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

Growth in Belgium in 1997 turned out significantly better than expected, but some weakening has occurred during the last quarter. The underlying trend in GDP growth should, however, confirm the 2.5% growth forecast for 1998.

The weakening in growth activity at the end of last year is to a large extent due to a significantly lower rate of growth for exports. As has been mentioned in other FPB-publications, the Asia crisis is having a dampening effect on the world and also the Belgian economy. The impact of the Asia crisis will mainly be felt in trade. Export growth will, therefore, continue to be negatively affected by slower growth in world trade. Price competitiveness has, on the other hand, improved considerably during the last two years. All in all, net exports should continue to make a positive contribution to GDP growth, but this contribution will be smaller than in 1997. As the effect of the Asia crisis is expected to be limited to 1998, some increase in growth is again expected in 1999 with GDP growth of 2.8%.

Domestic demand and particularly private consumption have continued to show a marked improvement. The consumer confidence index, strengthened by the creation of considerable employment opportunities, somewhat higher wage increases and good news concerning public finance, points to sustained consumer growth during the first quarters of 1998.

The medium-term outlook for Belgium points to an average growth rate of 2.6% over the next five years. But even with this rate of growth and moderate wage increases in accordance with the 1996 Framework Law, unemployment is likely to remain above the 1990 level. The growth in employment is estimated at around 0.75% per year and the supply of labour would increase by 0.2% per year.

The general government borrowing requirement should continue to show a gradual decrease and become a surplus from 2002 onwards in an "unchanged policy" scenario. The primary surplus should remain close to 6% from 1997 to 2000 and should increase again from then on. The debt ratio and interest burden are clearly decreasing.

Consumer price inflation should remain at 1.1% this year and show only a slight increase next year. If there are no external shocks and if wages continue to be constrained by the Competitiveness Law, there are few reasons why price stability should be threatened in future. Nominal interest rates should remain low.

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Economic Affairs

The Federal Planning Bureau (FPB) is a public agency under the authority of the Prime Minister and the Minister of Economic Affairs. The FPB has a legal status that gives it an autonomy and intellectual independence within the Belgian Federal public sector.

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

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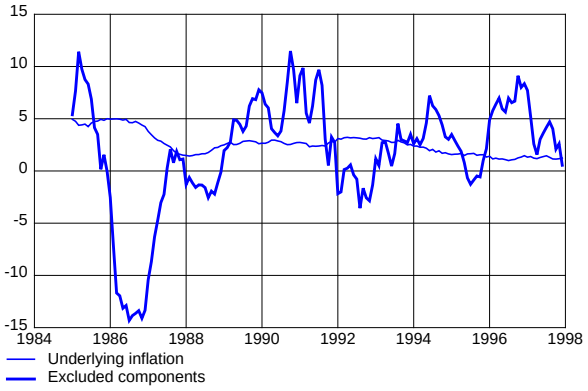
Explaining consumer price inflation

In recent years, the fall in consumer price inflation has been considerable. There are a number of reasons for this. An increasingly global and competitive economy has resulted in a decrease in world-wide inflation, leading to lower import prices. Primary commodity prices have fallen considerably. Wage moderation policies have been followed in many countries in Europe, perhaps linked to an attempt to fulfil the monetary Maastricht criteria. Moreover, central banks in many countries have increasingly concentrated on the objective of price stability. Finally, the existence of negative output gaps in recent years have protected many economies against inflationary pressures. In order to be able to assess inflation and its determinants correctly, attention should be focused on underlying inflation.

Underlying inflation

Short-term price movements are sometimes rather erratic, temporary and / or difficult to forecast. Underlying inflation (often also called *core* inflation) tries to measure fundamental price movements. Some specific categories of goods such as energy products, tobacco, alcoholic drinks, fresh fruit and vegetables are excluded as well as indirect taxes on other products.[1] Compared with observed inflation, underlying inflation is more stable (cf. graph 1) and should bear a closer relationship to the economic fundamentals.

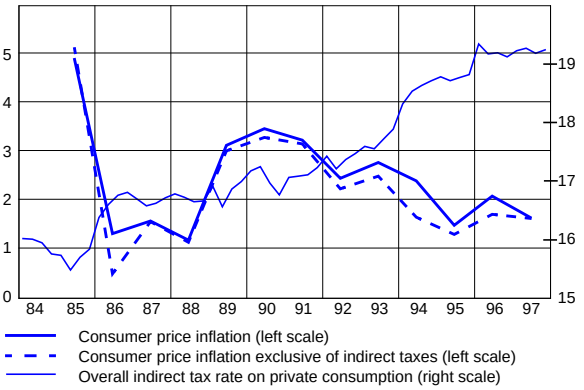
Graph 1 - Breakdown of inflation into underlying inflation and excluded components (yearly increase)



Inflation and indirect taxes

First, attention must be paid to one factor which explains the unstable behaviour of observed inflation, namely indirect taxes. An index of consumer prices exclusive of indirect taxes is established for the period January 1984 - December 1997.[2] Value added taxes (VAT), excises (on fuel, alcoholic drinks and tobacco products) and some other special taxes are regarded as indirect taxes. Graph 2 compares the yearly average growth rates of both indices and presents the *overall* indirect tax rate[3] on private consumption.

Graph 2 - Consumer price inflation and indirect taxes



Two causes of changes in the overall indirect tax rate can be distinguished. Most obviously, the overall indirect tax rate changes when excises, VAT rates or other indirect tax rates are modified. Secondly, as the tax base for excises is not linked to prices[4], the indirect tax rate also changes when prices exclusive of excises change, even with unaltered excise duties. Indirect tax pressure, for instance, is negatively correlated to world oil prices expressed in Belgian francs.

Between 1984 and 1986, legal indirect tax rates have not been modified. Up to the middle of 1985, the fall in the overall indirect tax rate can be almost wholly attributed to the massive appreciation of the American dollar, which has led to higher fuel prices in Belgian francs. During the next six quarters, the overall indirect tax rate rose by more than 1% point, mainly due to the strong depreciation of the American dollar and the fact that the Brent oil price almost halved.

In 1987 and 1988 legal indirect tax rates were again not modified, and the dollar and the oil prices were relatively stable. As a result, the overall indirect tax rate remained almost level.

From the beginning of 1989, legal indirect tax rates have been increased in successive stages. From 1989 to 1991, this was limited to excises. Although the number of excise increases was rather high during these three

1. Only direct effects have been excluded. The impact of e.g. higher oil prices on prices of non-oil goods and services is therefore still included in the underlying inflation.
2. An immediate and full pass through of indirect tax rate modifications into the consumer price index was supposed, except for the VAT-increase of January 1994 (delayed pass through). The smoothness of the underlying inflation was used as criterion for the choice of the pass through hypothesis.
3. Calculated as a weighted average (fixed weights) of legal VAT-rates, excises and other indirect taxes, and expressed as a percentage of the prices exclusive of indirect taxes.
4. Except for "ad valorem" excise duties.

years, the global impact on the overall indirect tax rate remained limited.

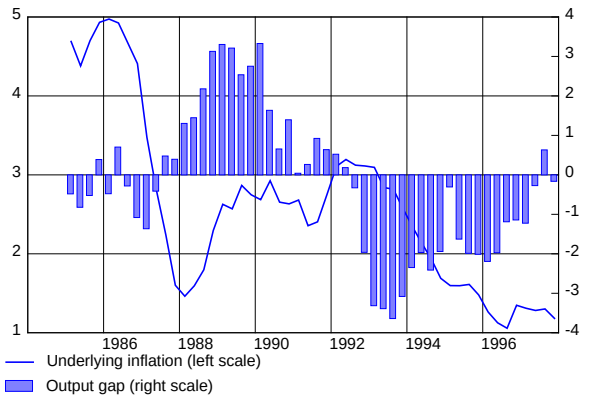
In April 1992, the VAT system was aligned to EU standards. This involved the replacement of the 17%, 19%, 25% and 33% rates with a uniform 19.5% rate, which resulted in a slight decrease (of a quarter of a per cent) in the overall VAT rate, partly offset by some excise increases. The general VAT rate was raised from 19.5% to 20.5% in January 1994 and to 21% in January 1996. In the meantime, excises were increased regularly. In January and August 1993, a special tax on energy consumption was introduced and in January 1996 the traffic tax on diesel cars was substantially increased.

All in all, the overall indirect tax rate has increased by more than 3% points during the last fourteen years. The major part of this increase took place between January 1993 and January 1996. Since then, the overall indirect tax rate has been constant.

Underlying inflation and output gap

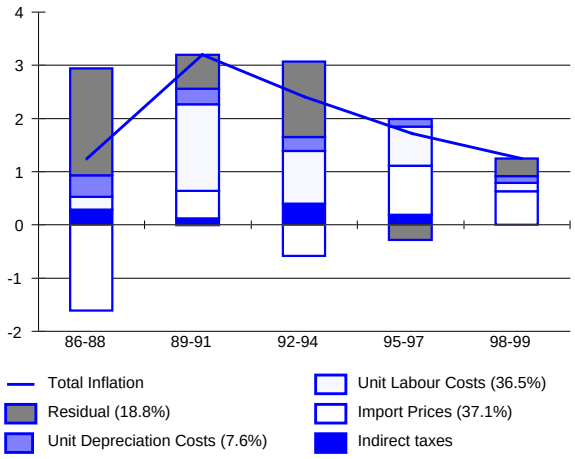
Graph 3 shows the relationship between the business cycle (measured by the output gap) and the underlying inflation. The output gap measures the difference between actual and potential GDP. Potential GDP cannot be observed and many methodologies exist to proxy it. For this purpose (as well as in graph 12 on p. 11), potential output is estimated using a production function approach with capital and labour as inputs. With the capital-labour ratio and technological progress being rather stable in the short run, the evolution of the capital stock, under the hypothesis of no labour shortages, is the main influence on potential output.

Graph 3 - Underlying inflation and output gap



Underlying inflation falls when the output gap is negative (1985-1987 and mid-1992 to 1997). From 1988 to the middle of 1992, the output gap was positive and underlying inflation increased (with the exception of a small fall in underlying inflation from mid-90 to mid-91).

Graph 4 - Consumer price inflation and production costs (yearly average growth rates)



The relationship between the output gap and underlying inflation can be explained via the evolution of profit margins (positive output gap leads to pressure for higher profit margins and vice versa) or via the evolution of production costs (e.g. a positive output gap can lead to labour shortages and hence higher labour costs).

Looking at the components of prices exclusive of indirect taxes, the bulk of the costs for one unit of production consists of import costs, labour costs and capital costs. Graph 4 gives the contribution of these components to consumer price inflation using the cumulative costs weights[1] from the 1985 Input Output table.

