01 THE ECONOMIC AND FINANCIAL SITUATION

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1.1 THE ECONOMIC SITUATION AT THE INTERNATIONAL LEVEL

1.1.1 Short-term interest rates and monetary policy decisions

In April 2011, the Governing Council increased the key ECB interest rates by 25 basis points, after leaving them unchanged since May 2009. Thus as of June 2011, the interest rate on the main refinancing operations (MROs) stands at 1.25%, while those on the deposit facility and on the marginal lending facility stand at 0.50% and 2.00% respectively.

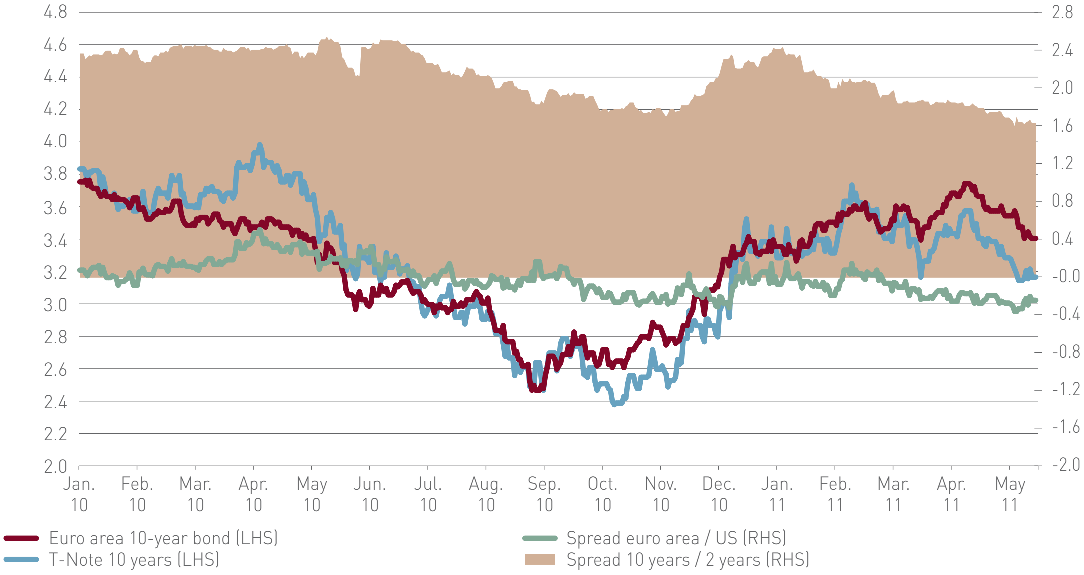
The Governing Council decided in March 2011 to continue to conduct MROs and the special-term refinancing operations with a maturity of one maintenance period as fixed rate tender procedures with full allotment for as long as necessary. Furthermore, the Governing Council decided to conduct the three-month longer-term refinancing operations (LTROs) as fixed rate tender procedures with full allotment. [1]

1.1.2 Government bond markets

Over the review period, long-term yields on government bonds in the US and the euro area first decreased, reflecting tensions in some euro area sovereign debt markets. The financial support granted to Greece, the creation of the EFSF and the non-standard measures introduced by the Eurosystem in May 2010 limited the propagation of these tensions without interrupting this trend which lasted until the end of the summer. From the third quarter of 2010, government bond yields finally started to increase in a financial environment characterised by risk-seeking behaviour. The improvement of the economic outlook, market participants' inflation expectations and the expected increase in central bank interest rates over the next quarters also contributed to this upward trend, despite the second phase of the quantitative easing launched by the Fed in November 2010.

1 This decision pertained to LTROs allotted on 27 April, 25 May and 29 June 2011.

Chart 1.1: Long-term yields on government bonds
(LHS: annual percentage; RHS: percentage points)



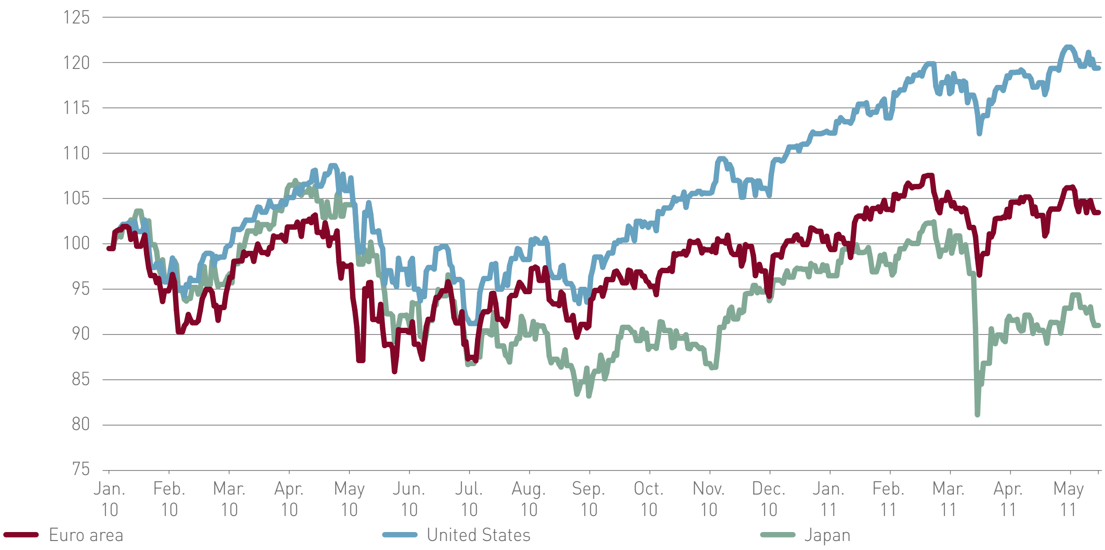
Sources: ECB, Bloomberg

The spread between 2-year and 10-year euro area government bond yields slightly decreased with the reduction of the excess liquidity in the banking system and the expected increase of short-term interest rates. Finally, the spreads of Greek, Irish and Portuguese 10-year government bonds vis-à-vis their German counterpart substantially widened forcing these countries to successively bid for international financial support.

1.1.3 Equity markets

Over the review period, the Dow Jones EURO STOXX and the S&P 500 have increased by 4.0% and 20.0% respectively, while the Nikkei 225 dropped by 8.5% as a consequence of the devastating earthquake in early March.

Chart 1.2: Major equity indices



Source: Bloomberg

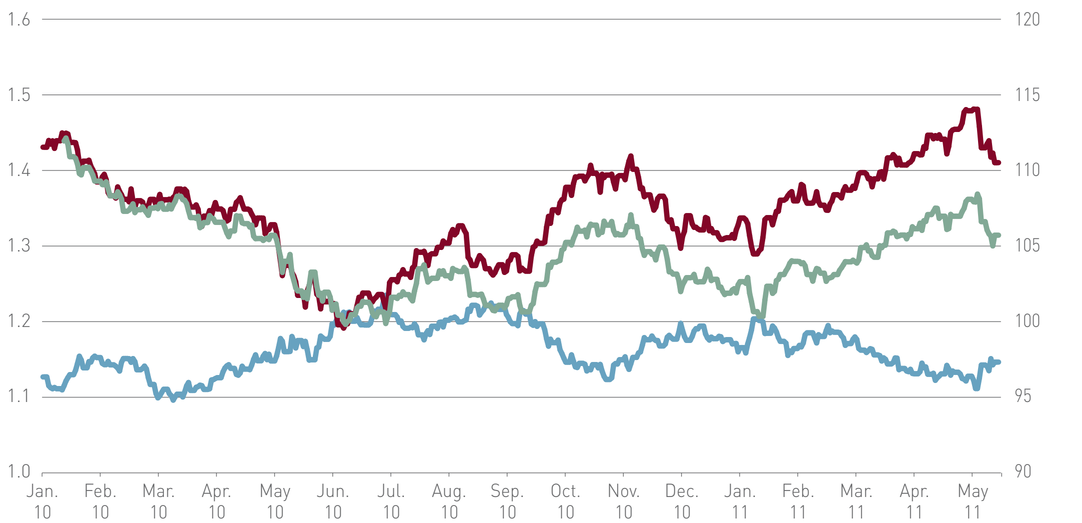
The bullish mood which prevailed in equity markets since the second half of 2009 was interrupted in the first part of 2010 due to concerns regarding the macro-financial environment. Despite the Greek sovereign debt crisis, equity markets were supported by a flow of positive economic news regarding the corporate sector and the strength of the global recovery. Overall, financials underperformed stock market returns, especially after

November 2010, with the renewal of the tensions in the peripheral euro area countries. The upward trend of the main equity indices lasted until the end of the period under review, despite the disruption generated by political tensions in the Arab countries and consequences of the earthquake in Japan.

1.1.4 Foreign exchange markets

Against the backdrop of strong market volatility, the nominal effective exchange rate of the euro, measured against the currencies of the euro area's 20 most important trading partners, reached a level slightly below the one prevailing at the beginning of 2010.

Chart 1.3: The euro exchange rates



Source: Bloomberg

Over the review period, the euro first depreciated against the US dollar to reach 1.19 USD/€ in June. The common currency then strengthened from the second half of 2010, due to the reduction in the excess liquidity in the banking sector and the expected increase in short-term interest rates in the euro area. The new round of quantitative easing in the US and the evolution of oil prices also weighed in on the US dollar. On 15 May 2011, the euro stood at 1.41 USD, 6% above its 2010 average.

As regards other currencies, the Japanese yen and the Swiss franc appreciated by 14.4% and 15.0% respectively against the euro, while the pound sterling overall traded in a fairly narrow band. The currencies participating in the ERM II have remained broadly stable against the euro. The Estonian crown continued to trade at a level close to its central rate of 15.6466 EEK/€, which was used as the reference rate for the conversion to the euro in January 2011. The currencies of the remaining European Union countries not participating in the ERM II also rose against the euro; in particular the Swedish koruna stands out in light of its appreciation of roughly 12%.

1.1.5 Consumer prices

HICP inflation has accelerated sharply since mid-2009. It rose from -0.9% in July 2009 to 2.2% at the end of 2010 and further to 2.8% in April 2011, its highest level since the end of 2008. Annual average inflation in 2010 was 1.6%.

The reversal in the inflation dynamics since mid-2009 stems almost exclusively from the sharp rise in the oil price and the subsequent acceleration in energy prices. In that context, HICP energy inflation rose from -14% in July 2009 to +11% in December 2010 and further to 13% in the first quarter of 2011. In the first stage, the inflationary impact of the sharp rise of oil prices was contained to its direct effects as the inflation rate for the ex energy inflation, receded until the beginning of 2010. This disinflation period however came to an end in mid-2010 and, since then, the inflation rate for the HICP excluding energy and unprocessed food has been on the rise again. It increased steadily from 0.9% in the second quarter of 2010 to 1.8% in April 2011. This turnaround was also broad-based, though not perfectly synchronised. Food and non-energy industrial goods inflation accelerated already in the second quarter of 2010, somewhat earlier than services inflation.

Table 1.1: Developments in the HICP and its components (in annual percentage changes)

	2008	2009	2010	2010 Q2	2010 Q3	2010 Q4	2011 Q1	April-11
HICP	3.3	0.3	1.6	1.6	1.7	2.0	2.5	2.8
Unprocessed food	3.5	0.2	1.3	1.0	2.3	2.7	2.3	1.4
Processed food	6.1	1.1	0.9	0.8	0.9	1.3	2.1	2.8
Non-energy industrial goods	0.8	0.6	0.5	0.5	0.5	0.8	0.5	1.0
Energy	10.3	-8.1	7.4	8.1	7.3	9.2	12.7	12.5
Services	2.6	2.0	1.4	1.2	1.4	1.3	1.6	2.0
HICP ex energy and unprocessed food	2.4	1.3	1.0	0.9	1.0	1.1	1.3	1.8

Source: Eurostat

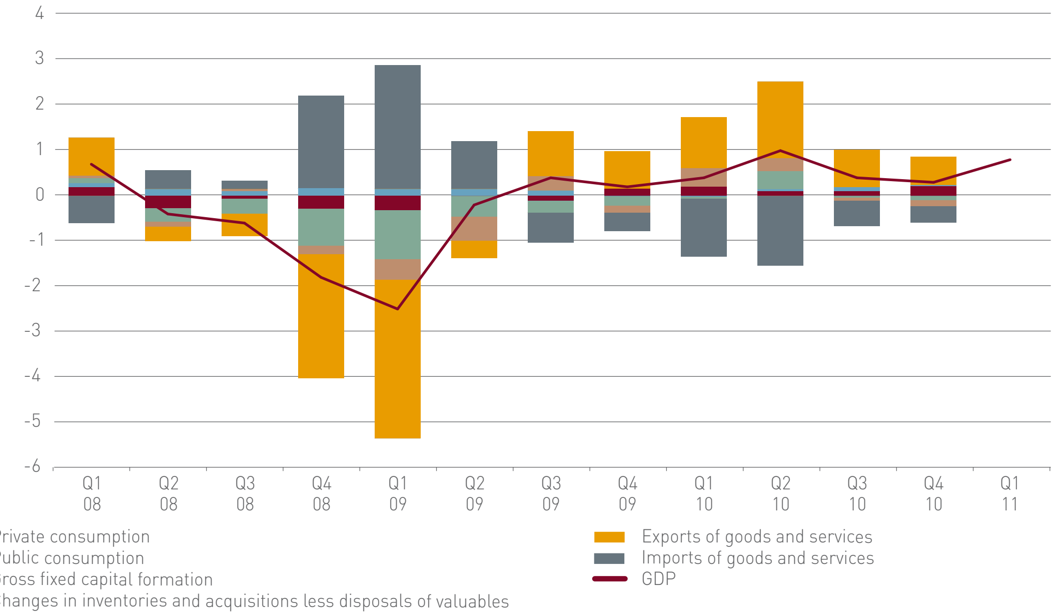
According to the Eurosystem staff projections, HICP inflation will average between 2.5% and 2.7% in 2011 and between 1.1% and 2.3% in 2012. Compared to the March 2011 exercise, these projections have been revised upwards.

1.1.6 Output, demand and labour market developments

Economic activity in the euro area picked up in 2010 and rose by 1.8% (after -4.1% in 2009). Output grew by 2.0% on a year-on-year basis in the last quarter of 2010. The breakdown of expenditure indicates that GDP growth was mainly driven by private consumption, fixed capital formation as well as external trade. The sectoral decomposition indicates that activity evolved favourably in all economic sectors except for construction, where activity declined by -2.9% on a year-on-year basis.

According to Eurostat's flash estimate for the first quarter of 2011, euro area GDP growth accelerated to 0.8% relative to the previous quarter and to 2.5% in annual terms. Economic activity expanded in all euro area countries except for Portugal and Greece.[2]

Chart 1.4: Real GDP growth and contributions to growth
(quarter-on-quarter growth rate and quarterly percentage point contributions; seasonally adjusted)



Source: Eurostat

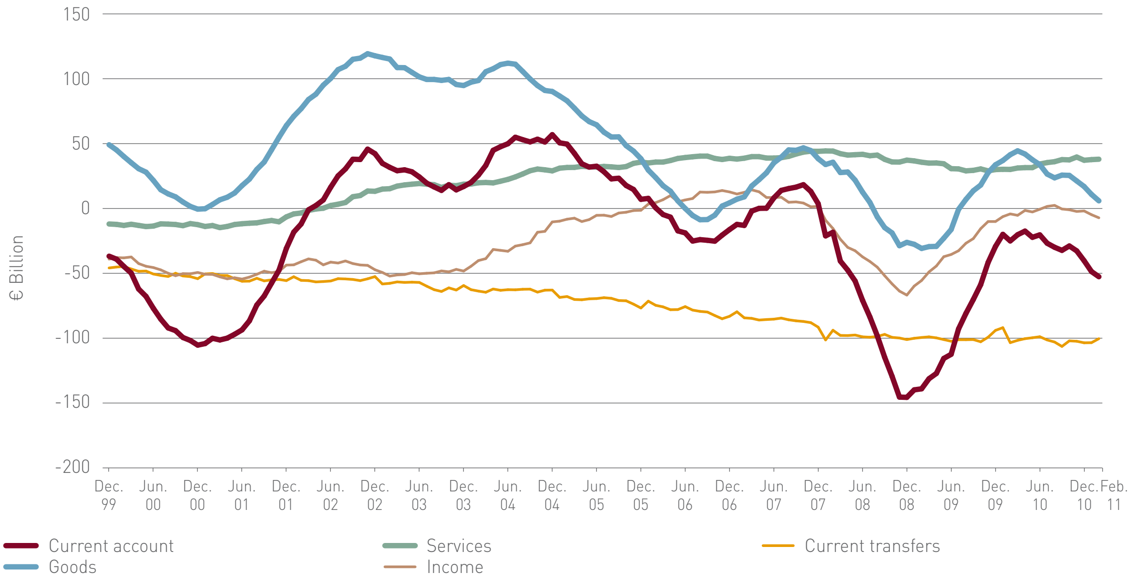
2 No data for Ireland, Luxembourg, Malta and Slovenia were available at the cut-off date of this Annual Report.

Following the pick-up in economic activity, employment rose on an annual basis by 0.2% in the fourth quarter of 2010. The euro area unemployment rate reached 9.9% in March 2011 and has remained stable around 10.0% since the first quarter of 2010. Regarding labour costs, compensation per employee and negotiated wages increased moderately by 1.6% in the fourth quarter of 2010 (year-on-year growth rate). Furthermore, as labour productivity grew faster than compensation per employee, unit labour costs declined on an annual basis by 0.2% in the last quarter of 2010.

1.1.7 External trade and current account

In 2010, the current account of the euro area recorded a deficit of 37 billion euro (or 0.4% of GDP), compared with a deficit of 26 billion euro in 2009. This worsening resulted from deterioration in the goods and the current transfer balances which were, however, in part offset by significant improvement in the services and the income balances. The euro area surplus in goods, which normally contributes positively to the overall current account balance, dropped by 45% falling to 21 billion euro in 2010. Higher prices of energy and other raw materials were the main factor behind this deterioration.

Chart 1.5: Current account balance and its components (12-months cumulated transactions)



Source: ECB

1.2 THE ECONOMIC SITUATION IN LUXEMBOURG

1.2.1 Prices, costs and competitiveness

1.2.1.1 Consumer prices

In 2010, consumer price inflation was at a fairly high level and it was characterised by a steady acceleration throughout the year. The NICP inflation rate rose from 2.1% in January to 2.5% in July and further to 2.8% at the end of the year. This process continued in 2011 as the inflation rate accelerated even to 3.7% in April 2011, thus about 1.0pp above its level in the euro area. In annual average terms, prices rose by 2.3% in 2010. The HICP inflation was somewhat higher than the NICP inflation but its intra-annual profile was more stable. The annual HICP inflation rate went from 3.0% in January 2010 to 2.9% in July 2010 only to climb to 3.1% at the end of the year. The rate accelerated in the beginning of 2011 and reached 4.0% in March and in April. In annual average terms, HICP inflation was 2.8% in 2010.

Chart 1.6: Inflation indicators (annual percentage changes)

Source: Statec

The unfavourable inflation developments stem from both the acceleration in energy prices and the turn-around in the ex energy inflation. Subsequent to the sharp rise in oil prices since the beginning of 2009, energy inflation turned positive already towards the end of that year (see chart). This upward momentum continued into 2010 and, in annual average terms, energy inflation was almost 15% in 2010. Excluding energy prices, the inflation rate first receded in the beginning of 2010 only to witness a turnaround towards mid-2010. The annual inflation rate dropped from 1.9% at the end of 2009 to 1.0% in the second quarter of 2010 only to end the year at 1.7%. This acceleration continued into 2011 as the inflation rate rose to 2.5% in April. The main causes of this last inflation increase are the impacts of the automatic wage payout in July 2010 on the prices of some services as well as pronounced rises in administered prices.

Since mid-2010, inflation in Luxembourg has been steadily higher than in the euro area and in the three neighbouring countries. Over the period from the beginning of phase III of EMU in 1999 to the beginning of 2011, Luxembourg's cumulated inflation differential stood at 4.5 percentage points vis-à-vis the euro area and 8.2 percentage points vis-à-vis Luxembourg's neighbouring countries.

According to the BCL's consumer survey, consumers perceived the sharp rise in headline inflation only with a lag of several months. Qualitative inflation perceptions started only to rise towards the end of 2009 and inflation expectations - after a short period of dithering - only rebounded towards the end of 2010. As regards the latter, and unlike in the two previous years, it seems that consumers no longer expect a broad-based fall in prices.

1.2.1.2 Producer prices in industry

Industrial producer prices picked up in 2010 together with the revival of global demand for industrial goods. The price increase was especially marked for the intermediate goods. Data for the first quarter of 2011 indicate that industrial producer prices continued to rise.

Price increases of construction services decelerated in 2010, as they only increased by 0.7% (after +1.1% in 2009). This development appears to be quite moderate given the rise in prices of intermediate goods observed in 2010.

