1. Economic and financial situation

1.1 Economic situation at the international level

1.1.1 Short-term interest rates and monetary policy decisions

The Governing Council of the ECB raised the minimum bid rate for the main refinancing operations by a total of 50 basis points in March and in June 2007; in June 2008, the minimum bid rate stood at 4.00%. The interest rates on the deposit facility and on the marginal lending facility were raised to 3.00% and 5.00% respectively. Since the onset of market turmoil in August 2007, the Eurosystem's monetary policy was conducted in a context of heightened uncertainty, in particular with regard to the impact of market tensions on economic developments.

Market turmoil also impinged on the overnight interbank lending rate (EONIA), while the three-month EURIBOR increased considerably in spite of the liquidity measures undertaken by the Eurosystem.

Annual HICP inflation averaged 2.1% in 2007, after 2.2% in 2006. The situation in the second quarter of 2007 suggested that annual HICP inflation would rise considerably at the end of the year; indeed, from the fourth quarter of 2007, the annual rate of inflation considerably exceeded

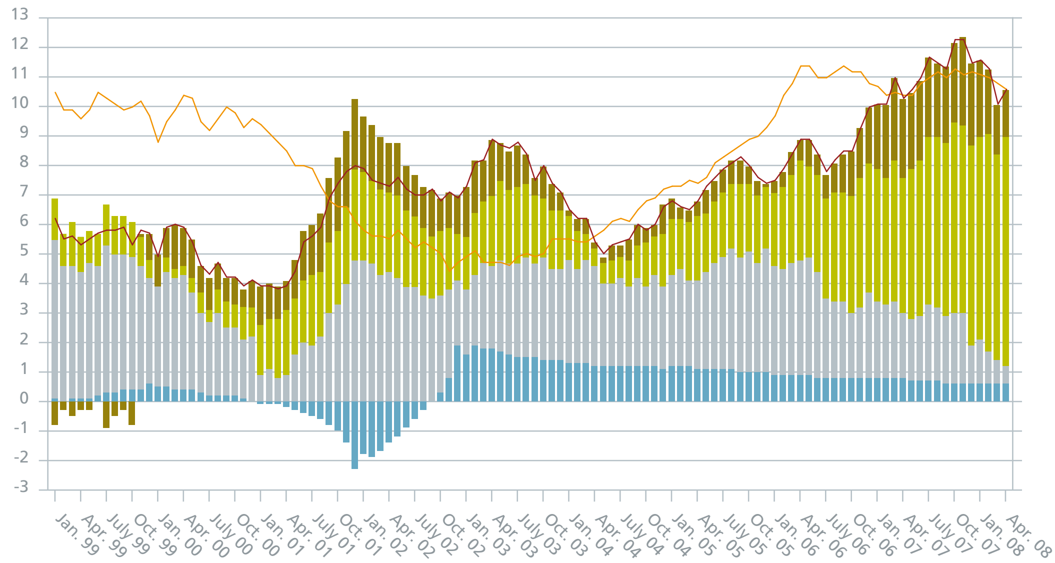
**CHART 1:
KEY POLICY RATES OF THE EUROSYSTEM, THE EONIA AND THE THREE-MONTH EURIBOR**

Sources : ECB, Bloomberg

1. ECONOMIC AND FINANCIAL SITUATION

CHART 2: MONEY AND CREDIT DEVELOPMENTS

(yearly changes in percentage; contributions to yearly changes in percentage points)



Source : ECB

2% in the wake of a rise in oil and food prices. In the first four months of 2008, the annual rate of inflation ranged from 3.2% to 3.6%; Eurostat's flash estimate put annual HICP inflation at 3.6% in May. The Eurosystem staff inflation projections in June point to an annual HICP progression between 3.2% and 3.6% in 2008, and between 1.8% and 3.0% in 2009. Several upside risks remain, in particular as regards continued upward pressure from further oil price hikes, as well as second-round effects linked to wage negotiations; upward risks to price stability have intensified recently.

Following the onset of financial market tensions in August last year, euro area growth prospects were surrounded by considerable uncertainty. However, economic growth remained robust in 2007: real GDP rose 2.6% annually, and the Eurosystem staff growth projections pointed to robust economic growth throughout the year. The June 2008 projections anticipated annual real GDP growth between 1.5% and 2.1% in 2008, and between 1.0% and 2.0% for 2009. Several downside risks to growth remain though, not least a stronger than expected impact of market tensions on the real economy.

Monetary growth and loan dynamics remained strong in 2007: the broad monetary aggregate M3 increased by 11.1% annually, while loans to the private sector rose by 10.8%.

At this stage, market tensions have hardly had an impact on monetary developments, although some of the sub-components of the monetary aggregates have been affected. The chart shows that the contribution of the narrow aggregate M1 (made up of "money in circulation" and "overnight deposits") has moderated further. The strong annual progression of "other short term deposits" (M2-M1) has continued, however, and their annual growth rate reached 20.2% in April this year, compared to 11.7% at end-2006. M2-M1 has thus put considerable upward pressure on the broad aggregate, as highlighted in the chart. As for the sub-components of M2-M1, deposits with an agreed maturity of up to two years grew particularly strongly, while in 2007 and early 2008 deposits redeemable at notice of up to three months even regressed on an annual basis. The impact of marketable instruments (M3-M2) on M3 also intensified in the course of 2007, before tapering off from November onwards. Money market fund shares and units, one of the sub-components of M3-M2, progressed continuously in the first seven months of 2007, while several outflows have been recorded since the onset of financial market tensions in August. Debt securities of up to two years also grew considerably: at end-2007, their annual growth rate stood close to 60%.

As for the counterparts of M3, loans to the private sector have stabilised at a growth rate around 11% since mid-2007. The annual progression of loans to non-financial corporations increased continuously in the period under review, hitting a historical high of 15.0% in March 2008. Loans to households continued to trend down on an annual basis.

The Governing Council of the ECB is monitoring very closely all developments. It is in a state of heightened alertness. By acting in a firm and timely manner, the Governing Council will prevent second-round effects and ensure that risks to price stability over the medium term do not materialise. The Governing Council is determined to secure a firm anchoring of medium and long-term inflation expectations in line with price stability.

1.1.2 Long-term government bond yields

At end-2007, the yield on euro area long-term government bonds stood at 4.4%; this constitutes a 45 basis point increase compared to end-2006. In the first five months of 2008, euro area government bond yields have risen somewhat, ending at 4.5%. Since around mid-2007, the yield spread between US and euro area bonds has fallen considerably, turning negative in November and standing at minus 46 basis points in May 2008. Indeed, the yield on US Treasuries dropped almost 70 basis points in the course of 2007; between end-2007 and end-May 2008, the yield has risen slightly and reached almost 4.1%. Since August 2007, market volatility rose considerably. In light of a steepening of the yield curve, the yield spread between two-year and ten-year bonds rose sharply in the euro area from August 2007, before declining slightly since March 2008.

In the first half of 2007 bond yields rose on both sides of the Atlantic in light of favourable growth prospects. This upward trend was only briefly interrupted between end-January and mid-March when market participants re-assessed US growth prospects. At the end of February, yields were put under additional pressure following a flight to quality caused by market turmoil in China.

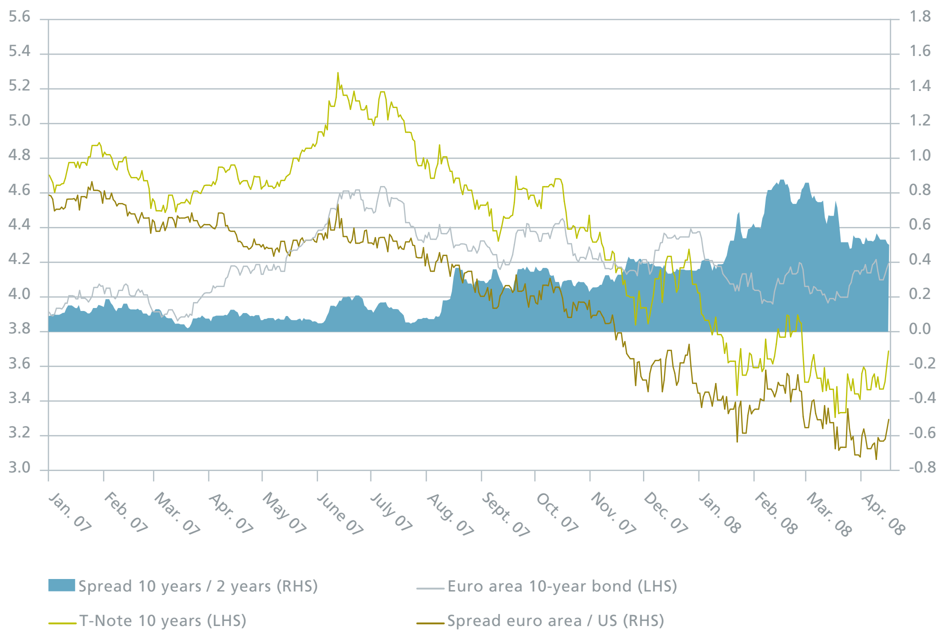
The upward trend observable in the first half of 2007 began to reverse as early as June when the first signs of sub-prime related market tensions surfaced: at first, bond yields fell across the entire maturity spectrum and volatility began to increase. Market tensions intensified in July and August and investors became increasingly nervous about contagion effects. Government bonds quickly became safe haven investments, which is common in times of increased uncertainty. The yield on US Treasuries fell much more sharply than euro area government bond yields in light of several cuts in the federal funds rate, leading to a significant drop in the spread between bond yields in the US and the euro area. Indeed, the federal funds rate was cut by 100 basis points between September and December 2007 while the minimum bid rate on the ECB's main refinancing operations remained unchanged.

Uncertainty continued to haunt market participants throughout the remainder of the period under review, while market expectations regarding further rate cuts only provided temporary respite. Furthermore, while rate cuts usually lead to lower government bond yields, this time they boosted confidence and optimism, which put upward pressure on bond yields. Stock market volatility, caused in large part by bleaker growth prospects in the US, spread to international bond markets. In the euro area, government bond yields rose between

1. ECONOMIC AND FINANCIAL SITUATION

CHART 3:
LONG-TERM GOVERNMENT BOND YIELDS IN THE EURO AREA AND IN THE UNITED STATES

(LHS: percentages per annum,
RHS: percentage points)



Sources : Bloomberg, ECB

January and May 2008, causing the spread over US Treasuries to become somewhat more negative. To some extent, the evolution of the spread reflects a stronger resilience of euro area fundamentals. Since mid-March, the rise in long-term government bond yields should be seen against the backdrop of a renewed rise in market participants' appetite for risk.

1.1.3 Equity markets

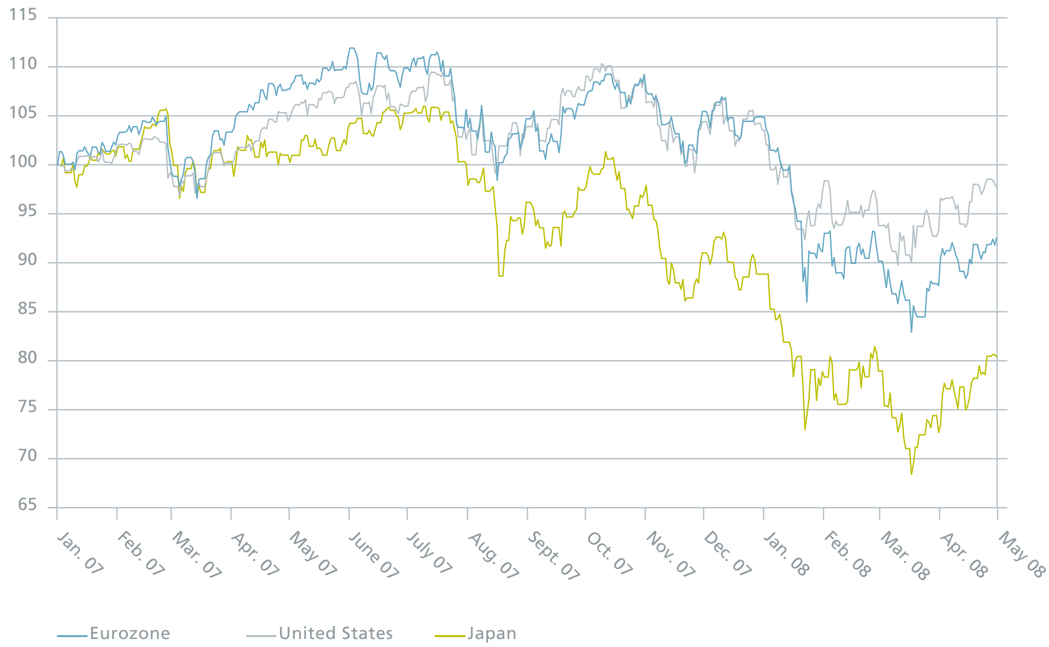
While the Dow Jones EuroStoxx and the S&P 500 progressed in 2007, the Nikkei 225 fell considerably. The Dow Jones EuroStoxx rose by 4.9% and finished the year at 414.9, while the S&P 500 only rose 3.5%; the Nikkei 225 fell 11.1%. Thus, although stock markets continued their upward progression in the euro area and in the United States, the upward trend has slowed down considerably compared to 2006 when the two indices rose by 20% and 14% respectively. Moreover, the Nikkei's decline stands in stark contrast with its past performance in 2006 and 2005, when it progressed by 7% and 40% respectively.

Overall stock market developments should be seen against the backdrop of heightened uncertainty and volatility since the onset of market turmoil around mid-2007. In the first five months of the year, all three indices under review lost ground overall, in spite of the rally discernible since mid-March 2008.

In the first half of 2007, stock markets continued their upward trend from 2006, notwithstanding several short periods of market turmoil such as the tensions in Chinese markets at end-February which led to a massive sell-off. The upward trend observable in the first half of 2007 began to cool off as early as June when

CHART 4:
MAJOR STOCK INDICES IN THE EURO AREA, THE UNITED STATES AND JAPAN

(indice: 01/01/2007 = 100)



Source : Bloomberg

the first signs of sub-prime related market tensions appeared. Market tensions subsequently intensified in July and stock markets across the globe fell sharply between mid-July and mid-August in the wake of a general re-pricing of risk: within the course of several weeks, the Dow Jones EuroStoxx and the Nikkei 225 lost roughly 12%, while the S&P 500 dropped 9%. Between mid-August and mid-October, stock markets recovered some lost ground amidst a partial regain of optimism, a sharp and continuing drop in bond yields since mid-2007, and persistently good reported and expected earnings per share.

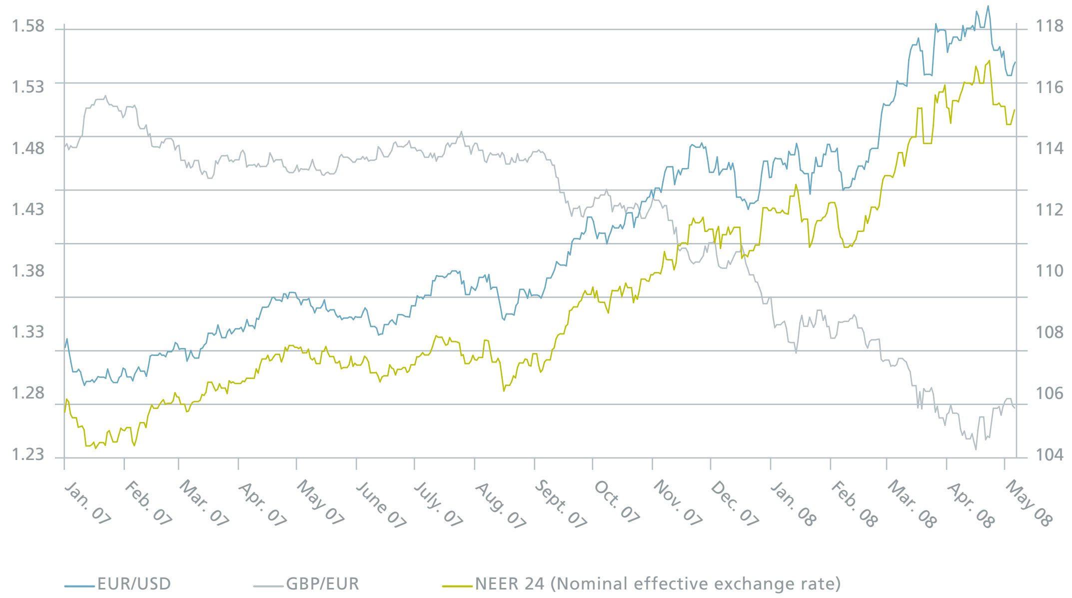
Overall, since the beginning of 2008, the three indices under review lost further ground. In the first three weeks of the year, the Dow Jones EuroStoxx lost 17%, the Nikkei 225 fell 16% and the S&P 500 dropped 7.5%. Volatility was particularly high in January when panic reigned and markets reacted sharply to the slightest hint that economic fundamentals could be deteriorating. Stock markets stabilised somewhat when the federal funds rate was cut by a total of 125 basis points in late January. After hitting a low in mid-March, stock markets embarked on a new upward trend, especially in the wake of additional rate cuts by the Federal Reserve in March and April, which further bolstered market participants' new-found optimism.

1.1.4 Exchange Rate developments

The euro appreciated strongly since end-2006, both in effective terms as well as vis-à-vis the US dollar and the pound sterling. Overall, the single currency also appreciated against the Japanese yen and, to a lesser extent, vis-à-vis the Swiss franc. Between end-2006 and end-2007, the euro's nominal effective exchange

1. ECONOMIC AND FINANCIAL SITUATION

CHART 5:
EXCHANGE RATE DEVELOPMENTS



Sources : Bloomberg, ECB

rate (NEER)[1] appreciated by more than 6%. Over that same period, the euro rose more than 10% against the US dollar, ending the year at USD 1.46; the single currency rose 9% against the pound sterling, ending the year at GBP 0.74.

Since early-2008, the euro has continued to appreciate against the US dollar and the pound sterling. The euro's appreciation against the dollar can be largely explained by diverging growth prospects in the United States and in the euro area, as well as by the change in interest rate differentials. As regards the euro's exchange rate vis-à-vis the pound, the single currency evolved in a relatively narrow range up until September when it began to appreciate following market participants' revised interest rates expectations in the UK. The euro-yen exchange rate behaved in a very volatile fashion since the Japanese currency is widely used as a funding currency in carry trade operations; a rise in risk aversion in times of financial turmoil quickly leads to an unwinding of carry trade positions.

The US dollar has a particularly strong impact on the evolution of the NEER, in light of its weight in the currency basket. While the euro's appreciation against the dollar in the first eight months of 2008 was somewhat more moderate, in particular between May and August, the single currency's upward momentum was soon reinforced by interest rate decisions on both sides of the Atlantic: the ECB raised the minimum bid rate on its main refinancing operations by 25 basis points in March and in June respectively, while the Federal Reserve left its federal funds rate unchanged at 5.25%. While the onset of the market turmoil in the summer months led to a sharp overall depreciation of the euro versus the yen, the euro-dollar exchange rate was at first hardly affected and even depreciated slightly owing to the US Dollar's status as a safe-haven currency. However, the euro soon began to appreciate against the dollar given that market participants felt that US growth prospects had become increasingly gloomy. From September onwards, the single currency also appreciated considerably against the pound sterling, in part owing to the liquidity crisis that brought down Northern Rock.

1 The NEER is a weighted average of bilateral euro exchange rates against the currencies of the euro area's main trading partners.

The euro's upward momentum slowed only partially between November 2007 and February 2008, in the context of market participants' reappraisal of economic and monetary policy developments in the US as well as in the euro area. Between February and April, the single currency appreciated sharply and hit historic highs against the US dollar and the pound sterling, breaking the USD 1.60 barrier and coming close to GBP 0.81. These developments were largely linked to a drop in the interest rate differentials between the euro area and the United States and between the euro area and the United Kingdom. It is likely that the euro's rapid appreciation is more than usually influenced by technical elements and speculative pressures rather than from changes in underlying economic fundamentals.

At the end of May 2008, the euro stood at USD 1.56, GBP 0.79 and JPY 164.1.

1.1.5 Consumer prices

HICP inflation in the euro area averaged 2.1% in 2007, compared to 2.2% the two previous years. Annual inflation rates remained below 2% and broadly stable until the end of the summer and increased rapidly thereafter, reaching 3.1% at the end of 2007. Oil price increases (including base effects stemming from previous energy price developments) and food price increases significantly affected the profile of HICP inflation in 2007.

From January to July 2007 the impact of the rise in oil prices on the energy price component of the HICP were reduced by favourable base effects stemming from the pronounced increase in energy prices observed a year earlier. From September 2007 onwards, both rising oil prices and unfavourable base effects led to a considerable contribution from the energy component to overall HICP inflation.

A major contribution to the rise in HICP inflation in late 2007 came from processed food prices, which started to accelerate towards the end of the summer, reflecting strong increases in the prices of certain agricultural commodities in global markets.

The June 2008 Eurosystem staff projections anticipate average annual HICP inflation between 3.2% and 3.6% in 2008 and between 1.8% and 3.0% in 2009. Compared with the March 2008 ECB staff projections, the ranges projected for inflation in 2008 and 2009 are markedly higher, reflecting mostly higher oil and food prices and increasing upward pressures in the services sector.

**TABLE 1:
DEVELOPMENTS IN THE HICP AND ITS COMPONENTS IN THE EURO AREA
(ANNUAL PERCENTAGE CHANGES)**

	2005	2006	2007	2006 Q4	2007 Q1	2007 Q2	2007 Q3	2007 Q4	2008 Q1	2008 Jan.	2008 Feb.	2008 Mar.	2008 April	2008 May
Overall HICP	2.2	2.2	2.1	1.8	1.9	1.9	1.9	2.9	3.3	3.2	3.3	3.6	3.3	3.6
of which														
-Unprocessed food	0.8	2.8	3.0	4.1	3.1	3.3	2.4	3.0	3.5	3.3	3.2	3.8	3.1	
-Processed food	2.0	2.1	2.8	2.2	2.1	2.0	2.5	4.5	6.4	5.9	6.5	6.7	6.9	
-Non-energy industrial goods	0.3	0.6	1.0	0.8	1.1	1.0	1.0	1.1	0.8	0.7	0.8	0.9	0.8	
-Energy	10.1	7.7	2.6	1.5	1.2	0.5	0.7	8.1	10.7	10.6	10.4	11.2	10.8	
-Services	2.3	2.0	2.5	2.1	2.4	2.6	2.5	2.5	2.6	2.5	2.4	2.8	2.2	
HICP excluding unprocessed food and energy	1.5	1.5	2.0	1.6	1.9	1.9	2.0	2.3	2.5	2.3	2.4	2.7	2.4	

Source: Eurostat

1. ECONOMIC AND FINANCIAL SITUATION

1.1.6 Output, demand and labour market developments

The euro area economy performed well in 2007. On average, real GDP growth was 2.6%, which is only slightly below the 2.8% recorded in 2006, despite the impact of energy price volatility and the uncertainty resulting from the financial market turmoil in the second half of 2007 (see Chart 6).

Slower GDP growth in 2007 was mainly due to developments in private consumption and residential investment as net exports remained robust.

On the domestic side, private consumption grew by 1.5% in 2007, down from 1.8% in 2006. The consumption growth path in 2007 was strongly influenced by a VAT increase in Germany in the first quarter of 2007. Household consumption rebounded in the following months, in line with improvements in real household disposable income which were mainly driven by the positive developments in employment and, to a lesser extent, by growth in household real wealth. The weakening in consumer confidence apparently linked to the financial turmoil is considered to have had only a limited direct impact on consumption, although consumer credit standards were also tightened in the last few months of the year. After rebounding strongly in 2006 (5.0%), total investment growth decelerated in 2007 at 4.3% for the year as a whole. This trend was most pronounced in residential investment, reflecting the end of the expansionary phase of the business cycle in the construction sector in the context of slowing house prices. As illustrated in the Eurosystem's bank lending survey for the fourth quarter of 2007, households' net demand for housing loans dropped considerably.

Euro area net exports expanded robustly by 24.1% in 2007 after 11.4% in 2006. However, this expansion essentially reflected the drop in import growth that exceeded the slowdown in export growth – caused by the rapid euro appreciation over the year and strong competition from China and other Asian countries - was more than offset by a more pronounced slowdown in import growth.

Against this background, the Eurosystem expects average annual real GDP growth to decelerate to a rate between 1.5% and 2.1% in 2008 and further to 1.0% to 2.0% in 2009.

Labour market conditions in the euro area improved significantly in 2007 in line with the pattern of economic growth. Strong employment growth observed in 2006 (1.4%) continued in 2007, with an annual growth rate of 1.6% and around four million net new jobs were created. According to the European Commission's Business and Consumer Survey, employment growth is expected to decelerate in 2008 and 2009 (respectively to 0.9% and 0.5%).

The evolution of euro area unemployment is in line with employment trends as it has continued to fall in 2007, reaching 7.4% on average in 2007 after 8.3% on average in 2006. This is the lowest rate seen since the early 1980s. The latest data available for March 2008 confirm this trend as the unemployment rate declined to 7.1% which represents - in absolute terms - less than 11 million unemployed persons. Overall, lower unemployment reflects robust employment growth in line with the cyclical evolution of GDP growth as well as the impact of labour market reforms and continued wage moderation.

1.1.7 External trade

Euro area trade in goods grew at a slower pace in 2007, after recording higher growth rates in 2006. Goods exports reached €1 493 billion in 2007, increasing by 8.3% compared with a growth rate of 11.6% in 2006. However goods imports saw a larger fall in their growth rate, from 13.7% in 2006 to 5.6% in 2007 (reaching €1 471 billion). As a result the euro area trade balance turned into a surplus of €22.3 billion in 2007, compared to a deficit of €14.3 billion in 2006. This reversal reflects the improvement in the euro area terms of trade in 2007 as a whole (see Chart).

