09 ANNUAL REPORT 2009

BANQUE CENTRALE DU LUXEMBOURG

EUROSYSTEM

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EUROSYSTEM

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THE GOVERNOR'S MESSAGE

The euro area GDP decreased by 4.1% in 2009. The economic recovery took hold ever since, but it will probably be characterised by low and quite volatile rates of growth. In Luxembourg, GDP declined by no less than 3.4% in 2009, which has been the worst result since 1975. The recession lasted five quarters, from the second quarter of 2008 to the second quarter of 2009, and real GDP decreased by 7% over this period. The discrepancy with respect to the trend growth rate observed from 1960 to 2007 therefore amounted to more than 10% during this phase. The revival recorded during the second half of 2009 and the positive impetus observed at the beginning of 2010 augur a GDP growth rate between 1.8 and 2.8% in 2011 and between 2.5 and 3.9% in 2012. This confirms that the Luxembourg economy is no longer able to record the high growth rates of 4% or more observed in the past, which underlay the so-called Luxembourg social model.

I would like to draw your attention to the high uncertainty that surrounds these projections. On the one hand, the fiscal consolidation measures adopted – or likely to be adopted – in most European countries are not fully integrated in the projections, which only take into account the measures already announced and sufficiently spelled out. The implementation of these plans is essential, in order to defuse as quickly as possible the public finance crisis. However, in the short term these plans could also dampen the external demand directed to Luxembourg.

On the other hand, the prospects of the financial sector are uncertain and the macroeconomic performances of Luxembourg closely depend on the evolution of financial markets. The Luxembourg financial centre at first sight exhibits a strong resilience to the financial crisis. However, this prima facie evidence could quickly prove wrong. The impact of the crisis on the financial centre is still difficult to assess at this juncture. The exposure of the Luxembourg banking sector on the Italian, Spanish, Greek and Portuguese sovereign risk is still significant and the absence of a resolution fund in Luxembourg could magnify this vulnerability. A cautious and responsible policy is required in these circumstances, as well as more efficient constitutional arrangements.

Real GDP will have stagnated from the end of 2007 to the beginning of 2011, compared to a "normal" rate of economic growth estimated at 4% a year in Luxembourg prior to the crisis. The Luxembourg authorities must grasp this new economic reality and adopt as soon as possible the indispensable structural reforms. Otherwise, Luxembourg will no longer be able to address successfully the manifold present-day challenges. The labour market must be reformed, on economic and in particular social grounds. The employment growth rate decelerated markedly in Luxembourg. Whereas total employment still grew by more than 5% a year before the recession, it is now at a standstill. The unemployment rate has as a result reached the historically high level of 6%, in spite of several dampening effects like cross-border workers, the use of short-term unemployment and the so-called "employment measures".

Unemployment becomes deeply entrenched in Luxembourg, due *inter alia* to the spectacular drift of unit wages, compared to our major trading partners, since the end of the nineties. Luxembourg belongs to a monetary union and should therefore act in a more responsible way as regards public finances and competitiveness. After the courageous reforms implemented in several foreign countries, Luxembourg is now among the worst European Union Member States with respect to labour costs and productivity. The current wage indexation mechanism is not compatible with our membership in such a union. Automatic, full indexation is all the more damaging as our inflation tends to exceed the inflation rate recorded in our neighbouring countries. Our inflation projections suggest that this trend will continue unscathed over the next years, unless decisive actions are adopted in this field.

As Luxembourg cannot resort to external devaluations, it should proceed as soon as possible to an "internal devaluation", namely to a cost confinement policy. Such a policy could be stimulated at the European level, as illustrated by the creation of a new governance task force under the aegis of the President of the European Council. The task force could recommend multilateral surveillance mechanisms as far as competitiveness is concerned. Luxembourg must as quickly as possible remedy to its low productivity, via *inter alia* an efficient economic diversification policy. An internal reallocation of public expenditure in favour of education, research and training would favour such a strategy.

The authorities also have to face reality as far as public finances are concerned. BCL has repeatedly underlined over the last few years the drift in our public finances, which earned the bank the nickname "Cassander". Our only problem is that we basically – albeit to a lesser extent than many observers – underestimated the real extent of the challenge. The Luxembourg general government posted a deficit of 0.7% of GDP in 2009. According to our projections, the deficit should be below but close to the 3% reference value in 2010, for the first time since the establishment of the ESA 95 harmonised accounts. This reference value would even be breached from 2011 onwards due to lower direct taxes on corporations and to a still relatively sustained increase in current expenditure. Public debt would amount to 29% of GDP in 2012, namely about four times the level recorded in 2007.