Table 1.2: Industrial producer prices (changes with respect to the previous period)

	2009	2010	2009-Q4	2010-Q1	2010-Q2	2010-Q3	2010-Q4	2011-Q1
Total	-8.3	3.7	0.4	1.7	5.0	1.1	-0.5	4.9
Intermediate goods	-14.2	7.1	0.6	2.5	9.0	3.4	-1.0	5.9
Capital goods	1.5	2.2	0.7	-1.0	1.0	2.6	1.5	4.9
Consumer goods	2.6	0.1	0.8	-0.6	-0.2	0.6	0.3	1.1
Energy	-0.8	-3.7	-0.5	-0.4	2.0	-6.7	-0.9	4.4

Source STATEC

1.2.1.3 Labour costs

The first release of national accounts data for 2010 suggests that compensation per employee grew by 1.6% in 2010, after 1.8% in 2009. The sectoral decomposition indicates that compensation per employee growth rate decelerated in the sectors "wholesale and retail trade; hotels and restaurants; transport" (2.2%) as well as in "other services" (1.2%) and accelerated in the financial sector (1.6%) and industry (3.0%). The average compensation per employee slightly decreased in construction (-0.2%), probably as a result of the bad weather conditions in early 2010 and by the end of the year.

According to IGSS data, compensation per employee rose by 2.5% in 2010 (after 2.0% in 2009). Despite the fact that these figures are not perfectly comparable to national accounts data (which are subject to various adjustments), the monthly IGSS data provide useful information on labour cost developments. National accounts are subject to future revisions and should therefore be interpreted with caution.

In 2010, real unit labour costs declined by 5.5% and nominal unit labour costs slightly decreased by 0.3% (after the sharp increase of respectively 7.0% and 6.7% registered in 2009).

According to the latest available data, compensation per employee increased by 2.0% in the last quarter of 2010 (on an annual basis).

1.2.1.4 Competitiveness

In 2010, the price and cost competitiveness indicators improved (except for the indicator based on GDP deflator). Nevertheless, according to the results of the recent Eurosystem projection exercise, the competitiveness indicators should return to their deteriorating trend throughout the projection horizon.

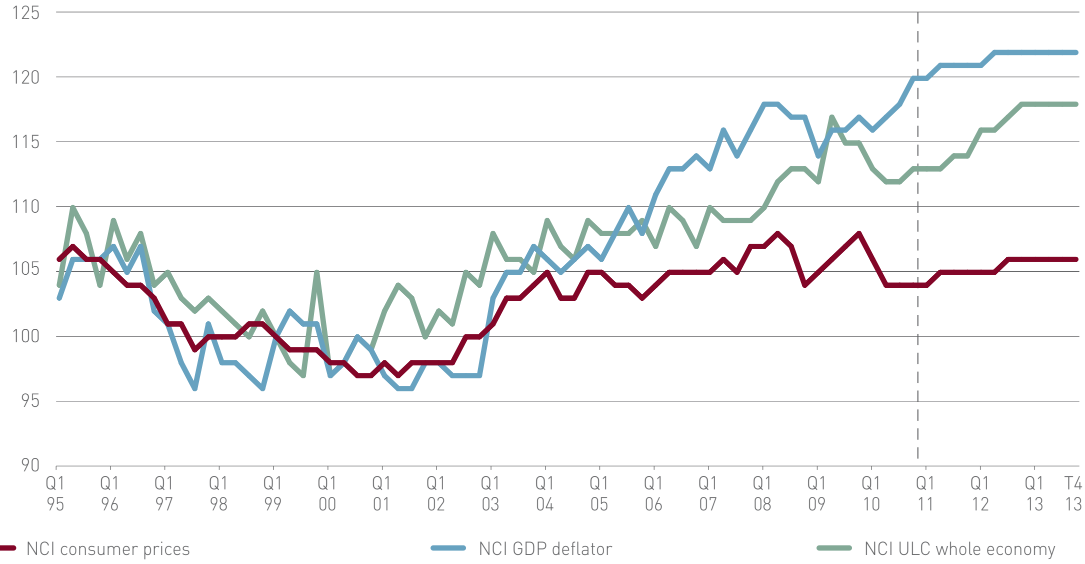
The competitiveness indicators calculated by the BCL are effective exchange rate indices deflated by different measures of prices and costs. These indicators compare prices or costs in Luxembourg to a weighted average of the same prices or costs in Luxembourg's main trading partners,[3] all expressed in a common currency. The weight attached to each trading partner reflects its importance in Luxembourg's external trade.

The chart illustrates Luxembourg's competitiveness indicators extended to 2013 using the recent Eurosystem projections.[4] For each series, an increase signals that prices or costs are growing faster in Luxembourg than abroad (deteriorating competitiveness).

3 The group of trading partners considered includes the 26 other members of the European Union and eleven additional countries: Switzerland, Norway, USA, Canada, Japan, Australia, New Zealand, South Korea, China, Hong Kong and Singapore.

4 The years 2011-2013 are based on projections of the deflators for the 17 euro area countries and technical assumptions for the UK, Switzerland, USA and Japan.

Chart 1.7: National Competitiveness Indicators based on consumer prices, GDP deflator and unit labour costs (ULC) for the whole economy



Sources: Eurosystem and BCL calculations

The indicator based on consumer prices improved by -1.8% in 2010 and registered a further improvement in the first quarter of 2011, the latest available observation (-1.4% on an annual basis). According to the projections, this indicator should deteriorate again in 2011 (+0.5%) and continue to deteriorate over the whole projection horizon (+0.7% in 2012 and +0.5% in 2013). The competitiveness indicator based on the GDP deflator deteriorated by +1.8% in 2010 and +2.1% in the last quarter of 2010 (latest available observation). The projections anticipate a sharp deterioration in 2011 (+2.6%) and slower deterioration in 2012 (+0.6%) and 2013 (+0.3%). The indicator based on unit labour costs in the whole economy indicates an improvement of -2.0% in 2010. According to the projections, cost-competitiveness should deteriorate by +1.1% in 2011, +2.8% in 2012 and +0.8% in 2013.

Box 1.1:

COMPETITIVENESS: SOME FUNDAMENTAL ASPECTS

In a speech at the University of Liège in February 2011, the President of the European Central Bank presented some fundamental elements underlying competitiveness. Competitiveness may be defined as "a country's ability to achieve sustainable improvements in the economic living standards and job opportunities of its citizens in an open economy". This is especially important within the Economic and Monetary Union (EMU), where excessive competitiveness differentials may lead to persistent imbalances among Member States. The competitiveness strategy of EMU Member States should be based on the following key elements.

1. ***Unit labour costs in the non-tradable sector are essential for competitiveness***

Non-tradable goods and services are those not usually traded internationally because of physical barriers, national regulations or high transport costs. Firms producing these goods and services are commonly known as the "sheltered" or "protected" sector while those producing tradable goods and services (usually those in manufacturing) are known as the "exposed" sector subject to international competition.

Non-tradable goods and services are important inputs in the production of tradable goods. Thus, unit labour cost increases in the sheltered sector may force tradable sector firms to reduce their profit margins as they cannot transmit higher input prices to international prices. In the long run this can shrink the exposed sector and harm potential growth.

Table 1 shows that between 1998 and 2010 unit labour costs in the manufacturing sector increased by 20.3% in Luxembourg against 5.0% in the neighboring countries and 8.6% in the euro area (in cumulative terms).

Table 1: Cumulated growth of unit labour costs by economic sector (1998 to 2010) (in percentage)

	Belgium	France	Germany	Italy	Netherland	Euro area	United Kingdom	Luxembourg
Whole economy	25.5	23.7	5.2	33.0	28.1	22.2	39.4	35.0
Industry	7.9	6.8	0.3	31.2	3.4	7.9	29.7	19.3
Manufacturing	8.4	6.0	0.5	35.8	2.7	8.6	21.3	20.3
Construction	19.5	57.7	14.8	69.9	66.3	40.3	97.4	51.8
Trade, transports and communication	23.2	19.5	6.0	25.6	3.8	17.1	26.0	7.2
Financial activities, real estate and business services	30.5	32.5	28.2	42.1	40,9	37.7	36.4	56.6

Remark: cumulated growth is computed by comparing the average labour cost level in 1998 to the average level in 2010

Source: OECD and BCL calculations

2. *Public wages affect competitiveness through private sector wages*

Recent empirical analyses suggest that an increase in public wages may affect private sector wages through a variety of channels influencing competitiveness.

First, an increase in public sector employment raises the probability that the unemployed will find a job, increasing their reservation wage also in the private sector. In addition, an increase in public sector wages raises the value of public sector jobs to the unemployed. Thus, public wages may exert pressure on wage bargaining and crowd out private sector employment. Secondly, if wages in the public sector wages grow faster than in the private sector, the latter may increase to reduce the augmented wage differential between these two sectors. This is known as a "signaling effect" from the public to the private sector. Lastly, tax increases required to finance pay increases in the public sector impose an additional tax burden on the private sector, raising labour costs beyond productivity increases.

Graph 1 indicates that between 2000 and 2010 compensation per employee (in the whole economy) increased at a higher pace in Luxembourg (3.0%) than in its neighboring countries or the euro area. In addition, compensation per employee grew faster in the public sector (3.2% on average) than in the private sector (2.9%).[1]

3. *High and persistent inflation differentials undermine competitiveness*

A monetary union and the price stability objective are not incompatible with temporary deviations from average euro area inflation. Transitory inflation differentials may reflect differences in economic development of Member States, in their degree of economic openness or their relative business cycle position. Inflation differentials represent a potential adjustment factor in the absence of nominal exchange rates. However, evidence increasingly suggests that differentials within the euro area can hardly be explained by catching-up effects, the so-called Balassa-Samuelson effect. Instead, they may indicate inappropriate macroeconomic policies in some Member States. Automatic wage indexation - as in Luxembourg - may feed persistent inflationary spirals, increasing inflation differentials and competitiveness losses. It is worth noting that Luxembourg has suffered increasing cumulated inflation differentials since the launch of EMU.[2]

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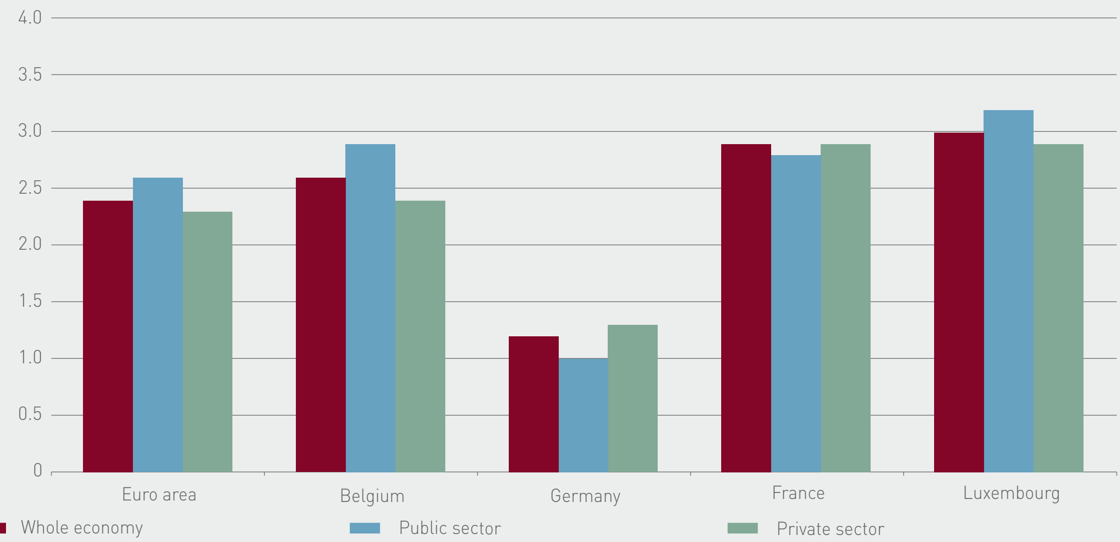
1 Data relative to the private sector is computed by deducting the figures of the sectors L to P from the figures of the whole economy.

2 Please refer to the BCL Bulletin 2011/1

Chart 1: Average annual growth rate of compensation per employee by sector (2000-2010) (in percentage)



Remark: due to missing data on public employment, this graph refers to 2000-2009 for the euro area and 2000-2008 for France. Remaining countries refer to 2000-2010.

Source: Eurostat and BCL calculations

1.2.2 The labour market

1.2.2.1 Employment

Following the pick-up in demand, employment growth accelerated to 1.8% in 2010, after 1.1% in the previous year. Available data suggest a stabilisation of employment growth during the second half of 2010 and in early 2011.

Job vacancies increased throughout 2010, indicating improving employers' confidence. In 2010, improved labour market conditions contributed to the net creation of more than 6 100 jobs. Regarding the various components, after a sharp deceleration during the crisis, annual growth of non-resident employment has accelerated over the whole year of 2010 to 2.6% in April 2011. National annual employment growth has stabilised at around 2.0% since the third quarter of 2010.

The sectoral decomposition indicates that all economic sectors contributed positively to employment growth in 2010, except for industry (-0.1 pp).

Table 1.3: Annual employment growth (in%) and rate of unemployment

	Employees*	Self-employed*	Total domestic employment*	Incoming cross-border commuters*	National employment*	Active population*	Unemployment (narrow definition)	Unemployment (narrow definition), seasonally adjusted	Unemployment (broad definition)	Unemployment (broad definition), seasonally adjusted
2005	3.2	0.2	3.0	5.8	1.7	2.1	4.2%	4.3%	6.1%	5.3%
2006	4.1	-0.7	3.8	6.7	2.0	2.1	4.4%	4.4%	6.3%	5.5%
2007	4.6	0.5	4.4	7.9	2.4	2.3	4.4%	4.4%	6.1%	5.5%
2008	5.0	2.5	4.8	7.2	3.2	3.2	4.4%	4.4%	5.7%	5.7%
2009	1.2	1.4	1.2	1.0	1.4	2.8	5.7%	5.7%	7.0%	7.0%
2010	1.7	1.4	1.7	1.7	1.7	2.2	6.0%	6.0%	7.6%	7.6%
2010Q1	0.7	3.3	0.8	0.3	1.2	2.1	6.3%	6.0%	7.8%	7.6%
2010Q2	1.7	1.4	1.7	1.6	1.7	2.1	5.7%	6.0%	7.4%	7.6%
2010Q3	2.2	0.4	2.1	2.2	2.0	2.2	5.8%	6.1%	7.4%	7.6%
2010Q4	2.4	0.7	2.3	2.7	2.0	2.2	6.3%	6.1%	7.9%	7.8%
Jan-10	0.3	3.2	0.4	-0.2	0.9	1.9	6.4%	5.9%	7.8%	7.5%
Feb-10	0.7	3.4	0.9	0.4	1.2	2.1	6.4%	6.0%	7.9%	7.6%
Mar-10	1.0	3.2	1.2	0.8	1.5	2.2	6.2%	6.0%	7.7%	7.7%
Apr-10	1.5	1.7	1.5	1.4	1.6	2.1	5.9%	6.0%	7.5%	7.6%
May-10	1.7	1.2	1.6	1.4	1.8	2.1	5.6%	6.0%	7.3%	7.5%
June-10	1.9	1.3	1.9	1.9	1.9	2.2	5.6%	6.1%	7.3%	7.6%
July-10	2.0	0.6	1.9	2.0	1.9	2.2	5.7%	6.1%	7.3%	7.6%
Aug-10	2.3	0.5	2.2	2.3	2.0	2.3	5.8%	6.1%	7.4%	7.6%
Sep-10	2.3	0.3	2.2	2.4	2.0	2.2	5.9%	6.1%	7.6%	7.7%
Oct-10	2.4	0.8	2.3	2.6	2.1	2.3	6.1%	6.1%	7.8%	7.7%
Nov-10	2.4	0.6	2.3	2.6	2.0	2.2	6.2%	6.1%	7.9%	7.8%
Dec-10	2.4	0.6	2.3	2.8	2.0	2.2	6.5%	6.1%	8.1%	7.9%
Jan-11	2.5	0.6	2.4	2.4	2.4	2.2	6.3%	5.9%	8.0%	7.7%
Feb-11	2.4	0.6	2.3	2.6	2.1	1.8	6.2%	5.8%	7.9%	7.6%
Mar-11	2.4	0.7	2.3	2.6	2.1	1.8	5.9%	5.7%	7.7%	7.6%
Apr-11	2.2	1.6	2.2	2.6	1.9	1.9	5.9%	6.0%	7.7%	7.7%

* Data from February 2011 to April 2011 are estimates. Furthermore, data related to unemployment in April 2011 are provisional data.

Sources: ADEM, IGSS, STATEC and BCL calculations

1.2.2.2 Unemployment

Narrow unemployment reached 6.0% in 2010, after 5.7% in 2009. The seasonally adjusted narrow unemployment rate has stabilised around 6.0% since the end of 2009 and the latest available data suggests a slight decrease during early 2011. Data for April 2011 are still provisional and will probably be revised (downwards). The "broad" unemployment rate increased to 7.7% in 2010, from 7.0% in the previous year. This increase can mainly be explained by the growing number of unemployed people benefiting from "employment support measures". In fact, the average monthly number of support measures has increased by 24.1% in 2010 compared to 2009.

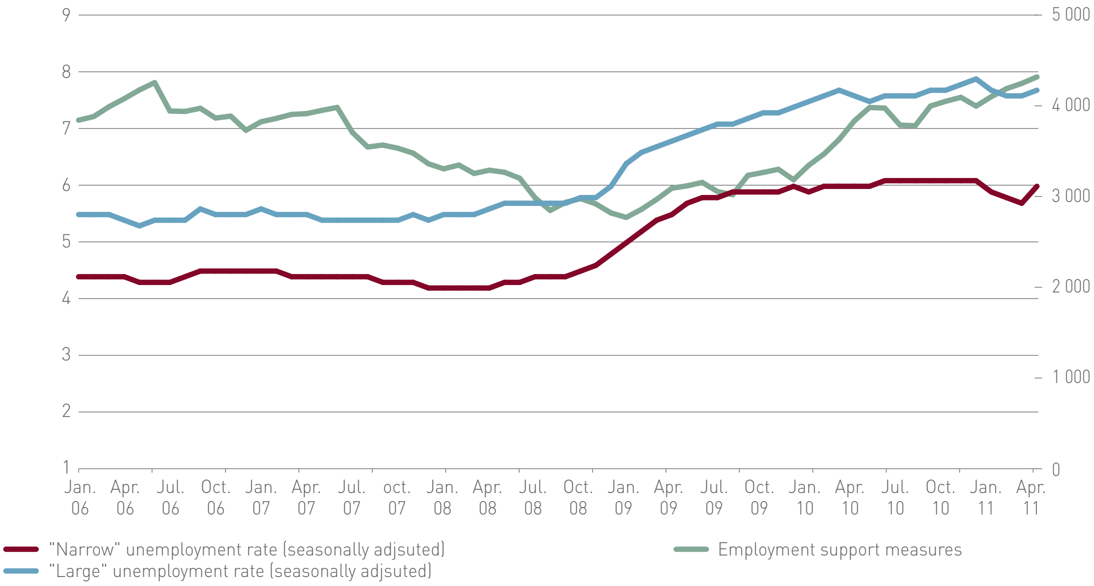
Firms continue applying for short-time work but their use has sharply decreased since mid-2009 with requests mainly stemming from the industrial sector. The favourable evolution of short-time work suggests that the phasing out (by the end of 2011) of the flexible conditions under which firms are allowed a recourse to this scheme could have a relatively limited impact on unemployment.

According to IGSS data, the number of hours worked per employee slightly increased in 2010 (by 0.2%). This moderate increase could be explained by the fact that the number of non-worked hours[5] remained at a rela-

5 This indicator includes the number hours not worked by employees because of cyclical unemployment (short-time work) as well as hours not worked because of unfavourable weather conditions. It is worth noting that the bad weather conditions registered in early 2010 and at the end of the year certainly contributed to lower activity in some sectors (such as construction) and thus to decreasing working time.

tively high level (despite the decline relative to 2009). Another possible explanation relates to the fact that the number of part-time jobs increased at a higher pace than full-time jobs in 2010 (with respectively 2.2% and 1.7%).

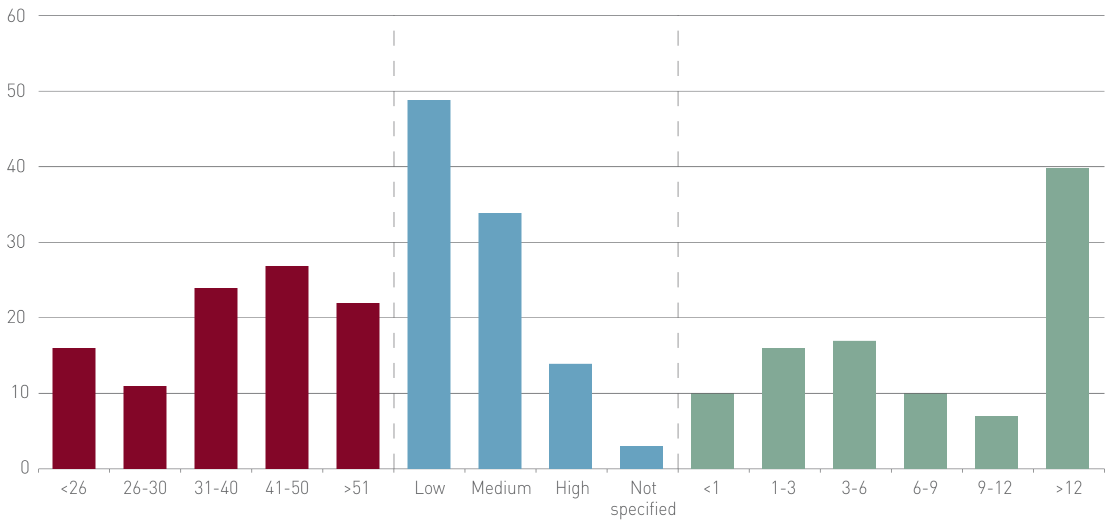
Chart 1.8: Unemployment rate and employment support measures
(in percentage of active population and in units)



Sources: ADEM, IGSS, Statec

The dynamic growth of job vacancies contributed to an improvement in the matching between labour demand and labour supply. Nevertheless, as witnessed by the graph below, labour mismatch remains high, in particular for a priori more vulnerable groups of unemployed people. In fact, almost one half of all unemployed people have a lower level of education and one fifth of unemployed people are older than 51 years. Furthermore, 20.0% of resident unemployed people have reduced work ability (for example as a result of a physical handicap). These people usually face greater difficulties to (re-)enter the labour market and tend to contribute to long-term unemployment and structural unemployment. Long-term unemployment has steadily increased in the last few years and accelerated since the crisis.