Inflation and production costs

Lower costs lead to lower inflation rates. But it seems that the inflation rate does not fully reflect changes in costs. An additional "residual"-term plays an important role. What is the nature of this residual? A full quantitative breakdown of it is not easy. Apart from measurement[2] and estimation errors, part of consumer price inflation is due to improvements in the quality of goods and services included in the consumer basket. But the main contribution of the residual comes from margins per unit.

When production cost increases become more important (e.g. via higher wage increases or import price inflation), margins drop or its increases become smaller. Alternatively, lower production costs make higher margins possible. It seems that margins play a buffer role between erratic cost movements and rather rigid inflation rates. Inflation forecasts based on the above analysis will be commented on further on page 15 of this publication.

1. The "Net operating surplus" contains the income of self-employed. Part of this income is attributed to labour costs.
2. For instance the fact that Laspeyres-indices overestimate inflation as far as quantities react adversely to relative prices.

Medium Term Economic Outlook 1998-2003 of April 1998

The FPB medium-term economic outlook of April 1998 covers the period 1998-2003. Analyses of macro-economic, sectorial and labour market developments are given. Detailed results concerning public finance for the federal government, regions and communities, local authorities and departments of Social security are also commented on. A special chapter is devoted to the evolution of energy consumption and carbon dioxide emissions; another chapter focuses on medium- and long-term budgetary prospects in the framework of the Maastricht treaty criteria and the Stability and Growth Pact.

The outlook for the international environment is largely based on the most recent medium-term projections of international institutions and also takes into account the short-term diagnosis by the FPB. Forecasts for Europe suggest sustained European growth, promoted by the successful implementation of national convergence policies, the subsequent reduction of public deficits and indebtedness and the achievement of EMU. Moreover, European inflation and nominal interest rates should remain low.

Unchanged assumptions with regard to fiscal and social policy and institutional arrangements are made (even if the evolution of some macro-economic aggregates might suggest inflexions of economic policy).

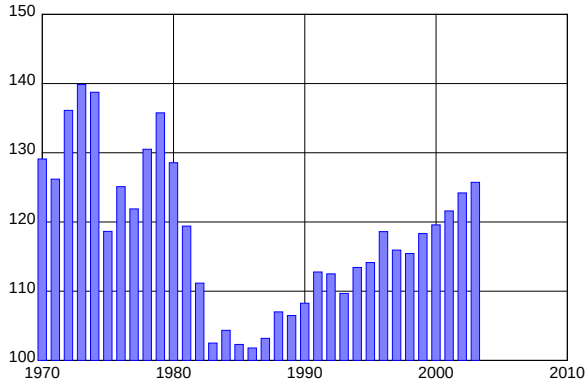
The forecast indicates that Belgian GDP growth should reach 2.6 % on average for the period 1998-2003. This favourable development would still be largely attributable to exports and investment growth, but private consumption would play a more important role than during the last few years.

Gross fixed capital formation should increase rapidly during the period of the forecast thanks to the favourable development of business investments. Private consumption would in turn increase its contribution to GDP growth thanks to a more sustained increase in household disposable income (2.1% per year on average during the period 1998-2003). Exports should be boosted by the favourable development of the world economy as well as the sustained competitiveness of the Belgian economy. Consequently, the contribution of net exports to growth should remain significant, boosting the external surplus to more than 7% of GDP, with the total claims of Belgium on the rest of the world exceeding 50% of GDP. The increase in the external surplus also reflects abundant domestic savings set against the background of a declining public sector deficit.

The establishment of new production capacity and wage moderation are the main factors behind a low inflation rate in the medium term (the rate of inflation does not exceed 1.6 % on average during the period 1998-2003).

The recovery in growth implies a further increase in energy consumption, despite a drop in the energy intensity of the GDP. In spite of the substitution of different fuels (decreasing the use of solid fuels in favour of natural gas and electricity), a rise in CO_2 emissions would be noted in the medium term (see graph 1). Without any significant change in policy, the target set for Belgium in the Kyoto protocol (a reduction in greenhouse gas emissions of 8% during the period 2008-2012, compared with the level attained in 1990) seems to be unachievable.

Graph 1 - CO_2 emissions (million of tons)



Another crucial result of the forecast concerns employment. Employment figures should show a gradual improvement, with 27,000 jobs being created every year on average during the period of the forecast. This result can be explained by the following factors:

- the favourable macro-economic context, with average GDP growth of 2.6 % for the period of the forecast;
- wage moderation (introduced as a hypothesis within the framework of the 1996 law on the promotion of employment and the safeguarding of competitiveness) and an extension of the reduction in employers' social security contributions until 1999; consequently, the increase in unit labour costs will not exceed 1.1 % per year on average over the period 1998-2003;
- the various measures taken in favour of employment (mainly activation and insertion programs).

The decline in industrial employment is likely to be confirmed, but the total number of jobs lost in industry between 1998 and 2003 should be limited to 14,000 (com-

pared with 119,000 during the period 1991-1997). The number of jobs created by the private services sector on the other hand should approach 170,000, bringing the share of employment in the private services sector to about 55 % of total employment (compared with only 36 % in 1970).

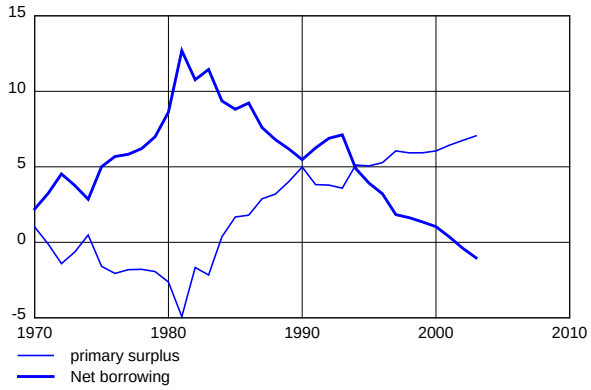
The increase in the labour force should, however, limit the impact of jobs creation on unemployment: indeed, total unemployment (in its widest sense, i.e. including "older" unemployed people) is still likely to affect about 560,000 persons in 2003, compared with 654,000 in 1996. The rate of unemployment (defined as the ratio between total unemployment in its widest sense and the labour force) is still likely to exceed 12 % in 2003, compared with only 10.3 % in 1990.

As far as public finances are concerned, the forecast supposes, as usual, that all existing laws and policies will be applied to the whole period of simulation. This will particularly result in low rates of growth in public expenditure: the growth of expenditure on health will be strictly regulated, other social expenditure will not be adjusted for developments in welfare, public employment (in the strict sense) will be slightly reduced and public wages will not increase (apart from price linking and previously scheduled increases). Public receipts will also be computed according to a constant policy rule. Taxation rates will be maintained, except when changes have already been decided (price linking of income tax brackets, decrease in the rates of social security contributions, increase in VAT on dwellings, after a temporary reduction between 1996 and 1997).

In the medium term, the primary surplus of General Government should increase again, rising from 6.1% of GDP in 1997 to 7.1 % in 2003. Moreover, interest payments should decrease considerably (from 7.9 % of GDP in 1997 to 6 % in 2003) as a result of a reduction in the interest rates and a reversed "snowball" effect (graph 2).

The combination of increased primary surpluses and lower interest payments should result in an elimination of the public deficit in the medium term: for the first time since 1974, the current deficit (measured in terms of the public gross savings) will disappear in 1997 and public savings should become positive from 1998 onwards; after 2001, public net lending (i.e. gross saving and capital balance) might even gradually increase to the equivalent of 1 % of GDP in 2003.

Graph 2 - Net borrowing of the general government and primary surplus (in percent of GDP)



The forecast therefore seems to indicate possible budgetary margins from 2001 onwards. These margins are of course strongly conditioned by the favourable macroeconomic context of this forecast. Moreover, at the end of the projection, total public indebtedness would still be more than 100 % of GDP. A special study devoted to budgetary strategies in the long term shows that the maintenance of a strict budgetary equilibrium should make it possible for public indebtedness to be reduced to 60 % of GDP in 2016, the budgetary margins then depending on economic growth and the real interest rate.

Table 1 - Key figures of the medium-term economic forecast (period averages - changes in volume unless otherwise specified)

	1981-1985	1986-1990	1991-1997	1998-2003
Potential export market	2.3	6.5	4.5	6.4
Private consumption	0.5	2.8	1.3	2.0
Public consumption	0.6	-0.1	1.3	1.3
Gross fixed capital formation	-4.0	9.5	0.1	3.4
Final domestic demand	-0.5	3.7	1.0	2.2
Exports of goods and services	3.0	5.8	4.5	6.0
Imports of goods and services	0.9	7.0	4.0	5.7
GDP	0.8	3.0	1.4	2.6
Private consumer prices	6.9	2.3	2.6	1.6
Real disposable income households	-0.5	3.7	1.0	2.1
Domestic employment (changes in '000)	-27.9	40.7	-6.0	27.0
Unemployment rate (level expressed as percentage of labour force)[a]				
- including "older" unemployed people	13.1	10.3	14.8	12.5
- excluding "older" unemployed people	12.3	8.7	12.5	9.7
Current account balance (% of GDP)[a]	-0.6	0.8	5.0	7.1
General Government borrowing requirement (as % of GDP)[a]	8.8	5.5	1.8	-1.0

a. end of period

Economic Forecasts by the Federal Planning Bureau

Changes in volume (unless otherwise specified)

	1996	1997[1]	1998	1999
Private consumption	1.3	1.5	2.0	2.0
Public consumption	1.8	1.3	1.3	1.8
Gross fixed capital formation	0.6	4.6	3.6	3.0
Final national demand	1.1	2.1	2.2	2.2
Exports of goods and services	3.2	6.2	5.6	6.2
Imports of goods and services	2.8	5.5	5.3	5.6
Net-exports (contribution to growth)	0.4	0.7	0.4	0.7
Gross Domestic Product	1.5	2.7	2.5	2.8
p.m. Gross Domestic Product - in current prices (bn BEF)	8305	8657	8993	9363
Traditional consumer price index	2.1	1.6	1.1	1.4
Consumer prices: "health" index	1.7	1.3	1.3	1.4
Real disposable income households	-0.4	0.8	2.2	2.5
Households saving rate (as % of disposable income)	16.3	15.6	15.7	16.1
Domestic employment (change in '000, situation on June 30th)	2.1	12.1	33.7	34.9
Unemployment (Eurostat standardised rate, yearly average) [2]	9.8	9.3	8.8	8.3
Current account balance BLEU/UEBL (as % of GDP)	4.9	5.4	5.8	6.3
General Government borrowing requirement (as % of GDP)	3.2	1.8	1.6	1.3
Short term interest rate (3 m.)	3.2	3.4	3.6	4.0
Long term interest rate (10 y.)	6.5	5.8	5.2	5.5

[1] Estimation FPB. National Accounts 1997 (INR/ICN, May 1998) have not been integrated.

