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THE GOVERNOR'S MESSAGE

In 2006, the Governing Council of the ECB adjusted its monetary policy to address upside risks to price stability. It raised the key ECB interest rates on five occasions by a total of 125 basis points. As a result, the minimum bid rate in the main refinancing operations of the Eurosystem rose from 2.25% in January 2006 to 3.5% at the end of 2006.

The gradual withdrawal of monetary accommodation continued at the beginning of 2007 with an additional 25 basis points increase in the key interest rates in March. The most recent interest rate rise was decided at the Governing Council meeting of 6 June 2007, bringing the minimum bid rate in the main refinancing operations of the Eurosystem to 4.0%. This decision, which reflected the prevailing upside risks to price stability, will contribute to ensuring that inflation expectations in the euro area remain solidly anchored at levels consistent with price stability. Such anchoring is a prerequisite for the single monetary policy to make an ongoing contribution towards fostering sustainable economic growth and job creation in the euro area. After this increase, given the positive economic environment in the euro area, monetary policy remains still on the accommodative side.

The June 2007 Eurosystem staff macroeconomic projections anticipate annual real GDP growth in a range between 2.3% and 2.9% in 2007 and between 1.8% and 2.8% in 2008. Average annual HICP inflation is projected between 1.8% and 2.2% in 2007 and between 1.4% and 2.6% in 2008.

Turning to Luxembourg, the national index of consumer prices (NICP) increased by 2.7% on average in 2006, up by a 0.2 percentage point when compared with 2005. Thus, inflation has increased for the third consecutive year. The increase in inflation last year reflected both oil price developments and rising underlying inflation. Annual growth of administered prices rose from 2.1% in 2005 to 3.9% in 2006. This was a higher rate than that recorded for the euro area. The inflation differential of Luxembourg vis-à-vis the euro area and the neighbouring countries worsened further in 2006. The cumulated differential over the period from the beginning of phase III of EMU in 1999 to the end of 2006 stood at 2.1 percentage points vis-à-vis the euro area and 5.3 percentage points vis-à-vis the neighbouring countries. According to the latest BCL staff projections, inflation should decrease to 2.1% in 2007 and remain stable thereafter, reflecting a neutral contribution from energy prices. Public administration measures are projected to contribute 1.3 percentage points to the Luxembourg HICP in 2007 and 0.9 in the first half of 2008, compared to 0.9 in 2006. The contribution projected for 2007 would be the highest on record over the past decade.

The previous BCL Annual Report noted that the modification of the automatic wage indexation mechanism agreed in 2006 should slow the deterioration in Luxembourg's price and cost competitiveness, but would be unable to reverse the trend. This assessment has been confirmed by the latest available data. Indeed, the competitiveness indicators based on consumption prices and the GDP deflator continued to follow an upward trend in 2006, suggesting that the situation has worsened further. Since 1999, unit labour cost growth in Luxembourg has exceeded by 10.5% the respective indicators in our main trading partners. Furthermore, according to BCL projections, which incorporate the effects of the adjustment to the indexation scheme, the deterioration in competitiveness should continue until the end of 2009. In this context, the government should rapidly implement the structural reforms envisaged by the Lisbon strategy to durably increase productivity, thus helping Luxembourg's producers face the anticipated rise in prices and costs relative to those in our main trading partners.

Despite the worsening of the above-mentioned indicators, Luxembourg experienced strong growth in exports, production and employment in 2006. According to the first national accounts estimates for 2006, economic growth in Luxembourg increased from 4.0% in 2005 to 6.2% in 2006, which constituted the strongest performance since 2000. GDP growth has become more broadly based across sectors in 2006, as financial services, the main driver behind growth in 2005, was supported by stronger dynamics in industry, commerce and construction.

According to the BCL staff projections, average annual real GDP growth should range between 4.5% and 5.3% in 2007 and between 4.1% and 5.1% in 2008. In comparison with the previous BCL staff projections, the ranges for real GDP growth in both 2007 and 2008 were revised upwards, mainly reflecting a carry-over effect related to strong economic activity in 2006.

In contrast with the favourable developments in employment and economic growth, the unemployment rate continued its upward trend, reaching 4.5% on average in 2006 after 4.2% in 2005. This increase cannot be explained exclusively by cyclical factors and the situation calls, therefore, for active implementation of structural reforms in the labour market.

About two thirds of newly created jobs were taken up by non-residents. However, this inflow of cross-border commuters should not be seen as harming employment opportunities for residents. In any case, it would be difficult to reduce unemployment by creating more public sector jobs, as these would be mainly filled by residents previously employed in the private sector, and the jobs vacated would be occupied by new cross-border commuters rather than by unemployed residents. Finally, job creation in the private sector can be hampered by excessively rigid employment protection legislation, underlining the need to improve labour market flexibility. Fifty years after the Treaty of Rome and five years after the introduction of euro banknotes and coins one cannot overemphasise the need to facilitate free movement of persons and thereby further open the Luxembourg labour market to take advantage of EU enlargement.

According to the public sector accounts published in April 2007, general government recorded a slight surplus in 2006, contrary to what was previously projected by all observers. This better-than-expected outcome reflects to some extent the base effect from an important revision of the 2005 deficit. That deficit, which was estimated by the authorities at 1% of GDP in autumn 2006, was revised to only 0.3% in April 2007. The improvement recorded in 2006 can be explained by buoyant revenues - related to the favourable economic situation, the non-indexation of tax brackets, and the increase in taxes on oil products, rather than by expenditure restraint. Although expenditure growth decelerated in 2006, reaching 6%, it was still much higher than in the three neighbouring countries. Furthermore, the slowdown observed in expenditure growth essentially reflected lower public investments.
According to BCL staff, general government is projected to maintain surpluses over the projection horizon 2007-2009.

Maintaining a surplus position requires that any loosening of budgetary discipline be avoided, especially given the fact that significant additional revenues collected in 2006 might not last. This point is underscored by the long-term sustainability of public finances. Luxembourg is among those countries where ageing populations are likely to have a strong impact on public finances and social security systems. According to BCL projections, surpluses in the private sector pension regime will decline at the beginning of the next decade and deficits will emerge thereafter. These deficits will eventually result in sizeable net liabilities. A prefunding effort equal to about 6% of GDP is required so as to allow the private sector pension regime to accumulate a sufficient level of reserves over the longer term. Several measures could initiate such prefunding, for instance a more dynamic management of pension reserves, a temporary suspension of the biennial indexation of pensions to real wage developments, or adjustments to make the formula used to calculate pensions financially neutral. The latter measure would encourage later retirements in Luxembourg, where the average effective retirement age was 58 in 2004.

In this context, the authorities should aim for a medium-term objective of a structural surplus of at least 1% of GDP, rather than their current objective of a structural deficit of 0.8% of GDP. The currently favourable macroeconomic and financial conditions must be fully exploited to implement the consolidation measures required to attain that objective. In other words, the current economic upswing should be considered an opportunity to reach a more sustainable fiscal position.

Turning to structural reforms, Luxembourg faces several important challenges, notably related to the employment rate, research, education, internal market completion, infrastructure, energy, environment policy and both public and private governance. The current favourable cyclical position should be used to implement an ambitious reform programme. Structural measures such as those envisaged by the Lisbon strategy are necessary in order to durably enhance Luxembourg's productivity and competitiveness.

Yves Mersch

Artist: Manolo Valdès
Title: Infanta Margarita
Material: bronze
Format: height 123 cm
BCL Collection

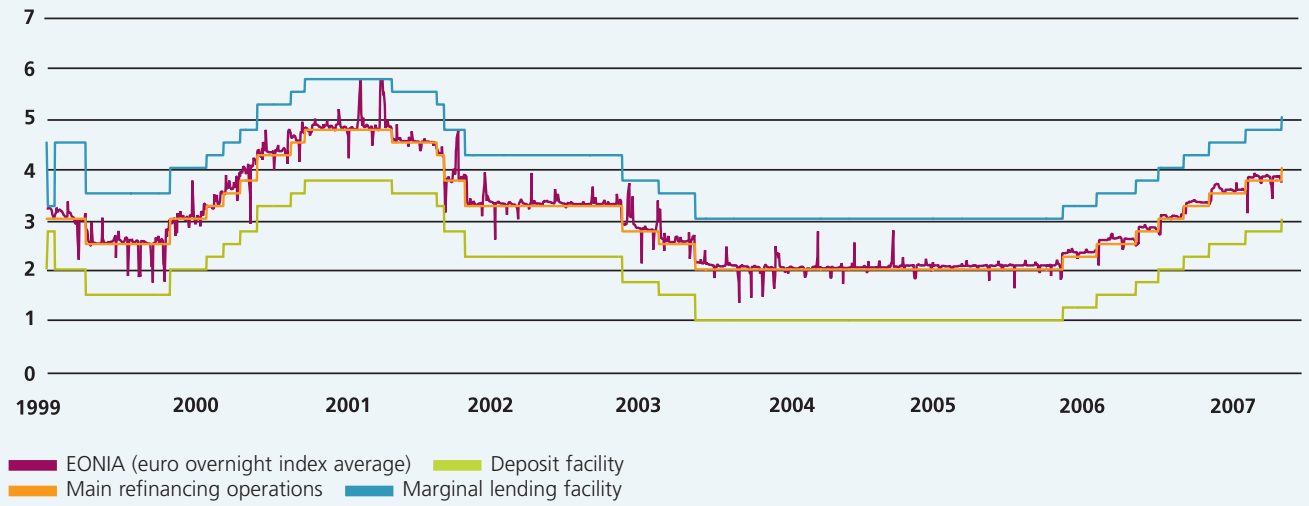
1. ECONOMIC AND FINANCIAL SITUATION

1.1 Economic situation at the international level

1.1.1 Short-term interest rates and monetary policy decisions

After raising the minimum bid rate on the Eurosystem's main refinancing operations by 25 basis points in December 2005, the Governing Council of the European Central Bank continued to address the prevailing upside risks to price stability in the period under review. Thus, the Governing Council progressively raised the Eurosystem's key policy rates by 175 basis points; the minimum bid rate on main refinancing operations now stands at 4.00%, while the interest rates on the marginal lending facility and on the deposit facility were raised to 5.00% and 3.00% respectively.

CHART 1: KEY POLICY RATES OF THE EUROSYSTEM AND THE OVERNIGHT INTEREST RATE



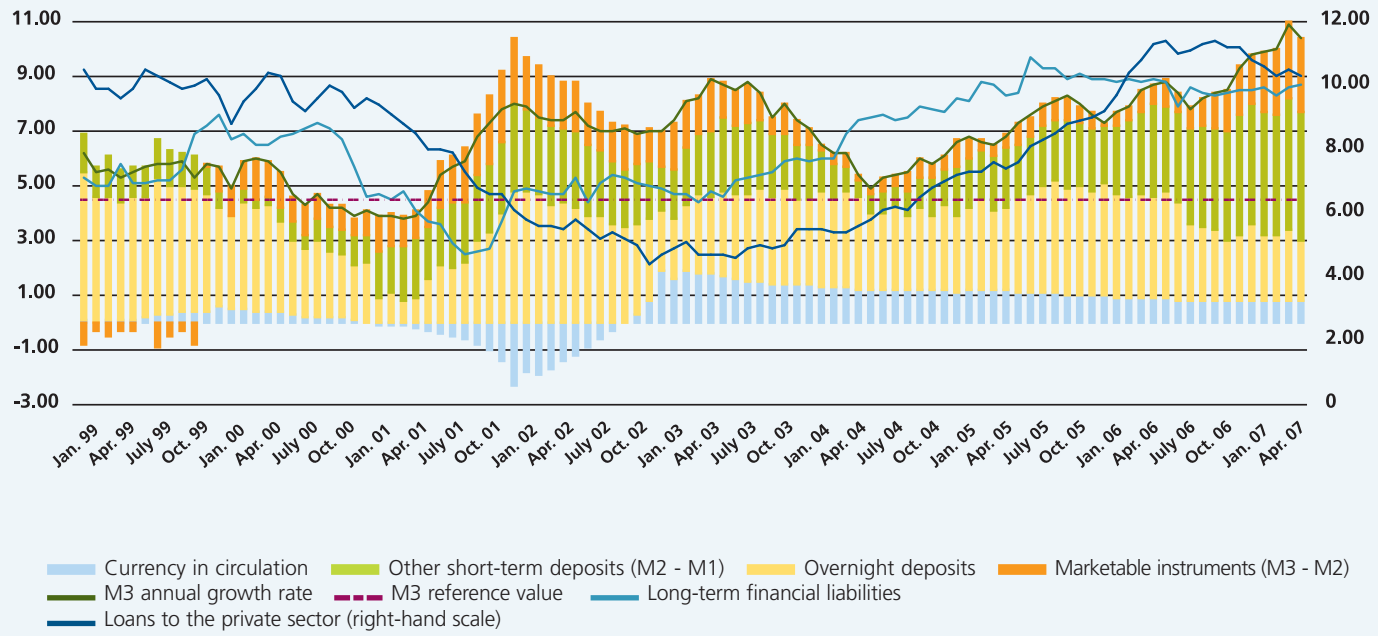
Note: The rate for main refinancing operations is the rate applicable to fixed rate tenders for operations settled before 28 June 2002. Thereafter, the rate reflects the minimum bid rate applicable to variable rate tenders.

Sources: ECB, Bloomberg

Economic developments in 2006 confirmed the Governing Council's main scenario which foresaw economic growth close to its potential rate, surrounded by risks which in the short-term remained mostly balanced in the period under review; medium and longer-term risks, on the other hand, remained on the upside. As suggested by the economic and monetary analyses, these risks pertained in particular to a stronger than anticipated pass-through of past oil price increases, unanticipated increases in administered prices and indirect taxes, and renewed oil price rises. Second-round effects arising from potential wage increases also constituted an upside risk to price stability. Average annual HICP inflation stood at 2.2% in 2006, unchanged from the previous year. More recently, HICP inflation ranged from 1.8% to 1.9% between January and April, while Eurostat's flash estimate predicts a rate of inflation of 1.9% for May.

In spite of the sharp rise in the Eurosystem's key rates, money and credit growth has remained vigorous. In the course of the third quarter of 2006, M3 growth picked up and hit a new peak in March this year, at 10.9%. While this development is largely attributable to the still low level of interest rates, strong economic activity has also contributed to the vigorous progression of the broad aggregate. If M3 growth has remained robust, the series of rate hikes has nevertheless had an impact on monetary developments in 2006 and 2007, mostly through substitution effects between the various components of M3. In particular, from the second half of 2006 stronger annual growth rates of other short-term deposits (M2-M1) made themselves felt while the narrow aggregate M1 progressed more slowly; marketable instruments (M3-M2) also picked up in the course of 2006.

CHART 2: MONEY AND CREDIT DEVELOPMENTS



Source: ECB

As for the counterparts of M3, the annual progression of loans to the private sector was particularly dynamic, although a slowdown set in around year-end; while the growth rate of private sector loans remains high, the slowdown is undoubtedly linked to the series of rate hikes since December 2005. If loans to households have evolved somewhat more slowly, in part due to a cooling off of housing markets in a number of euro area countries, loans to NFCs have picked up considerably, reaching 12.2% in April 2007.

While the Governing Council has raised the key policy rates again in June, it can be said that monetary policy has still remained accommodative.

1.1.2 Long-term government bond yields

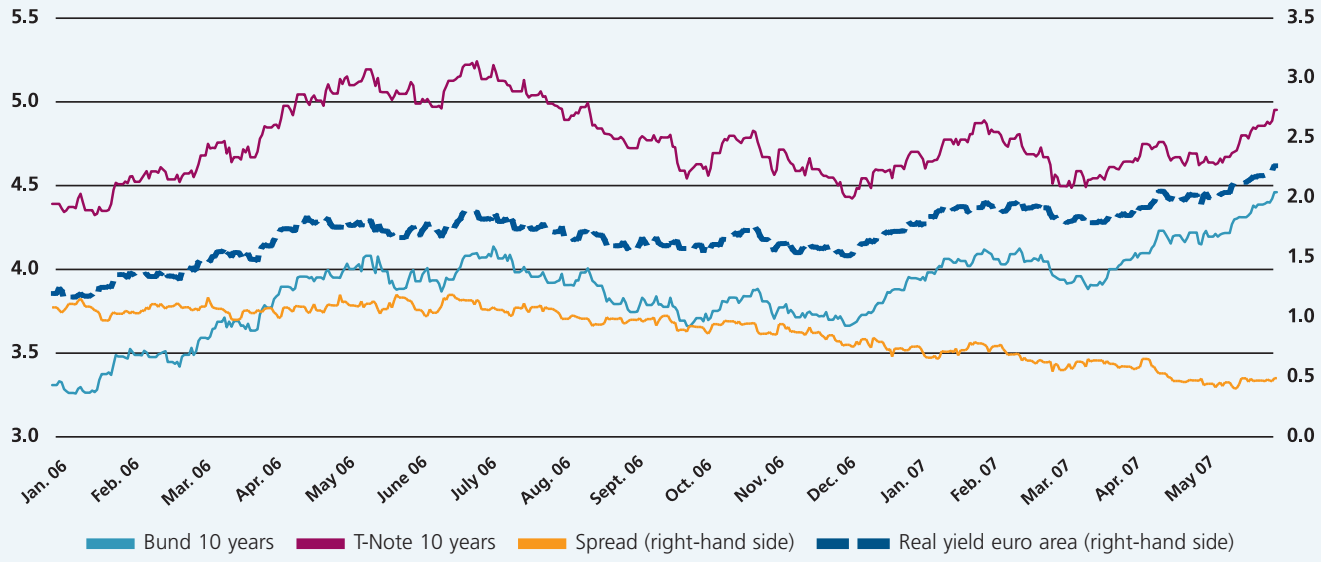
After reaching historically low levels in 2005, long-term government bond yields recovered somewhat in 2006, both in the euro area and in the United States. While several elements have contributed to this development, the strong pickup in economic activity early-2006, as well as the positive economic outlook in the medium term, were the main factors. Bund yields have risen by roughly 65 basis points in 2006; since January, they have entered a steep upward trend. In comparison, in the period under review the yield on US Treasuries has risen by merely 50 basis points, implying that the spread between euro area and US bond yields has declined.

The rise in bond yields largely reflects the positive economic outlook, in particular in the euro area, in a context of stable risk premia and inflation expectations as evidenced by the evolution of French index-linked bonds. The drop in bond yields registered in June 2006 was to a large extent due to turbulent stock market developments from May onwards as international investors were increasingly looking for safe haven investments such as government securities. Bond yields followed a downward trend until late-2006 and then picked up again, in particular in the euro area, given that various domestic factors, such as rising uncertainty regarding the housing market and the monetary policy outlook, were holding down bond yields in the United States.

Another noteworthy development is the flattening of the yield curve in the euro area. The chart illustrates how the spread between the German ten-year Bund and the two-year Schatz has decreased from over 40 basis points at the beginning of 2006 to zero by year-end; since then, the spread has remained at very low levels. Moreover, the term premium (i.e. the difference between the Bund and the three-month Euribor) has dropped considerably in the course of 2006.

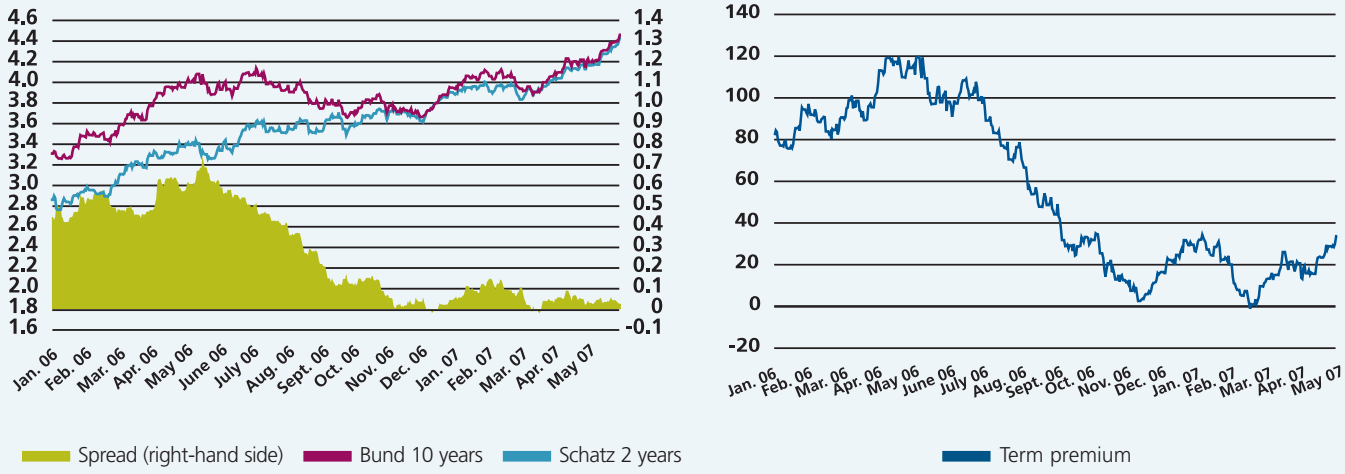
Historically, a flattening of the yield curve often precedes a slowdown in economic activity or even a recession. At this juncture, however, it appears rather to be linked to a sharp drop in risk premia embedded in the term premium.

