

Quarterly Newsletter of the Federal Planning Bureau

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

HEADLINES BELGIAN ECONOMY

The FPB is reassessing the state of the economy in 1998 and its possible evolution for 1999.

In 1998 the Belgian economy has continued to grow strongly and has moved into a "mature" phase of recovery with exports and investment no longer providing the engine for growth. Private consumption, fed mainly by employment growth, moderate real wage increases and high consumer confidence, took over their role. Employment growth remains impressive.

The outlook for the world economy for 1999 has deteriorated: the Asian crisis has widened and deepened and contagion effects have started to affect also Russia, Latin American countries and, to a lesser extent, Eastern Europe. World financial markets have shown extreme volatility. Continental European countries will be affected by the deterioration of the global economic performance and the weakening of the USD, but should nevertheless become the fastest growing area in the world.

Any forecast concerning Belgium is fragile in this context but it seems likely that the GDP-growth forecast for 1999 given in July (2.6%) is too optimistic. The Belgian economy might not be growing faster than 2.2% with significant downward risks on the domestic and international side.

Many uncertainties and downward risks regarding the international environment are linked, and, given the interdependencies in the global economy could trigger all the others and lead to a sharp deterioration in the overall economic situation.

Export growth should be significantly lower than in 1998 while private consumption should be less affected. Employment should still increase by 0.8% and the unemployment rate should further fall from 8.6% to 8.3% (Eurostat standardised definition).

In any case, consumption price inflation remains subdued at about 0.9% (1% for the "health" index). Wage increases will remain moderate, under the influence of the "wage norm". Interest rates in Belgium drop in line with international rates. This should be a positive factor for domestic demand.

STU 4-98 was finalised on November 10th 1998.

Editorial Board

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Etienne Rohaert
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Geert Bryon
Dominique van der Wal
Brenda Breugelmans

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

The accuracy of the FPB short-term economic forecasts since 1994

The activities of the FPB traditionally focused on the medium and long term economic developments. Short-term forecasting is a rather new discipline at the Bureau. Only since July 1993¹ has the FPB made annual short-term forecasts twice a year. As a new producer of short-term forecasts, it is useful to perform some quality control and to publish the results as a kind of consumer guidance. The main “consumer” of the short-term economic forecasts of the FPB is the Federal Government. In particular, the FPB short-term economic forecasts form the macro-economic environment for establishing and following up the Federal Government’s budgets.

Three questions will be dealt with in this article. Firstly, *how good* are the forecasts? Secondly, do the forecasts *improve* as more information on the economic situation of the year concerned becomes available? Thirdly, is there a *systematic bias* in the forecasts?

Comparing forecasts...

Twice a year the FPB makes annual short-term forecasts, once in July and once in February. In the July publication, forecasts for the current (t) and the next year (t+1) are made. In the February publication, the July forecasts (for the past (t-1) and the current (t) year) are updated. In this way, four forecasts are available for each year, of which the first two are of particular interest, as they are used for the Government budget and for the Government budgetary control respectively. For 1994, for example, forecasts were made in July 1993, February 1994, July 1994 and February 1995. The first three exercises can be considered as “forecasts” in the proper sense of the word, while the fourth exercise can rather be called an “estimate”.

... with actual outcomes...

Forecasts are to be compared to actual outcomes. The notion of “actual outcome”, however, is not straightforward. Most of the macro-economic data that will be looked at are published in the national accounts. Revisions of the national accounts data may occur, and this for several reasons: more complete and correct data become available, methodological changes take place or a new base year for data at constant prices is introduced. As methodological modifications are difficult to foresee and in order to exclude at most the effect of a changing base year on past observations, actual outcomes are here defined as the figures published in the first version of

the national accounts of the year concerned (generally dating from June of the year t+1, for 1997 dating from the autumn of 1998).

Forecasts are available from 1994 on, outcomes until 1997. For each year, four forecasts are available. As the number of years considered in this article is limited, all conclusions have to be interpreted with caution.

... a simple problem?

Assessing the accuracy of forecasts *ex post* may seem to be a simple problem: just measure the distance between the forecasts and the known outcome. Apart from the aforementioned problem of the definition of actual outcomes, a more fundamental problem arises when one wishes to interpret the measured errors. In fact, not all forecasting errors are due to an imperfect forecasting method. Other factors can also explain part of the forecasting errors. FPB forecasts, for instance, are deliberately based on the assumption of “unchanged government policy”, even if government intervention is very likely. Moreover, for most variables concerning the international environment (such as exchange and interest rates, world prices and export market growth) the FPB traditionally uses an exogenous scenario, delivered by international institutions such as the EC and partly based on technical assumptions. For a small, open economy like Belgium, disagreement between these assumed international scenarios and the outcomes can be an important source of forecasting errors. It follows that a sound risk analysis (assessing the sense and the size of the uncertainties) related to the underlying assumptions of the forecasts is equally important as an accurate point estimate itself.

Results

The accuracy of the FPB forecasts has been tested for the following data series: real GDP growth and its two components, namely domestic demand (DD) and net exports (XM), consumer price inflation (CPI) and the moment of indexation for public wages, employment growth (EMP) and the general government deficit (DEF). Figures on the government account are traditionally not published in the short-term economic forecasts but were available in internal databases.

Average errors and improvement of forecasts as more information becomes available

A first angle to assess forecasting accuracy deals with the following question: how great is the distance between forecasts and outcomes on average over the

1. The first forecast (July 1993) was made in collaboration with the Ministry of Economic Affairs. Since then, the FPB published short-term forecasts, initially under its own name, and from 1995 on, under the responsibility of the INR-ICN.

examined period? To measure this, the mean absolute error (MAE) is presented here. The interpretation of the MAE is intuitively straightforward. By taking the absolute value of the errors, this measure does not allow a neutralisation of positive and negative errors. The table below gives the MAEs for the examined variables, calculated for different forecasting horizons and on average.

Table 1 - Mean Absolute Errors over the 1994-97 period

MAE ^A	Average all forecasts	First ^B Forecasts	Second Forecasts	Third Forecasts	Fourth Forecasts
GDP	0.55	0.88	0.74	0.49	0.09
DD	0.47	0.53	0.69	0.45	0.21
XM	0.52	0.69	0.63	0.52	0.24
CPI ^C	0.33	0.47	0.38	0.15	--
EMP	0.25	0.19	0.25	0.32	0.24
DEF	0.38	0.76	0.40	0.21	0.14

- MAEs have to be interpreted in the following units: GDP: real growth rate, DD and XM: contribution to real GDP growth rate, CPI and EMP: growth rate, DEF: percentage of GDP.
- Forecasts for the year t are made in July of the year $t-1$ (first forecasts), February of the year t (second forecasts), July of the year t (third forecasts) and February of the year $t+1$ (fourth forecasts).
- For the consumer price index, at the time of the fourth forecast the observation is already available. So, the average forecast error in column 1 is the average of the *three* forecast errors. Observations available until October 1998 seem to indicate that consumer price inflation should amount to about 1.0% on average this year. Thus, as 1998 is almost observed at the moment, MAEs for this indicator have been calculated over the 1994-98 period.

For most European countries, MAEs for GDP-growth forecasts one year ahead made by the OECD and national institutes amount to 1 to 1.5% over the last 25 years¹. For our GDP forecasts on the 1994-97 period, MAEs are significantly smaller (only 0.88 for first and 0.74 for second forecast errors). As the period examined here is rather short, these results have to be interpreted cautiously. Moreover, the 1994-97 period was a period with relatively stable (and thus relatively easily predictable) GDP growth rates.

MAEs for domestic demand and net export do not differ much. However, over the period concerned variations of domestic demand were significantly larger than variations of net exports. Considered in this way, the forecasting performance for domestic demand was better.

As regards the moment of indexation of public wages over 1994-98², the MAE for the first forecasts (budget) is equivalent to 2 months. For the second forecasts (budgetary control), the error is reduced to 1,2 months.

As could be expected, forecasts become on the whole continuously more accurate as time goes by and more information becomes available. Second forecast errors are smaller than first forecast errors; it follows that an update of the macro-economic hypotheses for the budgetary control is useful. Both conclusions do not hold for employment forecasts over the 1994-97 period. This can be largely due to two facts. Firstly, first forecast errors for

employment growth were already extremely low. Secondly, reliable short-term indicators for the employment evolution are (were) rather scarce, and so the amount of new information as time goes by is limited.

Systematic errors

The size of the forecasting errors is one thing, the sign of it is another. If forecast errors always have the same sign, forecasts are biased in the sense that they are systematically too optimistic or too pessimistic. In that case, even when forecast errors from year to year are not very large (and thus the MAE is acceptable), forecast series can drift away from actual outcomes when these biased errors are accumulated. The table below confronts the average forecasts with the actual outcomes over the 1994-97 period.

Table 2 - Average forecasts³ compared to average actual outcomes over the 1994-97 period⁴

	Actual outcomes	First Forecasts	Second Forecasts	Third Forecasts	Fourth Forecasts
GDP	2.15	1.95	1.90	1.78	2.09
DD	1.55	1.95	1.96	1.73	1.72
XM	0.58	0.00	-0.06	0.05	0.38
CPI	1.71	2.18	2.09	1.80	--
EMP	0.11	-0.04	0.06	-0.10	0.04
DEF	-3.62	-4.29	-3.97	-3.81	-3.71

GDP and employment forecasts have been rather on the pessimistic side. In particular forecasts for the contribution of net exports are on the low side. This stems both from an under-estimation of exports and an over-estimation of imports. The latter is partly due to an over-estimated domestic demand.

On the other hand, consumer price inflation has been rather over-estimated. Related to this, indexation of public wages never took place earlier than forecast.

Although some over- or under-estimation for GDP growth, inflation and employment growth can be found, the cumulated errors remain on the whole low, implying that our forecasts can hardly be considered as clearly biased. This can also be illustrated by a comparison of the number of over- and under-estimations. GDP growth, for instance was, on a total of sixteen forecasting exercises, under-estimated ten times (with an average error of 0.61%), against six over-estimations (with an average of 0.45%).

Finally, first forecasts for the government deficit were clearly too pessimistic. This finding is obvious in years of fiscal consolidation (1994-97) and in the light of the hypothesis of unchanged government policy. Once policy measures are known and incorporated, this bias disappears.

- See for instance: Öller L.-E. and B. Barot, "Comparing the accuracy of European GDP forecasts", National Institute of Economic Research, Sweden, May 1998, 21 p.
- As inflation observations until October 1998 are available, it is certain that there will be no indexation of public wages in 1998.

- For the units of forecasts and outcomes, see footnote table 1.
- For CPI: 1994-98 (cf. supra).

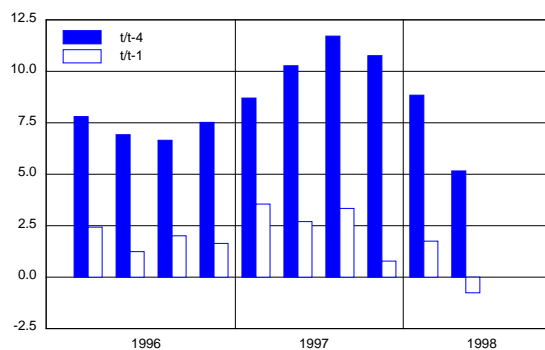
The Institute of National Accounts (INR/ICN) published in July its bi-annual Economic forecasts prepared by the FPB. Many of the risks surrounding the forecasts at that time have since materialised and ask for a new assessment. On the positive side one can cite the confirmation of high growth in 1998 and good economic fundamentals in Europe. On the negative side, the USD has suddenly dropped *vis-à-vis* the European currencies; the financial crisis has had real effects in Japan and in the emerging markets growth and export profitability were revised downwards in the US and the UK.