[2] 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	2.5	2.8	1.1	1.4	1.6	1.3	5-1998
INR/ICN	2.5	.	1.2	.	.	.	2-1998
National Bank of Belgium	.	.	.	.	.	.	.
European Commission	2.8	3.0	1.3	1.5	1.7	1.4	6-4-1998
OECD	2.7	2.8	1.0	1.2	1.7	1.6	9-4-1998
IMF	2.6	2.8	1.7	1.8	1.7	1.6	3-1998
BBL	2.7	.	1.2	.	1.8	.	17-4-1998
Generale Bank/Générale de Banque	2.7	.	1.2	.	1.7	.	6-4-1998
Gemeentekrediet/Crédit Communal	2.5	2.5	0.8	1.5	1.8	1.9	20-4-1998
Kredietbank	2.7	2.8	1.3	1.7	1.8	1.4	30-3-1998
J.P. Morgan	2.8	2.7	1.1	1.5	2.3	2.3	27-3-1998
Morgan Stanley	2.6	2.4	1.0	1.4	1.7	1.3	30-3-1998
Artesia Bank	2.6	2.5	1.6	1.6	1.7	1.7	20-4-1998
Petercam	2.7	2.7	1.1	1.5	1.7	1.3	20-4-1998
IRES	2.5	.	1.0	.	.	.	15-4-1998
DULBEA	3.0	.	1.8	.	2.0	.	6-4-1998
Averages							
All institutions	2.7	2.7	1.2	1.5			
International institutions	2.7	2.9	1.3	1.5			
Credit institutions	2.7	2.6	1.2	1.5			
Consensus The Economist	2.7	2.7	1.3	1.7			9-5-98

Collaborating institutions for The Economist: ABN-AMRO, Bankers Trust, Deutsche Morgan Grenfell, Economist Intelligence Unit, Goldman Sachs, HSBC Securities, IBJ, Kredietbank, Long Term Credit Bank, Merill Lynch, J.P. Morgan, Morgan Stanley, Nordbanken, Parisbas, Royal Bank of Canada, Solomon Smith Barney, UBS, Scotiabank

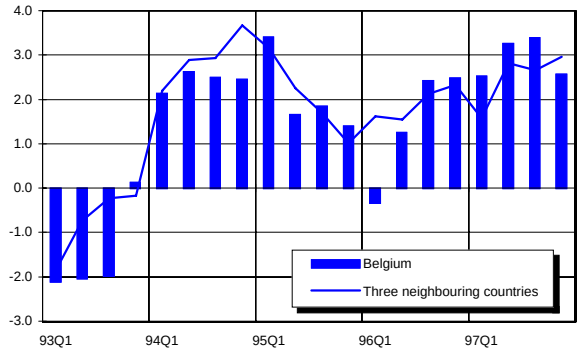
General economic activity

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

	95	96	97	95Q4	96Q1	96Q2	96Q3	96Q4	97Q1	97Q2	97Q3	97Q4
Germany	1.9	1.4	2.2	0.9	0.7	0.9	2.0	1.9	1.3	2.8	2.3	2.5
France	2.2	1.5	2.4	0.3	1.2	0.9	1.7	2.3	1.3	2.6	2.7	3.2
Netherlands	2.3	3.3	3.0	2.2	3.7	3.4	2.9	3.1	2.4	3.1	3.2	3.4
Belgium	2.1	1.5	2.9	1.4	-0.3	1.3	2.4	2.5	2.5	3.3	3.4	2.6

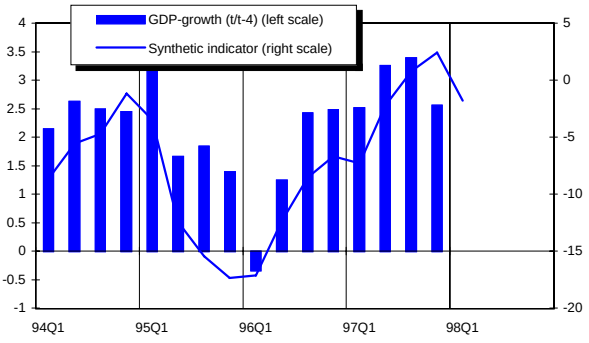
Source: National sources, INR/ICN

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



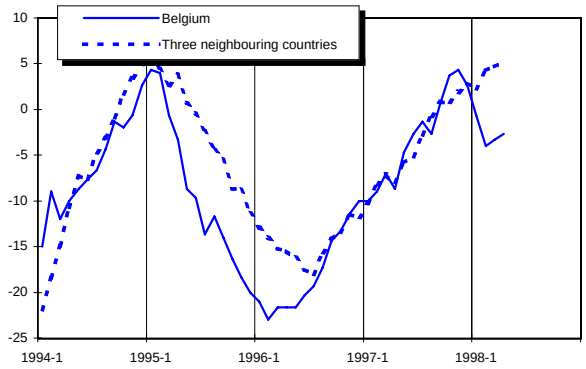
Source: INR/ICN, National sources

Graph 2 - Belgian GDP-growth and synthetic indicator



Source: INR/ICN, NBB

Graph 3 - Industrial confidence: international comparison



Source: European Commission

The Institute of National Accounts (INR/ICN)for the first time published quarterly national accounts in May. Figures for 1997 were obtained from the four quarters of the year. It is important to stress that the quarterly national accounts have their limits: a revision of the 1996 figures is beyond the scope of the quarterly accounts and only the "production side" has been estimated, with only partial estimates for the "expenditure side". Nevertheless, quarterly accounts provide useful information about the state of the economy. The accounts are integrated in the "Recent economic evolution" described in this publication.

Economic activity is progressing well in Belgium and in its neighbouring countries: GDP in the second half of 1997 increased by almost 3% in Belgium as well as in the economies of its three main trading partners. The slowdown in the fourth quarter looks rather pronounced in Belgium and is not observed in the three countries considered. The indicator of foreign orders in the manufacturing sector fell considerably shortly after the crisis in Asia became known. Because of the openness and the economy's specialisation in semi-finished products, this could have had more of an effect on GDP growth in Belgium than in the three neighbouring countries.

The drop in the synthetic indicator for the first quarter of 1998 also points to a weakening in the growth rate. It is, however, likely that the synthetic indicator will not continue to show a substantial decrease during the next few quarters. The quarterly profile of GDP growth should also remain in line with the FPB's forecasts: less of a contribution from external demand and more of a contribution from domestic demand, with relatively small changes in the year-on-year growth rates of the GDP.

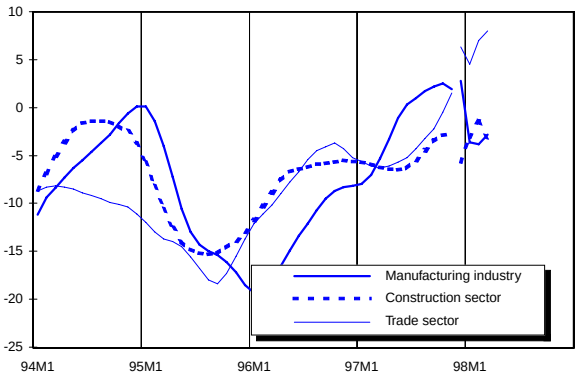
Table 2 - Monthly business surveys [1]

	96	97	97Q2	97Q3	97Q4	98Q1	97M10	97M11	97M12	98M1	98M2	98M3
Synthetic indicator	-11.2	-1.6	-2.3	0.8	2.4	-1.8	4.1	1.1	2.1	-2.3	-1.8	-1.3
Manufacturing industry	-13.3	-0.3	-0.2	2.9	3.8	-3.4	6.3	2.3	2.8	-3.6	-3.8	-2.8
Construction sector	-7.0	-5.1	-7.1	-5.1	-3.5	-2.6	-2.7	-2.1	-5.7	-3.0	-1.4	-3.3
Trade sector	-5.8	-4.0	-7.0	-3.3	1.9	6.5	0.5	-1.2	6.3	4.5	7.0	8.0

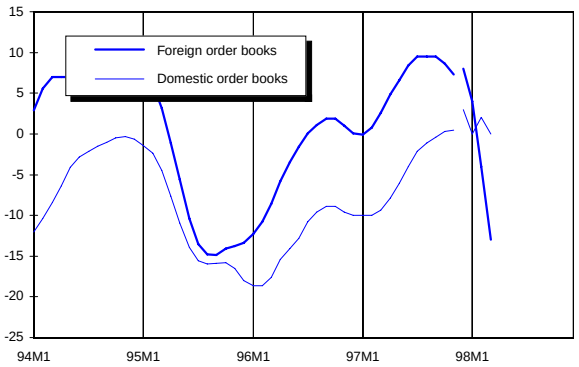
[1] Qualitative data

Source: NBB, FPB

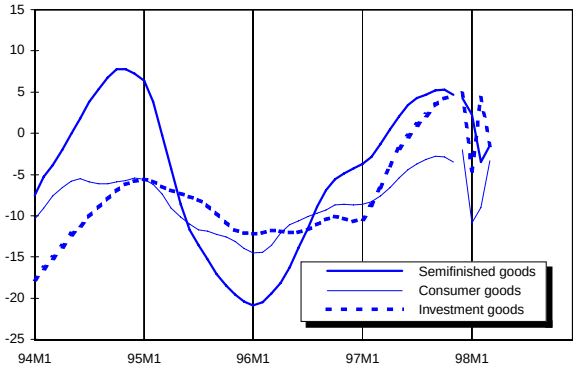
Graph 4 - Business cycle: sectoral evolution



Graph 5 - Manufacturing industry: order books



Graph 6 - Manufacturing industry: different types of goods



Source: Business cycle survey NBB

While the recovery in the manufacturing sector has been very clear since the beginning of 1996, the trade sector has only started to show a significant improvement since the middle of 1997. However, the indicators of domestic demand and particularly private consumption have since shown that the recovery of this component is strong.

The very clear difference between recent domestic and foreign contributions to economic activity can most clearly be seen from changes in the indicators of foreign and domestic order books. Although there has been no significant decrease in domestic orders during the last few months and these are currently close to their maximum value for many years, this is not the case with foreign orders. This indicator started to fall from October 1997 and is now significantly lower than the level for 1996-1997.

There is little indication that issues surrounding competitiveness are at the source of these developments. Falling rates of growth in world trade, originating from countries affected by the crisis in Asia and Japan, seem to be the most likely explanation.

So, while the spill-over from an export-led to a consumer-based recovery is now a reality, there is now a clear external risk to the recovery. However, given the fact that many other countries who are similarly exposed to Asian trade have not shown a marked decrease in their rate of export growth, it is unlikely that there will be a further decrease in the rate of growth of Belgian exports.

Finally, the construction sector indicator remains flat. Low nominal interest rates and growth in real disposable income should help the sector to gain some strength.