CHART 3: LONG-TERM GOVERNMENT BOND YIELDS



Source: Bloomberg

CHART 4: FLATTENING OF THE YIELD CURVE



Source: Bloomberg

1.1.3 Equity markets

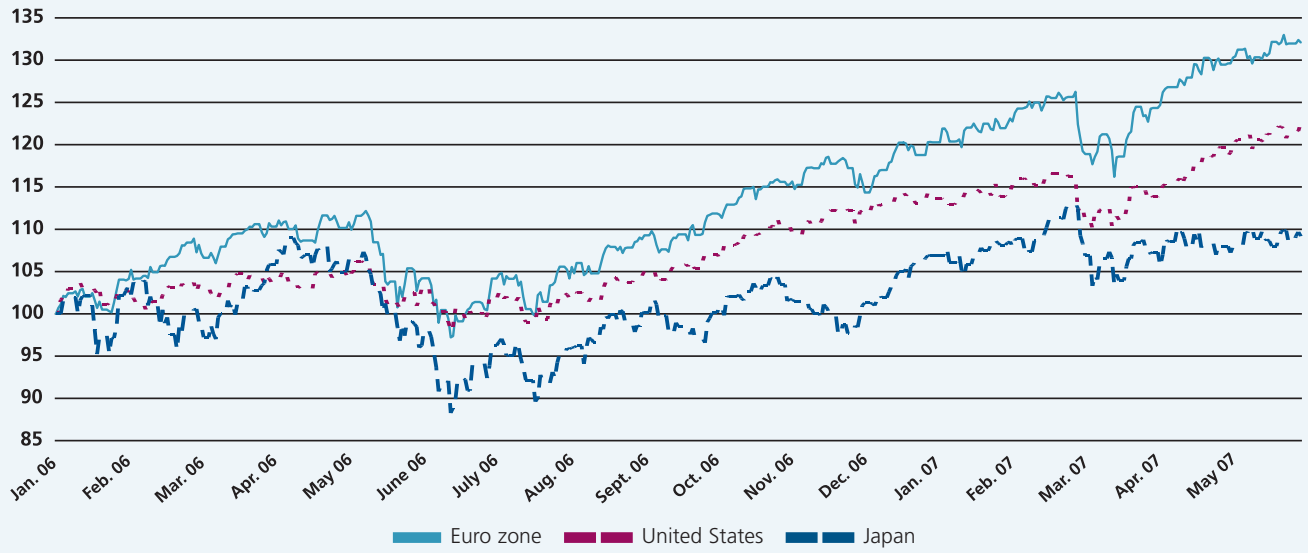
In the period under review, stock markets in the euro area largely continued on the upward trajectory they had embarked on in 2003. The Dow Jones EURO STOXX rose by over 20% last year, reaching 395.63 points at end-2006, while the Standard & Poor's 500 and the Nikkei 225 rose by 13.6% and 6.9% respectively.

The strong performance of euro area equity is largely attributable to firms' higher profitability, following a period of corporate balance sheet restructuring, but also to the importance of M&A activity; more generally, the positive stock market developments were supported by strong economic activity.

The sharp downturn in May 2006 should be seen against the backdrop of rising uncertainty regarding the sustainability of the remarkable stock market performance in the past, most notably with regard to emerging markets, where the fall in equity prices was particularly steep. While market participants were by and large aware that no major reassessment of the economic outlook had taken place, the stock market turbulences in May last year seemed to be attributable to a fall in risk appetite.

In 2007, equity markets mostly continued to progress and in February the Dow Jones EURO STOXX and the Standard & Poor's 500 reached their respective six-year peaks before global stock markets took a tumble again. The latter was triggered by a sharp contraction of the Chinese equity market and Asian markets more generally; indeed, the Shanghai Stock Exchange Composite Index fell by nearly 10% on February 27.

CHART 5: MAJOR STOCK PRICE INDICES IN THE EURO AREA, THE UNITED STATES AND JAPAN
(INDEX: 1 JANUARY 2006 = 100; DAILY DATA)



Source: Bloomberg

1.1.4 Exchange rate developments

In the course of 2006, the euro appreciated against most other major international currencies. However, although the euro appreciated versus the dollar, the yen and the renminbi (which together made up over 40% of euro area trade between 1999 and 2001), it nevertheless depreciated versus the British pound.

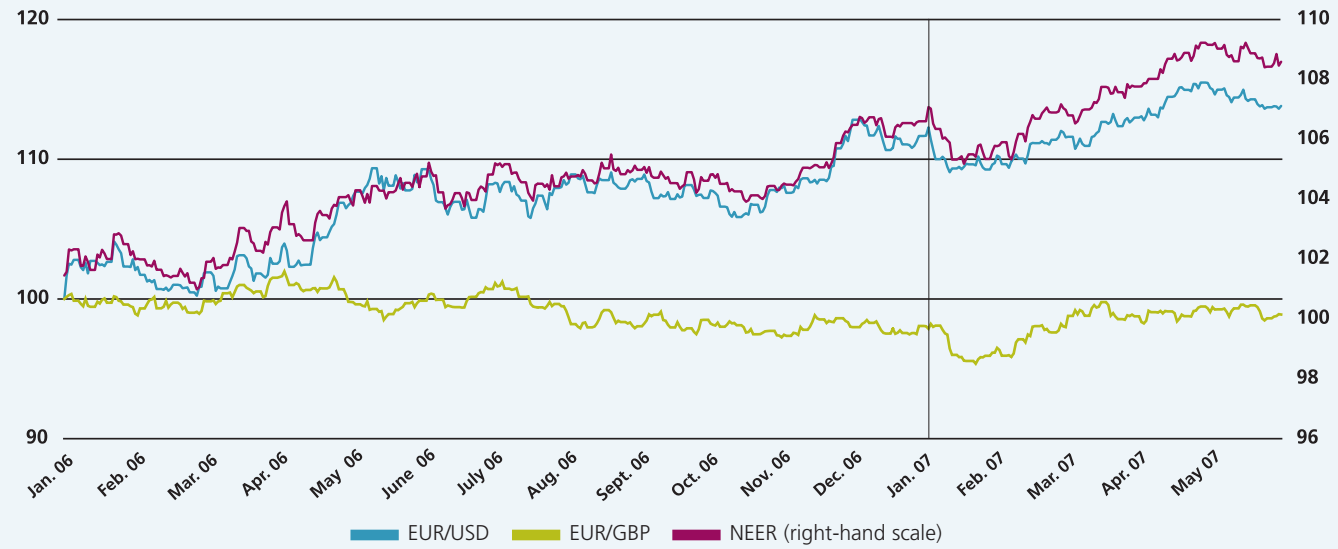
The upward trend of the euro in 2006 is mainly perceptible in the first half of the year, while the exchange rate stabilised somewhat in the second half, at least up until October when the single currency embarked on a new upward trajectory. In 2006 alone, the nominal effective exchange rate (NEER) appreciated by almost 5%, while the euro rose more than 11% against the dollar.

The euro's appreciation against the dollar is to a large extent due to diverging growth prospects on both sides of the Atlantic, which in the period under review also impinged on the monetary policy outlook and the spread between euro area and US key policy rates. Moreover, the US current account deficit and the housing market put additional downward pressure on the dollar. From October, signs of a slowdown in US economic activity and a falling interest rate differential supported the euro.

The single currency advanced much more steadily versus the yen, owing to a still considerable interest rate differential between Japan and the euro area. Indeed, interest rates are still at very low levels in Japan and the yen continues to be used as a major funding currency for carry trades.

In the first months of 2007, the euro continued to progress bilaterally against the dollar, but also in terms of its effective exchange rate. The elements responsible for this development are by and large the same as in 2006.

CHART 6: EXCHANGE RATE DEVELOPMENTS



** For EUR/USD and EUR/GBP, 2 January 2006 = 100.*
+ The nominal effective exchange rate (NEER) is calculated by the ECB (Q1 1999 = 100)

Sources: ECB, Bloomberg

1.1.5 Consumer prices

HICP inflation in the euro area averaged 2.2% in 2006, unchanged from the previous year. This exceeds the ECB Governing Council's definition of price stability of below, but close to, 2%. Inflation remained at such high levels mainly because of developments in oil and commodity prices.

Turning to consumer price developments in early 2007, euro area HICP inflation stood between 1.8% and 1.9% over the period from January to April 2007. The annual growth rate in both unprocessed food prices and services was high at the beginning of 2007. HICP inflation was 1.9% in May 2007 according to Eurostat's flash estimate.

According to the June 2007 Eurosystem staff projections, average annual HICP inflation is expected to be between 1.8% and 2.2% in 2007 and between 1.4% and 2.6% in 2008. Compared with the March 2007 ECB staff projections, the range for inflation in 2007 is somewhat higher, mainly due to higher oil prices.

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

	2005	2006	2005 Q4	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 Q1	2007 Jan.	2007 Feb.	2007 Mar.	2007 Apr.	2007 May
Overall HICP	2.2	2.2	2.3	2.3	2.5	2.2	1.8	1.9	1.8	1.9	1.9	1.9	1.9
of which:													
- Unprocessed food	0.8	2.8	1.4	1.4	1.6	3.9	4.1	3.1	3.7	2.7	2.9	3.9	
- Processed food	2.0	2.1	2.2	2.0	2.2	2.1	2.2	2.1	2.2	2.1	1.9	1.9	
- Non-energy industrial goods	0.3	0.6	0.4	0.4	0.7	0.7	0.8	1.1	0.9	1.1	1.2	1.1	
- Energy	10.1	7.7	11.1	12.2	11.6	6.3	1.5	1.2	0.9	0.8	1.8	0.4	
- Services	2.3	2.0	2.1	1.9	2.0	2.0	2.1	2.4	2.3	2.4	2.4	2.5	
HICP excluding unprocessed food and energy	1.5	1.5	1.5	1.4	1.5	1.5	1.6	1.9	1.8	1.9	1.9	1.9	

Source: Eurostat

1.1.6 Output, demand and labour market developments

Having stood at 1.4% in 2005, real GDP growth in the euro area rebounded in 2006 to 2.9%, a level which represented the strongest growth witnessed since 2001 and exceeded available estimates of potential output growth. In 2006, euro area real GDP was essentially supported by domestic demand and marginally by net trade. On the domestic side, total investment growth contributed substantially to GDP growth (1.0pp in 2006 after 0.5pp in 2005) benefiting from increasing profit rates, a positive demand outlook and low costs of external financing. Private consumption's contribution to growth increased also in 2006 in line with disposable real income growth (1.0pp in 2006 after 0.8pp in 2005). Meanwhile, solid world growth supported exports. However, the external sector solely effected a quasi-neutral contribution to economic growth (0.3pp after -0.2pp in 2005) which was attributable, in particular, to stronger domestic economic momentum boosting imports from the rest of the world.

Following real GDP growth of 0.6% quarter on quarter in the first quarter 2007, quarterly growth in real GDP is expected to continue at rates of about 0.6% over the projection horizon. Against this background, average annual real GDP growth is projected to be between 2.3% and 2.9% in 2007 and between 1.8% and 2.8% in 2008.

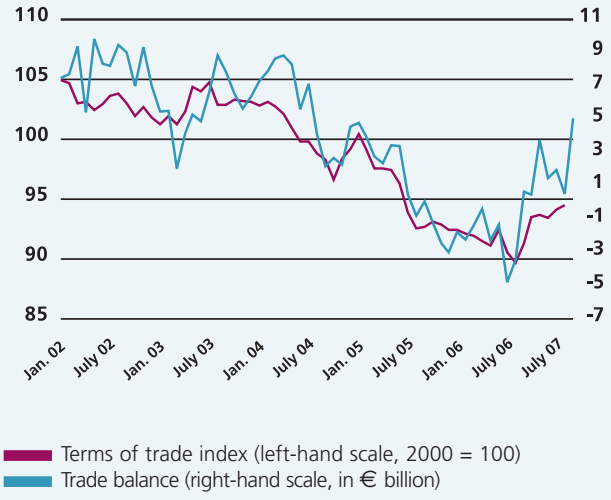
Labour market conditions in the euro area improved significantly in 2006 in line with the pattern of economic growth. Employment growth has expanded at a robust pace in 2006 (1.6%) and its level has increased by around two million. The unemployment rate decreased further in 2006, reaching a level of 7.9% in average. The data available for the first quarter of 2007 confirms this decrease as the unemployment rate fell to 7.2% in March 2007. It should be noted that it is the first time that such levels have been achieved since the beginning of the series in 1993. Although it clearly indicates a cyclical rebound in labour market conditions in 2006, part of the decrease in the unemployment rate can be assessed as being of a structural nature, reflecting the impact of labour market reforms in some euro area countries. While several countries have made significant progress towards making their labour markets more flexible, more ambitious reforms are still needed in many countries in order to improve their resilience to various shocks that could possibly affect their labour market.

1.1.7 External trade

For the first time since 2000, the euro area trade balance recorded a deficit of €9.7 billion in 2006 compared with a surplus of €14.8 billion in 2005. The higher oil and non-oil commodity prices resulted in a 13.3% increase in import values while export values increased by 11.1%. As a result, the euro area terms of trade continued to decline in 2006, further accelerating the deterioration in the euro area trade balance (see chart 7).

The geographical allocation of trade shows that the euro area surplus with the United States reached €71 billion in 2006 up from €65 billion in 2005. However, the surplus vis-à-vis the United Kingdom declined by 2.9% to €49 billion in 2006 as a whole. Large trade deficits were recorded with oil exporting countries: OPEC members (€48.4 billion), Russia (€39.7 billion), Norway (€26 billion) and some African oil exporting countries (€32.4 billion). Moreover, the usual heavy trade deficit with China (€89.8 billion in 2006) and the deficit with Japan (€21.6 billion) continued to expand.

CHART 7: MONTHLY DEVELOPMENTS IN THE EURO AREA TRADE BALANCE AND IN THE TERMS OF TRADE (SEASONALLY ADJUSTED DATA)



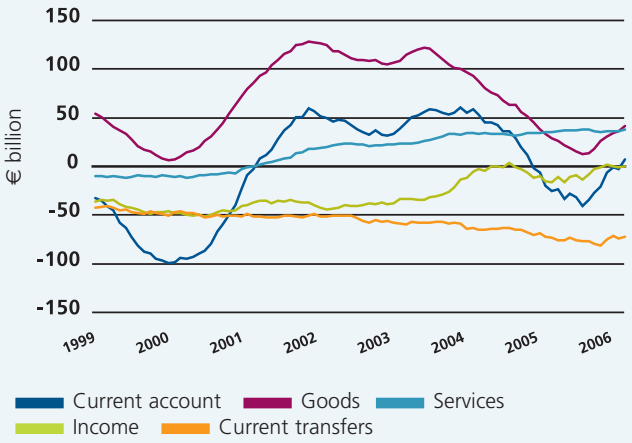
Source: Eurostat

1.1.8 Balance of payments

In 2006 the current account of the euro area recorded a slight deficit of €6.1 billion (0.1% of GDP) compared with a deficit of €1.8 billion in 2005. The higher deficit in 2006 reflected to a larger extent the drop in the goods surplus as imports grew faster than exports. The 7% increase in the deficit of the current transfers contributed also to the deterioration in the current account of the euro area, while the balances for services and for income improved strongly.

In the financial account, the euro area recorded net inflows of €134 billion in 2006, up from €25 billion in 2005. Net outflows in direct investments dropped to €156.7 billion in 2006 down from €210 billion in 2005. These net outflows were, however, largely offset by portfolio investment net inflows of €273 billion resulting from the net purchases of euro area equity and debt securities by non-resident investors.

CHART 8: CURRENT ACCOUNT BALANCE AND ITS COMPONENTS (12-MONTH CUMULATED TRANSACTIONS)



Source: ECB

1.2 ECONOMIC SITUATION IN LUXEMBOURG

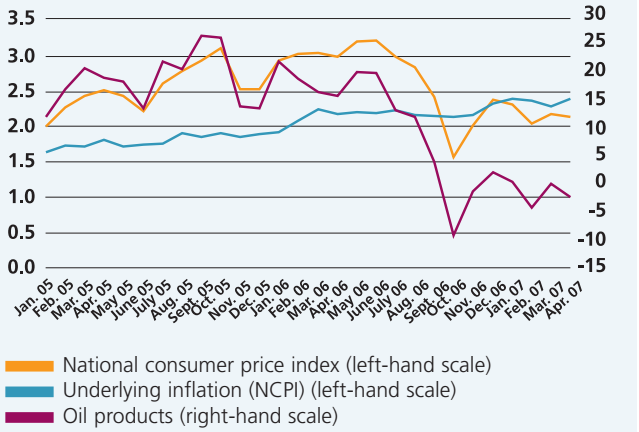
1.2.1 Prices and costs

1.2.1.1 Consumer prices and inflation projections

The national index of consumer prices (NICP) increased by an average 2.7% in 2006, up by a 0.2 percentage point when compared with 2005. Thus, inflation has increased for the third consecutive year. The increase in inflation last year was due both to oil price developments and rising underlying inflation.

The direct impact of fiscal policy on the NICP amounted to about a 0.6 percentage point in 2006, up from some 0.4 percentage point in 2005. The average annual growth rate of administered prices rose from some 2.1% in 2005 to 3.9% in 2006. This was a higher rate than the one recorded for the euro area. Hence, the increase in inflation recorded in 2006 partly reflected rises in administered prices and indirect taxes.

CHART 9: INFLATION AND OIL PRODUCTS (ANNUAL PERCENTAGE CHANGES)

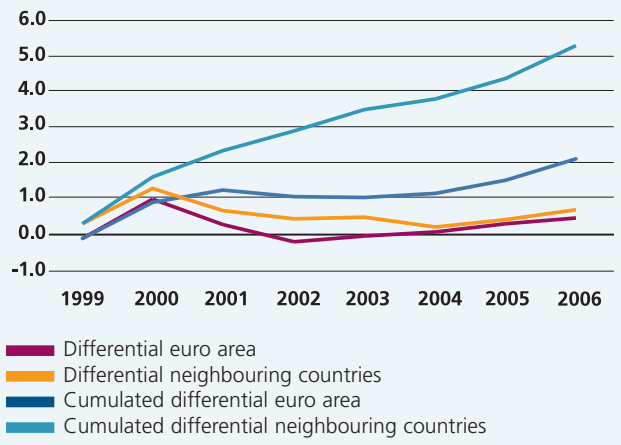


Source: STATEC

Turning to developments in early 2007, inflation hovered between 2.0% and 2.3% over the period from January to April 2007. The contribution from oil product prices to the annual rate of change was moderate during this period, reflecting mainly favourable base effects. Underlying inflation pressures continued the upward trend observed since early 2005.

The inflation differential of Luxembourg vis-à-vis the euro area and the neighbouring countries worsened further in 2006. The cumulated inflation differentials between Luxembourg and the euro area and between Luxembourg and its neighbours stood at 2.1 and 5.3 percentage points respectively (see chart 10).

CHART 10: INFLATION DIFFERENTIALS (PERCENTAGE POINTS)



Sources: STATEC, Eurostat, BCL calculations

Inflation projections

Assumptions

Mid-may, the price of oil fluctuated around 66$/bl and the markets were anticipating a marginal increase to a level close to 70$/bl in June 2008. The quote for one euro against the dollar stood at 1.36, which corresponds to an appreciation with respect to both the average of 2006 and the previous exercise. Detailed assumptions are given in the following table.

TABLE 2: ASSUMPTIONS UNDERLYING THE INFLATION PROJECTIONS

	2006	2007	07-Q1	07-Q2	07-Q3	07-Q4	08-Q1	08-Q2
Price of oil in $/bl	65.4	65.0	58.0	66.6	67.0	68.5	69.4	69.9
Exchange rate $/€	1.26	1.34	1.31	1.35	1.36	1.36	1.36	1.36
Price of oil in euros (in annual percentage changes)	18.6	-7.2	-14.1	-11.6	-10.2	9.0	15.6	4.9

Source: BCL

As regards the fiscal measures introduced by the government, they remain unchanged compared to the previous exercise. The projections take into account the increase in the level of excise duties on diesel by 12.5€/1 000l and petrol by 20€/1 000l from 1st January 2007 onwards. According to our estimates, the additional impact of these two fiscal measures on the NICP corresponds to a 0.07pp in 2007. The impact on the HICP is higher, at around a 0.2pp.

The HICP excluding energy is usually driven by imported inflation and wage developments. Beyond this, specific measures such as indirect tax adjustments, public charges and administered prices may also influence inflation developments. At the beginning of 2007, the less favourable outcome in the HICP excluding energy can be traced, first to a hike in tariffs for public services and, second to a slight acceleration in the non-energy industrial goods inflation. Economic growth in the euro area is continuing on the path that started in mid-2005. Attention is gradually shifting to the speed at which the output gap is closing, creating inflationary pressures. This is becoming important as economic growth has spilled over into the labour market, resulting in dynamic employment growth and a decline in unemployment. According to the European Commission's projections, nominal and real wage growth will accelerate in the euro area, slightly in 2007 and even more in 2008. In Luxembourg, the risk from spiralling wages seems fairly contained in the short term in light of the 2006 government measures. Imported inflation however is expected to accelerate in 2007, before declining slightly.

Results

Projections for both the energy and the ex-energy components of the NICP have been revised upwards compared to the previous exercise. On the basis of the euro oil price assumptions, the contribution of the energy component to headline inflation would be broadly neutral in 2007, whereas the HICP and the NICP excluding energy are expected to accelerate in 2007 compared to 2006, before dropping slightly at the beginning of 2008. As a result, annual average NICP inflation should be roughly stable around or slightly above 2.0%. However, the quarterly is somewhat more volatile (see chart 11), with the rate dropping below 2.0% in the third quarter of 2007 followed by an acceleration close to 2.5% at the end of the year and an easing of inflation thereafter.

The impact of government measures on headline inflation is set to accelerate in 2007 compared to 2006, mainly on the basis of the surprisingly strong hikes in public tariffs that have been observed at the beginning of 2007. In return, though, the payout of the upcoming automatic wage indexation, projected for November 2007, would be postponed until March 2008, in line with the government measures agreed in 2006.