The combination of these positive and negative evolutions makes any forecast for 1999 very fragile. The consensus forecast for GDP-growth is close to the rate on which the Federal Government's budget is based. The FPB, without pretending to make a new official forecast, which in any case should be endorsed by the INR/ICN, thinks that the 2.6% growth given in the Economic forecasts in July, is probably too optimistic. A new assessment is therefore necessary.

A sharp downturn in the world economy

World trade growth remained dynamic in the beginning of 1998 but has since deteriorated significantly (see graph 1). The Asian monetary and financial crisis has entered a so-called "third stage" with its extension to Russia, resulting in a considerable devaluation of the rouble and a major financial turmoil in Russia. Contagion to other emerging countries such as Latin America (mainly Brazil) and to a lesser extent Central Europe has occurred. Due to rising concern about the stability of many financial institutions as well as the deterioration of investors' confidence in world economic prospects, stock markets in the US and Europe have recorded strong volatility and price declines.

Graph 1 - Quarterly evolution of world imports' growth rates, in %

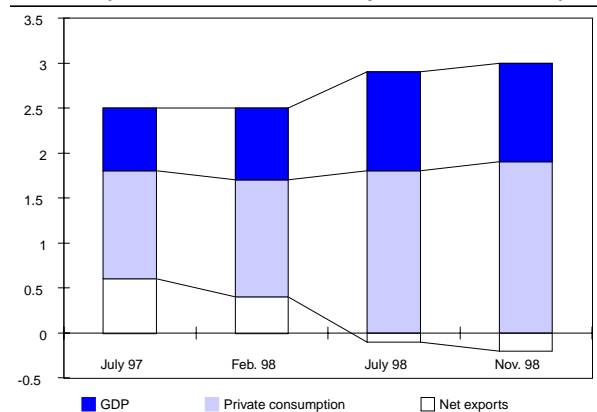


Source: CPB

1998 growth holds up remarkably well in Belgium

On first sight, Belgian growth in 1998 remained relatively unaffected by the deterioration in world growth. This is, however, not exactly the case. 1998 could be considered as the maturing of the business cycle in Belgium. Exports and business investment contributed less to economic growth than in 1997 but private consumption, mainly fuelled by employment growth, moderate real wage increases and a rise in consumer confidence, was exceptionally dynamic. Graph 2 shows that GDP growth was rather well forecast but that the change in its composition was even more pronounced than initially thought. The reason for this may be found in the change in the world economy and in particular in weaker global demand, less inflation and lower interest rates in the EMU countries.

Graph 2 - GDP-growth for 1998, contribution of: (revisions made in subsequent FPB forecasts)



Downward revisions for the world economy in 1999

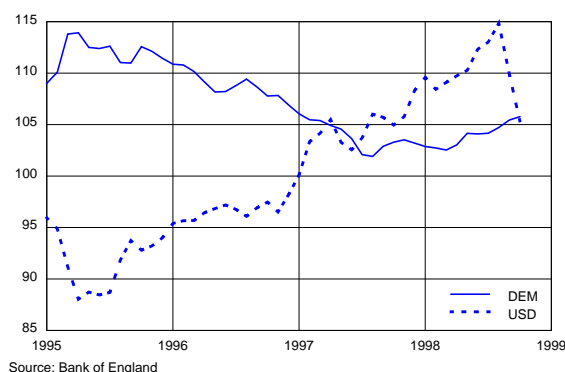
The main international institutions revised downward their forecasts for world demand and growth. The FPB's forecasts are usually based on the scenario drawn up by the EC¹. World economic growth is expected to be around 2% this year (against 2.9% forecast in spring) and 2.7% next year (instead of 3.6% in spring).

Most international organisations consider that the Asian crisis has now reached its lowest point. Moreover, they expect that the economic and financial reforms implemented in the Asian economies will start bearing fruit in 1999, leading to a stabilisation and/or a small recovery in the main exposed Asian countries as well as in Japan. Latin America should only slightly decelerate next year and the United States should face a soft landing.

1. European Commission, Economic Budget 1998-2000, Autumn 1998.

The previous bright prospects for the European economy for next year are deteriorated by weaker world trade growth, reduced price competitiveness and the deepening of the financial crisis. Extra-European markets' growth will be reduced. This could contribute to some "spill over" from external to internal demand components if investors abandon their investment projects because of lack of demand prospects. Since August, European currencies' effective exchange rates have appreciated due to a strong weakening of the USD exchange rate (-10%).

Graph 3 - Evolution of effective exchange rates (1990=100)



On the other hand, European domestic demand will remain favourably influenced by the fall in commodity prices and the stability of the intra-European exchange rates, resulting in lower inflation. Moreover, lack of confidence in financial markets has led to capital flowing to the US and Europe, resulting in further falls in nominal long-term interest rates in Europe; short-term interest rates are now supposed to converge to the lowest level in Europe (the repo rate in Germany is 3.3%). The impact of the recent European stock market falls on the real economy should remain limited, as the share of equities in households' wealth is rather small in most countries (in comparison with the United States), and as the fall in equity prices has only reversed part of the gains registered last year.

Belgian exports are due to suffer in 1999

While relatively strong export growth has been observed in the first half of 1998, significantly smaller growth rates are forecast from the second half of 1998 onwards and into 1999.

For 1999, the relevant export market growth for Belgium will be further reduced (from 8% in 1997 to 6.2% in 1998 and 5.2% in 1999). Price competitiveness conditions for exporters will deteriorate considerably. The BEF will appreciate 0.9% in 1998 and 1.4% in 1999. The USD is supposed to be at 33.8 BEF in 1999 (1.64 DEM per USD). Wage moderation *vis-à-vis* the seven major trade partners should compensate for the exchange rate appreciation,

so that labour cost competitiveness, while clearly less favourable compared to six months ago, will remain rather good.

Inflation should not accelerate and remain around 1% (see page 15 for monthly forecasts). Interest rates should remain in line with German rates.

Reaction of domestic demand remains uncertain

Domestic demand could remain buoyant. Business investment will be negatively affected by lower export demand but should be supported by very low interest rates. Household investment should also benefit from low long rates. Private consumption has been particularly dynamic and leading indicators cannot point to any significant weakening. Lower export growth should lead to smaller employment gains and a somewhat deteriorated disposable income. If consumer confidence remains high, the saving ratio could further drop by about a 0.7%-point, leading to a continued dynamism of private consumption in 1999 (with a growth rate of 2.5%). Imports should then rise faster than exports and the contribution of net exports to GDP growth should be -0.2%. GDP should then increase by 2.2%.

Downside risks remain high

Downside risks, on the international as well as on the domestic side, remain important.

The main risks faced by emerging financial markets are a further contagion of the crisis from Brazil to other Latin American countries and the failure by Japan to resolve its banking problem which could lead to a renewed downward pressure on the yen and consequently to a deepening of the crisis in Asia. These financial turbulences could hit OECD countries through trade links but also by threatening the solvency of exposed financial institutions and by negatively affecting business and consumer confidence. Such a scenario could imply for 1999 a hard landing of the US economy. This could in turn reach the European economy through the weakening of world demand. Even with an easing monetary policy, European growth could in this case experience a severe deceleration.

Even when the world economic outlook for 1999 remains rather positive, a considerable fall in the European and Belgian consumer confidence levels is possible so that a drop in the saving ratio might become unlikely. Precautionary savings might then *increase* and the growth in Europe of private consumption and GDP will be significantly reduced. But even under the hypothesis of a *stable* households saving ratio in Belgium in 1999, a GDP-growth rate of 2% would be difficult to attain.

Economic Forecasts by the Federal Planning Bureau

Changes in volume (unless otherwise specified)				
	1996	1997	1998	1999
Private consumption	1.8	2.1	3.0	2.5
Public consumption	1.4	0.8	1.1	1.7
Gross fixed capital formation	0.5	5.4	4.4	3.0
Final national demand	1.3	2.2	3.2	2.5
Exports of goods and services	2.2	7.1	4.7	3.8
Imports of goods and services	2.2	6.3	5.3	4.3
Net-exports (contribution to growth)	0.1	0.9	-0.2	-0.2
Gross Domestic Product	1.3	3.0	2.8	2.2
p.m. Gross Domestic Product - in current prices (bn BEF)	8305	8675	9085	9360
Traditional consumer price index	2.1	1.6	1.0	0.9
Consumer prices: "health" index	1.7	1.3	1.3	1.0
Real disposable income households	-0.4	1.1	2.5	1.6
Households saving rate (as % of disposable income)	16.1	15.2	14.9	14.1
Domestic employment (change in '000, situation on June 30th)	14.8	18.5	45.5	28.6
Unemployment (Eurostat standardised rate, yearly average) [1]	9.8	9.3	8.6	8.3
Current account balance BLEU/UEBL (as % of GDP)	4.9	5.3	5.8	5.5
Short term interest rate (3 m.)	3.2	3.4	3.6	3.5
Long term interest rate (10 y.)	6.5	5.8	4.7	4.5

[1] Other unemployment definitions can be found on page 14 (table 7).

Economic forecasts for Belgium by different institutions

	GDP-growth		Inflation		Government deficit		Date of update
	1998	1999	1998	1999	1998	1999	
Federal Planning Bureau	2.8	2.2	1.0	0.9	.	.	10-11-98
INR/ICN	2.8	2.6	1.1	1.3	.	.	7-7-98
National Bank of Belgium	2.7	.	1.2	.	1.3	.	11-9-98
European Commission	2.8	2.5	1.1	1.4	1.3	1.2	10-98
OECD	2.7	2.8	1.0	1.2	1.7	1.6	4-98
IMF	2.7	2.6	1.4	1.8	1.3	1.2	1-10-98
BBL	3.0	2.4	1.0	1.4	1.5	1.3	29-10-98
Generale Bank/Générale de Banque	3.0	2.0	1.0	1.3	1.6	1.3	5-11-98
Gemeentekrediet/Crédit Communal	3.0	2.2	1.0	1.3	1.2	1.4	16-10-98
KBC	3.1	2.1	0.9	1.5	1.5	1.3	10-11-98
J.P. Morgan	3.1	1.6	1.1	1.3	1.4	1.9	7-10-98
Morgan Stanley	2.6	1.9	0.9	1.2	1.7	2.0	2-10-98
Artesia Bank	2.6	2.1	1.0	1.5	1.7	1.4	20-9-98
Petercam	2.5	2.0	1.0	1.3	1.6	1.5	10-12/98
IRES	2.7	2.5	1.0	1.4	1.4	1.2	9-98
DULBEA	3.0	3.0	1.0	1.3	1.3	0.8	15-8-98
Averages							
All institutions	2.8	2.3	1.0	1.3	1.5	1.4	
International institutions	2.7	2.6	1.2	1.5	1.4	1.3	
Credit institutions	2.9	2.0	1.0	1.4	1.5	1.5	
Consensus The Economist	2.8	2.2	1.0	1.3			7-11-98