Private consumption

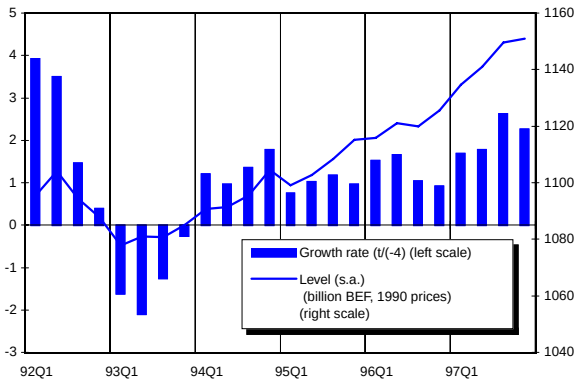
Table 3 - Private consumption indicators

	96	97	97Q2	97Q3	97Q4	98Q1	97M11	97M12	98M1	98M2	98M3	98M4
Turnover (VAT) - retail trade [1]	3.5	3.3	2.3	6.1	2.7	.	-2.4	4.3	7.7	.	.	.
New car registrations [1]	7.8	-5.7	-6.4	1.7	-0.4	5.1	-2.9	5.9	2.1	4.5	9.1	11.5
Consumer confidence indicator [2]	-22.5	-21.7	-25.7	-21.7	-16.0	-7.0	-15.0	-18.0	-10.0	-6.0	-5.0	-4.0

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

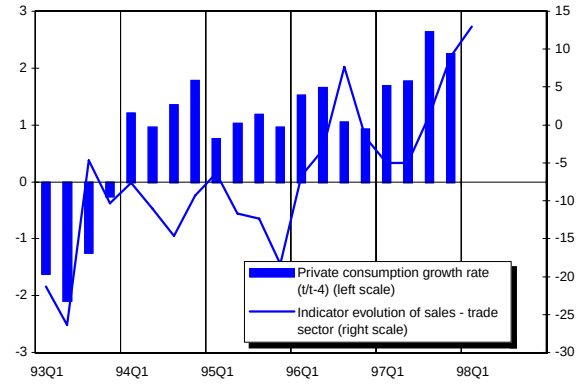
Source: NIS/INS, Eurostat, NBB, Febiac, FPB

Graph 7 - Private consumption at constant prices



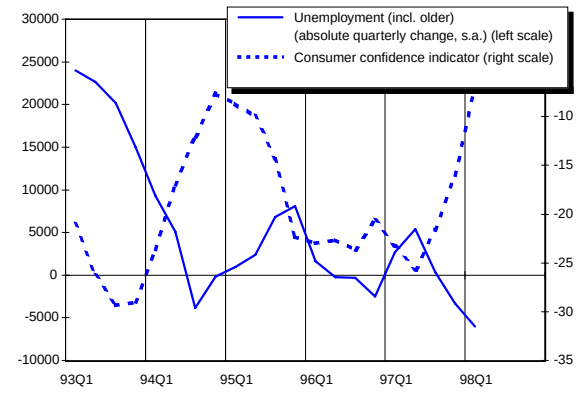
Source: INR/ICN

Graph 8 - Private consumption and related survey indicator



Source: INR/ICN, Business cycle survey NBB

Graph 9 - Consumer confidence and unemployment



Source: RVA/ONEm, Eurostat, FPB

The growth rate for turnover in the retail trade sector (derived from VAT statistics) almost doubled during the second half of 1997 (4.4%) compared with the first half of the year (2.3%) (growth rates t/t-4 at current prices). Although part of this difference can be explained by low car purchases during the first half of 1997, the consumption of other goods and services gained in strength during the course of the year.

During the first quarter of 1998 new car registrations were 5.1% higher than during the same period in 1997 (year without Motor Show), but almost 8% lower than during the first quarter of 1996 (year with Motor Show). As the effect of the Motor Show on new car registrations normally lasts for two quarters, it is too early to assess fully the success of the 1998-Motor Show.

During the first months of 1998, consumer confidence continued the upward trend which had started by the middle of 1997. There was a sharp rise in the consumer confidence index during the last nine months; the high level attained in April of this year had not been observed since 1991. The improvement in consumer confidence is in line with the fall in the unemployment level observed since the middle of 1997. The improvement in consumer confidence might also be due to positive news concerning public finances and stronger wage increases in 1997-98 compared with 1995-96.

The NBB survey indicator for sales in the trade sector has been on an upward path since the middle of 1997. During the first quarter of 1998 it reached its highest level since 1990.

All in all, short-term indicators show that the growth in private consumption showed a marked increase during the second half of 1997. This improvement should continue this year. Private consumption has probably begun to follow a more dynamic path of growth following the very moderate upturn which occurred during the second half of 1993. This year, real private consumer growth should be around 2%.

Business investment

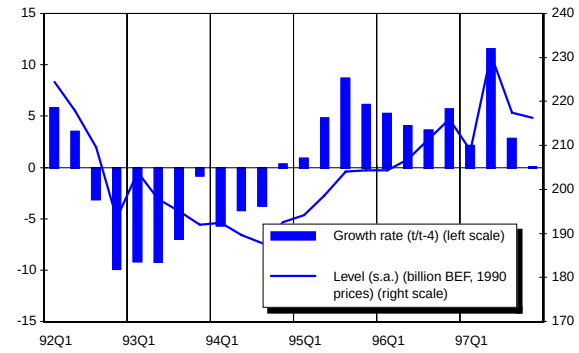
Table 4 - Business investment indicators

	96	97	98	97Q2	97Q3	97Q4	98Q1	97M9	97M10	97M11	97M12	98M1
Investment (VAT) [1]												
Industrial companies	9.3	1.6	.	4.2	-2.8	7.9	.	1.0	0.8	8.5	11.7	-5.3
Non-industrial companies	3.1	11.2	.	22.7	7.2	8.8	.	1.1	11.1	4.5	9.8	15.8
Total companies	5.5	7.4	.	15.4	3.1	8.5	.	1.5	6.7	6.6	10.5	5.7
Investment survey [1]	5.1	7.0	9.2									
Capacity utilisation rate (s.a.) (%)	79.9	82.0	.	82.0	82.5	82.3	83.4					

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

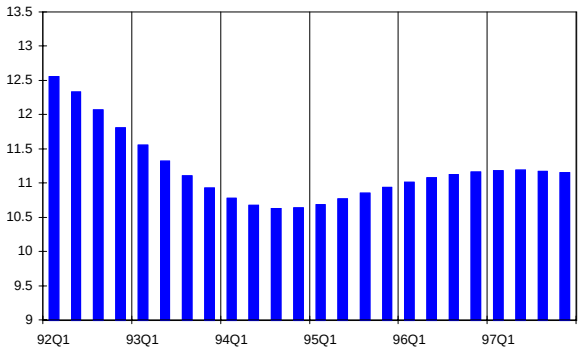
Source: NIS/INS, NBB, FPB

Graph 10 - Business investment at constant prices



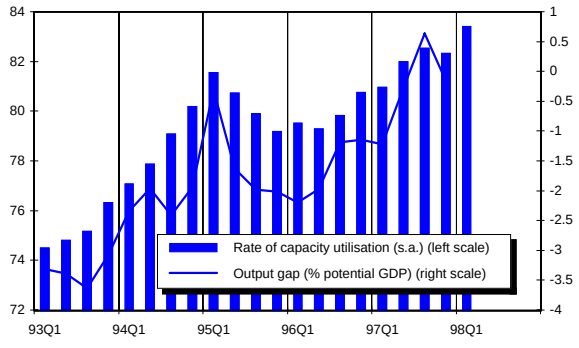
Source: INR/ICN

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



Source: INR/ICN, FPB

Graph 12 - Business investment indicators



Source: INR/ICN, FPB

In 1997, the quarterly pattern of investment by industrial as well as non-industrial companies was somewhat erratic. According to VAT statistics, growth was strong in the second and fourth quarter, while in the first and third quarter it was rather weak. All in all, growth in business investment in 1997 was somewhat lower than in 1996.

The investment climate however continues to be favourable. Long-term interest rates are at an all-time low. The high level of business profitability also contributes to the favourable investment climate. As more dynamic domestic demand should compensate for the slowdown in external demand, there might be a change in the investment structure, but there should not be any negative effect on overall business investment.

In the first quarter of 1998, the rate of capacity utilisation in the manufacturing industry was 83.4% (in seasonally-adjusted terms), compared with 82.3% in the last quarter of 1997 and 82.5% in the third quarter. The extremely high levels of the capacity utilisation rate are not only due to strong activity in the manufacturing industry but also to the rather weak growth of the capital stock during the last few years.

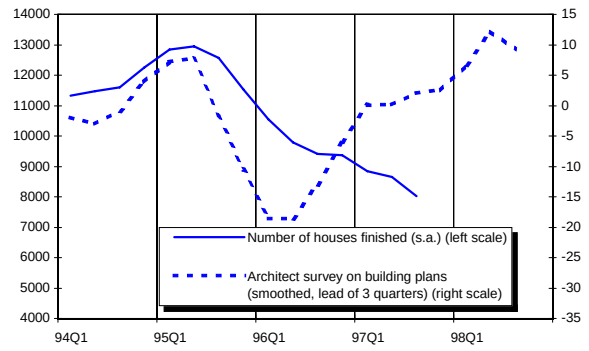
In spite of the pick-up in business investment since the end of 1994, the investment rate (in % of GDP) only rose by about 0.5% (from 10.6% at the end of 1994 to 11.1% at the end of 1997).

In 1997 as a whole, the output gap remained negative. During the second half of 1997, the output gap was close to zero.

The positive investment performance observed for more than three years is expected to be maintained in 1998. A continuing upward trend in business investment in 1998 should bring the business investment rate (in percent of GDP) to about 11.5% by the end of this year. This level has not been achieved for the past five years, but it will still be at least one percent lower than the levels observed between 1989 and 1992.

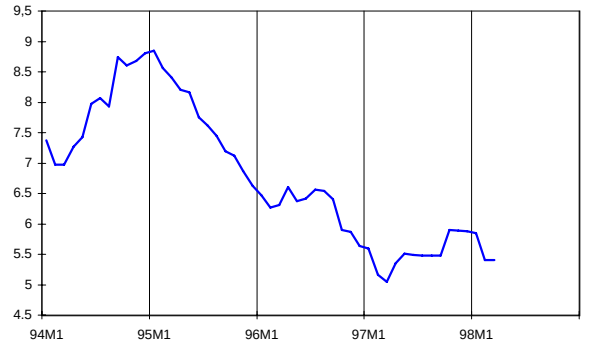
Housing investment

Graph 13 - Activity in the residential housing sector



Source: NIS/INS, NBB, FPB

Graph 14 - Mortgage rate (in %)



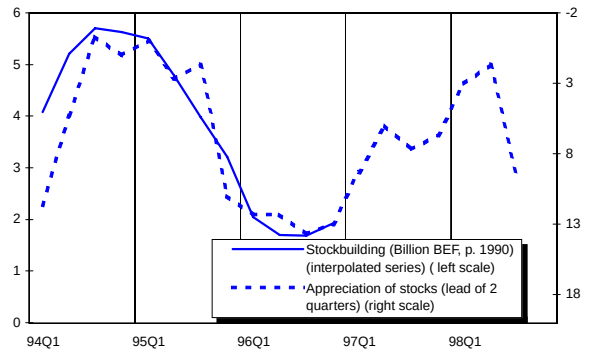
Source: NBB

In 1997, assessing the activity in the housing sector became more difficult. The number of houses finished, calculated from the number of houses started (registered by local authorities), showed a negative trend. Since this indicator has been subject to administrative changes and the most recent quarterly figures will (probably) be revised upwards, this indicator can no longer be used to assess trends in housing investment in the recent past. On the other hand, the results of the quarterly survey among architects concerning the volume of building plans indicate that activity in the residential housing sector in 1997 should have continued the upward trend which was begun in the middle of 1996. This positive trend should continue until the middle of 1998. As this indicator is leading (with a three quarters lead), it suggests that building activity should slow down somewhat during the second half of 1998.