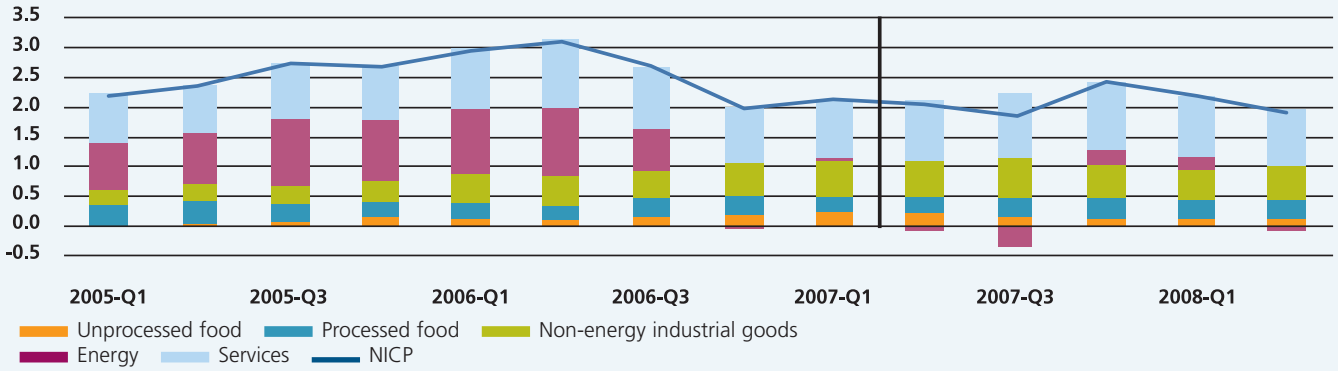
TABLE 3: INFLATION PROJECTIONS AND REVISIONS COMPARED TO THE PREVIOUS EXERCISE (IN ANNUAL PERCENTAGE CHANGES, RESP. IN PERCENTAGE POINTS)

	2006	2007	2007-1st half	2007-2nd half	2008-1st half
NICP	2.7	2.1 (0.2)	2.1 (0.2)	2.1 (0.2)	2.0
NICP ex energy	2.1	2.3 (0.1)	2.3 (0.1)	2.4 (0.1)	2.1
HICP	3.0	2.4 (0.4)	2.3 (0.5)	2.5 (0.3)	2.5
HICP energy	7.9	-0.3 (2.3)	-0.5 (3.2)	-0.2 (1.4)	1.3
HICP ex energy	2.3	2.8 (0.2)	2.7 (0.2)	2.9 (0.2)	2.7
Impact of government measures[1] on the NICP, in pp	0.6	0.8			
Impact of government measures on the HICP, in pp	0.9	1.3			

[1] *The total impact encompasses the impact of administered prices, indirect taxation and of tobacco.*

Source: BCL

CHART 11: CONTRIBUTIONS TO NICP INFLATION



Sources: STATEC, BCL calculations

1.2.1.2 Producer prices in industry

Industrial producer prices increased on average by 7.7% in 2006, broadly at the same pace as observed in 2005. The price adjustments reflect mostly price increases of intermediate goods, and steel goods in particular, whereas the price hikes for capital and consumer goods were much more muted. Three factors probably explain to a large extent these price developments. The oil price increased in 2006, on average by 11$/bl compared to 2005. Despite the weakening of the U.S. economy, world growth has also remained steady, particularly on the back of the dynamism observed in the South-east Asian economies. Finally, the euro has appreciated in effective terms, both in 2006 and at the beginning of 2007 (see 1.1.4).

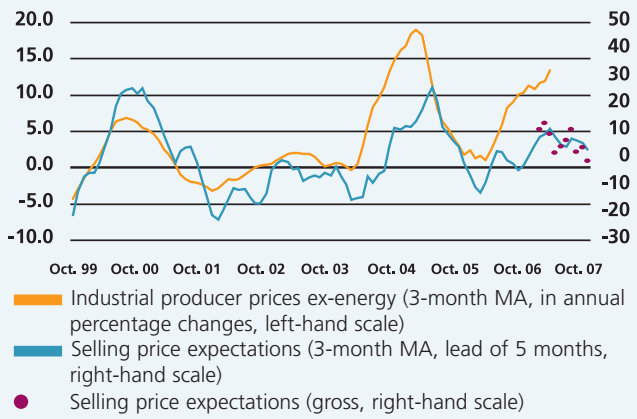
The outlook for industrial producer prices has turned less favourable in recent months. While inflation has steadily increased since the beginning of 2006, a trend reversion in the near future is likely according to the results of the harmonised business surveys (see chart). These developments imply a stabilisation of inflation in the near term, followed by a mild decline in mid-2007.

TABLE 4: INDUSTRIAL PRODUCER PRICES (CHANGES WITH RESPECT TO THE PREVIOUS PERIOD)

	2005	2006	06-Q2	06-Q3	06-Q4	07-Q1
Total	8.1	7.7	3.2	3.8	2.1	2.5
Intermediate goods	10.4	8.8	4.3	4.8	3.0	3.9
Capital goods	0.1	0.9	0.8	0.9	1.5	1.4
Consumer goods	0.9	1.2	0.5	0.4	0.4	-0.7
Energy	11.2	19.9	2.0	2.2	2.1	2.1

Sources: STATEC, BCL

CHART 12: INDUSTRIAL PRODUCER PRICES, PAST AND EXPECTED DEVELOPMENTS



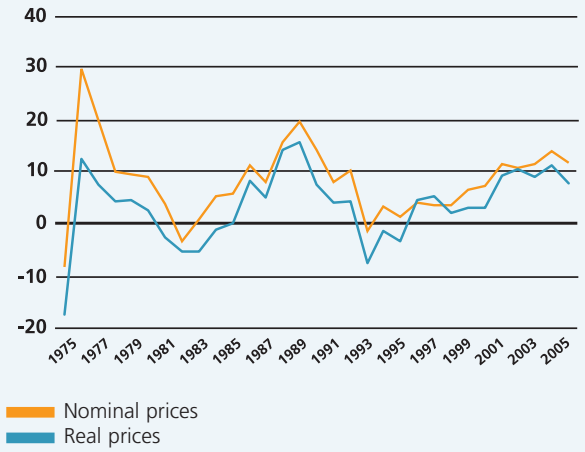
Sources: Eurostat, BCL

1.2.1.3 Construction prices

Prices of construction services increased by 2.6% in 2006, less than the 3.1% observed in 2005. This increase is also below the 2.9% hike in nominal wages that is solely attributable to the automatic wage indexation scheme and which compensates for past consumer price inflation.

The next chart illustrates that residential property price inflation remained strong in 2005, albeit at a diminishing rate. Indeed, the annual nominal (real[1]) growth rate declined to 11.7% (7.8%) in 2005, from 14.0% (11.1) in 2004. The chart also shows that nominal and real house price growth recorded over the past years, albeit high, does not seem exceptional given past experience.

CHART 13: RESIDENTIAL PROPERTY PRICES (ANNUAL PERCENTAGE CHANGES)



Sources: STATEC, BCL calculations

[1] The private consumption deflator was used here.

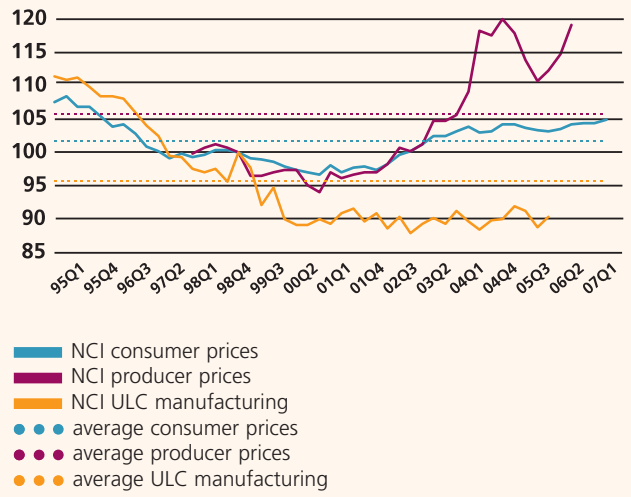
Competitiveness Indicators

The BCL regularly publishes competitiveness indicators based on effective exchange rates deflated by using different price or cost indices. These indicators compare prices or costs in Luxembourg with a weighted average of those in partner countries, where the prices or costs are expressed in a common currency and the weights reflect the importance of the country in question in Luxembourg's international trade. These indicators are calculated for 37 countries (27 in the EU and 10 others, see BCL bulletin 2005/2) depending on data availability.

The latest observations confirm that Luxembourg's competitiveness has continued to deteriorate. However, in 2006 Luxembourg also witnessed strong growth of exports, output and employment, complicating the interpretation of these indicators. It bears repeating that real effective exchange rates only measure price- or cost-competitiveness and neglect other dimensions of this multifaceted concept. Luxembourg's exporters may benefit from other advantages that provide them with some market power, allowing them to raise prices when facing higher demand, and thus to absorb higher costs. In fact, the real effective exchange rate is only one of several indicators considered by the Observatoire de la compétitivité or in the recent publication by the Swiss IMD institute, which found an improvement in Luxembourg's relative position.

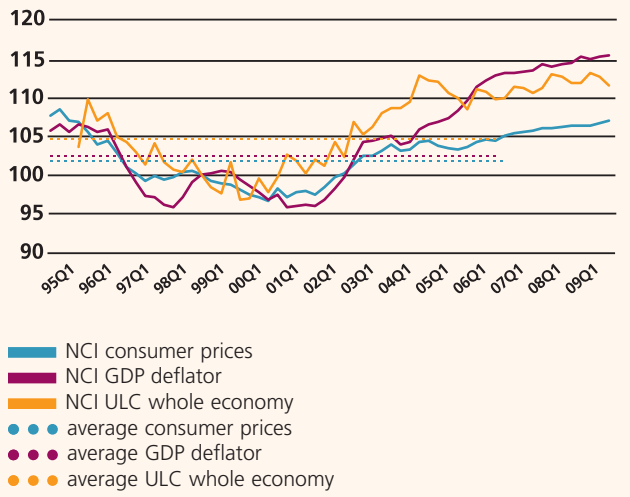
The first chart plots Luxembourg's real effective exchange rate deflated by the index of consumer prices, by the index of producer prices, and by unit labour costs in manufacturing. An increase in the curve represents a deterioration of Luxembourg's competitiveness (prices or costs rising faster in Luxembourg than in its trading partners). The latest observations confirm the upward trend in the consumer price indicator. In 2007Q1 this indicator lies above its historical average (calculated since 1995Q1) by 3.2%. However, many of Luxembourg's exports are not in the consumer price index, which instead includes many goods and services that are only imported. The producer competitiveness price indicator is limited to goods that are more likely to be tradables. In 2006, this indicator exceeded its old peak in 2004Q4 and reached a new record 20.6% above its historical average (since 1998Q1). These strong fluctuations reflect robust price growth in the steel sector, which is over-represented in Luxembourg's industry. Therefore, the producer price indicator probably gives a distorted view of competitiveness developments in the economy as a whole. For the indicator based on unit labour costs in manufacturing, the latest available observations are still below the historical average (-5.5% in 2005Q4). However, this indicator is not yet available for 2006 as the underlying data is only available with a substantial lag in some partner countries.

CHART 14: NATIONAL COMPETITIVENESS INDICATORS BASED ON CONSUMER PRICES, PRODUCER PRICES, AND UNIT LABOUR COSTS IN MANUFACTURING



Sources: ECB, IMF, and BCL calculations

CHART 15: NATIONAL COMPETITIVENESS INDICATORS BASED ON CONSUMER PRICES, GDP DEFLATORS, AND UNIT LABOUR COSTS IN THE WHOLE ECONOMY



Sources: Eurosystem, IMF, and BCL calculations

Three of Luxembourg's competitiveness indicators can be extended using the results of the recent Eurosystem projections. These are the consumer price indicator, the one based on the GDP deflator, and the indicator based on unit labour costs in the whole economy. Note that GDP deflator projections are only available for the 13 euro area member states and some of the most important other commercial partners. Indicators based on consumer prices and on the GDP deflator reflect not only the projections for euro area member countries but also technical assumptions regarding nominal exchange rates and GDP deflators in the UK, the US, Switzerland and Japan. For the indicator based on whole economy unit labour costs, the projections only consider euro area member countries and the US.

According to the indicator based on the GDP deflator and that based on whole economy unit labour costs, the most recent observation (2006Q4) confirms the continuing deterioration of competitiveness. According to the projections, this deterioration should continue on all three indicators until the end of the forecast horizon in 2009Q4. The consumer price indicator should pass from 3.3% above its historical average in 2007Q1 to +5.2% in 2009Q4. The indicator based on the GDP deflator should pass from +10.3% in 2006Q4 to +12.7% in 2009Q4. Finally, the indicator based on whole economy unit labour costs should pass from +5.0% in 2006Q4 to +6.6% in 2009Q4.

The box in the last annual report argued that the "modulation" of automatic wage indexation agreed in 2006 could mitigate the competitiveness deterioration but could not reverse its trend. In fact, in 2006 the deterioration was 0.5% on the consumer price indicator and 4.0% according to the indicator based on the GDP deflator. On the other hand, competitiveness improved 1% in 2006 according to the indicator based on whole economy unit labour costs, mostly thanks to higher than anticipated growth (and therefore productivity). However, according to the projections (based on "modulated" wage indexation) all three indicators should deteriorate in 2007, 2008 and 2009. The indicator based on the GDP deflator should increase faster than the one based on whole economy unit labour costs, suggesting that firms have enough market power to increase their margin. This puts into perspective the loss in price competitiveness. In any case, the recent increase in productivity has slowed the increase in unit labour costs, but is not sufficient to avoid a deterioration of cost competitiveness vis-à-vis our main commercial partners.

In conclusion, yet again price and cost competitiveness indicators confirm that the deterioration has continued. This message needs to be seen in perspective given the good performance of Luxembourg's economy in 2006. However, the government should rapidly implement the structural reforms envisaged by the Lisbon process to durably increase productivity, thus helping Luxembourg's exporters face the anticipated rise in prices and costs relative to those in our main trading partners.

Towards a New Business Cycle Indicator for Luxembourg
Methodological presentation and preliminary results[2]

One major aim of economic analysis is to track economic growth and provide an assessment of the present economic situation. On the one hand, GDP is frequently considered basic series of reference. On the other hand, it is released on a quarterly basis with a certain delay and may be subject to significant revisions. For these reasons, it is interesting to consider other economic and financial data series with shorter publication lags and other advantages such as fluctuations in line with those of GDP, released at monthly intervals. This is the case for most monthly statistics related to employment, industrial production, interest rates or business surveys which are published by national statistics institutes or central banks.

At this level, two main approaches exist. First, one selects a limited number of series and tracks their evolution. The selection criteria may reflect the ex-post ability of the series to reproduce GDP movements or a priori beliefs based on economic theory. Given the huge quantity of data series available, the choice may be criticised as subjective. The second approach provides a partial escape from this issue. The selection criterion does not matter because a large number of economic and financial time series may be considered. Generalised dynamic factor models are a typical illustration of this second approach[3]. The aim is to synthesise information contained in a large sample of economic and financial time series, which sometimes exhibit erratic monthly movements.

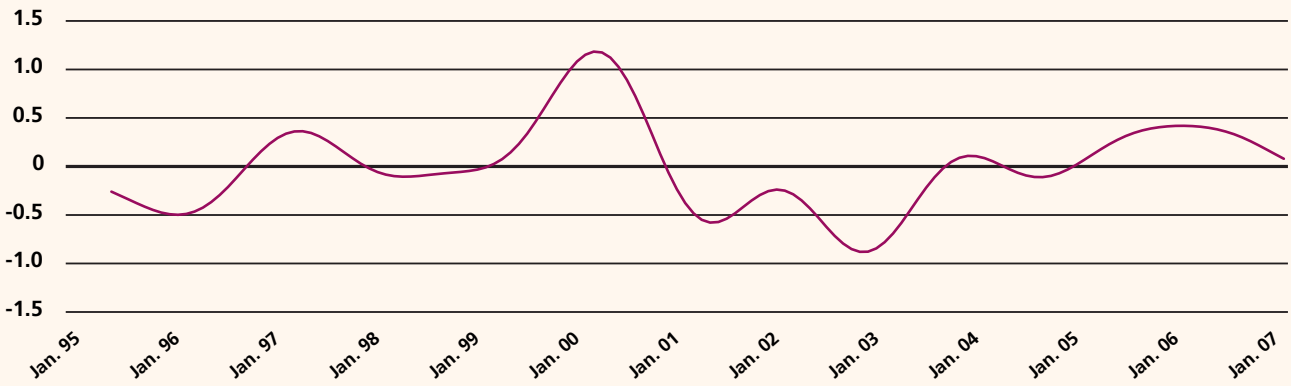
Using a dynamic factor model to construct an indicator of economic activity remains a purely statistical approach. The model assumes the existence of a limited number of factors that explain most of the individual fluctuations in time series. These factors - which may be viewed as fundamental shocks that affect the economy - are also used to construct the business cycle indicator. Using such a model has several benefits. Firstly, the resulting indicator will be based on a well-defined econometric representation. Secondly, the indicator will be less volatile than GDP and thus more informative. Thirdly, it will reflect medium- to long-run developments of the economy, i.e. those that are adjusted from short-term fluctuations - due to noise, seasonality, etc. It is important to note that €urocoin is the only regularly-published indicator of economic activity that is backed by a generalised dynamic factor model[4]. This methodology has also been used by the Banque centrale du Luxembourg for its forthcoming indicator of economic activity. The results presented here are still preliminary.

In order to construct a business cycle indicator for Luxembourg, 76 monthly and one quarterly time series from January 1995 to December 2006 have been used. Apart from GDP, the dataset contains data series related to financial markets, business surveys, prices, industrial production, turnover, employment and external trade. The raw business cycle indicator is based on two factors that summarise the information contained in the 77 series. As a result, it is more stable than the individual series in the sample (e.g. stock exchange indices are less volatile than the individual shares they include).

The smoothed business cycle indicator is obtained by removing the most volatile movements that are likely to be inverted in the short-run. This smoothed version of the business cycle indicator (see chart 16) captures the more persistent component of economic growth. The interpretation is as follows. The business cycle indicator is centred on 0. Positive values (negative values) of the indicator indicate economic activity growing above (below) its historical mean. This historical mean is equal to a quarterly GDP growth of about 1.1%.

The business cycle indicator gives a clear message. It identifies the strong growth of 1999-2000, and detects the slowdown observed in 2001. After having reached a local peak at end 2005, the indicator decreased. Latest data suggests that economic activity is currently growing at a pace which is closer to its historical mean. At this stage, interpreting these latest observations requires caution because the indicator is likely to be revised with the release of new data.

CHART 16: THE BUSINESS CYCLE INDICATOR FOR LUXEMBOURG



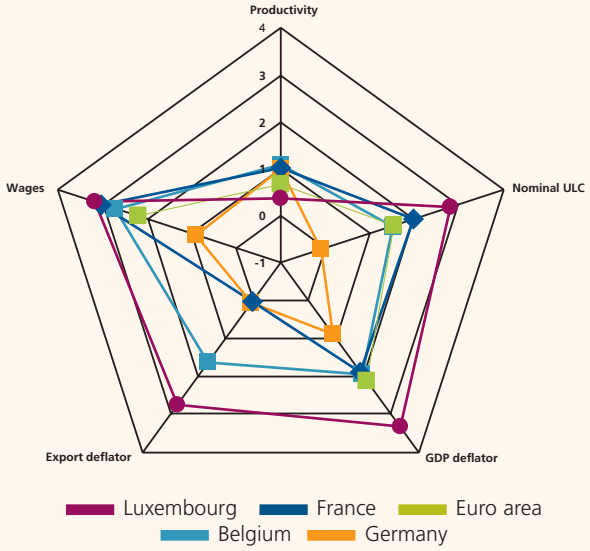
Source: BCL

[2] The definitive version of the indicator is expected for the end of 2007. It will be presented in detail in a forthcoming working paper.
[3] See Forni, M., M. Hallin, M. Lippi and L. Reichlin (2000): The Generalized Dynamic-Factor Model: Identification and Estimation. The Review of Economics and Statistics, 82(4), 540-554.
[4] See Altissimo F., Bassanetti A., Cristadoro R., Forni M., Lippi M., Reichlin L. and Veronese G. (2001): EuroCOIN: A Real Time Coincident Indicator of the Euro Area Business Cycle. CEPR Discussion Paper 3108, Centre for Economic and Policy Research.

Evolution of employment, GDP and productivity in Luxembourg

Compared to its neighbours as well as to the euro area, Luxembourg recently appears to have performed poorly with respect to productivity (growing slowly) as well as compensation per employee, unit labor cost, export prices and GDP deflator (all rising quickly).

CHART 17: PRODUCTIVITY, PRICES AND COSTS (2001-2006)



Sources: Eurostat, BCL calculation

However, Luxembourg outperformed most euro area countries in terms of employment, real GDP and export growth.

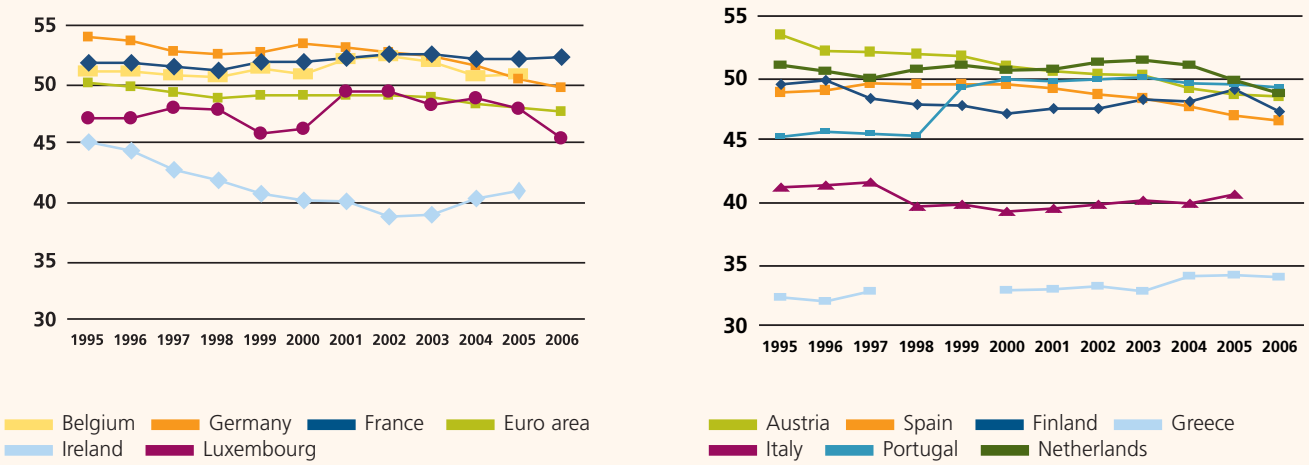
TABLE 5: ECONOMIC PERFORMANCE OF EURO AREA COUNTRIES (2001-2006)

	Annual real GDP growth	Annual real export growth	Annual total employment growth	GDP deflator	Export deflator
Greece	4.4	2.1	1.3	3.3	2.6
Ireland	4.3	4.1	2.4	3.5	0.5
Luxembourg	**3.6**	**7.1**	**3.2**	**3.3**	**2.8**
Spain	3.3	3.6	3.2	4.1	2.0
Finland	3.0	4.8	1.0	1.0	-0.4
Euro area	**1.6**	**-**	**0.9**	**2.1**	**-**
France	1.6	2.5	0.5	1.9	0.0
Belgium	1.5	2.7	0.6	1.9	1.6
Netherlands	1.4	4.2	0.4	2.5	0.7
Austria	1.3	5.8	0.1	1.6	1.1
Germany	1.0	7.0	0.0	0.9	0.1
Italy	0.9	0.3	1.0	2.7	3.8
Portugal	0.9	3.5	0.7	3.2	1.3

Source: Eurostat

As prices and volumes increased simultaneously, it turns out that a favourable evolution of (international) demand was the main determinant of prices and quantities rather than supply side developments. Strong growth of the GDP deflator, rather than being a competitive disadvantage, allowed for relatively high wage increases without any significant increase in the wage share.