Collaborating institutions for The Economist: ABN Amro, Bankers Trust, Deutsche Morgan Grenfell, EIU, Goldman Sachs, HSBC Securities, IBJ, KBC Bank, Long-Term Credit Bank, Merrill Lynch, J.P.Morgan, Morgan Stanley, Nordbanken, Paribas, Primark Decision Economics, Royal Bank of Canada, Salomon Smith Barney, SBC Warburg Dillon

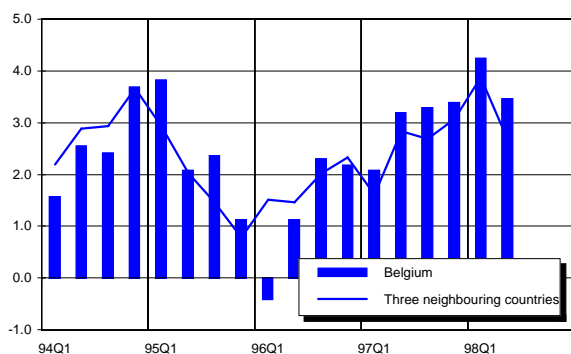
General economic activity

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

	95	96	97	96Q2	96Q3	96Q4	97Q1	97Q2	97Q3	97Q4	98Q1	98Q2
Germany	1.9	0.3	2.2	0.8	1.9	2.0	1.2	2.9	2.3	2.6	4.1	1.7
France	2.2	1.4	2.3	0.9	1.4	2.2	1.2	2.4	2.6	3.1	3.5	3.0
Netherlands	2.3	3.3	3.4	3.4	3.0	3.0	2.8	3.4	3.3	3.9	4.1	3.7
Belgium	2.3	1.3	3.0	1.1	2.3	2.2	2.1	3.2	3.3	3.4	4.2	3.5

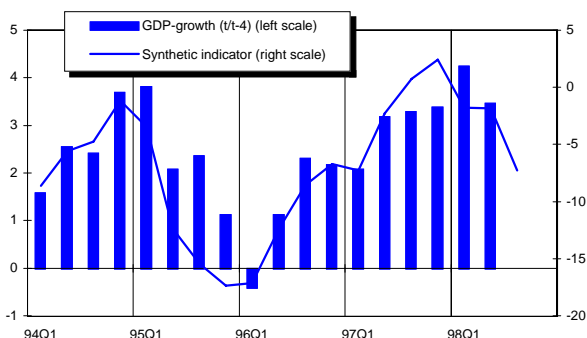
Source: National sources, INR/ICN

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



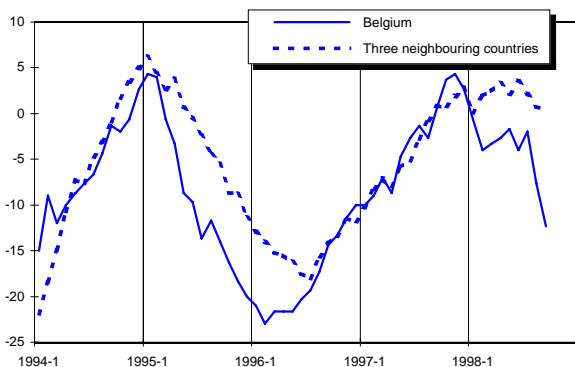
Source: INR/ICN, National sources

Graph 2 - Belgian GDP-growth and synthetic indicator



Source: INR/ICN, NBB

Graph 3 - Industrial confidence: international comparison



Source: European Commission

The Institute for National Accounts (INR/ICN) started publishing quarterly national accounts in April of this year. In October, the Institute published figures for 1997 using its usual annual methodology for national accounts and also estimates for the first and second quarter of 1998. All these figures have been integrated in this publication.

Economic activity remained very buoyant in Belgium in the first half of 1998. GDP increased by 3.75% compared to a year earlier. The figures for 1997 have been slightly revised upwards so that five consecutive quarters with growth rates of over 3% have been observed now. Hardly any weakening can be observed in the second quarter of 1998.

When one compares the Belgian growth rates to what has been observed in the neighbouring countries, a certain pattern emerges. The Dutch growth rates remain highest while German growth lags behind. French and Belgian growth rates are similar, although the dynamic in domestic demand growth have been even stronger in France than in Belgium since the beginning of this year.

The synthetic NBB survey indicator has dropped significantly for almost a year now with significant dips at the turn of the year 1997-98 and again last summer. The indicator is based on three components. Among them, the manufacturing sector takes up the biggest share (about 70%). It is mainly the decline in the confidence indicator in this sector that has been responsible for the fall in the synthetic indicator.

One should be careful not to draw too many conclusions from these qualitative indicators. Respondents to the surveys change their opinion often when there is a clear reason for a change. This has clearly been the case with the bad news from Asia and from the financial markets. Although turning points in the economic cycle are generally well represented by qualitative indicators, it would be incorrect to link qualitative indicators directly to quantity evolutions.

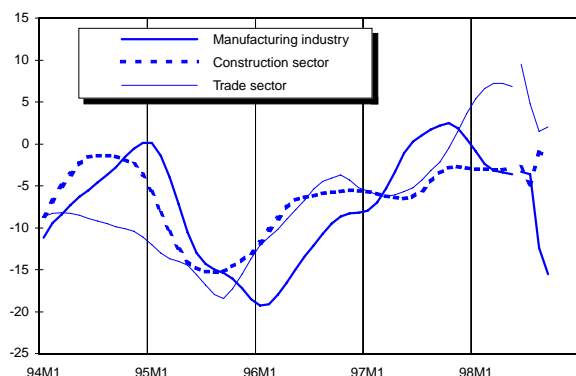
Table 2 - Monthly business surveys [1]

	96	97	97Q4	98Q1	98Q2	98Q3	98M4	98M5	98M6	98M7	98M8	98M9
Synthetic indicator	-11.2	-1.6	2.4	-1.8	-1.8	-7.3	-1.4	-2.8	-1.3	-2.5	-8.6	-10.8
Manufacturing industry	-13.3	-0.3	3.8	-3.4	-3.5	-10.5	-2.5	-4.8	-3.3	-3.6	-12.4	-15.5
Construction sector	-7.0	-5.1	-3.5	-2.6	-3.5	-2.4	-5.7	-1.9	-2.9	-4.9	-1.0	-1.4
Trade sector	-5.8	-4.0	1.9	6.5	7.7	2.8	7.8	5.7	9.5	4.8	1.5	2.0

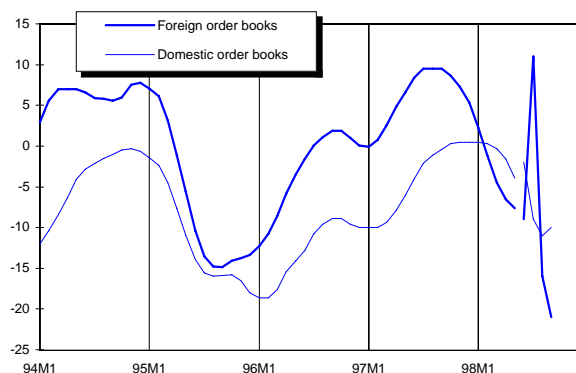
[1] Qualitative data

Source: NBB, FPB

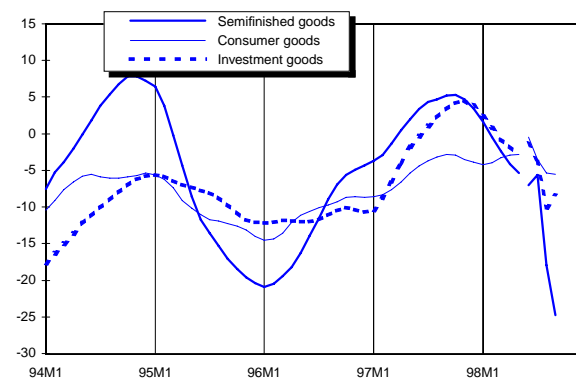
Graph 4 - Business cycle: sectoral evolution



Graph 5 - Manufacturing industry: order books



Graph 6 - Manufacturing industry: different types of goods



Source: Business cycle survey NBB

While total growth has remained fairly constant over the last five quarters, the composition of growth is changing rapidly. On the one hand, the manufacturing sector is clearly losing steam after having been very buoyant until late last year. But on the other hand, the dynamics of the trade sector have been much stronger than anticipated.

Lower growth rates in the manufacturing sector had become very likely after having reached extremely high levels in 1997. Foreign orders were first to drop, reflecting the Asian crisis. Due to the limited exposure of Belgium to Asia, the decline was limited and the confidence indicator stabilised. But the crises in many other emerging markets, the very high volatility in the financial markets and the weakening of the U.S. dollar led to a new strong fall in the confidence levels among exporters. While domestic orders followed to some extent this downward trend, the decline was by no means similar.

It is clear that the manufacturing of semi-finished goods suffered most. This does not come as a surprise since Belgian industry is traditionally a producer and exporter of this kind of goods. The very strong falls in recent months indicate that the bottom of the cycle has probably not been reached yet.

The trade and the construction sector have seen a completely different evolution compared to the manufacturing industry. The levels observed now are still among the highest for years. Part of this can be explained by employment growth. Strong employment creation has led to high consumer confidence levels, which in turn led to extremely strong growth rates in private consumption.

While some signs of weakness - or at least no further improvement - in the trade sector are observed, it is difficult to point at a trend reversal at the moment.

Private consumption

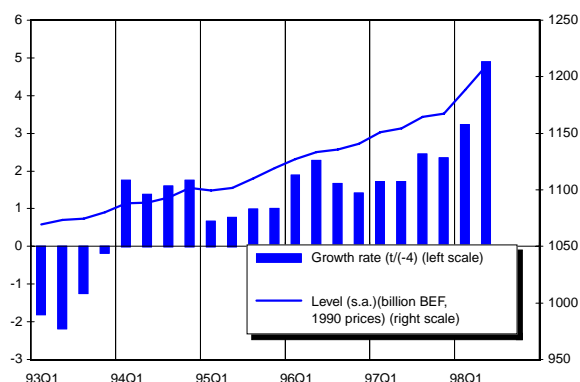
Table 3 - Private consumption indicators

	96	97	97Q4	98Q1	98Q2	98Q3	98M4	98M5	98M6	98M7	98M8	98M9
Turnover (VAT) - retail trade [1]	3.5	3.5	3.6	5.6	6.3	.	7.7	4.1	7.1	7.1	.	.
New car registrations [1]	7.8	-5.7	-0.4	5.1	10.0	8.4	11.5	10.3	7.9	5.5	22.1	0.9
Consumer confidence indicator [2]	-22.5	-21.7	-16.0	-7.0	-4.7	-5.0	-4.0	-5.0	-5.0	-4.0	-6.0	-5.0

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

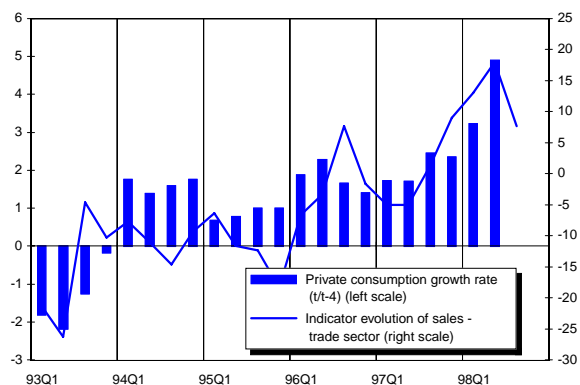
Source: NIS/INS, Eurostat, Febiac, FPB

Graph 7 - Private consumption at constant prices



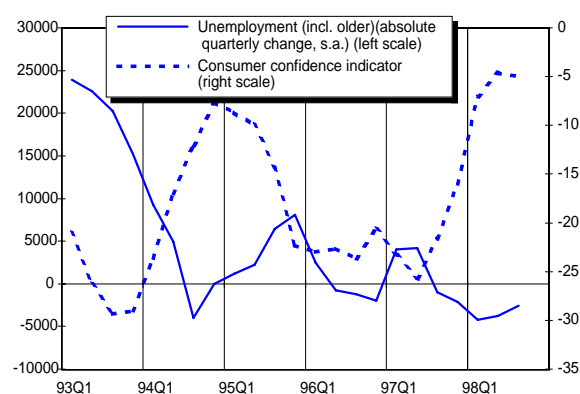
Source: INR/ICN

Graph 8 - Private consumption and related survey indicator



Source: INR/ICN, NBB

Graph 9 - Consumer confidence and unemployment



Source: RVA/ONEm, Eurostat, FPB

Quarterly national accounts show a markedly dynamic growth path for private consumption since the middle of 1997. After three-and-a-half years with real growth rates (t/t-4) between 1 and 1.5%, private consumption grew by 2.5% during the second half of 1997 and even by 4% during the first half of 1998.