It is too early to say whether the recently observed decline in the volume of building plans is due to the temporary rise in mortgage rates which occurred during 1997 (although these are still historically low), the (uncertainty regarding the) ending of some promotional measures introduced at the beginning of 1996 or other factors.

Stockbuilding

Graph 15 - Stockbuilding and related indicator



Source: INR/ICN, NBB (Survey), FPB

Within the context of the economic recovery which has been taking place since the middle of 1996 and on the basis of the assessment of the level of existing stocks by business (as a leading indicator), stockbuilding would appear to have made a positive contribution to economic growth in 1997.

By the middle of 1998, there has been a reversal in the appreciation of stocks. The global contribution of stockbuilding to economic growth for 1998 is, therefore, still shrouded in uncertainty.

Foreign Trade

Table 5 - BLEU/UEBL Trade statistics (intra/extrastat) [*]

	96	*97*	*97Q1*	*97Q2*	*97Q3*	*97Q4*	*97M7*	*97M8*	*97M9*	*97M10*	*97M11*	*97M12*
Exports - value [1]	4.6	11.9	9.9	12.9	16.8	8.5	18.2	17.2	15.3	9.1	4.3	12.1
Imports - value [1]	8.1	9.6	5.8	11.3	10.6	10.8	12.2	8.2	11.0	8.6	9.8	14.0
Exports - volume [1]	2.5	7.4	6.2	9.0	10.5	4.2	12.2	11.9	8.0	5.1	-1.1	9.1
Imports - volume [1]	5.6	4.2	1.6	5.8	3.2	6.2	5.0	0.5	3.9	4.2	4.6	9.9
Exports - price [1]	2.0	4.2	3.5	3.6	5.6	4.1	5.3	4.7	6.8	3.9	5.5	2.8
Imports - price [1]	2.5	5.2	4.1	5.2	7.1	4.4	6.9	7.7	6.9	4.3	5.1	3.7

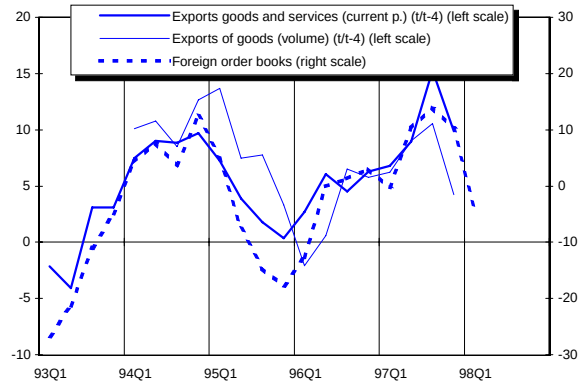
[1] Change (%) compared to same period previous year
[*] Methodological changes in the beginning of 1997 make comparisons with the past difficult. This table shows estimates to facilitate the analysis.
Source: INR/ICN, FPB

Table 6 - BLEU/UEBL Balance of payments statistics

	96	*97*	*97Q1*	*97Q2*	*97Q3*	*97Q4*	*97M7*	*97M8*	*97M9*	*97M10*	*97M11*	*97M12*
Exports - goods [1]	4.7	9.5	6.3	9.2	15.1	7.6	14.5	17.7	13.7	2.5	7.4	13.2
Imports - goods [1]	5.4	9.2	8.3	8.0	12.4	8.4	10.0	16.9	10.8	5.7	4.5	14.8
Trade balance [2]	263	299	58	87	92	62	50	3	39	25	28	10
Exports - goods and services [1]	4.9	10.2	6.8	8.9	15.3	9.9	13.6	16.4	16.0	5.6	7.9	16.1
Imports - goods and services [1]	5.4	9.7	7.5	8.6	13.4	9.5	12.1	15.3	13.1	6.6	5.7	15.9
Goods and services balance [2]	345	404	105	108	97	94	45	5	47	37	34	23
Exports - current transactions [1]	0.2	7.9	5.2	6.8	11.5	8.3	10.3	12.2	12.2	4.9	7.3	12.5
Imports - current transactions [1]	0.1	7.5	6.2	6.2	10.6	7.0	9.3	11.4	11.2	4.9	4.5	11.5
Current account [2]	433	500	102	131	127	141	57	15	55	51	49	41

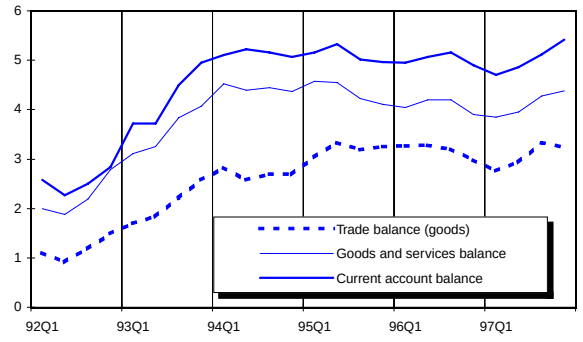
[1] Change (%) compared to same period previous year; [2] Level in Billion BEF
Source: NBB, FPB

Graph 16 - Growth of exports and related indicator



Source: NBB (BoP. Survey), INR/ICN (Trade Stat.), FPB

Graph 17 - Foreign balances (4 quarters cumulated, % of GDP)



Source: NBB (BoP), FPB

Real growth in the export of goods declined significantly during the last quarter of 1997. As preliminary results for 1998 show, this slowdown is likely to persist during the coming months. On the other hand, real imports rose faster than exports at the end of last year and at the start of 1998. With the upswing in domestic demand and increased competition from Asian products, net exports should contribute less to growth this year than they did in 1997.

Terms of trade losses were recorded on average for 1997, but, as expected, import price increases have slowed down during the last few months and there is no reason why they should increase in the course of 1998.

The current account for 1997 for BLEU exhibits a record surplus of 500 billion BEF (5.4 percent of GDP) and despite the decrease in net real export growth, the trade balance is likely to increase further in 1998.

Labour market

Table 7 - Labour market indicators

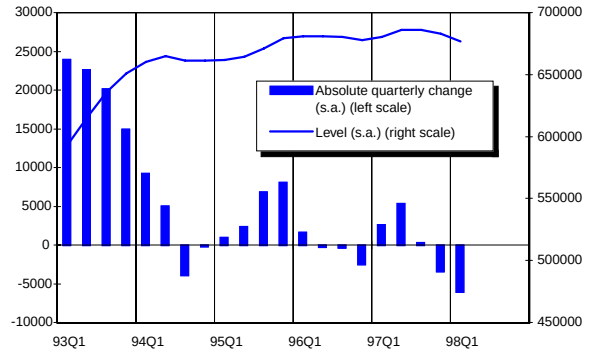
	96	*97*	*97Q2*	*97Q3*	*97Q4*	*98Q1*	*97M11*	*97M12*	*98M1*	*98M2*	*98M3*	*98M4*
Unemployment (excl. older) [1]	588.3	570.0	542.9	598.1	568.7	551.8	562.6	565.9	561.3	554.1	539.9	526.3
Unemployment (incl. older) [1]	679.9	683.9	654.5	714.1	688.6	674.8	682.6	687.0	683.2	677.0	664.0	655.0
Unemployment rate-FMTA/MfET[2]	13.7	13.2	12.6	13.9	13.2	12.8	13.1	13.1	13.0	12.9	12.5	12.2
Unemployment rate-Eurostat [3]	9.8	9.3	9.3	9.3	9.0	9.0	9.0	9.0	8.9	9.0	9.0	.

[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.

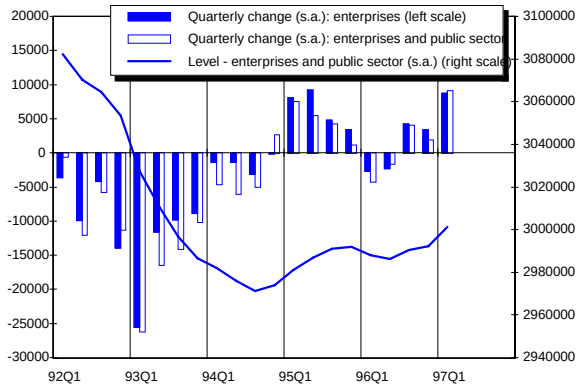
Source: RVA/ONEm, FMTA/MfET, Eurostat, FPB

Graph 18 - Evolution of unemployment (incl. older)



Source: RVA/ONEm, FPB

Graph 19 - Evolution of employment



Source: RSZ/ONSS, FPB

Analysing the figures for the labour market has been complicated by the fact that changes were made to the administrative treatment of various categories of workers and unemployed people in 1996. No definite conclusions can, therefore, be drawn from the monthly figures.

The RSZ/ONSS publishes quarterly data on employment with a delay of around six months. Statistics for five quarters are now available. Greater use will probably be made of these data in the future.

Despite the changes in the administrative treatment of figures, some tentative conclusions can be made.

A drop in total unemployment (i.e. including "older" unemployed people) has been observed for two quarters now. Even though these changes have been modest, they are nevertheless significant. A quarterly decrease of 5,000 people over 4 quarters and an increase in the labour force of 10,000 corresponds to a 1% increase in total employment.

The increase in employment is attributable to economic growth as well as more active labour market policies. The number of people working in "Local Employment Agencies" who qualify as being in employment has increased by over 5,000 compared with a year ago.

The number of vacancies has also risen considerably over the past year, indicating that the fall in unemployment should continue for the next few months.