The geochartical breakdown of trade shows that the euro area surplus with the United Kingdom rose by 24% reaching €61 billion in 2007. However the surplus vis-à-vis the United States declined by 13% to €64 billion in 2007 as a whole. Trade deficits with oil exporting countries decreased: OPEC members (-32% at €32.8 billion), Russia (-24% at €30 billion) and Norway

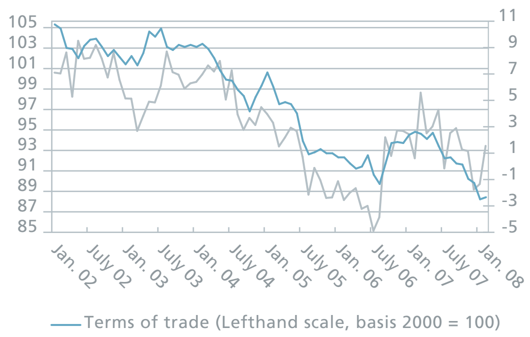
TABLE 2: COMPOSITION OF GDP GROWTH (PERCENTAGE CHANGES)

	Annual rates								Quarterly rates				
	2005	2006	2007	2006 Q4	2007 Q1	2007 Q2	2007 Q3	2007 Q4	2006 Q4	2007 Q1	2007 Q2	2007 Q3	2007 Q4
Real gross domestic product	**1.6**	**2.8**	**2.6**	**3.2**	**3.2**	**2.5**	**2.7**	**2.2**	**0.8**	**0.7**	**0.3**	**0.7**	**0.4**
Of which:													
Domestic demand	**1.8**	**2.6**	**2.2**	**2.4**	**2.9**	**2.0**	**2.1**	**1.9**	**0.2**	**0.9**	**0.1**	**0.9**	**0.0**
Private consumption	1.6	1.8	1.5	2.1	1.4	1.6	1.7	1.1	0.5	0.1	0.6	0.5	-0.1
Government consumption	1.5	2.0	2.2	2.3	2.2	2.2	2.4	1.8	0.5	1.0	0.2	0.6	-0.1
Gross fixed capital formation	3.0	5.0	4.3	5.5	6.3	3.5	3.9	3.2	1.5	1.3	0.0	1.1	0.8
Net exports	**-9.4**	**11.4**	**24.1**	**60.9**	**21.8**	**27.0**	**37.6**	**14.2**	**40.6**	**-7.4**	**11.6**	**-5.3**	**16.7**
Exports	4.7	7.9	6.0	9.0	6.6	6.0	7.2	4.4	3.3	0.8	0.9	2.0	0.6
Imports	5.5	7.7	5.2	7.1	5.9	5.0	5.9	3.8	1.7	1.3	0.3	2.5	-0.3

Sources : Eurostat

(-19% at €21 billion). However the usual heavy trade deficit with China (€110 billion in 2007) and the deficit with Japan (€24 billion) continued to broaden.

CHART 6: MONTHLY DEVELOPMENTS IN THE EURO AREA TRADE BALANCE AND IN THE TERMS OF TRADE (SEASONALLY ADJUSTED DATA)



Source: EUROSTAT

1.1.8 Balance of payments

In 2007 the current account of the euro area recorded a surplus of €26.4 billion compared with a small deficit of €1.3 billion in 2006. This shift reflected to a large extent the improvement in the goods surplus as imports grew slower than exports. The 21.8% increase in the surplus of the services balance contributed also to the improvement in the current account while the balances for current transfers and for income deteriorated strongly.

In the financial account, the euro area recorded net inflows of €103 billion in 2007 down from €112 billion in 2006. Net outflows in direct investments dropped in 2007 and were largely offset by portfolio investment net inflows resulting from the net sales of foreign securities by euro area resident investors.

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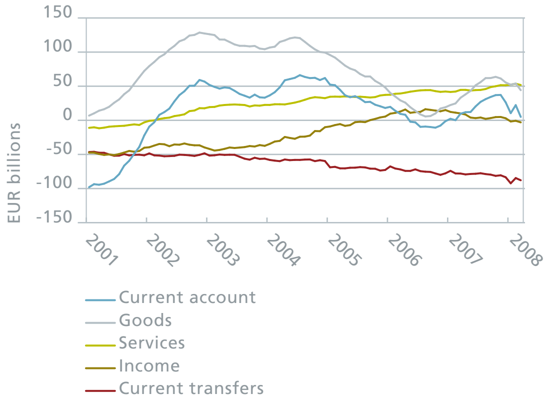
CHART 7:
CURRENT ACCOUNT BALANCE AND ITS COMPONENTS (12- MONTHS CUMULATED TRANSACTIONS)



Source: ECB

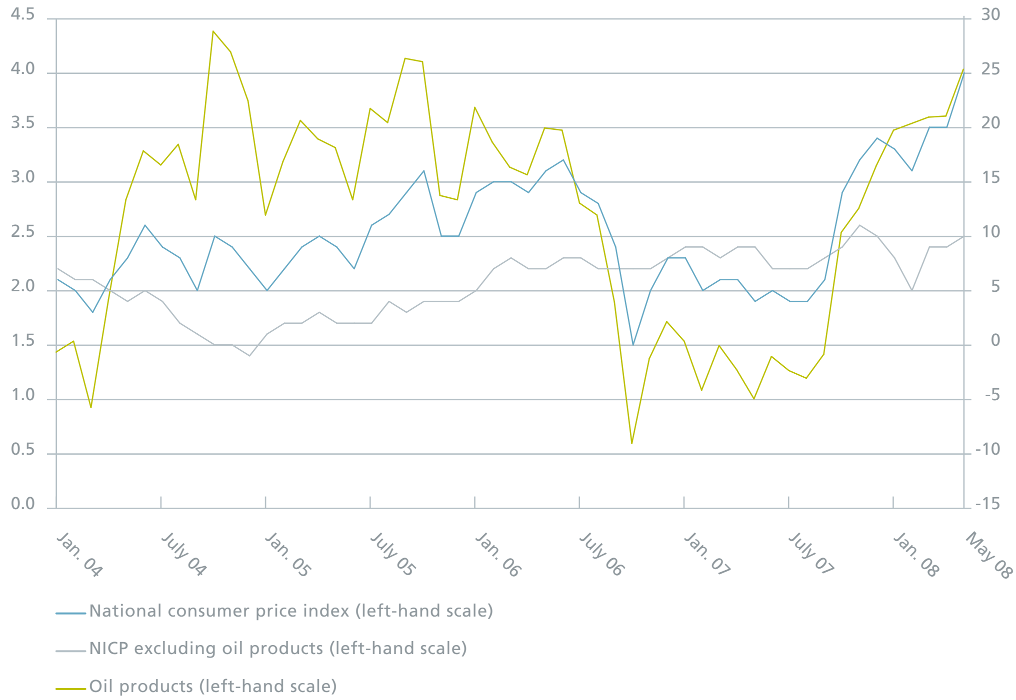
1.2 Economic Situation in Luxembourg

1.2.1 Prices and costs

1.2.1.1 Consumer prices and inflation projections

The national index of consumer prices (NICP) increased by an average 2.3% in 2007, down by a 0.4 percentage point when compared with 2006. However, inflation increased sharply since October 2007, reaching 3.4% in December after having hovered around 2% since the beginning of 2007. The increase in inflation at the end of last year was mainly due to oil price developments and rising food prices in the second half of 2007, and adverse base effects related to energy prices.

CHART 8:
BREAKDOWN OF THE NATIONAL CONSUMER PRICE INDEX (ANNUAL PERCENTAGE CHANGES)



Source : STATEC

Turning to developments in early 2008, inflation remained above 3%. The annual rate of change of the NICP even reached 4.0% in May 2008, which is the highest rate on record since the series was introduced in 1995.

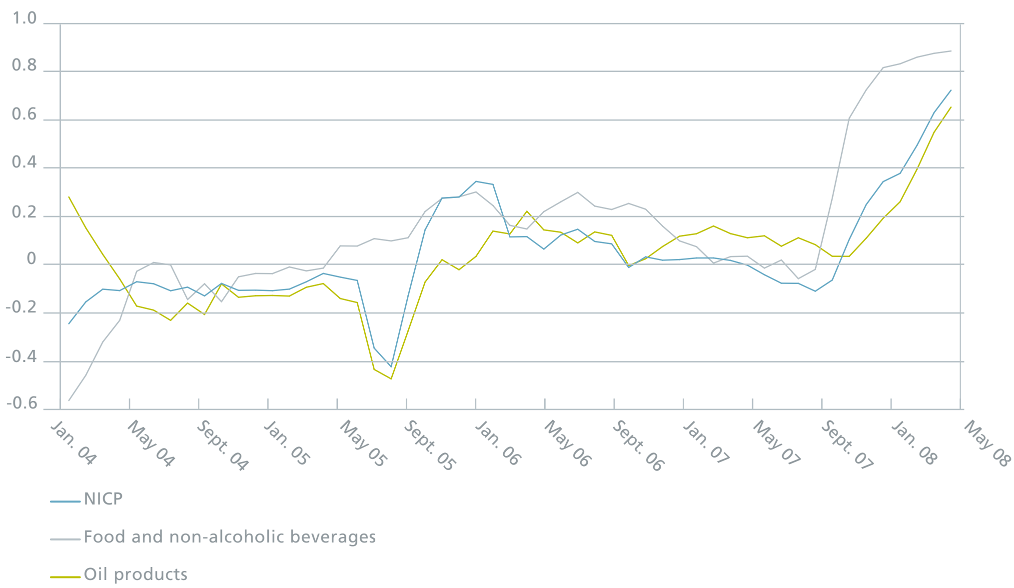
Luxembourg's inflation differentials against the euro area and against the three neighbouring countries remained unfavourable in 2007. Over the period from the beginning of phase III of EMU in 1999 to the end of 2007 Luxembourg's cumulated inflation differential stood at 2.5 percentage points vis-à-vis the euro area and 6.5 percentage points vis-à-vis Luxembourg's neighbouring countries.

According to the BCL's consumer survey, qualitative inflation perceptions have risen sharply since August 2007, reaching the highest level since the survey was launched in 2002. Consumers' inflation expectations also showed a substantial increase in September, moderating thereafter while remaining high by historical standards.

Developments in the prices of "food and non-alcoholic beverages" seem to have had a more direct impact on consumers' inflation perceptions recently. Processed food prices have risen sharply in recent months, and these increases have been very closely followed by rises in consumers' inflation perceptions. This assessment is confirmed by the fact that the correlation between inflation perceptions and the prices of "food and non-alcoholic beverages" has increased and reached record levels in the recent period (see chart 9).

The increase in inflation perceptions and expectations related to the recent surge in food prices could affect the real economy. The increase in food price inflation has been cited as a reason for the fall in the Luxembourg consumer confidence in recent months. In this regard, it should also be recalled that the consumer survey shows a positive and significant degree of correlation with real household consumption growth.

CHART 9: CORRELATION BETWEEN INFLATION PERCEPTIONS AND MEASURES OF ACTUAL INFLATION (CORRELATION COEFFICIENT OVER A ROLLING SAMPLE OF 2 YEARS)



Sources : BCL et STATEC

1. ECONOMIC AND FINANCIAL SITUATION

Inflation projections

Assumptions

End of May, the price of oil fluctuated around 126 USD per barrel and the markets were anticipating a stabilization at that level up to June 2009. The quote for one euro against the dollar stood at 1.54, which corresponds to an appreciation with respect to both the average of 2007 and the previous exercise. Detailed assumptions are given in the following table.

As regards the fiscal measures introduced by the government, they remain unchanged compared to the previous exercise.

Inflation excluding energy has recently turned out at fairly high levels, and a couple of factors suggest that it might persist around those levels in the near future. Following the sharp rise in agricultural commodities prices, such as wheat and milk, inflation of processed food excluding tobacco has accelerated sharply in recent months. It remains highly uncertain whether the recent drop in commodities prices will also feed through to lower consumer prices. The financial turmoil has clouded economic prospects in Luxembourg. However, the eurozone has proved extremely resilient and, although slower growth is likely in the second quarter of 2008, there is not yet convincing evidence of more persistent economic weakness. This context favours the development of indirect effects stemming from the rise in oil prices. In the labour market, wages might also continue on their accelerating path. In Luxembourg though, these risks are contained in 2008 in light of the agreement to moderate the automatic compensation for past inflation and the absence of a further adjustment in the minimum wage. According to the Eurosystem's projections, imported inflation is set for a sharp acceleration in 2008, before moderating in 2009.

TABLE 3: ASSUMPTIONS UNDERLYING THE INFLATION PROJECTIONS

	2006	2007	2008	08-Q1	08-Q2	08-Q3	08-Q4	09-Q1	09-Q2
Price of oil in USD/barrel	65.4	72.7	116.7	96.4	118.5	126	126	126	126
Exchange rate USD/€	1.26	1.37	1.54	1.50	1.55	1.54	1.54	1.54	1.54
Price of oil in € (annual percentage changes)	18.6	1.4	43.7	45.1	49.6	49.4	32.9	26.9	7.0

Source: BCL

Results

The projections for the energy component of inflation have been revised sharply upwards compared to the previous exercise. On the basis of the euro oil price assumptions, the contribution of the energy component to headline inflation might have peaked in mid-2008. However, it should remain at a high level in the near term and a more substantial deceleration only seems feasible in the second quarter of 2009. The projections for the HICP and the NICP excluding energy remain broadly unchanged. Inflation is set to persist around the current high levels with a modest decline towards the end of the projection horizon. As a result, NICP inflation should turn out around 4.0% up to the third quarter of 2008 (see chart), and it is only towards the beginning of 2009, when the base effects on the energy component set in, that a decline below 3.0% is projected.

The sharp acceleration of headline inflation has occurred against the backdrop of a moderation of the impact of government measures on consumer prices. The payout of the automatic wage indexation that had been triggered towards the end of 2007 has been postponed until March 2008, in line with the measures agreed in 2006. On the basis of these inflation projections, the next 2.5% automatic wage increase should be due in March 2009.

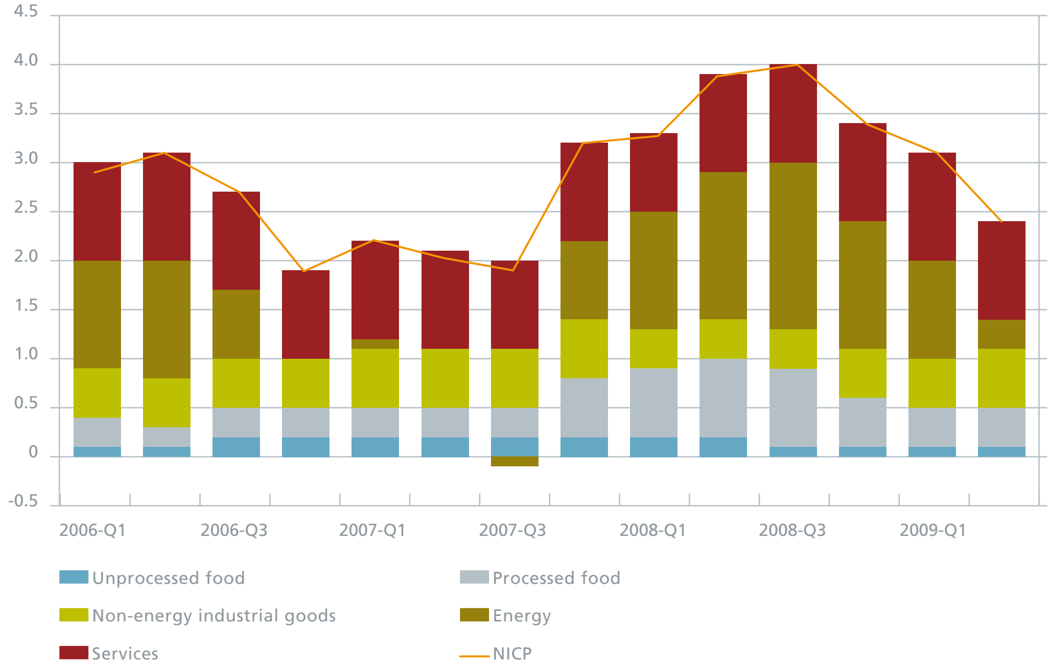
TABLE 4:
INFLATION PROJECTIONS AND REVISIONS COMPARED TO THE PREVIOUS EXERCISE (IN ANNUAL PERCENTAGE CHANGES, RESP. IN PERCENTAGE POINTS)

	2007	2008	2008-1st half	2008-1st half	2009-1st half
NICP	2.3	3.6 (0.6)	3.5 (0.3)	3.7 (1.0)	2.7
NICP ex energy	2.3	2.4 (-0.1)	2.4 (-0.1)	2.4 (-)	2.3
HICP	2.7	4.5 (1.1)	4.4 (0.6)	4.6 (1.5)	3.3
HICP energy	2.7	16.9 (8.9)	16.2 (5.1)	17.5 (12.5)	7.3
HICP ex energy	2.7	2.8 (-)	2.9 (-)	2.8 (0.1)	2.7
Impact of government measures on the NICP, in pp	0.8	0.4			
Impact of government measures on the HICP, in pp	1.2	0.8			

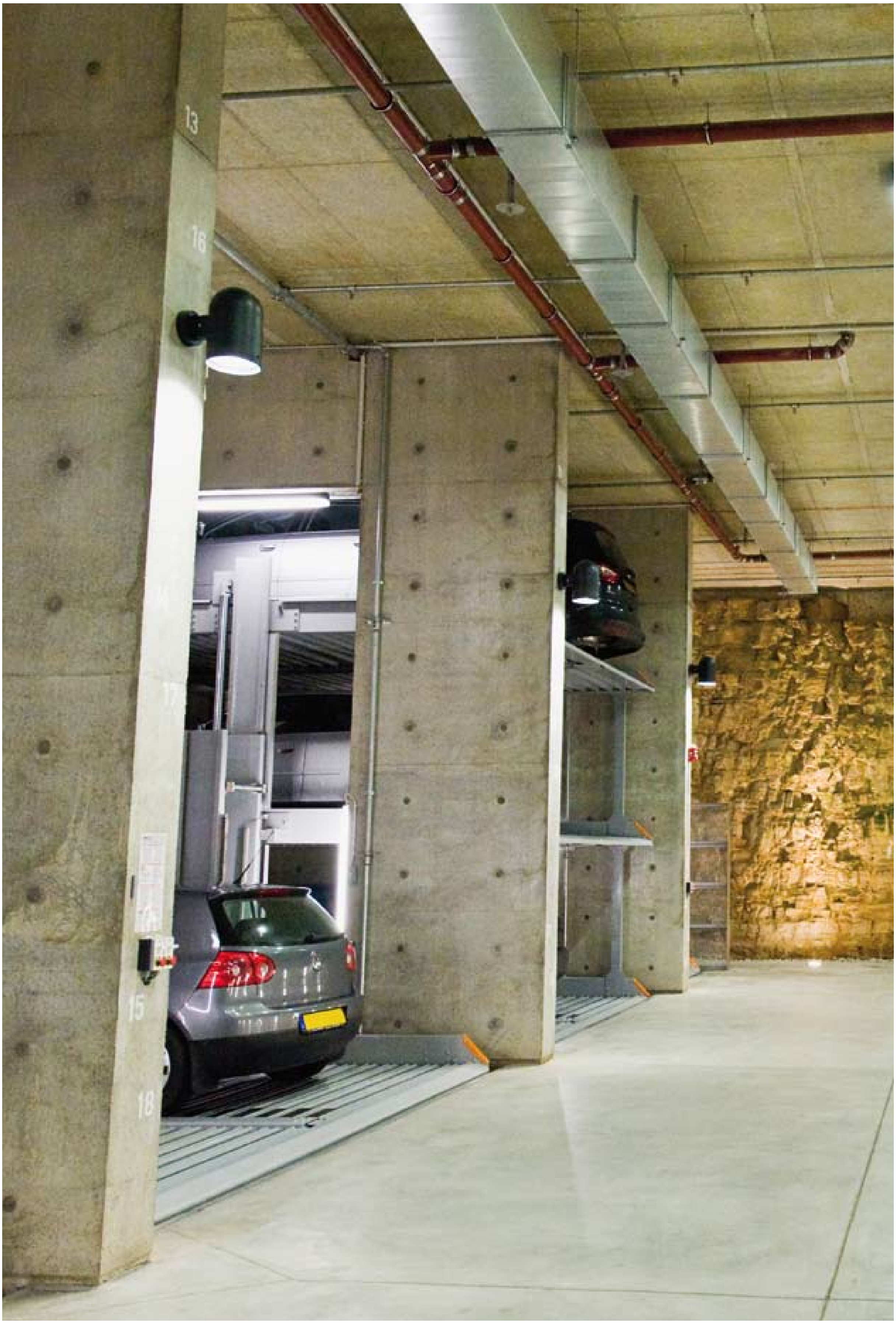
Source: BCL

1. ECONOMIC AND FINANCIAL SITUATION

CHART 10:
CONTRIBUTIONS TO NICP INFLATION



Sources : STATEC, BCL calculations



Can automatic wage indexation generate an inflationary spiral?

Inflation has accelerated considerably over recent months. While annual growth of NICP fluctuated around 2.0% in mid-2007, it reached 4.0% in May 2008. This echoes the experience some years ago, when inflation rose from an average of 1.0% in 1999 to 3.7% in November 2000. As at that time, the current acceleration in inflation is largely attributable to the rise in petrol prices. Back then, the BCL warned against the potential danger of a wage-price spiral triggered by the automatic wage indexation mechanism[2]. This text box aims to revisit this discussion in the light of recent events.

A wage-price spiral represents a situation in which an initial increase in consumer prices boosts nominal wages via the automatic indexation mechanism and, in a second round, firms transmit the increase in labour costs onto their selling price, generating feedback effects between wages and prices.

In a small open economy, such as Luxembourg which imports more than 50% of its private consumption, inflation is largely determined by external price developments. Imported inflation, originating mostly in the three neighbouring countries, thus represents the main source of fluctuations in Luxembourg's consumer prices. However, domestic factors, in particular labour market conditions, can also play an important role.

This effect is most visible in the "Services" component of the consumer price index, as this is essentially domestic. Services are characterised by a high labour intensity in production, meaning that labour costs play a key role in determining their price. As a result, services prices will be the first to reflect wage increases, especially those due to automatic wage indexation. This is especially true for some categories of services whose prices are officially linked to the sliding wage scale that serves as the basis for the indexation mechanism.

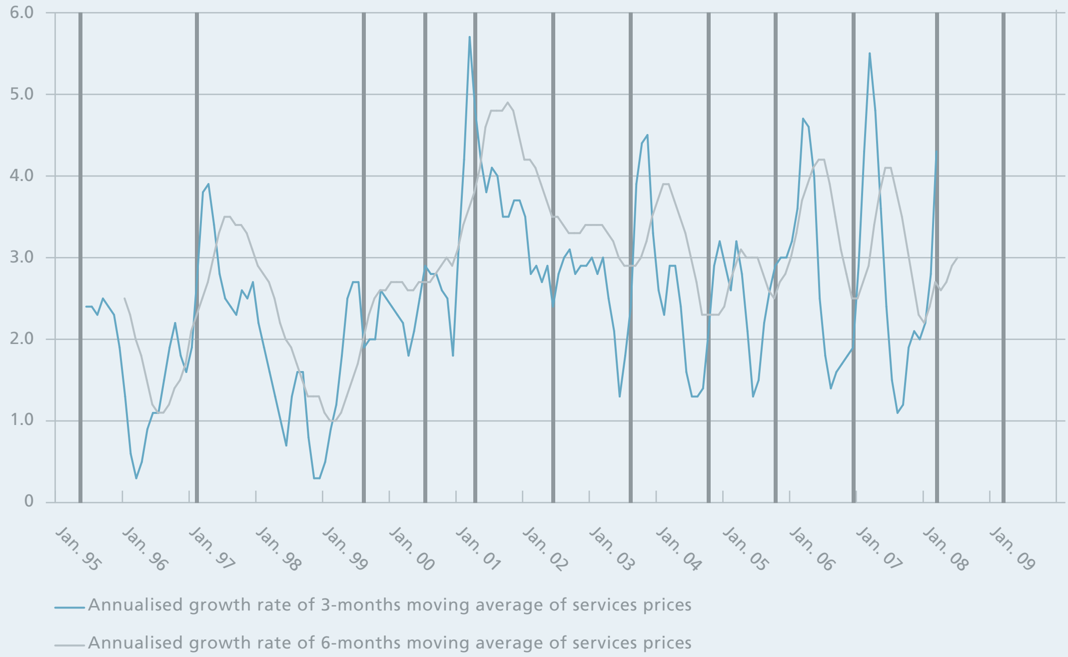
Price developments since 2001 seem to confirm the analysis published at the time. Chart 11 indicates that services prices tend to accelerate after an automatic 2.5% wage increase. More recently, in March 2008, the application of the indexation mechanism was followed by an increase of about 1.0% in services prices between February and April. However this time, the process was already under way in the month of March. Thus, unlike previous years, there was no delay between the automatic wage increases and the acceleration in services prices. The automatic 2.5% wage increase that fell due in December 2007 had been delayed to the month of March 2008, so that, unlike under the previous functioning of the system, the timing of the wage increase was no longer a surprise for the service providers. Therefore, they were prepared in advance to adjust their prices to compensate for the change in their labour costs.

The apparent link between services prices, on the one hand, and the wage indexation mechanism, on the other, appears more clearly on chart 12. The wage increase associated with the automatic indexation mechanism seems to act as a lower bound for services price inflation. Since 2002, with the exception of some short intervals of two months, the yearly increase in the sliding wage scale remained constant at 2.5%, which probably prevented services price inflation falling below this level. Conversely, the years 1996 and 1998 demonstrated that when the time span between two automatic wage increases widened, services price inflation could fall below this level, contributing to the decrease in aggregate inflation.

The impact of an automatic wage increase on aggregate inflation has been quantified using econometric methods. Based on monthly data for the period January 1996 to May 2008, an estimated equation explains monthly inflation (after seasonal adjustment) using a dummy variable that takes the value unity in months when wages are increased automatically and zero otherwise. Month-on-month changes in petrol prices (in euro) appear in the equation with a one-month delay. The results are statistically significant: an automatic 2.5% wage increase raises month-on-month inflation

2 See BCL 2000 Annual Report, pp.33-34.

CHART 11:
SERVICES PRICE INFLATION



Sources: STATEC data, BCL calculations

by 0.18 percentage points on average, or more than 2.1% at an annual rate. An automatic wage increase has a statistically significant effect even after four months and its effect is further prolonged by inflation inertia. The cumulated impact over twelve months is an additional 0.42 percentage point inflation for the year as a whole. It should be emphasized that this estimation only represents a lower bound, as it relies on several assumptions, including the occurrence of a single automatic wage increase during the whole year. Furthermore, this analysis is limited to the short-term impact of an automatic wage increase and does not consider longer-term effects that may be associated with the existence of an automatic wage indexation mechanism.