CHART 18: EVOLUTION OF THE WAGE SHARE



Sources: Eurostat, BCL calculation

However, developments differ across sectors. For instance, the manufacturing sector experienced increasing productivity, low value added deflator growth and a simultaneous drop in employment, virtually stagnating output as well as a marked increase in the wage share with a resulting drop in profitability. The financial services sector suffered a drop in productivity, an important rise in the price of value added, a strong increase in both employment and output, with the wage share remaining virtually constant. For the economy as a whole, even though productivity stagnated, the increase in compensation per employee did not cause a significant increase in the wage share.

TABLE 6: EVOLUTION BY SECTOR (2000-2005)*

	Nominal VA	Real VA	Total Employment	Wage share	Productivity	Compensation of employees	Compensation per employee
Industry including energy	10.3	5.6	-0.9	4.0	6.6	17.7	19.1
Manufacturing	**4.8**	**1.5**	**-1.5**	**7.1**	**3.0**	**16.8**	**18.6**
Construction	35.2	18.5	17.0	2.1	1.3	39.6	18.6
Trade	34.1	20.8	13.2	1.3	6.8	37.9	20.6
Sales; Repair of cars and of domestic articles	35.9	8.0	12.6	0.7	-4.1	37.8	20.9
Hotels and restaurants	34.2	5.8	11.8	0.1	-5.4	34.5	18.0
Transport and communication	32.5	37.5	15.1	2.0	19.5	38.8	20.0
Financial activities; real estate, renting and services to enterprises	35.5	15.9	22.0	1.5	-5.0	40.5	14.3
Financial services	**29.5**	**10.7**	**15.6**	**0.7**	**-4.2**	**31.6**	**13.9**
Services for real estate, renting and services to enterprises	43.5	22.1	26.8	3.0	-3.7	56.3	21.2
Other services	51.7	19.5	25.6	-1.3	-4.9	49.3	17.8
Total	**34.1**	**16.2**	**16.5**	**1.7**	**-0.3**	**38.6**	**17.9**

** Cumulated change (in percent, except for the wage share, the change of which is indicated in cumulated percentage points)*

Sources: STATEC, BCL calculations

Apparently, the sectoral and/or geographical specialization of Luxembourg's exports has been such that the demand for these exports was so dynamic it allowed for an economic performance that was better than what productivity developments would justify. While this may explain the favorable evolution of the Luxembourg economy during recent years, nothing guarantees a further continuation of this evolution. In the medium and long run, wage moderation and productivity growth remain key determinants of competitiveness and of Luxembourg's ability to generate income.

1.2.2 Sectoral developments

1.2.2.1 Industry

In the context of a favourable international environment, the industrial sector has witnessed a very positive performance in 2006. Benefiting from price increases, turnover rose by more than 14% in 2006. Production per working day also accelerated when compared to 2005. The overall positive result, however, was almost exclusively due to the intermediate goods segment and the steel industry in particular. The rest of the sector fared less well and merely saw a stabilisation of its production level.

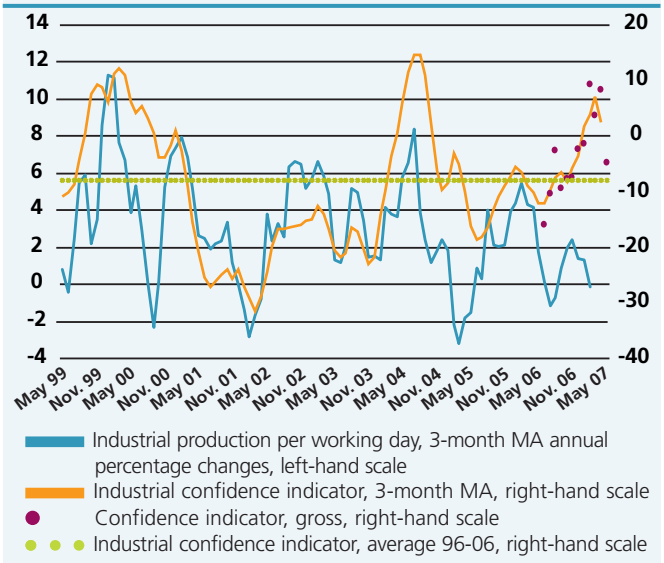
TABLE 7: INDICATORS FOR THE INDUSTRIAL SECTOR (IN ANNUAL PERCENTAGE CHANGES)

	2005	2006	06-Q1	06-Q2	06-Q3	06-Q4
Turnover	2.2	14.7	15.3	16.4	12.8	14.4
Total production	0.5	2.1	5.8	1.9	-1.0	1.5
Production per working day	0.5	2.3	5.5	1.7	-0.7	2.4
Intermediate goods (ppwd)	-0.1	6.2	6.5	7.6	4.2	6.4
Capital goods (ppwd)	11.8	1.2	3.6	0.4	-7.9	8.9
Energy (ppwd)	-0.8	-1.4	5.3	0.5	-5.6	-7.9

Sources: STATEC, BCL

On the back of euro area dynamism, the business surveys in the industrial sector point to relatively favourable developments at the beginning of 2007. The industrial confidence indicator has run up to record levels signalling an acceleration in production in the following months. The capacity utilisation rate, at 89%, has reached its all-time high pointing to the likely emergence of bottlenecks. Companies have also announced an extension of the production facilities via an increase in their investment expenditures.

CHART 19: CONFIDENCE INDICATORS AND INDUSTRIAL PRODUCTION



Sources: STATEC, BCL

1.2.2.2 Construction

The construction sector also fared well in 2006 as both production per working day and turnover accelerated in 2006. But, unlike in manufacturing, growth was more broad-based with similar growth rates being observed in both the civil engineering and the building sectors. As regards the building sector, most demand-related short-term indicators point to a continuation of the relatively favourable trends. Building permits in 2006 have remained at broadly the same level as in 2005 and loans for house purchases were up by 11%, in spite of the upward trend in mortgage rates. Although the ECB has raised rates to 4.0% in June 2007, financing conditions remain favourable.

TABLE 8: INDICATORS FOR THE CONSTRUCTION SECTOR (IN ANNUAL PERCENTAGE CHANGES)

	2005	2006	06-Q2	06-Q3	06-Q4	07-Q1
Turnover - Total	3.1	5.1	3.3	12.9	6.7	Na
Production per working day - Total	-0.6	2.3	1.3	2.1	4.1	Na
Production per working day - Building	1.3	2.2	1.6	1.8	3.4	Na
Production per working day - Civil engineering	-7.5	2.8	-0.2	2.9	7.4	Na
Building permits[1]	21.3	-5.9	-10.9	-0.4	-13.5	Na
Loans for house purchases[2]	16.6	11.2	3.9	2.3	17.1	Na
Mortgage rates	3.5	4.1	3.8	4.0	4.5	4.6

[1] *Number of dwellings*

[2] *Total of mortgage loans to residents*

Sources: STATEC, BCL

1.2.2.3 Commerce and other sectors

The various trade sectors have fared fairly well in 2006, probably as a result of the overall good performance of the Luxembourg economy. Turnover figures in retail and wholesale trade have accelerated, and so have car registrations. These trends can probably be linked to the increase in consumers' purchasing power which has arisen in the context of the strong employment growth and the robust growth in real wages.

Although hotels and restaurants saw slower growth in turnover, this seems nonetheless a very positive result in light of the exceptional circumstances in the first half of 2005, i.e. activities related to the Luxembourg Presidency of the EU.

TABLE 9: TURNOVER AND CAR REGISTRATIONS (IN ANNUAL PERCENTAGE CHANGES)

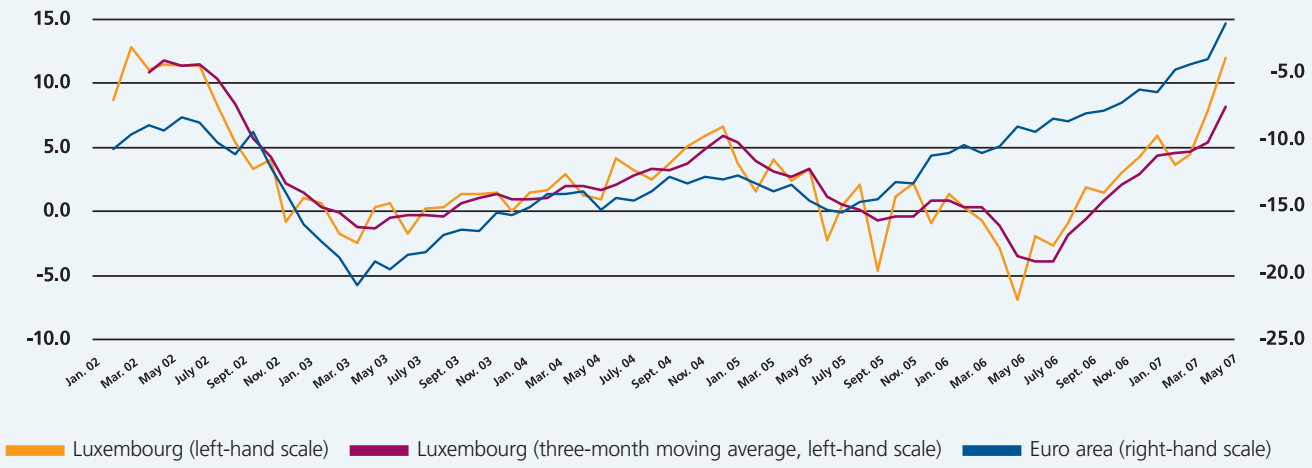
	2005	2006	06-Q2	06-Q3	06-Q4	07-Q1
Car registrations	0.8	4.7	15.5	-0.8	5.9	1.4
Wholesale trade	6.8	7.2	5.3	4.4	7.3	Na
Retail trade	2.3	4.7	6.1	3.4	0.9	Na
Hotels and restaurants	4.7	1.9	1.5	1.3	0.1	Na

Sources: STATEC, BCL

1.2.3 Consumer survey

In early 2006, consumer confidence continued to follow the downward trend observed over 2005, reaching its lowest level since the series began in 2002. This negative trend was then fully reversed, with consumer confidence in May 2007 recording its highest level since April 2002 (see chart). This recovery in confidence was mainly driven by growing optimism concerning future economic developments (i.e. general economic situation and unemployment). Consumers' expectations concerning their financial situation and their ability to save also contributed, albeit to a lesser extent.
The chart also shows that the parallel-movement between Luxembourg and euro area consumer confidence was restored as a result of the improvements recorded in Luxembourg. Domestic factors like the uncertainty surrounding the discussions on the structural reforms and the announcements of lay-offs in several big Luxembourg-based companies seem to have played a lesser role since mid-2006.

CHART 20: CONSUMER CONFIDENCE INDICATOR (SEASONALLY ADJUSTED DATA)



Sources: BCL, European Commission

1.2.4 Financial sector

1.2.4.1 Financial sector activity

Strong growth in major world economies accompanied by a declining petrol price and an environment of well-performing stock prices supported Luxembourg's financial centre. Stock market corrections in the principal indexes surveyed in May and June 2006 were only temporary. Nevertheless, they had repercussion effects on the annual balance sheet of the financial sector.

The good performance of main stock exchanges as well as the influx of new capital have particularly favoured growth of the investment fund industry, which shows a significantly higher growth rate than credit institutions. Moreover, growth of the Luxembourg financial industry is also fostered by the success of investment companies in risk capital (SICAR), with 114 registered units on the official list at 31 December 2006 against 47 units at the end of 2005. The number of securitisation vehicles approved in accordance with the law of 22 March 2004 relating to securitisation passed from 6 to 11 units. However, the number of pension funds, separated into pension saving companies with variable capital (sepcav) and pension savings associations (assep), has decreased by one unit reaching a level of 14 entities.

By the end of 2006, 2 238 UCIs (undertakings for collective investment) were recorded on the official list, showing an increase of 178 units compared with figures end December 2005. This upward trend is confirmed by NAV (net assets value) growth of 319 642 million euros (21%) between these year end periods. The NAV reached 1 844 850 million euros by 31 December 2006. Moreover, net capital investment amounted to 241 344 million euros during 2006 against 236 277 million euros during the year 2005.

TABLE 10: GLOBAL SITUATION OF UNDERTAKINGS FOR COLLECTIVE INVESTMENTS (IN MILLIONS OF EUROS, OUTSTANDING AMOUNTS AT END OF PERIOD, EXCEPT WHERE OTHERWISE STATED)

	Number of UCIs	Number of sub funds	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							
March	2,091	8,724	1,675,260	106,569	43,483	481,250	40.3
June	2,130	8,909	1,652,126	46,996	-70,130	362,339	28.1
Sep.	2,170	9,122	1,733,030	32,872	48,032	309,479	21.7
Dec.	2,238	9,473	1,844,850	54,907	56,913	319,642	21.0
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	1,966,966	22,233	17,403	264,757	15.6

[1)] Net capital investment is defined as the difference between net proceeds from shares or units and net payments made in settlement of redemptions adjusted to take into consideration UCIs in liquidation.

[2)] Figures cumulated on a yearly / quarterly / monthly basis.

[3)] The column variation of financial markets reflects the yearly / quarterly / monthly change in net assets which is due to the fluctuation of financial markets.

Source: CSSF

Regarding money market funds, the balance sheet went up by only 8 889 million euros in 2006 (4.9%) to reach 189 601 million euros at 31 December 2006. This relatively weak development of money market funds reflects strong performance of stock markets. Against this background, investors have been looking for products with higher yields than usually achievable with money market funds.

Regarding the banking sector, aggregate balance sheets have increased virtually uninterrupted since 2003, and continued to do so in 2006 and during the three first months of 2007. The aggregate balance sheet increased by 47 145 million euros (5.9%) between 31 December 2005 and 31 December 2006. On a quarterly basis, this increase reached 2.5% calculated for the time span end-December 2006 to end March 2007. Growth was mainly due to portfolio investment activity, to loans to non-banking customers on the asset side, and to deposits from non-banking customers on the liability side.

Luxembourg banks hold a growing part of their assets and liabilities in connection with non-banking customers, clients where margins are usually more important compared to less profitable interbank business. Accordingly, on the asset side, the volume of interbank credits increased by 3.0% between end December 2005 and end-December 2006. This is low compared to annual growth rates marked by loans to non-banking customers (10.0%) and investment portfolios (8.4%).

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

Assets	Amounts in million euros			Variation in million euros and in %				Relative weight[1]
	2005/12	2006/12	2007/03	2005/12 - 2006/12		2006/12 - 2007/03		2007/03
				million euros	in %	million euros	in %	
Interbank loans	405,891	417,942	433,740	12,052	3.0	15,798	3.8	50.4
Loans to non-banking customers	146,640	161,250	167,001	14,610	10.0	5,751	3.6	19.4
Portfolio investment	215,439	233,602	233,915	18,163	8.4	313	0.1	27.2
Other assets	24,451	26,771	26,085	2,321	9.5	-686	-2.6	3.0
Total assets	792,420	839,565	860,741	47,145	5.9	21,176	2.5	100.0

[1] *Relative weight in relation to total assets*

Source: BCL

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

Liabilities	Amount in million euros			Variation in million euros and in %				Relative weight[1]
	2005/12	2006/12	2007/03	2005/12 - 2006/12		2006/12 - 2007/03		2007/03
				million euros	in %	million euros	in%	
Interbanks debts	386,031	386,087	407,625	56	0.0	21,538	5.6	47.4
Deposits to non-banking customers	255,580	296,803	293,970	41,223	16.1	-2,833	-1.0	34.2
Debt securities issued	89,535	90,043	90,352	507	0.6	309	0.3	10.5
Other liabilities	61,273	66,632	68,794	5,359	8.7	2,162	3.2	8.0
Total liabilities	792,420	839,565	860,741	47,145	5.9	21,176	2.5	100.0

[1] *Relative weight in relation to total liabilities*

Source: BCL

The liability side of the aggregate balance sheet of Luxembourg credit institutions appears rather different. Indeed, most growth stems from the strong performance of refinancing activities through issues of debt securities bought by non-banking customers. This activity demonstrates a remarkable dynamism, with growth of 16.1% (41,223 million euros) on an annual basis between December 2005 and December 2006. However, the first quarter of 2007 showed a sign of consolidation, with growth diminishing slightly by 1.0% with debt vis-à-vis private clients reaching a level of 293 947 million euros by end of first quarter 2007.

With a growth rate of 0.7% or 6,052 million euros with reference to 31 March 2007, the data for April 2007 confirm the further strengthening of the aggregate balance sheet observed during the first quarter 2007.

1.2.4.2 Retail interest rates in Luxembourg

During 2006, the development of retail interest rates followed roughly those of the Eurosystem's main refinancing rate. The latter increased from 2.25% by the end of December 2005 to 3.50% at the end of 2006.

The cost of floating rate housing loans granted by Luxembourg's banks to euro area residents (including Luxembourg) increased by 89 basis points between end December 2005 (3.62%) and end-December 2006 (4.51%).
As of 30 April 2007, the cost of housing loans reached 4.66%.

Meanwhile, new business volumes have increased from a monthly average of €164 millions during 2005 to €186 millions during the year 2006. For April 2007, €191 million housing loans were granted by Luxembourg's banks to euro area's consumers.

Besides, the share of floating rates in total new business remains quite steady at 84% by the end of the first quarter 2007.

The cost of consumption loans, with interest rate fixed between one and five years, has increased by 40 basis points between end-December 2005 (5.42%) and end-December 2006 (5.82%). At the end of the first four months of 2007, the cost of consumption loans reached 5.76%. This decline is due to commercial fairs that take place during February but that have a lagging effect on new business rates.

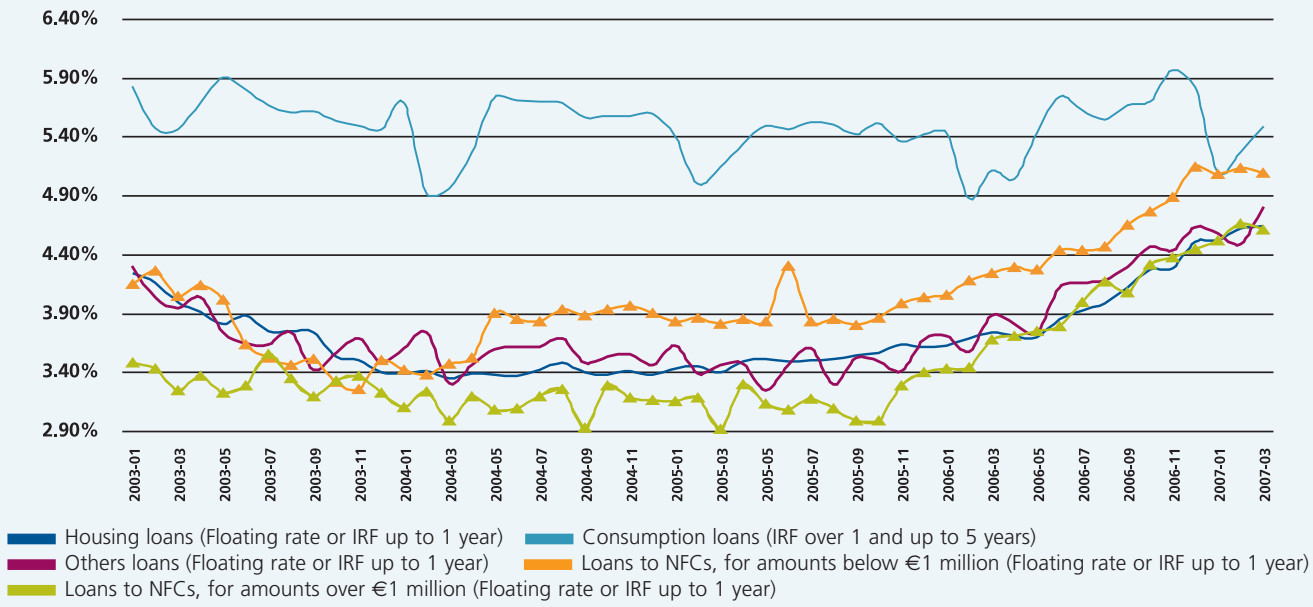
The cost of other floating rates loans increased by 96 basis points during 2006 to reach 4.63% as of end-December 2006. The situation in April 2007 confirmed the trend formerly observed in 2006, since interest rates on other loans reached 4.94%. It is worth mentioning that 90% of other loan contracts are granted to non-resident households.

The cost of floating rate loans to non-financial corporations (NFCs) and concerning amounts below one million euros, increased by 111 basis points between end December 2005 (4.04%) and end-December 2006 (5.15%). During the first quarter of 2007, costs increased by 17 basis points, amounting to 5.32 % as of 30 April 2007.

Regarding loans to NFCs with amounts over one million euros, the underlying floating rate increased 104 basis points between end-2005 (3.41%) and end-2006 (4.45%). The latter loans were granted with an interest rate of 5.24% by end-April 2007.

During the period December 2005 to December 2006, rates on deposits from households and NFCs have increased by 110 and 115 basis points, respectively. This trend continues through the first quarter of 2007 and deposit rates went up to 3.45% and 3.85%, respectively, as of end-April 2007.