Chart 1.9: Breakdown of unemployment according to various characteristics (in 2010)
(in percentage of total number of unemployed people)



Sources: ADEM, IGSS, Statec and BCL calculations

The last available observations suggest improving labour market conditions. However, it is likely that the deterioration in unemployment (induced by the crisis) will partially increase structural unemployment.

1.2.3 Sectoral developments

1.2.3.1 Industry and construction

The industrial production per working day index, which is corrected for price developments, has strongly rebounded in 2010. The latest data indicate that the increase in industrial production was modest in the beginning of the year 2011 (+2.1% yoy in February 2011). The sectoral breakdown of production per working day suggests fairly heterogeneous developments in the different branches in the beginning of the current year. Production of investment goods and steel industry strongly increased in February 2011 (by respectively 18.6% and 13.1% yoy). The level of production slightly increased in the energy sector in February 2011 (+3.9%), and it decreased in both the intermediate goods sector (-1.6%) and the consumption goods sector (-2.0%).

Table 1.4: Industry-related indicators (on a yoy variation)

	2009	2010	2009-Q4	2010-Q1	2010-Q2	2010-Q3	2010-Q4
Production per working day - Total	-15.9	10.2	2.8	15.6	14.5	5.2	6.2
Intermediate goods (ppwd)	-16.6	10.0	12.8	23.3	16.6	-0.1	2.2
Capital goods (ppwd)	-29.9	12.8	-22.2	-0.7	17.9	22.1	12.4
Consumer goods (ppwd)	-5.3	11.8	7.0	17.2	6.2	11.0	13.6
Energy (ppwd)	-2.7	11.8	0.7	9.2	22.9	4.1	12.1
Industry excluding steel (ppwd)	-14.8	9.6	-0.6	13.4	12.2	6.5	6.7
Steel industry (ppwd)	-24.2	15.8	46.1	36.9	35.7	-5.7	1.7

Source: STATEC

The activity of the construction sector, which showed some signs of relative resilience in 2008 and 2009, was not very dynamic in 2010. The total number of building permits for housing was more or less stable in 2010 in comparison with 2009. The level of production in the construction sector almost stagnated in 2010, despite the increase in total hours worked. Indicators available for the beginning of the year 2011 indicate that the level of production was buoyant in both January and February 2011, after the decline observed at the end of 2010 due to adverse weather conditions.

Table 1.5: Construction sector-related indicators (on a yoy variation)

	2009	2010	2009-Q3	2009-Q4	2010-Q1	2010-Q2	2010Q3	2010-Q4
Production per working day -Total	1.1	0.2	5.6	3.1	-1.3	4.0	1.6	-3.8
Hours worked	-0.9	1.2	3.5	-5.0	-2.6	9.1	-6.0	4.9
Building permits (housing)	-8.5	0.3	-2.8	-4.4	40.4	13.7	-3.8	-21.0

Source: STATEC

1.2.4 Financial sector

1.2.4.1 Credit institutions' balance sheets

Between December 2009 and December 2010, the aggregated balance sheet of Luxembourgish banks decreased by 3.5% (28 205 million euro) to reach 769 256 million euro at the end of 2010.

Unlike in the previous quarters, this decrease is not mainly due to the fall of the interbank loans. Indeed, interbank loans fell by 19.3% between January 2009 and January 2010, while the decline between December 2009 and December 2010 amounted to 2.8% only. However, the amount of the interbank loans at the end of 2010 (364 047 million euro) has to be compared with the 509 120 million euro recorded during the third quarter of 2008.

The value of the investment portfolio fell by 26 743 million euro (-12.5%) at the end of 2010, to reach 187 683 million euro. This decline can be explained by the fall of a number of market indexes since April 2010. Moreover, in this context banks are trying to sell some of the securities that they are holding, in order to reduce the amount of their risky assets and to improve the quality of their balance sheet. The composition of their portfolio is the following: 92.4% is invested in fixed income securities, and only 7.4% in variable income securities.

Lastly, other assets, which include derivative financial instruments, rose by 28.6% in 2010.

Table 1.6: Main figures related to the asset side of the aggregate balance sheet (in million euro, outstanding amounts at the end of the period)

Assets	Amounts in million euro			Variation in million euro and in %				Relative weight [1]
	12-2009	12-2010	03-2011	12-2009 - 12-2010		12-2010 - 03-2011		03-2011
				in million euro	in %	in million euro	in %	
Interbank loans	374 389	364 047	372 689	-10 342	-2.8	8 642	2.4	48.6
Loans to non-banking customers	188 149	191 174	191 768	3 024	1.6	594	0.3	25.0
Portfolio investment	214 425	187 683	176 821	-26 743	-12.5	-10 862	-5.8	23.1
Other assets	20 497	26 353	24 851	5 856	28.6	-1 502	-5.7	3.2
Total assets	797 461	769 256	766 129	-28 205	-3.5	-3 127	-0.4	100.0

1) Relative weight in relation to total assets
Source: BCL

The conclusions derived from the asset side of the aggregated balance sheet can also be applied to the liability side. On an annual basis, outstanding interbank debts fell by 22 350 million euro to 348 243 million at the end of 2010 (-6% compared to 2009). This amount also includes the operations with the BCL which has reduced its supply of liquidity to the banking sector since September 2009.

The deposits from non-banking customers represented 270 017 million euro at the end of 2010, 0.3% less than at the end of 2009. These deposits represent the second largest source of income for banks.

Lastly, the outstanding amount of debt securities at the end of 2010 was 72 278 million euro, 11.8% less than at the end of 2009.

Table 1.7: Main figures related to the liability side of the aggregate balance sheet (in million euro, outstanding amounts at the end of the period)

Liabilities	Amounts in million euro			Variation in million euro and in %				Relative weight [1]
	12-2009	12-2010	03-2011	12-2009 - 12-2010		12-2010 - 03-2011		03-2011
				in million euro	in %	in million euro	in %	
Interbank debts	370 593	348 243	347 750	-22 350	-6.0	- 493	-0.1	45.4
Deposits to non-banking customers	266 619	265 804	270 017	- 815	-0.3	4 213	1.6	35.2
Debt securities issued	81 914	72 278	67 906	-9 636	-11.8	-4 371	-6.0	8.9
Other liabilities	78 336	82 931	80 456	4 596	5.9	-2 476	-3.0	10.5
Total liabilities	797 461	769 256	766 129	-28 205	-3.5	-3 127	-0.4	100.0

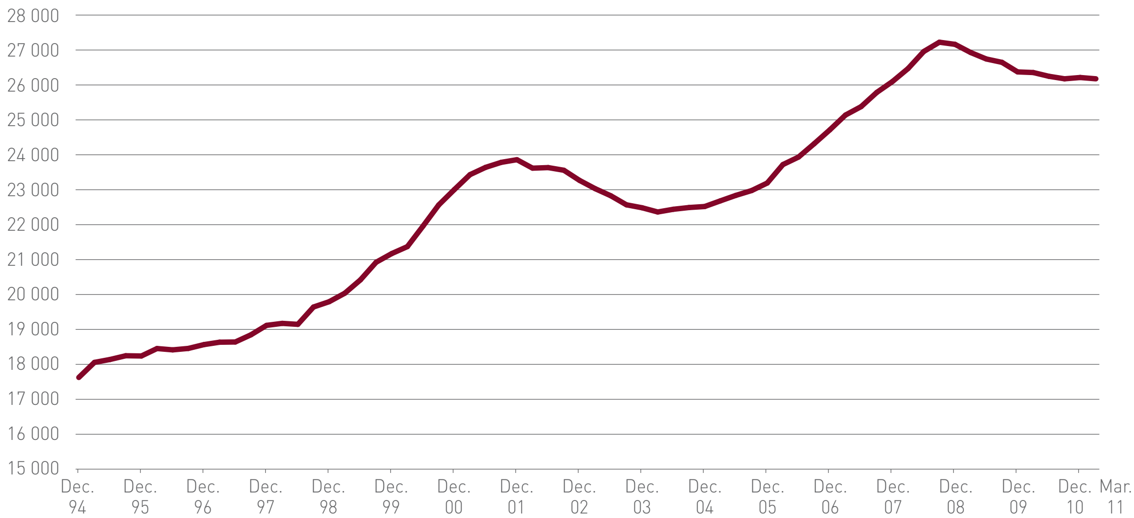
1) Relative weight in relation to total liabilities
Source: BCL

1.2.4.2 Employment in the banking sector

Employment in Luxembourg's banking sector decreased by 3.6% between December 2008 and December 2010. This represents a loss of 953 positions. Employment in the banking sector reached its peak in the third quarter of 2008 with 27 269 employees; since then this number has kept falling.

At the end of March 2011, 26 218 people were working in the banking sector in Luxembourg, compared with 26 255 at the end of December 2010.

Chart 1.10: Evolution of the employment in the banking sector between December 1994 and March 2011



Source: BCL

1.2.4.3 Retail interest rates in Luxembourg

The cost of new housing loan contracts with variable interest rate conditions decreased by 15 basis points between the end of December 2009 (2.03%) and the end of December 2010 (1.88%). At the end of the first quarter of 2011, an interest rate increase of 4 basis points was passed on to customers and drove the cost of housing loans with variable interest rates up to 1.91%. New housing loan contracts were concluded at a historical low of 1.81% at the end of February 2010.

While January and February were characterised by a slow downward trend of rates for consumption loans rates, these rates rose and stabilised around 4.8% by the end of October 2010. During the first quarter of 2011, the observed decline was much more significant due to the so-called Luxembourg "car festival". Between December 2009 and December 2010, the cost of new business consumption loans with interest rate fixation over one and up to five years decreased by 61 basis points from 5.17% down to 4.56%. Between December 2010 and March 2011, the cost further diminished by 55 basis points down to 4.01%.

The cost of consumption loans with interest rates fixation over five years increased by 30 basis points between December 2009 (4.76%) and December 2010 (5.06%). This cost was reduced by another 65 basis points to 4.41% from December 2010 until March 2011.

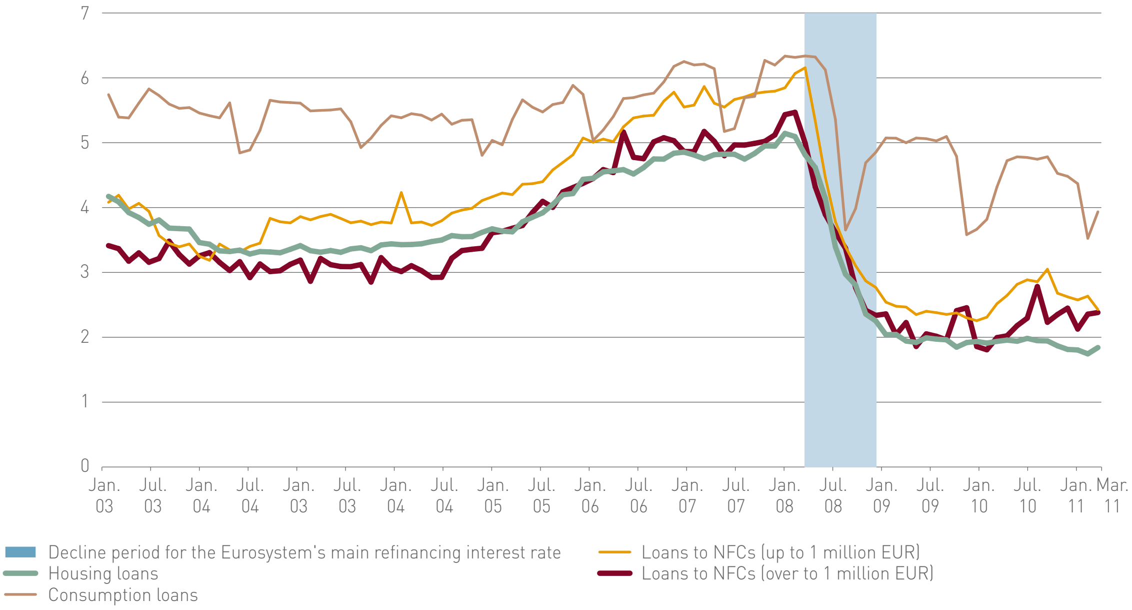
Interest rates of the other loan categories increased by 50 basis points between December 2009 (1.76%) and December 2010 (2.26%). This trend was followed by a decrease of 6 basis points observed from December 2010 to March 2011 (2.20%). A majority of the other loan categories is offered to non-domestic counterparts (mainly households out of the Monetary Union).

The cost of new loans to non-financial corporations (NFCs) up to one million euro increased by 27 basis points between December 2009 (2.42%) and December 2010 (2.69%). This was followed by a decrease of 19 basis points throughout the first three months of 2011 (to 2.50% in March 2011).

Regarding new contracts of over one million euro, interest rates increased by 49 basis points during 2010 and decreased by 7 basis points between December 2010 and March 2011 leading to a level of 2.45%.

Term deposit rates (with maturities below one year) for households increased by 32 basis points between December 2010 (0.50%) and March 2011 (0.82%). Interest rates proposed to non-financial corporations in the same category increased by 34 basis points from 0.40% in December 2009 up to 0.74% in March 2011.

Chart 1.11: Loans to households and to non financial corporations between January 2003 and March 2011 (in %)



Source: BCL

1.2.4.4 Profit and loss accounts

On the basis of provisional figures, credit institutions in Luxembourg, including their branches abroad, registered a reduction of their profit before impairment, provisions and tax by 18.5% between end-2009 and end-2010. The absolute value of the profit mentioned amounted to 5 031 million euro in 2010.

Income

The reduction in the size of banks' balance sheet combined with a decrease in possibilities to generate profit from term transformation in the years 2009 and 2010 resulted in much lower income from interest rate business. The "interest receivable" declined by 34.1% in relation to 2009 while the "interest payable" dropped by 38.9% over the same period. These developments resulted in a net interest income which amounted to 5 683 million euro in 2010, which was 14.6% below the result in the previous year. Also, the relative importance of the net interest income measured against the gross income fell to 57.0% after 69.0% in 2008 and 61.9% in 2009.

The income from securities - included in the net interest income - generated 750 million euro in 2010 which was slightly less than in 2009 (773 million euro).

Unlike the net interest income, the net income from commissions increased strongly between 2009 and 2010 and came close to its level in 2008. This development can mainly be explained by exchange traded values influencing the volume of assets under management which serve as a basis for the calculation of management commissions. The development of exchange traded values also triggers an adaptation in the volume of private banking investments. To sum up, the net income from commissions in the banking sector jumped by 19.4% between 2009 and 2010 as a result of a rebound in financial markets.

While the abating impact of the financial crisis and the reduction of the risk premia led to an increase in the market value of assets, the increase has partly been offset by a decrease in sovereign papers' values. In 2009, the recovery of financial markets had generated especially high gains in market values. As a consequence, the other net income which amounted to 169 million euro in 2010 plunged by 611 million euro or 78.3% compared to the peak in 2009. It must be noted, however, that this result was still higher than the net loss of 176 million euro in the second quarter of 2010, after a net income of 316 million euro in the first quarter of the same year.

Table 1.8: Aggregate profit and loss account of Luxembourg credit institutions 2010 in comparison to 2009
Result of Luxembourg banks, including their foreign branches
(in million euro, outstanding amounts at the end of the period)

	Debit and credit items	2009	2010	Variation in %	Variation in million euro
1	Interest receivable	27 755	18 278	-34.1%	-9 477
2	Income from securities	773	750	-3.0%	-23
3	Interest payable	21 906	13 375	-38.9%	-8 531
4	Net interest income	6 622	5 653	-14.6%	-969
5	Commission income	3 188	3 808	19.4%	620
6	Income from foreign exchange	103	288	179.6%	185
7	Other net income	780	169	-78.3%	-611
8	Net non-interest income	4 071	4 265	4.8%	194
9	Gross income	10 693	9 918	-7.2%	-775
10	Staff costs	2 491	2 669	7.1%	178
11	Other administrative expenditures	1 747	1 937	10.9%	190
12	General administrative expenditures	4 238	4 606	8.7%	368
13	Write-downs of non-financial fixed assets	279	281	0.7%	2
14	Results before provisions and tax	6 176	5 031	-18.5%	-1 145
15	Net provisions	256	21	-91.8%	-235
16	Impairment	2 432	555	-77.2%	-1 877
17	Other results	13	92	592.5%	79
18	Results before tax	3 501	4 547	29.9%	1 046
19	Tax on income and profit	875	638	-27.1%	-237
20	Net result	2 626	3 909	48.9%	1 283

Data were revised in the light of new information. Differences may appear due to rounding.
Provisional figures for 2010
Source: BCL

These figures underline that the net income is characterised by a high and constant volatility which is in addition heterogeneous across banks.

The gross income which results from the different areas of banking activity declined at a rate of 7.2% in annual comparison and amounts to 9 918 million euro in 2010.

Table 1.9: Selected income and cost items of the aggregate profit and loss account [1) 2)]
of Luxembourg credit institutions in relation to gross income
Results of Luxembourg banks, including their foreign branches (in relation to gross income, end of period)

	Income and cost items	2008	2009	2010
I	**Components of net income**			
	Net interest income	69.0	61.9	57.0
	Commission income	35.2	29.8	38.4
	Income from foreign exchange	3.6	1.0	2.9
	Other net income	-7.7	7.3	1.7
II	**Application of net income**			
	General administrative expenditures	42.2	39.6	46.4
	Net provisions	-1.0	2.4	0.2
	Impairment	52.3	22.7	5.6
	Tax on income and profit	2.5	8.2	6.4
	Net result	1.6	24.6	39.4

1) Data were revised in the light of new information. Differences may appear due to rounding.
2) Provisional figures for 2010.
Source: BCL

Cost

The general administrative expenditure increased at a rate of 8.7% reflecting a 7.1% growth of staff costs and 10.9% growth of other administrative expenditure. The growth of this expenditure in connection with a weaker gross income implied an increasing cost income ratio amounting to 46.6% in 2010 in comparison to 39.6% in 2009.

Depreciations and net provisions significantly dropped in 2010, which can be partly explained by the abating market tensions but also by a generally improved quality of the securities held by credit institutions. This led to a drop of 91.8% of net provisions and of 77.2% in depreciations in annual comparison.

It is against this context that the net result of banks in Luxembourg must be seen. It jumped by 48.9% to 3 909 million euro in 2010 compared to 2 626 million euro in 2009.

First quarter 2011

The provisional figures for the first quarter of 2011 confirm the developments observed in 2010.

At the end of the first quarter of the current year, the net interest income of 1 453 million euro slid 1.1% below its value at the end of March 2010. The pace of diminishing net interest income – on a year-on-year basis – was slowing down in comparison to the preceding quarters.

The income net of interest business climbed at a rate of 6.6% compared to the first quarter of 2010, which was mainly due to a soaring net income from commissions (+19.8%) reaching 1 103 million euro in the first quarter of the current year.

The general administrative expenditure increased by 4.6% to 1 211 million euro. The main factor explaining this development was the position of other administrative expenditure which predominantly drove the cost. The staff cost, however, showed almost a side movement (+0.7%).

The result before depreciation, net provisions and tax, thus, stayed relatively constant (+0.7%) between the end of March 2010 and 2011 and amounted to 1 609 million euro.