The measures announced by the Prime Minister on 5 May 2010 would, according to mechanistic estimates, decrease the general government deficit by a little more than 1% of GDP from 2011 onwards. According to our estimations, lower current expenditure accounts for at most one fourth of the global consolidation package, whereas higher taxes represent about one half of this package. This latter element could prove detrimental to economic growth.

A different picture emerges once the adverse impacts of higher taxes, *inter alia* on labour supply, are taken into account. These adverse impacts would indeed dampen to a considerable extent the budgetary impact of the new consolidation measures. According to the BCL general equilibrium model, this favourable impact would reach at most 0.4% of GDP over the medium term, compared to 1% of GDP for the "static" effect. The BCL has always argued for expenditure restraint – Luxembourg is on the top of the European league as regards both public expenditure per head and the increase in expenditure. An austerity package focused on higher taxes rather than on a more responsible expenditure policy spoils the Luxembourg economy, and this in turn harms public finances. The ultimate result is a weak economy and a mitigated decrease of the fiscal deficit.

The consolidation effort presented by the Luxembourg government is only a first and grossly insufficient step towards a lasting improvement in our public finances. The latter are penalised by a high central government deficit and by the high implicit liabilities connected to social transfers – pensions in particular. Only a resolute action based on the conjunction of two pillars could ensure the sustainability of our public finances. The first pillar is the implementation of the EUR 1.5 billion effort presented in the 11th update of the Luxembourg Stability Programme. The second pillar is a structural reform of the social security system, focused in particular on a "ticking time bomb", namely the pension systems. The actuarial neutrality of pensions should be guaranteed. In other words, the "pensions versus contributions" principle should be plainly complied with, *inter alia* via a less generous treatment of the so-called "assimilated" years. In addition, the effective retirement rate should be raised. Finally, the full adjustment of pensions to real wages should be severed or at least confined to the lower pensions. The healthcare system, whose financial situation is constantly deteriorating, should also be monitored closely by the authorities.

Should the government rest on the measures announced on 5 May 2010, the consolidated debt ratio would exceed the 60% of GDP reference value around 2027. It would increase in an exponential way afterwards. Any subsequent adjustment would be extremely costly in these circumstances – also from a social viewpoint. This shows that an early and coherent consolidation strategy is the best one also from a distributive viewpoint.

These indispensable quantitative adjustments should be accompanied with more qualitative improvements of the institutional framework presiding over budgetary policy. The BCL has repeatedly advocated what is at present discussed at the European level, namely the establishment of an independent fiscal body. In Luxembourg, such a body would make it easier to coordinate the macroeconomic projections that underlie the budget process and to choose an appropriate evolution of expenditure. A more tangible expenditure rule would also be extremely useful. The current one is only one aspect of the coalition agreement. This new expenditure norm could be monitored by the independent fiscal body. Finally, the budget should be presented in line with programmes and performance indicators rather than with a view to administrative traditions. This debate about a more efficient budgetary governance framework should begin as soon as possible in Luxembourg and should proceed in parallel to the similar discussions at the European level.

The BCL is clearly deeply entrenched in the European debate, most notably the euro area, as illustrated for instance by the launch by Clearstream of LuxCSD, namely a new central depository service for securities in Luxembourg and other countries. LuxCSD will make it possible to settle securities transactions in central bank money, which will decrease the related risks for financial market participants. LuxCSD should become operational during the first half of 2011. It will also ease the connection of market participants to TARGET2 Securities.

The BCL also closely monitors the evolution of the institutional architecture of Europe, *inter alia* the European Systemic Risk Board (ESRB), in which the BCL plays a role. At the national level, legislative changes related to the BCL organic law are also envisaged.