The Tripartite agreement of May 2006 introduced changes to the automatic wage indexation mechanism that probably dampened the impact of the wage-price spiral. The postponement of automatic wage increases to some pre-determined dates preserved an interval of at least 12 months between two consecutive automatic wage increases. This avoided the superimposition of two automatic wage increases on an annual basis, as would otherwise have been the case in the third quarter of 2006 and would be the case again towards the end of 2008 (green line on chart 12). In this counterfactual scenario, services price inflation would have accelerated even more, as was observed end-2001 and beginning-2002, when it even exceeded 4%.

Unless a new agreement is negotiated or the current accord is extended, the modulation of the automatic wage indexation mechanism will expire end-2009. On the basis of the current inflation projections, the

CHART 12:
SERVICES PRICE INFLATION AND SLIDING WAGE SCALE

Sources: STATEC data, BCL calculations

superimposition of two automatic wage increases would occur twice in 2010 (see also section 1.2.10). Wages would be increased in January as well as July 2010 meaning that automatic wage indexation would contribute 4.2 percentage points to the increase in nominal wages. This would be the highest contribution from the wage indexation mechanism since 1984. The result would be an acceleration of non-energy price inflation due to a strong increase in services prices. At the time of this acceleration, this inflation component may actually be falling in neighbouring countries. In any case, this is the scenario underlying our macroeconomic projections, which are based on the assumption of unchanged government policy.

Producer prices in industry

Industrial producer prices increased on average by 9.0% in 2007, the fourth consecutive year of price rises above 7%. As was the case in previous years, the price adjustments are mostly due to intermediate goods prices. Prices for energy and capital goods increased also, but at a more moderate pace, while consumer goods prices were virtually flat.

The driving forces behind these price increases are probably the oil price on the cost side, and robust consumption growth in the emerging economies, particularly in South-East Asia, on the demand side. While the aggregate picture suggests flat prices for consumer goods, the breakdown reveals that prices for food products have accelerated sharply in the course of 2007, probably on the back of the sharp price increases recorded for agricultural commodities, such as wheat and milk. These developments have also influenced prices at the consumer level.

The annual inflation rates have been on a downward trend since the beginning of 2007, and have fallen to around 7% in the beginning of 2008. The available data from the harmonised business surveys however suggest that this trend might soon revert and that inflation is set for a re-acceleration (see chart).

TABLE 5:
INDUSTRIAL PRODUCER PRICES (CHANGES WITH RESPECT TO THE PREVIOUS PERIOD)

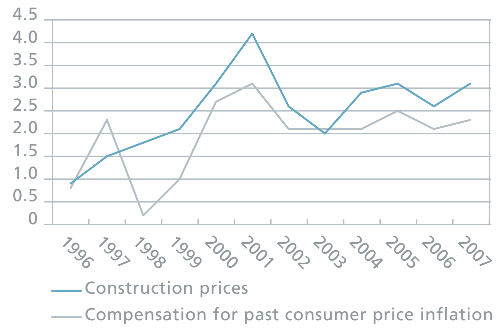
	2006	2007	2007-Q2	2007-Q3	2007-Q4	2008-Q1
Total	7.7	9.0	2.4	-0.1	1.7	2.3
Intermediate goods	8.8	12.1	3.0	-0.6	0.3	3.9
Capital goods	0.9	5.1	1.1	1.6	-0.2	2.7
Consumer goods	1.2	0.6	0.8	-0.1	0.4	0.5
Energy	19.9	8.5	2.0	2.0	0.2	3.4

Source: STATEC

1.2.1.2 Construction prices

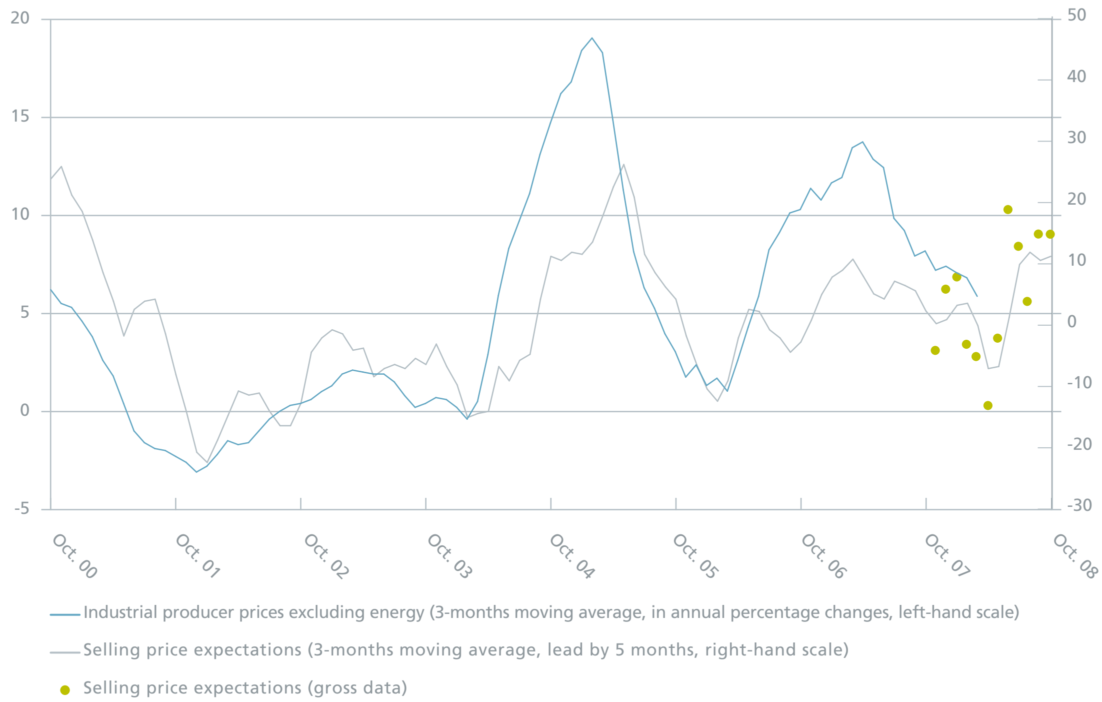
The prices of construction services rose by 3.1% in the course of 2007. This probably reflected developments on the cost side, in particular wages, rather than the cyclical position of the sector. Given the high labour content of construction, it is no surprise that these price increases rarely drop below the automatic wage increases dictated by the indexation scheme (see chart).

CHART 13:
CONSTRUCTION PRICES



Source: STATEC, BCL

**CHART 14:
INDUSTRIAL PRODUCER PRICES, PAST AND EXPECTED DEVELOPMENTS**



Sources : Eurostat, BCL

1.2.2 Sectoral developments

1.2.2.1 Industry

The short-term indicators paint a fairly mixed picture for the industrial sector. The value of production and the turnover statistics point to an apparently comfortable performance in 2007. However, the latter stems exclusively from the sharp rise in industrial producer prices. Production per working day, which is corrected for price developments, stagnated in 2007, and was thus below the growth of the manufacturing sector in the euro area.

The sectoral breakdown of production per working day suggests fairly heterogeneous developments in the different branches. Production of capital goods rose by almost 10% compared to 2007, whereas intermediate goods production stagnated. An outright fall in production levels was recorded for the energy and consumer components.

The confidence indicator based on harmonised monthly business surveys declined from its peak in February 2007. While the corporate sector has tempered its optimism, the confidence indicator remains nonetheless above its long-run average (see chart), possibly suggesting that the financial turmoil not yet affected

TABLE 6:
INDICATORS FOR THE INDUSTRIAL SECTOR
(IN ANNUAL PERCENTAGE CHANGES)

	2006	2007	2007-Q1	2007-Q2	2007-Q3	2007-Q4
Value of production	9.7	7.1	9.5	9.0	3.8	6.0
Turnover	14.7	4.9	7.9	8.1	4.8	-0.9
Production per working day	2.4	0.3	2.4	2.1	-2.9	-0.7
Intermediate goods (ppwd)	6.1	1.1	8.3	5.3	-5.5	-3.8
Capital goods (ppwd)	1.3	12.2	12.8	10.0	16.7	9.9
Consumer goods (ppwd)	-4.3	-6.3	-4.0	-3.4	-9.6	-8.1
Energy (ppwd)	-1.5	-4.3	-16.9	-15.1	6.8	14.3

Source: STATEC, BCL

its activities. The quarterly surveys suggest a resilient manufacturing sector however no new impulses seem present. In April, growth prospects worsened considerably as the confidence indicators in the neighbouring countries recorded sharp drops and this in all the sectors polled. This does not bode well for economic activity in the second quarter, in the euro area as well as in Luxembourg.

1.2.2.2 Construction

In 2007, the construction sector fared slightly better than the manufacturing sector. Turnover accelerated to 5.7%, whereas production per working day slowed to 1.4%. The activity breakdown suggests that the dynamism is virtually all due to civil engineering, since the building branch apparently stagnated. Leading indicators however paint a more favourable scenario for the latter. The loans to households for house purchase grew robustly in both 2007 and the beginning of 2008. In addition, the government is pursuing its policy of increasing housing supply. It remains to be seen whether the increase in building permits granted will also translate into higher economic activity.

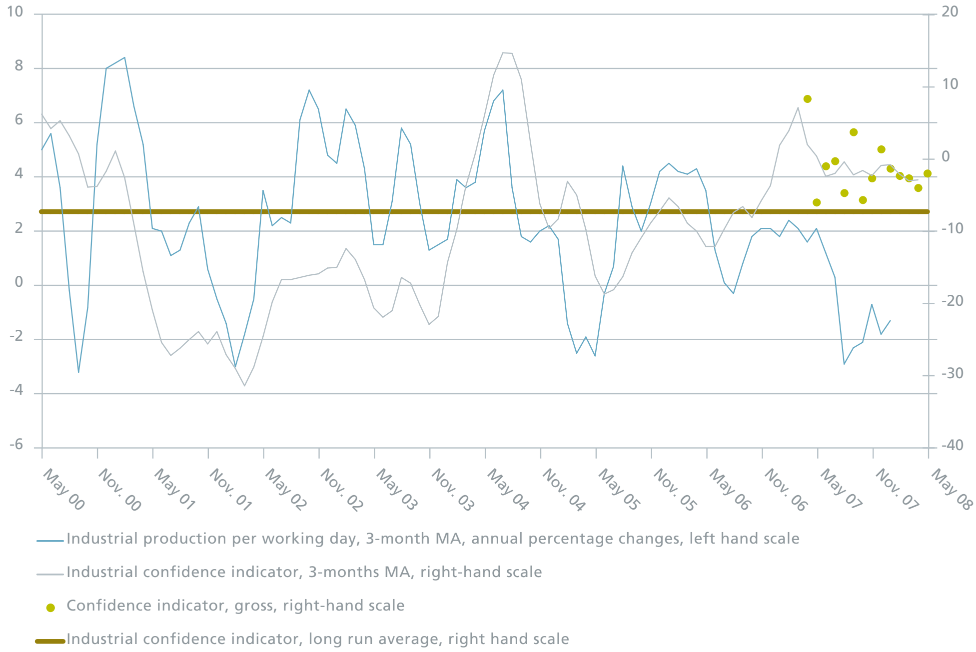
For example, mortgage rates rose to 4.9%, which risks weighing on demand prospects. Higher monthly instalments on variable-rate loans will deter some households from buying and building new homes, especially since several indicators suggest that, in relative terms, house prices have already reached historically high levels[3]. On a more reassuring note, the dislocations in the money markets since the second quarter of 2007 have not yet fed through to mortgage rates. According to the Bank Lending Survey, banks are unlikely to tighten financial conditions for households. However, an easing does not seem to be on the agenda either.

1.2.2.3 Trade and other sectors

The trade branches have overall fared fairly well in 2007 as wholesale trade and retail trade maintained their strong growth performance of the previous year. However, retail trade data need to be interpreted carefully as they are affected by e-commerce activities, which do not do not reflect the behaviour of Luxembourg consumers. After correcting for these activities, turnover growth rate would have been only 3.8%, thus below the corrected value of 5.4% in 2006. Car registrations recorded only modest growth,

3 See BCL Bulletin 2007/1, pp. 337-40

CHART 15:
CONFIDENCE INDICATORS AND INDUSTRIAL PRODUCTION



Sources : Eurostat, BCL

TABLE 7:
INDICATORS FOR THE CONSTRUCTION SECTOR (IN ANNUAL PERCENTAGE CHANGES)

	2006	2007	2007-Q1	2007-Q2	2007-Q3	2007-Q4	2008-Q1
Turnover - Total	5.3	5.7	25.3	11.6	-1.8	-5.1	-
Production per working day -Total	2.5	1.4	13.0	1.6	-3.2	-4.4	-
Production per working day - Building	2.3	0.3	9.8	-0.3	-3.9	-3.4	-
Production per working day - Civil engineering	3.2	5.7	28.8	9.0	-0.3	-8.4	-
Building permits	-5.9	12.1	-6.5	37.2	-9.4	25.5	-
Loans for house purchase - outstanding amounts	13.8	22.1	22.3	22.0	21.9	22.0	12.2
Loans for house purchase - new business	9.4	19.4	14.4	18.4	-0.4	43.5	16.7
Mortgage rates	4.1	4.7	4.6	4.6	4.9	4.9	4.9

Sources : STATEC, BCL

1. ECONOMIC AND FINANCIAL SITUATION

TABLE 8:
TURNOVER AND CAR REGISTRATIONS
(IN ANNUAL PERCENTAGE CHANGES)

	2006	2007	2007-Q1	2007-Q2	2007-Q3	2007-Q4	2008-Q1
Car registrations	4.7	1.0	1.4	-8.7	5.4	11.4	-6.5
Trade - total	11.0	9.5	8.2	3.3	9.0	16.6	--
Repair of motor vehicles	5.6	-3.1	-2.5	-8.3	-0.3	-0.5	--
Wholesale trade	10.7	10.1	7.9	4.4	9.9	22.3	--
Retail trade	17.1	19.6	19.3	12.5	14.9	25.6	--
Hotels and restaurants	1.8	3.4	1.7	3.3	3.9	6.4	--
Transport - total	8.6	-0.9	-3.6	15.5	-5.3	-7.1	--
Postal services and telecommunications	13.8	7.5	5.8	2.9	3.8	21.2	--
IT related services	68.8	-58.2	-41.6	-64.3	-67.8	-59.4	--
Business services	12.0	13.0	15.0	7.9	24.2	7.9	--

Source: STATEC, BCL

while motor vehicle repair saw an outright drop in sales. Taking all this into account, sales data suggest somewhat prudent consumer spending in spite of the strong fundamentals such as employment growth and increasing real wages. The hotel branch benefited from a rise in the number of tourists.

Turnover in other business services, which are largely dependent on manufacturing and financial services, point to a heterogeneous performance in the different branches in 2007 when compared to 2006.

1.2.3 Consumer survey

Consumer confidence[4] had been on a steady uptrend since mid-2006, reaching a high level by historical standards around mid-2007. The rise was mainly due to consumers' expectations as regards the outlook for the general economic situation and unemployment in Luxembourg.

4 The consumer survey carried out in Luxembourg is part of the Joint Harmonised EU Programme of Business and Consumer Surveys and is co-financed by the European Commission.

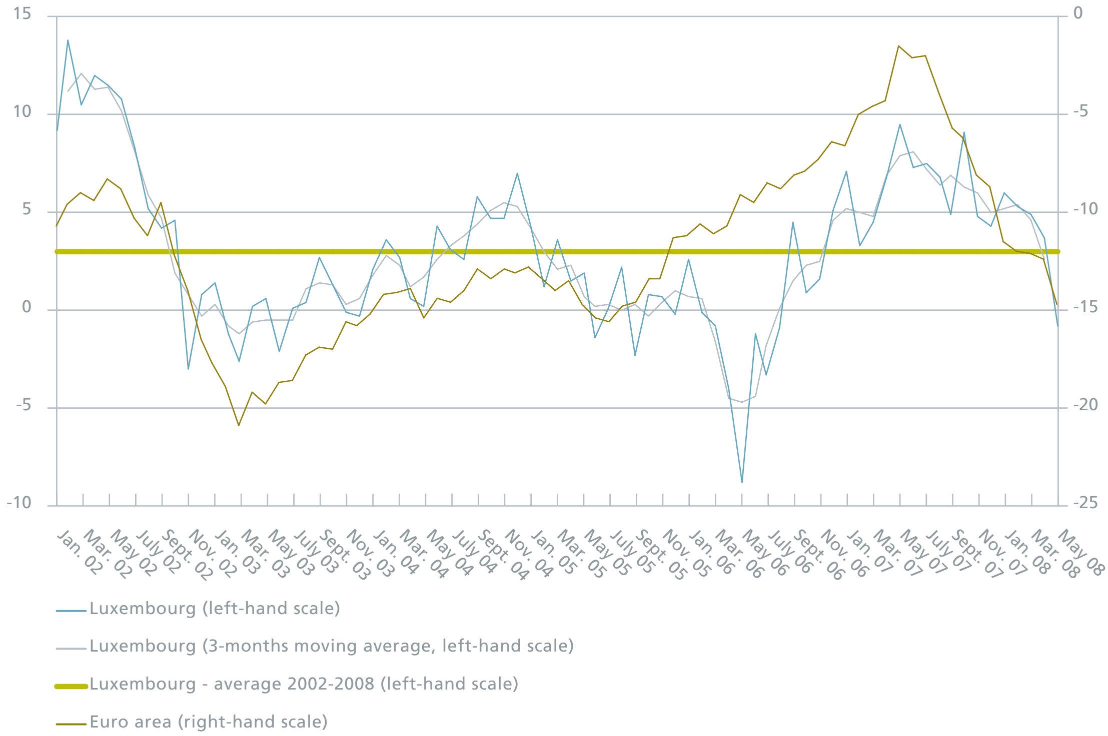
However, this positive trend reversed in the summer of 2007. Progressive weakening in consumer confidence appears to have been linked to the turmoil in financial markets and the rise in inflation. Nevertheless, the decline in consumer confidence observed since the summer 2007 has been less severe in Luxembourg than in the euro area as a whole.

1.2.4 Economic growth

GDP decelerated to an estimated growth rate of 4.5% in 2007, after 5.0% and 6.1% in 2005 and 2006 respectively, mostly due to weaker exports. After an exceptionally dynamic year in 2006, services exports grew more slowly and goods exports decreased slightly. Imports of services accelerated while imports of goods virtually stagnated.

The contribution to growth from final consumption was weak by historical standards, while gross fixed capital formation was particularly strong (+2.8 p.p. contribution to growth). Net exports' contribution (1.9 p. p.) was almost entirely due to trade in services as trade in goods had virtually no impact on growth.

CHART 16:
CONSUMER CONFIDENCE INDICATORS
(SEASONALLY ADJUSTED DATA)



Sources: BCL, European Commission

1. ECONOMIC AND FINANCIAL SITUATION

TABLE 9:
ANNUAL NATIONAL ACCOUNTS

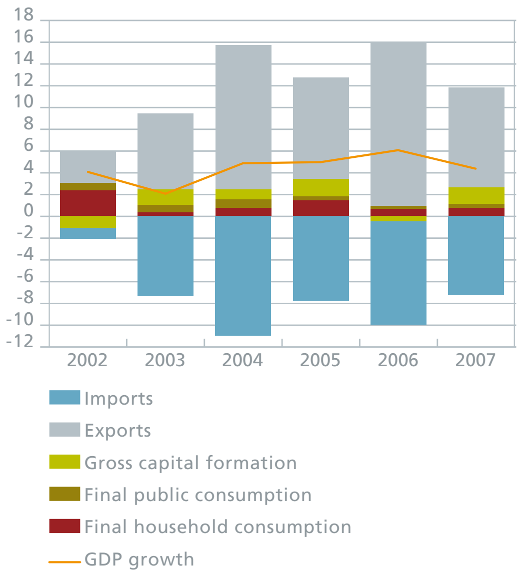
	ANNUAL RATES OF CHANGE						CONTRIBUTIONS TO GDP GROWTH *(in p. p.)*					
	2002	2003	2004	2005	2006	2007	2002	2003	2004	2005	2006	2007
Final consumption expenditure	5.5	2.0	3.0	3.3	2.1	2.1	3.2	1.2	1.7	1.9	1.1	1.1
Final consumption expenditure of private households	5.7	0.7	1.9	3.6	1.7	2.1	2.3	0.3	0.7	1.4	0.6	0.7
Final consumption expenditure of NPISH	9.3	10.2	6.8	6.4	10.2	-1.0	0.1	0.2	0.1	0.1	0.2	0.0
Final consumption expenditure of Public Administrations	4.6	4.4	5.1	2.4	2.1	2.4	0.7	0.7	0.8	0.4	0.3	0.4
Gross capital formation	-4.4	6.2	4.2	7.3	-2.3	8.0	-1.1	1.4	0.9	1.6	-0.5	1.5
Of which : Gross fixed capital formation	5.5	2.4	2.1	2.1	3.1	15.2	1.2	0.5	0.5	0.4	0.6	2.8
Exports of goods and services	2.1	5.0	9.8	6.3	9.6	5.5	3.0	7.0	13.3	9.3	15.0	9.2
Exports of goods	2.4	2.3	8.4	-1.5	10.1	-0.6	1.0	0.9	3.1	-0.6	4.0	-0.2
Exports of services	1.9	6.0	10.4	9.2	9.4	7.4	2.0	6.1	10.1	9.9	11.0	9.4
Imports of goods and services	0.8	6.1	9.7	6.1	7.2	5.3	-1.0	-7.4	-11.0	-7.8	-9.5	-7.3
Imports of goods	-1.4	4.2	6.8	0.9	9.1	0.0	0.8	-2.1	-3.2	-0.5	-4.6	0.0
Imports of services	2.4	7.5	11.7	9.7	6.0	8.3	-1.8	-5.3	-7.7	-7.3	-4.9	-7.3
Gross Domestic Product	**4.1**	**2.1**	**4.9**	**5.0**	**6.1**	**4.5**						
GDP deflator	2.1	5.0	1.7	4.2	6.2	2.2						
Employees	3.4	1.9	2.4	3.0	4.0	4.4						
Total employment	3.2	1.8	2.2	2.9	3.7	4.2						
Compensation per employee	3.1	2.2	3.9	3.8	4.5	3.5						
Labour productivity	0.8	0.3	2.6	2.1	2.3	0.3						
Unit Labour Cost	2.2	1.9	1.3	1.7	2.2	3.2						
Profit margins	-0.1	3.1	0.4	2.5	4.1	-1.0						

Source : STATEC, BCL calculations

Job creation rose to 4.4% despite slowing economic activity, in line with the observation that job growth is often a lagging function of GDP growth. The diverging dynamics of GDP and job growth led to a slowdown in productivity (+0.3%). In a context of robust wage growth (+3.5%), accelerating ULC, combined with slow growth in the GDP deflator, resulted in the first decrease in profit margins since 2002 (-1%).

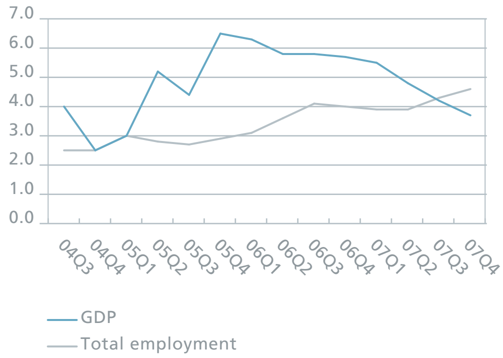
Quarterly national accounts figures show that the deceleration of growth started in the first quarter of 2006 and intensified in the course of 2007. As employment accelerated towards the end of 2007, productivity growth became negative in the fourth quarter, a development which should be reversed in the medium term, quite possibly by a pronounced cyclical deceleration of employment.

CHART 17: CONTRIBUTION OF INDIVIDUAL AGGREGATES TO REAL GDP GROWTH



Sources : STATEC, BCL calculations

CHART 18: GDP AND TOTAL EMPLOYMENT (ANNUAL PERCENTAGE GROWTH, QUARTERLY DATA)



Source : STATEC

Output Gap and Potential Growth Estimates

This text box provides an update of the output gap and potential growth estimates published in the 2006 annual report. It is well known that these estimates are subject to important revisions, especially for the most recent observations. To reduce this problem of limited reliability, the series have been extended until 2010 using the results of the latest projection exercise.

With respect to the estimates published in June 2007, the new results indicate clearly that output was below its potential level during the period 2003-2005 (negative gap according to all methods). However, for the year 2006 all methods found a negative gap in June 2007, while using the latest data the output gap in 2006 is now positive according to five of the six methods considered. This change is partly the result of new national accounts data published in October 2007. These revised upwards GDP growth in 2004 and 2005 by more than a percentage point. Now, the output gap in 2006 is negative only according to the Apel-Jansson model (-2.4%). This could be explained by the fact that this method also takes into account fluctuations in unemployment in order to identify the cyclical component of output. As a result, the rise in unemployment from 2001 to 2006 translates into a more negative output gap according to this method, which only begins to fall back in 2006.

For the year 2007, the situation is unchanged with respect to 2006 according to one method (HP filter), deteriorates according to three methods (by about 0.5% of GDP), and improves according to the other two methods (between 0.2% and 1.1% of GDP). For the following years, the projections anticipate a slowdown in 2008 and a gradual recovery in 2009-2010, which implies a negative gap for five of the six methods. The production function approach is less pessimistic over the projection horizon, partly thanks to the recent reduction in unemployment and the expectations of sustained growth in fixed capital formation.