Table 1.10: Aggregate profit and loss account of Luxembourg credit institutions comparing the first quarters of 2010 and 2011

Results of Luxembourg banks, including their foreign branches (in million euro, outstanding amounts at the end of the period)

	Income and cost items	March 2010	March 2011	Variation in %	Variation in million euro
1	Interest receivable	5 144	5 050	-1.8%	-94
2	Income from securities	143	118	-17.5%	-25
3	Interest payable	3 818	3 715	-2.7%	-103
4	Net interest income	1 469	1 453	-1.1%	-16
5	Commission income	921	1 103	19.8%	182
6	Income from foreign exchange	118	46	-61.0%	-72
7	Other net income	316	290	-8.2%	-26
8	Net non-interest income	1 355	1 439	6.2%	84
9	Gross income	2 824	2 892	2.4%	68
10	Staff costs	705	710	0.7%	5
11	Other administrative expenditures	453	501	10.6%	48
12	General administrative expenditures	1 158	1 211	4.6%	53
13	Write-downs of non-financial fixed assets	68	72	5.9%	4
14	Results before provisions and tax	1 598	1 609	0.7%	11

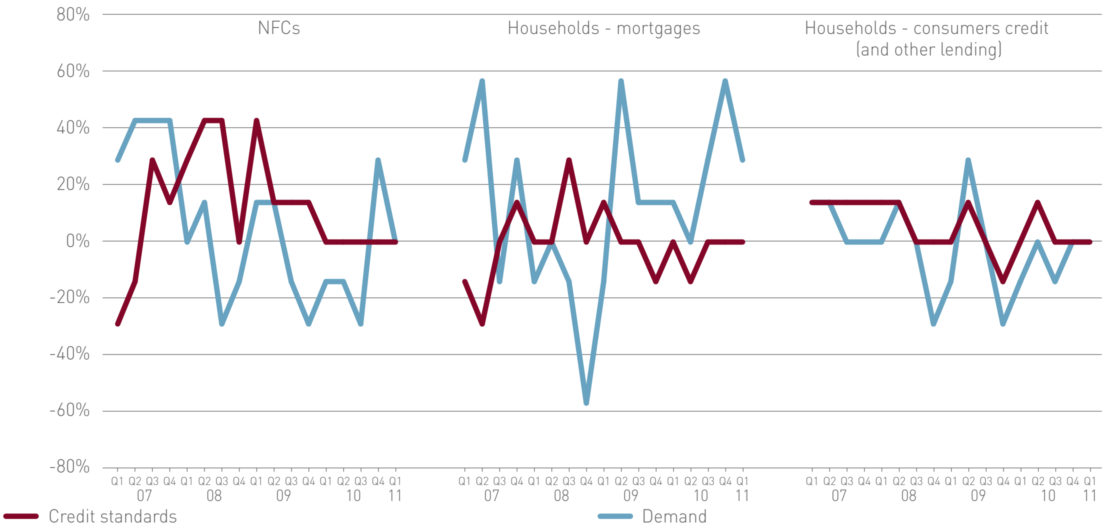
Data were revised in the light of new information. Differences may appear due to rounding.
Provisional figures for 2010.
Source: BCL

The Bank Lending Survey

The Bank Lending Survey (BLS), carried out by the Eurosystem since end-2002, assesses credit conditions in the euro area. Every quarter, a questionnaire is sent out to the seven banks from the Luxembourg sample; the survey questionnaire comprises several questions on the supply of and demand for credit, covering the household sector as well as non-financial corporations (NFCs). Results are generally expressed in terms of "net percentages". Concerning the questions on credit standards, net percentages refer to the difference between those banks that reported a tightening and those that reported an easing of lending standards. For the questions on credit demand, net percentages refer to the difference between those banks that reported a fall in demand and those that reported a rise.

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

Chart 1.12: The evolution of credit standards and loan demand in Luxembourg (net percentages)



Source: BCL

<u>NFCs:</u> In net terms, corporate credit standards remained unchanged in 2010 as well as in the first quarter of 2011. However, lending standards remain restrictive to the extent that the cumulated net tightening recorded since the second quarter of 2007 has not been neutralised, let alone reversed.

Net demand was fairly volatile but, overall, rather subdued or negative during the financial crisis. However, recent developments are more favourable and banks reported a rebound in the final quarter of 2010, though net percentages dropped to zero in the latest survey round.

<u>Households (housing loans):</u> Overall, credit standards applied to loans for house purchases have eased slightly in the period under review. Indeed, one bank reported an easing of lending standards in the second quarter of 2010, while net percentages stood at zero in the other survey rounds.

Net demand for housing loans was positive on average, in particular in the last quarter of 2010 when four banks reported a rise in demand. These developments are largely owing to favourable housing market prospects.

<u>Households (consumer credit and other lending):</u> Overall, credit standards applied to consumer credit (and other lending) have tightened slightly in the period under review, while net demand has fallen somewhat.

Box 1.2:

THE EVOLUTION OF CREDIT TO THE PRIVATE SECTOR

This box reviews the latest credit developments in Luxembourg. While previous publications only analysed credit developments to households and firms, this box looks at the evolution of credit to the whole private sector [1] before and notably since the onset of the crisis.

The box draws on the following sources: balance sheet data (BSI reporting) collected from the MFI sector, interest rate statistics (MIR data) which also cover new lending volumes, and the Bank Lending Survey (BLS) which provides some information on demand and supply developments.

The private sector is made up of households, non-financial corporations (NFCs), insurance corporations and pension funds (ICPFs) and other financial intermediaries (OFIs). Loans to households are also split according to the purpose of the loan (lending for house purchase, consumer credit and other lending). Slightly more than half of all loans granted by Luxembourgish MFIs to euro area private sector counterparties actually go to non-residents.

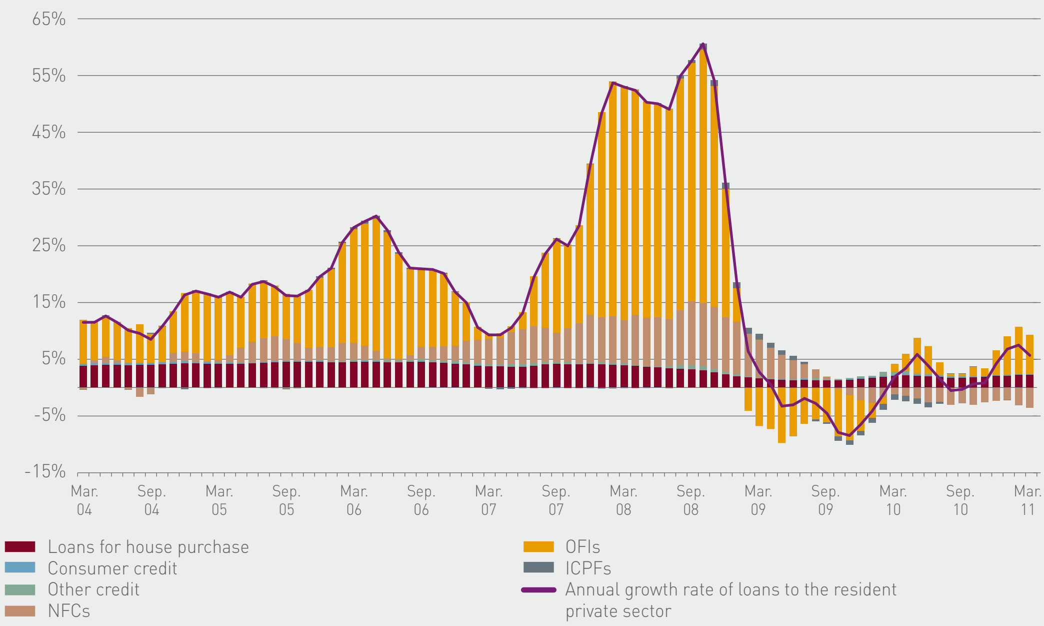
Although lending by domestic MFIs is more volatile than lending by euro area MFIs, the underlying trend developments are similar. The sharp drop in the annual growth rates of the two series in the fourth quarter of 2008 in particular is worth mentioning, as is the subsequent rebound in the course of 2010. Regarding the evolution of loans granted by domestic MFIs more specifically, the sharp fall in the annual growth rate towards the end of 2008 was at first attributable to a strong decline in the contribution of lending to resident counterparties. The recovery discernable since 2010 is also largely owing to loans granted to resident counterparties. However, if the current underlying trends persist, credit to the private sector will continue to expand as the rebound in domestic lending is compounded by the pickup in lending to non-resident counterparties. The remainder of this box will focus on lending to resident counterparties only, given their stronger link to domestic economic developments.

At the end of the first quarter of 2011, roughly half of the outstanding loan amounts granted by resident MFIs were given to OFIs, which are largely made up of investment funds. About one third of the outstanding amounts were granted to households, in particular for house purchases, while the remaining 20% were granted to NFCs. The share of loans to ICPFs is insignificant. The sectoral composition of the outstanding loan amounts has important implications for credit developments and for the economy at large. For instance, mortgage loans are rather stable and more strongly connected to disposable income and housing market prospects, while loans to OFIs are much more volatile because of their role in liquidity management.

Chart 1 clearly shows that credit dynamics are strongly linked to the OFI sector. Thus, the sharp drop in lending to the resident private sector in the

1 "Private sector" shall in this box refer to "private sector excluding monetary and financial institutions (MFIs)".

Chart 1: Loans to the resident private sector - sectoral decomposition (annual growth rate in percentages per annum, contributions to growth in percentage points; three-month moving averages)



Source: BCL

fourth quarter of 2008 is first and foremost due to a fall in the contribution of OFI-lending; the recent rebound is also first and foremost owing to a pickup in OFI lending. In the course of several months, the year-on-year growth rate of credit to the resident private sector turned negative, after exceeding 60% in September 2008.

The contribution of corporate lending has also fallen continuously since the intensification of the financial crisis, turning negative roughly one year later. Although the evolution of loans for house purchase was at first fairly stable, credit dynamics slowed down with the onset of the financial turmoil in 2007. However, it is important to emphasise that mortgage developments already began to moderate before the financial crisis.

In spite of the significant share that OFIs have in total lending, a detailed analysis of this sector lies outside the scope of this box. However, the quasi-instantaneous sharp drop in OFI-lending following the collapse of Lehman Brothers is most probably linked to the fact that these loans are used in the framework of liquidity management practices of investment funds.

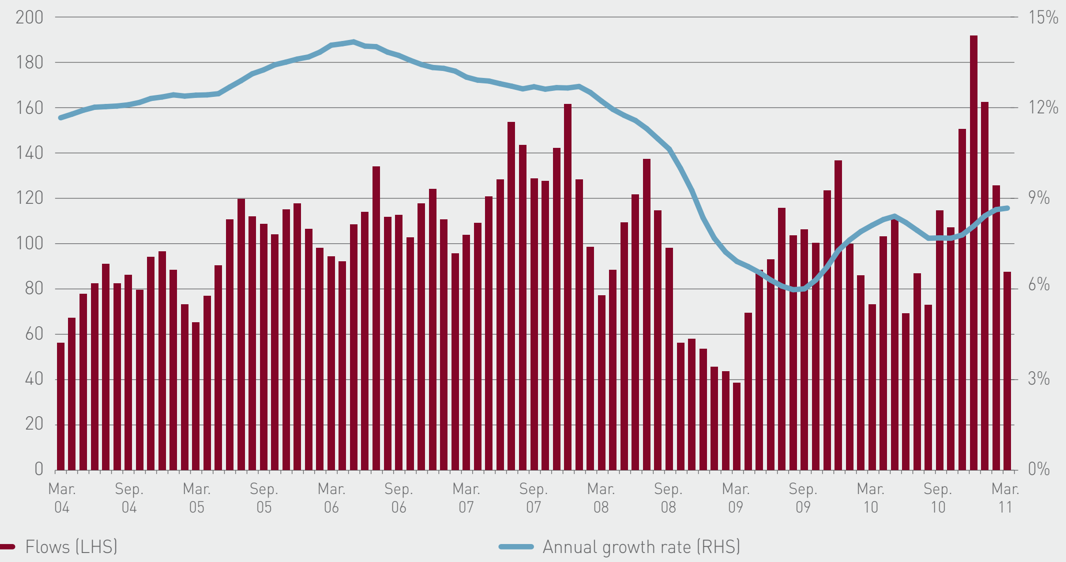
Chart 2 plots the evolution of loans for house purchase to resident households, in terms of month-on-month flows[2] available through the BSI reporting.

After gaining momentum in the course of 2009, loans for house purchase to Luxembourgish residents continued to progress throughout 2010, as well as in 2011. Their progression was particularly buoyant in the fourth quarter of 2010. Month-on-month flows also rose strongly in the final quarter of 2010, before levelling off somewhat in the first three months of 2011. MIR data, moreover, confirmed that new business volumes for house purchase have risen in 2009 and remained vigorous in the following year, before falling somewhat in early-2011. However, it is worth mentioning that there are methodological differences between MIR and BSI data. According to the BLS, lending standards applied to loans for house purchase have not changed significantly since the onset of the financial turmoil, while net demand has been rising almost continuously since it rebounded in 2009.

As for corporate lending, the annual growth rate of loans to NFCs continued to deteriorate since the financial turmoil intensified in 2008, in spite of several rebounds which turned out to be ephemeral. Month-on-month flows have also rebounded somewhat, although they generally remain close to zero or negative. MIR data on new business volumes suggest that small loans up to one million euro have expanded vigorously since May 2010, sometimes even more so than in the past, while larger loans above one million euro remain subdued compared to 2008 and 2009. Although corporate credit standards tightened during the financial crisis, banks indicated that they have left credit standards unchanged since 2010. However, it is worth underscoring that lending standards have lead indicator properties. Net demand, which fell during the financial crisis, rebounded briefly in the fourth quarter of 2010, but remained unchanged again in the first quarter of 2011.

2 Flows are differences in outstanding loan amounts, adjusted for a number of statistical effects.

Chart 2: Loans for house purchase to Luxembourg residents
(in million euro and percentages per annum; three-month moving averages)



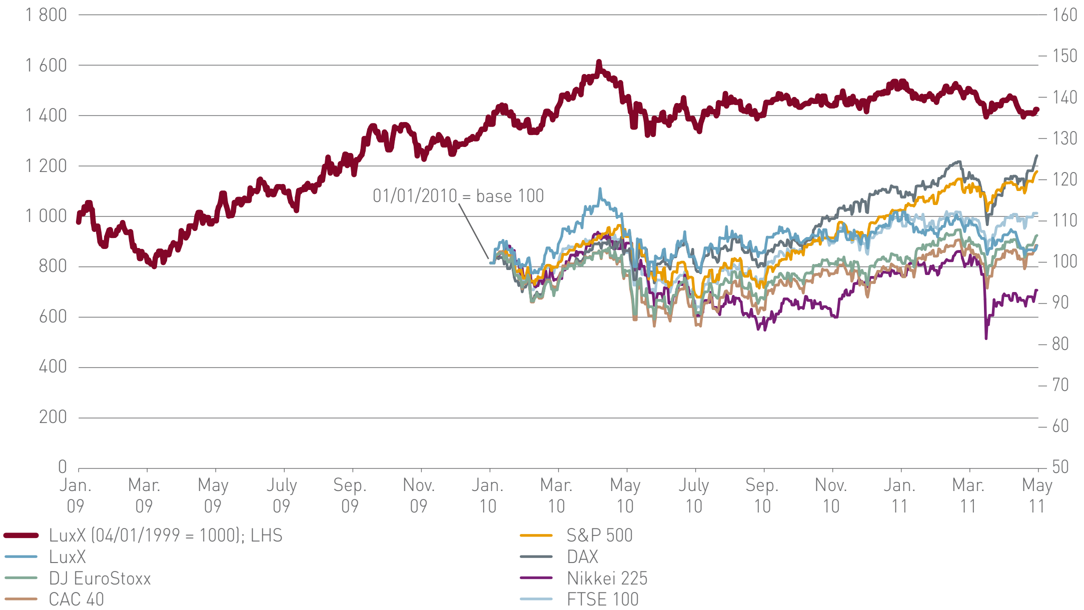
Source: BCL

To conclude, the sharp drop in lending to the resident private sector is largely owing to a fall in OFI-lending. Moreover, the recent rebound in lending is also by and large due to a pickup in OFI-lending. As for lending to households, the available information points to a sustained acceleration in mortgage credit dynamics. At the same time, corporate lending continues to deteriorate.

The Luxembourg Stock Exchange

Between end-2009 and end-2010, the LuxX index increased by 12%, going from 1 372 to 1 542. The LuxX subsequently fell to 1 424 at the end of May 2011. All in all, the index traded in a narrow range for most of the period under review. It is worth noting that, with effect from March 2011, the company Aperam was included in the composition of the basket of shares that is used to calculate the LuxX index.

Chart 1.13: The LuxX index and other major international indices
(Index: 01/01/2010 = 100 unless otherwise indicated; daily data)



Source: Bloomberg

ArcelorMittal shares, which make up 20% of the index, fell by 19% in 2010. Reinet Investments and SES, which each make up 20% of the index, rose by 8% and 18% respectively.

At the end of 2010, there were a total of 44 916 listings at the Luxembourg Stock Exchange, compared to 45 660 in 2009. The sectoral split of listings has remained roughly stable since 2009 and bonds continue to make up the highest share in total listings.

Total turnover by volume fell from 272 million euro in 2009 to 219 million euro in 2010, largely owing to a significant drop in share turnover.

1.2.4.5 Undertakings for collective investment

1.2.4.5.1 The evolution of the number of funds

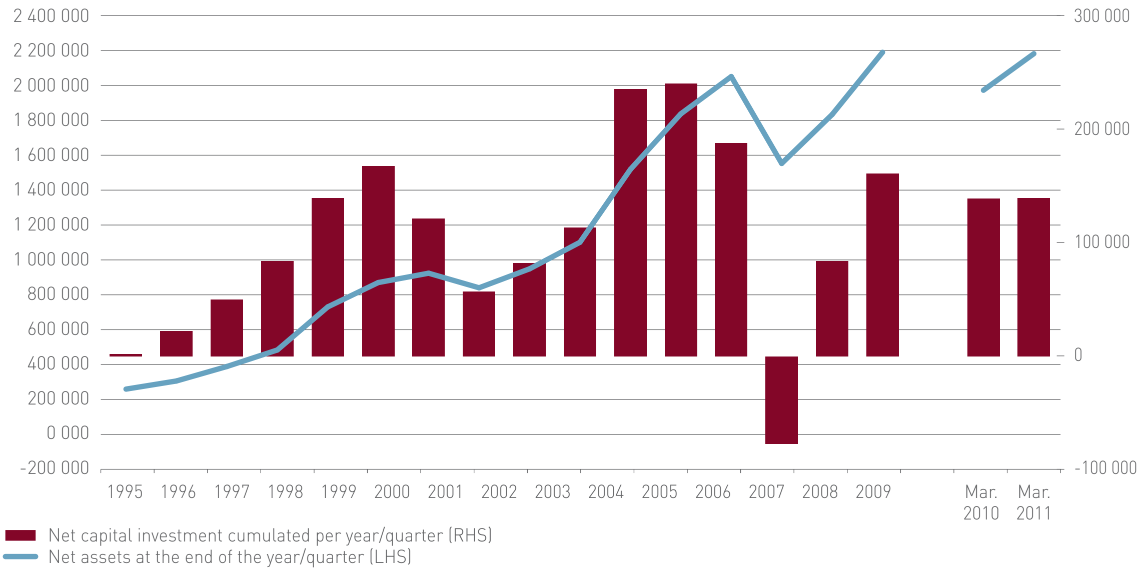
At the end of 2010, the official list included 3 667 UCIs, compared to 3 463 at the end of 2009. This represents an increase by 204 units in 2010. The rise of the number of UCIs has been stronger in 2010 than in the previous year. With the creation of 57 units in the first quarter, this upward trend continues in the beginning of 2011.

1.2.4.5.2 Net asset value

In 2010, the UCIs' net global property increased considerably. Between December 31st, 2009 and December 31st, 2010, the net asset value rose by 358 billion euro to reach 2 199 billion euro, representing an increase of about 19%. The upward trend in the net asset value had been noticeable from March 2009 on.

During the year 2010, the favourable performance of financial markets contributed to the growth of the net asset value by 196.4 billion euro, whereas a net capital investment increase of 161.6 billion euro was recorded. Because of adverse market developments in January and March, the UCI's global property decreased slightly in the beginning of 2011. At the end of March, it reached 2 191 billion euro, although the net capital investment was positive (32.3 billion euro) over the same time span.

Chart 1.14: Development of the net assets and of the net capital investment (in million euro)



Source: CSSF

Table 1.11: Global situation of undertakings for collective investment
(in million euro, outstanding amounts at the end of period, except where otherwise stated)

	Number of UCIs	Number of subfunds	Net asset value	Net capital investment 1)2)	Variation of financial markets 2)3)	Annual changes in EUR million	Annual percent-age change	Monthly change in EUR million	Monthly percentage change
2000	1 785	6 995	874 600	168 200	-28 118	140 082	19.1		
2001	1 908	7 519	928 447	121 700	-67 900	53 847	6.2		
2002	1 941	7 806	844 508	57 314	-141 206	-83 939	-9.0		
2003	1 870	7 509	953 302	82 609	26 185	108 794	12.9		
2004	1 968	7 876	1 106 222	113 731	39 189	152 920	16.0		
2005	2 060	8 497	1 525 208	236 277	182 709	418 986	37.9		
2006	2 238	9 473	1 844 850	241 344	78 298	319 642	21.0		
2007	2 868	11 115	2 059 395	188 488	26 057	214 545	11.6		
2008	3 372	12 325	1 559 653	-77 191	-422 549	-499 742	-24.3		
2009									
Jan.	3 398	12 278	1 571 534	3 458	8 423	-379 607	-19.5	11 881	0.8
Feb.	3 402	12 255	1 530 291	-4 375	-36 868	-432 554	-22.0	-41 243	-2.6
Mar	3 396	12 200	1 526 563	-226	-3 502	-368 882	-19.5	-3 728	-0.2
Apr.	3 415	12 177	1 592 932	7 005	59 364	-371 144	-18.9	66 369	4.3
May	3 425	12 172	1 619 269	8 080	18 257	-377 690	-18.9	26 337	1.7
June	3 435	12 172	1 631 256	4 272	7 715	-270 836	-14.2	11 987	0.7
July	3 438	12 164	1 706 030	22 448	52 326	-190 327	-10.0	74 774	4.6
Aug.	3 449	12 198	1 739 417	16 128	17 259	-178 576	-9.3	33 387	2.0
Sep.	3 457	12 207	1 773 834	10 467	23 950	-22 862	-1.3	34 417	2.0
Oct.	3 454	12 247	1 777 528	13 645	-9 951	130 500	7.9	3 694	0.2
Nov.	3 473	12 251	1 788 910	2 111	9 271	184 673	11.5	11 382	0.6
Dec.	3 463	12 232	1 840 993	1 356	50 727	281 340	18.0	52 083	2.9
2010									
Jan.	3 480	12 316	1 860 688	21 474	-1 779	289 154	18.4	19 695	1.1
Feb.	3 498	12 425	1 897 934	12 688	24 558	367 643	24.0	37 246	2.0
Mar.	3 516	12 513	1 980 538	19 848	62 756	453 975	29.7	82 604	4.4
Apr.	3 521	12 552	2 012 887	13 803	18 546	419 955	26.4	32 349	1.6
May	3 542	12 612	1 992 413	-14 858	-5 616	373 144	23.0	-20 474	-1.0
June	3 550	12 628	2 010 637	18 784	-560	379 381	23.3	18 224	0.9
July	3 582	12 685	2 019 223	8 907	-321	313 193	18.4	8 586	0.4
Aug.	3 614	12 718	2 068 990	31 383	18 384	329 573	18.9	49 767	2.5
Sep.	3 633	12 755	2 083 740	9 589	5 161	309 906	17.5	14 750	0.7
Oct.	3 645	12 814	2 107 575	15 457	8 378	330 047	18.6	23 835	1.1
Nov.	3 656	12 877	2 160 872	16 263	37 034	371 962	20.8	53 297	2.5
Dec.	3 667	12 937	2 198 994	8 230	29 892	358 001	19.4	38 122	1.8
2011									
Jan.	3 684	12 979	2 184 027	14 212	-29 179	323 339	17.4	-14 967	-0.7
Feb.	3 705	13 030	2 208 198	15 623	8 548	310 264	16.3	24 171	1.1
Mar.	3 724	13 057	2 190 896	2 515	-19 817	210 358	10.6	-17 302	-0.8

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

2) Figures cumulated on a yearly/monthly basis.