Yves Mersch

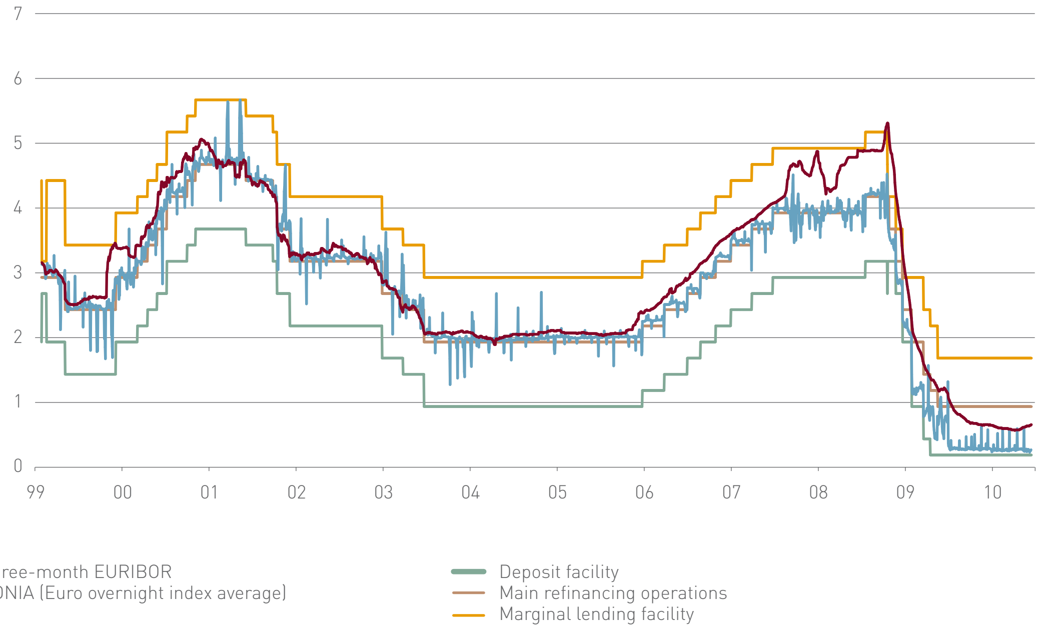
01 THE ECONOMIC AND FINANCIAL SITUATION

1 THE ECONOMIC AND FINANCIAL SITUATION

1.1 THE ECONOMIC SITUATION AT THE INTERNATIONAL LEVEL

1.1.1 Short-term interest rates and monetary policy decisions

Chart 1.1: Key policy rates of the Eurosystem, the EONIA and the three-month EURIBOR
(percentages per annum)



Sources: ECB, Bloomberg

Between January and May 2009, the interest rate on the main refinancing operations was lowered by 150 basis points. The interest rate on the deposit facility and on the marginal lending facility was lowered by 175 and 125 basis points respectively. Since May 2009, key ECB rates have remained unchanged. Thus, the interest rate on the main refinancing operations stands at 1.00%, while those on the deposit facility and on the marginal lending facility stand at 0.25% and 1.75% respectively.

The Governing Council also adopted a series of non-standard measures in order to cope with dysfunctional money markets and facilitate the monetary transmission mechanism. These measures are temporary in nature and designed to maintain price stability over the medium term.

Annual HICP inflation stood at 0.3% in 2009, the lowest level on record since the launch of the euro, after a record high of 3.3% in the preceding year. The inflation rate has however edged up gradually, reaching 1.5% in April 2010; according to Eurostat's flash estimate, annual HICP inflation stood at 1.6% in May. Looking ahead, inflation rates should remain moderate over the medium term.

Regarding economic activity in the euro area, annual real GDP contracted by 4.1% in 2009. Quarterly growth rates of real GDP turned positive in the second half of the year. In the third and fourth quarters of 2009, quarterly real GDP progressed by 0.4% and 0.1% respectively. According to Eurostats' flash estimate, euro area real GDP progressed by 0.2% quarter-on-quarter in the first quarter of 2010. The rebound in economic activity is linked to the ongoing economic recovery at the global level, the accommodative monetary policy stance and the measures adopted to restore the functioning of financial markets. Looking ahead, the Governing Council expects real GDP to grow at a moderate and still uneven pace.