Prices

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

	96	*97*	*97Q2*	*97Q3*	*97Q4*	*98Q1*	*97M11*	*97M12*	*98M1*	*98M2*	*98M3*	*98M4*
Consumer prices: all items	2.06	1.63	1.53	1.79	1.29	0.73	1.42	1.15	0.42	0.74	1.03	1.50
Food prices	0.62	2.20	1.26	3.27	3.29	2.06	3.52	2.89	0.95	1.81	3.46	5.09
Non food prices	2.37	1.50	1.55	1.55	0.44	-0.79	0.66	0.20	-0.98	-0.80	-0.59	-0.33
Services	2.35	1.48	1.59	1.36	1.18	1.97	1.17	1.24	1.74	2.19	1.98	2.11
Rent	2.48	1.69	1.71	1.59	1.64	1.29	1.69	1.63	1.27	1.34	1.26	1.21
"Health" index	1.65	1.32	1.22	1.42	1.20	0.96	1.32	1.15	0.56	0.99	1.32	1.80
Brent oil price in USD (level)	20.5	19.1	18.1	18.3	18.7	14.3	19.0	17.1	15.3	14.3	13.3	13.7

Source: MEZ/MAE, IWH

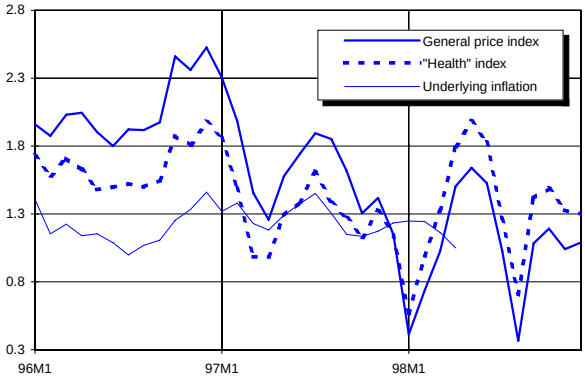
Table 9 - Monthly inflation forecasts

	98M1	*98M2*	*98M3*	*98M4*	*98M5*	*98M6*	*98M7*	*98M8*	*98M9*	*98M10*	*98M11*	*98M12*
Consumer prices: all items	101.99	102.19	102.02	102.48	102.8	102.8	103.1	102.7	103.0	103.1	103.2	103.1
Consumer prices: "health" index	101.83	102.08	101.95	102.44	102.7	102.8	103.1	102.6	102.9	103.0	103.1	103.1
Moving average "health" index	101.71	101.86	101.90	102.08	102.3	102.5	102.8	102.8	102.8	102.9	102.9	103.0

Source: Observations (up to 98M1): MEZ/MAE; forecasts: FPB

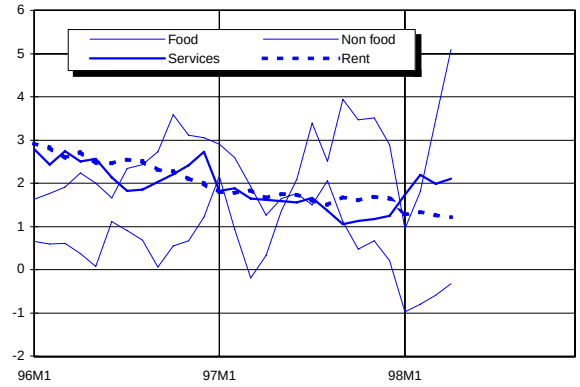
The new price index computation (new base year 1996 and corresponding new basket of products) started in January 1998. It should not have a significant impact on average inflation in 1998, but will have an effect on the monthly pattern observed. The forecasts in Table 9 take this monthly pattern into account.

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



Source: MEZ/MAE, from 1998M5 on: forecasts FPB

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



Source: MEZ/MAE

In the first quarter of 1998, CPI inflation fell to 0.73% on a year-to-year basis, compared with 1.63% on average in 1997. This difference is partly explained by the new base year (0.15% points) and partly by changes in the prices of products which are not included in the underlying inflation. Among these, fuel and other energy products particularly had a downward impact on inflation, explaining about 0.6% points of the difference between inflation during the first quarter of 1998 and the average for 1997. Brent oil prices, for instance, fell below 15 USD per barrel during the first few months of this year, compared with 19.3 USD per barrel on average in 1997. Unlike with the excluded products, underlying inflation during the first months of 1998 did not differ much from the average level of 1997 (1.2 to 1.3%).

With reference to the special topic in this issue (cf. p. 3-4), production cost increases should be smaller than in 1998, mainly due to lower import prices. Labour costs should be kept under control and not grow faster than in neighbouring countries. Furthermore, no increases in indirect tax rates are expected. Inflation should not fall to the same extent as costs so that profit margins could improve somewhat.

All in all, inflation as measured by the general CPI and the "health index" should amount to 1.1% and 1.3% respectively this year. Public-sector wages and social security benefits will not be adjusted for price changes in 1998. The pivot index for the public sector should not be reached until early 1999.

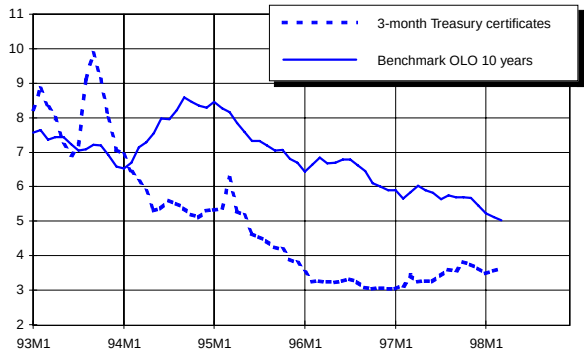
Interest rates

Table 10 - Interest rates

	96	97	97Q2	97Q3	97Q4	98Q1	97M11	97M12	98M1	98M2	98M3	98M4
Short-term rates (3 months)												
Belgium	3.21	3.44	3.25	3.54	3.76	3.57	3.77	3.67	3.50	3.59	3.63	3.73
Germany	3.21	3.26	3.11	3.18	3.63	3.48	3.69	3.69	3.51	3.45	3.46	3.59
Long-term rates												
Belgium: traditional bonds (6+ y)	6.30	5.59	5.70	5.50	5.54	5.03	5.62	5.40	5.14	5.01	4.95	4.96
Belgium: 10 y benchmark OLO	6.49	5.75	5.92	5.69	5.61	5.12	5.68	5.45	5.22	5.11	5.03	4.99
Germany (7-15 y)	6.1	5.5	5.6	5.5	5.4	5.0	5.5	5.3	5.1	4.9	4.9	4.9
Germany: 10 y benchmark	6.22	5.65	5.78	5.60	5.49	5.00	5.56	5.32	5.12	4.99	4.90	4.90

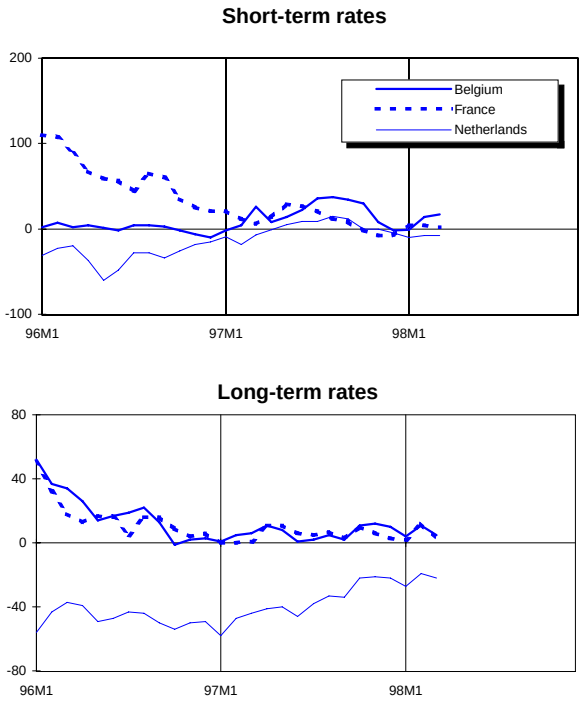
Source: NBB, Frankfurter Allgemeine Zeitung

Graph 22 - Interest rate levels in Belgium, in %



Source: NBB

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



Source: NBB, Frankfurter Allgemeine Zeitung, Crédit Lyonnais

Despite the fact that the stock markets and exchange rates in Asia have not fallen any further since January, investors have still opted for more secure bonds in the United States and in Europe during the first two months of the year. The US 10-year nominal interest rates reached its lowest level since 1993. However, financial uncertainties decreased in March and capital was progressively moved back to the stock markets. The low long-term US interest rates contributed to a further convergence of long-term interest rates in Europe, also reflecting the results of the 11 countries who will be taking part in the EMU from January 1999 in terms of the Maastricht criteria.

The Asian crisis and the fall in oil prices have largely contributed to an unchanged monetary policy in the United States as well as in Germany. However, short-term interest rates convergence is not made easier by cyclical divergencies in the euro zone. On the one hand, some countries such as Ireland, Spain and Portugal still need to reduce their interest rates due to very buoyant domestic demand. On the other hand, in countries such as Germany, France, Belgium and Austria, domestic demand is only starting to recover, inflation is decreasing and interest rates are among the lowest in Europe. In these countries, an increase in short-term interest rates with a view to facilitating convergence in the euro zone is not appropriate. However, the small increase in German short-term interest rates on the money market in April could reflect the financial markets' expectation that there will be a tightening of German monetary policy in the coming months.

Short- and long-term interest rates in Belgium followed German interest rates, benefiting from low inflation and the better than expected results of public finance consolidation. The spread between Belgian and German long-term interest rates continued to be about 12 base points during the first months of the year. On the money markets, Belgian short-term interest rates increased earlier than they did in Germany; the spread again reached about 13 base points in February after being negative during the previous two months.