This upswing in consumption growth was mainly due to the rise in employment and disposable income. Additionally the purchases of new cars after the Motor Show of the beginning of the year helps to explain the extremely high consumption growth during the first half of 1998. In the first two quarters of 1998, new car registrations were respectively about 5 and 10% higher than during the same period of 1997. It seems that the effect of the Motor Shows dies out only gradually. During the third quarter new car registrations were still more than 8% higher than during the third quarter of 1997.

A number of quantitative and qualitative indicators seem to point to a cooling down of the dynamism of private consumption during the second half of the year. The growth of excises and VAT revenues fell back in the third quarter. However this was not entirely due to real, but partly also to price effects. The NBB survey indicators for the trade sector reached a peak level in the second quarter of this year, and have shown a clear, albeit not dramatic, fall since then. Consumer confidence was on a steep upward path since the middle of 1997 and ended this rising trend during August and September. In spite of it, consumer confidence is still at a high level and the decline remained limited. So far, consumer confidence seems to suffer only marginally from the international turmoil and the extreme fluctuations on financial markets.

All in all, a somewhat lower growth for private consumption (around 2%, t/t-4) is expected for the second half of 1998. This should bring the real private consumption growth for 1998 as a whole at about 3%.

Business investment

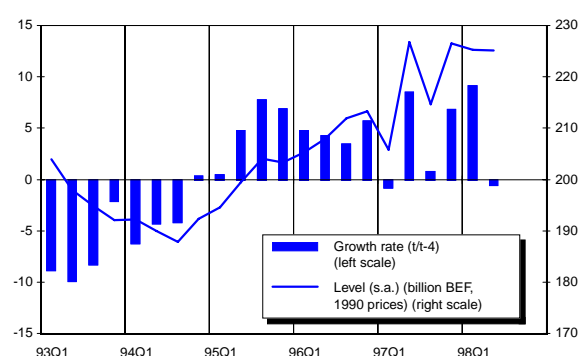
Table 4 - Business investment indicators

	96	97	98	97Q4	98Q1	98Q2	98Q3	98M3	98M4	98M5	98M6	98M7
Investment (VAT) [1]												
Industrial companies	9.3	1.7	.	8.0	5.0	3.8	.	9.8	3.5	16.5	-5.1	-2.8
Non-industrial companies	3.1	11.2	.	8.7	9.8	-6.6	.	-0.8	13.5	-29.0	6.0	7.5
Total companies	5.5	7.4	.	8.5	7.9	-2.9	.	3.7	8.8	-15.2	0.6	3.1
Investment survey [1]	5.1	5.6	12.4									
Capacity utilisation rate (s.a.) (%)	79.9	82.0	.	82.3	83.4	83.1	81.7					

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

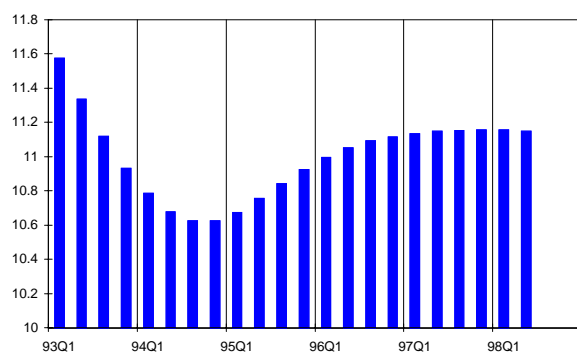
Source: NIS/INS, NBB, FPB

Graph 10 - Business investment at constant prices



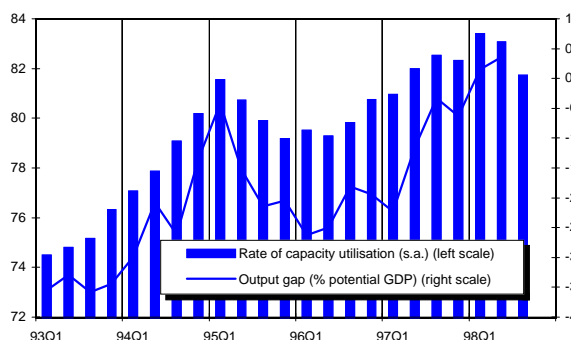
Source: INR/ICN

Graph 11 - Business investment rate (in % of GDP, smoothed)



Source: INR/ICN, FPB

Graph 12 - Business investment indicators



Source: INR/ICN, FPB

From 1997 on the quarterly pattern of business investment has been somewhat erratic. In spite of this, business investment remained on its stable growth path that started in the second half of 1994. Yearly real growth rates have been markedly stable during the past three years: 5.1% in 1995, 4.6% in 1996 and 4.2% in 1997, corresponding to a contribution of about 0.5% to real economic growth each year.

The picture for business investment in 1998 is mixed. During the first six months, business investment grew by some 4% (t/t-4). This growth rate has been negatively influenced by some exceptional investment during the second quarter of 1997. It follows that the underlying dynamism of business investment remained rather strong during the first two quarters of the year.

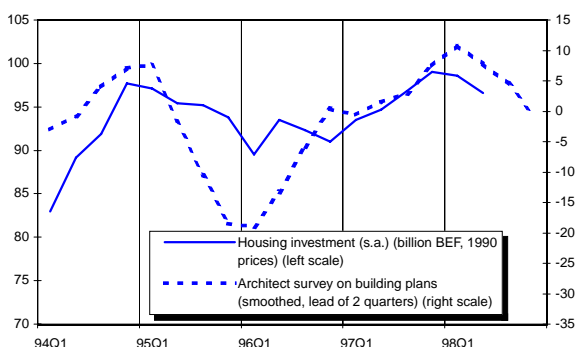
Some indicators, however, point to a somewhat less favourable investment climate than a few months ago. With a certain time lag, the sharp drop in foreign orders to the manufacturing industry was followed by a moderate decline in the rate of its capacity utilisation. The degree of capacity utilisation fell back from more than 83% (on a seasonally adjusted basis) during the first half of the year, to about 81.5% during the third quarter of 1998. Business profitability, which has been on an upward path since 1996 and clearly supported investment growth, should increase further up in 1998, but no longer in 1999. For 1999 a stabilisation of the rate of business profitability at the level of 1998 is expected, well below its peak level reached at the end of the eighties.

On the other hand, long-term interest rates have recently further declined and should remain at these low levels for some time. As domestic demand (in particular private consumption) is expected to compensate partly for the drop in foreign demand, the business investment climate should not deteriorate that much.

This year, business investment should grow by about 4%. This is a downward revision compared to earlier forecasts. For 1999, a somewhat lower growth rate is expected.

Housing investment

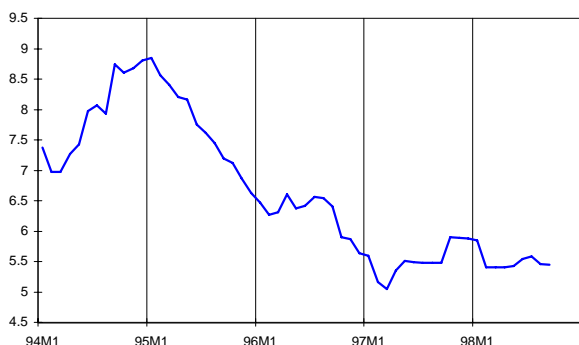
Graph 13 - Activity in the residential housing sector



Source: INR/ICN, NBB, FPB

As a result of the cyclical downturn in housing investment from mid-1995 until mid-1996, a sharp negative real growth rate for housing investment (-4%) was noted for 1996 as a whole. The strength of the cyclical upward trend from mid-1996 till the end of 1997, led to a strong positive growth rate of 4.9% on average in 1997.

Graph 14 - Mortgage rate (in %)



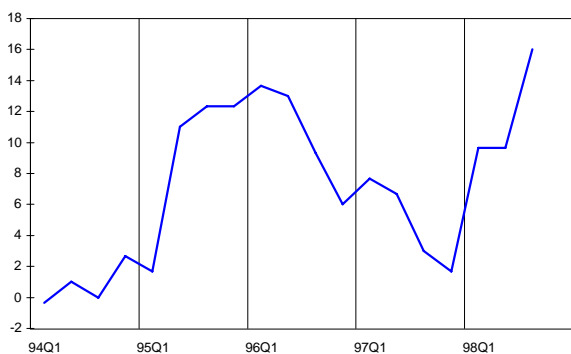
Source: NBB

Some qualitative indicators, e.g. the quarterly survey results among architects concerning the volume of building plans and the monthly business survey in the construction sector, point to a more stable growth path in the course of 1998.

Mortgage rates are low and should remain so. Households' real disposable income should increase by about 2% on average over 1998-99, markedly faster than during the past five years. These factors should lead to positive housing investment growth rates for this and next year, of around 2.5 to 3.5%.

Stockbuilding

Graph 15 - Appreciation of stocks



Source: NBB

In 1996 and 1997 stockbuilding contributed negatively to economic growth. Quarterly national accounts for the first half of 1998 show a strong positive contribution of stockbuilding to economic growth. However, as a growing number of entrepreneurs consider their stock levels excessive, stocks should be reduced in the second half of 1998. On the whole, the contribution of stockbuilding to economic growth should be positive in 1998 in Belgium, as in most other European countries.