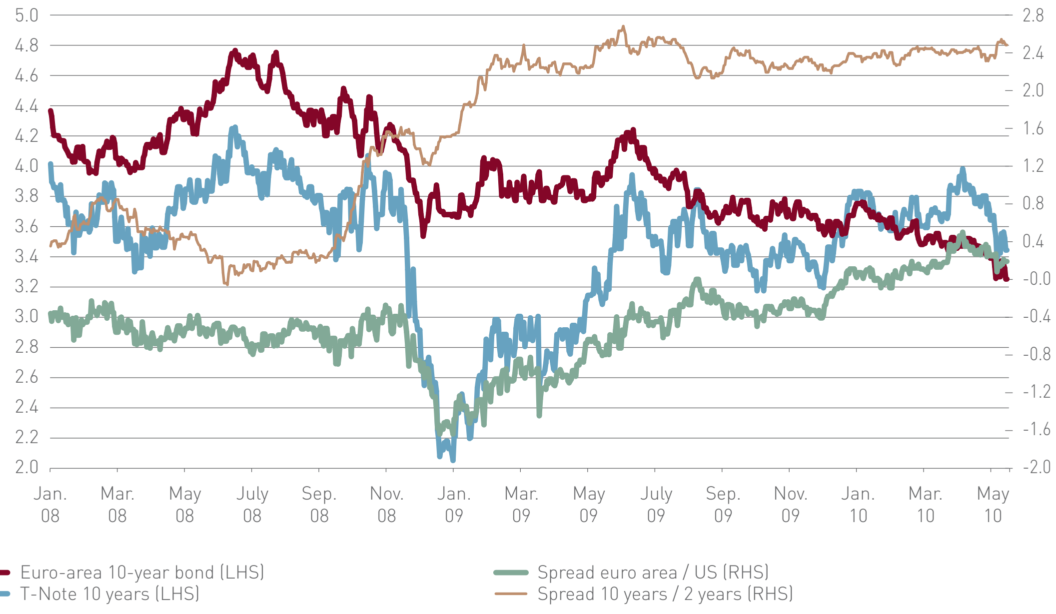
Turning to the monetary analysis, the annual growth rates of M3 and of loans to the private sector have continued on their respective downward trends. However, the annual growth rates stabilised in the fourth quarter of 2009 and subsequently evolved in a relatively narrow range. In April 2010, the annual growth rate of M3 stood at -0.1%, unchanged from the previous month, while the annual growth rate of private sector loans turned positive (+0.1%). The fall in M3 is largely attributable to the decrease in M3-M2 and M2-M1, while the narrow spread between interest rates applied to different short-term deposits encouraged the allocation of funds to the most liquid instruments.

As for the counterparts of M3, loans to the private sector fell by 0.2% between end-2008 and end-2009. The annual growth rate of loans to non-financial corporations stabilised in the course of 2009 while remaining negative, reaching -2.6% in April 2010. The available data pertaining to consumer credit also point to a stabilisation of the annual growth rates (-0.3% in April), while loans for house purchase recovered even if their annual remains weak (+2.9% in April).

1.1.2 Long-term government bond yields

In the course of the period under review, long-term government bond yields in the United States and in the euro area were subject to a considerable degree of volatility but generally followed opposing trends. Between January 2009 and mid-May 2010, ten-year government bond yields decreased by 43 basis points in the euro area and increased by 124 basis points in the United States, reaching 3.26% and 3.45% respectively at the end of the period.

Chart 1.2: Long-term government bond yields in the euro area and in the United States
(LHS: Percentages per annum; RHS: Percentage points)



Sources: ECB, Bloomberg

In early-2009, government bond yields on both sides of the Atlantic first increased owing to substantial issuance of securities aimed at propping up the economy and the banking sector. This upward trend was nevertheless interrupted around mid-June. The accommodating monetary policies and the unconventional measures taken by the central banks supported the absorption capacity of the market. Besides the direct purchase programmes of the Fed and the Bank of England, the expected low level of reference rates for an extended period, in association with contained inflation pressures, led investors (in particular banks) to diversify their bond portfolio toward longer-term maturities. At the end of the period, the tensions encountered in euro area "peripheral" countries translated into a rise in risk aversion and hence a flight to quality, resulting in a fall in US and German long-term yields.

As for the spread between two-year and ten-year government bond yields in the euro area, the yield curve continued to steepen at the beginning of 2009 to reach a historically high level. Intra euro area yield spreads also widened substantially in the course of the period under review. In a context characterised by the decrease of liquidity premia in bond markets, these persistent spreads have reflected the risk premium associated with the quality of the sovereign issuers. In December 2009, the downgrading of Greek bonds by the main rating agencies caused the risk premium on Greek debt to reach record levels, before speculative attacks led to contagion effects on Portuguese, Irish and Spanish bonds. The conditional 110 billion euro support to Greece approved by the European Union, however, did not reduce market uncertainty. The ECB's decision to buy government debt securities on secondary markets and the joint 750 billion euro EU-IMF stabilisation plan finally managed to put an end to this self-fulfilling prophecy. Despite these measures, which should enable national governments to implement austerity measures under satisfying conditions, the intra euro area yield spreads remained, on May 15, 2010, at historically elevated levels.