These estimates (and especially those for current or future periods) are subject to a large amount of uncertainty, as indicated by the size of the revisions since the last publication in June 2007. Note that the level of GDP was also revised by more than 1% in each of the years 2003-2007. As a result, the linear trend finds an increase in the output gap between one and two percentage points over the years 2004-2007. The gap estimated for the year 2003 has been revised downwards for four of the six methods (by nearly two percentage points according to the Kuttner model). For the years 2004-2007 revisions are almost always positive (smaller negative gap or larger positive gap). The production function approach is characterized by the smallest revisions in absolute value (highest reliability). Univariate methods, which are limited to analysing fluctuations in GDP growth, have seen the largest revisions in absolute value. In particular, the linear trend appears to be the least reliable method (subject to the largest revisions).

Potential growth estimates have generally been revised slightly upwards. According to the linear trend, potential growth remains at 5.0%. According to the other methods, the average of potential growth since 1981 increased by 0.1 percentage points in three cases. The average since 2001 rose between 0.2 and 0.8 percentage points. Potential growth seems to remain within the range 4% to 5% over the projection horizon 2008-2010 (with the possible exception of the Apel-Jansson model). However, it bears repeating that the results for the projection period should be interpreted with caution.

TABLE 10: ESTIMATES OF THE OUTPUT GAP AND POTENTIAL GROWTH ESTIMATES

	real GDP (bn EUR)	Linear Trend	Hodrick-Prescott	Harvey-Jaeger	Kuttner	Apel-Jansson	Production Function
		Output gap estimates					
2003	23.97	-0.9%	-1.2%	-0.3%	-0.6%	-1.0%	-1.9%
2004	25.14	-1.0%	-1.0%	-0.4%	-0.6%	-2.3%	-1.5%
2005	26.40	-1.0%	-0.5%	-0.3%	-0.5%	-2.9%	-0.9%
2006	28.02	0.1%	1.0%	0.6%	0.7%	-2.4%	0.7%
2007	29.27	-0.4%	1.0%	0.3%	0.3%	-1.4%	0.9%
2008	30.22	-2.1%	-0.2%	-1.1%	-1.2%	-0.4%	0.0%
2009	31.43	-3.1%	-0.6%	-2.0%	-2.0%	-0.9%	-0.1%
2010	32.81	-3.7%	-0.7%	-2.5%	-2.5%	-0.2%	0.3%
	Revisions	Revisions to output gap since last estimates in 2007					
2003	1.0%	0.2%	-0.2%	0.5%	-1.7%	-0.9%	-0.2%
2004	2.2%	1.4%	0.8%	1.6%	-0.8%	1.2%	0.7%
2005	3.2%	2.3%	1.6%	1.9%	0.3%	1.7%	1.4%
2006	3.2%	2.2%	1.4%	1.8%	2.0%	1.5%	1.2%
2007	2.6%	1.7%	0.8%	0.9%	1.8%	0.7%	0.6%
	Real GDP growth	Potential growth estimates					
2003	2.1%	5.0%	4.7%	4.4%	4.9%	5.1%	4.6%
2004	4.9%	5.0%	4.6%	4.9%	4.9%	6.2%	4.4%
2005	5.0%	5.0%	4.6%	5.0%	4.9%	5.7%	4.4%
2006	6.1%	5.0%	4.5%	5.1%	4.9%	5.6%	4.5%
2007	4.5%	5.0%	4.5%	4.9%	4.9%	3.5%	4.3%
2008	3.2%	5.0%	4.5%	4.7%	4.9%	2.1%	4.2%
2009	4.0%	5.0%	4.4%	4.9%	4.8%	4.6%	4.1%
2010	4.4%	5.0%	4.4%	4.9%	4.8%	3.6%	4.0%
	Average real growth	Average potential growth					
1981-2006	4.8%	5.0%	4.8%	5.0%	4.9%	4.9%	4.8%
2001-2006	4.1%	5.0%	4.7%	4.7%	4.9%	5.1%	4.7%

Sources : STATEC data, BCL calculations

1.2.5 Financial sector

The real estate crisis in the United States affected the global financial system through two major channels. On the one hand, it directly affected credit institutions providing housing loans in the USA or holding securities representing securitised housing loans. On the other hand, it had an indirect impact through the significant downturn of stock indices, observed especially during the first quarter of 2008.

As in other countries, the financial sector in Luxembourg experienced a turbulent year, marked by sharp reversals in performance of credit institutions and mutual funds. The first half of the year under review was perfectly in line with developments observed during 2006, with high growth in the major indicators of the financial sector (such as employment, results of credit institutions or net asset values of undertakings for collective investments). However, the second half of the year indicated a clear reversal. Employment growth is the only indicator to have been spared so far.

The impact of this degradation on the financial centre is undeniable. However, it is important to mention that this reversal affects the various indicators unevenly.

Between December 2006 and 2007 the net asset value (NAV) of undertakings for collective investment grew 11.6%, far below growth rates in 2005 and 2006. Employment in the banking sector increased by 1 387 units during 2007, representing a growth rate of 5.6%, a slight decrease compared to the rate of 6.6% observed in 2006. Banks' aggregate balance sheet rose by 9.0% to €915 448 million as at 31 December 2007. By contrast, net results of credit institutions were subject to an important decline, significantly larger than that observed in 2002 in the financial market turbulences amplified by the terrorist attacks of 11 September 2001. Net income fell by 35.8% compared to 2006.

Is there a credit crunch in Luxembourg?

1. Introduction

The current financial turmoil has led to fears that a "credit crunch" may emerge in Europe, as has been the case in the United States. The tightening of credit conditions in financial markets together with the weakening of the capital positions of big banks naturally raise the question of whether a restriction of credit has occurred in Luxembourg.

This box discusses the different definitions of a credit crunch, before analysing recent data. Special attention is given to the banking industry Balance Sheet Items (BSI), results of the last quarterly Bank Lending Survey (BLS), and indicators typically used for monitoring banks' capital base.

2. Multiple definitions

There is no single definition of a credit crunch that is commonly accepted. At present, the academic literature provides a variety of definitions. According to Bernanke and Lown[5], a credit crunch is a significant leftward shift in the supply of bank loans, holding constant both the real interest rate and the quality of potential borrowers. Owens and Schref[6] define it as a period of sharply increased non-price credit rationing. This view is shared by Green and Oh[7], who also describe a credit crunch as an inefficient situation characterised by solvent borrowers which are unable to obtain credit, and lenders which are excessively prudent. More formally, a credit crunch is typically defined as a situation where the erosion of banks' capital base forces them into a de-leveraging process in order to maintain regulatory capital adequacy ratios. In such a situation, banks are unable to extend credit, irrespective of the price they could charge or the rating of the borrower. This narrow definition is sometimes also referred to as "capital crunch[8]".

Finally, following a broader definition of a credit crunch, the trigger may lie not only in banks' balance sheet problems (impaired capital ratios), but also in borrowers' balance sheet problems (impaired creditworthiness) or, more precisely, uncertainties created by asymmetric information.

Note that a credit crunch may take place between banks as well as between banks and borrowers. It may be localised in particular sectors of the economy (the real estate market for example) or categories of borrowers (households for example). In the following, we'll see credit crunches as a supply-side phenomenon, including situations where banks significantly tighten their non-price credit standards or write more protective covenants into the terms of a loan (reflecting changes in banks' standards that go beyond a normal cyclical tightening), or when higher uncertainty results in significantly higher estimated probabilities of borrower default and thus higher capital charges (reflecting changes in the risk environment; for example via changes to the value of borrowers' collateral). We are particularly interested in assessing the risks of a credit crunch for households and Non-Financial Corporations (NFCs).

3. The growth of loans continues to increase…

By the end of December 2007, Luxembourg banks registered €77 702 million of outstanding loans to NFCs. This figure represents an increase of €13 742 million (+21.5%) within 12 months. Euro area NFCs represented the most important player in nominal terms. Credits to the latter increased by €6 135 million (+18.6%) over one year. Credits to NFCs situated outside the euro area went up by 19.5% (€4 337 million). In relative terms, the strongest credit growth was observed at national level with 37.8% (€3 270 million) between end-2006 and end-2007. According to the latest data, outstanding loans to euro area NFCs continued to increase in the first quarter of 2008 (+ 27.2% within 12 months in April 2008).

5 Bernanke and Lown (1991) "The Credit Crunch", Brookings Papers on Economic Activity, Vol. 1991, No. 2, pp. 205-247.
6 Owens and Schreft (1995) "Identifying Credit Crunches", Contemporary Economic Policy, April, Vol. 13, No. 2, pp. 63-76.
7 Green et Oh (1991) "Can a 'Credit Crunch' Be Efficient? ", Federal Reserve Bank of Minneapolis Quarterly Review, Vol. 15, No. 4, pp. 3-17.
8 See Peek and Rosengren (1995) "The Capital Crunch: Neither a Borrower nor a Lender Be", Journal of Money, Credit and Banking, Vol. 27, No. 3, pp. 625-638.

Outstanding loans granted by Luxembourg banks to households increased by 10% in 2007 (€34 251 million). According to the latest figures, loans to Luxembourg residents remained buoyant during the first four months of the year whereas loans to euro area households excluding Luxembourg were decreasing. Overall, outstanding loans granted by Luxembourg banks to euro area households were still increasing in April 2008 (+3.1%).

4. ... but the Bank Lending Survey indicates a tightening of financing conditions!

BLS data suggest that credit standards on loans to NFCs have tightened in Luxembourg. This tightening has been stronger for large companies. Moreover, it should continue during the second quarter of 2008. These results should be considered with caution as the correlation between the evolution of reported corporate credit standards and corporate loan developments is far from perfect. For instance, the BLS reported tightening credit standards between 2005 and 2006 during a period that coincided with a significant acceleration of loan growth.

5. Banking sector performance indicators are satisfactory

At this stage, there is no sign of an erosion of banks' capital base that could generate a capital crunch. Although decreasing somewhat between 2007 and 2006, solvency ratios remain far above the minimum required level of 8%.The average solvency ratio stood at 14.2% in 2007 compared to 14.9% in 2006. The return on assets ratio "Net results/total assets" was on average 0.68% in 2007 compared to 0.79% in 2006. The liquidity ratio "liquid assets/eligible liabilities" remained comfortably above the minimum required level of 30% (63.3% on average in 2007).

6. Borrowers remain solvent

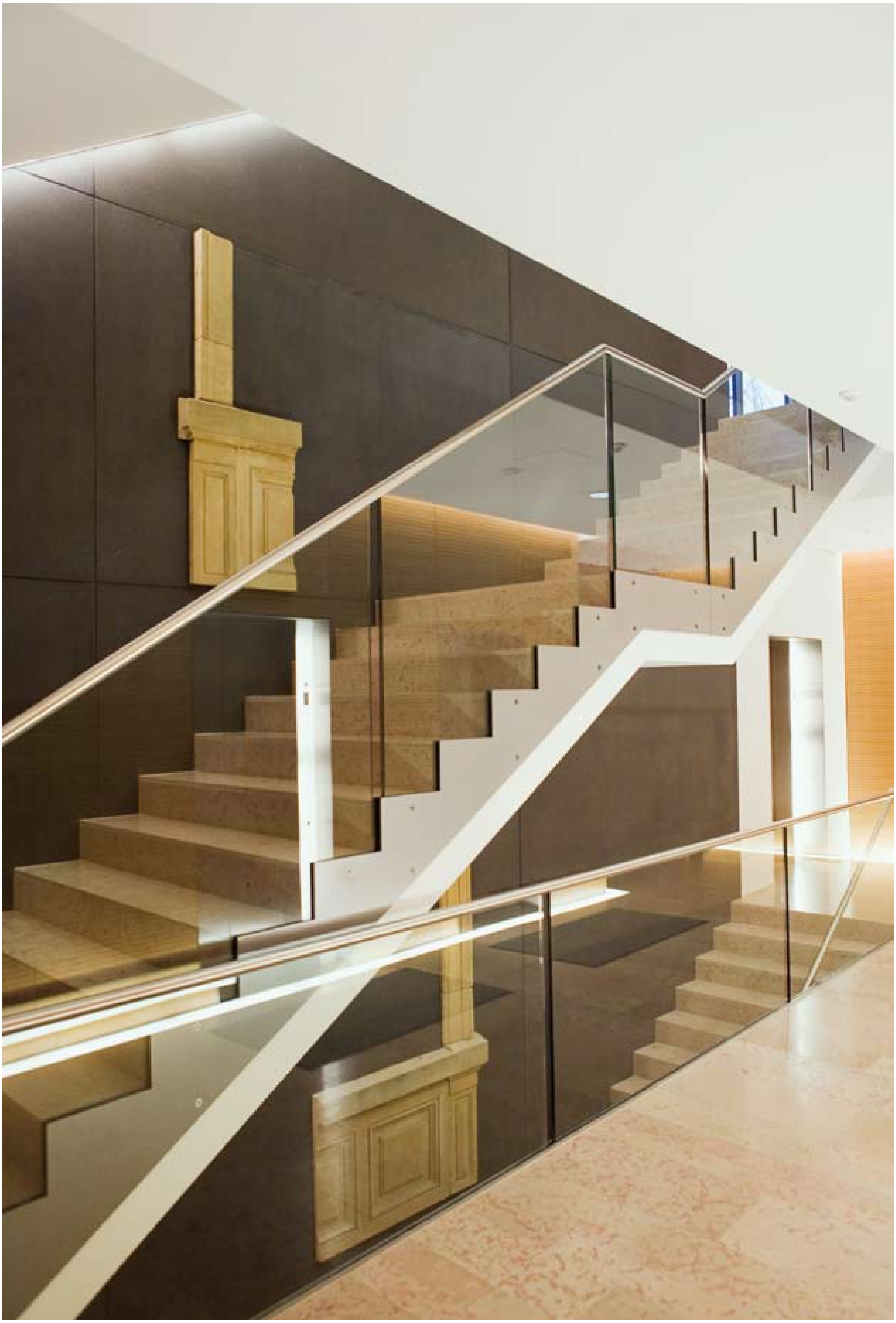
The broad definition of a credit crunch implies that borrower solvency should be monitored carefully. BLS data suggest that a credit crunch would first and foremost affect riskier corporate borrowers. Moreover, judging by recent credit standard developments, large firms are particularly vulnerable, while the household sector has largely been shielded from adverse developments in financial markets. This is unlikely to change significantly in the near term. On the other hand, in the absence of corporate loan data by branch of activity, it is impossible to draw further conclusions about which kind of borrowers may be affected.

7. Conclusion

Strong loan growth has continued during the first quarter 2008. The total supply of credit to both households and NFCs has not been affected by financial turmoil that appeared in August 2007. At this stage, there is no evidence of a credit crunch in Luxembourg.

It should be noted that the decline would be limited to 23.7% if one neutralises non-recurring gains of €904 million that occurred in 2006. The significant decline of credit institutions' net profits is primarily due to important value adjustments and resident credit institutions' provisions to cover risks.

Finally, due to continuing uncertainty on global stock exchanges as well as the impact of the economic slowdown in the US, a further weakening in 2008 can no longer be ruled out.



1. ECONOMIC AND FINANCIAL SITUATION

1.2.5.1 Credit institutions' balance sheets

The aggregate balance sheet grew virtually uninterrupted since 2003, with the exception of December 2007, when it fell by €25 296 million. Between 31 December 2006 and 31 December 2007 banks' aggregate balance sheet increased by €75 883 million, or 9.0%, to reach €915 448 million. The first quarter of 2008 saw similar growth, with an increase of 2.6% between 31 December 2007 and 31 March 2008. Thus, at the end of first quarter of 2008 the Luxembourg banks' aggregate balance sheet stood at €939 299 million. The increase in activity stems mostly from growth in credits and debts as much from the inter-bank market as from non-bank customers.

It is worth mentioning that despite the introduction of International Financial Reporting Standards (IFRS) for all Luxembourg credit institutions, loans (72.0% of total assets) and deposits (82.9% of total assets) are still expressed at their face value in the statistical reports of the BCL. By contrast, the level of securities held or issued are subject to changes in accounting standards which have obviously an impact on the developments of the outstanding amounts. Indeed, previously only a small share of securities were valued at market price, the application of IAS / IFRS means that the majority of securities are now measured at fair value. Finally, it is also important to mention that the new accounting standards require accounting for derivatives on the balance sheet rather than off-balance sheet as was still the case in 2007. The statistical reporting to the BCL requires that the latter positions be classified under other assets and/or other liabilities, respectively. These residual categories are therefore subject to some increase during the first quarter of 2008 as financial derivatives are moved onto the balance sheet.

On the asset side, inter-bank loans increased €37 739 million (9.0%) between December 2006 and 2007. During the first three months of 2008, there was an additional increase of €15 404 million (3.4%), reaching €471 086 million by 31 March 2008. At this stage, interbank activity accounts for nearly half (50.2%) of Luxembourg banks' total assets.

Loans to non-bank customers grew by €34 100 million (21.1%) on an annual basis, rising from €161 250 million at the end of 2006 to €195 350 million at the end of 2007. During the first quarter of this year, loans

TABLE 11:
MAIN FIGURES RELATING TO THE ASSET SIDE OF THE AGGREGATE BALANCE SHEET (OUTSTANDING AMOUNTS AS AT END OF PERIOD)

	Amounts in million euros			Variation in million euros and in %				[1] Relative weight
Assets	2006/12	2007/12	2008/03	2006/12 - 2007/12		2007/12 - 2008/03		2008/03
				million euros	in %	million euros	in %	
Interbank loans	417 943	455 682	471 086	37 739	9.0	15 404	3.4	50.2
Loans to non bank customers	161 250	195 350	204 367	34 100	21.1	9 017	4.6	21.8
Portofolio investment	233 602	236 700	230 632	3 098	1.3	-6 068	-2.6	24.6
Other assets	26 770	27 717	32 214	946	3.5	5 497	18.8	3.5
Total assets	839 565	915 448	939 299	75 883	9.0	23 851	2.6	100.0

Source: BCL

1 Relative weight in relation to total assets

to non-bank customers increased by 4.6% reaching €204 367 million as of 31 March 2008.

While the value of portfolio investment increased slightly during 2007 (1.3%), it fell by €6 068 million (-2.6%) during the first quarter of 2008. This decrease reflects the impact of less favourable stock market developments as well as the application of new valuation methods. Similar effects are visible on the liability side. Debt securities issued decreased by 12.2% (€11 394 million) during the first quarter of 2008. Part of this fall may be linked to the application of the new accounting standards, in particular the adoption of fair value measures.

Other assets, having risen modestly by €946 million (3.5%) over 2007, have significantly improved by €5 497 million (19.8%) in the first quarter of 2008. This increase is largely due to the migration of LuxGAAP accounting towards International Financial Reporting Standards. Finally, on 31 March 2008 other assets represented 3.5% of the total balance sheet, while other liabilities accounted for 8.6%. Given this background, the share of these two miscellaneous categories should keep growing fairly strongly in the months ahead.

On the liabilities side, most of the increase stems from inter-bank refinancing. After an increase of 14.9% (€57 710 million) during 2007, this item has grown by 4.5% (€20 179 million) during the first quarter of 2008. In relative terms, interbank liabilities represent nearly half (49.4%) of the total liabilities of Luxembourg banks.

Deposits to non-bank customers account for the second most important source of financing with a 33.3% share of total liabilities. They increased by just 2.9% over 2007, followed by a 2.4% increase during the first quarter of 2008.

While 2007 was marked by 3.9% growth of outstanding debt securities issued. In the first quarter of 2008 these fell 12.2% to €82 180 million.

In contrast, other liabilities rose in line with banks' aggregate balance sheet, increasing 9.3% (€6 166 million) during 2007. An even more remarkable performance was registered over the first three months of 2008 with growth of 10.8% (€7 854 million), which was largely due to migration towards IAS / IFRS accounting. On 31 March, outstanding amounts accounted for €80 651 million.

TABLE 12: MAIN FIGURES RELATING TO THE LIABILITY SIDE OF THE AGGREGATE BALANCE SHEET (OUTSTANDING AMOUNTS AT END OF PERIOD)

	Amount in million euros			Variation in million euros and in %				[1] Relative weight
Liabilities	2006/12	2007/12	2008/03	2006/12 - 2007/12		2007/12 - 2008/03		2008/03
				million euros	in %	million euros	in %	
Interbank debts	386 088	443 797	463 976	57 710	14.9	20 179	4.5	49.4
Deposits from non bank customers	296 803	305 279	312 492	8 476	2.9	7 212	2.4	33.3
Debt securities issued	90 043	93 574	82 180	3 531	3.9	-11 394	-12.2	8.7
Other liabilites	66 631	72 797	80 651	6 166	9.3	7 854	10.8	8.6
Total liabilities	839 565	915 448	939 299	75 883	9.0	23 851	2.6	100.0

Source: BCL

1 Relative weight in relation to total assets

1. ECONOMIC AND FINANCIAL SITUATION

1.2.5.2 Retail interest rates in Luxembourg

After a continuous increase since December 2005, the cost of loans granted by the Luxembourg banks to euro area residents stabilised during the second half of 2007. On the other hand, financing conditions offered to non-financial corporations tightened until the end of 2007 and relaxed during the first quarter of 2008.

After a rapid increase between December 2006 (4.51%) and July 2007 (4.83%), the variable interest rate on loans for house purchase granted to euro area households fluctuated between 4.82% and 4.93% during the second half of 2007. During the first quarter of 2008 it remained rather stable, passing from 4.89% in January to 4.90% in March and finally settling at 4.82% in April.

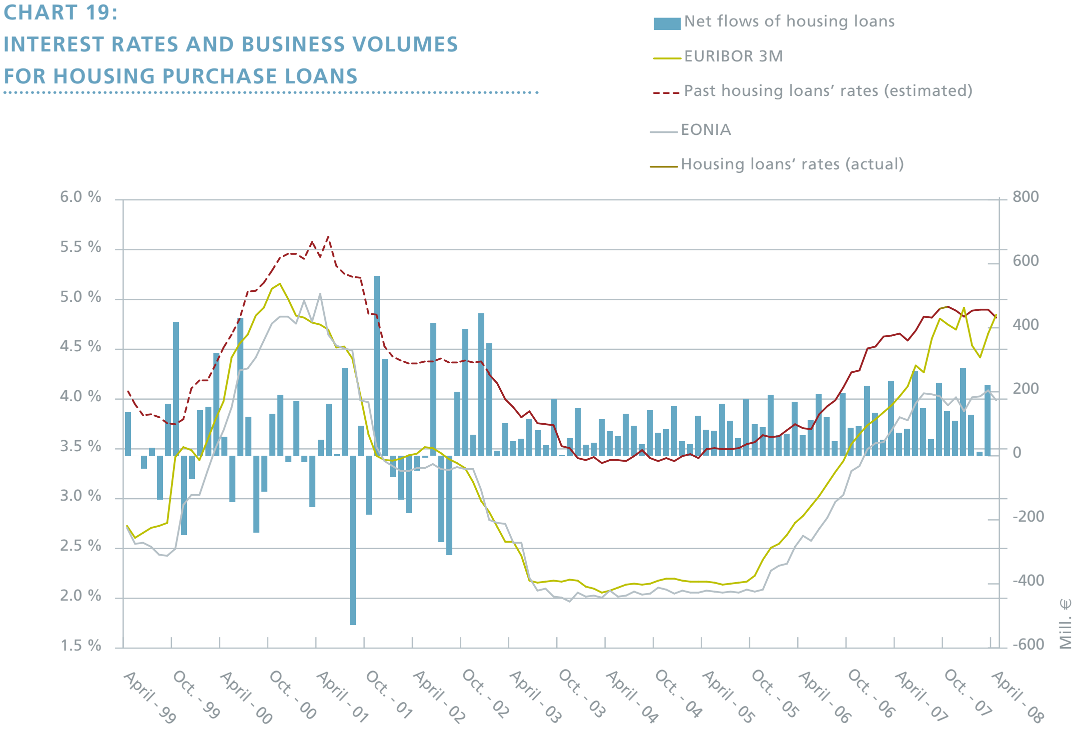
The financial turmoil since summer 2007 flattened the interest rate yield curve (and disconnected the interbank interest rate and the Eurosystem's refinancing rate). However, it did not affect interest rates on loans for house purchase. The latter remain strongly correlated with the daily interest rate linked to the rate of the main refinancing operations of the Eurosystem. The current interest rate on loans for house purchase remains below levels observed in 2000 and 2001.

At the same time, the volume of loans granted for house purchase in Luxembourg grew since the beginning of the decade. From the first quarter of 2001 to the last quarter of 2005 this increase could be explained by favorable conditions offered to borrowers and the continuous growth of real estate prices. Since the beginning of 2006 the macroeconomic environment has changed substantially (increase of the cost of financing) but real estate prices continued to rise (8% for apartments and 13% for houses between end-2004 and end-2006[9]). Despite this development, Luxembourg banks anticipate only a slight tightening in loan conditions over the coming months.

Regarding loans to non-financial corporations (NFCs) the situation is quite different. Interest rates on loans to NFCs are anchored to short-term market rates (typically the 3-month EURIBOR) and not the Eurosystem's

9 Data provided by the Observatoire de l'habitat based on public offers – note n°8, June 2007

CHART 19:
INTEREST RATES AND BUSINESS VOLUMES FOR HOUSING PURCHASE LOANS



Source: BCL

main refinancing operations. In addition, the latest bank lending survey (BLS) indicates a tightening of loan criteria reflecting balance sheet constraints. The turmoil on inter-bank markets raised the volatility of interest rates for loans to NFCs, in particular for loans above €1 million. The interest rate for the latter decreased from 5.25% in December 2007 to 5.04% in April 2008. However, this development occurred after an increase of 31 basis points between November (4.94%) and December 2007 following the strong increase of the 3-month inter-bank rate during this period (22 basis points). Besides, the differential between the interest rate on loans granted to NFCs (for loans above €1 million) and the EONIA rate, provides a measure of the volatility of this series against the financing conditions offered on a daily basis. This spread increased from 7 basis points in 2006 to 17 basis points in 2007.