Foreign Trade

Table 5 - Belgium - Trade statistics (intra/extrastat)

	96	97	97Q3	97Q4	98Q1	98Q2	98M2	98M3	98M4	98M5	98M6	98M7
Exports - value [1]	4.9	13.1	18.0	12.6	11.1	8.6	9.3	13.5	4.1	9.5	12.1	3.3
Imports - value [1]	7.7	10.9	12.3	13.0	11.5	7.0	12.1	13.0	4.5	4.4	12.0	7.1
Exports - volume [1]	2.1	7.5	10.8	6.3	6.9	6.9	5.6	9.8	1.4	8.0	11.3	4.1
Imports - volume [1]	4.2	4.6	4.1	7.2	9.9	7.4	10.2	14.0	4.0	6.1	12.1	10.3
Exports - price [1]	2.7	5.3	6.5	5.9	4.0	1.5	3.6	3.2	2.7	1.3	0.6	-0.7
Imports - price [1]	3.4	6.1	8.0	5.4	1.5	-0.4	1.7	-0.7	0.5	-1.6	-0.1	-3.0

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

Source: INR/ICN, FPB

Table 6 - Belgium - Balance of payments statistics

	96	97	97Q3	97Q4	98Q1	98Q2	98M1	98M2	98M3	98M4	98M5	98M6
Exports - goods [1]	5.2	12.2	17.9	13.4	9.6	8.6	6.7	6.4	15.6	7.5	6.3	12.0
Imports - goods [1]	5.6	12.3	16.4	14.8	10.0	9.5	9.5	4.7	15.7	7.7	7.0	13.6
Trade balance [2]	328	360	106	79	75	101	33	24	18	36	35	29
Exports - goods and services [1]	4.8	12.3	17.5	14.8	9.6	8.9	5.7	7.0	16.1	7.3	5.7	13.6
Imports - goods and services [1]	5.2	12.0	16.5	14.7	11.1	9.2	10.7	5.8	16.6	7.6	7.1	12.8
Goods and services balance [2]	327	380	89	99	83	102	30	31	22	35	32	36
Exports - current transactions [1]	1.8	10.6	14.8	13.3	9.6	9.2	5.9	7.8	15.2	7.5	8.0	12.1
Imports - current transactions [1]	1.9	10.2	14.3	12.5	10.9	10.0	10.3	6.7	15.3	8.9	8.9	12.1
Current account [2]	340	403	93	131	73	88	23	29	22	31	27	30

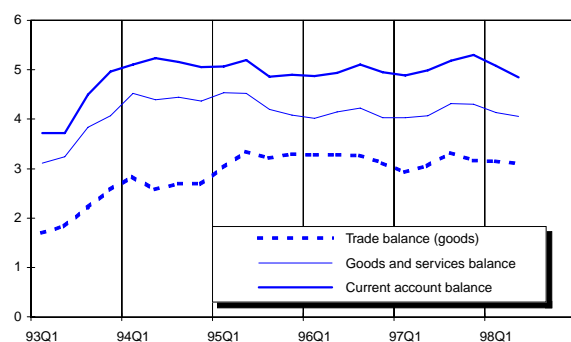
[1] Change (%) compared to same period previous year; [2] Level in Billion BEF

Source: NBB, FPB

Graph 16 - Growth of exports and related indicator



Graph 17 - BLUE/UEBL foreign balances (4 quarters cumul, % of GDP)



Source: NBB (BoP), FPB

After a peak reached during the third quarter of 1997, export growth has declined gradually and foreign order books indicate that this slow-down is likely to continue during the second half of 1998. This situation reflects the sharp deceleration in world output and trade observed since the end of 1997 and more recently the depreciation of the dollar *vis-à-vis* the European currencies which implies a loss of competitiveness. An analysis per destination shows that while exports are still dynamic to Europe and America during the first part of 1998 (effects of the depreciation of the dollar and of the Brazilian crisis should not be visible before the end of the year), exports in value to Asia have dropped significantly (which is partially due to price decreases but probably also to negative volume effects). Conversely, import growth in volume has remained high during the last three quarters reflecting a buoyant internal demand.

As a consequence of the Asian crisis, export and import prices have declined steadily since the end of 1997, reflecting lower world demand and increased competition on international markets. The stronger slow-down in import price inflation (with even a negative growth rate for the second quarter of 1998) is mainly due to the fall in oil and commodity prices. As a result, and despite exports in volume growing at a slower pace than imports, the current account is expected to increase further this year.

Labour market

Table 7 - Labour market indicators

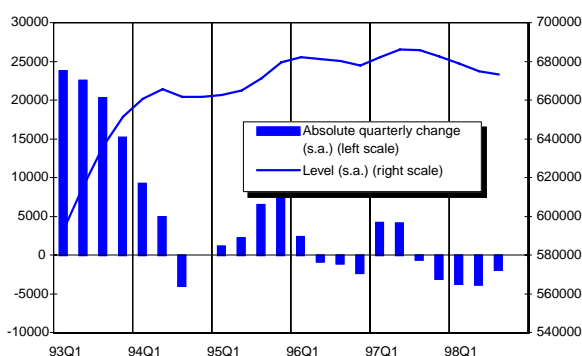
	96	97	97Q4	98Q1	98Q2	98Q3	98M5	98M6	98M7	98M8	98M9	98M10
Unemployment (excl. older) [1]	588.3	570.0	568.7	551.8	514.5	569.1	511.8	505.3	554.1	584.2	568.9	539.5
Unemployment (incl. older) [1]	679.9	683.9	688.6	674.8	644.5	701.9	642.0	636.4	686.3	717.1	702.3	674.4
Unemployment rate-FMTA/MfET[2]	13.7	13.2	13.2	12.8	11.9	13.2	11.9	11.7	12.9	13.6	13.2	12.5
Unemployment rate-Eurostat [3]	9.8	9.3	9.1	9.0	8.9	8.8	8.9	8.8	8.8	8.9	8.8	8.6

[1] Level in thousands; [2] In % of labour force of June 1996, 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

Graph 18 - Evolution of unemployment (incl. older)

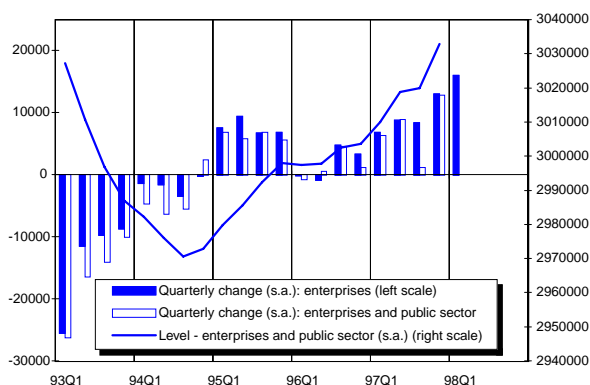


Source: RVA/ONEm, FPB

The labour market has played a key role in the explanation of the change in the composition of growth that has been observed in the present cycle. Employment creation has remained relatively small up until 1996. But since the beginning of 1997 it has gradually become stronger to reach growth rates now that have not been observed since the 1988-90 cycle. Graph 19 indicates the strength of the recovery.

Employment creation has come earlier than in previous cycles and has also been stronger. Active labour market policies, wage moderation and - partly linked - a higher labour intensity of growth explain these phenomena. Moreover, further developments of part-time labour contribute to this job creation measured in the number of the people.

Graph 19 - Evolution of employment



Source: RSZ/ONSS, FPB

The employment figures further indicate that job creation among people younger than 21 and between 50 and 54 has been extremely strong and explain about 75% of total employment creation in the last available figures (first quarter of 1998). This may further indicate that labour supply has increased significantly (people entering earlier and leaving later), so that the drop in unemployment has not been to the same extent.

Nevertheless, unemployment (seasonally adjusted and using a broad definition, including the "older" unemployed) has dropped for the fifth consecutive quarter. The strongest falls have probably occurred during the first half of this year.

The employment creation figures already announced in previous forecasts (around 45,000 in 1998) are confirmed. Slower GDP growth should also affect employment growth in 1999. The fact that irregular employment creation has been strong, reflecting, inter alia, interim labour, may contribute to significantly slower employment growth next year.

Prices

Table 8 - Inflation rates: change compared to the same period in the previous year, in %

	96	97	97Q4	98Q1	98Q2	98Q3	98M5	98M6	98M7	98M8	98M9	98M10
Consumer prices: all items	2.06	1.63	1.29	0.73	1.65	0.76	1.86	1.59	1.03	0.44	0.82	0.86
Food prices	0.62	2.20	3.28	2.06	4.59	0.49	4.85	3.85	1.52	0.03	-0.07	0.01
Non food prices	2.37	1.50	0.44	-0.79	-0.08	-0.41	0.13	-0.04	-0.06	-0.74	-0.43	-0.42
Services	2.35	1.48	1.18	1.97	2.38	2.50	2.52	2.51	2.23	2.24	3.04	3.16
Rent	2.48	1.69	1.65	1.29	1.16	1.10	1.16	1.11	1.13	1.12	1.04	1.10
"Health" index	1.66	1.32	1.19	0.96	2.00	1.12	2.24	1.96	1.29	0.84	1.22	1.21
Brent oil price in USD (level)	20.4	19.1	18.7	14.3	13.3	12.5	13.9	12.4	12.2	11.9	13.4	14.5

Source: MEZ/MAE

Table 9 - Monthly inflation forecasts

	98M1	98M2	98M3	98M4	98M5	98M6	98M7	98M8	98M9	98M10	98M11	98M12
Consumer prices: all items	101.99	102.19	102.02	102.48	102.99	102.89	103.14	102.75	102.69	102.72	102.93	102.85
Consumer prices: "health" index	101.83	102.08	101.95	102.44	102.99	102.89	103.14	102.74	102.71	102.72	102.94	102.86
Moving average "health" index	101.71	101.86	101.90	102.08	102.36	102.57	102.86	102.94	102.87	102.83	102.78	102.81
	99M1	99M2	99M3	99M4	99M5	99M6	99M7	99M8	99M9	99M10	99M11	99M12
Consumer prices: all items	103.03	103.17	103.05	103.44	103.93	103.80	104.01	103.67	103.63	103.71	103.88	103.79
Consumer prices: "health" index	103.07	103.24	103.11	103.53	104.04	103.94	104.17	103.77	103.72	103.74	103.93	103.82
Moving average "health" index	102.90	103.03	103.07	103.24	103.48	103.65	103.92	103.98	103.90	103.85	103.79	103.80

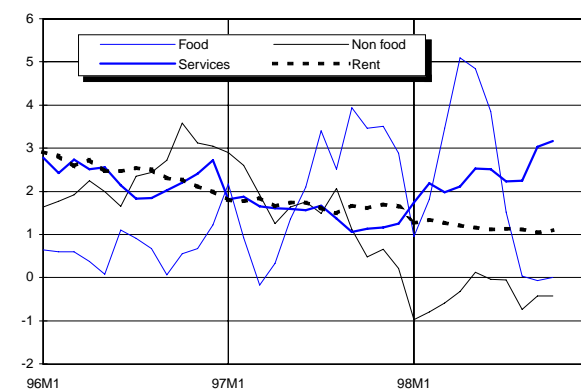
Source: Observations (up to 98M10): MEZ/MAE; forecasts: FPB

Graph 20 - Monthly inflation evolution in % (t/t-12)



Source: MEZ/MAE, from 98M11 on: forecasts FPB

Graph 21 - Inflation rates in % (t/t-12): decomposition



Source: MEZ/MAE

In January 1998 a new price index computation started (base year 1996 and new basket of products). Although inflation on average over 1998 will not be affected, this adjustment is to a large extent responsible for the erratic monthly pattern of the year-on-year inflation observed this year. For the two remaining months of 1998, this influence will play slightly downwards.