3) The "variation of financial markets" reflects the change in net assets which is due to the fluctuation of financial markets.

Source: CSSF

1.2.4.6 Money market funds

The number of money market funds

By the end of December 2010, 462 units were recorded on the official list, compared to 479 units at the end of 2009, representing a decrease by 17 units. In the beginning of 2011, the number of money market funds continued to fall, reaching 440 units by the end of March.

The balance sheet of money market funds

In the course of 2010, the balance sheet of monetary funds decreased by 10.9%, from 319.4 billion euro on December 31st, 2009 to 284.5 billion on December 31st, 2010. Since April 2009, due to the favourable performance of financial markets and low money market interest rates, the investors have shown preference to invest in non-monetary funds. This downward trend on money market funds continued in the first part of 2010, with their balance sheet reaching 281.5 billion euro by the 31st of March, 2011.

Box 1.3:

THE ANALYSIS OF THE LUXEMBOURG FINANCIAL ACCOUNTS FOR THE HOUSEHOLD SECTOR[1]

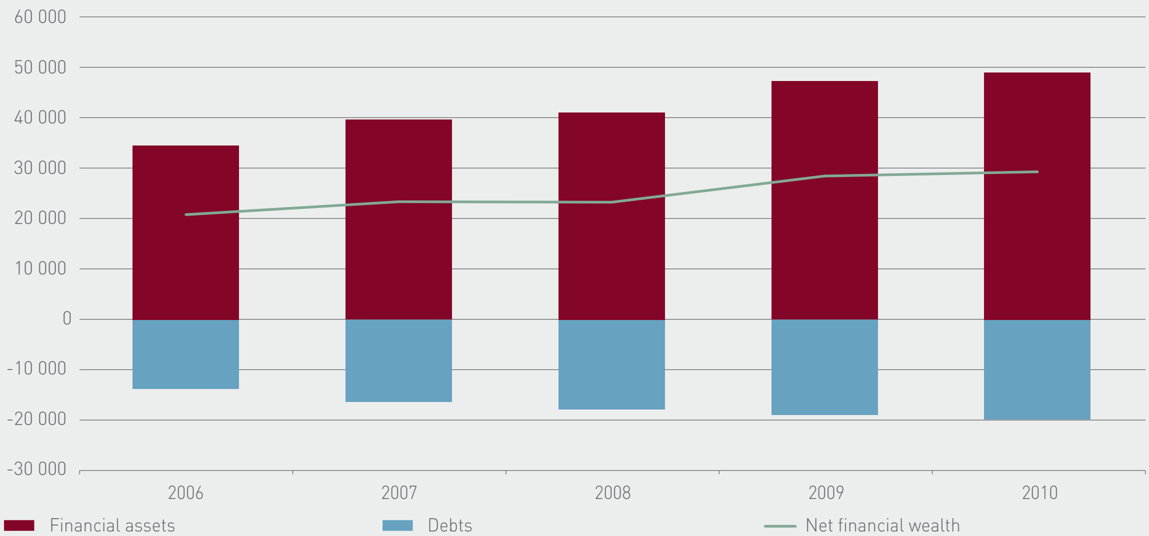
The publication of the Luxembourg financial accounts by STATEC provides interesting perspectives from an analytical point of view. The aim of this box is to exploit this set of data for the household sector over the period from 2006Q1 to 2010Q4.

1 Analysis performed with the data available on 6 May 2011.

Financial wealth and portfolio composition of Luxembourg households

The total gross financial wealth of Luxembourg households amounted to about 51.1 billion euro at the end of 2010, after a progression of more than 50% over the period under review. This increase came not only from a favourable revaluation of financial assets (+7.7 billion euro), but also from the dynamism of the net acquisition of financial assets by Luxembourg households (+9.9 billion euro). At the same time, household debt increased by 59% to reach 20.9 billion euro, thus bringing total net financial wealth to 30.2 billion euro at the end of the period.

Chart 1: Net financial wealth of Luxembourg households (million euro)

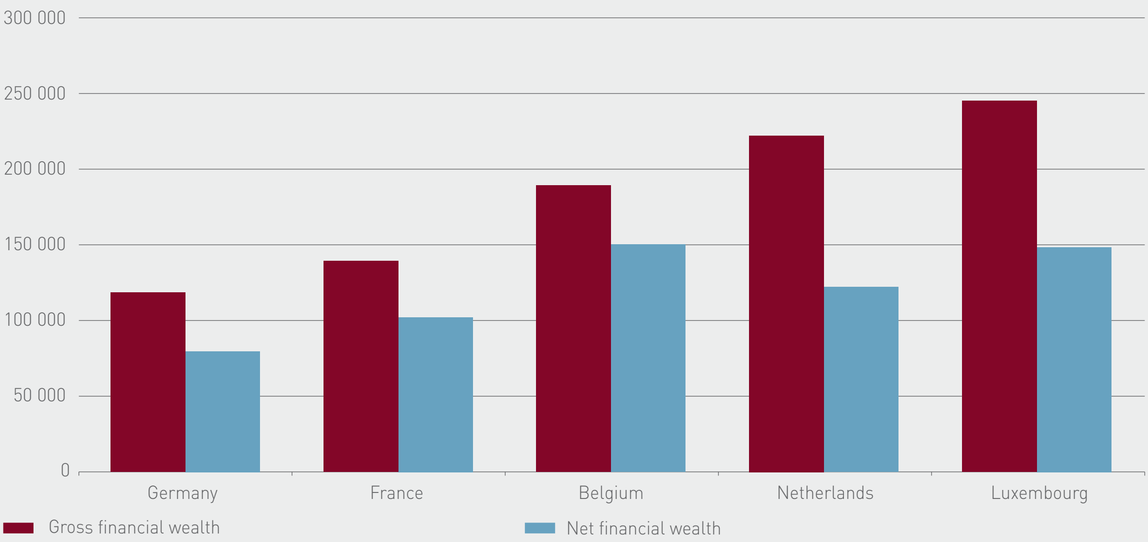


Source: Statec

At the end of 2009, the average gross financial wealth of Luxembourg households was about 246 000 euro, against 223 000 euro on average for Dutch households, 190 000 euro for Belgian households, 140 000 euro for French households and 119 000 euro for German households.[2] In comparison to other euro area countries, the financial assets of Luxembourg households are thus relatively high, all the more so as the amount of these assets is underestimated due to the absence of data on unquoted equities. Nevertheless, the incorporation of the level of indebtedness attenuates this figure since the net financial household wealth stood in 2009 Q4 at 149 000, 123 000, 151 000, 103 000 and 80 000 euro in Luxembourg, the Netherlands, Belgium, France and Germany respectively.

2 These figures are influenced by the number of persons per households. For example, the average size of a German household is smaller than the European average.

Chart 2: Average financial wealth by households in euro area countries (in euro, 2009)



Sources: Eurostat and Statec

From the point of view of the portfolio composition, Luxembourg households display an elevated share of deposits in comparison to the other euro area countries. Over the period under review, the share of deposits amounted to about 50% of financial wealth, thus illustrating the low risk profile of Luxembourg households. In contrast, the weight of technical insurance provisions appears to be relatively low, in particular with respect to the Netherlands where the capitalisation retirement system is largely developed.

Table 1: The composition of the financial assets portfolio of households in euro area countries* (2009)

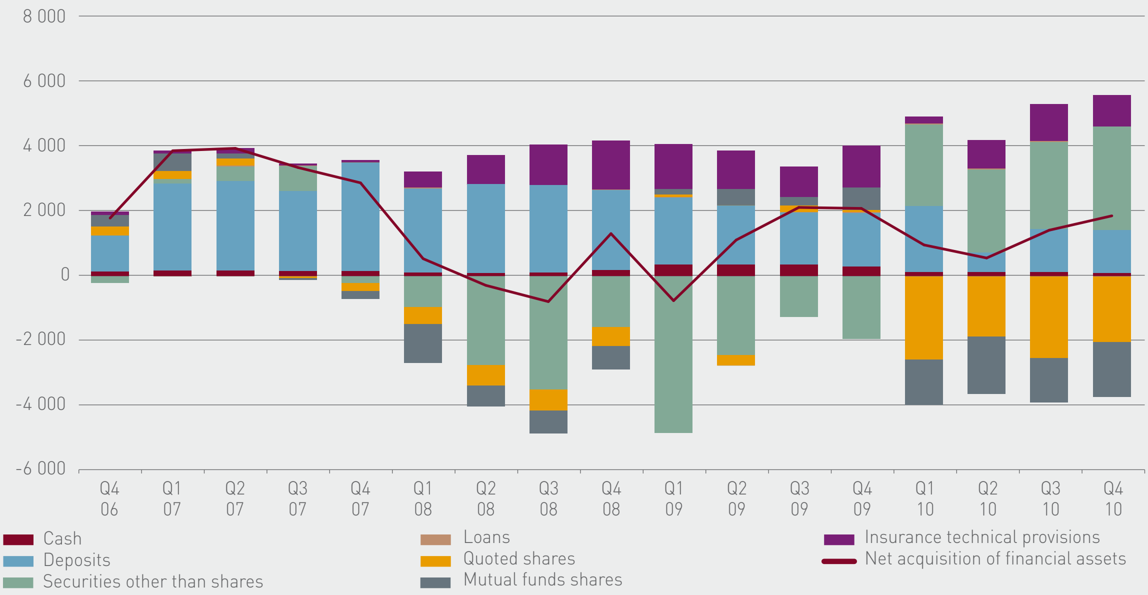
	Belgium	Germany	France	Netherlands	Luxembourg
Money and deposits	37.7%	40.1%	33.4%	25.2%	50.6%
Securities other than shares	10.8%	8.2%	1.9%	3.0%	15.9%
Quoted shares	4.8%	3.4%	3.8%	5.1%	4.4%
UCI's shares	15.9%	12.5%	8.9%	2.8%	14.2%
Technical insurance provisions	29.5%	35.1%	44.4%	62.8%	14.4%
Other assets	1.3%	0.8%	7.6%	1.0%	0.5%

* To make the comparison relevant, "unquoted shares" and "other equity" have been dropped from total assets in all countries except for Luxembourg.

Source: Eurostat and Statec

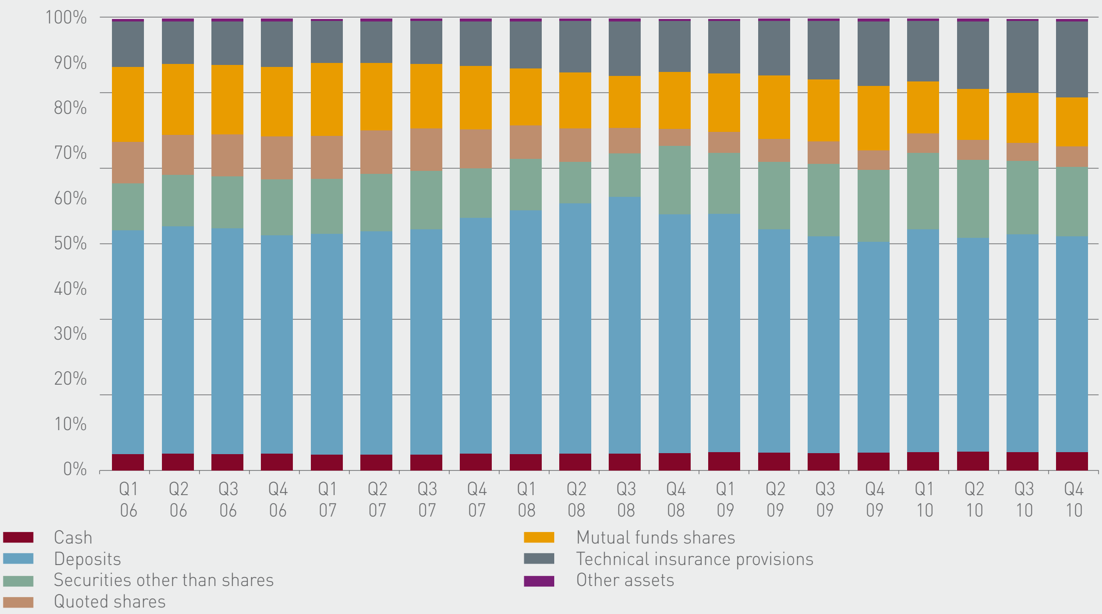
In order to analyse the investment behaviour of Luxembourgish households in the course of the crisis, the following graph displays the detailed evolution of financial transactions since the end of 2006. The financial crisis, which started in the summer of 2007, translated into a restructuring of Luxembourg households' portfolio. The high volatility of stock markets and the uncertainties related to economic activity and employment provided an incentive for households to adopt a liquidity preference behaviour, as reflected in the increase of the relative share of deposits in their portfolio.

Chart 3: Cumulated transactions over four quarters (million euro)



Source: Statec

Chart 4: Evolution of the composition of the financial assets portfolio of Luxembourg households



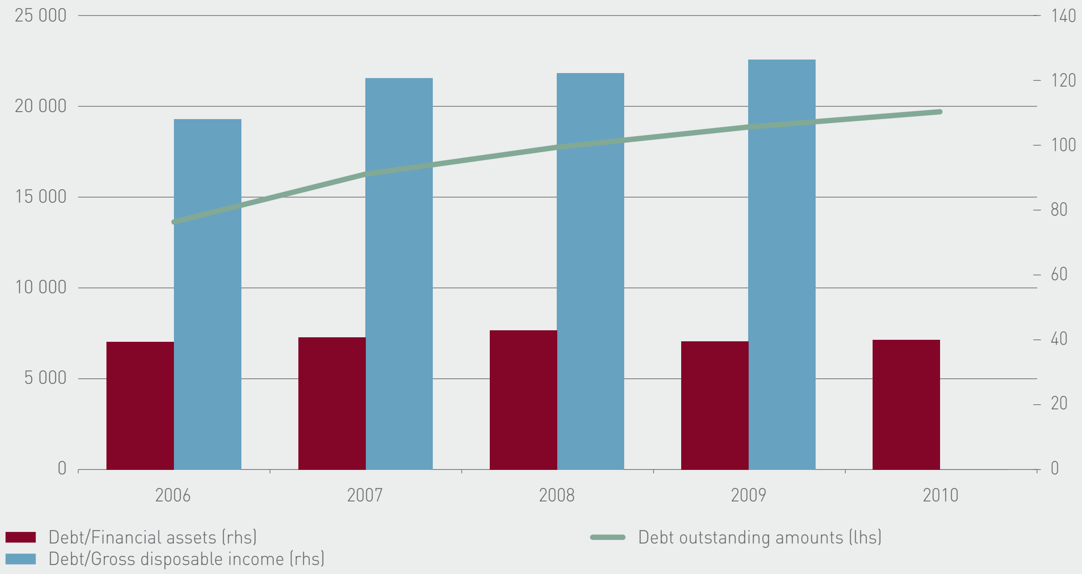
Source: Statec

At the same time, Luxembourg households turned away from quoted shares and mutual fund shares in the course of 2008. As a consequence, between 2006 Q4 and 2010 Q4, the proportion of equity and mutual funds shares in the portfolio dropped from 9.5% to 4.6% and from 15.4% to 10.8% respectively, despite an overall revaluation of about 3.9 billion euro over this period. In contrast, the portfolio behaviour of Luxembourg households was biased towards the acquisition of securities other than shares and technical insurance provisions, in particular around the end of the period. The proportion of securities other than shares, which moreover benefited from a revaluation of 4.3 billion euro between 2006 Q4 to 2010 Q4, increased from 12.3% to more than 15% of the total. Technical insurance provisions reached about 17% of total financial assets at the end of the period, thus mirroring the growing interest of Luxembourg households in life insurance contracts.

The indebtedness of Luxembourgish households

As for liabilities, the debt of Luxembourgish households displayed a clear upward trend driven mostly by the low level of interest rates and housing market prospects. Consequently, the debt ratio, which was still at 108% in 2006, increased substantially in recent years to reach about 127% of their gross disposable income in 2009. In comparison, this ratio stood at 77% in France, 84% in Belgium, 91% in Germany and 257% in the Netherlands respectively, yielding an average value of 95% for the euro area at large. The significant debt ratio of Luxembourgish households should however be seen against the background of the high level of their financial assets.

Chart 5: Debt ratio of Luxembourg households (million euro)



Source: Statec

Mortgage loans, which actually represent about 85% of the total household debt, have mainly been contracted at variable rates. The amount of interest paid by households for debt servicing is thus highly sensitive to monetary policy decisions. Indeed, the share of the latter in disposable income, which was still at 5.86% in 2008, strongly decreased with the implementation of a low interest rate regime, reaching 2.48% in 2009. In the light of expectations of further interest rate hikes in the euro area, it cannot be excluded that some low-income households may face difficulties to meet their obligations in the near future. With respect to the favourable evolution of the labour market and the level of households' financial wealth, the impact of additional interest rate increases should however remain relatively low from a financial stability point of view.

1.2.4.7 Trade and other sectors

In 2009, turnover in the wholesale trade decreased strongly. Turnover in the retail trade was rather stable. However, retail trade data needs to be interpreted with care as they are affected by e-commerce activities.

The statistics for 2010 show a more favourable outlook. Turnover increased by 11.8% in the retail trade and by 23.4% in the wholesale trade. Evolution of the turnover in the transport sector was favourable in 2010 too, whereas it was disappointing in the hotels and restaurants sector. Finally, turnover grew by 4.1% in 2010 in the sectors of cars, motor vehicle repair and sale.

Car registrations recorded a strong decline in 2009, before recovering in the first half of the year 2010. Since then, they fell again in the second half of the year 2010. The halt of the CAR-e initiatives designed to encourage purchasing of a less polluting car may explain this development. Latest statistics indicate that car registrations stagnated in the first quarter of 2011.

Table 1.12: Turnover and car registrations* (in annual percentage changes)

	2009	2010	2009-Q3	2009-Q4	2010-Q1	2010-Q2	2010-Q3	2010-Q4
Car registrations	-9.3	4.8	-11.8	-0.7	11.0	13.0	-1.2	-7.8
Trade and repair of motor vehicles	-10.5	4.1	-14.5	-6.6	-2.9	11.7	7.0	0.6
Wholesale trade (excluding motor vehicles)	-21.1	23.4	-29.7	-3.8	14.7	35.1	27.2	17.4
Retail trade	-0.2	11.8	-1.4	9.8	11.7	12.8	12.3	10.7
Retail trade (adjusted by e-trade and fuel sales)	-0.8	3.1	-2.3	3.9	3.4	3.6	4.6	1.0
Hotels and restaurants	-2.6	2.9	-2.0	-2.6	3.2	2.6	3.2	2.8
Transport – by air	-23.1	22.8	-23.9	-18.0	13.6	38.2	21.7	18.1
Water transport	-16.1	8.9	3.3	-22.5	22.7	37.6	-15.8	2.8
Land transport	-7.3	3.8	-11.6	0.4	-2.7	9.8	6.5	1.9
Ancillary services to transport	-19.8	20.6	-24.9	-12.6	20.7	29.2	19.5	13.7

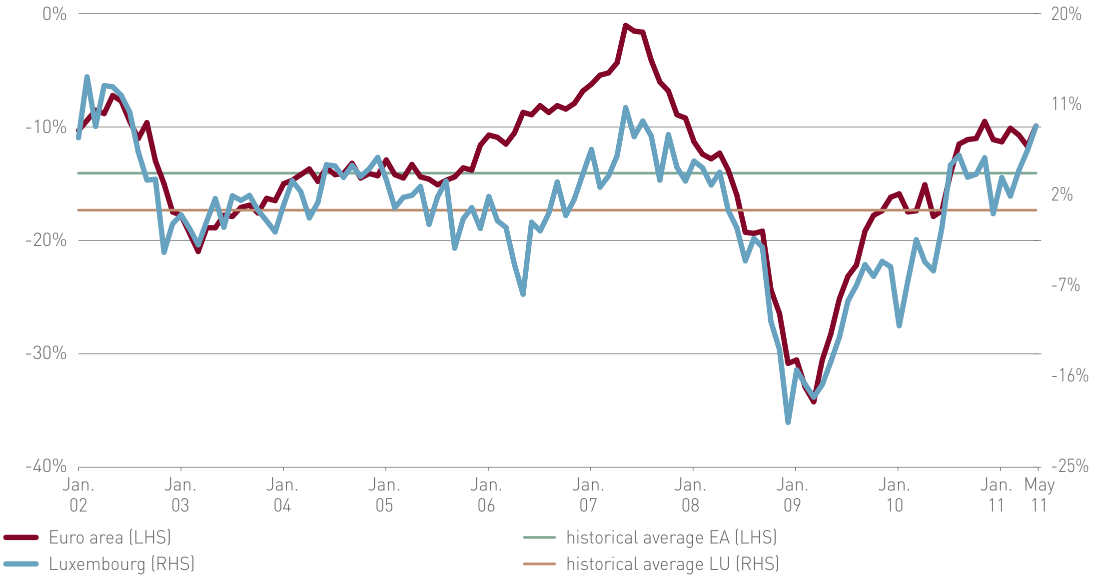
* Value.