Exchange rates

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

	96	*97*	*97Q2*	*97Q3*	*97Q4*	*98Q1*	*97M11*	*97M12*	*98M1*	*98M2*	*98M3*	*98M4*
German Mark	20.58	20.63	20.64	20.64	20.63	20.63	20.63	20.63	20.63	20.64	20.63	20.64
French Franc	6.05	6.13	6.12	6.13	6.16	6.16	6.16	6.16	6.16	6.16	6.15	6.16
Dutch Guilder	18.37	18.33	18.35	18.33	18.31	18.31	18.30	18.31	18.31	18.31	18.30	18.33
Italian Lira	2.01	2.10	2.09	2.12	2.11	2.09	2.11	2.10	2.10	2.09	2.10	2.09
British Pound	48.38	58.59	57.85	60.61	60.12	61.76	60.34	60.91	61.29	61.40	62.60	62.64
American Dollar	30.96	35.78	35.36	37.31	36.22	37.53	35.75	36.67	37.48	37.45	37.67	37.47
ECU	38.77	40.41	40.27	40.61	40.71	40.81	40.82	40.81	40.75	40.75	40.92	40.91

Source: NBB

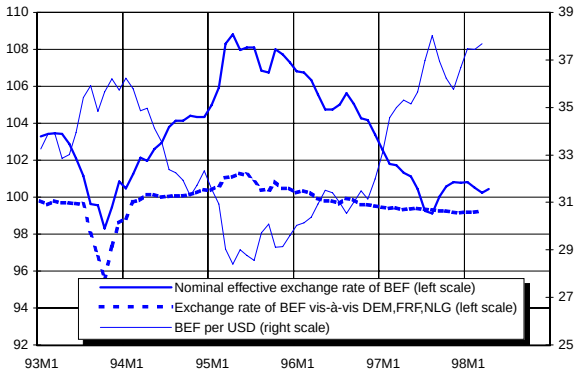
Table 12 - Nominal effective exchange rate of the Belgian Franc

	96	*97*	*98*	*97Q2*	*97Q3*	*97Q4*	98Q1	*97M12*	*98M1*	*98M2*	*98M3*	*98M4*
Level (Jan.92=100)	105.2	100.8		101.0	99.5	100.7	100.5	100.8	100.8	100.5	100.2	100.5
Growth rate [1]	-2.0	-4.2		-3.9	-5.5	-3.1	-1.5	-2.5	-1.7	-1.3	-1.4	-0.9
Id. with constant rate till year end			-0.3									

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

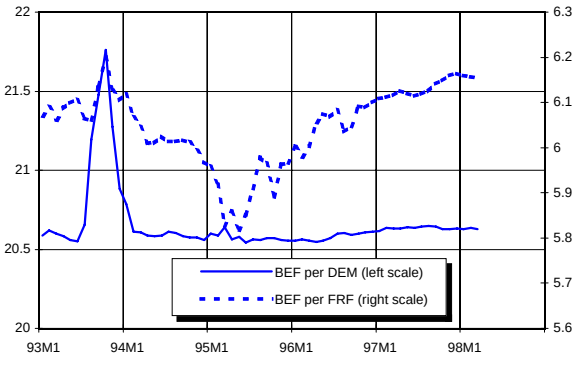
Source: NBB, FPB

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

During the first quarter of 1998, the dollar exchange rate increased by more than 3.5 percent in relation to the deutschemark compared with the previous quarter, playing its role as a "refuge currency" under the impact of the Asian crisis. However, most of this appreciation occurred in January and the dollar even weakened in April, due, among others, to the end of the conflict in Iraq and the recent intervention of the Japanese central bank in order to sustain the exchange rate of the yen against the dollar. The increase in the US current account deficit might dampen the dollar exchange rate against the European currencies in the coming months.

On the 15th March 1998, the drachma joined the EMS with a devaluation of 13.8 percent compared with its previous level. On the same day, the Irish punt was revalued by 3 percent in order to tighten monetary policy determined by very dynamic economic activity.

The bilateral exchange rates between the 11 countries participating in the EMU were fixed on the 2nd and 3rd May. The exchange rate of the euro against the dollar will largely depend on the starting level of the European interest rates and the monetary policy which will be followed by the future European Central Bank.

The BEF remained stable against the deutschemark during the first months of the year. However the BEF effective exchange rate fell by about 1.5 percent in the first quarter of 1998 due to the further appreciation of the dollar and the British pound. These currencies seemed to have reached their highest level at the beginning of April.

Fiscal indicators

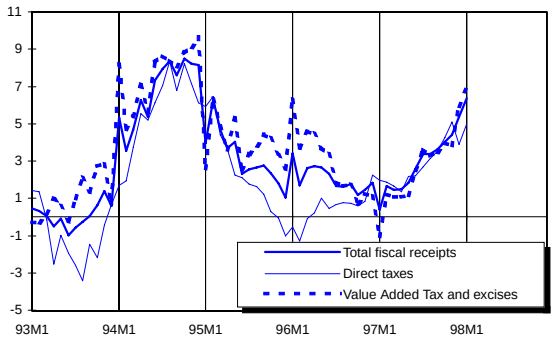
Table 13 - Fiscal receipts (1)

	96	*97*	*97Q1*	*97Q2*	*97Q3*	*97Q4*	*97M8*	*97M9*	*97M10*	*97M11*	*97M12*	*98M1*
Total	4.0	7.0	4.8	6.4	7.6	8.9	2.2	7.9	7.0	8.9	10.6	11.5
Direct taxes	3.2	7.6	6.1	6.6	6.9	10.4	-7.2	10.1	6.9	2.3	17.8	9.6
Withholding earned income tax	4.0	5.4	7.9	4.1	3.9	5.7	-28.5	8.0	12.4	22.4	-6.4	9.9
Advance payments	4.5	12.9	-6.2	8.7	15.2	18.8	-150.0	-6.5	13.0	0.0	26.1	75.6
Value Added Tax and excises	4.4	5.6	3.2	4.8	8.0	5.8	10.3	4.2	9.1	14.9	-1.6	15.3
Other	3.7	7.9	5.7	7.1	7.3	10.8	-4.9	10.3	6.0	4.8	18.5	9.4

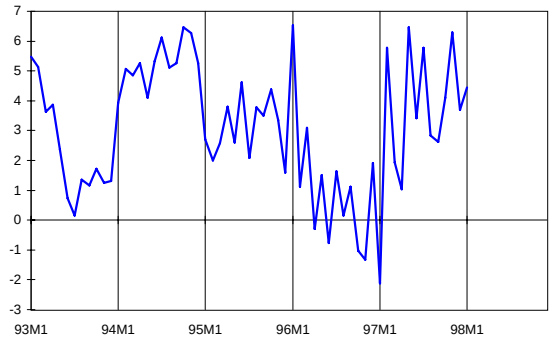
(1) Change (%) compared to same period previous year

Source: MvF/MdF, FPB

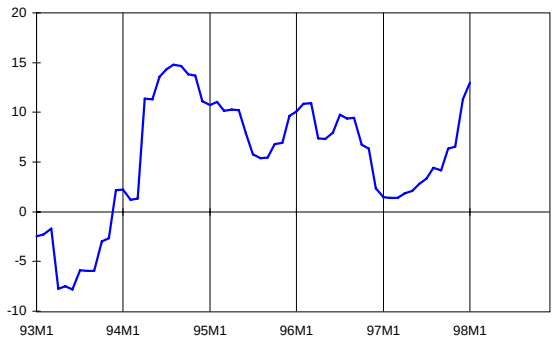
Graph 26 - Real total fiscal receipts (2)



Graph 27 - Real withholding earned income tax (2)



Graph 28 - Real advance payments (2)



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

The better than expected government account in 1997 was to a large extent due to better than expected fiscal receipts. The improvement during 1997 was indeed remarkable. The rate of growth in the receipts of direct taxes was strongest, but the acceleration of receipts from value added taxes and excises was most noticeable. Legal indirect tax rates have not changed since the beginning of 1997 so that all these increases can be attributed to higher tax bases.

This growth is consistent with what has been described in the previous pages: private consumption growth has shown a considerably increase during the year and contributed more and more to the rise in tax receipts.

Results for the first quarter of this year indicate that the rate of real (after adjustment for inflation) growth in tax receipts remains high - at nearly 7% on a year-to-year basis. Advance payments and indirect tax receipts remain strongest with somewhat smaller growth rates for earned income withholding tax receipts.

Such strong increases in tax receipts are unlikely to last. Fiscal tax pressure in 1997 is higher than in the past few years. Moreover, a further increase in growth is not expected during the course of this year. On the other hand, there are two arguments in favour of good receipts during the coming months: more balanced growth (with private consumption contributing more to GDP growth) and strong increases in advance payments.

Personal income taxes in Belgium: a macro-economic analysis

This methodological and empirical study focuses on the following topics: developments in tax over the past 25 years, the impact of fiscal reforms on tax elasticity, the tax contribution of specific income categories and a model of personal income tax.

Personal income tax forms a major source of revenue for the General Government. It is also a fiscal levy with progressive features and thus constitutes a cornerstone of the national system of income redistribution.

The evolution of the macro-economic progressivity of personal income taxation over the past 25 years and its impact on the pressure of taxation can be analysed by means of indicators based on tax statistics. Without tax reforms, the progressive nature of personal income taxation should cause its average rate to increase endogenously over the years, due only to the general growth of revenues. In the past, tax reforms tended to offset this increase in the average rate. The redistributional function of personal income taxation has, however, remained unchanged in the long term: the progressivity of personal income taxation increased up until the mid-eighties, then decreased and today still fluctuates around its historical average value.

The impact of fiscal reforms can be assessed from the difference between the estimated elasticity with unchanged policy and the observed elasticity of the tax yield to its base. The study focuses on the tax reforms of 1985 and 1988, which both resulted in a reduction in the pressure of taxation, as well as on the measures taken from 1993 onwards with a view to increasing the tax yield. It can be seen that the recent increase in personal income taxation only partly compensates for the accumulated tax yield forgone as a result of the reforms of the eighties. The analysis also evaluates the impact which the price linking of the tax brackets has on the average rate of personal income tax.

The tax base is composed of different categories of income. However, statistics on the contribution of specific kinds of income to the tax yield are not available. An appropriate method is developed to assess the contribution to personal income tax of wage earners in enterprises, wage earners in the public sector, self-employed people and people who benefit from social security benefits. As a result, it is possible to calculate a "wage wedge" for the business sector. The wage wedge is composed of all the compulsory levies that make up the gap between the macro-economic wage cost and the disposable wage, i.e. social security contributions and personal income tax. With regard to the latter, the increase in the pressure of taxation from 1993 onwards caused the average tax rate to return to its level before the reform of 1988.

Finally, an equation for personal income taxes which is suitable for medium-term macro-economic models is proposed. The equation takes into account all concepts elaborated in this study and can be used for forecasting or simulation.

"L'impôt des personnes physiques en Belgique: une analyse macroéconomique".
M. Saintrain, Working Paper 1-98, April 1998.

Economic and budgetary effects of a reduction in VAT on dwellings from 21% to 12%

Public authorities can influence housing by means of fiscal incentives. For this purpose, a partial and temporary reduction in VAT was introduced in 1996 and 1997: provided that houses or apartments covered an area of less than 190 m^2 or 100 m^2 respectively, the buyer was able to benefit from an intermediary VAT rate of 12% (instead of 21%) for the first 2 million BEF of the investment. It was initially planned that, after 1997, a VAT rate of 21% would again be applied to the total price of residential investment. However, the measure has been extended for another six months (up to June 30, 1998).

A temporary measure like the one described above involves specific anticipation effects which are not easy to evaluate. The FPB has analysed the economic and budgetary effects of a general and permanent fiscal incentive. The simulated measure consists of a definitive VAT rate reduced from 21% (i.e. the rate of the reference scenario) to 12% in the case of private dwellings, excluding social housing, applied to the total price of the new building without imposing a maximum area. The change in VAT analysed is, therefore, different from the one which will exist until June 1998.

The simulation was realised by means of the macro-sectoral model HERMES. The year t is the year in which the measure comes into operation.

The households react with some delay (in and after the year t+1). After 5 years, households' investment exceeds the level of the reference simulation by more than 9%. It is obvious then that there is an increase in employment

and, therefore, in households' disposable income, which implies a slight increase in private consumption. In addition, the accelerated economic growth which results from the rise in household spending leads to an increase in business investment.