Underlying inflation (which is not affected either by this statistical adjustment, or by energy prices, food prices and indirect taxes), experienced an upward trend during the last months, probably as a result of extremely strong consumer demand in the first half year. Some factors point to a return of underlying inflation to lower levels (even below 1%) next year: the past depreciation of the dollar, low import prices, unit labour costs that remain under control and profit margins that are not expected to increase further in 1999.

Inflation, as measured by the general CPI, should amount to 1.0% this year and 0.9% in 1999. Because the health index excludes, *inter alia*, fuels, its growth rate should be somewhat higher: 1.3% in 1998 and 1.0% in 99.

Public-sector wages were adjusted (by 2%) for price changes in October 1997, and will not be adjusted this year. In 1999, public wages should be adjusted for price changes in June. This follows from the fact that, according to our new monthly forecasts, the pivot index for the public sector (103.14 at the moment) should be reached in April 1999, *i.e.*, two months later than forecast in the previous STU.

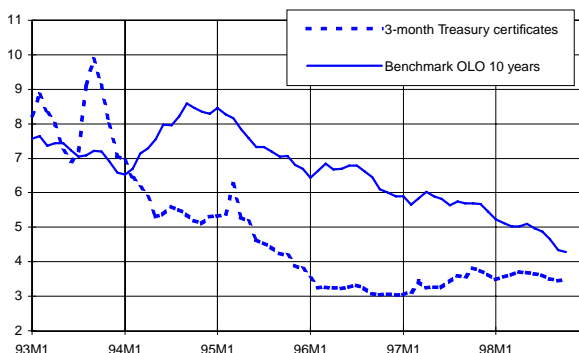
Interest rates

Table 10 - Interest rates

	96	97	97Q4	98Q1	98Q2	98Q3	98M5	98M6	98M7	98M8	98M9	98M10
Short-term rates (3 months)												
Belgium	3.21	3.44	3.76	3.57	3.68	3.53	3.68	3.64	3.61	3.51	3.46	3.50
Germany	3.21	3.26	3.63	3.48	3.54	3.45	3.57	3.50	3.48	3.43	3.43	3.51
Long-term rates												
Belgium: traditional bonds (6+ y)	6.30	5.59	5.54	5.03	4.96	4.57	5.03	4.90	4.82	4.61	4.29	4.23
Belgium: 10 y benchmark OLO	6.49	5.75	5.61	5.12	5.03	4.63	5.09	4.96	4.88	4.66	4.34	4.28
Germany (7-15 y)	6.1	5.5	5.4	5.0	4.9	4.4	4.9	4.8	4.7	4.5	4.1	4.0
Germany: 10 y benchmark	6.22	5.64	5.49	5.00	4.89	4.39	4.96	4.80	4.69	4.42	4.05	4.03

Source: NBB, Frankfurter Allgemeine Zeitung

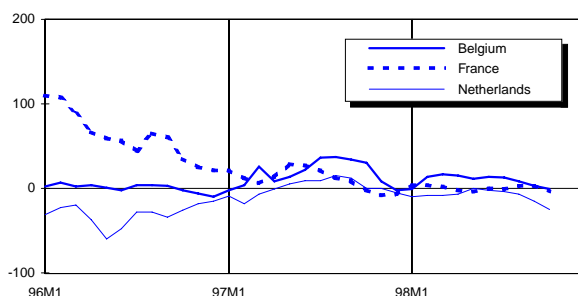
Graph 22 - Interest rate levels in Belgium, in %



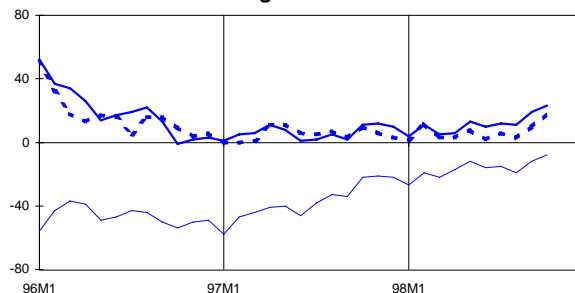
Source: NBB

Graph 23 - Interest rate differentials with Germany (in basis points)

Short-term rates



Long-term rates



Source: NBB, Frankfurter Allgemeine Zeitung, Crédit Lyonnais

During the third quarter of 1998, the extension of the financial crisis to Russia, and the decline in stock markets in industrialised countries have led investors to redirect capital to bond markets. As a result, nominal long-term interest rates declined further in United States (to 4.5% in October) and in most European countries. The fall was most pronounced in Germany (the 10-year benchmark dropped to 4.0% in October) leading to higher long-term interest rate differentials between Germany and the other European countries.

In United States, corporate bond yields have decreased less than long-term treasury rates. The increasing risk of a hard landing of the economy and the fragility of the world financial sector might have led the Federal Reserve to decrease its short-term official interest rates by 50 basis points between the end of September and mid-October, while three months ago a tightening in the US monetary policy was still mentioned as feasible.

Since the end of September, short-term interest rates have been reduced in most non Core-ERM countries. Due to lower European prospects for 1999, resulting from the deepening of the financial crisis, short-term interest rates in the Euro zone are now supposed to converge at the lowest level observed in Germany (3.3%). More and more voices are also calling for an interest-rate reduction in Europe in order to sustain internal demand in a context of reduced external demand. However, it is hardly probable that the Bundesbank will decide to relax its monetary policy before the start of EMU, as this would make the necessary convergence more difficult to achieve.

On the money markets, short-term interest rates in Belgium strictly followed the small drop in German rates during the third quarter 1998, and from September on, the spread nearly disappeared, reflecting financial markets' confidence in the bilateral parities between the two currencies. For long-term interest rates, the spread with German rates increased during the financial turmoil of this summer (up to 40 basis points beginning of October).

Exchange rates

Table 11 - Exchange rate (Belgian francs per ...)

	96	97	97Q4	98Q1	98Q2	98Q3	98M5	98M6	98M7	98M8	98M9	98M10
Deutschemark	20.58	20.63	20.63	20.63	20.63	20.62	20.63	20.63	20.62	20.62	20.63	20.63
French franc	6.05	6.13	6.16	6.16	6.15	6.15	6.15	6.15	6.15	6.15	6.15	6.15
Dutch guilder	18.37	18.33	18.31	18.31	18.31	18.29	18.31	18.30	18.29	18.29	18.29	18.29
Italian lira	2.01	2.10	2.11	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09
British pound	48.38	58.59	60.12	61.76	61.21	60.07	59.98	61.04	60.96	60.25	59.00	57.28
American dollar	30.96	35.78	36.22	37.53	37.01	36.36	36.63	36.96	37.09	36.87	35.11	33.81
ECU	38.77	40.41	40.71	40.81	40.77	40.66	40.64	40.75	40.75	40.67	40.57	40.64

Source: NBB

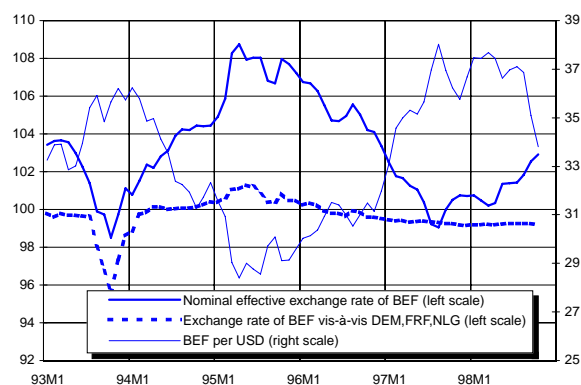
Table 12 - Nominal effective exchange rate of the Belgian franc

	96	97	98	97Q4	98Q1	98Q2	98Q3	98M6	98M7	98M8	98M9	98M10
Level (Jan.92=100)	105.1	100.7		100.7	100.5	101.0	101.9	101.4	101.4	101.8	102.5	102.9
Growth rate [1]	-2.0	-4.2		-3.1	-1.5	0.1	2.5	1.0	2.2	2.8	2.5	2.4
Id. with constant rate till year end			0.9									

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

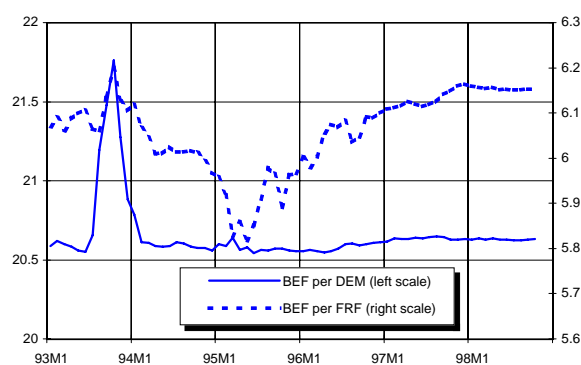
Source: NBB, FPB

Graph 24 - Effective exchange rate (Jan. 92=100) and dollar rate



Source: NBB, FPB

Graph 25 - Belgian francs per French franc and Deutschemark



Source: NBB

Exchange rates in the Asian countries hit by the crisis stabilised during the third quarter 1998, while since its devaluation, the rouble has lost nearly 70% of its value, and the yen has regained strength against the USD. The exchange rate of the dollar has depreciated by nearly 10% against the main European currencies, reaching less than 1.65 DEM in October against 1.80 DEM in July. This depreciation reflects rising concern regarding the impact on the US real economy of the deepening in the financial crisis in Asia, its contagion to Latin America as well as the US stock market falls. The reduction in short-term interest rates by the Federal reserve has probably also contributed to this depreciation.

The evolution of the exchange rate of the dollar against the Euro zone currencies is rather uncertain. However, due to the sharp deterioration in the US current account, the risks are clearly on the down side for the parity between the US dollar and the Euro, and will rely on the conduct of the monetary policy by the European Central Bank from 1 January 1999 onwards.

Despite the financial turmoil during the third quarter 1998, the bilateral exchange rates between the European currencies taking part in EMU have shown high stability, reflecting the credibility of the Euro in the financial markets. The Belgian franc remained stable against the other Euro zone currencies and the BEF effective exchange rate increased by 0.9% (t/t-1) during the third quarter 1998 because of the depreciation of the US dollar and the British pound.