CHART 21: INTEREST RATES ON LOANS: JANUARY 2003 - MARCH 2007



Source: BCL

1.2.4.3 Employment in the financial sector

By the end of 2007 Q1, Luxembourg's banks employed 25 178 staff members (of which 29% are residents). Employment in Luxembourg credit institutions increased by 1,424 units (5.99%) between 31 March 2006 and 31 March 2007. This figure comprises a real increase of 1,209 units and a technical increase of 215 units due to an enlargement of coverage (i.e. the number of institutions that were taken into account). Since the first quarter of 2007, local offices (caisses rurales) of the Raiffeisen Bank are included.

However, with 229 jobs created during the first quarter of 2007 (at constant perimeter) employment growth remains significant. The upward trend observed is confirmed by developments registered in 2004 (+0.16%), 2005 (+2.99%) and 2006 (+6.50%), respectively.

1.2.4.4 Profit and loss accounts

2006 has been an excellent year for Luxembourg's credit institutions, which achieved an aggregate net result after taxes of €5,716 million. This represents a rise of €2,170 million, or 61.2% compared with 2005. Strong world economic growth, a generally favourable performance of the major stock indices as well as a boost of other net income due to realized nominal holding gains in the course of 2006 allowed Luxembourg credit institutions to obtain these good results. Having declined for four consecutive years, the interest margin rose by 23.8% in 2006. Net income has been influenced, in particular, by a drop in net income from securities of 75.6%, or €292 million, whereas other net income progressed by 265.5%, or €1,216 million. General administrative expenditure (staff costs and other administrative expenditure) rose by 9.8% during 2006. Staff costs increased due to wage adjustments and to new job creation in the banking sector (+ 1510 jobs).

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

(EUR millions except otherwise indicated)

Debit and credit items	2001	2002	2003	2004	2005	2006
1 Interest receivable and income from securities	52,790	43,170	35,135	30,964	36,249	49,972
2 Interest payable	48,332	38,895	31,000	26,874	32,288	45,069
3 Interest margin (1-2)	4,458	4,275	4,135	4,090	3,961	4,903
Other income:						
4 from securities	174	173	288	417	386	94
5 from commission	2,830	2,654	2,552	2,853	3,253	3,761
6 from foreign exchange	290	317	282	300	356	446
7 other net income	399	949	429	68	458	1,674
8 Net income (4+5+6+7)	3,693	4,093	3,552	3,638	4,453	5,975
9 Gross income (3+8)	8,151	8,368	7,687	7,728	8,414	10,878
10 Staff costs	1,804	1,871	1,790	1,884	1,994	2,208
11 Other administrative expenditures	1,506	1,416	1,370	1,425	1,499	1,628
12 General administrative expenditures (10+11)	3,310	3,287	3,160	3,309	3,493	3,836
13 Taxes other than tax on income	95	51	41	35	40	46
14 Write downs of non-financial fixed assets	402	316	293	302	273	235
15 Results before provisions (9-12-13-14)	4,344	4,714	4,193	4,082	4,608	6,761
16 Provisions and write downs of fixed financial assets	1,405	1,928	1,241	1,025	906	712
17 Write back of provisions	686	526	590	625	615	519
18 Net provisions	719	1,402	651	400	291	193
19 Result after provisions (15-18)	3,625	3,312	3,542	3,682	4,317	6,568
20 Tax on income	833	636	665	762	771	852
21 Net result (19-20)	2,792	2,676	2,877	2,920	3,546	5,716
22 Average balance sheet total	696,778	700,110	668,146	687,486	754,825	838,227

(in per cent of average balance sheet total)

Debit and credit items	2001	2002	2003	2004	2005	2006
23 Operating costs (row 10 to 14)	0.55	0.52	0.52	0.53	0.50	0.49
24 Results before provisions (row 15)	0.62	0.67	0.63	0.59	0.61	0.81
25 Net provisions (row 18)	0.10	0.20	0.10	0.06	0.04	0.02
26 Result after provisions (row 19)	0.52	0.47	0.53	0.54	0.57	0.78

[1] Data has been revised in the light of new information. Discrepancies may arise from rounding.
[2] 2006: provisional data

Source: BCL

TABLE 14: INTERIM AGGREGATED PROFIT AND LOSS ACCOUNT OF LUXEMBOURG BANKS, EXCLUDING THEIR FOREIGN BRANCHES[1)]

Euro millions	2006 / 03	2007 / 03	Annual percentage change	Annual absolute change
1 Interest receivable and income from securities	11,728	15,097	28.7	3.369
2 Interest payable	10,652	13,729	28.9	3.077
3 Interest margin (1-2)	1,076	1,368	27.1	292
Other income:				
4 from securities	79	59	-25.3	-20
5 from commission	1,005	1,076	7.1	71
6 from foreign exchange	126	136	7.9	10
7 other net income	582	188	-67.7	-394
8 Net income (4+5+6+7)	1,792	1,459	-18.6	-333
9 Gross income (3+8)	2,868	2,827	-1.4	-41
10 Staff costs	538	605	12.5	67
11 Other administrative expenditures	396	433	9.3	37
12 General administrative expenditures (10+11)	934	1,038	11.1	104
13 Taxes other than tax on income	12	10	-16.7	-2
14 Write downs of non-financial fixed assets	60	61	1.7	1
15 Results before provisions (9-12-13-14)	1,862	1,718	-7.7	-144

[1] *Data has been revised in the light of new information. Discrepancies may arise from rounding.*

Source: BCL

1.2.4.5 Credit institutions' 2007 Q1 results

The interest margin reached €1,368 million in 2007 Q1, which represents a rise of €292 million, or 27.1% compared to the same period a year before. Income from securities represents 1.97% only of the total amount of Interest receivable and Income from securities. However, from an analytical point of view, these dividend payments represented 21.7% of the interest margin, or in absolute terms €297 million, against 13.5% at the end of March 2006.

The high level of income from commission (+28%) in 2006 Q1 was increased by 7.1% to reach €1 076 million on 31 March 2007. Net income in the first quarter of compared with the first quarter of 2006, mainly due to a drop in other net income by 67.7%, or €394 million. Nevertheless, other net income still represented €188 million; a considerable level due to another extraordinary result of €72 million. This drop in net income was almost compensated by the increased interest margin so that gross income just slightly diminished from €2 868 million to €2 827 million, or 1.4%, during the first quarter of 2007 in comparison with the first quarter of 2006.

Within the same time frame, general administrative expenditures (staff costs and other administrative expenditures) rose by 11.1% (€104 million) to a level of €1,038 million. This is mainly due to the creation of 1,424 new jobs and a rise in wages (+2.5%) resulting from the triggering of the automatic wage indexation mechanism in August that became effective in December 2006.

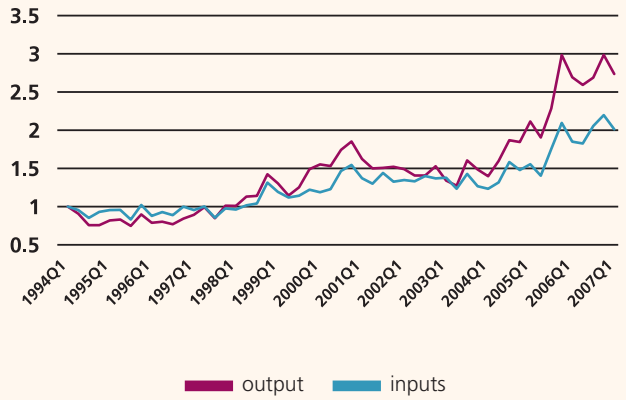
Compared to one year earlier, gross income of 2007 Q1 was only marginally lower. In particular, growth of general administrative expenditures led to a reduction of aggregate gross income before taxes and provisions of 7.7%, or €144 million, from €1,862 million to €1,718 million. However, excluding extraordinary results, during the first three months of 2007, credit institutions reached gross income before taxes and provisions of €1,646 million, 17.2% or €242 million more than during the first quarter of the previous year.

Banking Output and Productivity Measures

The measurement of bank output (and therefore productivity) has long been controversial. This box adopts the user cost approach to measuring output and prices in Luxembourg's banking sector using quarterly reports transmitted by banks to the BCL. The method consists of associating the different flows in the profit-and-loss account to the different assets and liabilities in the balance sheet. Thus, for each asset or liability a rate is calculated on the basis of the associated cost or revenue flows. The user cost of the asset/liability in question is then calculated as the difference between this rate and a reference rate representing the opportunity cost of financial capital. A negative user cost identifies an asset or liability as a product, while a positive user cost identifies it as an input in production. The traditional approaches to measuring bank output, the "intermediation" approach and the "production" approach, are based on an a priori classification. Instead, the user-cost approach allows for a data-driven classification which can, theoretically, combine elements from the two traditional approaches.

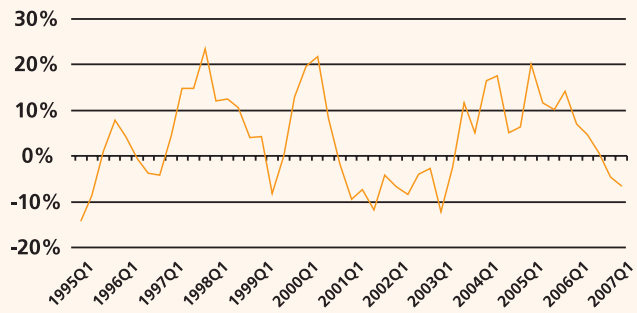
In practice, results suggest that neither of the traditional approaches is consistent with Luxembourg data. Among the four asset classes considered, loans to customers and to depository institutions are identified as outputs, which is consistent with the "intermediation" approach. The other two asset classes are also classified as outputs (fixed and variable income securities). However, among the liabilities, deposits by customers are identified as an output (consistent with the "production" approach) while deposits by banks are classified as an input. An additional output class was defined a priori to include those revenue flows which could not be associated with a particular asset or liability, this includes commissions received and other interest income. On the other hand, four inputs were also defined on an a priori basis, including commissions paid and administrative costs, labour and capital.

CHART 22: VOLUME OF OUTPUT AND INPUTS (TÖRNQVIST INDICES, REPRESENTATIVE FIRM)



Source: BCL

CHART 23: ANNUAL GROWTH IN TOTAL FACTOR PRODUCTIVITY (REPRESENTATIVE FIRM)



Source: BCL

Having identified inputs and outputs, these are aggregated using multilateral Törnqvist indices. These indices are based on a representative firm that serves as a benchmark to track the performance of the banking sector through time. Results suggest that gross output grew at an average annual rate of 11% over the period 1994Q1-2006Q4. This high rate of growth is largely attributable to the process of European financial integration, but also to financial innovation, with balance sheets benefiting from the introduction of new financial instruments and from changes in the regulatory framework. Results are robust to several alternative measures of the reference rate.

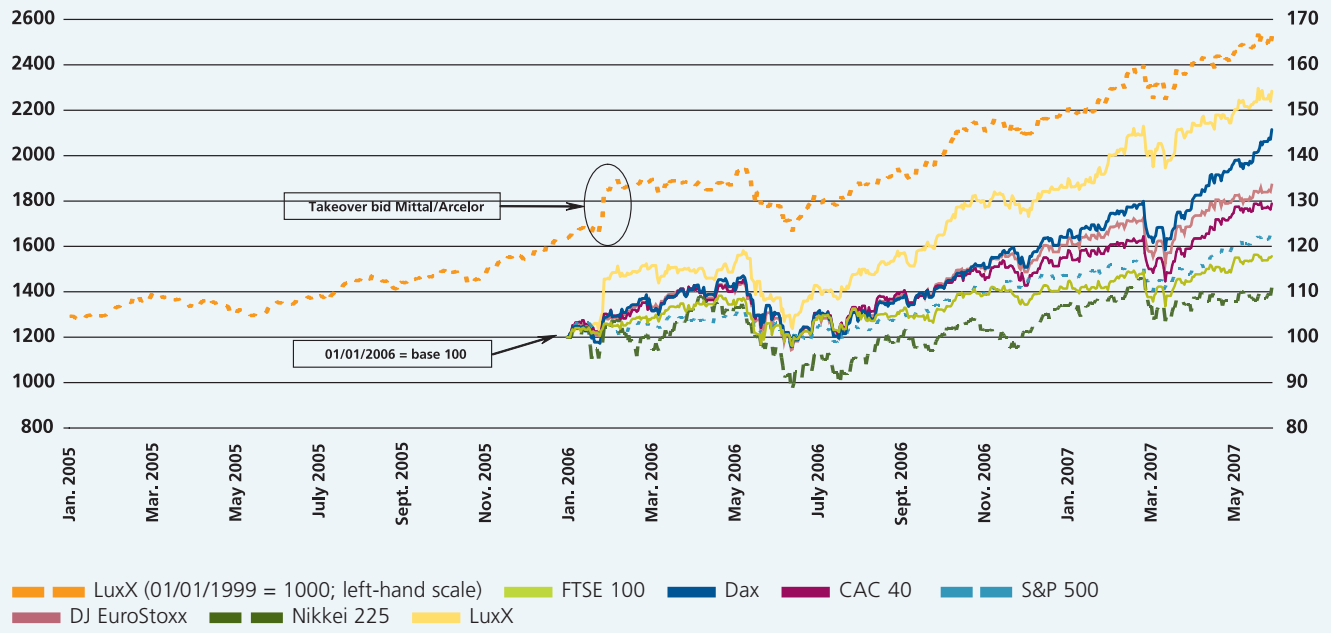
Total Factor Productivity (TFP), measured as the difference between input and output indices, increased by 4% per year. Productivity growth has been volatile but persistent, moving pro-cyclically. Although the most recent data is still preliminary and subject to revisions, the fall in TFP over the last two quarters suggests a possible turning point. In any case, this fall is consistent with the combination of strong employment growth in the sector along with the levelling of the aggregate balance sheet. Productivity was also calculated for individual banks. Although it varies widely, it seems to be higher in banks with larger balance sheets.

An implicit price index was also derived and suggests that the price of financial intermediation services fell over the sample period. This may be attributed to new information and communication technologies, whose impact on costs should be larger in the banking sector. Alternatively, it could be associated with the downwards trend in nominal interest rates over the last decade. By compressing the interest rate margin, lower interest rates have reduced the user cost of both assets and liabilities and, therefore, the implicit price of output. In this context, the user cost approach is particularly attractive because it provides a price measure for financial intermediation services that are indirectly charged, meaning that their price cannot be directly observed.

1.2.5 Luxembourg Stock Exchange

In 2006, the Luxembourg stock price index again progressed strongly, moving from almost 1,637 to over 2,524 at end-May 2007. Nevertheless, behind this outstanding performance lie more heterogeneous developments of some of the index components. In particular, the Mittal Steel takeover bid for Arcelor had a strong upward impact on the index at large; in August, Mittal Steel shares were introduced into the LuxX index and Arcelor shares were withdrawn.

CHART 24: THE LUXX AND MAJOR INTERNATIONAL EQUITY INDICES (INDEX: 1 JANUARY 2006 = 100 UNLESS OTHERWISE INDICATED; DAILY DATA)



Source: Bloomberg

Between August and December, Mittal Steel shares progressed by 18%; overall in 2006, Fortis, KBC Group, BGL Investment Partners, Cegedel, Foyer and RTL progressed between 17% and 23%, while SES Global fell by 9%. Since January 2007, the share prices of all index members have risen although the progression of Audiolux and Mittal Steel shares has been particularly impressive.

There were 10,544 new listings in 2006; warrants have increased particularly sharply since 2005 in terms of the number of listings. In spite of the large increase in the number of listings, total turnover has fallen sharply in 2006: bond turnover fell by 34%, equity turnover by 10%, UCI turnover by 64% and warrant turnover by 95%. Bonds and equity now make up 98.6% of the total in terms of turnover by volume, while the share of warrants is close to zero.

1.2.6 Labour market

In 2006, employment accelerated, but unemployment still remained on an ascending trend. Employment grew by 12,000 units in 2006 (10,000 in 2005) which constitutes the best performance since 2001. To a large extent, employment growth drew on an increased inflow of non-residents. Average growth in cross-border employment reached 6.7% in 2006 after 6.4% in 2005. Among cross-border commuters, 51% live in France, 26% in Belgium, and 23% in Germany. The sectoral breakdown of employment in 2006 showed that employment growth spread to all sectors, although the financial sector has been the main source of jobs.

Despite the rise in employment, the unemployment rate increased throughout 2006 to 4.5% on average. Apparently, GDP growth was insufficient to stabilise the unemployment rate which is not caused only by cyclical factors. A certain amount of skill mismatch is certainly present as more than half of the resident unemployed have only a primary education level whereas most jobs offered require higher qualifications or a specialization 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 depreciation of their skills. Finally, the unemployed are competing with a large cross-border labour force, which makes it more difficult for them to find a job, at least in the short run.

Preliminary figures issued in the framework of the Quarterly National Accounts suggest that growth in compensation per employee slowed drastically in 2006 (2.3% after 3.7% in 2005). This deceleration could be attributed to a negative wage drift, as the contribution of wage indexation alone was 2.1pp and the negotiated wage was certainly positive. This negative wage drift does not seem consistent with robust real GDP growth in 2006. Therefore, this moderation in compensation per employee should be interpreted with caution, and could be revised.

Unemployment and labour market policies

Unemployment is currently rising in Luxembourg despite strong employment growth. One possible explanation for this 'unemployment paradox' is that employers in Luxembourg prefer to recruit cross-border commuters rather than residents. The share of cross-border commuters in domestic employment is indeed rising. About 66% of net employment creation is currently due to non-residents. In other words, the employment dynamics in Luxembourg seem to mainly benefit non-residents. Is job competition by commuters the correct explanation for unemployment problems? And which labour market policies could we implement to reduce unemployment while keeping employment growth strong?

To address these questions, we refer to a theoretical model developed at the Central Bank of Luxembourg (see Pierrard, 2007, for an in-depth exposition of the model and the results). We also enlarge our discussion by looking at labour market policies (and their results) implemented in several neighbouring countries.

Crowding-out of the residents by the commuters?

An increase in the number of potential cross-border commuters has two opposite effects on domestic unemployment: (i) a congestion effect and (ii) a vacancy effect. At a given level of employment, the congestion effect means that more commuters mechanically reduce resident employment. However, the level of employment is not given and the vacancy effect means that more potential commuters increase the probability of filling a vacancy, which reduces the average vacancy opening cost, lowers wage pressures, and therefore stimulates new job creation. The sign of the total effect is ambiguous a priori. More competition will generate a positive externality (i.e. the vacancy effect will dominate) as long as firms raise profits by employing commuters rather than residents.

By calibrating our model with Luxembourg data, we confirm that the latter is the case. Indeed, because of higher unemployment rates and less generous unemployment benefits in the neighbouring countries, salary claims by commuters are lower than salary claims by residents; and profits realized by a firm hiring a commuter are higher than profits realized by a firm hiring a resident. As a result, an increase in the number of commuters alone cannot explain the unemployment rise in Luxembourg. Quite the reverse, it should even be seen as a great opportunity since it strongly stimulates employment.

Public employment

Over the last decade, public sector employment has increased from 47,000 to 72,000, although its share in total domestic employment has remained stable around 24%. Unlike private sector employment which is open to all, public sector employment is mainly open to residents with Luxembourg nationality. So could we reduce unemployment by creating more public sector jobs? Our simulations show that new public sector jobs would be mainly filled by residents previously employed in the private sector, and these would not be replaced by resident unemployed but rather by new cross-border commuters. Thus, we would need to create 10 new public sector jobs to reduce unemployment by one person, which would be very costly.

Another option would be to create new public sector jobs reserved for resident unemployed. However, even in this case, the increase in labour demand would generate wage pressures within the whole economy, which would in the end result in the destruction of some private jobs. Creating public sector jobs to reduce unemployment, therefore, seems a costly and inefficient policy, especially in a small open economy such as Luxembourg.

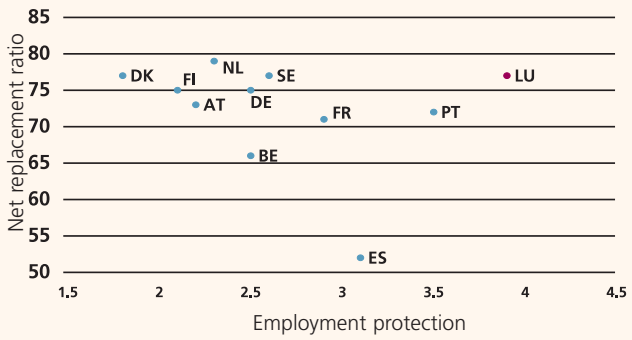
Unemployment income

Unemployment benefits (unemployment insurance) in Luxembourg are available for up to one year after job loss and the gross replacement rate is 80% of the last salary. Once this period has elapsed, the unemployed have access to the 'Revenu Minimum Garanti' (unemployment assistance), which is open-ended, provided the unemployed are willing to consider all employment possibilities to improve their situation. In theory, reducing the generosity of unemployment income would help cut unemployment, by lowering the reservation wage and increasing the willingness to find a job. However, the effect on total welfare is ambiguous: employment is stimulated but at the cost of lower income.

Moreover, lower unemployment income may give rise to problems of social justice: why should we reduce unemployment income if no jobs are available or if the unemployed cannot find a job because of individual characteristics? On the other hand, providing unemployment income to non-cooperative unemployed (unemployed who do not search for a job or who systematically refuse all propositions) creates moral hazard, causes negative externalities and is inefficient for the economy. It is, therefore, important to effectively monitor the unemployed and to apply sanctions when fraud is detected.

In conclusion, it should be possible to keep Luxembourg's current generous regime (see chart 26) as well as the open-ended design of the social security system (unemployment insurance followed by unemployment assistance), but we believe it is very important to credibly and effectively apply sanctions to avoid fraud and limit resource losses. In the latest survey on Luxembourg, the OECD notes that sanctions are only applied in exceptional cases in Luxembourg, which renders the whole system globally inefficient.