Source: STATEC

Provisional data indicate that turnover increased by 21.5% in the wholesale trade and by 17.4% in the retail trade. Note that turnover in the retail trade adjusted by e-trade and fuel sales increased by only 4.6% in February, which is weak given the –relatively high– level of inflation during the same period.

1.2.5 Consumer survey

Chart 1.15: Consumer confidence indicators (seasonally adjusted data)



Sources: BCL and European Commission

Consumer confidence[6] has reached its historical minimum in December 2008 and it has been improving since then. Its movements have appeared more volatile than those of the euro area since the beginning of 2010. The euro area consumer confidence stands at a level close to its historical average since the end of 2010, but below the level it reached during mid-2007. Latest data show that the Luxembourg consumer confidence

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

evolves towards levels close to those observed before the beginning of the financial turmoil. More generally, the relatively high level of the consumer confidence should be considered as a favourable signal for private consumption dynamics in 2011.

The latest Luxembourg consumer survey run in Luxembourg in May 2011 indicates that the consumer confidence indicator continues to increase. Individual components of the indicator follow different paths. Consumers' expectations regarding their financial situation and the outlook for the general economic situation in Luxembourg rose in May. Consumers' expectations concerning unemployment in Luxembourg strongly increased. Finally, consumers' expectations of their savings slightly decreased.

1.2.6 Economic growth

According to the first release of national accounts data for 2010, GDP increased by 3.5% (after -3.6% in 2009). Domestic demand and net exports were the main contributors to economic growth (accounting respectively for 2.6 pp and 1.5 pp). The sectoral decomposition of value added growth indicates that all economic sectors expanded in 2010 on an annual basis.

Table 1.13: Annual national accounts: first estimate of 2010 real GDP growth

	April 2011 national accounts Yearly rate of change				Contributions to GDP growth (in percentage points)			
	2007	2008	2009	2010	2007	2008	2009	2010
Private consumption	3.3	4.7	0.2	2.0	1.1	1.5	0.1	0.7
Public consumption	2.8	2.7	4.6	2.9	0.4	0.4	0.7	0.5
Gross fixed capital formation	17.9	1.4	-19.2	2.6	3.4	0.3	-3.9	0.4
Changes in inventories	-48.0	-27.2	23.8	-125.6	-0.5	-0.1	0.1	-0.6
Acquisitions less disposals of valuables	-1 102.7	-1.9	278.2	-69.8	-0.4	0.0	-0.9	1.0
Domestic demand (excluding stocks)	5.9	3.1	-5.9	3.0	4.6	2.2	-4.0	2.6
Imports	9.3	8.5	-10.2	6.7	-12.9	-12.3	14.9	-9.0
Exports	9.1	6.6	-8.2	6.3	15.5	11.6	-14.5	10.6
Net exports	8.3	-2.0	1.0	4.6	2.6	-0.6	0.3	1.5
Gross domestic product	6.6	1.4	-3.6	3.5	6.6	1.4	-3.6	3.5
GDP deflator	3.6	4.2	-0.3	5.5				
Employees	4.7	4.9	1.0	1.6				
Total employment	4.5	4.7	0.9	1.6				
Compensation per employee	3.7	2.1	1.8	1.6				
Labour productivity	2.1	-3.2	-4.5	1.9				
Unit labour costs	1.6	5.4	6.7	-0.3				

Source : Statec, BCL calculations (totals may not add due to rounding)

The latest release of annual national accounts highlights wage moderation for the third year in a row with unit labour costs slightly decreasing (-0.3%) in 2010 despite the accelerating labour productivity (from -4.5% in 2009 to 1.9% in 2010). These figures should be interpreted with caution as national accounts are subject to future revisions. Furthermore, the deceleration of the growth rate of compensation per employee, as indicated by national accounts data, is not in line with the IGSS data which suggest an acceleration of the growth rate of compensation per employee (from 2.0% in 2009 to 2.5% in 2010) [7].

According to the first release of national accounts data for the first quarter of 2011, real GDP accelerated to an estimated growth rate of 4.6% on a year-on-year basis and to 1.7% compared to the previous quarter. Available data suggest that all demand components contributed positively to annual output growth, except for gross capital formation. From a sectoral perspective, all economic sectors expanded on a quarter-on-quarter basis, except for construction (and agriculture) where value added growth turned out negative.

7 The IGSS database is the main source of national accounts data on labour costs. However, as a result of various adjustments carried out in national accounting, figures stemming from the IGSS database are not perfectly comparable to the ones in national accounts. In consequence, one should bear in mind these differences when comparing the two sources and interpret with caution the results obtained.

Box 1.4:

SLOWER POTENTIAL GROWTH IN LUXEMBOURG IS CONFIRMED (PG)

Since the real GDP contraction in 2009, Luxembourg's potential growth has fallen by nearly half to reach a range between 2% and 3%. According to the national accounts data published in April, observed growth in 2010 reached 3.5%. Since this is above estimated potential growth, GDP recovered towards its potential level, although it was not reached. For 2011-2013, estimations based on the recent projection exercise suggest that potential growth will remain weak compared to the past.

The output gap (difference between observed and potential GDP, in % of potential) became negative in 2009 according to all estimation methods in this box[1]. Most of these expect the gap to remain negative until the end of the projection horizon. The gap should close gradually, but only the production function approach anticipates a gap near zero in 2012 (observed GDP near its potential level) and a positive gap in 2013[2]. Two other methods expect the gap to be near zero in 2013: the Hodrick-Prescott filter and the Kuttner model, which takes into account the projected reduction in inflation over the years to come.

The linear trend, only method to assume a constant potential growth rate, continues to produce implausible estimates of the output gap, which becomes increasingly negative. This observation confirms the limited reliability of this method following a shock as important as the recent financial crisis.

1 For details, see BCL working paper no. 4.

2 The production function approach is implemented with the Hodrick-Prescott filter, which suffers from a well-known end-point bias.

Table 1: Output gap and potential growth estimates

	Real GDP (mio EUR)	Linear Trend	Hodrick-Prescott	Harvey-Jaeger	Kuttner	Apel-Jansson	Production Function
				Output Gap Estimates			
2006	27.55	3.6%	1.9%	2.0%	1.9%	0.0%	1.7%
2007	29.38	5.5%	5.2%	5.0%	5.2%	2.4%	3.6%
2008	29.80	2.4%	3.5%	3.3%	3.5%	0.5%	0.6%
2009	28.72	-5.9%	-3.1%	-3.1%	-3.1%	-5.8%	-4.5%
2010	29.73	-7.0%	-2.4%	-2.6%	-2.4%	-5.1%	-2.7%
2011	30.93	-8.0%	-1.5%	-2.0%	-1.5%	-3.9%	-1.0%
2012	31.86	-9.6%	-1.2%	-2.1%	-1.2%	-2.8%	0.1%
2013	33.01	-10.5%	-0.3%	-1.6%	-0.3%	-1.1%	1.7%
	Revisions			Revisions to output gap relative to estimates in 2010			
2006	-0.6%	-0.2%	-0.9%	-0.7%	1.9%	-0.3%	-0.6%
2007	-0.4%	0.0%	-0.9%	-0.9%	4.5%	-0.7%	-0.7%
2008	1.0%	1.4%	0.3%	0.5%	3.3%	0.3%	0.5%
2009	0.7%	1.2%	-0.2%	0.3%	-0.9%	-0.4%	0.1%
2010	1.3%	1.7%	0.0%	0.7%	1.8%	-0.6%	-0.3%
	Real GDP growth			Potential growth estimates			
2006	5.0%	4.7%	3.6%	3.8%	3.6%	4.7%	4.1%
2007	6.6%	4.7%	3.3%	3.4%	3.1%	4.1%	4.7%
2008	1.4%	4.7%	3.1%	3.1%	3.1%	3.3%	4.4%
2009	-3.6%	4.7%	2.9%	2.7%	2.9%	2.8%	1.5%
2010	3.5%	4.7%	2.8%	3.0%	2.8%	2.8%	1.6%
2011	4.0%	4.7%	2.8%	3.1%	2.8%	2.4%	1.9%
2012	3.0%	4.7%	2.7%	3.1%	2.7%	1.9%	1.8%
2013	3.6%	4.7%	2.7%	3.1%	2.7%	1.8%	2.1%
	Average real growth			Average potential growth			
1985-2010	4.7%	4.7%	4.6%	4.6%	4.6%	4.7%	4.6%
2001-2010	3.1%	4.7%	3.7%	3.7%	3.7%	4.2%	3.7%

Sources: BCL calculations, STATEC data

Excluding the linear trend method, potential growth in 2010 ranged from 1.8% to 3.0%. This range is largely unchanged over the projection horizon and is consistent with potential growth forecasts for Luxembourg published by other institutions.

Table 2: Forecasted potential growth in Luxembourg

	2010	2011	2012	2013
OECD (Economic Outlook 89, 25 May 2011)	3.2%	2.8%	2.9%	
European Commission forecasts (May 2011)	2.2%	2.2%	2.6%	
Statec (Note de Conjoncture 1-11, May 2011)	2.9%	2.7%	2.6%	2.5%
Stability and growth programme (April 2011)	2.9%	2.7%	2.6%	2.6%

Sources: European Commission, Ministère des Finances, OECD, Statec.

Compared to the other methods, the production function approach finds a more brutal fall in potential growth during 2009. It also expects a slower recovery through 2013. Lower potential growth is more easily surpassed by observed growth, which explains why this method is also the most optimistic regarding the future output gap.

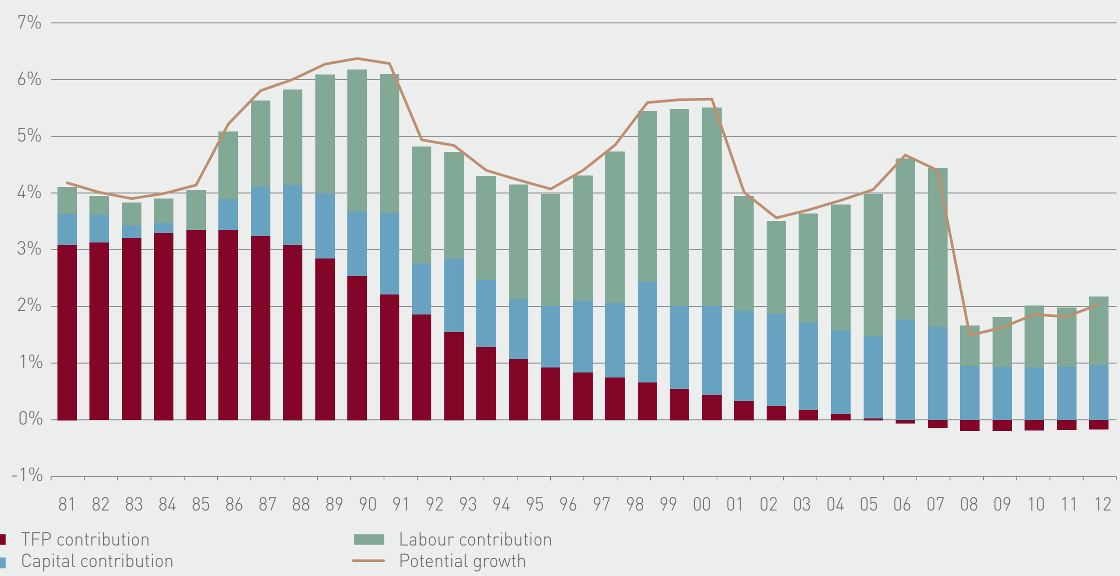
The main advantage of the production function approach is that it provides a decomposition of potential growth into the contributions of capital, labour and Total Factor Productivity (TFP). The latter is calculated as Solow residual through a growth accounting exercise[3]. As indicated in the last BCL annual report, Luxembourg's potential growth is largely dependent on labour, given the limited contribution of capital and the continuous fall in the TFP contribution since the 1980's (when it was dominant).

According to the most recent data, the TFP contribution[4] is marginally negative since 2006 and should remain near the level estimated for 2010 (-0.2%). The labour contribution underwent several cycles in the past, with peaks during the recessions of 1991, 2001 and 2008. In 2009, labour's contribution fell from 2.8% to 0.7% and in 2010 had only recovered to 0.9%. For the years to come, the labour contribution should be slightly above 1%. Finally, the capital contribution fell from 1.7% in 2008 to below 1% in 2009 and 2010. It should recover very slowly given the deep cuts in investment during 2009 and the persistent effects of the crisis on the capital stock.

3 This exercise differs from that in the AMECO database of the European Commission, where TFP is contaminated by the contribution of cross-border workers (ignored by the harmonised method applied to all countries). The capital stock data is also different, but also obtained by the perpetual inventory method applied to a long series for real investment.

4 L'Observatoire de la compétitivité (Perspectives de politique économique n°14) does not distinguish between trend and cycle in TFP, but confirms the sharp drop in 2008.

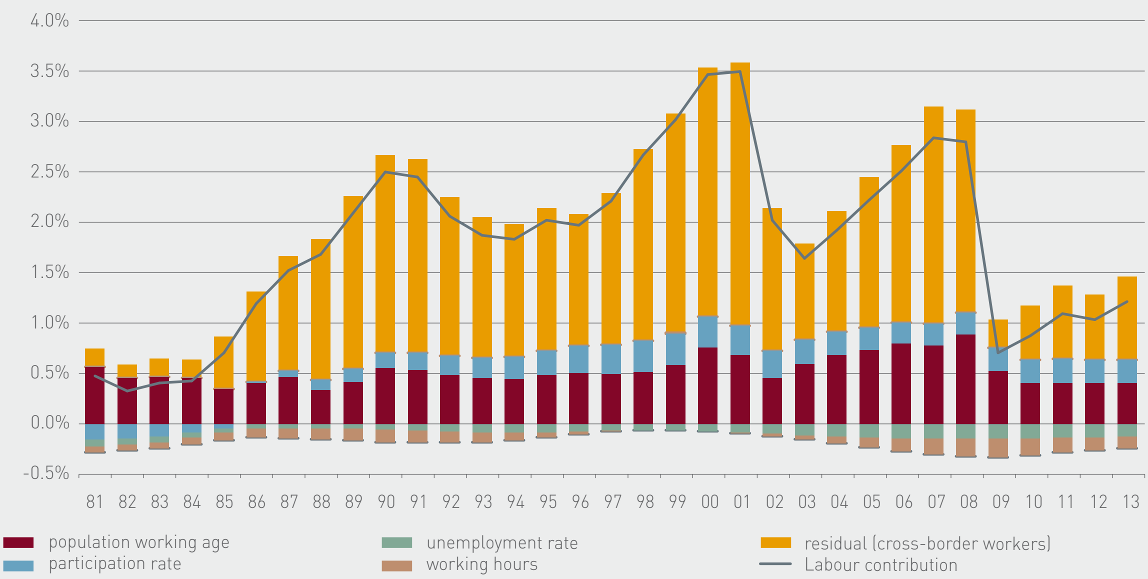
Chart 1: Potential growth accounting



Source: data from Statec, World bank, calculations by BCL

The labour contribution can itself be decomposed in terms of the impact of changes in the population of working age, participation rates and unemployment rates (limited to the resident population), as well as a residual component representing the contribution of non-resident population through cross-border employment. Since the end of the 1980s, cross-border workers have provided the bulk of the labour contribution to potential growth in Luxembourg. Following the bursting of the Internet bubble, this contribution fell significantly, from 2.6% in 2001 to less than 1.0% in 2003. Five years then passed before this contribution returned to 2.0%. More recently, the contribution of cross-border workers fell from around 2.0% in 2008 to 0.2% in 2009 and remained below 0.5% in 2010. According to the projections, this contribution will still be below 1.0% in 2013.

Chart 2: Decomposition of the labour contribution



Source: data from Statec, EU-KLEMS, calculations by BCL

1.2.7 Macroeconomic projections

Since the previous macroeconomic projection exercise, the cyclical upturn was somewhat stronger than previously expected, although the annual national accounts data might a priori point to a different assessment. The first estimate for real GDP growth in 2010 is 3.5%, thus 0.3pp below our December 2010 projection. The expansion of nominal GDP, however, testifies to the vigour of the expansion and, at a rate of above 9.0%, it was well above our expectations. The quarterly national accounts have also been revised for the years 2009 and 2010. According to the revised data, quarter-on-quarter growth in the course of 2009 was less dynamic than previously assumed, but it regained momentum again as of the second quarter of 2010. Since then, real GDP growth surpassed past trends, pushing the levels of economic activity close to the pre-recession peak. The carry-over on annual average real GDP growth in 2011 is now estimated at 2.2%.

Recent developments

The favourable business cycle dynamics observed towards the end of 2010 extended into the beginning of 2011. Initially, the expansion was at a sustained pace whereas in the second quarter it probably lost some of its vigour.

In the first quarter of 2011, the dynamism moderated in the financial services sector, in spite of rising stock markets. The quarter-on-quarter growth of the net asset value in the mutual fund industry slowed down after seven consecutive quarters of sustained expansion. The banks' fee-based income, adjusted for seasonal factors, also increased only moderately. Set against that, however, are the business surveys in the construction sector which, in light of the very favourable weather conditions, point to accelerating growth dynamics. Industrial production also accelerated in the beginning of the year, though its dynamics still falls short of what could be expected on the basis of various survey indicators. This performance looks all the more lacklustre as the growth in the euro area was exceptionally dynamic with a real GDP expansion of 0.8%. Such news should normally bode well for Luxembourg's export-oriented sectors, in particular since this expansion was to a large extent driven by our main trading partners, i.e. our neighbouring countries.

As regards the second quarter of 2011, not much information is available at the current juncture. Growth is set to moderate in the neighbouring countries. The financial market developments would at best suggest moderate growth of the net asset value in the mutual fund industry and banks' fee-based income. On the other hand, the survey indicators in construction are close to record highs. The monthly and the quarterly surveys in the manufacturing sectors would also point to sustained activity and healthy order books.

The recession in Luxembourg has probably ended to the extent that the level of real GDP has probably already moved beyond the pre-crisis peak. This assessment is corroborated by several activity indicators such as the exports of goods, the net asset value in the mutual fund industry and banks' fee-based income, in spite of their more moderate expansion at the beginning of the year. Only industrial production seems to be lagging behind and has so far failed to pick up all its lost output. Employment growth is positive and short-time work, emblematic of the recession, is vanishing gradually.

This favourable news, however, should not conceal that the economy did not grow at all from the first quarter of 2008 to the fourth quarter of 2010, thus almost three full years. The lack of growth, associated with the deliberately expansionary fiscal policy, has produced several distortions. Despite the end of the recession, the unemployment rate remains at a fairly high level, about 8% for the broad unemployment rate. In spite of the government's fiscal retrenchment for the years 2011 and 2012, the fiscal deficit will not vanish in 2013 and gross debt would surpass 20% of GDP. The persistence of these distortions should be avoided. Their correction in the coming years will also put the economy on a sounder basis and lay the foundations for sustainable growth thereafter. It will also help rebuild safety margins that can be deployed in the next economic slowdown.

The end of the recession does not imply the end of the financial crisis, and the ongoing reverberations on the bond markets fully testify to that. A disorderly exit of the crisis in some euro area countries could affect the activities and the results in the financial services sector and jeopardise the growth prospects. These risks cannot be ignored; all the more as any ex ante evaluation of the possible consequences of such a shock is highly uncertain.

Technical assumptions and international environment

Technical assumptions about interest rates, exchange rates, commodity prices and financial markets are presented in the table below.

The global economic recovery has been stronger than expected in 2010, and the recovery in the global economy is continuing and becoming increasingly self-sustained.

While the recovery in advanced economies becomes more engrained, the fallout from the financial crisis is expected to continue to weigh on the strength of the recovery, thwarting the prospects for a speedy recovery in the labour market. This contrasts markedly with the situation in fast-growing emerging economies, which are operating at or close to – and, in some cases, above – full capacity and where overheating pressures persist.

World growth is expected to reach 4.0% in 2011 according to the European Commission and 4.4% according to the IMF. For 2012, both institutions do not anticipate any (notable) acceleration of world growth. International trade is therefore expected to decelerate in 2011 and almost stagnate in 2012.

Following a relatively subdued expansion in the second half of 2010, real GDP growth in the euro area picked up particularly strongly in the first quarter of 2011, with a quarter-on-quarter rate of 0.8%. As this temporary upward effect vanishes, real GDP growth is likely to moderate in the second quarter. Looking further ahead, real GDP is expected to recover only slowly and to reach its pre-crisis level only in the course of 2012. In annual terms, real GDP is expected to increase by between 1.5% and 2.3% in 2011 and between 0.6% and 2.8% in 2012.