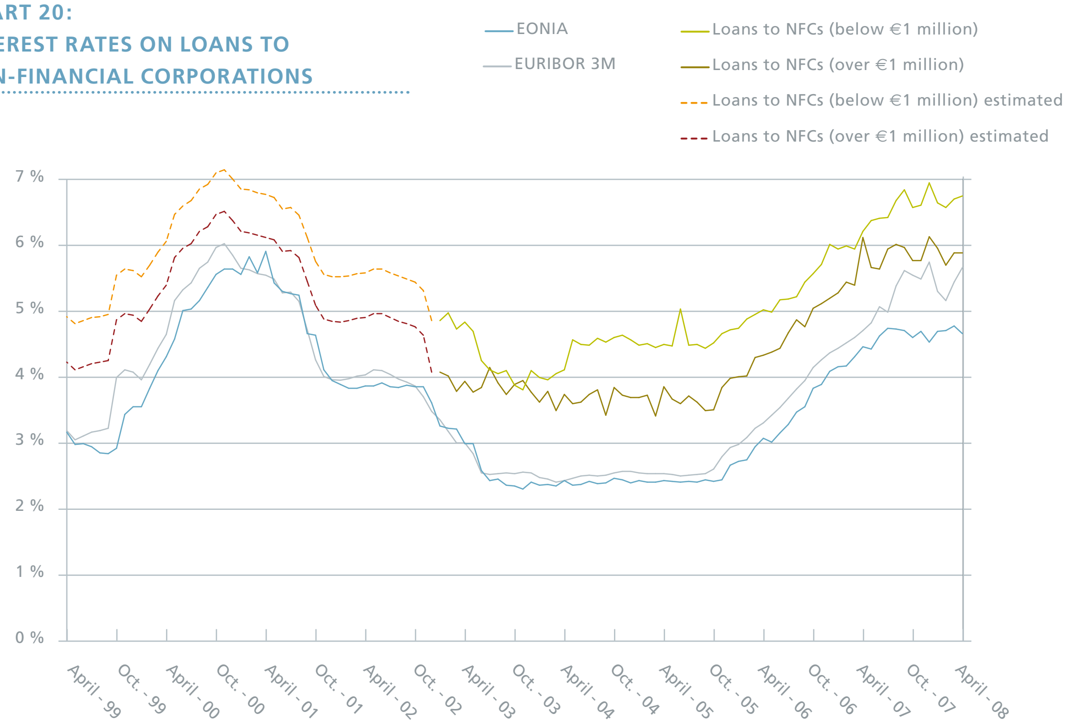
Interest rates on loans to NFCs below €1 million decreased from 5.95% in December 2007 to 5.78% in April 2008. Both rates remained stable in April 2008 with 5.78% and 5.04%.

For consumer loans granted to euro area households with an initial rate fixation between 1 and 5 years, the interest rate fell 52 basis points from 6.29% in December 2007 to 5.77% in April 2008. However, it is worth mentioning that the rate offered in this category of loans fell to 5.25% in February 2008 due to the so-called *Festival de l'auto* and its very specific interest rate conditions.

Other loans with variable interest rate also saw a decrease of interest rates by 11 basis points from 5.52% in December 2007 to 5.41% in April 2008. However, the downturn in the financial environment affects this category of loans through two channels: the rise of short-term financing costs and the increase of the default risk premium. In 2007, at the height of the tensions on inter-bank markets, the interest rate on other loans increased by 26 basis points compared to November 2007 (5.26%).

A similar evolution affected the remuneration of deposits with agreed maturity of less than one year for households and for non-financial corporations. Following

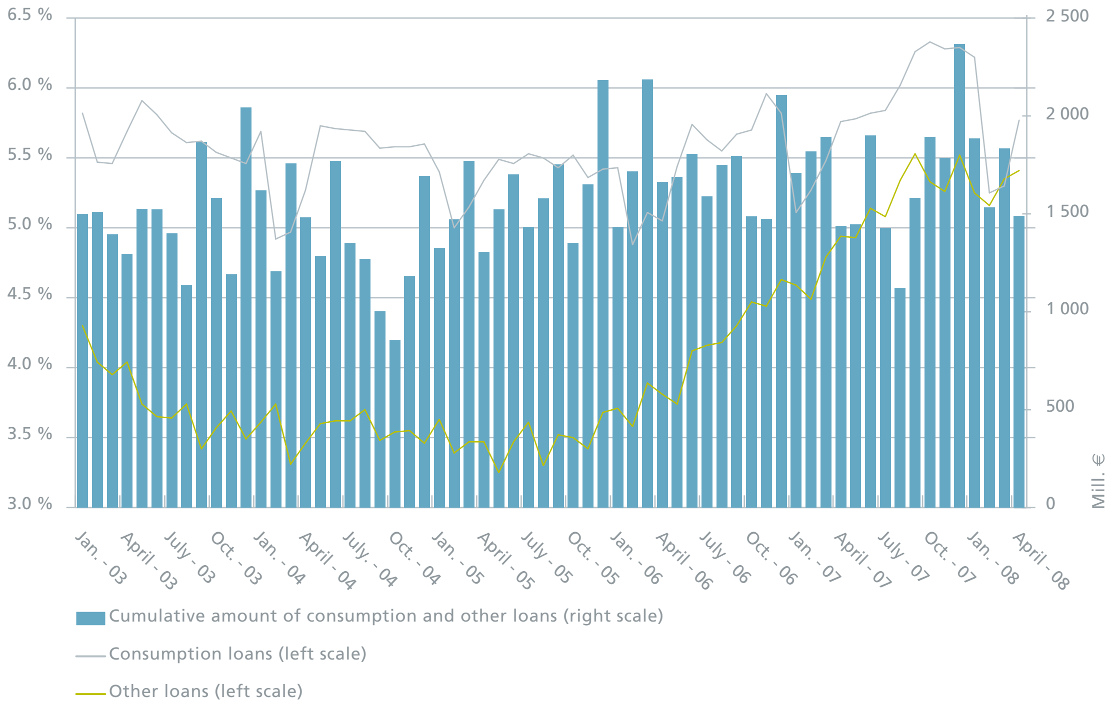
CHART 20: INTEREST RATES ON LOANS TO NON-FINANCIAL CORPORATIONS



Source: BCL

1. ECONOMIC AND FINANCIAL SITUATION

CHART 21:
INTEREST RATES AND VOLUMES OF CONSUMER LOANS AND OTHER LOANS



Source: BCL

an increase of 24 basis points between October 2007 and December 2007, the interest rates on household deposits with agreed maturity fell slightly between December 2007 (4.07%) and March 2008 (3.98%) but increased again to 4.08% in April 2008. Deposits with agreed maturity from non financial corporations saw an increase in interest rates from 4.07% in December 2007 to 4.11% in April 2008.

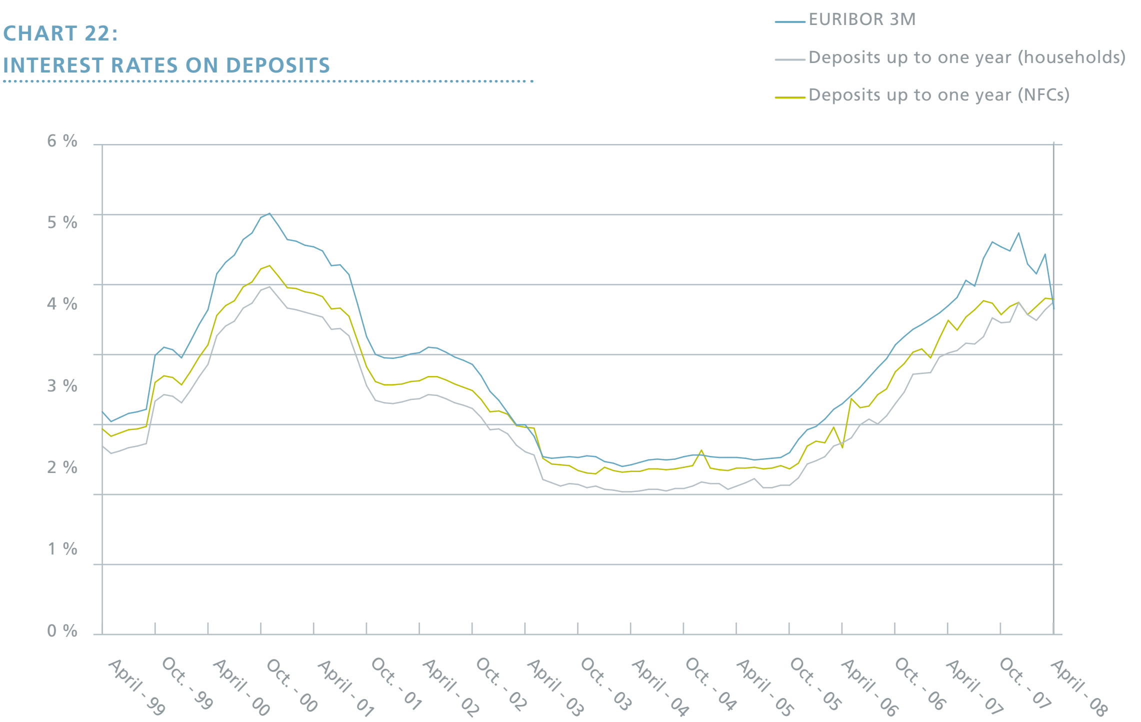
1.2.5.3 Employment in the banking sector

As of 31 March 2008, the total number of employees in the Luxembourg banks stood at 26 513, which represents an increase of 1.4% from December 2006. Despite a difficult macroeconomic and financial environment (revaluation of risks, worsening of refinancing conditions, uncertainty, high volatility of stock indices…) Luxembourg banks increased their staff. This development is even more significant if one considers that the number of credit institutions remains stable (fluctuating between 153 and 157 units). It should be mentioned that the Luxembourg banking sector has been a net job creator since mid-2004.

However, some banks recently announced plans to cut jobs. It seems that these decisions are motivated by reorganisation plans at a group level rather than by local considerations. In fact, some major international banking groups have recently announced that they intend to implement cost reduction plans.

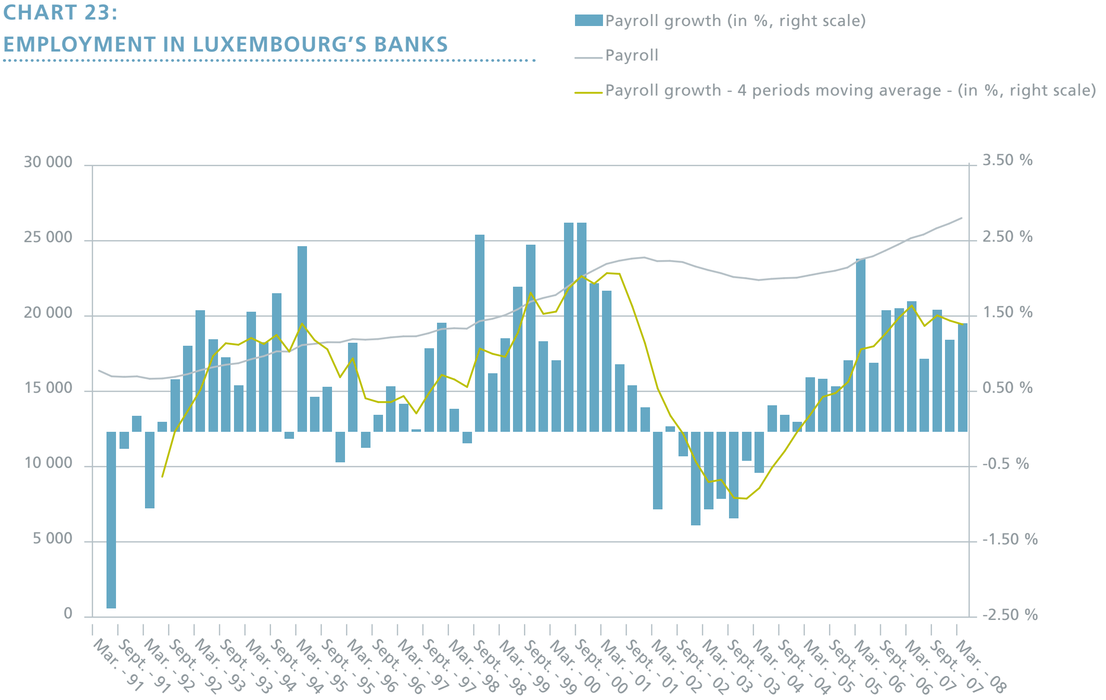
The chart below shows that despite the difficult economic and financial environment in the first half of the year 2001, the Luxembourg banking sector has continued to create jobs. A reversal of this trend was only observed during the first quarter of 2002 but this

CHART 22: INTEREST RATES ON DEPOSITS



Source: BCL

CHART 23: EMPLOYMENT IN LUXEMBOURG'S BANKS



Source: BCL

1. ECONOMIC AND FINANCIAL SITUATION

reversal was strong and durable; as it took 2 years to return to job creation. This suggests a time-lag between the start of a crisis and its impact on the level of employment in the Luxembourg banks.

1.2.5.4 Credit institutions' profit and loss accounts

After an excellent first half of 2007, in line with the results of 2006, earnings in Luxembourg's credit institutions suffered from the financial turmoil that started in August 2007. The aggregate net result after taxes declined by €2 046 million, or 35.8% compared with 2006, to €3 670 million, which nearly represents a return to the level in 2005.

The interest margin rose considerably by 24.5%, or €1 199 million, to €6 102 million in 2007. Net income benefited especially from an increase in net income from securities of 275.5%, or €259 million, whereas other net income dropped by €760 million, or 45.5%.

The slight decline in net income by 2.3% was more than compensated by the increased interest margin so that gross income rose from €10 878 million to €11 939 million, or 9.8%, over 2007.

General administrative expenditure (staff costs and other administrative expenditure) rose by 11.2% during 2007. Staff costs increased due to wage adjustments and to new job creation in the banking sector (+ 1 387 jobs).

In 2007, Luxembourg banks reached an aggregate gross income before taxes and provisions of €7 364 million, representing an improvement of 8.9% in comparison with the year 2006, when an exceptionally high level of €6 761 million was achieved (+46.7% compared to 2005).

However, due to the sub-prime mortgage crisis and subsequent financial turmoil, credit institutions had to increase net provisions from €193 million in 2006 to €2 899 million in 2007, representing 24.3% of gross income. Although some banks holding mortgage-backed securities and collateralised debt obligations faced significant losses, the vast majority of Luxembourg banks seem to have been fairly resilient to the effects the sub-prime mortgage crisis had on international financial markets.

TABLE 13:
AGGREGATE PROFIT AND LOSS ACCOUNT OF LUXEMBOURG BANKS AT YEAR-END, INCLUDING THEIR FOREIGN BRANCHES [1)2)]

(Eur millions except otherwise indicated)

	Debit and credit items	2000	2001	2002	2003	2004	2005	2006	2007
1	Interest receivable and income from securities	50 694	52 993	42 681	35 300	30 241	36 515	49 972	62 452
2	Interest payable	47 081	48 524	38 441	31 129	26 241	32 531	45 069	56 350
3	Interest margin (1-2)	3 613	4 469	4 240	4 171	4 000	3 984	4 903	6 102
	Other income:								
4	from securities	290	189	172	297	415	376	94	353
5	from commission	3 102	2 830	2 655	2 575	2 831	3 285	3 761	4 115
6	from foreign exchange	300	290	316	285	296	335	446	455
7	other net income	463	413	948	430	64	503	1 674	914
8	Net income (4+5+6+7)	4 155	3 722	4 091	3 587	3 606	4 499	5 975	5 837
9	Gross income (3+8)	7 768	8 190	8 331	7 758	7 606	8 483	10 878	11 939
10	Staff costs	1 677	1 806	1 864	1 807	1 860	2 016	2 208	2 432
11	Other administrative expenditure	1 444	1 498	1 412	1 381	1 413	1 518	1 628	1 832
12	General administrative expenditure (10+11)	3 121	3 304	3 276	3 188	3 273	3 534	3 836	4 264
13	Taxes other than tax on income	99	95	50	40	36	38	46	54
14	Write downs of non-financial fixed assets	315	402	314	295	296	286	235	257
15	Results before provisions (9-12-13-14)	4 232	4 390	4 691	4 235	4 001	4 625	6 761	7 364
16	Provisions and write downs of fixed financial assets	1 584	1 381	1 912	1 318	1 004	1 007	712	3 587
17	Write back of provisions	719	627	526	593	622	630	519	688
18	Net provisions	864	754	1 386	725	382	377	193	2 899
19	Result after provisions (15-18)	3 368	3 635	3 305	3 510	3 619	4 248	6 568	4 465
20	Tax on income	936	834	630	657	747	775	852	795
21	Net result (19-20)	2 432	2 802	2 675	2 853	2 872	3 473	5 716	3 670
22	Average balance sheet total	639 043	696 961	700 099	668 088	687 486	754 825	837 148	896 069
		Significant indicators							
23	Operating costs (row 10 to 14)	0.55	0.55	0.52	0.53	0.52	0.51	0.49	0.51
24	Results before provisions (row 15)	0.66	0.63	0.67	0.63	0.58	0.61	0.81	0.82
25	Net provisions (row 18)	0.14	0.11	0.20	0.11	0.06	0.05	0.02	0.32
26	Result after provisions (row 19)	0.53	0.52	0.47	0.53	0.53	0.56	0.78	0.50

Source: BCL

1. Data has been revised in the light of new information.
2. 2007 provisional data.

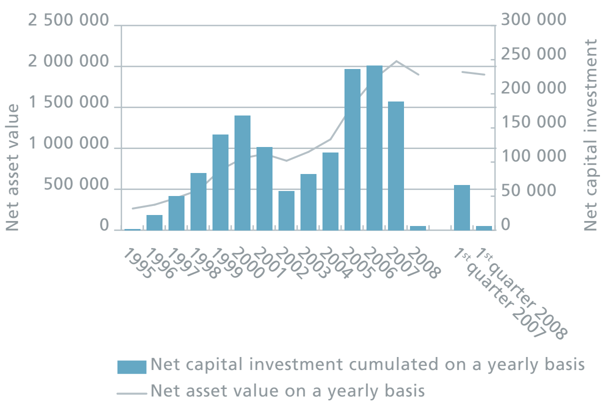
1.2.5.5 Undertakings for collective investment

The Luxembourg investment fund industry was marked by many contrasts over the year 2007. The favourable stock market environment during the first half of the year set the basis for an excellent performance of the funds industry with high growth rates both in the number of funds as well as in net asset value and net capital investment. Following the US mortgage market crisis, the second half of 2007 was characterised by reduced net capital investment as well as the stabilization of the net asset value at a high level. The first quarter of 2008 was characterised by a decrease of the net asset value essentially explained by the poor equity market performance.

The evolution of the number of funds

As at end 2007, 2 868 undertakings for collective investment (UCIs) were recorded on the official list, representing an increase of 630 units compared to the level end December 2006. This upward trend in the number of UCIs, confirmed in the first quarter of 2008 by an increase of 144 units, suggests that the US mortgage crisis did not affect the development of the number of UCIs.

CHART 24:
NET ASSET VALUE AND NET CAPITAL INVESTMENT (IN MILLION EUROS)



Net asset value

As far as concerns the net asset value (NAV), the growth observed during 2006 continued in 2007 to reach its highest historical value of €2 123 519 million at the end of October 2007. By the end of December 2007, net asset value stood at €2 059 395 million, compared to €1 844 850 million observed as at end December 2007. The 11.6% annual growth observed in 2007 is still high although below the growth rates observed during the three previous years.

As at 31 March 2008, net asset value stood at €1 895 445 million, representing a significant decrease of €163 950 million compared to December 2007. This decrease can mainly be explained by the weak stock market performance in January and March 2008 as well as by lower net capital investment, which was even negative in January 2008.

1.2.5.6 Money market funds

Unlike the overall population of UCIs, money market funds had a successful year in 2007.

The number of money market funds

End December 2007, 463 units were recorded on the official list. Compared to the previous year, the number of money market funds rose by 12 units. During the first quarter of 2008, the number of money market funds remained stable with 464 units registered as at end March 2008.

The balance sheet of money market funds

The balance sheet increased from €190 242 million as at 31 December 2006 to €253 641 million as at 31 December 2007 which represents a growth rate of 33%. This positive evolution was confirmed during the first quarter of 2008 when the balance sheet increased further to €286 092 million.

Strong total asset growth in the money market funds during 2007 and the first quarter of 2008 may partially be explained by the enlargement of the population. However, the important increase of money market funds' total balance sheet also confirms that during a period

TABLE 14:
GLOBAL SITUATION OF UNDERTAKINGS FOR COLLECTIVE INVESTMENTS

(in million euros, outstanding amounts at the end of period, except where otherwise stated)

	Number of UCIs	Number of subfunds	Net asset value	Net capital investment 1) 2)	Variation of financial market 2) 3)	Annual change in EUR million	Annual percentage change
2000	1 785	6 995	874 600	168 200	-28 118	140 082	19.1
2001	1 908	7 519	928 447	121 700	-67 900	53 847	6.2
2002	1 941	7 806	844 508	57 314	-141 206	-83 939	-9.0
2003	1 870	7 509	953 302	82 609	26 185	108 794	12.9
2004	1 968	7 876	1 106 222	113 731	39 189	152 920	16.0
2005	2 060	8 497	1 525 208	236 277	182 709	418 986	37.9
2006	2 238	9 473	1 844 850	241 344	78 298	319 642	21.0
2007	2 868	11 115	2 059 395	188 488	26 057	214 545	11.6
2007							
Jan.	2 260	9 563	1 895 810	30 749	20 211	312 566	19.7
Feb.	2 278	9 637	1 908 707	29 083	-16 186	270 601	16.5
March	2 248	9 680	1 927 360	6 378	12 275	252 100	15.0
April	2 276	9 793	1 966 996	22 233	17 403	264 757	15.6
May	2 302	9 900	2 024 662	21 578	36 088	366 985	22.1
June	2 352	10 042	2 047 022	20 598	1 762	394 896	23.9
July	2 407	10 194	2 052 977	23 771	-17 816	373 459	22.2
Aug.	2 460	10 336	2 035 294	166	-17 849	327 888	19.2
Sept.	2 501	10 415	2 059 144	-607	24 457	326 114	18.8
Oct.	2 618	10 644	2 123 519	24 630	39 745	342 402	19.2
Nov.	2 761	10 924	2 063 797	6 860	-66 582	264 272	14.7
Dec.	2 868	11 115	2 059 395	3 049	-7 451	214 545	11.6
2008							
Jan.	2 932	11 262	1 951 141	-7 580	-100 674	55 331	2.9
Feb.	2 972	11 387	1 962 845	9 027	2 677	54 138	2.8
March	3 012	11 498	1 895 445	4 794	-72 194	-31 915	-1.7

Source: CSSF

1. Net capital investment is defined as the difference between net proceeds from shares or units and net payments made in settlement of redemptions in liquidation adjusted to take into consideration UCIs
2. Figures cumulated on a yearly/monthly basis
3. The column variation of financial markets reflects the change in net assets which is due to the fluctuation of financial markets.

of negative stock market performance investors tend to adopt more prudent behaviour and prefer investments that have more stable returns. In fact, since the start of 2007 total balance sheet grew €95 850 million, representing a growth rate of more than 50% within 15 months.

1.2.5.7 Bank lending survey

The Bank Lending Survey (BLS) carried out by the Eurosystem since end-2002 assesses credit conditions in the euro area. Every quarter, a questionnaire is sent out to the seven banks from the Luxembourg sample; the survey questionnaire contains a number of questions on the supply of and demand for credit, covering the household sector as well as non-financial corporations (NFCs).

Results are generally expressed in terms of "net percentages". For the questions on credit standards, net percentages refer to the difference between those banks that reported a tightening and those that reported an easing of credit standards. For the questions on credit demand, net percentages refer to the difference between those banks that reported a fall in demand and those that reported a rise.

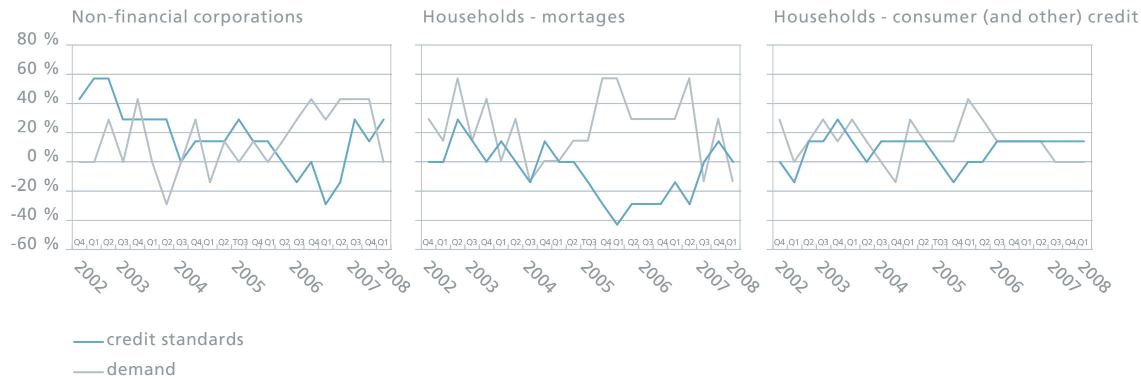
The latest results pertain to the first quarter of 2008; this survey again included a number of additional questions on market turmoil. For the entire period under review (January 2007 to March 2008), the results obtained for Luxembourg differ markedly from those at the euro area level, in particular after the first six months of 2007; overall, results are much more optimistic for Luxembourg. Nevertheless, results for the corporate sector are more or less in line with the aggregate results at the euro area level.

The chart plots the survey results for key questions in terms of net percentages.

NFCs: Following a period of net easing of credit standards during the first two quarters of 2007, several banks indicated that they had tightened lending standards after the market turmoil in August 2007. Although this tightening impact has risen somewhat since the onset of the turmoil, other elements such as risk perceptions have also contributed to a net tightening. Credit standards for large NFCs were particularly affected.

On the demand side, corporate net demand remained resilient at first before hitting 0% in the last quarter of the period under review, owing to lesser financing requirements.

**CHART 25:
CREDIT STANDARDS AND DEMAND, NET PERCENTAGES**



Source: BCL

1. ECONOMIC AND FINANCIAL SITUATION

Households (mortgages): Although the two-year period during which mortgage credit standards have eased continuously came to an end in the third quarter 2007, only one net tightening has been recorded since. The ad hoc questions on market turmoil indicate that market tensions have indeed had little impact on mortgage lending standards. These results are much more favourable for borrowers than those recorded at the euro area level, though it is worth highlighting that considerable intra-country differences exist.