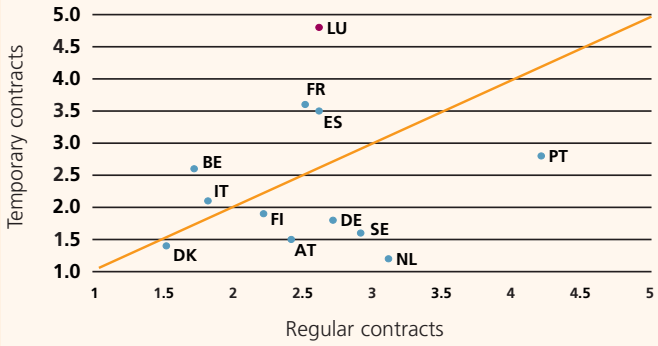
CHART 25: NET REPLACEMENT RATIO AND EMPLOYMENT PROTECTION INDEX



Note: Net replacement ratio: unweighted average of net replacement rate (including all benefits and social assistance) over 60 months of unemployment, for two earnings levels and four family types. Employment protection overall index: weighted average of the employment protection for different types of contracts and different types of dismissals.

Source: OECD

CHART 26: EMPLOYMENT PROTECTION INDEX, DEPENDING ON THE TYPE OF CONTRACT



Source: OECD

Employment protection

Employment protection legislation in Luxembourg is the strictest among OECD countries (see chart 26 for definitions and comparisons). Employment protection decreases the job destruction rate and protects workers (usually called 'insiders' in this context). But employment protection also reduces the job creation rate (because of a lack of flexibility, firms will be reluctant to create new jobs), which negatively affects the unemployed (usually called 'outsiders'). In the end, employment protection favours the insiders to the detriment of the outsiders and the resulting effect on employment is ambiguous. Job turnover, however, decreases unambiguously and unemployment duration increases, which reduces the participation rate (because higher unemployment duration leads to qualification losses and generates discouragement effects). The resulting effect of employment protection is, therefore, rather negative[5].

Is the solution to drastically reduce employment protection in Luxembourg? Firstly, decomposing employment protection by type of contract, we see that protection of workers with regular contracts (permanent contracts) is around the EU average, whereas protection of workers with temporary contracts (fixed-term contracts) is very high (see chart 27). Reducing protection for temporary contracts would increase the flexibility of firms and would stimulate job creation. However, this would further emphasize the duality between unstable fixed-term contracts and stable long-term contracts. Some economists, such as Blanchard (2006a), propose to merge these two contract types into a single but gradual one. This contract (called CUP, 'Contrat Unique Progressif' in French) would progressively increase employment protection with seniority in the firm, and avoid the sharp contrast between temporary and permanent contracts that exists today.

[5] The government of Luxembourg recently implemented new legislation called 'Plan de maintien dans l'emploi' which attempts to avoid layoffs (see Ministère du Travail, 2007). We do not fully agree with this plan because it increases further employment protection and ultimately protects insiders to the detriment of outsiders. We rather suggest helping all unemployed in order to reduce unemployment duration, for instance through training or individual coaching.

Secondly, decreasing employment protection (protecting firms' freedom) does not mean that firms no longer have social responsibilities. Firms that lay off workers impose economic costs on society and these costs should be internalized. Blanchard (2006b) suggests that firms pay contributions equal to the benefits paid to the workers they lay off (financial constraint for firms). This would force firms to provide on-the-job training for their workers (to avoid skill losses) and help laid-off workers to find a new job, in order to reduce unemployment duration and therefore limit contributions.

Of course, these proposals (single contract with financial constraints) remain quite theoretical but deserve discussion in a country where sectoral diversification (and therefore new job creation) is crucial to enlarge the employment basis.

Flexicurity: the wonder drug?

In the last few years, Denmark managed to reduce unemployment and increase participation. The solution? Flexicurity, from flexibility (for firms) and security (for workers), which combines loose employment protection legislation, generous unemployment benefits (subject to very strict eligibility conditions), and training and individual coaching of the unemployed (see chart 26). The philosophy of flexicurity is not to avoid unemployment inflows but to avoid long-term unemployment (the unemployment trap). Last year, the European Commission even published a green book to promote the Danish model across Europe (European Commission, 2006)[6].

Could we implement such a model in Luxembourg? Our answer is affirmative, since most of its features are in accordance with our analysis above. Firms must be flexible because flexibility stimulates employment creation. And laid-off workers must receive significant unemployment benefits as well as training and individual coaching. But these generous and open-ended benefits must be subject to strict eligibility conditions: in particular, abuses must be effectively sanctioned[7].

Which policies for employment?

With respect to the above analysis, we do not think that Luxembourg's labour market legislation needs a revolutionary reform. However, some adjustment would be welcome, such as a decrease in employment protection (for instance by merging the two types of contracts into a single but progressive one) or more effort on training and individual coaching of the unemployed. The open-ended unemployment income regime (insurance followed by assistance) could be maintained, but under very strict conditions (commitment to really search for a job). Abuses must be effectively sanctioned. We also want to stress that the government has the duty to improve the functioning of the labour market. However, reform must be agreed with the social partners. In fact, several studies have shown that a good relationship between social partners is important for employment.

Finally, we would conclude with three observations. First, we cannot attribute the unemployment increase in Luxembourg to higher job competition from cross-border commuters. Quite the reverse, this inflow of commuters contributes to high domestic growth and stimulates labour market dynamics. Second, addressing the unemployment problem by the creation of public sector jobs is costly and inefficient. Third, even the best labour market legislation will be useless if the economy is unable to create employment, that is if the economy is not competitive enough.

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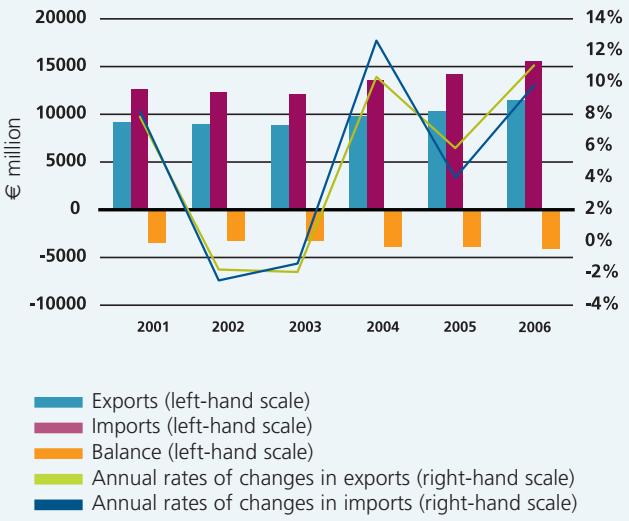
[6] The goal of a green book is to disseminate ideas in order to launch public discussions in the European Union. After consultations with the member states, the Commission may then decide to publish a white book, which contains concrete proposals in order to give birth to political decisions.

[7] However flexicurity system is costly: Denmark is the European country with the highest financial cost for active labour market policies (1.8% of GDP in 2004, compared to only 0.9% in the euro area (excluding Finland) and 0.6% in Luxembourg; sources: OECD Economic Outlook Database and 2006 budget proposal for Luxembourg).

1.2.7 External trade

Luxembourg trade in goods expanded robustly in 2006, reflecting the pick-up in international economic activity. Exports of goods rose by 11.1% reaching €11.5 billion. Import of goods also increased strongly (9.6%) to €15.6 billion in 2006. As a result, the trade deficit increased by 5.6% reaching €4.1 billion in 2006 as a whole. The rise in imports of goods was driven by higher oil and non-oil commodity prices while steel sector sales largely explain the increase in the export values.

CHART 27: LUXEMBOURG TRADE IN GOODS



Source: STATEC

1.2.8 Balance of payments

In 2006, the Luxembourg current account surplus rose by 7% reaching €3.5 billion (or 10.6% of GDP). This improvement was driven by the strong increase (26.6%) in the services surplus that was partly offset by a 49% rise in the combined deficit of the current transfers and labour and investment income. The improvement in net services receipts was for the most part driven by favourable developments in the financial sector. The goods balance was positively affected by fuel sales to non-residents and by sales of non-monetary gold. In the income balance, dividend payments abroad and compensation of non-resident employees turned the overall balance into a huge deficit in 2006, while the rising deficit in current transfers was mainly driven by monetary income redistribution within the Eurosystem.

In the financial account, Luxembourg registered net inflows in equity securities (in portfolio as well as in direct investments), which were largely offset by net outflows in debt securities and in other investments.

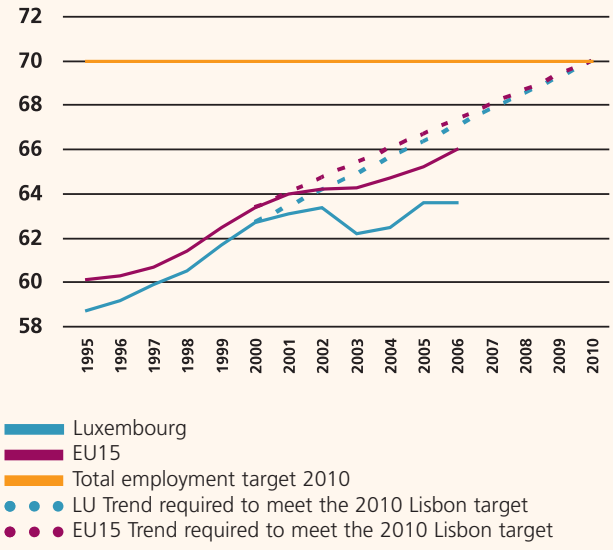
The implementation of the Lisbon strategy in Luxembourg

The Lisbon European Council in 2000 decided a set of structural reforms in product and labour markets that was relaunched under Luxembourg Presidency in 2005 by refocusing its priorities. These reforms aim to improve the flexibility of EU Member States' economies, increase their resistance to shocks, support sustainable non-inflationary growth and create new employment opportunities.

Eurosystem interest in structural reform reflects the fact that it facilitates the conduct of the single monetary policy and enhances its effectiveness. Structural reforms improve price and wage flexibility and foster the mobility of factors of production, which are necessary conditions for the efficient operation of the single monetary policy.

Therefore, structural reforms reduce the risk that price shocks may have enduring effects on inflation.

CHART 28: TOTAL EMPLOYMENT RATE (EMPLOYED PERSONS AGED 15-64 AS A PERCENTAGE OF THE TOTAL POPULATION OF THE SAME AGE GROUP)



Note: The trendlines are straight lines connecting the starting points in 2000 with the targets for 2010.

Source: Eurostat

This box evaluates the implementation of structural reforms in Luxembourg compared to progress achieved in the EU. The box concentrates only on selected areas of economic reform which are particularly important. Its focus is on areas in which Luxembourg must step up its efforts. Progress achieved is mainly measured on the basis of structural indicators compiled by Eurostat[8], which are compared to the targets set for the EU as a whole. It should be noted that the targets are non-binding for the Member States and that Luxembourg, like most EU Member States, has not set any national targets, except in the domain of research and development.

Employment

An important objective of the Lisbon strategy is to increase the employment rate. Luxembourg's total employment rate increased 0.90 percentage point over the period 2000-2006, reaching 63.6%, while the EU total employment increased to 66% over the same period. It should be noted that the European Council's total employment target is 70% in 2010.

The employment rate for women has increased significantly from 50.1% in 2000 to 54.6% in 2006, while remaining well below the target of 60% set for the EU as a whole. The employment rate for workers aged between 55 and 64 also picked up by about 6.5 percentage points to 33.2%, compared to the EU 2010 target of 50%. Luxembourg's performance is disappointing, as it ranks 14th among the EU15.

In its latest assessment[9] of the Luxembourg reform programme, the European Commission notes that: "Despite encouraging reforms on the employment front, no new initiative has been announced to raise the level of employment among older workers." The Commission encourages Luxembourg to "focus on a strategy for further increasing the employment rate among older workers; a detailed strategy aimed, in particular, at further reforming the current early-retirement systems…".

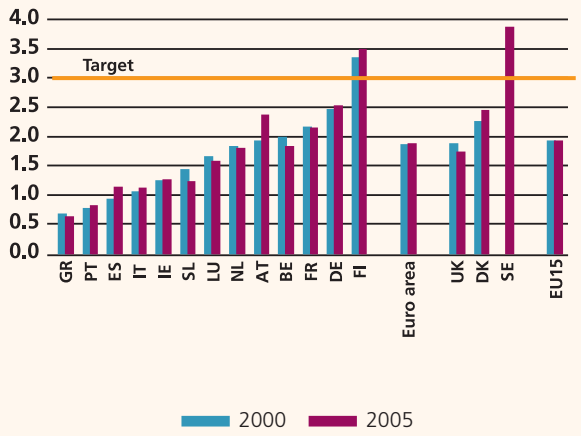
Innovation and research

The European Council set the target of raising research and development (R&D) spending to 3% of GDP. The Luxembourg government also adopted 3% of GDP as its national target. However, over the period from 2000 to 2005 the ratio of R&D expenditure to GDP remained broadly stable for the EU15, while it decreased slightly in the case of Luxembourg to 1.56% (in 2005), which is substantially below the 3% target (see chart). However, it should be noted in this context that the Luxembourg government substantially increased R&D expenditure budgeted for 2007 and that the figures shown in the graph also include private sector R&D expenditure.

[8] *http://ec.europa.eu/eurostat/structuralindicators*

[9] *European Commission, "Implementing the renewed Lisbon Strategy for Growth and Jobs - a year of delivery - assessment of the national reform programmes", part II/2, page 109, 23 February 2007*

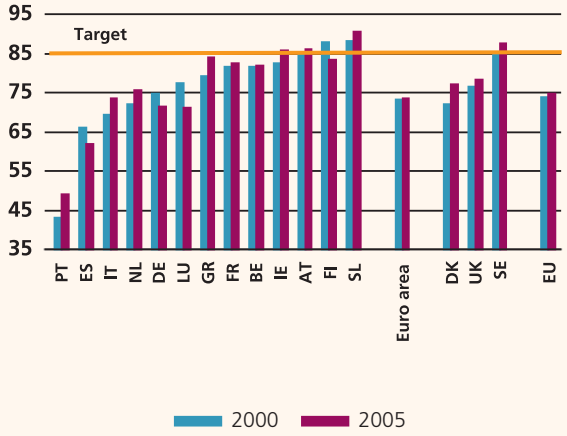
CHART 29: RESEARCH AND DEVELOPMENT EXPENDITURE (PERCENTAGE OF GDP)



Note: Figures for GR refer to 1999 instead of 2000. Figures for IT, UK and NL refer to 2004 instead of 2005.

Source: Eurostat

CHART 30: EDUCATIONAL ATTAINMENT (PERCENTAGE OF THE POPULATION AGED 20-24 HAVING COMPLETED AT LEAST UPPER SECONDARY EDUCATION)



Source: Eurostat

In addition to R&D expenditure, another structural indicator in the area of innovation and research is the percentage of the population aged 20 to 24 who have completed at least an upper secondary education. In Luxembourg, this share stood at 71.2% in 2005, slightly below the average for the EU15 and well below the 85% target (see chart). According to Eurostat data, educational attainment has worsened somewhat in Luxembourg since 2000.

The OECD takes the view that "there is considerable scope to improve education achievement and attainment, which are below the OECD average, especially for children of immigrants and low socio-economic backgrounds. While much has been done to help these children cope with Luxembourg's trilingual education system, more could still be done. There are other reforms that would improve education outcomes, notably reducing selection at early ages and avoiding widespread recourse to grade repetition"[10].

Completion of the Internal Market

The completion of the Internal Market is an important area of economic reform. Luxembourg has achieved considerable progress. Indeed, the Luxembourg authorities have reduced the "transposition deficit" (directives which have not been transposed into national law) from 4.6% in 2000 to 2.5% (42 directives) at the end of 2006. However, this result remains below the intermediate target of 1.5%. The European Commission concluded, on the basis of its "Internal Market Scoreboard" (November 2006) that Luxembourg's "performance is still poor", while acknowledging that Luxembourg has "made very good progress over the past six months"[11].

Conclusion

The Commission concludes in its assessment of the Luxembourg reform programme that "Luxembourg is making very good progress on implementation of its National Reform Programme and of the actions agreed by the 2006 Spring European Council, but there is still room for improvement regarding the weaknesses identified in 2005". The Commission issued no formal recommendation to Luxembourg. However, this box showed that Luxembourg still faces important challenges as far as the following areas are concerned: employment rate, research, education and completion of the internal market.

[10] *See OECD "OECD Economic Surveys - Luxembourg", volume 2006/9 - July 2006, p. 8, 2006*
[11] *European Commission, IP/07/126, 1 February 2007*

1.2.9 Economic growth and macroeconomic projections

Since the finalisation of the previous projection exercise, Luxembourg's economy has fared better than expected. Real GDP growth in 2006 is currently estimated at 6.2%, which is 0.9pp above our December projections. The overall positive surprise stems mainly from buoyant activity in the financial services sector which showed up via a strong contribution to net exports. However, growth has probably peaked in the first quarter of 2006 and, although it remained above trend estimates, it has steadily moderated since then. In fact, growth dropped to 5.0% in year-on-year terms in the fourth quarter of 2006. The carry-over effect on annual real GDP growth in 2007 can be estimated at 2.0%.

Short-term indicators point to a further decline in growth in the first quarter of 2007. In the context of the more moderate developments observed on the financial markets, the annual increase in fees earned by banks (other than the interest margin) has dropped to a mere 7.1% in the first quarter of 2007, compared to 28% a year earlier. This effect is likely to be partially offset by the more upbeat mood in the manufacturing sector, where confidence indicators have recently rallied to a level close to their all-time highs.

Overall, the outlook for the international environment has largely remained unchanged. Compared to the previous exercise, the growth profile and dynamics for both world GDP and world trade have been only marginally adjusted. After the exceptional dynamism observed in 2006, the forecasts of international institutions generally concur that economic activity is likely to slow in 2007, although it should remain above its long-term average. The weakening of the U.S. economy would be largely offset by the emerging economies, in particular South-east Asia, as well as the growth revival both in Japan and in the euro area. As regards the euro area in particular, economic growth has firmed since the pick-up that started in the second half of 2005. Real GDP growth was recorded at or above potential growth estimates, and was not interrupted by the hike in indirect taxation in Germany in 2007Q1. At 2.9% in 2006, real GDP growth reached its highest level since 2000 and the projected slowdown should only be moderate. According to the recent Eurosystem projections, economic growth is expected in a range between 2.3% and 2.9% in 2007 and between 1.8% and 2.8% in 2008.

On the back of the very favourable international environment, growth in Luxembourg's export markets was particularly dynamic in 2006. World demand growth, although it is expected to decelerate, should be above its long-term average both in 2007 and 2008.

On the basis of this analysis and especially in the euro area context, it seems appropriate to revise upwards Luxembourg's real GDP growth projections for 2007 to a range between 4.7% and 5.3%. In line with growth in the euro area, economic growth should further decelerate somewhat in 2008. These projections are based on assumptions of a more balanced growth scenario. Slowing exports, on the back of the lower expansion of world demand, should be partially offset by the acceleration in domestic demand. In this respect, private consumption growth will benefit from the favourable employment developments and prospects, as well as the growth in real wages. According to the European Commission's bi-annual investment surveys, companies in the industrial sector have also announced a strong expansion of their investment projects in 2007 (see chart 31). Capital expenditures in that sector are set to increase at around 27%, the highest rate observed since 2001. Finally, public consumption and investment are also expected to accelerate in 2007.

TABLE 15: PROJECTIONS OF INTERNATIONAL INSTITUTIONS (IN ANNUAL PERCENTAGE CHANGES, RESPECTIVELY IN PERCENTAGE POINTS)

	2006	2007	2008	2009
World Trade (EC)	9.2 (-0.3)	7.1 (+0,1)	7.6 (+0,3)	-
World GDP (EC)	5.2 (+0.1)	4.8 (+0.2)	4.8 (+0,1)	-
Euro area GDP (EC)	2.7 (+0.1)	2.6 (+0.5)	2.5 (+0,3)	-
Euro area GDP (Eurosystem)	2.9	2.3 - 2.9	1.8 - 2.8	-
World demand for Luxembourg	8.7 (-0,3)	5.8	6.0 (+0.2)	6.1
Oil in $/bl[1]	65.4 (-0,1)	65.0 (+0.4)	69.9 (+2.7)	69.6
Exchange rate $/€[2]	1.26	1.34 (+0.06)	1.36 (+0.08)	1.36
Short-term interest rate	3.1	4.2	4.5	4.4
Long-term interest rate	3.8	4.2	4.3	4.3

[1] *Revisions in $/bl*

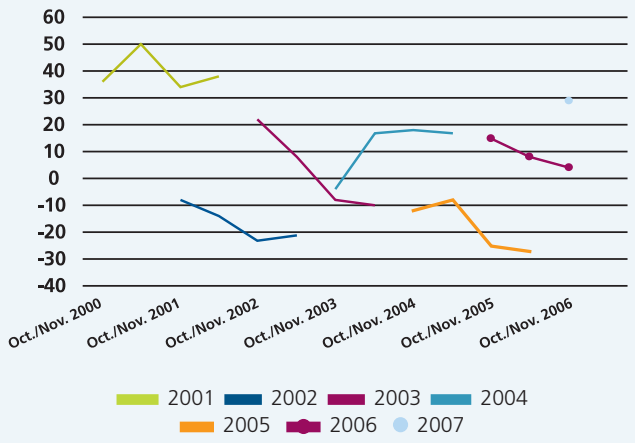
[2] *Revisions in $/€*

Sources: European Central Bank, European Commission

Turning to wage developments, negotiations are apparently still based on cautious behaviour by the social partners, probably because the conjunctural pick-up was mostly driven by the financial services sector, with the expansion more muted in most other sectors of the economy. The unemployment rate also seems entrenched at a fairly high level and government measures decided in 2006 still restrain wage growth. Among these measures, the contribution of the automatic wage indexation mechanism to nominal wage increases has been virtually fixed up to 2009. Furthermore, the negotiated wage levels in the government sector will be frozen for the years 2007-2008. The projections also incorporate planned increases in the minimum wage, 1.9% in 2007 and a further rise in 2009. The acceleration of wages in 2009 reflects the assumption that real wages in the public sector will be increased again.