Fiscal indicators

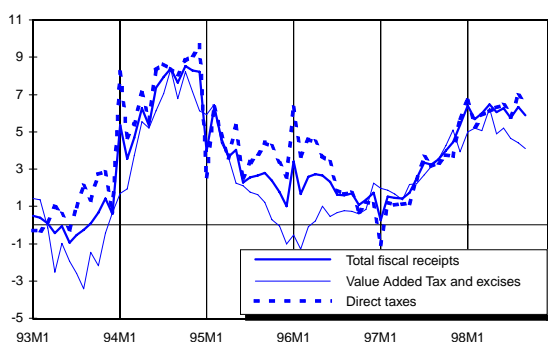
Table 13 - Fiscal receipts (1)

	96	97	97Q4	98Q1	98Q2	98Q3	98M4	98M5	98M6	98M7	98M8	98M9
Total	3.8	7.0	9.1	6.7	7.4	4.9	8.7	3.5	8.6	5.4	8.7	0.3
Direct taxes	3.2	7.4	10.1	5.6	8.3	5.9	7.2	8.2	10.3	5.9	12.6	1.3
Withholding earned income tax	4.0	5.5	5.6	6.3	2.7	6.2	45.7	-17.7	-1.1	-27.1	63.4	5.2
Advance payments	4.5	13.5	20.4	38.5	12.5	30.0	14.2	100.0	-25.1	28.3	.	55.2
Value Added Tax and excises	4.4	5.6	5.8	7.4	5.6	2.6	11.9	-2.0	4.6	2.6	5.7	-1.2
Other	3.5	7.9	11.0	6.3	8.3	6.3	7.4	7.1	10.5	6.8	12.1	1.2

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

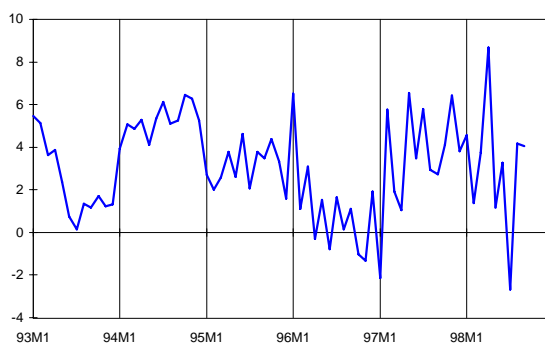
Source: MvF/MdF, FPB

Graph 26 - Real total fiscal receipts (2)



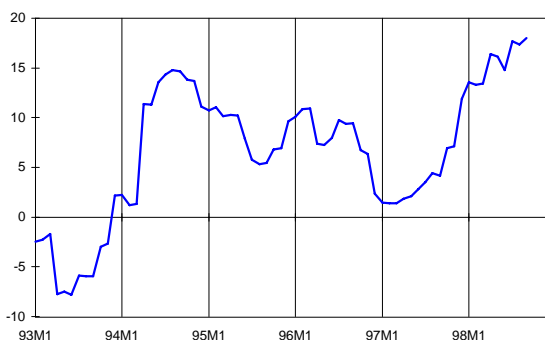
Tax receipts have been positively influenced by strong activity growth rates and the composition of growth. The real 12-month on 12-month growth rates have remained very high at around 6% since the beginning of the year. In the previous publications of the STU, it has been argued that the growth rates are unlikely to remain this high until the end of the year. Some signs of smaller growth rates have become visible since our July publication.

Graph 27 - Real withholding earned income tax (2)



Receipts from value added taxes and excises have further grown, mainly under the influence of higher private consumption. The figure for the third quarter of 1998 is clearly lower than what has been observed during the first half of the year. This points to some weakening in private consumption growth.

Graph 28 - Real advance payments (2)



Advance payments remained exceptionally good in July. It is likely that the October and December advance payments may be significantly lower, partly because the growth rates in these months in 1997 were already very high.

Withholding earned income taxes continued their strong growth rates. While wage moderation continues, the main influence must come from higher employment growth. This evolution is clearly positive for the outlook for the real economy for the rest of this year.

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

The 1985 input-output table

Since the 1994 legal reform of the Belgian statistical apparatus, the FPB is in charge of the construction of input-output tables. These tables describe the domestic production process and transactions in products within the economy. They display the product flows between sectors, with the rest of the world and the deliveries of sectors to the final demand. In that way they reflect the use and supply of products by branch.

The National Institute for Statistics used to produce these tables each five years. The last table concerned the year 1980. In the normal course of events the FPB should have started with the 1995 table. In order to respect those five-year gaps, the FPB decided to begin with the tables of 1985 and 1990. The 1985 table is ready now. It was adopted by the Scientific Committee for the National Accounts on 5 October 1998 and is available on diskette and on the Internet site of the FPB.

In order to fully understand the 1985 table, it is helpful to read the accompanying book "The 1985 Input-Output Table". This book includes two parts. The first part describes the notions used in the input-output table, and explains how the components of the final demand, the intermediate deliveries of the sectors and the components of the value added have been estimated. The second part of the book deals with some applications of input-output analysis. Some of these are mentioned below.

Only a moderate change in the sectoral production technology appears in comparing the 1985 table with the 1980 one. The consumption of chemicals, synthetic products and market services increased in the industry whereas the contribution of imported products to industrial production grew to the detriment of the value added. This shift is generated by outsourcing activities and globalisation. In addition, modernising the productive machinery and the wage policy of the beginning of the eighties increased profitability in most sectors.

The direct and indirect impact on total production of a change in the final demand for domestic products has been measured by calculating production multipliers by sector. So, an increase by 1 billion francs of the demand aimed at the construction sector led to an upsurge of total production by 1.4 billion francs. This multiplier differs from sector to sector. It is mostly higher for industrial products than for services. Employment multipliers have been calculated in the same way. They display the impact of the final demand for domestic products on total employment. For example, in 1985, an additional demand of 1 billion francs for transport equipment other than motor vehicles created 717 jobs, whereas a

demand of 1 billion francs addressed to the construction sector generated 617 jobs.

The relationship between the components of final demand and employment has also been evaluated. In 1985 private consumption provided 1.3 million people with a job, of which 80 per cent were in market services. This corresponds to 36 per cent of total domestic employment. Exports generated 1.2 million jobs. In industry, three quarters of the jobs depended on exports whereas, in market services, one third was related to exports. Nearly just as many people worked for exports in market services as in industry, although the latter accounted for 75 per cent of exported products. Investment produced 310,000 jobs, half of which were to be found in the construction sector.

The interdependence between sectors has been analysed by using cumulated costs. These are all the costs direct and indirect to be borne for the production of a final product. Except for the collective consumption of public services, that by definition consists almost only of value added, it appears that the private consumption has the highest content of cumulated value added, namely 62 per cent. Investment and exports contain only 45 per cent of value added, so that here, imports form the greatest part of the cumulated costs.

In the same way, the total employment needed to satisfy the final demand for domestic products, has been estimated. In 1985, 960,000 people were required to satisfy the final demand for industrial products, whereas employment in the industry amounted to 760,000. This implies that 200,000 people employed in market services were working for industry.

The interdependence between the Belgian economy and the rest of the world has been computed by combining input and output indicators. The petroleum refineries, the motor vehicle industry, the non-ferrous metals industry are sectors which depend the most on the rest of the world. Conversely, the distribution of natural gas, water and electricity, the building-materials and meat-products industries rely almost entirely on the domestic market. Finally, it appears that, compared to 1980, the industry is more exposed to international competition, whereas market services maintain their relatively sheltered position.

"Tableau entrées-sorties 1985. Une analyse des structures économiques de la Belgique". "De input-output tabel van 1985. Een analyse van de economische structuur van België". L. Avonds, J. Floridor, A. Gilot, C. Hambye, D. Rase, K. Versteegen. October 1998.

Differences in growth of value added and employment between Belgian firms: the role of innovation and group membership

The paper studies the impact of product, process and combined product and process innovations on firm growth, both in terms of (sector price deflated) value added and average employment, while holding constant various growth-related characteristics of firms. It also compares the growth performance of firms that see themselves as independent units with those that, as a subsidiary or parent company, are part of a group. This paper, made within the framework of the SSTC-program on "relocation, innovation and employment", makes use of a survey answered by 466 firms located in Belgium. This survey was organised in december in collaboration with the KUL and UCL.

Using simple OLS and SUR (Seemingly Unrelated Regression) techniques, a reduced form growth specification is estimated that is consistent with recent theories in industrial organisation about active learning and selection. These theories emphasise the importance of differences between firms in capacity to learn and efficiency. They predict that firm age and size are negatively correlated with growth, positively with labour productivity. Besides this, some variables are included to check for other existing theories particularly relevant for a small open economy: the theory of comparative advantages, the influence of real exchange-rate fluctuations and the product life-cycle theory.

In this broad theoretical context, innovation can have a positive effect on growth rates, both because it generates a new product life-cycle, and because innovations are associated with learning processes, during which productivity rises sharply. More specifically we predict a

more rapid growth of value added than employment at the firm level, as a consequence of all types of innovation.

Our regressions, based on yearly growth rates for the period 1990-1996, confirm that age, and (particularly) size are negatively related with growth of value added and employment in Belgium. A high capital intensity is found to have a positive impact on growth, while a high share of blue-collar workers has a negative one. The fact that a firm is an independent unit also has a negative impact on growth in the group of industrial firms. In the industrial sector, independent units were found to be less innovative, less export-oriented, less capital-intensive and employing more blue-collar workers.

Combined product and process innovations had a significant positive effect on growth for industrial firms. As predicted, their effect on value-added growth was larger than that on employment growth. The effect of combined innovations was larger for firms exporting more than 50% of their turnover. For the latter group of industrial firms, as well as for firms in the trade sector, process innovations had a positive impact on value added and employment growth. Product innovations that did not imply process changes were not found to have a significant positive effect on growth of value added or, employment in the industry, trade and service sectors.

"Verschillen tussen ondernemingen in groei van toegevoegde waarde en tewerkstelling in België: de rol van innovatie en groep-lidmaatschap".

Bart Van den Cruyce, Working Paper, 9-98 December 1998.

Macro-economic impact of reductions in non-wage labour costs

Earlier this year, the Belgian government submitted an "Employment Action Plan" to the European Commission. One of the policy actions proposed in this Plan refers to an additional reduction of employers' contributions to social security. In this working paper an estimate is made of the macro-economic repercussions with respect to employment, economic growth and public finances that may be expected from this measure.

In the Employment Action Plan, non-wage labour costs would be gradually reduced over the period 1999-2004, the total reduction (with respect to a baseline projection at constant policy) amounting to 108 billion francs in 2004. Part of this overall package (more than 12%) is destined for the "non-profit" sector and is conditioned by a

net increase in employment in this sector. Half of the remaining budget will be used to extend the existing flat-rate reduction for blue-collar workers to all employees and to gradually increase its level. The other half will be made available subject to the conclusion of sectoral agreements for employment, to be negotiated by the social partners.

The simulation was performed by means of the macro-sectoral model HERMES for the period 1999-2006. According to this exercise, the measure would increase total employment by 1.3% (50,000 units) in 2004. On the one hand, this result may be explained by a relative increase in the labour intensity of production following the less rapid increase in domestic labour costs and by

stronger GDP growth, sustained both by more buoyant net exports and by stronger growth in the domestic components of final expenditures. On the other hand, part of this increase must also be credited to the relative mix of the policy measures: reductions are targeted rather to the market services sectors, where factor substitution is more pronounced and more swift, and to the non-profit sector, where there is more scope for making subsidies conditional on net increases in employment that would not have occurred otherwise, thereby reducing the deadweight losses that normally accompany this type of measures.

In this exercise no alternative financing of social security was assumed (none is envisaged in the Belgian Employment Action Plan). In 2004, after taking account of all induced macro-economic effects, the net financing capacity of the Social security system would decrease by

93 billion francs and the net financing capacity of Central government (Federal government, Communities and Regions) would increase by 32 billion francs, resulting in a net increase of the overall General government borrowing requirement of 59 billion francs (to be compared with an initial cost of 108 billion francs before feedback effects). In other words, the measure may be seen as being "self-financed" to the extent of 45%, the initial (ex ante) cost per extra job created of 2 million francs being reduced to a macro-economic (ex post) cost after feedback effects of 1.1 million francs.