Net mortgage demand has moderated considerably after a prolonged period during which high net percentages had been recorded; indeed, net demand was negative in the third quarter of 2007 and in the first quarter of 2008. Moreover, participating banks indicated that housing market prospects had a mitigating impact on loan demand.

Households (consumer and other credit): Regarding credit standards, consecutive net tightenings have been recorded since the third quarter of 2006. However, it is essential to recall that the net percentages are not weighted, and the overall results should therefore not be interpreted as a broad-based tightening affecting the Luxembourg economy at large.

On the demand side, net percentages have been flat since the third quarter of 2007, following a prolonged period during which net demand was positive. The drop in net demand for consumer (and other) credit is in part linked to a fall in consumer confidence.

Ad hoc questions regarding the impact of market tensions on funding access: In addition to the questions regarding the impact of market tensions on credit standards, the last three survey rounds included a series of questions on whether market turmoil had affected banks' funding access. Results indicate that participating banks in Luxembourg have primarily experienced funding difficulties in the money market; these difficulties have increased somewhat since the third quarter 2007. While funding difficulties were less severe with regard to the issuance of debt securities, it should be highlighted that not all banks from the sample were active in this market segment, while securitisation was not widely used at all.

These funding difficulties have also had an impact on the quantity banks were willing to lend, and especially on their margins. Bank capital was virtually unaffected.

1.2.6 Luxembourg Stock Exchange

In 2007, the LuxX index progressed by 11.1%, finishing the year at 2 419.28. During the first five months of 2008, the LuxX fell by 4.5%, standing at 2 311.54 at end-May. Nevertheless, compared to other major stock indices the performance of the LuxX remains impressive.

The overall rise in the index veils a rather heterogeneous evolution of its components. It is, for example, largely attributable to ArcelorMittal, which contributes over 20% to the index basket. However, some of the other components of the LuxX, most notably financial sector shares, had a much less favourable performance.

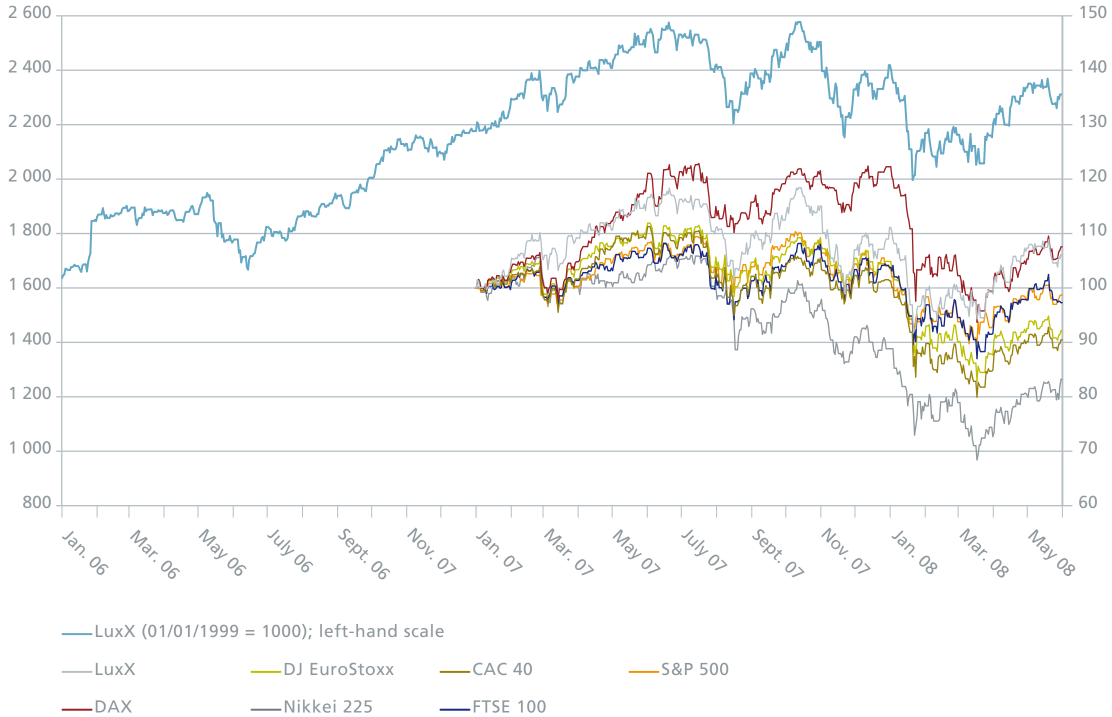
All in all, 13 353 new listings were introduced in the year under review (2 305 in the alternative Euro MTF market); this contrasts with 7 639 de-listings, yielding a total of 45 573 listings at end-2007.

Total turnover by volume fell from €1 500.5 million to €652 million, however, largely owing to a substantial drop in bond turnover (-65%).

Apart from these developments, it is worth mentioning that the alternative market Euro MTF launched in July 2005 has become increasingly popular at the international level, in particular with issuers outside the European Union; this alternative market lies outside the scope of some EU regulations, such as IAS. At end-2007, 4 259 securities were listed on Euro MTF. In March 2007, Euronext and the Luxembourg Stock Exchange announced the signature of a Master Agreement. On May 2, 2007, the Luxembourg Stock Exchange migrated all securities listed on its two markets to the NSC® trading platform of Euronext. A few weeks later, LCH.Clearnet SA and the Luxembourg Stock Exchange announced the signature of a Memorandum of Understanding to implement clearing services for Luxembourg Stock Exchange markets in respect of transactions in corporate bonds, government bonds and equities.

CHART 26:
THE LUXX INDEX AND OTHER MAJOR INTERNATIONAL STOCK INDICES

(Index : 01/01/2007 =
100 Unless Otherwise Indicated ; Daily Data)



Source: Bloomberg

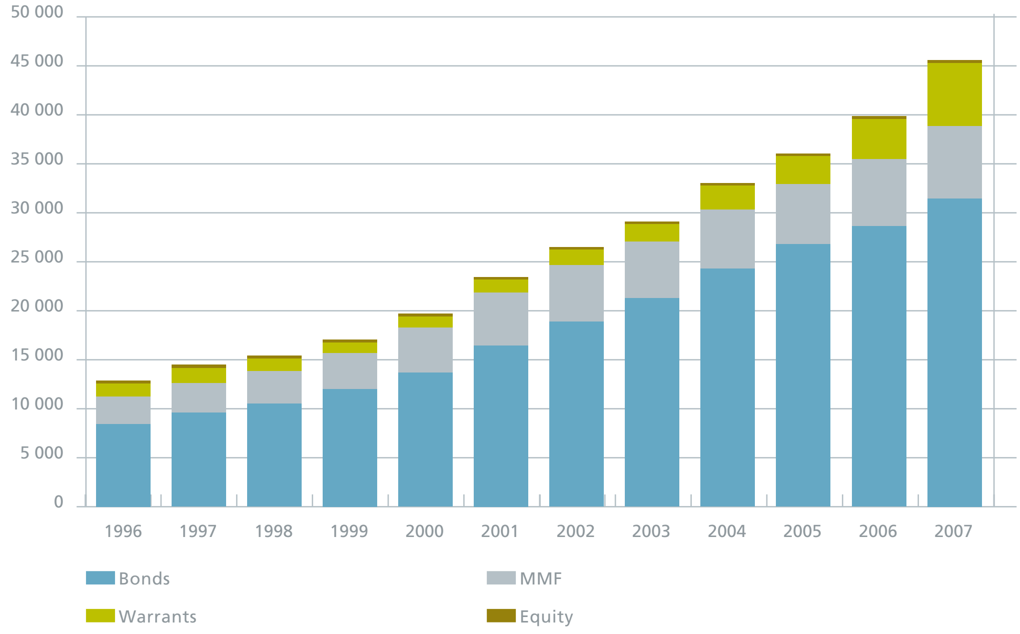
TABLE 15:
TURNOVER BY VOLUME, %

	2002	2003	2004	2005	2006	2007
Bonds	70.0%	47.9%	49.5%	87.8%	86.1%	68.8%
Equity	16.7%	29.4%	27.1%	9.3%	12.5%	27.0%
MMF	13.2%	16.5%	16.2%	2.7%	1.4%	4.1%
Warrants	0.0%	6.2%	7.2%	0.2%	0.0%	0.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Bourse de Luxembourg

1. ECONOMIC AND FINANCIAL SITUATION

CHART 27:
NUMBER OF LISTINGS



Source : Bourse de Luxembourg

1.2.7 Labour market

The Luxembourg labour market improved clearly in 2007: employment growth continued to accelerate throughout the year, in line with the lagged response of employment to economic activity, rising by 4.5% in 2007 after an increase of 3.9% in 2006. Available information suggests continued and even accelerating expansion in 2008 at around 5.2% on average for the first four months. As a result, the total number of persons working in Luxembourg reached around 350 000 in April 2008. The sectoral breakdown indicates that the acceleration in employment growth in 2007 was driven by two sectors, namely "Real estate and business services" and "Financial services".

The inflow of non-resident labour has continued to account for the largest part of employment growth. Cross-border commuters represent nearly 70% of net newly created jobs. This share is higher than the previous year's figure. In 2007, the share of cross-border commuters in total domestic employment reached almost 40%. Of all cross-border workers approximately 51% come from France, 26% from Belgium and 24% from Germany.

After 5 years of increase, the unemployment rate stabilised at 4.4% in 2007, employment growth having been sufficiently strong to prevent a further increase. However, a certain amount of skill mismatch certainly remains as more than half of the resident unemployed have only a primary education level while most jobs offered require higher qualifications or a specialisation, especially in the financial sector. In addition, one-third of the unemployed are unemployed for more than 12 months so they may be subject to a depreciation of their existing skills.

Unit labour costs and productivity: comparison with neighbouring countries

This text box analyses unit labour cost developments over the period 1996-2006, comparing Luxembourg's performance with that of its three neighbouring countries (Germany, France and Belgium). These three countries are also Luxembourg's main trading partners and in 2006 they were the destination of more than 50% of Luxembourg's goods exports and nearly 40% of its services exports. Any international comparison requires comparable data. This is why this text box relies on the AMECO database, published by the European Commission services, in which the most recent annual observation is 2006.

Unit labour costs are measured by the ratio of wages per employee to labour productivity (GDP divided by total employment, including the self-employed). In general, international comparisons are based on nominal unit labour costs (calculated using real GDP)[10]. The table indicates that Luxembourg experienced the fastest growth in unit labour costs over the period 1996-2006 (1.95%), above Belgium and France (1.38% and 1.22%). In Germany, unit labour costs even declined slightly in nominal terms over this period (-0.05%). Limiting the analysis to the five most recent years (2001-2006), it appears that growth in unit labour costs in Luxembourg was even higher, by nearly 0.8 percentage points with respect to the whole of the decade. Note also that over the period 2001-2006, the drop in Germany was nearly twice as fast as the decline over the last decade.

10 Comparing **real** unit labour costs Luxembourg's situation appears to be much better because these incorporate the GDP deflator, which has grown much more rapidly in Luxembourg than abroad. By analogy, it would be mistaken to compare the price of apples in Luxembourg and abroad after deflating by the consumer price index (which has increased more in Luxembourg than in neighbouring countries).

TABLE 16: UNIT LABOUR COSTS: COMPARISON WITH NEIGHBOURING COUNTRIES

	Luxembourg	Germany	France	Belgium
		Average 1996-2006		
Unit labour costs (1) = (2)-(3)	1.95%	-0.05%	1.38%	1.22%
Wages per employee (2)	3.01%	1.03%	2.52%	2.49%
Labour productivity (3)=(4)+(5)	1.06%	1.08%	1.14%	1.27%
Contribution from total factor productivity (4)	0.45%	0.58%	0.64%	0.87%
Contribution from capital-deepening (5)	0.61%	0.50%	0.50%	0.40%
		Average 2001-2006		
Unit labour costs (1) = (2)-(3)	2.76%	-0.09%	1.98%	1.61%
Wages per employee (2)	3.12%	0.90%	2.93%	2.65%
Labour productivity (3)=(4)+(5)	0.36%	0.99%	0.95%	1.04%
Contribution from total factor productivity (4)	-0.56%	0.51%	0.26%	0.64%
Contribution from capital-deepening (5)	0.93%	0.47%	0.69%	0.40%

Sources : European Commission (AMECO), BCL calculations

Growth in unit labour costs can be decomposed into the contribution of wages per employee and the contribution of labour productivity (GDP per person employed). Luxembourg experienced the fastest growth in wages per employee (3.01% on average), well above France (2.52%) and Belgium (2.49%), with Germany demonstrating significant wage moderation (1.03%). On the other hand, labour productivity grew more slowly in Luxembourg (1.06%) than in Belgium (1.27%) or France (1.14%) or even Germany (1.08%). Considering that Luxembourg experienced the weakest productivity growth and the strongest wage growth, it is natural that its unit labour costs grew faster than in its neighbouring countries. Concentrating on the last five years of the decade, one can see that wages per employee accelerated in Luxembourg but also in France and in Belgium. Furthermore, over the period 2001-2006, labour productivity growth was nearly three times slower than over the whole of the decade, contributing to the decline in Luxembourg's relative position.

Labour productivity growth can be further decomposed by relying on the conventional assumptions of growth accounting. Assume that observed GDP is produced by a Cobb-Douglas function with constant returns to scale:

$$Y = (K)^{1-\alpha} (L)^{\alpha} \, TFP$$

where Y represents real GDP, K represents the real capital stock, L represents total employment and TFP represents total factor productivity. Applying natural logarithms (ln) and taking first differences ($\Delta x_t = x_t - x_{t-1}$), one can rewrite this equation as follows:

$$\Delta \ln(Y/L) = (1-\alpha)\Delta \ln(K/L) + \Delta \ln(TFP)$$

The term on the left-hand side measures growth in labour productivity, which can now be decomposed into the two terms on the right-hand side: fluctuations in the capital-labour ratio (capital-deepening) and growth in total factor productivity. The parameter α is conventionally set at the average share of the wage bill in nominal GDP (on the assumption that on average factor markets are at their competitive equilibrium). This makes it possible to calculate TFP as a residual.

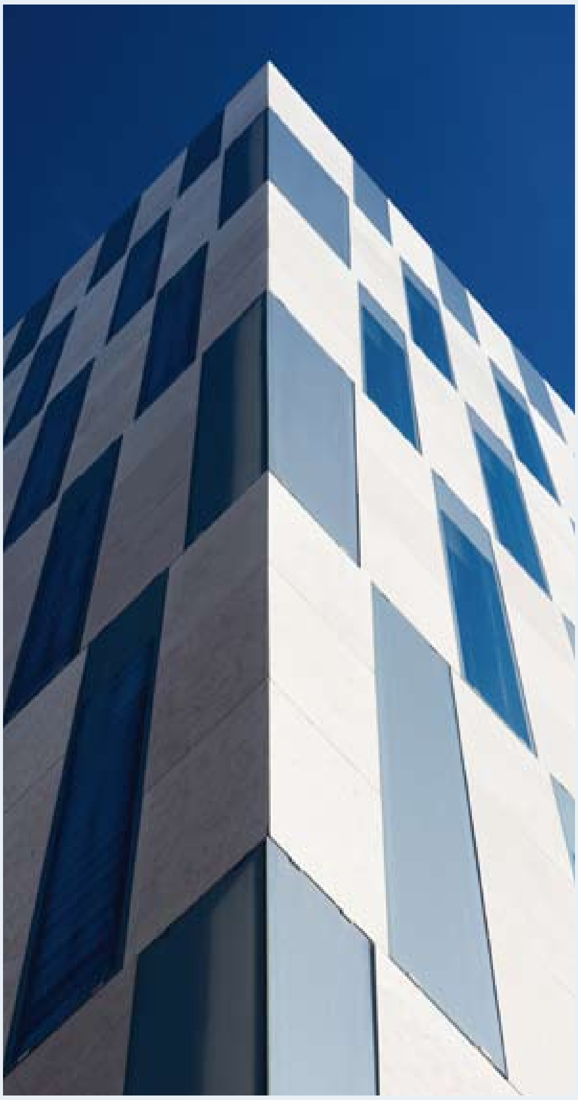
Based on the capital stock estimates in the AMECO database[11], the results of this accounting exercise suggest that the contribution of total factor productivity has been weakest in Luxembourg, with respect to its neighbouring countries, and that it has even been negative over the last five years. This result should be taken with some caution, as total factor productivity is not observed but only estimated on the basis of the (possibly unrealistic) assumptions mentioned earlier. In particular, if one of the factors of production (labour or capital) is not homogeneous, but varies due to quality improvements or composition effects, this will contaminate total factor productivity if measured as described.

The second component of labour productivity reflects changes in the capital-labour ratio. The results suggest that the contribution from "capital deepening" has been very important in Luxembourg, exceeding that in the three neighbouring countries. In particular, this contribution increased over the last five years, practically reaching the double of levels observed in Germany and Belgium. This means that growth in labour productivity in Luxembourg reflects the fact that each worker had a greater portion of capital stock available. In order for this component to provide a positive contribution to labour productivity, capital accumulation must grow faster than total employment. Again, it is important to bear in mind that the capital stock measure used in this international comparison is calculated by the European Commission services on the basis of some assumptions that could be challenged[12]. However, it is possible to draw some provisional conclusions.

Since 1996, unit labour costs have grown faster in Luxembourg than in the surrounding countries. This increase could be attributed to faster growth of wages per employee and slower growth of labour productivity than in the three neighbouring countries. On the basis of some conventional assumptions, weak labour productivity growth can be decomposed separately. Results suggest that this has suffered from a contribution of total factor productivity that has been weak in

11 This series for Luxembourg's capital stock is not produced by STATEC. The national statistics institute has not validated the series for Luxembourg available on www.eu-klems.com either.

12 For all countries, the initial level of the capital stock is fixed at 300% of GDP in 1960.



international comparison and even negative over the most recent years. On the other hand, the "capital-deepening" contribution of the capital-labour ratio has been higher than in the neighbouring countries. This suggests that Luxembourg depends on a capital accumulation that has been much faster than employment growth. Under this configuration, Luxembourg's labour productivity seems vulnerable to a fall in the country's attractiveness for foreign investors.

Impact of the Tripartite Coordination Committee's measures on the compensation per employee in Luxembourg

1. Presentation of the measures decided by the Tripartite Coordination Committee

In April 2006, the Tripartite Coordination Committee's stressed the imbalances in public finances, in the labour and real estate market and the rise in inflation. In order to preserve competitiveness, the Tripartite Coordination Committee decided to modulate the automatic indexation scheme for the period 2006-2009. The principle of the indexation mechanism remained unaltered but the inflation-related pay increases were postponed as follows:

- 2006: the automatic wage increase due in August 2006 was postponed to December 2006.

- 2007: the automatic wage indexation was suspended.

- 2008: the automatic wage increase due in January 2008 was postponed until March 2008, as the average oil price exceeded the threshold of 63 USD per barrel during the last six months of 2006 (65.1 dollars on average) and in 2007 (72 dollars on average).

- 2009: the previous automatic wage increase will be paid in January or March 2009 depending on the average level of the oil price.

This modulation of the indexation scheme will be applied until 31st December 2009.

In addition to the modulation of the indexation scheme, the Government announced a wage freeze for public employees in 2007 and 2008.

2. Impact on compensation per employee

To quantify the impact on wages of the changes to the indexation scheme, two cases are presented simultaneously in Table 17. The first case describes the situation without indexation modulation, in other words under the counterfactual assumption that the automatic indexation mechanism remained unchanged in 2006-2009. The second case shows the impact of the modulated scheme on compensation per employee and on unit labour costs. The main result is that on

TABLE 17:
IMPACT OF THE INDEXATION MODULATION ON THE COMPENSATION PER EMPLOYEE

	2003	2004	2005	2006	2007	2008	Sum 03-05	Average 03-05	Sum 06-08	Average 06-08
Without indexation modulation										
(1) Real wage	0.1	1.9	1.3	2.5	1.2	1.3	3.3	1.1	5.0	1.7
(2) Contribution of indexation	2.1	2.1	2.5	2.9	1.7	3.4	6.7	2.2	7.9	2.6
(3) Compensation per employee (1)+(2)	2.2	3.9	3.8	5.4	2.8	4.7	10.0	3.3	12.9	4.3
(4) Productivity	0.3	2.6	2.1	2.3	0.3	0.2	5.0	1.7	2.8	0.9
(5) Unit Labor Costs (3)-(4)	1.9	1.3	1.7	3.1	2.6	4.5	5.0	1.7	10.1	3.4
With indexation modulation										
(1) Real wage	/	/	/	2.5	1.2	1.3	/	/	5.0	1.7
(2) Contribution of indexation	/	/	/	2.1	2.3	2.1	/	/	6.4	2.1
(3) Compensation per employee (1)+(2)	/	/	/	4.5	3.5	3.4	/	/	11.4	3.8
(4) Productivity	/	/	/	2.3	0.3	0.2	/	/	2.8	0.9
(5) Unit Labor Costs (3)-(4)	/	/	/	2.2	3.2	3.2	/	/	8.6	2.9

*BCL projections

Source : BCL

average during the period 2006-2008[13], the modulation of indexation reduced the contribution of indexation to average wage growth (on average from 2.6pp with the automatic scheme to 2.1pp with modulation). Paradoxically, growth in real compensation per employee has been higher on average during the period of indexation modulation than during the three years before (1.7% on average for 2006-08 and 1.1% for 2003-05). As a result, the real wage increases seemed to have compensated the wage moderation caused by indexation modulation.

The government announced a wage freeze in the public sector for 2007 and 2008, but this has not been effective as the collective agreement grants a 0.9% one-off bonus in December of these two years. This collective agreement increased the negotiated wage in the public sector by 0.9pp in 2007[14], with an impact of +0.2pp on compensation per employee in 2007.

To conclude, the modulation of the indexation scheme has moderated the contribution of the indexation to growth in compensation per employee during the years 2006-08. However, all in all real wage increases have compensated for the wage moderation generated by the indexation modulation. The announced wage freeze in the public sector has not occurred, so the current collective agreement contributed to accelerating compensation per employee in 2007.

13 It should be noted that the results presented for 2008 are BCL projections.

14 And 0.0pp in 2008 as the wage increase is paid as a one-off bonus in December.

TABLE 18:
IMPACT OF THE WAGE AGREEMENT IN THE PUBLIC SECTOR ON COMPENSATION PER EMPLOYEE

	2006	2007	2008
If the wage freeze was applied			
Negotiated wage in the public sector	0.8	0.0	0.0
(1) Real wage	2.4	1.0	1.3
(2) Contribution of indexation with modulation	2.1	2.3	2.1
(3) Compensation per employee (1)+(2)	4.5	3.3	3.4
With the wage agreement signed in the public sector for 2007, 2008 and 2009			
Negotiated wage in the public sector	0.8	0.9	0.0
(1) Real wage	2.4	1.3	1.3
(2) Contribution of indexation with modulation	2.1	2.3	2.1
(3) Compensation per employee (1)+(2)	4.5	3.5	3.4

*BCL projections

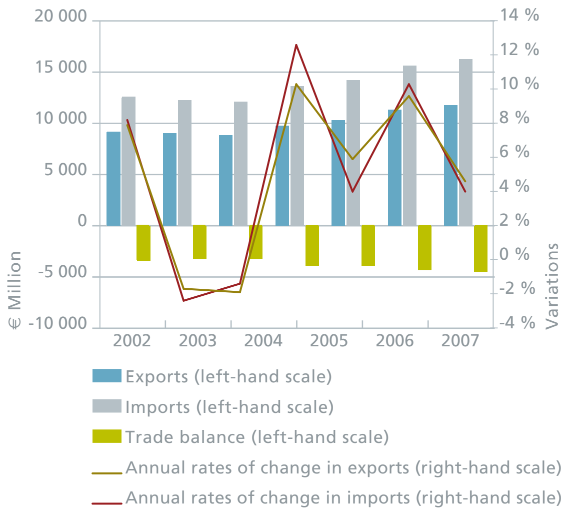
Source : BCL

1. ECONOMIC AND FINANCIAL SITUATION

1.2.8 External trade

As for the euro area, Luxembourg's trade in goods grew at slower pace in 2007, after recording strong growth rates in 2006. Luxembourg goods exports rose 4.6% reaching €11.8 billion in 2007, compared with a growth rate of 9.6% in 2006. Goods imports grew even less, down to 4.6% in 2007 (reaching €16.3 billion) from 10.6% in 2006. As a result Luxembourg's trade deficit increased at a lower pace in 2007 (2.3% at €4.4 billion).

CHART 28:
LUXEMBOURG TRADE IN GOODS



Source: STATEC

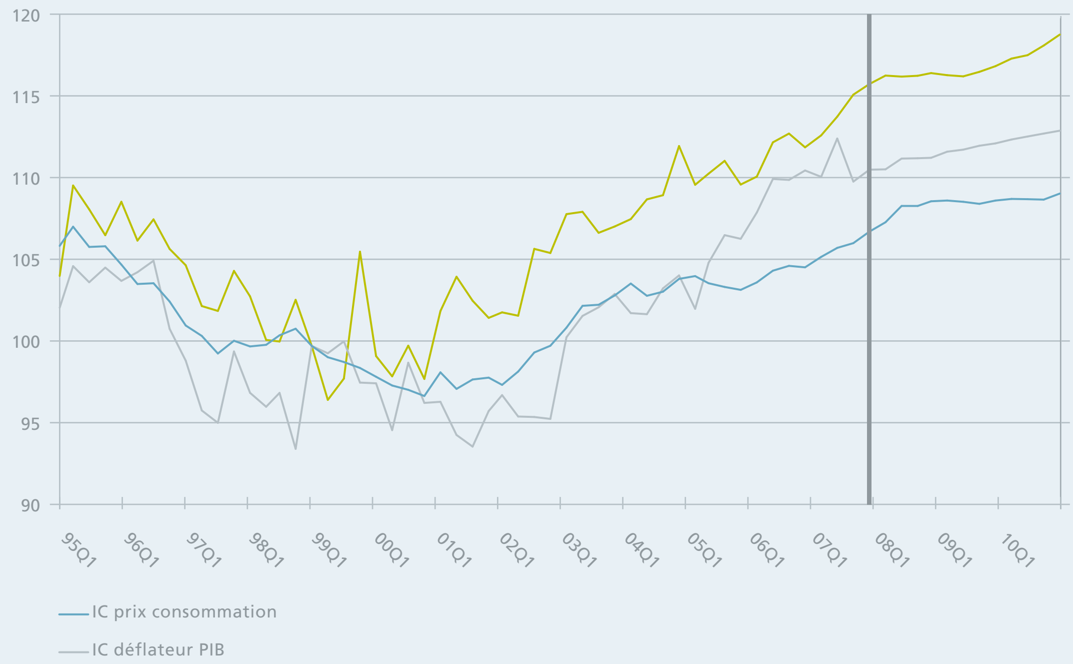
Can price-cost competitiveness indicators explain export growth?