In 2007, inflation dynamics are likely to moderate despite the very favourable demand conditions. Headline inflation should drop to around 2.1% for the NICP and to 2.4% for the HICP, as the contribution from the energy component will be virtually neutral. However, headline inflation excluding energy has been on a steady rise since the end of 2004, and

CHART 31: BI-ANNUAL INVESTMENT SURVEYS IN THE INDUSTRIAL SECTOR (EXPENDITURES AT CURRENT PRICES, IN ANNUAL PERCENTAGE CHANGES)[1]



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

Source: European Commission

it should accelerate further in 2007 as its path will be partially conditioned by exceptional hikes in public tariffs. The mild drop in non-energy inflation in 2008 with a stabilisation afterwards is unchanged from previous projections and hinges on several factors. A moderation in the impact of the government measures on inflation is expected. Wage projections also remain largely unchanged. Finally, although the output gap is gradually closing, the baseline scenario does not yet correspond to that of an overheating economy, neither in the euro area nor in Luxembourg. In this respect, imported inflation from the neighbouring countries is also expected to remain fairly moderate.

TABLE 16: MACRO-ECONOMIC PROJECTIONS AND REVISIONS COMPARED TO DECEMBER 2006 (IN ANNUAL PERCENTAGE CHANGES, RESP. IN PERCENTAGE POINTS)

	June 2007				Revisions		
	2006	2007	2008	2009	2006	2007	2008
Real GDP	6.2	4.7 - 5.3	4.1 - 5.1	4.0 - 5.0	0.9	0.8	0.3
HICP	3.0	2.4	2.5	2.2	-	0.2	0.2
HICP energy	7.9	-0.3	1.5	-0.1	-0.1	-1.0	-0.2
HICP excluding energy	2.3	2.8	2.6	2.5	-	0.4	0.2
NICP	2.7	2.1	2.1	2.0	-	0.2	0.1
NICP excluding energy	2.1	2.3	2.1	2.1	-	0.4	0.1
Contribution of indexation to nominal wages	2.1	2.3	2.1	2.5	-	-	-
Compensation per employee	2.3	3.9	3.7	4.2	-1.6	0.3	-
Employees	4.0	3.7	3.4	3.3	0.2	0.5	-
Unemployment rate	4.5	4.6	4.7	4.6	-	-0.1	-0.1

Source: BCL

Structural unemployment and potential growth

What is the level of structural unemployment in Luxembourg? What is the potential growth rate of the Luxembourg economy? These two questions are related by Okun's law, one of the classic pillars of macroeconomics. In 1962 Arthur Okun estimated potential output by supposing that it was limited by the availability of labour inputs. He suggested the following relationship:

$$(U - U^*) = -\alpha(y-y^*)$$

On the left, U denotes the observed unemployment rate and U* the structural unemployment rate. On the right, y denotes the logarithm of observed output (GDP) and y* that of its potential level (their difference represents the output gap as a percentage of potential output). The main idea of Okun's "law" is that unemployment and output fluctuate around their "structural" levels and that these fluctuations are related. Okun deduced the level of potential output y* in the US by assuming U* took the value 4% and the coefficient α was 1/3.

However, this shortcut to measure potential output suffers from several limitations. First, it does not consider the lag with which the labour market reacts to changes in output. Second, it assumes that unemployment fluctuates around a fixed equilibrium level. Today structural unemployment is more commonly considered a variable that changes with time, typically as a result of structural reforms. Therefore, it is more appropriate to replace the constants U* and y* in the previous equations with variables (often approximated by the trends in the observed series). In this case, the two expressions in parentheses on the right and left of the equation sign can be interpreted as deviations from trend (cyclical components of unemployment and output). Thus, a more up-to-date version of Okun's law will relate unemployment cycles to output cycles and include past terms of the output gap to capture lagged adjustment.

$$(U_t - U_t^*) = -\alpha_0(y_t-y_t^*)-\alpha_1(y_{t-1}-y_{t-1}^*)$$

However, this expression is not enough to deduce the potential growth rate without an estimate of the structural unemployment rate. The latter is generally supplied by the Phillips curve, the other classic pillar of macroeconomics (along with Okun's law). The Phillips curve postulates an inverse short-term relationship between inflation (of prices or of wages) and the level of unemployment. In other words, it implies the existence of a level of unemployment that can stabilise inflation. This concept of structural unemployment is called NAWRU (Non-Accelerating Wage Rate of Unemployment) when inflation is measured by wages and NAIRU (Non-Accelerating Inflation Rate of Unemployment) when inflation is measured by prices. The European Commission uses the NAWRU to measure structural unemployment when estimating potential output (which it then uses to cyclically adjust public sector deficits). In the December 2006 Quarterly Report on the Euro Area, the Commission provides a discussion of the NAWRU and estimates for each member state. According to the Commission forecasts, between 2006 and 2008 structural unemployment should fall in Germany and France, level off in Belgium but increase in Luxembourg, where it should rise from 4% in 2005 to 4.5% in 2008[12].

Since 2001, the BCL regularly estimates the NAIRU for Luxembourg to calculate potential output by the Apel-Jansson[13] method. This approach differs from that of the Commission in several ways. First, the Phillips curve and Okun's law are estimated simultaneously, providing a joint analysis of fluctuations in inflation, output and unemployment to better separate trend from cycle in the latter two series. Instead, the Commission method estimates the Phillips curve in isolation (assuming productivity is exogenous) and then uses the NAWRU concept to estimate the output gap. Second, the Commission uses the Eurostat harmonised unemployment rate. In Luxembourg, this rate ignores unemployment among cross-border workers (who by now represent 40% of salaried employment). To allow for cross-border workers, BCL estimates use a regional unemployment rate that weights unemployment in each of the surrounding regions according to the share of its residents in Luxembourg's employment. However, in order to allow a comparison with the Commission results, estimates in this text box are also based on the harmonised unemployment rate[14]. Third, BCL estimates include additional variables in the Phillips curve using the following (more general) specification:

$$\Delta^2 w_t = \rho(L)\Delta^2 w_{t-1} + \eta(L)(U_{t-1}-U_{t-1}^*) + \omega(L)z_t$$

where $\rho(L)$, $\eta(L)$, and $\omega(L)$ denote polynomials in the lag operator L. This specification, drawn from the "triangle" inflation model[15], assumes that inflation in wages (w_t) is driven by three factors: inertia (past inflation), capacity constraints (gap between unemployment and its structural level) and supply shocks in variables such as oil prices, import prices, and the effective exchange rate (included in the vector z_t). One limitation of the Commission approach is that it neglects this last source of inflation, which can be important in an economy as small and as open as Luxembourg. In this case, the impact of external factors may erroneously be attributed to movements in the NAWRU. However, our conclusions are substantially in line with those of the Commission, confirming the sharp rise in structural unemployment since 1999. This conclusion is unchanged when inflation is measured by wages (NAWRU) or by the national index of consumer prices (NAIRU). Unlike the Commission method, the Apel-Jansson approach also provides an estimate of the α parameter in the Okun's law relation. Results for Luxembourg suggest that a 1% increase in the output gap (over two years) generates a fall of the harmonised unemployment rate around 0.1 percentage points (the conclusion is similar when using the national

[12] See also Denis, C., D. Grenouilleau, K. McMorrow, et W. Roeger (2006) "Calculating potential growth rates and output gaps - a revised production function approach", European Economy Economic Paper No. 247.
[13] See BCL Working Paper No. 4 for more details.
[14] Results are qualitatively unchanged when harmonised unemployment is replaced by regional unemployment.
[15] Gordon, R.J. (1997) "The time-varying NAIRU and its implications for economic policy", Journal of Economic Perspectives, 11(1):11-32

unemployment rate). As a basis of comparison, Okun assumed that in the US the impact would be 0.3 percentage points. It seems logical that this link is weaker in Luxembourg, especially, because the estimate is based on harmonised unemployment, which neglects the important contribution of cross-border workers to the labour market in Luxembourg. It should be noted that such a reduction in unemployment would only be a transitory phenomenon that would disappear, with the output gap, when output returns to its potential level in the medium term. In other words, unemployment rates below the structural level are not sustainable: Okun's law only relates the cyclical components of unemployment and output.

TABLE 17: HARMONISED UNEMPLOYMENT, NAWRU AND NAIRU

	Harmonised unemployment rate	Hodrick-Prescott Trend	NAWRU European Commission	NAWRU BCL	NAIRU BCL
1999	2.4	2.8	2.7	2.6	2.5
2000	2.3	3.0	2.9	2.6	2.6
2001	2.1	3.1	3.0	2.9	2.6
2002	2.8	3.3	3.3	3.1	2.9
2003	3.7	3.6	3.5	3.3	3.4
2004	5.1	3.8	3.9	4.0	3.9
2005	4.5	4.1	4.0	4.0	3.9
2006	4.7	4.3	4.2	4.1	4.1
2007	4.6[a]	4.5	4.4	4.5	4.4
2008	4.4[a]	4.7	4.5	4.7	4.6

[a] Harmonised unemployment in 2007-2008 are European Commission forecasts.

Sources: European Commission, BCL estimations

The table compares the harmonised unemployment rate (in the first column) with its trend as extracted by the Hodrick-Prescott filter (a simple statistical method to separate trend from cycle). The Commission estimate of the NAWRU appears in the third column, and the BCL estimates of the NAWRU and the NAIRU in the two remaining columns. According to all four measures considered, structural unemployment in Luxembourg increased regularly since 1999. Turning to cyclical fluctuations, in 1999 observed unemployment was below all the measures of structural unemployment (a sign of inflationary pressures). Between 2000 and 2001, the gap increased as observed unemployment fell and structural unemployment rose. Observed unemployment only rose in 2002, moving towards the new level of structural unemployment. This suggests that the increase in observed unemployment was more structural than cyclical (and therefore more persistent). In 2003, the gap changed sign, with observed unemployment exceeding structural unemployment to generate a positive gap.

Looking ahead, the Commission forecasts expect the positive gap to stabilise in 2006, fall in 2007 and turn slightly negative in 2008. BCL estimates are not significantly different for 2006 and 2007, but project a greater negative gap in 2008, suggesting possible inflationary pressures. BCL projections of harmonised unemployment in 2007 and 2008 are slightly more pessimistic (4.7% both years). However, using the BCL projections does not change the conclusion: observed unemployment should soon be below its structural level due to the rise in the latter.

TABLE 18: OUTPUT GAP AND POTENTIAL GROWTH

	Real GDP (bn EUR)	Linear Trend	Hodrick-Prescott	Harvey-Jaeger	Kuttner	Apel-Jansson	Production Function
		Output Gap Estimates					
2002	23.42	2.4%	2.0%	1.7%	1.8%	1.7%	1.2%
2003	23.74	-1.1%	-1.0%	-0.8%	1.1%	-0.1%	-1.7%
2004	24.60	-2.4%	-1.7%	-2.0%	0.2%	-3.5%	-2.1%
2005	25.57	-3.3%	-2.1%	-2.2%	-0.7%	-4.6%	-2.3%
2006	27.16	-2.1%	-0.4%	-1.2%	-1.3%	-4.0%	-0.5%
2007	28.52	-2.1%	0.1%	-0.6%	-1.5%	-2.2%	0.3%
2008	29.84	-2.4%	0.3%	-0.4%	-1.2%	0.0%	0.8%
2009	31.17	-2.9%	0.3%	-0.2%	-0.6%	1.3%	1.1%
	Revisions	Revisions to output gap since last estimates in 2006					
2002	0.2%	0.4%	0.3%	-1.2%	-0.4%	-1.0%	0.4%
2003	-0.5%	-0.3%	-0.4%	-0.9%	-0.5%	-0.3%	-0.4%
2004	-1.1%	-0.9%	-1.1%	-1.5%	-0.5%	-2.3%	-1.1%
2005	-1.1%	-0.9%	-1.3%	-1.0%	-0.4%	-2.3%	-1.5%
2006	0.5%	0.7%	0.0%	0.4%	-0.2%	-1.5%	-0.2%
	Real GDP growth	Potential growth estimates					
2002	3.8%	5.0%	4.5%	5.3%	4.1%	4.4%	4.6%
2003	1.3%	5.0%	4.4%	3.9%	2.1%	3.2%	4.3%
2004	3.6%	5.0%	4.4%	4.9%	4.6%	7.2%	4.1%
2005	4.0%	5.0%	4.4%	4.2%	4.9%	5.0%	4.1%
2006	6.2%	5.0%	4.4%	5.1%	6.8%	5.6%	4.3%
2007	5.0%	5.0%	4.4%	4.4%	5.2%	3.2%	4.2%
2008	4.6%	5.0%	4.4%	4.4%	4.3%	2.4%	4.1%
2009	4. 5%	5.0%	4.4%	4.3%	3.9%	3.2%	4.1%
	Average real growth	Average potential growth					
since 1981	4.7%	5.0%	4.7%	4.9%	4.9%	4.9%	4.7%
since 2001	3.6%	5.0%	4.5%	4.5%	4.1%	4.6%	4.4%

Sources: STATEC data, BCL calculations

The European Commission uses its NAWRU estimates to calculate potential output in member countries by the production function method. This approach is also implemented by the BCL, but distinguishing between cross-border employment (whose trend is extracted by the HP filter) and resident employment (whose structural level is determined by the HP trends of the participation rate and of the unemployment rate). Table 18 provides an update of the results using the different methods applied at the BCL.

Last time these estimates were published, in BCL bulletin 2006/1, they were based on data as available in June 2006. At that time, the different methods all agreed that the output gap turned negative in 2005 and would remain negative (with the exception of one method) through 2008. Following revisions to national accounts data (in particular, growth in 2005 and 2006 was higher than initially anticipated) two observations merit attention. First, the trough of the cycle has moved back into the past (now five of six methods find a negative output gap already in 2003 and place the trough in 2005). Second, a marginally positive output gap is already detected in 2007 for two of the methods, a result confirmed in 2008 and in 2009, when three methods register a positive output gap.

However, it is difficult to draw firm conclusions regarding the situation in 2009, since the different methods often contradict each other. The linear trend anticipates a growing negative output gap, since its potential growth estimate is higher than projected growth over 2008 and 2009. The Hodrick-Prescott filter finds a positive output gap starting in 2007 increasing gradually. The Harvey-Jaeger model, which is methodologically similar to the HP filter, finds a negative output gap that diminishes very slowly and persists through 2009. The Kuttner model, which takes account of inflation developments, also finds a persistent negative output gap which increases in absolute value (projected growth below potential growth) until 2007. The Apel-Jansson model, which takes account of both inflation and unemployment developments, finds that the negative output gap is rapidly reabsorbed and a positive gap appears in 2009. Finally, the production function method agrees with the HP filter results, anticipating a positive output gap in 2007 and an increase thereafter. The agreement between these two methods could reflect the fact that the production approach uses the HP filter to extract trend participation in the labour market, trend unemployment and the trend contribution of cross-border workers.

In conclusion, the different methods give a clear signal that the negative output gap is being reabsorbed, in other words growth observed in 2006 was higher than potential and this situation could well be prolonged through 2009. However, it is not yet clear whether GDP in 2007 has reached its potential level (zero output gap), nor whether it will have reached it in 2009.

The uncertainty underlined by divergent results across different methods is exacerbated by uncertainty from the data. In fact, the output gap estimates have been substantially revised compared to the estimates published in 2006. The Apel-Jansson method suffered revisions around two percentage points of GDP. The Hodrick-Prescott, Harvey-Jaeger and production function estimates have all been revised by more than one percentage point. These revisions are not only due to revisions in the underlying data, but also to new projections and an increase in the horizon to include 2009.

Potential growth estimates have also been revised. Average growth since 1981 is unchanged so the linear trend estimate of potential growth has not changed. However, according to the HP filter, potential growth since 1981 has increased by 0.1 percentage points. The estimates from other methods have also changed but in different directions. Potential growth should be relatively constant over 2007-2009 according to four of the six methods considered. The linear trend is based on the assumption that potential growth is constant, but for the HP filter, the Harvey-Jaeger model and the production function approach this result is more significant. The Kuttner and Apel-Jansson models anticipate greater fluctuations in potential growth (this is natural since these two methods also take into consideration fluctuations in other variables such as inflation and unemployment). However, looking across methods and across periods, medium-term potential growth between 4% and 5% remains plausible.

TABLE 19: DECOMPOSING POTENTIAL GROWTH (PRODUCTION FUNCTION APPROACH)

		Contributions to potential growth			Labour contribution decomposition	
	Potential Growth	Total Factor Productivity	Capital	Labour	Residents	Cross-border workers
1995	4.4	1.0	1.1	2.3	0.7	1.6
1996	4.4	0.9	1.1	2.4	0.7	1.7
1997	4.6	0.8	1.3	2.5	0.7	1.7
1998	4.6	0.7	1.4	2.6	0.8	1.7
1999	5.1	0.6	1.8	2.7	0.9	1.8
2000	4.9	0.6	1.5	2.8	1.0	1.8
2001	4.8	0.5	1.6	2.7	0.9	1.7
2002	4.5	0.4	1.6	2.4	0.7	1.7
2003	4.3	0.4	1.5	2.3	0.6	1.7
2004	4.0	0.5	1.4	2.2	0.5	1.7
2005	4.0	0.5	1.3	2.2	0.5	1.7
2006	4.2	0.6	1.3	2.3	0.6	1.7
2007	4.1	0.6	1.3	2.2	0.5	1.7
2008	4.0	0.6	1.4	2.1	0.4	1.6
2009	4.0	0.6	1.4	2.0	0.4	1.6

Sources: STATEC data, BCL calculations

Following an ECOFIN Council decision in July 2002, the European Commission favours the production function approach, especially because it allows a decomposition of growth into the contributions of labour, capital and total factor productivity (TFP). However, the Commission must apply this method to harmonised data across countries and, therefore, cannot take into account country specifics. In particular, the Commission calculates the labour contribution from unemployment and participation rates collected from the harmonised Labour Forces Survey, which is limited to residents. As a result, the important contribution to growth from cross-border workers in Luxembourg may contaminate the TFP estimate, since this is calculated as a residual, cumulating any measurement errors in the other variables. The following table provides a growth accounting exercise for Luxembourg, according to the BCL implementation of the production function method. This approach is not necessarily preferable to the others, but allows for an additional decomposition of the labour contribution into contribution of residents (both nationals and immigrants) and cross-border workers.

Over the whole period considered, the contribution of TFP was clearly less than those of capital and labour. In addition, the TFP contribution fell gradually until 2003. On the other hand, TFP has given some signs of recovery since 2004. The contribution of capital reached a peak around 1.8 percentage points in 1999 and then fell to 1.3 points in 2005-2006. In 2008 and 2009, capital accumulation should allow this source of potential growth to slightly raise its contribution. Finally, labour has always been the most important source of potential growth, reaching a peak near 3 percentage points in 2000. Since then, this source of growth has fallen and should be only 2 percentage points in 2009. The additional decomposition of the labour contribution reveals that cross-border workers account for two thirds to three quarters of this contribution. This result is hardly surprising given that since 1995 resident employment grew by only 1.7% on average (mostly thanks to immigration) while employment of cross-border workers grew by 7.7%. Between the peak in 2000 and the latest observation in 2006, the contribution of cross-border workers has fallen by 0.1 percentage points, while the contribution of resident workers has fallen by almost 0.5 points.

This analysis confirms that the structural reforms laid out in the Lisbon agenda remain crucial for sustaining growth in Luxembourg. Improved functioning of markets for goods, services and capital can favour innovation and thereby raise the TFP contribution to growth. However, labour has traditionally played the major role in Luxembourg, and its contribution has fallen by nearly a third since 2000. Thus, it is also important to improve the functioning of the labour market to bolster the labour contribution. The fall in this source of growth can be largely attributed to resident employment, underlining the need for the reforms proposed by the European Commission and the OECD to promote labour market participation among women and older workers. In Luxembourg, these groups of the population have low participation rates in international comparison, a phenomenon that could lower potential growth rates in the future in the wake of the ageing population.

1.2.10 Public finance

1.2.10.1 Budgetary policy overview

A shift towards a more rigorous budgetary policy occurred last year. On 2 May 2006, the Prime Minister announced new measures such as higher indirect taxes and social contributions for long-term care, the suspension of the indexation to prices of most family allowances and a rescheduling of the next indexation of pensions to real wages. The freeze in real terms of public sector wages in 2007 and 2008 as well as a closer monitoring of investment expenditure were also announced. Most measures were to be implemented in 2007 and were, therefore, embedded in the 2007 budget, adopted by the Parliament in December. The budget was based on a general government deficit calculated in line with ESA 95 methodology and equal to 0.9% of GDP in 2007. The eighth update of the Stability Programme, published in November 2006, confirmed the more cautious budgetary course. In this update, the authorities targeted a gradual convergence to budgetary balance, which was anticipated for 2009.

According to the public sector accounts published in April 2007, this target was already reached in 2006. The general government balance was actually in surplus by 0.1% of GDP, in spite of the fact that most consolidation measures were not implemented before 2007. As shown below, this improvement should not lead to fiscal complacency as it may rest on shaky foundations.

1.2.10.2 General government revenue

The revenue ratio decreased markedly in 2006, but this reflects an exceptionally high rate of growth of nominal GDP. Expressed in nominal terms, total general government revenue increased by 7% in 2006, after 10.5% in 2005. The significant increase in total revenue in 2006 benefited from the impact of an exceptionally high dividend paid by Arcelor-Mittal which affected both dividend taxes and central government's property income. In addition, personal income taxes were extremely buoyant due in part to the non-indexation of tax brackets. Some deterioration on the revenue side should be recorded in 2007 reflecting the unwinding of the Arcelor-Mittal windfall recorded in 2006. These developments may be dampened by strong corporate taxes and buoyant social contributions owing to the resilience of the economic recovery and to the impact of the consolidation measures announced by the Prime Minister in 2006. The revenue ratio should remain stable thereafter.