"Macro-economische impact van bijkomende patronale bijdrageverminderingen in het Belgisch Actieplan voor Werkgelegenheid". "Impact macro-économique des réductions supplémentaires de cotisations patronales du Plan d'Action Belge pour l'Emploi". F. Bossier, K. Hendrickx, C. Streel. Working Paper 7-98, September 1998

Economic and Environmental Consequences of Fiscal Measures for Energy Products in the European Union

This Working Paper presents an evaluation of the economic and environmental consequences of European harmonisation proposals, regarding the taxation of energy products, drawn up by the Commission in 1996 and early 1997. The Paper is a revised version of a study carried out for the Services of the European Commission in 1997.

In the study, two types of measures are considered. The first type defines minimal excise rates on energy products, as well as their evolution. Member countries are supposed to apply the higher of two rates, the effective (existing) rate and the minimal (proposed) rate. Member States are left free to apply rates higher than those proposed by the Commission. If actual rates are higher than those proposed, they must not be revised downwards, so as to avoid downward fiscal competition between Member States. The rise in tax rates is applied progressively over five years. Generally, these measures should not lead to substantial increases in existing tax rates.

Within the first type of measures, two cases are defined. In the first case, certain Member States receive a two-year dispensation regarding the increased minimum excise rates. In the second case, one assumes that industrial sectors are taxed at a level 20% lower than in the first case. These two cases are evaluated both with and without accompanying fiscal reform measures in favour of employment.

In the second type of measures (or third case), Member States increase their effective tax rates up to the same growth rate of the new EC minimum levels. In this more technical scenario, we have much higher increases in

excise rates than in the first group of cases. Once more, this case is evaluated both with and without accompanying fiscal reform measures in favour of employment.

Finally, we evaluate the effects of the Commission's February 1997 energy tax proposal. The differences introduced in this proposal, as compared to case one of the first type of measures, can be summarised as follows :

- Excise tax rates on motor fuels have been lowered ;
- Exemptions for energy intensive industries are implemented (as provided in article 15, paragraph 2 of the Commission's Revised Proposal).

In each of the above cases, the tax proceeds may be recycled into either reductions in budget deficits, leading to reductions in interest rates, or reductions in employers' social security contributions.

In general, the more realistic cases (cases one and two, as well as the February 1997 proposal), when tested with accompanying fiscal reform measures, have positive effects on GDP, while leading to only slight increases in inflation. These measures have positive effects on employment, and allow for reductions in CO₂ emissions. Finally, notwithstanding the ex ante fiscal neutrality of the measures, the scenarios lead to slightly positive effects on public finances.

"An Evaluation of Fiscal Measures for Energy Products in the European Union. Results from the HERMES-Link System", F. Bossier, L. Lemiale, S. Mertens, E. Meyermans, P. Van Brusselen, P. Zagamé. Working Paper 8-98, October 1998.

Other Recent Publications

[Medium-Term Economic Outlook 1998-2003](#), April 1998
(available in Dutch and in French).

[Economic Forecasts 1999](#), July 1998
(available in Dutch and in French).

[Working Paper 4-98](#), June 1998.

B. Van den Cruyce,

"Deelname door Belgische ondernemingen aan de mondialisering, investeringen in het buitenland en toelevering vanuit het buitenland, een vergelijking".

"Participation des entreprises belges au processus de mondialisation, via leurs investissements et la sous-traitance à l'étranger, une comparaison".

[Working Paper 5-98](#), July 1998.

Algemene directie van het Federaal Planbureau,
Direction générale du Bureau fédéral du Plan,
"Macro-economische determinanten van de werk-
gelegenheid".

"Déterminants macro-économiques de l'emploi".

[Working Paper 6-98](#), July 1998.

C. Streel, I. Bracke, M. Saintrain, F. Vanhorebeek,
"Effets macro-économiques et budgétaires de l'appli-
cation du taux de TVA réduit à certains services".
"Macro-economische en budgettaire effecten van
een BTW-verlaging op bepaalde diensten".

Forthcoming Publications

[Sustainable development on a world scale](#)

This paper presents concise and recent information on the current state of implementation of Agenda 21 for sustainable development. Agenda 21 is the Earth Plan towards improved living standards for all in the 21st century which was adopted in Rio by the United Nations in June 1992 after years of long and difficult negotiations. It summarises progress and failures met since Rio in the world-wide implementation of actions of this Plan, ranging from local to global, in the social, economic, environmental and institutional fields. The paper collects data considered in the broad sense, including the outcome of international negotiations, indicators of the world's environment and development, other knowledge about the present trends at the global level and lessons based on experiences.

[Belgian Federal Report on sustainable development](#)

The Report reviews the implementation of Agenda 21 in Belgium. The context and content of the Federal Report are largely determined by the Law on the Co-ordination of the Federal Policy on Sustainable Development of 5 May 1997, which aims to improve the planning and management system at governmental level and charges the FPB with drawing up such a report every two years. It describes and analyses social, economic and ecological aspects of sustainable development in this country and the evolution of related federal policies since 1992. A framework for the appraisal of alternative future developments according to a number of relevant scenarios is proposed.

[Macrosectoral effects of tradable permits on CO₂ emissions](#)

Tradable permits are today considered to be a central instrument for mitigating GHG emissions, be-

sides fiscal and regulatory measures. The study proposes an evaluation of the macrosectoral impacts of tradable permits using an applied general equilibrium model for the Belgian economy. Technical simulations are undergone in which permits are combined with fiscal measures (carbon tax and reduction in social contributions on labour).

[Demographic ageing and the financing of Social security: a sustainable challenge?](#)

Reports of the two-day conference organised by the FPB, on 2 and 3 December 1997, in Brussels.

In order to enhance their value and keep in mind the diverse and rich contributions to this colloquium the summaries of the interventions are published. The main ideas advanced give a broad spectrum of the questions arisen by the subject: acute and updated analysis of the demographic factors, global approach of the financing in the long run of Social security schemes, more specific analyses of the latest Pension reform and of the incidence of ageing on the Health scheme. Experts gave their points of view and reacted to the analyses of the FPB.

[Belgian economic policy in the third stage of Economic and Monetary Union \(EMU\)](#)

This paper presents the main objectives and instruments of the economic and structural policy coordination that is taking place in the European Union, as well as the respective "roles" and efficiencies of the monetary, budgetary and income policies for regulating business cycles during the third stage of EMU. Finally, the consequences of Economic and Monetary Union for macro-economic and structural policy in Belgium are analysed.

Recent history of major economic policy measures

October 1998	The Federal Government presented its 1999 Budget. The primary surplus for the overall government should remain 6%. Tax brackets will be price-linked from 1999 onwards. Most of the supplementary reductions of employers' contributions to Social security for 1999 (see April 1998) should only start in July. A number of social transfers to households have been somewhat increased and direct taxation has decreased a little for married couples.
September 1998	The social partners agreed on the CRB/CCE report that defined the maximum growth rate for nominal labour costs per hour at 5.9% over 1999-2000 combined.
May 1998	The EU-Brussels Summit has decided that 11 countries will participate in European Monetary Union from January 1999 onwards: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain. At the same time, the Executive Board of the future European Central Bank has been nominated, with Mr. W. Duisenberg being the first chairman. Part of the agreement was that the Belgian primary surplus should remain close to 6% of GDP in the medium term.
April 1998	The Belgian Government has presented the National Action Plan for Employment to the European Union. Particular attention is given to: (i) an extension of the reduction in employers contribution to social security (an additional 18 Billion BEF per year from 1999 to 2004); (ii) more pronounced active labour market policies and (iii) further measures in the area of training and learning.
October 1997	The 1998-Budget was presented to the Parliament. Employers' contributions are to be cut by a further 6 billion BEF in 1998, and by 12 billion in 1999. The Justice Department is to receive an extra 4 billion BEF. Three one-off receipts: 8 billion from a third telephone operator; 2.4 billion from pharmaceutical companies and 1.5 billion from electricity producers.
July 1997	<ul style="list-style-type: none"> • Changes in the pension system for the private sector were introduced. Men and women will gradually be treated equally in the calculation of their pension. • The EU-Amsterdam Summit extended the "Stability and Growth Pact" to include an employment chapter. Countries with budget deficits above 3% of GDP could receive fines between 0.2% and 0.5% of GDP unless there are exceptional circumstances (e.g. an economic recession). • The Federal Government extended and changed the criteria for Maribel: reduction of employers' social security contributions are based on the 'blue-collar intensity'^a of each company; the total reduction of contributions is increased from 18 to 25 billion.
December 1996	The Federal Government decided that the maximum increase of the wage cost rate (per hour) would be 6.1% over 1997-98, as the Social partners were unable to reach an agreement earlier.
October 1996	The Federal budget 1997 was presented to Parliament. The major measures were: <ul style="list-style-type: none"> • Increase in excise taxes on petroleum and tobacco products and alcohol; • Non-indexation of tax brackets in 97 and 98.
August 1996	Three framework laws gave the Government extensive powers to encourage employment and competitiveness, as well as in the area of budgetary policy with a view to joining EMU and modernising the social security system. One of the laws defined a wage norm providing for a minimum and maximum increase of the hourly compensation.
October 1995	Federal Budget 1996 was presented with the main measures as follows: <ul style="list-style-type: none"> • Excise taxes on petroleum products were increased, "tax" on diesel cars • The 20.5% VAT rate was increased to 21% from January 96 onwards; • The withholding tax rate was increased to 15% from January 1996 onwards (after increases from 10% - see January 90 - to 10.3% in July 1993 and 13.39% in the beginning of 1994); • Extension of the number of "low paid workers" entitled to benefit from lower social security contributions to workers with a gross wage of up to 60,000 BEF per month (applied from April 96 onwards).
January 1994	The 19.5% VAT rate was increased to 20.5%. Excise duties on petroleum and tobacco products were also increased.
November 1993	The Federal Government presented its 'Global plan'. The main measures were as follows: <ul style="list-style-type: none"> • A new price-index was defined (the so-called 'health-index') as the CPI excluding: petroleum and tobacco products, alcohol and a new tax on household energy consumption. This price index would be used to link wages, house rents and social expenditure to prices; • A real wage-freeze in 1995-96; • Increase in indirect taxes (see January 1994); • Reduction of social security contributions.
August 1993	The EMS fluctuation bands were widened.
April 1992	VAT rates were aligned with EU norms
June 1990	The National Bank of Belgium announced that the BEF would be more closely linked with the stronger currencies of the EMS.
January 1990	The withholding tax rate on fixed income investments was reduced from 25% to 10% from March 90 onwards.

Abbreviations for names of institutions used in this publication

BLEU/UEBL	Belgisch-Luxemburgse Economische Unie / Union Economique Belgo-Luxembourgeoise
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
DWTC/SSTC	Federale Diensten voor Wetenschappelijke, Technische en Culturele aangelegenheden / Services fédérales des Affaires Scientifiques, Techniques et Culturelles
EC	European Commission
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
HRW/CSE	Hoge Raad voor de Werkgelegenheid / Conseil Supérieur de l'Emploi
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
DEM	Deutschemark
ECU	European Currency Unit
EMS	European Monetary System
EMU	Economic and Monetary Union
FRF	French franc
GDP	Gross Domestic Product
OLO	Obligations linéaires / Lineaire obligaties
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