The competitiveness indicators calculated by the BCL indicate a continuing deterioration, even when they are extended to 2010 using the results of the recent Eurosystem projection exercise. However, as noted in the BCL 2006 Annual Report, in the past the deterioration of the different price and cost competitiveness indicators has been accompanied by robust export growth in Luxembourg. This text box explains this apparent paradox by decomposing export growth into one component tied to price-cost competitiveness and another related to fluctuations in foreign demand addressed to Luxembourg.

The competitiveness indicators calculated by the BCL are effective exchange rate indices deflated by different price or cost indicators. Thus, these competitiveness indicators compare prices or costs in Luxembourg with a weighted average of the same prices or costs in Luxembourg's main trading partners[15], all expressed in

15 The trading partners considered include the other 26 members of the European Union and eleven other countries: Switzerland, Norway, the US, Canada, Japan, Australia, New Zealand, South Korea, China, Hong Kong and Singapore.

**CHART 29:
COMPETITIVENESS INDICATORS BASED ON CONSUMER PRICES, GDP DEFLATOR AND UNIT LABOR COSTS (ULX) FOR THE ENTIRE ECONOMY**



Sources : Eurosystem, FMI, et calculs BCL the same currency. The weight attached to each trading partner reflects its importance in Luxembourg's foreign trade.

The following chart presents those of Luxembourg's competitiveness indicators which could be extended to 2010 using the recent Eurosystem projections[16]. For each series, an increase in the curve means that prices or costs are increasing faster in Luxembourg than in its trading partners (a deterioration of Luxembourg's competitiveness). According to the indicator based on consumer prices, the most recent observations confirm this rising trend. The deterioration in 2007 was 1.56% and in the first quarter of 2008 (last available observation) this indicator is growing at 2.01% (annual rate). According to the projections, the deterioration should reach 2.08% in 2008, and continue into 2009-2010 but at a lower rate (0.41% and 0.22%). The competitiveness indicator based on the GDP deflator registers a deterioration of 1.05% in 2007 and in the last quarter of 2007 (latest available observation) this indicator was growing 0.04% at an annual rate. The projections suggest a deterioration of only 0.32% in 2008 but around 0.70% in 2009 and 2010.

The competitiveness indicator based on unit labour costs in the whole economy indicates a deterioration of 2.31% in 2007 and in 2007Q4 (latest available observation) it increased 3.46% at an annual rate. According to the projections, the deterioration should continue with a 1.74% increase in 2008, 0.15% in 2009, and 1.25% in 2010. It bears repeating that these latest developments represent the continuation of an extended loss of competitiveness since Luxembourg entered the economic and monetary union. As illustrated by the chart, the three indicators have been characterised by a growing trend (competitiveness deterioration) over several years. The indicator based on consumer prices began this deteriorating phase in 2001 and increased at an annual rate of 0.6% on average from the first quarter of 1999 to end 2007. For the indicator based on the GDP deflator, the current phase began only in 2002 and the average yearly increase was 1.7% over the same sample. The last indicator, based on unit

16 Note that the projected deflators are limited to the fifteen euro area member states and the UK, Switzerland, the US and Japan.

TABLE 19: COMPETITIVENESS INDICATORS – IMPACT ON EXPORTS

	Estimated parameters			Contributions to average export growth (7.92% over 1996Q1-2007Q4)		
		export elasticities				
	error correction	foreign demand	price-cost competitiveness	foreign demand	price-cost competitiveness	residual
consumer prices	-0.81	1.53	-0.60	9.29	-1.00	-0.37
GDP deflator	-0.69	1.34	-0.30	8.10	0.06	-0.23
producer prices	-0.78	1.39	-0.22	8.52	-0.30	-0.29
ULC whole economy	-0.73	1.34	-0.37	8.14	0.07	-0.29
ULC manufacturing	-0.78	1.34	-0.25	8.06	0.09	-0.22
export deflator	-0.80	1.43	-0.33	8.70	-0.52	-0.25

Sources : ECB, STATEC data, BCL calculations labour costs in the whole economy, began its deterioration in 2001 and increased at an average yearly rate of 1.4% over 1999Q1-2007Q4.

How can one reconcile the deterioration in price-cost competitiveness observed since 2001 with the good performance of Luxembourg's economy and in particular its exports over the same period? One must first recognise that exports not only depend on fluctuations in relative costs and prices, but also on growth in foreign demand addressed to Luxembourg. The latter is measured here by a weighted average of real imports in Luxembourg's main trading partners, with weights reflecting each country's share in Luxembourg's foreign trade. This indicator has a similar structure and geochartic coverage to the effective exchange rate indicators presented above[17]. It is then possible to estimate an export equation for Luxembourg, linking them to this measure of foreign demand and a measure of price-cost competitiveness[18]. The following table presents the results of these estimations[19]. Each row in the table reports an export equation estimated with a different price-cost competitiveness indicator[20]. In each case, the equation is estimated using quarterly data (seasonally adjusted) from 1996Q1 to 2007Q4 and adopting an error-correction specification. The first column reports the speed of adjustment towards the long-term equilibrium. This equilibrium is characterised by the export elasticities in the following two columns[21].

Comparing the different rows, one can observe that results are quite similar for all the price-cost competitiveness indicators considered. In every case, the error-correction term is included between zero and -1, as required for the stability of the equation. Adjustment is always fast: 69% to 81% of deviations from the long-term equilibrium are eliminated after a single quarter[22]. In the following column, one can observe that the (long-term) export elasticities with respect to foreign demand are always positive, consistent with economic theory. However, they are always statistically above unity, which is problematic from the perspective of theory. In fact, Luxembourg's exports cannot systematically increase faster than foreign demand. Nevertheless, this result is consistent with experience since 1996 and imposing a unit elasticity could introduce mis-specification error, generating a bias in the estimates of the other parameters[23]. Elasticities above unity are often found for other countries and it is generally recommended to tolerate them[24]. In the third column, export elasticities with respect to the different measures of price-cost competitiveness are always negative, as expected, but also relatively weak (from -0.22 to -0.60). This means that a 5% deterioration of competitiveness implies a fall of exports of only 1.1% to 3%. This weakness of export elasticities with respect to price-cost competitiveness is a result that has already been found for other continental European economies[25]. In summary, Luxembourg's loss of price-cost competitiveness had an impact on exports that was negative and statistically significant, but its economic significance was limited.

The right-hand panel of the table uses the estimated equations to decompose Luxembourg's average export growth over the period 1996Q1-2007Q4. The equations are simulated under two different scenarios. In the first, price-cost competitiveness (represented by the different indicators in each row) is kept at its level in 1995Q4 until 2007Q1. In the second scenario, it is foreign demand that is kept at its level of 1995Q1. The results of this exercise indicate that (for all price-cost competitiveness indicators considered) foreign demand has been crucial in determining export

17 Real imports in Luxembourg's trading partners are expressed in a common currency and with the same base year.

18 Goldstein and Khan (1985) "Income and Price Effects in Foreign Trade" Handbook of International Economics, Elsevier.

19 These results are based on combined exports of goods and services. Similar results are obtained when the exercise is repeated separately for goods exports and for services exports.

20 Ca'Zorzi and Schnatz (2007) "Explaining and forecasting euro area exports: which competitiveness indicator performs best?" ECB Working Paper 833.

21 All coefficients are statistically different from zero. The equation includes three lags of all variables in first differences (short-term dynamics) and test results are consistent with the absence of residual autocorrelation up to four lags.

22 For each price-cost competitiveness indicator, the existence of a cointegration relationship is confirmed by the rejection of the hypothesis that this coefficient is zero.

23 In addition, for each of the estimated equations the Wald test rejects a unit elasticity.

24 Krugman (1989) «Differences in Income Elasticities and Trends in Real Exchange Rates,» European Economic Review, 33, 1031-1054.

25 Hooper, Johnson and Marquez (2000) "Trade Elasticities for the G-7 Countries," Princeton Studies in International Economics, no. 87.

growth, representing an average yearly contribution of 8.06% to 9.29%. On the other hand, the average yearly contribution of price-cost competitiveness has been negative or close to zero (although it may have been important for individual quarters). In fact, the average contribution of price-cost competitiveness has been comparable (or even below) the residual contribution (export growth that is not explained by the estimated equations), which is reported in the last column.

In conclusion, the deterioration of price-cost competitiveness has marginally reduced Luxembourg's exports over the period 1996Q1-2007Q4. However, in a context or strong growth in foreign demand addressed to Luxembourg, this competitiveness effect was minor. High estimated export elasticities with respect to foreign demand may suggest that exporting firms benefit from other competitiveness factors (quality, specialisation) which have offset the negative effects of the deterioration in price-cost competitiveness. From a wider perspective, one should take note of the fact that the world economy has just experienced a phase of exceptionally strong growth in international trade. This has benefited Luxembourg, minimising the negative effects of the deterioration of its price-cost competitiveness. However, Luxembourg remains especially vulnerable to a slowdown, or even a fall, in international trade. The high estimated values for Luxembourg's export elasticities with respect to foreign demand suggest that the negative effects of such a development at the global level could be amplified in Luxembourg. Therefore, it is crucial that Luxembourg authorities maintain their opposition to the protectionist tendencies that are increasingly visible in the public arena.

1.2.9 Balance of payments

In 2007 the Luxembourg current account surplus remained unchanged at €3.6 billion. This stability reflected strong divergent developments in the four components of the current account. The strong increase in the services surplus (17.8%) was offset by growing deficits on current transfers and factor incomes. The improvement in net services receipts was mostly driven by favourable developments in the financial sector. However, in the wake of the financial turmoil, the surplus on financial services grew at slower pace in 2007 (20%), after recording a strong increase (34%) in 2006.

The goods balance was positively affected by sales of fuel to non-residents and by net sales of non-monetary gold. In the income balance, dividends payments abroad and compensations of cross-border employees turned the overall balance into a huge deficit in 2007 while the rising deficit in current transfers was mainly driven by the redistribution of monetary income within the Eurosystem.

In the financial account, Luxembourg registered net outflows of €3.5 billion in 2007. This development reflected net inflows in portfolio investments which were largely offset by net outflows in foreign direct investments and in other investments.

BCL monetary operations within Luxembourg's balance of payments and international investment position

This text box focuses on BCL operations as a monetary authority within Luxembourg's Balance of Payments[26] (BOP) and International Investment Position[27] (IIP). The role of a central bank requires special treatment; in particular transactions are categorised to identify how a monetary authority could potentially finance an current account imbalance. In other words, the balance of transactions of the sector "resident monetary authorities" is the direct counterpart of the balance of transactions of the sector "non-monetary residents".

26 The balance of payments (BOP) is a statistical statement that summarises transactions between residents and non-residents during a given period. It comprises the current account, the capital account, and the financial account.

27 The international investment position (IIP) is a financial statement setting out the value and composition of a country's external financial assets and liabilities. The IIP is established on a quarterly basis.

In order to fulfil its statistical obligations, the BCL records all its operations under a regular statistical BOP reporting. Thus, the BCL transmits BOP and IIP statistics to the European Central Bank to allow it to establish the BOP and IIP of the EMU and thus detect a potential disequilibrium on the external balance. This framework includes transactions executed within the field of monetary policy, operations with the ECB and other supranational organisations (i.e. the International Monetary Fund (IMF)) as well as operations related to daily management. The above-mentioned transactions are primarily related to reserve assets, portfolio investment and other investments of the BCL. Finally, the nomenclature employed is defined by the IMF's balance of payments manual (BPM5).

1. Reserve Assets

Reserve assets are an important component of BOP statistics and an essential element in the analysis of an economy's external position. Reserve assets consist of those external assets that are readily available to and controlled by a monetary authority for direct financing of payments imbalances, for indirectly regulating the magnitude of such imbalances through intervention in exchange markets to affect the currency exchange rate, and/or for other purposes. Reserve assets comprise monetary gold, special drawing rights, the reserve position in the IMF, foreign exchange assets (consisting of currency and deposits and securities), and other claims. Securities that do not satisfy the requirements of reserve assets are included in direct investment or portfolio investment.

Reserve assets held by the BCL comprise the following categories:

a. Monetary gold

Monetary gold is gold owned by the BCL and held as a reserve asset. Other gold (i.e. non-monetary gold, possibly including commercial stocks held for trading purposes…) is treated as any other commodity. Transactions in monetary gold occur only between monetary authorities and their counterparts in other economies or between monetary authorities and international monetary organisations.

b. Special Drawing Rights (SDRs)

SDRs are international reserve assets created by the IMF (in 1970) to supplement other reserve assets that are periodically allocated to IMF members in proportion to their respective quotas. SDRs are not considered liabilities of the Fund, and IMF members to whom SDRs are allocated do not incur actual liabilities to repay SDR allocations.

c. Reserve position within the IMF

An IMF member may have a position that is recorded under the category "reserve assets". This is referred to as the member's reserve position in the Fund. A members' reserve position is the sum of the reserve tranche purchases it may draw upon and any indebtedness of the Fund that is readily repayable to the member.

d. Foreign exchange

Foreign exchange includes monetary authorities' claims on non-residents in the forms of currency bank deposits, government securities, other bonds and notes, money market instruments, financial derivatives, equity securities, and non-marketable claims arising from arrangements between central banks or governments.

The BCL compiles data on reserve assets since 1999, but data on BOP and IIP is only available since 2002.

The sharp increase beginning of 2008 is due to an investment of foreign currency outside the Eurozone. According to the IMF's methodology, these investments have to be included in reserve assets.

2. Portfolio Investment

Portfolio Investment targets the management of BCL assets. The core objective of these investments is to generate a regular income. The main components of this portfolio are equities, bonds (majority) as well as money market instruments.

3. Operations with the European Central Bank (ECB) / Other investments

Operations with the ECB and operations relative to financial derivatives are part of other investments. Operations with the ECB and transactions within the ESCB comprise:

a. Revenues generated by monetary operations

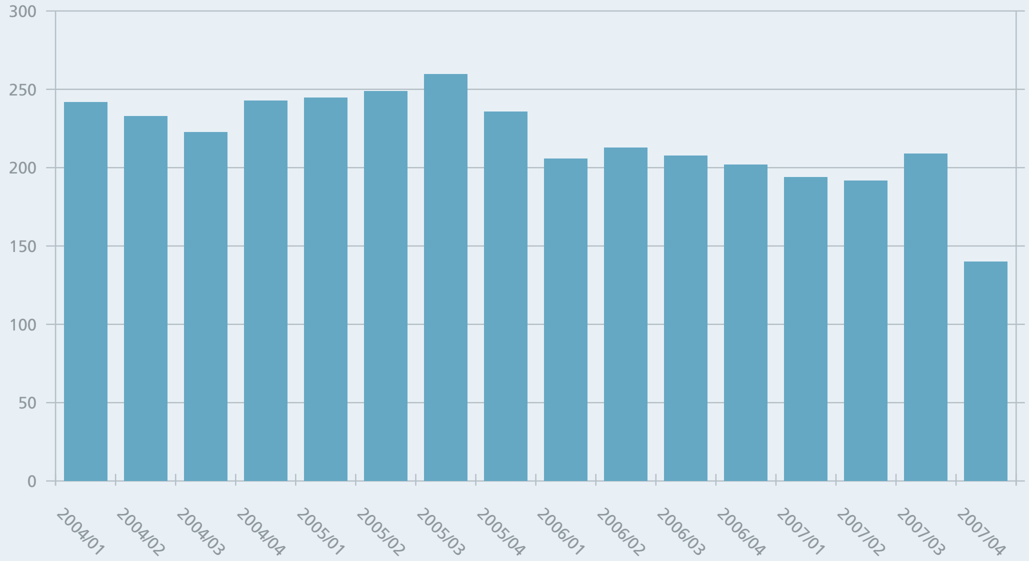
As of 2003, the amount of monetary revenue of each national central bank in the Eurosystem is defined via the amount of revenue generated by a basket of certain assets. This basis comprises:

- Banknotes;
- Liabilities (linked to monetary policy operations) denominated in EUR towards credit institutions of the eurozone.
- Intra-Eurosystem liabilities (i.e. liabilities towards the ECB)

b. Profit allocation of the ECB

The ECB's profit is distributed to the national central banks. National central banks are also responsible for possible ECB losses.

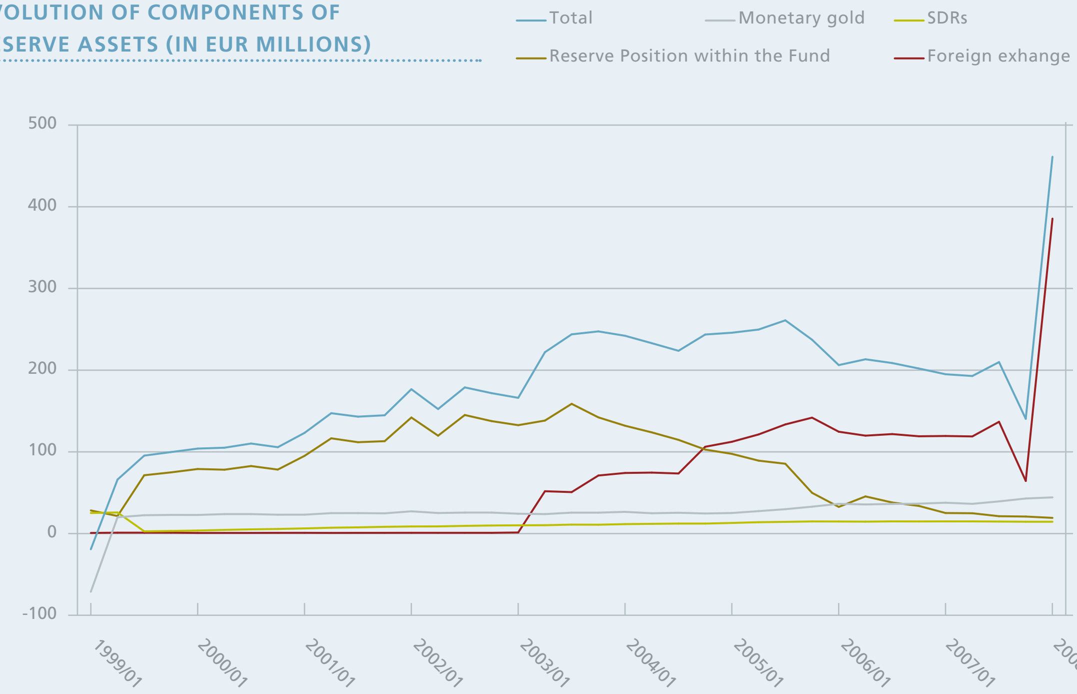
CHART 30: EVOLUTION[1] OF RESERVE ASSETS[2] (IN EUR MILLIONS)



Source : BCL

1 All charts are based on quarterly data
2 2007 figures are subject to revisions

CHART 31: EVOLUTION OF COMPONENTS OF RESERVE ASSETS (IN EUR MILLIONS)



Source : BCL

c. Income from banknotes and Target (payment system)

d. Income from fines enforced by the ECB

e. Income from reserve asset pooling

f. Income from collateral exchange

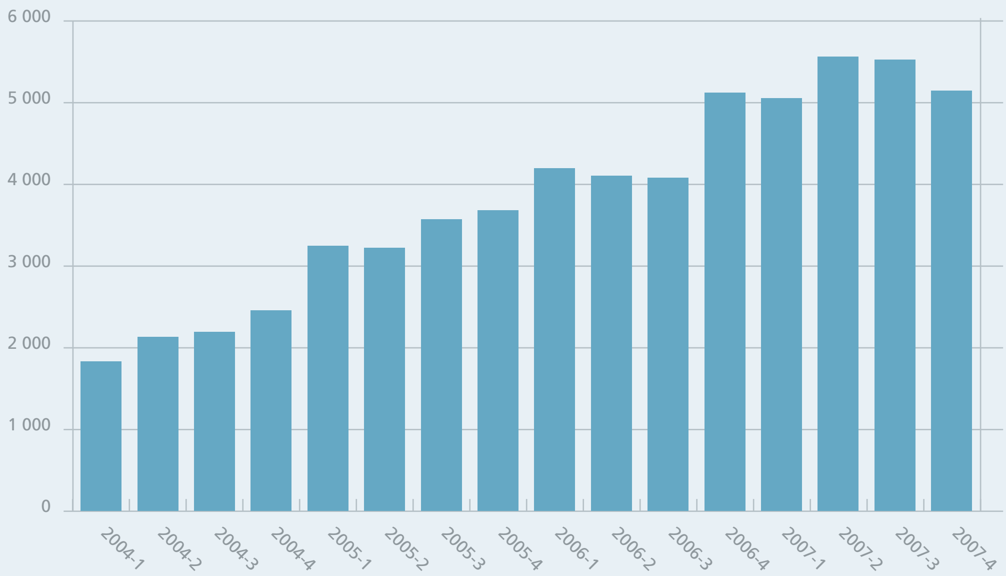
Monetary policy operations as well as the balance resulting from Target operations account for most of these amounts. The increase of end-2007 reflects the higher refinancing needs of Luxembourg's credit institutions. These refinancing operations were executed through the Target system. In addition, in December 2007, commercial banks participated in USD operations offered by the Eurosystem in response to the financial market turbulence.

The recent increase in the deficit on current transfers mainly reflects the reallocation of monetary income within the Eurosystem.

Inside the Eurosystem, income from seigniorage is transferred to the ECB before being attributed to national central banks. In this particular case, the BCL had to transfer funds to the Eurosystem because it issues a large volume of banknotes.

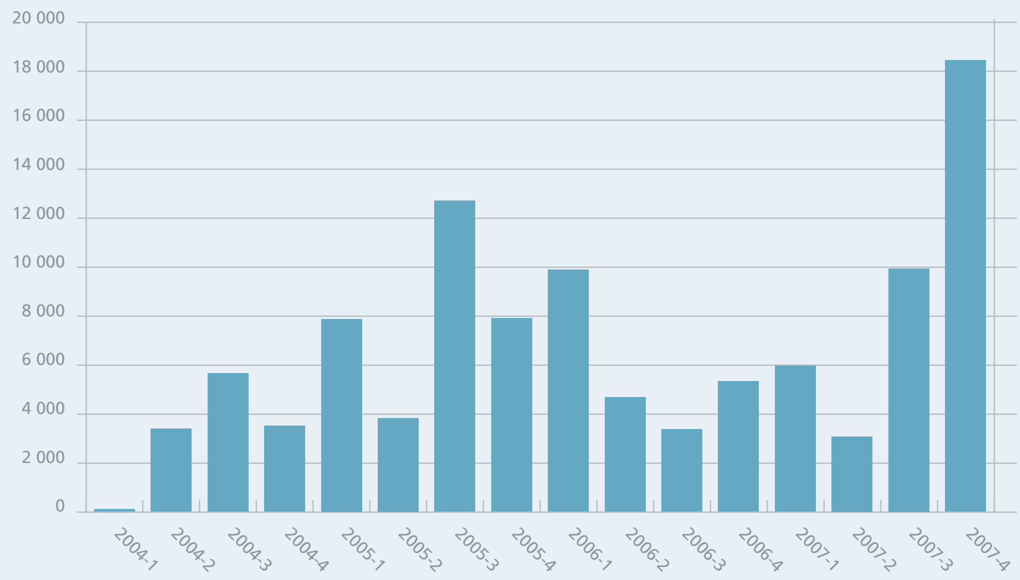
Finally, the following table identifies the operations described above within the BCL balance sheet.

CHART 32:
EVOLUTION OF PORTFOLIO INVESTMENTS – ASSETS – TOTAL STOCK (IN EUR MILLIONS)



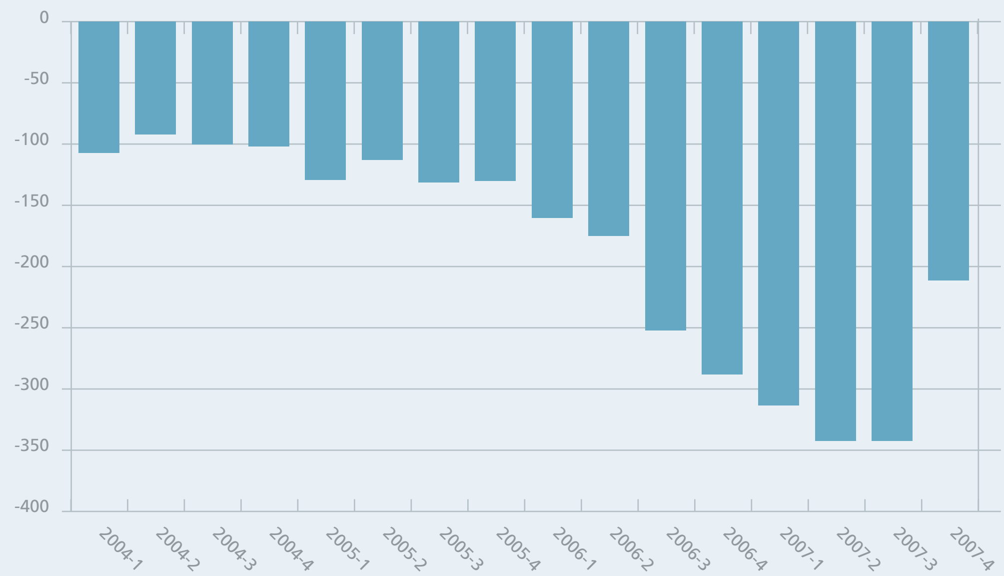
Source: BCL

CHART 33: EVOLUTION OF OPERATIONS BETWEEN THE BCL AND THE ECB – ASSETS – TOTAL STOCK (IN EUR MILLIONS)



Source : BCL

CHART 34: IMPACT OF BCL OPERATIONS ON THE BALANCE OF CURRENT TRANSFERS (IN EUR MILLIONS)



Source : BCL

CLASSIFICATION BOP / IIP LEVEL	CLASSIFICATION AT BALANCE SHEET LEVEL
Assets	**Assets**
Portfolio Investment	
Securities	Claims on non-euro area residents denominated in euro
Bonds and notes	Securities of euro area residents denominated in euro
Money market intruments	Other assets
Other investments	
	Intra-Eurosystem claims
Loans/currency and deposits	Intra-Eurosystem claims
Other assets	Intra-Eurosystem claims
Reserve Assets	
Monetary gold	Gold and receivables
SDRs	Receivables from the IMF
Reserve position within the Fund	Receivables from the IMF
Foreign Exchange	Balances with banks, security investments, external loans and other external assets
Currencies and deposits	Balances with banks, security investments, external loans and other external assets
Securities	Balances with banks, security investments, external loans and other external assets
Bonds and notes	Balances with banks, security investments, external loans and other external assets
Money market instruments	Balances with banks, security investments, external loans and other external assets
Liabilities	**Liabilities**
Other investment	
Loans/currency and deposits	Liabilities to non-euro area residents denominated in euro
	and
Other liabilities	Liabilities to non-euro area residents denominated in foreign currency

1.2.10 Macroeconomic projections

Since the finalisation of the previous projection exercise, Luxembourg's economy has fared slightly worse than expected. Real GDP growth in 2007 is currently estimated at 4.5%, at the lower end of our December projections. Furthermore, the quarterly growth profile has been adjusted downwards. A negative growth rate has been recorded for the third quarter, though it was followed by considerable rebound thereafter. Towards the end of 2007, the carry-over effect on annual real GDP growth in 2008 is estimated at 1.5%.