TABLE 20: GENERAL GOVERNMENT REVENUE (AS A PERCENTAGE OF GDP, UNLESS OTHERWISE INDICATED)

	Official data April 2007						BCL projections June 2007		
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Direct taxes	15.2	15.2	14.7	13.2	14.0	13.2	13.0	13.2	13.4
Payable by households	*7.9*	*7.2*	*7.3*	*7.4*	*8.0*	*8.1*	*7.8*	*8.0*	*8.2*
Payable by corporations	*7.3*	*8.0*	*7.4*	*5.8*	*6.0*	*5.1*	*5.1*	*5.2*	*5.2*
Indirect taxes	13.6	12.9	12.7	13.7	13.7	12.8	12.6	12.5	12.3
Social contributions	11.8	11.7	11.8	11.8	11.7	11.0	11.1	11.1	11.2
Other revenue	4.1	3.9	3.5	3.4	3.4	3.6	3.5	3.5	3.4
Total revenue	**44.6**	**43.8**	**42.7**	**42.1**	**42.7**	**40.6**	**40.2**	**40.3**	**40.3**
Nominal increase in total revenue (%)	**3.9**	**4.6**	**3.8**	**3.9**	**10.5**	**7.0**	**7.0**	**7.9**	**7.2**

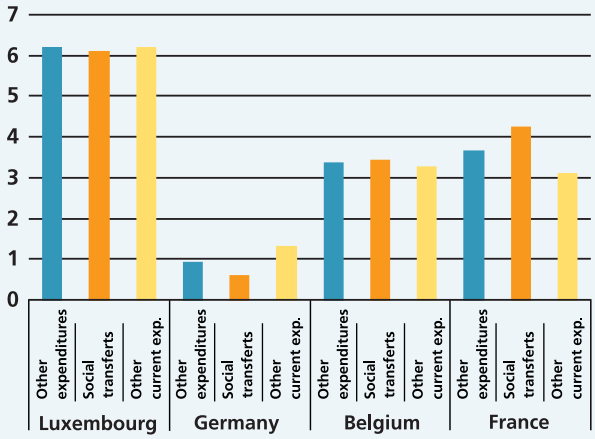
Sources: IGF, IGSS, STATEC, UCM, BCL calculations

1.2.10.3 General government expenditure

The expenditure ratio experienced a pronounced decline in 2006. This reflected the impact of the extremely high rate of nominal GDP growth recorded in 2006 rather than actual expenditure restraint. Although expenditure growth decelerated in 2006 - it reached 6% compared to 8% or more from 2001 to 2005 - it was still much higher than in the three neighbouring countries, as illustrated in the following chart. In addition, to a certain extent it reflected lower public investments, which decreased both in nominal terms and as a share of GDP.

Total expenditure should increase by 7% in 2007, boosted by extra outlays stemming from the implementation of the Kyoto protocol and by purchases of land by the central government. Expenditure growth should recede somewhat in 2008 but should rebound in 2009 due to the biennial adjustment of pensions and among other factors to the assumed impact of a new public sector wage agreement. In spite of these developments, the expenditure-to-GDP ratio should decrease over the projection horizon.

CHART 32: GENERAL GOVERNMENT CURRENT EXPENDITURE IN LUXEMBOURG AND THE THREE SURROUNDING COUNTRIES: GROWTH RATES (AS %)



Source: Eurostat

Note: The chart focuses on current expenditure. Capital expenditures are more volatile due to temporary effects.

TABLE 21: GENERAL GOVERNMENT EXPENDITURE (AS A PERCENTAGE OF GDP, UNLESS OTHERWISE INDICATED)

	Official data April 2007						BCL projections June 2007		
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Social transfers	19.5	20.2	21.0	21.5	21.2	20.0	19.9	19.7	19.8
Public investments	4.3	5.0	4.6	4.3	4.7	4.1	3.9	3.9	3.9
Consumption expenditure[1]	11.2	11.3	11.4	11.6	11.7	11.0	10.8	10.7	10.7
Subsidies[2]	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7
Other expenditure	1.9	3.4	3.5	4.2	3.7	3.8	3.8	3.6	3.6
Total expenditure	**38.5**	**41.7**	**42.3**	**43.3**	**43.0**	**40.5**	**40.1**	**39.6**	**39.6**
Nominal increase in total expenditure (%)	**8.8**	**10.0**	**7.9**	**8.0**	**8.1**	**6.0**	**7.0**	**6.2**	**7.3**

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

Notes:
[1] Compensation of employees and intermediate consumption.
[2] Disregarding capital transfers.
The expenditure ratio recorded in 2001 was negatively affected by a one-off transaction, namely the sale of a licence to a satellite company. This explains the marked decrease in the "Other expenditure" item in 2001. The nominal growth rates displayed in the last row of the table smooth out the impact of this transaction, which amounted to 1.9% of the 2001 GDP.

1.2.10.4 General government net lending or borrowing

The general government recorded a slight surplus in 2006, for the first time since 2003. The improvement was due to a deceleration of total expenditure growth, which was below the average of the 2001-2005 period, and to the impact of the Arcelor Mittal dividends. Without this latter windfall, the general government balance would have slightly deteriorated because corporate tax receipts plummeted in 2006, while revenues from VAT and taxes on energy stagnated.

The general government surplus is projected to remain unchanged in 2007 and to increase to 0.7% of GDP in 2008 and 2009. With the revenue-to-GDP ratio expected to remain stable over the projection horizon, all the improvement in the budget balance compared to 2007 should stem from a decline in the expenditure share of GDP.

The cyclically adjusted balance would barely improve from 2006 to 2009. It would even deteriorate in 2009, in particular due to the assumed public sector wage agreement and the biennial adjustment of pensions to real wage developments.

The fiscal situation projected by the ESCB is significantly more favourable than the one envisaged in the November 2006 update of the Stability Programme. This discrepancy is mostly attributable to a significant overestimation of the 2005 and 2006 deficits in November 2006, with an associated base effect in the ESCB projections. Compared to the Stability Programme data, the ESCB projections indicate more sustained expenditure growth for 2007-09 but a more dynamic behaviour of revenue over the same time horizon.

TABLE 22: GENERAL GOVERNMENT NET LENDING (+) OR NET BORROWING (-) (AS A PERCENTAGE OF GDP)

	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Actual balance (net lending (+) or net borrowing (-))								
	Official data April 2007						BCL projections June 2007		
General government	**6.1**	**2.1**	**0.4**	**-1.2**	**-0.3**	**0.1**	**0.1**	**0.7**	**0.7**
of which central government	2.9	-0.5	-1.3	-2.7	-1.5	-1.5	-1.6	-1.0	-1.0
of which local governments	0.1	0.1	0.0	-0.1	-0.4	0.0	0.0	0.1	0.1
of which social security	3.1	2.4	1.8	1.6	1.6	1.7	1.7	1.7	1.6
Stability Programme	**--**	**--**	**--**	**--**	**-1.0**	**-1.5**	**-0.9**	**-0.4**	**0.1**
BCL projections December 2006						**-1.3**	**-1.0**	**-0.6**	**--**
	Cyclically adjusted balances								
BCL projections June 2007 [1]	5.6	1.2	0.3	-1.0	0.2	0.4	0.2	0.7	0.4
Stability Programme estimate	--	--	--	--	-0.2	-1.3	-0.5	-0.1	0.9

Notes:

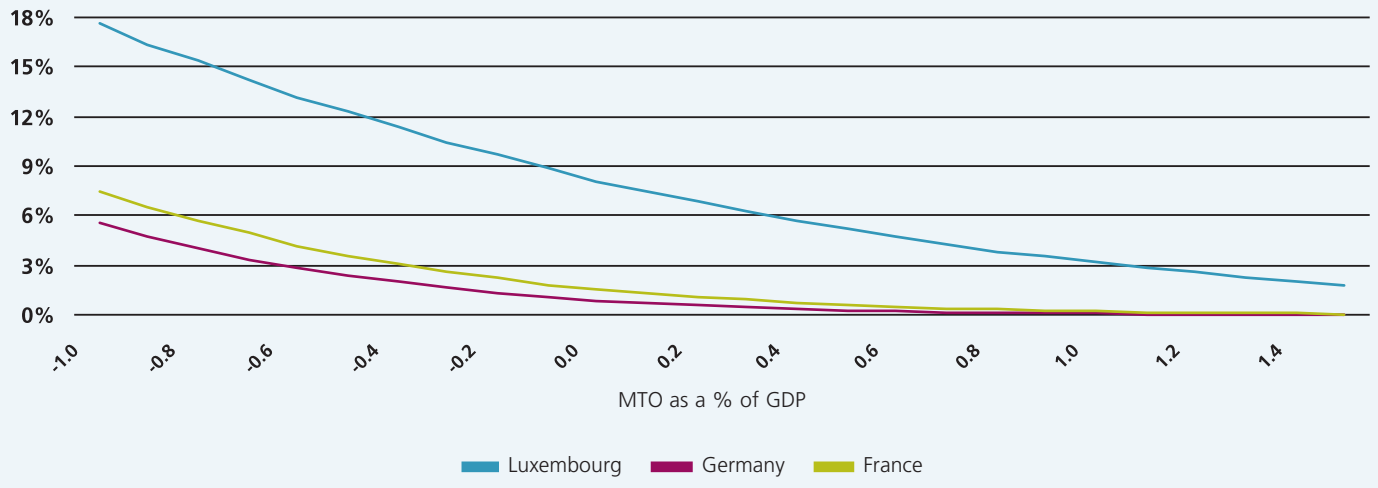
[1] These cyclically adjusted balances are based on a disaggregated Hodrick-Prescott approach.

Sources: STATEC, 8th update of the Luxembourg Stability Programme, BCL calculations

The high volatility of macroeconomic conditions is a major source of risk to the fiscal projections as highlighted by fiscal developments in 2006. The risks are further exacerbated by the de-linking of several taxes from macroeconomic tax bases. Additional risks relate to the fiscal impact of a pending statement by the European Court of Justice on the tax deduction of mortgage interest charges paid by cross-border workers and to the possible introduction of a higher solidarity levy on direct taxes in January 2008. In addition, in the May 2007 address on the social, economic and financial situation of the country, the Prime Minister hinted at new measures related to corporate income taxes and at the possible introduction of tax credits for specific income groups. Finally, the ongoing discussions at the European level of registration taxes ("droit d'apport") and VAT on electronic commerce could turn out to have a major budgetary impact. On the expenditure side, government investments are difficult to be forecast, due to volatility in the implementation of investment programmes and uncertainties surrounding the forthcoming wage negotiations in the public sector.

The slight surplus recorded in 2006 should not lead to complacency. The improvement of the fiscal situation is moderate and rests on an exceptionally favourable macroeconomic context, buoyant financial markets and the Arcelor Mittal windfall. The November 2006 Stability Programme aims to achieve a cyclically adjusted surplus of 0.9% of GDP, while the medium-term objective is a deficit of 0.8% of GDP. This medium-term objective should be more ambitious. As illustrated in the chart above, only a structural surplus in excess of 1% of GDP would ensure compliance with the 3% of GDP reference value in a context characterised by fiscal instability. In fact, the Luxembourg economy exhibits high cyclical volatility and is also confronted with many non-cyclical sources of fiscal volatility, especially on the revenue side. An additional factor of instability is the frequent revision in public finance statistics. In this context, the medium-term objective should be much more demanding than in countries like Germany and France, where the volatility of fiscal balances is less pronounced. Moreover, room for manoeuvre is required in order to address long-term sustainability issues - in particular, in the pension and healthcare systems - identified, inter alia, in the European Commission's Sustainability Report. In this context, the authorities should strictly comply with the November 2006 update of the stability programme and even pursue further fiscal adjustment in the event of continued favourable macroeconomic conditions. A structural surplus of at least 1% of GDP should be reached in 2009 at the latest, and such a balance should become the new medium-term objective.

CHART 33: PROBABILITY THAT THE 3% OF GDP REFERENCE VALUE WILL BE BREACHED IN THE COURSE OF A GIVEN YEAR, CONDITIONAL ON THE MEDIUM-TERM OBJECTIVE TARGETED (AS % OF GDP)



Sources: Eurostat, STATEC, BCL calculations

Notes: For a given medium-term objective, the probability is inferred starting from a normal distribution centered on this MTO and with the standard deviation of the general government balances recorded over the 1991-2006 period. This exercise is repeated for each of the three selected countries. By assumption the targeted MTO is complied with on average, the deviations from the MTO being symmetric. These deviations could stem from macroeconomic conditions or from other sources of budgetary volatility such as the decoupling of tax bases from cyclical developments. The standard deviation of fiscal balances recorded over the 1991-2006 is deemed sufficiently representative.

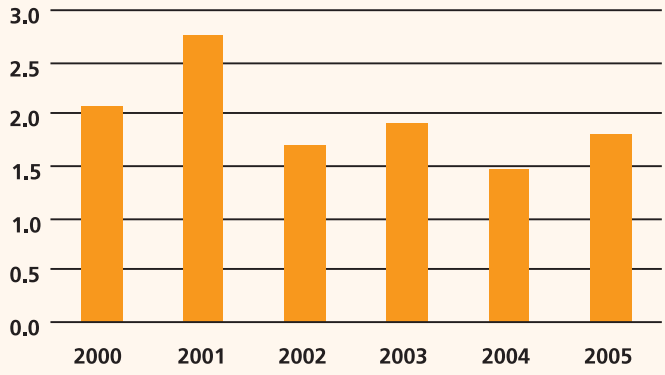
Pension reform in Luxembourg: some insights

Favourable short-term indicators, but serious challenges in the future

The short-term fiscal indicators of the private sector pension regime are extremely favourable, as indicated in the next chart. Surpluses of about 2% of GDP allowed this regime to accumulate significant reserves reaching 22% of GDP in 2005.

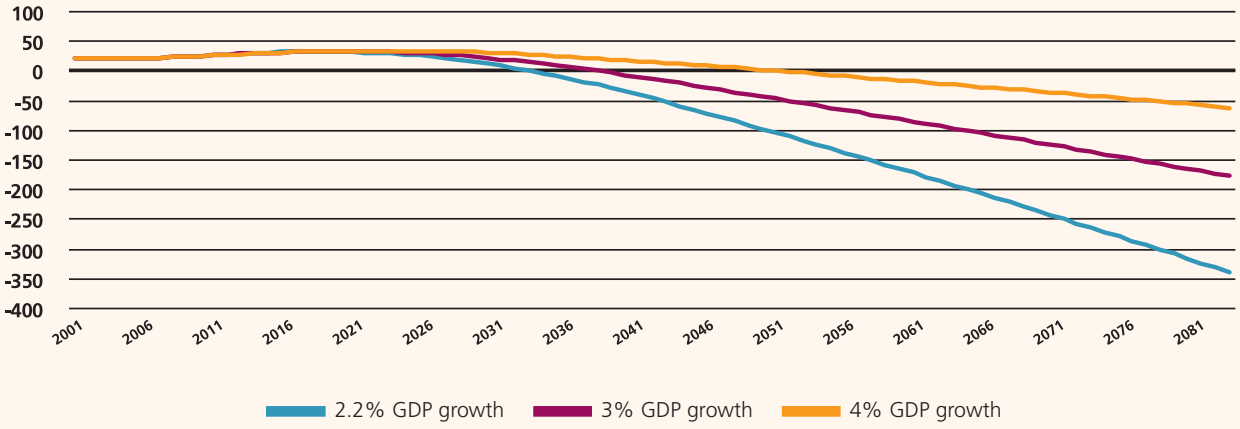
However, long-term indicators depict a distinctively darker picture. As illustrated in the chart below, the baseline scenario, which is based on the assumption of a 3% GDP growth rate from 2010 onwards, would result in sizeable net liabilities of the pension regime equal to about 200% of GDP around the end of the projection horizon. Net liabilities would even reach 350% of GDP under a 2.2% growth scenario. Liabilities would be of a much lesser magnitude under a 4% growth scenario, but the latter would require the participation of more than one million cross-border workers to the labor force at the end of the horizon, namely about ten times more than at the current juncture.

CHART 34: THE BUDGETARY SITUATION OF THE PRIVATE SECTOR PENSION REGIME: FISCAL BALANCES (% OF GDP)



Sources : IGSS, STATEC

CHART 35: LONG-TERM PROJECTION OF THE BUDGETARY SITUATION OF THE PRIVATE SECTOR PENSION REGIME: PENSION RESERVES (+) OR LIABILITIES (-) UNDER ALTERNATIVE GDP GROWTH SCENARIOS (% OF GDP)



Notes: The underlying assumptions are spelled out in BCL Working Paper n°23. The macroeconomic, financial and demographic assumptions as well as the number of cross-border workers were updated at the beginning of May 2007. The June 2007 macroeconomic projections made by BCL are used for the 2007-2009 period, which means that the growth scenarios illustrated in the chart do not apply before the 2010-2085 horizon. It is further assumed that the net number of immigrants will be equal to 4 000 a year over this horizon. The number of cross-border workers is the "residual" variable, which ensures that total employment grows in line with the rates of GDP growth selected in the different scenarios and with productivity growth - by assumption 2% a year - over the same 2010-2085 period.

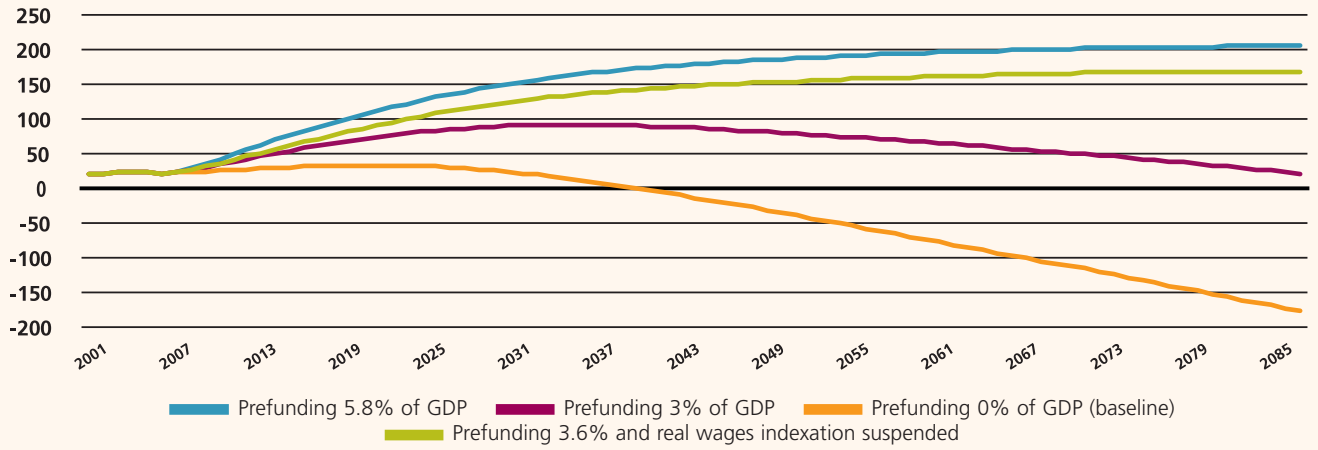
Sources: IGSS, STATEC, BCL calculations

These results should, of course, be interpreted with caution. They should be viewed as attempts to outline the major trends at stake over a long-term horizon rather than as firm predictions, as many uncertainties lie ahead. However, in spite of several shortcomings, long-term projections are clearly required, especially in a country like Luxembourg, where short-term indicators are distorted by the large inflow of cross-border and foreign workers recorded over the last decade. This evolution gave way to a steep increase of social contributions not matched by commensurate increases on the expenditure side. This mismatch explains most of the aforementioned surpluses, which are bound to disappear unless high economic growth and the associated inflow of cross-border workers are sustained over all the projection horizon. These developments will unfold over a long period of time, underlining the need for a long-term projection horizon that will encompass the life cycle of all the cross-border workers currently employed.

What should be the next steps forward?

Pension reform should be implemented as soon as possible in Luxembourg. The financial situation of the pension regime faces pronounced deterioration in the future, if policy remains unchanged. In addition, delayed adjustment would be extremely costly, as it would require much higher social contributions (at least 40% of gross income around the end of the projection horizon under a wait-and-see strategy, compared to the current 24%), or much lower pensions. This calls for immediate action. As indicated in the chart below, only a prefunding effort equal to about 6% of GDP - namely a permanent increase in revenue or decrease in expenditure by 6% of GDP - would guarantee the advent of a stable, self-sustained equilibrium, in which investment income would be sufficiently high to offset the additional expenditure induced by ageing. Such an equilibrium would ensure convergence to a steady-state level of reserves equal to about 200% of GDP. As explained in BCL Working Paper n° 23, this equilibrium would also comply with the present value budget constraint over an infinite time horizon. The Working Paper also highlighted that high reserves would protect the pension system from adverse macroeconomic developments, what represents a very desirable feature in a small, open economy like Luxembourg. Any prefunding effort lower than 6% of GDP, for instance 3% of GDP as illustrated in the chart, would result in a systematic drift away from the steady-state equilibrium, which means that long-term sustainability would not be achieved and that the pension regime would not be shielded from adverse macroeconomic developments.

CHART 36: LONG-TERM PROJECTION OF THE BUDGETARY SITUATION OF THE PRIVATE SECTOR PENSION REGIME: PENSION RESERVES (+) OR LIABILITIES (-) UNDER ALTERNATIVE PREFUNDING SCENARIOS AND CONDITIONAL ON A 3% GDP GROWTH RATE (% OF GDP)



Sources: IGSS, STATEC, BCL calculations

The prefunding effort could rest on the implementation of a combination of measures. In the Luxembourg context, the following illustrative steps could be envisaged:

- Temporary suspension of the biennial indexation of pensions to real wage developments, for instance from 2009 to 2017 as illustrated in the chart above. In this case, the residual prefunding effort could decline to 3.6% of GDP and the corresponding equilibrium reserves to 170% of GDP.

- Better management of pension reserves. The real returns achieved in the recent past are very low, as they reached 1% only on average over the 1997-2005 period due to a short-term investment bias. The Government Pension Fund in Norway achieved a real return higher than 4% over the same period. Had Luxembourg have achieved the same return, pension reserves would have reached 28% of GDP instead of 22% at the end of 2005. The discrepancy (6% of GDP) is equivalent to approximately three quarters of a yearly pension bill.

- Recalibration of the formula used to calculate individual pensions, in order to raise the effective retirement age closer to the legal age (65 years). A device currently used to encourage later retirements ("augmentation échelonnée") should be reinforced. By contrast, other components of the pension formula (the so-called "majoration proportionnelle") should be adjusted downwards in order to guarantee that the new calibration is financially neutral for individuals who retire at 65.