Total employment increases by 2000 persons in the year t+1. After 5 years, 8000 additional jobs are created with respect to the baseline, with 5300 of these in the building sector. The other employment gains concern mainly the service sector and the sector of investment goods.

With regard to public finance, the measure inevitably leads to a decrease in indirect tax receipts. The government's loss of income amounts to 21 to 24 billions of BEF a year ex ante (i.e. before feedback effects). The loss in indirect taxation ex post (i.e. after feedback effects) represents less than 20 billion BEF in the year t+1 and continues to decrease due to the increasing tax base. Overall, current receipts fall by only a little more than 4 billion BEF in t+5; however, the decrease in indirect tax receipts remains significant. Indeed, on the one hand, direct taxes paid by households and social security contributions change with the growth in wage revenues due to job creations. On the other hand, improved economic activity leads to an increase in corporate tax revenue. On the expenditures side, social security benefits decrease due to the fall in unemployment. Nevertheless, interest payments increase due to the accumulation of additional public deficits.

In the first year, the general government borrowing requirement increases by more than 20 billion BEF compared with the baseline. Despite the development of positive feedback effects on economic growth, the public deficit remains above its baseline level (more than 7 billion BEF in t+5). Consequently, the measure is not budget neutral, even if important feedback effects occur. Overall, compared with the ex ante budgetary loss in the medium term (i.e. 24 billion BEF), the additional public deficit would be less than a third of that amount.

Some possible developments are not taken into account in this exercise. On the one hand, some unlisted work could shift to the legal activity sphere, because tax evasion from VAT would be less attractive. On the other hand, the reduction of VAT is supposed to be completely reflected in the price of housing. If the fall in prices is smaller and the reduction in VAT increases the companies' mark-up in the building sector, the measure would have less of an impact on economic growth.

"Economische en budgettaire effecten van een BTW-verlaging op nieuwe particuliere woningen".
F. Bossier, R. Molein, M. Saintrain, C. Streel, F. Vanhorebeek, Working Paper 2-98, April 1998.

The ExternE Project: a policy case study on electricity taxation

The ExternE project, funded in part by the European Commission's non-nuclear energy programme Joule III, is the first comprehensive attempt to use a consistent "bottom-up" methodology to evaluate the external costs associated with a range of different fuel cycles. The external costs of fuel cycles are costs imposed on society and the environment which are not accounted for by the producers and consumers of energy, i.e. which are not included in the market price. They include, for instance, damage to the natural and built-up environment, such as the effects of air pollution, occupational disease and accidents.

The ExternE accounting framework in Belgium is implemented by a consortium of four institutes: VITO (Vlaamse Instelling voor Technologisch Onderzoek), the Centre for Economic Studies of the KU Leuven, the Institut Wallon and the FPB. VITO co-ordinates Belgian participation within the European project.

The FPB elaborated a policy case study which provides some insight into how ExternE costs of damage resulting from Belgian electricity generation are used to determine electricity taxes. Special reference was made to electricity taxes in proposals for the taxation of energy at a European level, including the 1992 proposal for a CO_2 / energy tax and the 1997 proposal for the restructuring of the Community framework for the taxation of energy products.

The economic theory which establishes the basis for environmental taxation calls for the cost of the production of commercially traded goods as well as any external costs (environmental or other) to be reflected in their price. Setting the level of the tax at the cost of the marginal external damage would "correct" market prices and should lead to an optimisation of social welfare. Although the economic theory sounds rather straightforward, its application in practice is problematic. The theory relies, among other things, on the assumed existence of competitive (electricity) markets, while these markets are heavily regulated in reality. This makes it difficult to ascertain whether the taxation of electricity in line with the costs of the associated damage would have the intended effect of increasing social welfare.

One possible way forward would be to extend the theoretical framework to take account of existing market distortions. In this way, "corrected" external environmental damage costs would be taken into account when

setting environmental tax levels. Research done by Burtraw e.a. in the US with regard to the determination of optimal "adders" (taxes) has addressed this issue. They conclude that the optimal adder may differ substantially from the damage costs, depending on the severity of the pre-existing market distortions.

Another possibility would be to look for more pragmatic ways in which ongoing political processes could be inspired by the available evidence on damage costs. The 1997 proposal for a Community framework for the taxation of energy products can serve as a case in point. This proposal includes a harmonised tax on the consumption of electricity. In addition to the consumption tax, Member States can impose taxes on input fuels used in electricity generation. The level of such (non-harmonised) input taxes could be varied according to the (widely differing) external damage costs of the different fuel types. The proposal also includes the possibility of refunding the electricity tax to producers who use fuels which are less harmful to the environment: such subsidies could be provided for damage costs associated with the different types of fuel.

"Environmental external cost of fuel cycles: a policy case study on electricity taxation". B. Steyaert, Working Paper, 3-98, May 1998.

Mondialisation, Globalisation, Relocation

Conference organised by the FPB on the 12th June 1998.

The FPB will briefly present two recent studies related to dislocation. The first one, published in the book "Globalisation, Relocation", is an update of the 1994 study for Belgium. The second one analyses the results of a survey of 3000 Belgian firms with regard to "Relocation, employment and innovation", conducted in collaboration with KU Leuven and UCL. Experts from the academic and business world will give their opinion on the meaning and impact of Globalisation.

The day will be presided by Mr. R. Maldague, Commissaire honoraire au Plan. The speakers who will introduce and present the FPB reports include: Mr. H.J. Bogaert, Mr. H. Van Sebroeck and Mr. B. Van den Cruyce. External speakers will include Mr. I. Visco (OECD), Mr. G. Jacobs (UNICE, UCB), Mr. E. Di Rupo (Vice Prime Minister), Mr. Ph. Pochet (Observatoire Social Européen) and Prof. A. Sapir (ULB).

The Conference will start at 9.00 am and a general panel discussion will take place at 4.15 pm.

Both French and Dutch will be used during the Conference. Simultaneous translation to and from Dutch and French will be available.

Place	Auditoire de la Société Générale de Banque - Auditorium Generale Bank, Rue de la Chancellerie 1 - Kanselarijstraat 1, 1000 Bruxelles - 1000 Brussel.
Registration	Registration can be made by paying 2500 BF (1000 BF for students) on the FPB account Publi-Planning 000-1583766-47. This price includes the two studies and a lunch.
Contact	Additional information can be obtained from Mr. H. Dekens (tel +32 2 507 73 41 - fax +32 2 507 73 73 - e-mail contact@plan.be). The full program can be viewed on the FBP Web Site (http://www.plan.be).

Other Recent Publications

Medium-Term Economic Forecast 1998-2003, April 1998 (available in Dutch and French).

Economic Forecasts 1998, February 1998 (available in Dutch and French).

Planning Paper 81, November 1997.
M. Lambrecht "Le viellissement démographique. De l'analyse des évolutions de population au risque de conclusions hâtives". "De vergrijzing van de bevolking. Over de analyse van de bevolkingsevolutie en het gevaar voor overhaaste conclusies".

Planning Paper 82, November 1997.
Marie-Jeanne Festjens "De pensioenhervorming". "La réforme des pensions".

Planning Paper 83, November 1997 .
N. Fasquelle, S. Weemaes, "Perspectives financières de la Sécurité Sociale à l'horizon 2050". "Verkenning van de financiële evolutie van de Sociale Zekerheid tot 2050".

Planning Paper 84, January 1998.
F. Bossier, I. Lebrun, S. Mertens, C. Streel, P. Van Brusselen "Les priorités d'Essen en matière d'emploi". "De prioriteiten van Essen inzake tewerkstelling".

Delokalisatie-Mondialisering, een actualisatierapport over België , January 1998.
P. Bernard, H. Van Sebroeck, H. Spinnewijn, P. Vandenhove, B. Van den Cruyce.
"Delocalisation-Mondialisation, un rapport d'actualisation concernant la Belgique".

Forthcoming Publications

Demographic ageing and the financing of social security: a sustainable challenge? Reports of the two-day conference organised by the FPB, on December 2 and 3 1997, in Brussels.

Economic forecasts 1998-99. The FPB publishes economic forecasts for 1998-99 in July under the auspices of the Institute of national Accounts. These forecasts will be used by the federal government in the preparation of its budget.

Macro-economic factors determining labour demand. A quantitative pattern of employment over time and its main determining factors in Belgium compared with the country's most important trading partners are described. There is also an overview of the macro-economic and budgetary impact of labour market policies to encourage job creation which have been the subject of recent research by the FPB.

The sustainable development project. Five years after the Earth Summit: Five years after RIO (United Nations Conference on Environment and Development).
The study looks at progress made in the project of sustainable development on an international basis. The purpose is to inform the public authorities, politicians as well as the general public about the concept of the "global approach". The study is based on information regarding progress with the Action 21 program for sustainable development.

The 1985 input-output table. In December 1994, the FPB was commissioned to compile input-output tables. Since data for the 1995 table was lacking and there was a desire to gain experience in this field, a table for 1985 was drawn up based on a somewhat mechanical method. The publication describes the framework, definitions and evaluation methods and outlines various applications of input-output analysis such as the link between final demand and primary inputs, the cost composition of output and the import content of output. A diskette with the data will be included.

Recent history of major economic policy measures

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.
March 1998	The Greek drachma was devalued by 13.8 percent while the Irish punt was revalued by 3 percent.
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	• 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. Anticipated retirement between 60 and 65 will henceforth only be allowed to workers with a career of minimum 20 years. A minimum pension right for every year worked was also introduced. The savings for government of these changes are evaluated by the FPB to be limited in the near future but will amount to 0.25% of GDP in 2010. • 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: • Increase in excise taxes on petroleum and tobacco products and alcohol - expected impact (excise taxes and VAT on excise taxes included): 1.2 billion in 96 and 13.2 billion in 97-; • Non-indexation of tax brackets in 97 and 98 - expected impact: 5.4 billion BEF in 97-. • Taxes on the delivery of financial products - expected impact: 4 billion BEF in 97-.
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: • 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: • 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. • Reduction of employers contributions to social security in the "open sector" (so-called Maribel bis). • Several measures to encourage employment by reducing employers contributions to social security
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
DULBEA	Département d'Economie Appliquée de l'Université Libre de Bruxelles
FEBIAC	Fédération Belge des Industries de l'Automobile et du Cycle "reunies"
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
IWH	Institut für Wirtschaftsforschung Hamburg
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	European Monetary Union
FRF	French Franc
GDP	Gross Domestic Product
OLO	Obligations linéaires / Lineaire obligaties
s.a.	seasonally adjusted
t/t-4	growth rate between present quarter and the corresponding quarter previous year
t/t-12	growth rate between present month and the corresponding month previous year
UKP	United Kingdom Pound
USD	United States Dollar
VAT	Value Added Tax