With regard to real GDP growth, the Eurosystem projection range has been notably revised upwards for 2011 compared with the previous one (as of December 2010); whereas it has been unchanged for 2012.

The world demand for Luxembourg declined in 2008 and 2009 before rebounding strongly in 2010. Thereafter, it should slow down over the next quarter towards a more normal growth path.

Table 1.14: Projections of international institutions and technical hypotheses (yoy variation rates)[1]

	2010	2011	2012	2013
World trade (EC)	14.0 (+0.2)	7.8 (+0.4)	7.9 (+0.6)	-
World GDP (IMF)	5.0 (+0.2)	4.4 (+0.2)	4.5	-
World GDP (EC)	4.9 (+0.4)	4.0 (+0.1)	4.1 (+0.1)	-
Real GDP euro area (IMF)	1.7 (+0.0)	1.6 (+0.1)	1.8	-
Real GDP euro area (EC)	1.8 (+0.1)	1.8 (+0.3)	1.9 (+0.1)	-
Real GDP euro area (Eurosystem)	1.7 (0.0)	1.5-2.3 (+0.5)	0.6-2.8 (0.0)	-
World demand for Luxembourg	9.6	6.9 (+1.0)	6.5 (+0.9)	6.3
Oil in USD/barrel[2]	80	111 (+22)	108 (+17)	104
Exchange rate USD/EUR[3]	1.33	1.42 (+0.03)	1.43 (+0.04)	1.43
Short-term interest rate	0.8	1.6 (+0.2)	2.3 (+0.6)	2.8
Long-term interest rate	3.2 (-0.2)	3.5 (-0.3)	3.8 (-0.4)	4.1
Eurostoxx[4]	266	284 (+15)	280 (+17)	276

1) Between brackets, revisions with regard to the June 2010 projections, in percentage points.
2) Revisions in USD/barrel.
3) Revisions in USD/EUR.
4) Revisions in index points.

Sources: ECB, EC, IMF

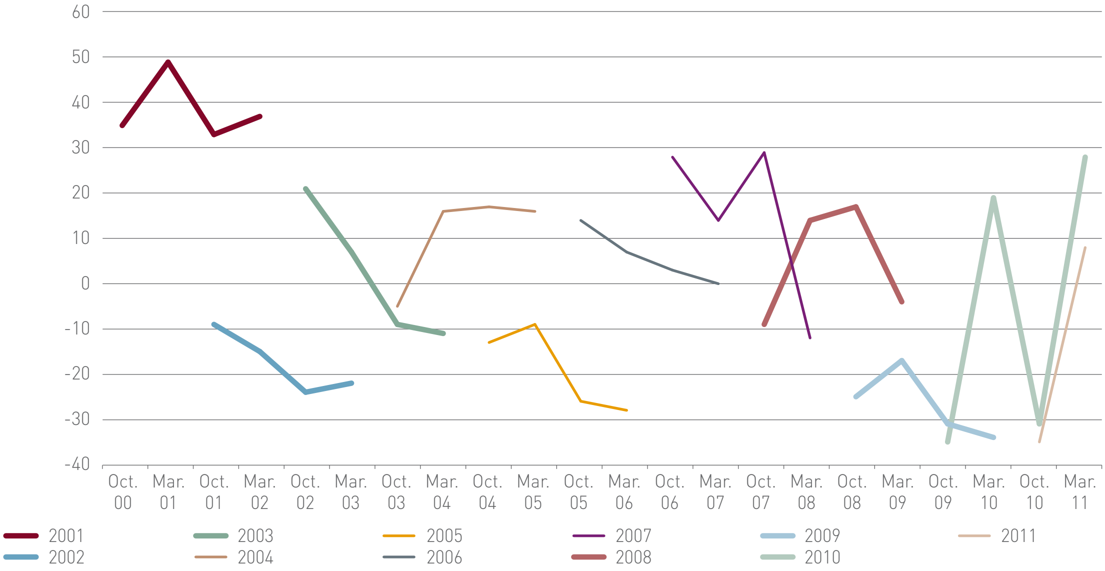
Real GDP and demand components

The more favourable growth momentum towards the end of 2010 and its extension into 2011 yielded a more favourable scenario than envisaged in the December 2010 projection exercise. Real GDP growth in 2011 is now expected at around 4.0%, thus 1.2pp higher than previously expected. Thereafter, growth would be around 3.0% in 2012 and around 3.6% in 2013. Following a period of above trend growth in 2010, the impetus would slow as of the second quarter of 2011 with a gradual renewed acceleration setting in thereafter. The slow-down in the 2012 annual average figures is therefore also largely technical as it arises mostly from the loss of growth momentum in the year 2011. Real GDP growth in 2013, however, would still be below the past trend growth. This projection is mostly based on the assumption that the pending adjustments in the financial services sector are likely to weigh on the medium-term growth prospects.

After the sharp pick-up observed since mid-2009, economic growth is increasingly becoming more balanced. There are no major imbalances in the Luxembourg economy such as excessive indebtedness of the private or public sectors that could prevent the export-led upturn to spill over into the domestic demand components. To some extent 2010 featured already robust and balanced growth as all of the GDP's demand components contributed to its expansion. Total investment, however, expanded only against the backdrop of public investment. Private investment was still retrenching.

In 2011, growth is likely to be pulled again by exports whereas domestic demand would only see a moderate expansion. Indeed, the government's fiscal consolidation measures come in several shapes and they hold back several demand components. Higher direct taxes slow down households' disposable income and restrain private consumption growth. Public investment expenditures even are set to reverse according to the government's spending plans. But this ensuing growth shortfall would most likely be offset by stronger private investment. According to the bi-annual investment surveys in the manufacturing sector, companies have already increased their investment expenditures towards mid-2010 and they would even step up their efforts in 2011 (see chart). Such a scenario is also the most likely after a prolonged adjustment period. The corporate sector's profit margins have been restored by the joint pick-up in foreign demand and the stagnation in real wages. Bar major balance sheet problems, these developments would suggest ample liquidity available to finance new investments. While companies have already accelerated their recruitment, the next step would normally be increased expenditures on new production facilities.

Chart 1.16: Bi-annual investment surveys in Luxembourg's manufacturing sector (in annual percentage changes)



Source: European Commission

Table 1.15: Macroeconomic projections and revisions compared to December 2010 (in annual percentage changes, resp. in percentage points)

	2010	2011	2012	2013	2010	2011	2012
Real GDP	3.5	3.7 - 4.3	2.5 - 3.5	2.9 - 4.3	-0.3	1.2	-0.2
HICP	2.8	3.7	2.5	2.3	-	1.2	0.4
HICP energy	11.7	12.7	-0.1	-1.7	0.3	9.4	-0.9
HICP ex energy	1.7	2.5	2.8	2.8	-	0.1	0.6
NICP	2.3	3.4	2.4	2.2	-	1.1	0.6
NICP ex energy	1.5	2.5	2.6	2.6	-	0.4	0.7
Contribution of indexation to nominal wage increase	1.7	1.9	4.0	2.3	-	-	1.9
Compensation per employee	1.6	2.6	5.2	3.8	-1.1	-0.1	2.2
Employees	1.5	2.3	2.0	2.0	0.1	1.3	1.0
Unemployment rate [1]	6.2	6.0	5.9	5.8	0.1	-0.4	-0.5

1) National accounts version.

Source: Source: STATEC, BCL

Labour market and wage costs

Following the recovery in economic activity, labour market perspectives have steadily improved in the last few months. Employment growth picked up again and reached 2.2% in April 2011. Since mid-2010, non-resident employment is growing at a higher pace than national employment. Employment growth is fairly broad-based and downsizing is only ongoing in the manufacturing and the banking sectors, although at a lower pace than previously. The growing job vacancy rate (from 0.4% in 2009 to 0.6% in 2010 and 1.1% in early 2011) is a sign of regained employers' confidence. In addition, the recourse to short-time work sharply decreased. In June 2011, only 1 400 employees were potentially affected by short-time work. As a result of these considerations, employment growth is expected to accelerate in 2011 and slightly decelerate thereafter.

Narrow unemployment is projected to decrease only gradually and at a slow pace. Elderly people and people with a lower education level are particularly hit by unemployment. As a result of labour mismatch, it might be harder for these people to (re-)enter the labour market. Long-term unemployment has continued to deteriorate and represents 40% of total unemployment. On the other hand, the large unemployment rate could decrease over the projection horizon. In fact, unemployed people enrolled in subsidised employment support measures could primarily benefit from employment growth.

The adjustment in employment also had an impact on wage developments. Real wages are expected to evolve positively as the economy is recovering. At the current juncture, wage demands remain relatively moderate. The high unemployment rate and the uncertainty surrounding economic recovery are some explanatory factors. For 2012 and beyond, information is scarce. The absence of a final decision on a further modulation of wage indexation for 2012 leaves a major uncertainty for the wage negotiations and might also hold back companies from concluding wage deals. At the same time, improving labour market conditions might enhance employees' bargaining power and their wage demands, as witnessed by the recent wage agreement in the banking sector. It stipulates unchanged wage levels in 2011 and an increase in real wages of 2.0% per annum in 2012 and 2013.

In 2011, the evolution of nominal wages would be mainly due to the impact of automatic indexation to past inflation. The social partners agreed to postpone any payout in 2011 to October 2011 at the earliest. While this decision has a downward impact of 1.0pp on wage growth in 2011, it mechanically increases the growth rate of nominal wages by 1.5pp in 2012. According to our inflation projections, the next automatic wage hikes are due in March 2012 and April 2013. The contribution of automatic wage indexation is projected to accelerate to 4.0% in 2012 and 2.3% in 2013. Nominal wages should thus increase by 2.5% in 2011, 5.2% in 2012 and 3.8% in 2013.

Our projections include the increase of social security contributions and the adjustment of the minimum wage in early 2011 as well as the assumption that the real minimum wage will be adjusted in 2013. In addition, whereas no decision has yet been taken by the government, we have assumed a stagnation of real public wages in 2011.

Consumer prices

Inflation would accelerate sharply in 2011, to around 3.4% for the NICP and 3.7% for the HICP. This sharp rise would also be broad-based as it owes to both stronger energy inflation and ex energy inflation. Thereafter, inflation would moderate, close to 2.3% for the NICP and 2.4% for the HICP. This pullback, however, is mostly driven by the technical assumption of slightly lower oil prices. Energy prices would stagnate in 2012 and fall in 2013. But ex energy inflation would still be set to accelerate in 2012 and it would also persist at fairly high levels in 2013, at around 2.6% for the NICP ex energy.

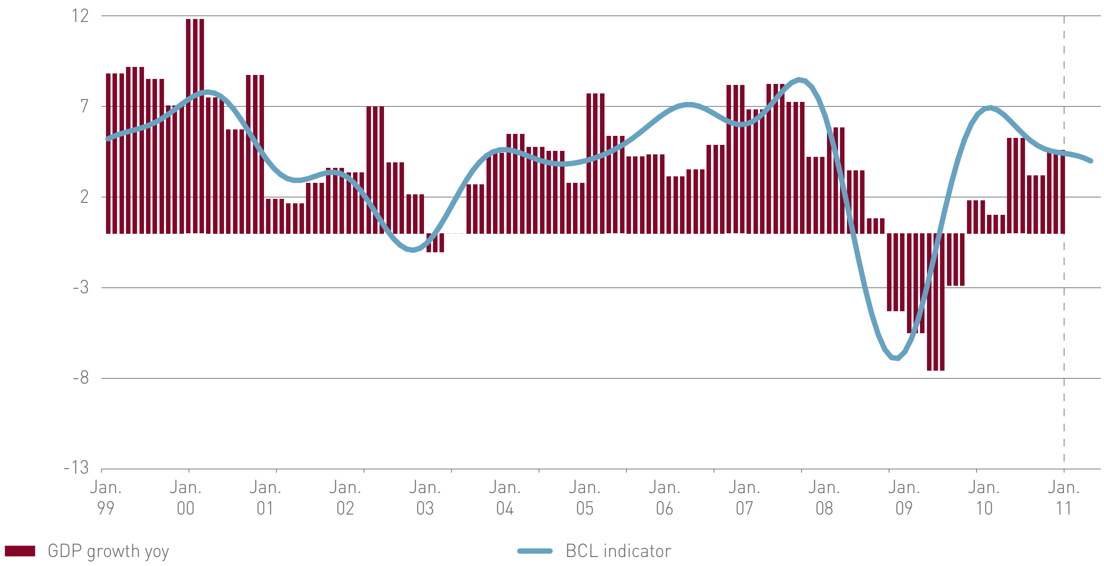
Compared to the previous exercise, these projections have been sharply revised upwards, by about 1.1pp in 2011 and 0.6pp in 2012 for the NICP. In 2011, the adjustment comes largely against the backdrop of the less favourable oil price assumptions and thus also much higher energy inflation. In 2012, however, the revisions can almost exclusively be ascribed to stronger ex energy inflation.

A number of factors are driving inflation, but they differ with the projection horizon. Several factors have already emerged in 2010 and they continue having impact on inflation in 2011 such as the rise in the oil price, the dynamics of food commodity prices, imported inflation as well as administered price hikes. Once these supply shocks are absorbed, inflation could normally decelerate more swiftly. The demand pressures in Luxembourg and in the neighbouring countries would probably be insufficient to maintain inflation at such high rates. But, around mid-2012, the second round effects stemming from the higher oil price would give a new impetus to the inflation dynamics. The projected higher consumer price level in 2011 implies that the two forthcoming automatic wage payouts follow each other very closely, i.e. in October 2010 and in March 2011. They drive nominal wage growth up - to around 5.2% in 2012 - which in turn nourishes inflation. The impacts of the automatic wage indexation scheme would therefore perpetuate the inflation dynamics at a high level and prevent it from falling below 2%. In that context, headline inflation is unlikely to converge to the rate in the neighbouring countries largely because of domestic factors, and higher service prices in particular.

Risk analysis

According to the BCL business cycle indicator, economic growth should stay dynamic at the beginning of this year. According to our calculations based on the BCL indicator, Luxembourg's yoy GDP growth is estimated to be between +4.7% and +6.5% in the first quarter of 2011 (after +4.6% in fourth quarter of 2010). In other words, GDP growth rate qoq should stand around +1.3% in the first quarter of 2011 (after +1.7% in the fourth quarter of 2010). The indicator suggests that economic growth should lose some momentum in the second quarter of 2011, by standing between +2.8% and +6.5% yoy. This is in line with a GDP growth qoq around +0.5% in the second quarter of 2011, so that the carry-over for the year 2011 reaches +3.8%. This last result suggests that GDP growth in 2011 could be somewhat higher than the June 2011 macroeconomic projections for the year 2011.

Chart 1.17: BCL indicator and GDP growth yoy



Source: STATEC, BCL calculations

The projections are based on the assumption of an unchanged government policy. This principle implies the reintroduction of the automatic wage indexation scheme as of November 2011. A possible extension of the modification - as could possibly be inferred from the agreement between government and the trade unions - is therefore not part of the projections. It is obvious that if the government were to postpone the forthcoming automatic wage payout - currently foreseen for March 2012 - then our projections for nominal wages and headline inflation would be biased to the upside.

In the same spirit, the projections for Luxembourg and major economies incorporate only those government measures that have been announced to date. By the end of the projection horizon however, substantial fiscal deficits will persist in the developed world. In 2012, the fiscal deficit in the USA would amount to around 9%, whereas it would amount to about 3.5% in the European Union. Nearly all EU countries would be in deficit and several countries would still fall short of their commitments announced in their updates to the stability programmes. In Luxembourg, the government has pledged to prepare a renewed round of fiscal consolidation in the course of 2012 and to implement it over the years 2013-2014. These additional government measures, in Luxembourg, within the EU and outside the EU, are precisely not part of the macroeconomic projections. Once decided upon, they will be integrated into the baseline scenario, and they will invariably weigh on growth prospects. In small open economies like Luxembourg the fiscal multipliers are usually small, and fiscal consolidation in Luxembourg will therefore not weigh substantially on the country's growth outlook. Downward risks, however, stem mostly from the synchronised fiscal consolidation in the remainder of the developed world. The downward impacts on growth from fiscal adjustment in the different countries would combine and compound each other and affect Luxembourg's growth outlook mostly via the trade channel.

The Luxembourg financial services sector seems to have escaped the crisis better than initially feared. The sector will, however, have to face up to tighter regulation and increased supervision. Some of these new requirements will only be implemented as of 2019 and they could possibly weigh more on the medium-term growth prospects than is currently incorporated in the baseline scenario.

1.2.8 External Trade

Luxembourg's external trade has gradually recovered since the beginning of 2010, after being adversely hit by the world economic slowdown in 2008 and in 2009. When compared to 2009, exports and imports of goods rose respectively by 14.7% and 16% in 2010. However, trade in goods is below the levels reached before the global economic crisis. The trade deficit has widened by 18.6% reaching up to 5 billion euro in 2010. Increasing import prices due to the rise in oil prices and an exceptional purchase of an equipment good (satellite) contributed to the widening of Luxembourg's trade deficit. Development in price indexes shows that in 2010 as a whole, import prices grew faster (+5%) than export prices (+2%), leading to a deterioration of 3% in the terms of trade. However, regarding developments in the trade volumes, exports grew faster than imports of goods.

Table 1.16: External Trade of Luxembourg (Value in million euro and change as % if compared with the same period a year earlier)

	Exports		Imports		Balance	
Period	Value	Change	Value	Change	Value	Change
2005	10 319.4	5.5%	14 187.1	3.7%	-3 867.7	-0.6%
2006	11 306.9	9.6%	15 644.1	10.3%	-4 337.2	12.1%
2007	11 848.6	4.8%	16 311.0	4.3%	-4 462.3	2.9%
2008	11 890.4	0.4%	17 290.3	6.0%	-5 399.9	21.0%
2009	9 162.5	-22.9%	13 370.7	-22.7%	-4 208.2	-22.1%
1st quarter	2 245.2	-26.7%	3 307.5	-19.5%	-1 062.3	1.6%
2nd quarter	2 167.6	-32.8%	3 215.2	-29.2%	-1 047.6	-20.5%
3rd quarter	2 393.1	-21.3%	3 220.2	-29.3%	- 827.1	-45.3%
4th quarter	2 356.7	-8.0%	3 627.8	-11.2%	-1 271.1	-16.6%
2010	10 511.8	14.7%	15 504.4	16.0%	-4 992.6	18.6%
1st quarter	2 460.4	9.6%	3 562.7	7.7%	-1 102.3	3.8%
2nd quarter	2 740.0	26.4%	4 180.4	30.0%	-1 440.4	37.5%
3rd quarter	2 633.2	10.0%	3 700.2	14.9%	-1 067.0	29.0%
4th quarter	2 678.2	13.6%	4 061.1	11.9%	-1 382.9	8.8%

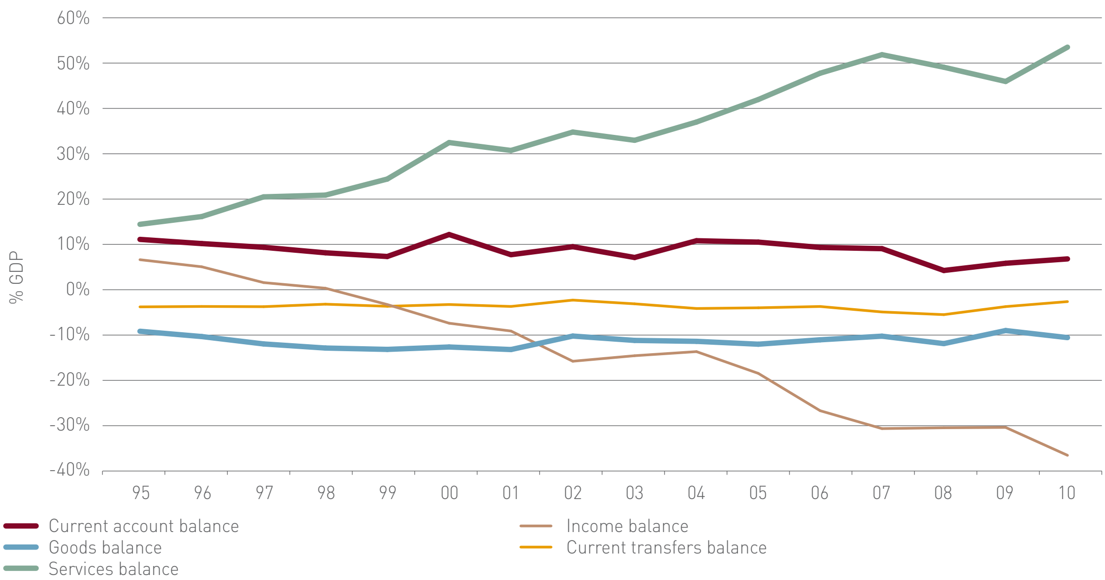
Source: Statec

1.2.9 Balance of payments

In 2010, Luxembourg's current account surplus increased by 25% reaching 3.2 billion euro (or 8% of GDP), compared with a surplus of 2.6 billion euro in 2009 (or 7% of GDP). This development resulted from a large improvement in the services balance, particularly in the net exports of financial services. Travel, insurance activities, air transport (freight) and advertising were among other services that positively contributed to the overall improvement of the services surplus. The latter added up to 22.7 billion euro in 2010 (or 55% of GDP). However, the goods and the income balances deteriorated substantially in 2010, offsetting partially the rise in the services surplus. The deficit in goods rose by 30% standing up at 4 billion euro in 2010 (or 10% of GDP). This large deterioration resulted partially from a drop in the Luxembourg's terms of trade and from a drop in the surplus of the non-monetary gold. In 2010, the deficit of the income balance widened by 32% to 15 billion euro (or 36% of GDP). This worsening was primarily the result of a significant rise in interest and dividends paid to non-residents.