The business cycle probably peaked towards the turn of the year 2005/2006. While growth initially decelerated only gradually and remained at a high level, in the course of 2007 the slowdown grew sharper. According to our baseline scenario, the trough was probably reached in the first quarter of 2008, with a renewed decline in the level of activity, and a further substantial drop in annual growth rates. In that period, the financial turmoil resulted in a 10% drop of major stock-market indices, leading to a 7% decline of the net asset value of listed mutual funds, the first negative growth rate since the beginning of 2003. As a result, banks' income from trading fees also recorded a drop, both on a quarterly and on an annual basis. In the second quarter of 2008, as market sentiment gradually convinced itself that the worst of the financial crisis was over in the USA, equity markets turned the corner, which bodes well for activity in the banking sector and real GDP growth.

Overall, the short-term growth profile in Luxembourg was probably different from the euro area, and in particular from Germany, our main export market. However, this is hardly a surprise, given that Luxembourg's main sector of production, financial services, was at the centre of the turmoil.

Monthly indicators in manufacturing also suggest the downward phase of the business cycle. Although manufacturers have dampened their optimism, their sentiment falls short of outright pessimism. The confidence indicator remains above the medium-term value suggesting a more sustained drop in activity is not in the offing.

Overall, compared to the previous exercise, the outlook for the international environment has been significantly adjusted downwards, both for 2008 and 2009. Growth slowed already in 2007, but international organisations now agree that the slowdown might reach at least until 2009. However, annual average growth rates are rather slow in identifying turning points. The quarterly projection profile suggests that the upturn could emerge as early as the second half of 2008.

The international scenario embodies generally very weak growth, if any, in the USA as the economy digests the downturn in the housing market. Faced with this weakness, other economies should also be affected, though a prolonged period of weak global growth is unlikely. US weakness should be partially compensated by dynamism in South-east Asia and the resilience of the euro area economy.

The euro area was characterised by a period of strong growth that extended well into the first quarter of 2008. In light of the international scenario, it could have also slowed down in the second quarter of 2008 before converging gradually back to trend growth. According to the recent Eurosystem projections, economic growth is expected to range between 1.5% and 2.1% in 2008 and between 1.0% and 2.0% in 2009, slightly lower than previously assumed.

Growth in Luxembourg's export markets declined sharply in 2007 after being particularly dynamic in 2006. The deceleration could continue in 2008 before a projected gradual recovery to trend growth. As for the international assumptions, this scenario has been revised downwards compared to the previous exercise.

On the basis of this analysis and especially in the euro area context, economic activity in Luxembourg is set to decelerate further in 2008. Thus the scenario remains unchanged compared to previous projections. However, the speed of the slowdown has increased in the context of the financial turmoil and its projected repercussions on the performance of the banking sector. Real GDP growth is now expected in a range between 2.9% and 3.5%, thus below trend growth. On the basis of the international scenario, and taking into account the different short-term growth profile, economic growth could rebound in 2009. These projections are based on the assumptions of faster growth in private and public consumption spending, which

TABLE 20: PROJECTIONS OF INTERNATIONAL INSTITUTIONS (IN ANNUAL PERCENTAGE CHANGES, RESPECTIVELY IN PERCENTAGE POINTS)

	2007	2008	2009	2010
World trade (EC)	6.8 (-0.7)	6.2 (-0.8)	5.8 (-1.4)	-
World GDP (EC)	4.6 (-0.5)	3.8 (-0.9)	3.6 (-1.2)	-
Real GDP euro area (EC)	2.6	1.7 (-0.5)	1.5 (-0.6)	-
Real GDP euro area (Eurosystem)	2.7	1.5-2.1	1.0-2.0	-
World demand for Luxembourg	4.7 (-0.3)	4.3 (-1.1)	4.4 (-1.4)	5.5
Oil in USD/barrel[1]	72.7 (0.1)	116.7 (28.1)	126.0 (42.3)	126.0
Exchange rate USD/EUR[2]	1.37	1.54 (0.1)	1.54 (0.1)	1.54
Short-term interest rate	4.3	4.9 (0.4)	4.3 (-)	4.2
Long-term interest rate	4.3	4.4 (0.1)	4.6 (0.3)	4.7

Sources : European Central Bank, European Commission, BCL

1 Revisions in USD/barrel
2 Revisions in USD/EUR

however cannot fully offset slower export growth and weaker investment.

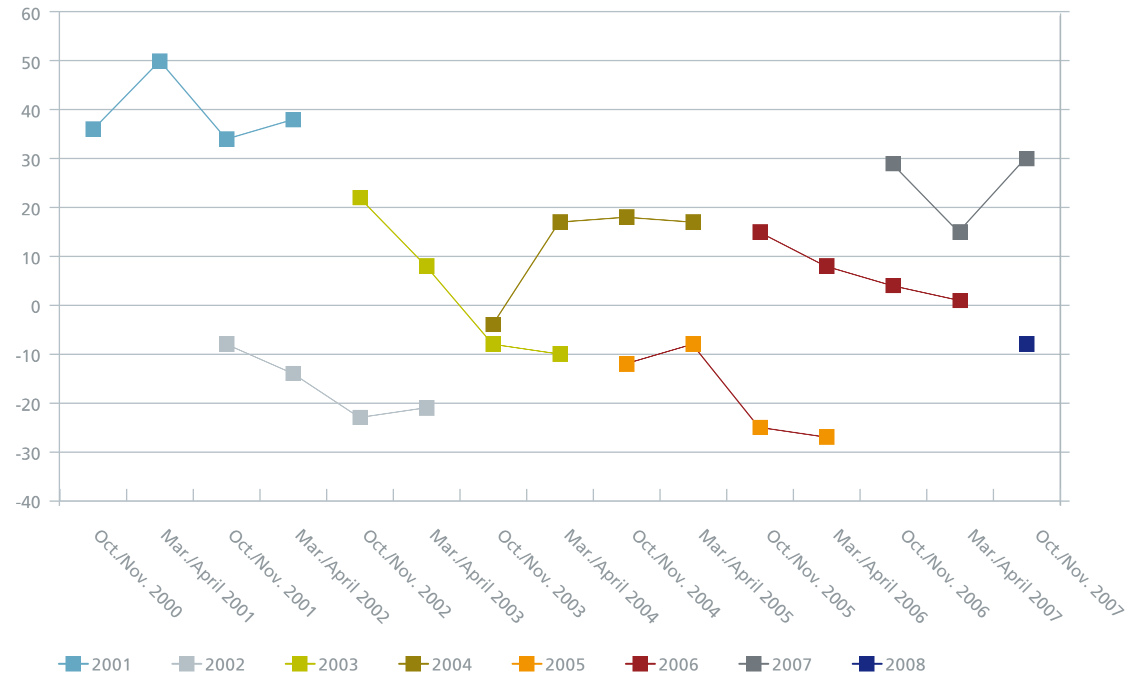
Exports suffer both from slowing world demand and from the impact of the financial turmoil on exports of financial services, which account for about 50% of total exports. The weakness in private investment is mostly the consequence of exceptional dynamism observed in 2007 rather than the result of endogenous factors such as more moderate growth prospects. In fact, for the year 2008 manufacturing has announced plans to keep investment spending flat – at a high level – after the 30% rise in 2007 (see chart). It also seems premature to attribute these developments to the financial turmoil and the tighter financing conditions following the sharp rise in 3-month Euribor rates. A credit crunch is not considered a realistic scenario either (see box on pages 41-42). Though it is relatively less important for the Luxembourg economy, private consumption growth could strengthen. Indeed, in recent years, it has increased very little despite the strong fundamentals such as employment and earnings growth.

Turning to wage developments, the projections remain unchanged for the short term. Indeed, given the government's decision to modify the wage indexation mechanism for the period 2006-2009, it has virtually fixed the part of the nominal wage increase that compensates for past inflation. The benefits of the Tripartite agreement appear clearly as the sharp rise in oil prices does not lead to a more protracted rise in compensation per employee. In 2010 however, the agreement is set to expire and there will be a major impact on wages if the previous mechanism is re-introduced without adjustments. According to the current inflation projections, wage compensation for past inflation would amount to 4.2pp, the highest contribution from indexation since 1984, with wages increased automatically by 2.5% on two occasions in 2010, starting in January. Compensation per employee would then rise sharply from 3.7% in 2009 to 5.4% in 2010.

The labour market will feel the brunt of the economic downturn only with a considerable lag. In 2007 and early 2008 employment growth has been surprisingly resilient, especially in the financial services sector. The lack of skilled staff probably weighed more on recruitment decisions than banks' short-term financial performance. Luxembourg may also be less exposed to

1. ECONOMIC AND FINANCIAL SITUATION

**CHART 35:
BI-ANNUAL INVESTMENT SURVEYS IN THE INDUSTRIAL SECTOR (EXPENDITURES AT CURRENT PRICES, IN ANNUAL PERCENTAGE CHANGES)[1]**



Source: European Commission

1 The surveys are carried out in October/ November and in March/April of each year.

**TABLE 21:
MACRO-ECONOMIC PROJECTIONS AND REVISIONS COMPARED TO DECEMBER 2007 (IN ANNUAL PERCENTAGE CHANGES, RESP. IN PERCENTAGE POINTS)**

	2007	2008	2009	2010	2007	2008	2009
Real GDP	4.5	2.9-3.5	3.5-4.5	3.9-4.9	-0.5	-1.1	-0.5
HICP	2.7	4.5	2.8	2.3	-	1.2	0.9
HICP energy	2.7	16.9	3.8	0.0	-	9.6	5.7
HICP ex energy	2.7	2.8	2.6	2.7	-	-	0.1
NICP	2.3	3.6	2.4	2.1	-	0.7	0.6
NICP ex energy	2.3	2.4	2.2	2.4	0.1	0.2	0.3
Contribution of indexation to nominal wage increase	2.3	2.1	2.5	4.2	-	-	-
Compensation per employee	3.5	3.4	3.7	5.4	-1.0	-0.2	-
Employees	4.4	3.1	2.5	2.7	-0.1	-0.5	-0.5
Unemployment rate	4.4	4.4	4.6	4.6	-0.1	-0.3	-0.1

Source: BCL

the *sub-prime* crisis than other major financial services centres because of its concentration on mutual funds. Nevertheless, we expect employment growth to drop below 3%, which would be insufficient to generate a further decline in the unemployment rate. The rebound of the labour market is likely to be shallow, in line with the projected upturn for economic growth.

The favourable inflation dynamics observed in 2007 have come to an end, and headline inflation is set to accelerate sharply in 2008 to levels not seen since 1993. These developments stem largely from a high contribution from the energy component in the context of the surge in the oil price to above 120 USD/barrel. In spite of the economic slowdown, the effect is likely to be exacerbated by an acceleration of inflation excluding energy. This would be driven mostly by high services inflation and the rise in food prices. In the medium term, a decline of inflation is feasible. However, although the projections are conditional on a stabilisation of the oil price, a drop of NICP inflation below 2% is unlikely. The sharp rise in wages in 2010 following the return to automatic wage indexation should lead to higher services inflation, and therefore also to higher inflation in the NICP and the HICP excluding energy.

Risks analysis

The BCL business cycle indicator is calculated using monthly data as available on 4 June 2008. The dataset used includes around 100 economic and financial time series. Among them 14 were available until May 2008, nine until April 2008 and 48 until March 2008 to date (4 June 2008).

Based on this monthly information, the provisional results for the indicator suggest that economic growth in Luxembourg remained sustained during the first semester 2008, despite the global slowdown. Therefore, the indicator favours the upper part of the range of BCL growth projections.

1.2.11 Public finances

1.2.11.1 Budgetary policy overview

2007 was marked by three fiscal policy milestones. First, the implementation of the budgetary consolidation measures agreed in 2006 by the *Comité de Coordination Tripartite*. The main measures were an increase of fiscal and para-fiscal pressure, the suspension of the indexation of family allowances, and the rescheduling of pensions' indexation to real wages. In addition, a public sector wage freeze was announced as well as closer monitoring of investment expenditure. Second, the ninth update of the Stability Programme, published in October 2007, confirmed the more cautious budgetary course. Even though the general government balance registered a surplus, public expenditure increase was to remain moderate compared to previous years. Third, a very favourable macroeconomic environment, especially in the financial sector, allowed general government to accumulate significant revenues, resulting in a surplus of 3% of GDP.

The general government budget adopted by the Chamber of Deputies in December 2007 marked a clear deceleration of expenditure growth compared to the last few years (5.3% in 2008). Revenues should grow faster than expenditures, allowing the central government deficit to fall significantly from €188 million in 2007 to €20.5 million the year after (see table below).

However, these figures should be interpreted with caution, as they incorporate allocations to extra-budgetary funds instead of their actual expenditures. In addition, the final 2007 budget is an inappropriate basis for comparison, as in Luxembourg budgetary executions diverge clearly from the final budget. After correcting for these two inconsistencies, total central government expenditure should increase by 11.1% in the period 2006-2008 (or 5.5% per year on average), reflecting significant growth in planned expenditures by the extra-budgetary funds and by some public institutions. On the other hand, central government revenues should increase by only 6.3% over the period 2006-2008[28].

28 For more details about the consolidation please see BCL Bulletin 2007/02.

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TABLE 22:
KEY FIGURES IN THE 2008 CENTRAL GOVERNMENT BUDGET (EUR MILLIONS, UNLESS OTHERWISE INDICATED)

	Final 2007	2008 Budget	Increase in nominal terms
Revenue	**7 841.7**	**8 438.0**	**7.6%**
Current revenue	7 761.0	8 355.4	7.7%
Capital revenue	80.7	82.6	2.4%
Expenditure	**8 029.5**	**8 458.5**	**5.3%**
Current expenditure	7 239.6	7 631.3	5.4%
Capital expenditure	789.9	827.2	4.7%
Balance	**-187.8**	**-20.5**	--
of which current balance	521.4	724.1	--
of which capital balance	-709.2	-744.6	--

Source: 2007 and 2008 budget law.

1.2.11.2 General government revenue

After a significant fall in 2006, the revenue-to-GDP ratio rose in 2007. Revenues moved from 40.1% of GDP in 2006 to 41.1% the following year. Despite this increase, the revenue ratio remains low compared to the last decade, reflecting exceptionally high nominal GDP growth. According to the national accounts published in May 2008, nominal GDP increased about 7% in 2007, after 13% in 2006. In nominal terms, total general government revenue increased by 9.5% in 2007, which is significantly above the trend observed at the beginning of the century.

During 2007 the significant increase in total revenue benefited from exceptional growth in direct tax revenues (18% on an annual basis), mainly reflecting buoyant corporate taxes. Indirect tax receipts and social contributions followed the same trend in nominal terms, although at lower levels: 6.2% and 9.5% respectively. These positive effects reflected very favourable macroeconomic developments, an excellent financial sector performance, and strong employment growth.

Total general government revenue is expected to decrease in 2008 and 2009, before stabilising in 2010. This profile is dictated by the general economic slowdown following the sub-prime crisis. In addition, the introduction of the *statut unique* in 2009 could induce additional downward effects on social security revenues. Employment growth is also projected to slow.

It is important to mention that the projections are subject to a high degree of uncertainty. They basically set the high level of observed revenues in 2007 in a highly uncertain macroeconomic and financial context. Risk factors include the real effects of the financial market turmoil, higher inflation, and downward revision of world GDP growth. In addition, the additional revenues collected in the last three years, may be less persistent than assumed in the projections.

1.2.11.3 General government expenditure

The expenditure-to-GDP ratio declined sharply in 2007 for a second consecutive year. It reached 38.2% of nominal GDP compared to 38.8% in 2006. Although expenditure growth increased only slightly in 2007 – at 5% it is low compared to average growth in the last five years – it is still higher than in neighbouring countries.

Total expenditure in nominal terms should increase by 9.9% in 2008, mainly boosted by the introduction of a new tax credit for children. Expenditure growth should stabilize around 6.7% on average over 2009-2010. Continuing consolidation of expenditure is required in order to diminish the uncertainties related to future revenues.

Furthermore, lower expenditure growth in 2007 is in part due to a fall in social transfers, including the suspension of indexation of family allowances and the modulation of pension indexation to real wages.

TABLE 23: GENERAL GOVERNMENT REVENUE (AS A PERCENTAGE OF GDP, UNLESS OTHERWISE INDICATED)

	Official data May 2008						BCL projections June 2008		
	2002	2003	2004	2005	2006	2007	2008	2009	2010
Direct taxes	15.3	14.7	13.0	13.7	13.0	13.5	13.5	13.6	13.9
Payable by households	7.2	7.3	7.3	7.9	8.1	8.0	8.1	8.2	8.4
Payable by corporations	8.0	7.4	5.7	5.8	5.0	5.5	5.4	5.4	5.5
Indirect taxes	13.0	12.6	13.5	13.4	12.8	13.0	12.7	12.4	12.1
Social contributions	11.8	11.7	11.6	11.4	10.8	11.1	11.3	10.9	10.9
Other revenue	3.9	3.6	3.4	3.3	3.5	3.6	3.4	3.4	3.4
Total revenue	43.9	42.6	41.5	41.8	40.1	41.1	40.9	40.3	40.4
Nominal increase in total revenue %	4.5	4.0	4.0	10.3	8.1	9.5	4.0	5.2	7.3

Sources: IGF, IGSS, STATEC, UCM, BCL calculations.

TABLE 24: GENERAL GOVERNMENT EXPENDITURE (AS A PERCENTAGE OF GDP, UNLESS OTHERWISE INDICATED)

	Official data May 2008						BCL Projections June 2008		
	2002	2003	2004	2005	2006	2007	2008	2009	2010
Social transfers	20.3	20.9	21.1	20.7	19.4	19.0	20.1	19.9	19.9
Public investments	4.9	4.6	4.3	4.5	3.6	3.8	4.0	4.0	4.0
Composition expenditure[1]	11.5	11.4	11.5	11.4	10.4	10.4	10.6	10.6	10.7
Subsidies[2]	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6
Other expenditure	3.4	3.5	4.2	3.6	3.8	3.3	3.7	3.7	3.7
Total expenditure	41.8	42.1	42.7	42.0	38.8	38.2	40.1	39.9	39.9
Nominal increase in total expenditure (%)	15.3	7.9	8.3	7.4	4.3	5.0	9.9	6.2	7.2

Sources: IGF, IGSS, STATEC, UCM, BCL calculations

1 Compensation of employees and intermediate cosumption.

2 Disregarding capital transfers.

1.2.11.4 General government net lending or borrowing

The general government budget balance is obviously the difference between the expenditure and revenue ratios described above. After a period of deterioration, 2006 and 2007 have seen a return to a surplus position. This mainly reflects a very favourable economic environment, an excellent financial sector performance and the implementation of the budgetary consolidation measures agreed in 2006 by the *Comité de Coordination Tripartite*.

On the other hand, the gradual consolidation process since 2005 may come to a halt in 2008. The general government surplus should decrease from 3% of GDP in 2007 to 0.8% of GDP in 2008, mainly due to new measures adopted in the 2008 budget. These include the transformation of child allowance from tax deduction to tax credit, the partial indexation of tax brackets to past inflation up to 6%, and the reduction of the registration tax rate (*droit d'apport*) from 1% to 0.5%. Moreover, in 2008 the central government is projected to record a deficit once again, reaching -1.1% of GDP. As indicated in table below, the budgetary deterioration is mainly attributable to the central government in a broad sense, after consolidating the extra-budgetary funds and some administrations of central government *sensu stricto*.

For 2009, the general government surplus is projected to deteriorate compared to 2008. The surplus should decline from 0.8% to 0.4% of GDP. This deterioration is explained on the one hand by a less favourable economic environment, and on the other hand, by the introduction of the *Statut unique* adopted by Chamber of Deputies in April 2008, coming into effect January 1st 2008.

So far, no new significant measure for 2010 has been announced. On this basis, the surplus should remain positive and stable in 2010.

The Prime Minister's speech on the state of the Nation, delivered on May 22, 2008, to the Chamber of Deputies, reviewed the economic, social and financial situation. It contained no concrete and quantifiable measure for 2010 that could have a significant impact on public finances.

Several measures were announced for 2009:

- Partial indexation of tax brackets to past inflation up to 6%;
- Transformation of the *abattement compensatoire* for wage-earners, the tax deduction for pensioners, and the *abattement monoparental* to corresponding tax credits;

TABLE 25:
GENERAL GOVERNMENT NET LENDING (+) OR NET BORROWING (-) (AS A PERCENTAGE OF GDP)

	Actual balance (net lending (+) or net borrowing (-))								
	Official data May 2008						BCL Projections June 2008		
	2002	2003	2004	2005	2006	2007	2008	2009	2010
General government	2.1	0.5	-1.2	-0.1	1.3	3.0	0.8	0.4	0.5
of which central government	-0.4	-1.2	-2.6	-1.3	-0.7	0.6	-1.1	-1.1	-0.9
of which local governments	0.1	0.0	-0.1	-0.3	0.2	0.0	-0.1	-0.1	-0.2
of which social securitiy	2.4	1.8	1.5	1.5	1.8	2.4	1.9	1.7	1.6
Stability Programme	--	--	--	--	0.7	1.0	0.8	1.0	1.2
BCL projections December 2006	--	--	--	--	0.7	1.3	0.9	0.6	--
	Cyclically adjusted balances								
BCL projections June 2008[1]	1.4	0.5	- 0.6	0.3	1.8	2.6	1.0	0.6	0.6
Stability Programme estimate October 2008					1.1	0.8	0.7	0.6	1.1

Sources: IGF, IGSS, STATEC, UCM, BCL calculations.

1 These cyclically adjusted balances are based on a disaggregated Hodrick-Prescott approach.

- introduction of a tax allowance on motor vehicles for large families;
- increase of the minimum wage;
- regular adjustment of rents and pensions;
- and introduction of "Services" transfers to families with children.

These measures should have an impact on the budget balance in 2009 and 2010. Preliminary BCL estimates (limited to the partial indexation of tax brackets) suggest a possible negative effect of the order of 0.2% to 0.3% of GDP in 2009 and 2010. The official BCL projections presented above do not include this effect.

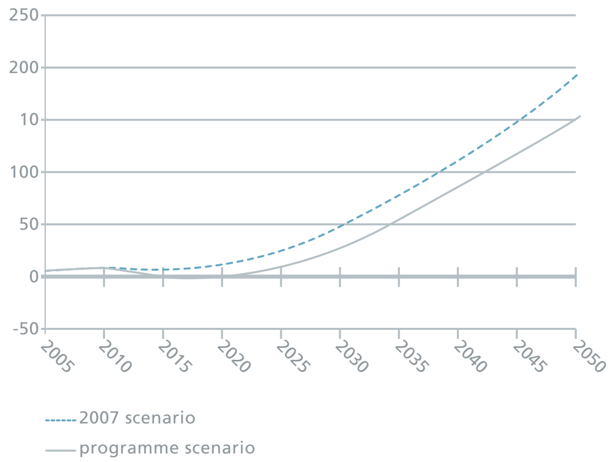
The modifications to the automatic indexation of wages agreed by the *Comité de Coordination Tripartite* in 2006, should expire 1st January 2010, assuming acceptable economic developments.

Luxembourg's public debt ratio remains among the lowest in the EU. In 2007 it was 6.9% of GDP, with an increasing trend mostly driven by central government. BCL projections anticipate a rising trend over the three next years, with the debt ratio reaching 7.7% of GDP in 2010. Although this remains very low compared to other European countries, vigilance is required, as the general pension regime could put severe strain on public finances if no significant reform is adopted in the near future. The BCL, along with all major international institutions, and in particular the European Commission, has repeatedly stressed the seriousness of the problem.

The European Commission projects Luxembourg's general government debt through 2050 under two alternative scenarios.

The first scenario (scenario 2007) assumes that the structural primary balance, ignoring the ageing effect, will maintain the level reached in 2007 over the projection period. The second scenario (scenario Programme) assumes that the budget objectives of the Stability Programme are respected. In both cases, the simulations take into account the ageing-related increase in general government expenditure. This has been estimated at 8.2% of GDP between 2010 and 2050. The estimated impact of ageing would lead to a spectacular increase of the general government debt ratio, as shown clearly in chart below. The debt ratio is projected to reach 60% of GDP by the mid-2030s.

CHART 36:
LONG TERM PROJECTIONS FOR THE GOVERNMENT DEBT RATIO UNDER TWO SCENARIOS (AS A PERCENTAGE OF GDP)



Sources: European Commission (2008), An analysis of the October 2007 Update of the Stability Programme for Luxembourg, p.36.