In the financial account, Luxembourg's net outflows amounted to 2.8 billion euro in 2010, up from 2.4 billion euro in 2009 as large outflows in the other investments (loans and deposits) exceeded inflows in the direct investments and in the portfolio investments.

Chart 1.18: Developments in the Luxembourg's current account and its components



Sources: BCL, Statec

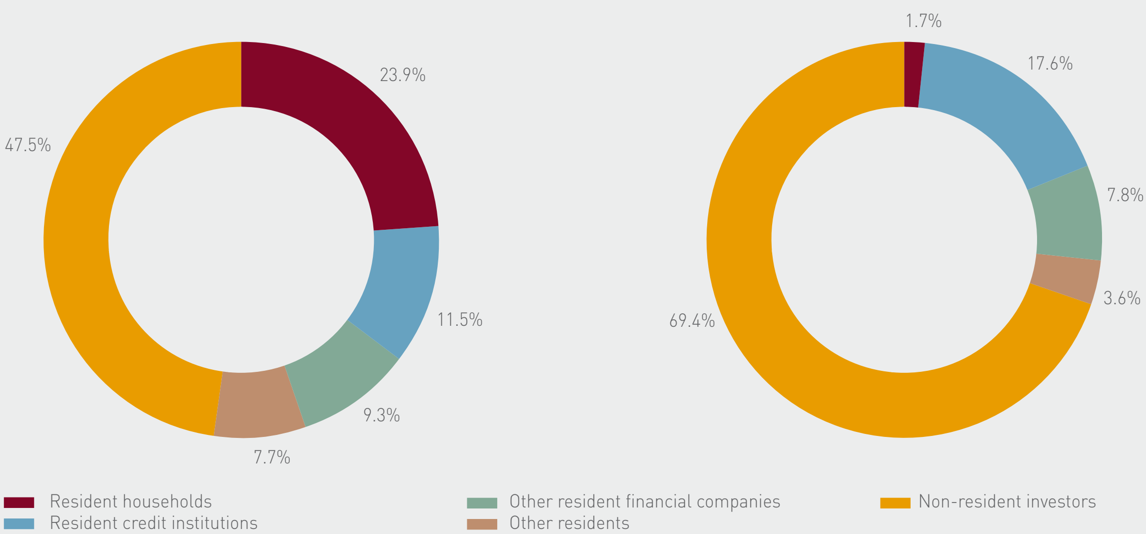
Box 1.5:

DEBT SECURITIES ISSUED BY THE LUXEMBOURG STATE: SECTORAL AND GEOGRAPHICAL BREAKDOWNS OF HOLDERS

At the end of 2009, the Luxembourg government issued two lines of debt securities for a total nominal amount of 4 billion euro. The purpose of this box is to present the structure of the owners and the part of securities held by non-resident investors.

Through its system of security-by-security data collection, the BCL has statistical information allowing estimating the quota-share of total nominal issuances held by non-resident investors. However, these sources do not allow distinguishing the country of residence of the investor or its business sector. On the other hand, for resident holders, this system of collection offers the possibility to determine the amounts held by the different economic sectors.

Chart 1: Geographical and sectoral breakdowns of the holders of securities issued by the Luxembourg State (IGF) (as of end 2010)



Source: BCL

At the end of 2010, 48% of the total issuances in nominal value of the first general public debt issuance in December 2008 were held by non-resident counterparties, 24% by Luxembourg households and 21% by resident financial companies.

Concerning the second issuance in May 2010 aimed primarily at the institutional investors, 69% of the holders were non-residents and 25% was attributed to financial companies established in Luxembourg. The quota-share held by resident households was marginal.

It is also interesting to note that the main holders of the securities from the second issuance were from France (18%), Germany (15%) and Belgium (10%). However, these proportions may have changed between the date of issuance and the end of 2010.

1.2.10 Public finances

1.2.10.1 Fiscal developments in 2010

The general government deficit-to-GDP ratio increased from 0.9% in 2009 to 1.7% in 2010. The expenditure-to-GDP ratio declined by around 1 percentage point, largely on account of strong growth in nominal GDP (denominator effect). This was, however, more than offset by an even stronger decline in the revenue-to-GDP ratio. The latter is largely explained by the fact that GDP growth far outpaced the growth of wages and private consumption (which are, respectively, the most important bases for direct and indirect taxes). Furthermore, corporate income taxes were flat, having rebounded very strongly in 2009. The debt-to-GDP ratio continued its upward trajectory, increasing from 14.6% to 18.4%. This was largely on account of a sizeable deficit-debt adjustment because of borrowing that, in the end, was unnecessary because tax revenues exceeded expectations.

The 2010 budget deficit was below the 3.9% target set in the January 2010 stability programme update. This was because macroeconomic developments were much better than expected, yielding higher tax revenues.

1.2.10.2 Budgetary projections for the period from 2011 to 2013

The general government deficit-to-GDP ratio is projected to decline to around 1% in 2011, before rising back to 2% in 2013. The impact of the economic cycle on the change in the budget balance is judged to be slightly negative in 2011, but then slightly positive in 2012-2013. Thus, both the projected deficit reduction in 2011 and the subsequent deterioration are viewed as structural in nature. The general government debt-to-GDP ratio is projected to continue its upward trajectory, reaching almost 23% in 2013.

The revenue-to-GDP ratio is projected to remain broadly unchanged in 2011 and 2012, and then decline by about ½ of a percentage point in 2013. Tax measures introduced in January 2011, including a new personal income tax rate of 39%, an increase in the solidarity tax for households and corporations and a special crisis tax on household revenues, as well as higher social contributions related to the healthcare reform, should add around ½% of GDP to revenues in 2011. But this will be offset by the impact of a still unfavourable (i.e. tax poor) composition of output growth. Moreover, the projection assumes a modest decline in corporate income tax receipts from the present high level.

The expenditure-to-GDP ratio is projected to decline by around 1 percentage point in 2011 and stabilise thereafter. The decline in 2011 is due to more subdued spending growth, and in particular lower government investment as the impact of stimulus measures adopted at the height of the crisis unwinds. In 2012, however, the combined effect of pension indexation to real wages and increases in agreed public sector wages give rise to a projection in which the growth rate of spending is broadly in line with GDP and slightly exceeds that of trend GDP.

For 2011 and 2012, the ESCB projection points to the deficit-to-GDP ratio being broadly in line with the plans of the government as presented in the April 2011 update of the stability programme. However, a gap of about ½% of GDP opens up in 2013. This would seem to be mainly related to differences in the macroeconomic scenario and more prudent revenue assumptions in the ESCB projection. Risks to the ESCB fiscal projection are viewed as being balanced.

1.2.10.3 Policy issues

While low by international standards, the deficits projected represent historically high levels for Luxembourg. Moreover, they would occur in spite of large social security system surpluses that are unsustainable over the longer term. In view of this, the April 2011 stability programme update is somewhat lacking in ambition as far as (progress towards) the government's medium-term objective is concerned. Firstly, the MTO of a structural surplus of ½% of GDP is below the ¾% of GDP recommended by the European Commission. Moreover, this objective is only to be achieved in 2015. This lack of ambition is unfortunate given that, according to the European Commission's Ageing Report (2009), Luxembourg would experience the largest increase in age-related spending in the EU over the coming decades. Furthermore, the European Council agreement of December 2007 on a regulation related to the taxation of electronic commerce will imply revenue losses for Luxembourg of 0.7-1.2% of GDP as of 2015. Against this background, the measures, already announced in May 2010 and implemented in the course of 2011 should be complemented by further measures as soon as possible. Expenditure-based consolidation should be given priority, and this could be supported by adoption of a medium-term budgetary framework with binding expenditure ceilings. Structural measures should also include a reform of the pension system.

Overall, the deficit-to-GDP ratio is projected to remain below the 3% of GDP reference value over the projection horizon. However, an adequate safety margin may be viewed as lacking given Luxembourg's position as a very small, open economy. The medium-term objective of a small budget surplus is not achieved. The debt-to-GDP ratio, although increasing, remains well below the 60% reference value.

Table 1.17: Fiscal developments in Luxembourg, 2009-2013

	2009	2010	2011	2012	2013	2010	2011	2012	2013
	(as a percentage of GDP)					(percentage change in nominal level)			
Total revenue	41.3	39.5	39.2	39.1	38.5	4.6	5.9	5.3	4.4
Legislation changes	0.0	-0.1	0.4	0.0	-0.2				
Total expenditure	42.2	41.2	40.3	40.4	40.4	6.8	4.2	6.0	5.8
Interest payments	0.4	0.4	0.6	0.6	0.7	22.1	49.7	18.6	13.6
						(change in percentage points of GDP)			
Budget balance	-0.9	-1.7	-1.0	-1.3	-1.8	-0.8	0.7	-0.3	-0.5
Cyclical component	-0.1	-0.3	-0.5	-0.3	-0.2	-0.2	-0.2	0.2	0.1
Temporary measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Structural balance	-0.8	-1.4	-0.5	-1.0	-1.6	-0.6	0.9	-0.5	-0.6
Cyclically adjusted primary balance	-0.4	-1.0	0.0	-0.4	-0.9	-0.6	1.1	-0.4	-0.5
Consolidated gross debt	14.6	18.4	18.6	21.0	22.6	3.9	0.2	2.4	1.6
Latest stability programme									
Budget balance		-1.7	-1.0	-1.5	-1.2		0.7	-0.5	0.3
Consolidated gross debt		18.4	17.5	19.8	21.4		-0.9	2.3	1.6

1) As a percentage of trend GDP.

Sources: IGF, IGSS, Statec, CNS, BCL calculations.

Box 1.6:

LABOUR MARKET IMPERFECTIONS AND PENSION REFORMS

Population ageing in most European countries will increase the dependency ratio, which raises many questions about the sustainability of our pay-as-you-go pension system. A general equilibrium model is a suitable tool to study these questions. Moreover, a realistic model of any European economy must include labour market imperfections and institutions.

Ageing, cross-border commuters and reforms in Luxembourg

In Luxembourg, population ageing will concern the residents but also the cross-border commuters. It is crucial in this respect to look at the sustainability of the pension system. To quantify the public finance effects of ageing, we use LOLA, a general equilibrium model with labour market frictions (see Pierrard and Sneessens, 2009, for more details). Our results are close to those obtained by the European Commission (see Table 1, rows "ageing EC" and "ageing LOLA"). All simulations highlight an impressive surge in pension expenditures.

Table 1: Increase in public deficit due to the population ageing in Luxembourg, excluding the interest rate burden (expected evolution under alternative scenarios, in percentage of GDP)

	2020	2050	2060
ageing EC	+1%	+16%	+18%
ageing LOLA	+1%	+14%	+15%
lower pensions	-1%	+9%	+10%
lower contributions	-1%	+10%	+11%
joint reforms	-2%	+6%	+6%

We therefore advocate a pension reform. Since the net replacement ratio in Luxembourg is largely above the ratio in the neighbouring countries (see OCDE.Stat), we believe that a decrease in this ratio could curb the increase in public expenditure and stimulate the activity rate without generating a generalised impoverishment of the population. The LOLA model shows that an immediate decrease by 10 percentage points in the net replacement ratio, which would move from 100% to 90%, would reduce in the end the adverse impact of population ageing on public expenditure from 15% to 10% of GDP (see Table 1, row "lower pensions").

Moreover, the OECD (see for instance Duval, 2003) recommends a decrease in the taxation rate for the older workers in order to stimulate their activity rate. The LOLA model shows that an immediate reduction by 10-percentage points in the taxation rate for workers between 55 and 65 years (moving from 12%, including an 8% contribution for pensions, to 2%) is initially not very costly from a public finance perspective because only few people between 55 and 65 years have a job. On the other hand, the policy prompts people to defer their – early – retirement age. In the long run, the public deficit would increase by 11% of GDP"only" (see Table 1, row "lower contribution").[1]

Savings and interest rates

LOLA is a small open economy (SOE) model, meaning that the interest rate is exogenous. However, de la Croix, Pierrard and Sneessens (2011) show that in a closed economy, labour market frictions generate a link between the interest rate and the unemployment rate. Indeed, a lower interest rate stimulates labour demand and hence the bargained wages. These higher wages in turn stimulate the work participation rates. In LOLA, the two policy reforms suggested above increase savings but do not change the interest rate (SOE assumption). The assumption that higher savings have at least some – downwards – effects on the interest rate would reinforce the positive effects of the reforms. Moreover, given the strong correlation between interest rates in Europe, Luxembourg could also benefit from pension reforms in the neighbouring countries.

Recent government proposals

Recently, the Luxembourgish government presented proposals to reform the pension system. Broadly speaking, the government suggests introducing more flexibility around the retirement age. Although the legal retirement age would remain fixed at 65 years, the reform would force the workers to choose between: (1) drawing their pension as soon as possible but with a reduction in the pension level, or (2) working longer to compensate the above-mentioned reduction in the pension level.

We believe that this proposal goes in the right direction. Public expenses would decrease as a result and the reform should stimulate the activity rate of older workers as well as encourage saving. However, the suggested implementation is very

1 Obviously, our policy suggestions are immediate, linear and politically unfeasible. A practical implementation should be reasonably progressive – and should at the same time guarantee that pension policies are fully sustainable over the long term.

gradual and substantial effects would not happen until 2060. We therefore suggest going deeper in the pension reform (earlier implementation – also with a view to intergenerational fairness – and additional measures such as a looser link to real wage developments).

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Box 1.7:

FISCAL SUSTAINABILITY IN LUXEMBOURG: AN UPDATE

This box contains an assessment of the long-term sustainability of Luxembourg's public finances over the 2011-2040 period. This exercise is based on simulations, which are not projections *stricto sensu* as they merely attempt to highlight future developments based on the "unchanged policy assumption".

The salient conclusion of this exercise is that fiscal sustainability problems are deeply entrenched in Luxembourg in spite of the implementation of consolidation measures in 2011. Additional consolidation and structural measures should be considered.

Medium-term simulations: the salient assumptions

The simulations carried out in this section mainly rely on two sources, namely the work of the Ageing Working Group of the Economic policy Committee (AWG) and the 2011-2013 BCL macroeconomic projections presented above in this report. By assumption, economic growth is to reach 2.2% a year after 2013 (whereas it would be in line with the BCL macroeconomic projections from 2011 to 2013). The 2.2% assumption seems reasonable in the aftermath of the economic and financial crisis and is in line with the current BCL estimates of potential growth. Employment and productivity would grow by 0.5% and 1.7% a year, respectively. The inflation rate would be equal to 2% all over the simulation horizon. Although the relatively classic demographic assumptions will not be spelled out in detail, it is appropriate to note the large number of immigrants assumed in the simulations, equal to 3 000 to 4 000 people per year.

All the simulations are carried out in structural terms. For the 2011-2013 period the BCL has carried out projections of structural general government revenue, expenditure and the structural balance. In other words, revenue and expenditure are "cleared" of the impact of economic cycles and temporary measures. On the expenditure side, it is assumed that average wages and public employment will increase at the same speed as in the private sector throughout the projection horizon. This means that in the steady state, public employment will increase by 0.5% per year, which seems moderate compared to the evolution observed in the last ten years. As far as social security is concerned, pension expenditures (both general - i.e. private sector - regime and the special regimes dedicated to, *inter alia*, civil servants), health insurance, unemployment allowances and dependency insurance are supposed to evolve in about the same manner as in the AWG basis scenario. This induces a strong increase of primary expenditure linked to these four sectors, by 13% of GDP, between 2011 and 2040. However, this impact is moderated by the treatment of family allowances applied in the simulations. This item, which carries a certain weight in Luxembourg, is not considered in the AWG study. To infer the long-term evolution of this item, national family allowances are presumed not to be indexed to prices all over the simulation horizon, in line with the decisions adopted in April 2006. Similary, it is also presumed that the Luxembourgish authorities will not implement new measures regarding family allowances. The nominal amount of these benefits is consequently frozen throughout the projection period. Therefore, in the simulations presented in this section, the cost of these benefits will fall from 2.7% of GDP in 2011 to only 1.0% of GDP in 2040.

This decrease by 1.7% of GDP covers about one sixth of the additional cost expected from pensions.

On the revenue side, the general rule to which the simulations stick is that revenues grow proportionally to GDP. However, there are several exceptions to the proportionality principle. First, contrary to the AWG, the BCL takes into consideration the positive impact of the marked increase in pensions on two revenue categories, namely social contributions paid by pensioners (health and dependency insurance), and direct taxes. This effect, which mitigates somewhat the fiscal impact of population ageing, cannot be ignored. Indeed, it improves the primary public balance by about 1% of GDP over the simulation horizon. Second, interest receivable is estimated in line with general government assets and consequently does not remain stable compared to GDP. The rate of return on capital is supposed to attain 3.5% per year. The implicit interest rate on debt is also fixed at 3.5% in nominal terms over the simulation period.

In addition, the simulations take into account general government assets other than pension reserves amounting to 10% of GDP at the end of 2010. These assets incorporate the "Fortis" shares acquired by the State during the economic and financial crisis, which amounted to EUR 2 500 million. These general government assets are assumed to decline gradually over the simulation horizon, which dampens the resort to debt financing.

Finally, it is considered in the simulation that three major risks will materialise during the projection horizon. First, direct taxes on corporations would gradually converge to the euro area average, in line with the assumption of a less dynamic financial sector. Second, a gradual decline of "Tanktourismus" ("oil tourism") over the simulation horizon is considered. Third, VAT revenue will disappear from 2019 onwards (and will start to decline steeply in 2015), in line with the "VAT package" approved by the European council in December 2007.

Medium-term simulations: the results

Conditional upon the assumptions described above, public finances would develop as announced in the table below. The total revenue ratio would decrease over time, as electronic VAT, direct taxes on corporations and "Tanktourismus" would gradually decline. The revenue ratio would go down from 38% of GDP in 2013 to 34% in 2040. In addition, interest receivable would wither away due to the progressive disappearance of pension reserves.

The expenditure ratio would increase in a significant way over the simulation horizon, due in particular to increasing social transfers. Interest payable would also go up, which reflects the inherent dangers of a poorly controlled indebtedness dynamic. General government deficits would significantly exceed the 3% of GDP level from 2016 onwards and gross consolidated debt would steeply increase as a result. It would exceed 20% of GDP in 2013 and would cross the 60% of GDP reference value in 2026. It would exceed 200% of GDP by the end of the projection horizon, of which close to 100% of GDP is related to the pension systems. These results are only marginally more favourable than the results commented in the BCL opinion on the 2011 draft budget, published in November 2010. Moreover, this slight improvement is the reflection of upward revisions in the GDP level and is therefore not of a structural nature.

These results are only partially attributable to the assumption of declining direct taxes and electronic VAT. Even when these two revenue items are kept constant, the debt ratio exceeds 60% of GDP from 2028 onwards and would amount to 175% of GDP in 2040, as indicated in the last row of the table below.

In these circumstances, the BCL must reiterate the two recommendations already made in its opinion on the draft 2011 State budget. First, the Luxembourg general government should reach as quickly as possible and in 2015 at the latest the Medium-Term Objective (MTO) of a surplus equal to at least 1% of GDP. Second, structural reforms should be implemented in parallel in the social sector. The first recommendation implies a fiscal consolidation amounting to at least 4% of GDP by 2015. As indicated in the table above, the structural deficit would indeed amount to 3% of GDP in 2015.

The "pension à la carte" mechanism presented by the government on 17 March 2011 would not radically improve fiscal sustainability because its implementation would be very gradual. It would indeed only concern new pensioners and would be confined to the part of their career falling after the reform's entry into force.

Table 1: General government fiscal situation with gradual decline of electronic VAT, "Tanktourismus" revenue and direct taxes on corporations (as percentages of trend GDP)

	2013	2014	2015	2020	2025	2030	2035	2040
Total revenue	**38.4**	**38.4**	**37.6**	**36.9**	**36.0**	**35.2**	**34.8**	**34.3**
Direct taxes	13.0	12.9	12.9	12.7	12.5	12.3	12.2	12.0
Indirect taxes	10.7	10.6	9.8	9.1	8.8	8.4	8.1	7.7
Social contributions	11.6	11.6	11.6	11.6	11.7	11.8	11.9	12.0
Interest income	0.6	0.7	0.7	0.8	0.4	0.0	0.0	0.0
Others	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Total expenditure	**40.0**	**40.4**	**40.6**	**42.6**	**45.7**	**48.9**	**53.3**	**57.4**
Social transfers	20.4	20.7	21.0	22.5	24.9	27.1	29.6	31.5
Public investments	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Compensation of employees	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Other primary expenditure	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
Interest charges	0.7	0.8	0.8	1.2	1.8	2.9	4.8	7.0
Deficit (-) or surplus (+)	**-1.6**	**-2.0**	**-3.0**	**-5.7**	**-9.6**	**-13.7**	**-18.5**	**-23.1**
Public debt	**22.3**	**22.7**	**24.8**	**39.1**	**57.6**	**96.3**	**154.9**	**224.0**
of which pension debt	-25.7	-25.9	-25.8	-21.4	-7.2	17.7	53.2	97.0
Debt with constant "tanktourismus" and corporate taxes	*22.3*	*22.5*	*24.4*	*35.3*	*47.2*	*76.1*	*121.9*	*175.3*

Sources: Ageing Working Group, International Energy Agency, Eurostat, IGSS, Statec, BCL calculations.