1.1.3 Stock markets

After the record losses posted in 2008, major stock markets witnessed a significant rebound from March 2009 onwards. This rebound was considerably supported by the measures put in place to prop up the financial system and the economy at large. Between end-2008 and mid-May 2010, the Dow Jones EURO STOXX rose by 13.7%; while the Standard & Poor's 500 and the Nikkei 225 rose by 25.7% and 18.1% respectively.

Chart 1.3: Major stock indices in the euro area, the United States and Japan
(index 01/01/2008 = 100)

Source: Bloomberg

In the first three months of 2009, major stock indices continued to record further losses. This was due to uncertainty regarding the magnitude and length of the recession, as well as investors' concerns regarding the health of the financial sector. After the troughs recorded in early-March, the Dow Jones EURO STOXX, the Standard & Poor's 500 and the Nikkei 225 rebounded sharply and embarked on an upward trend which lasted until September. The prospective end to the crisis, substantiated by the progressive release of optimistic economic data and the non-conventional measures adopted by central banks and governments, led to a fall in risk aversion which provided further impetus to stock markets.

However, by mid-January 2010, the recovery in stock markets was sharply interrupted by a downward correction, which in turn was owing to profit-taking by firms. This was soon exacerbated by a number of unfavourable elements, most notably potential contagion effects from the fiscal crisis in Greece. The stabilisation plan adopted by European finance ministers and the IMF, as well as the non-conventional measures adopted by the ECB, led to a rebound in stock markets towards the end of the period under review.

1.1.4 Foreign exchange markets

In the course of 2009, the nominal effective exchange rate of the euro (NEER) at first followed an upward trend, before recording significant losses from December 2009 onwards. On May 15, 2010, the NEER stood at its lowest level since March 2006. This is largely attributable to the appreciation of the US dollar and the British pound, given their weights in the basket of the NEER.

Chart 1.4: Exchange rate developments

Sources: ECB, Bloomberg

In early-2009, the euro embarked on an upward trend versus the dollar and in November the single currency reached 1.50 USD. The euro's rebound was largely due to a fall in risk aversion. Moreover, the Federal Reserve's decision to keep interest rates close to zero for a protracted period and the fall in volatility in foreign exchange markets encouraged carry trade activity. The upward trend of the euro then took a U-turn and the single currency fell back to its first quarter level. While the fiscal situation in a number of euro area countries contributed to the euro's depreciation, the dollar's rise against the single currency was largely linked to the unwinding of carry trade positions, as market participants expected monetary policy in the United States to tighten more rapidly than in the euro area. Towards the end of the review period, in the context of rising risk aversion, the US dollar increasingly benefited from its safe haven status. On May 15, 2010, the single currency stood at 1.24 USD, 11.4% below its 2009 average.

As for the Swiss franc and the Japanese yen, the euro followed an upward trend against these currencies in the first few months of 2009; however, the euro depreciated sharply from December onwards. The British pound also appreciated against the euro towards the end of the review period. By mid-May 2010, the euro stood at 0.86 GBP, 3.6% above its 2009 average.

ERM II currencies remained mostly stable against the euro in 2009. The other currencies from European Union Members States generally appreciated versus the single currency from March onwards, following market participants' renewed interest in these countries.

1.1.5 Consumer prices

HICP inflation in the euro area averaged 0.3% in 2009, its lowest level since the introduction of the euro in 1999. After having reached its trough at -0.7% in July 2009, headline inflation turned positive in November and accelerated sharply thereafter, to 0.9% in December 2009 and further to 1.5% in April 2010, its highest level since the end of 2008.

The reversal of the inflation dynamics stems exclusively from the renewed rise in the price of oil and the subsequent acceleration in energy prices throughout 2009. In spite of higher energy costs, the inflation rate for the HICP excluding energy and unprocessed food declined steadily, from 1.8% in January 2009 to 1.0% in December 2009 and further to 0.7% in April 2010. This disinflationary trend results mostly from the lagged effects of the fall in the price of oil in 2008, the unwinding of the commodities shock and the moderate wage developments that have come about from the 2008/2009 recession and the resulting weak labour market.

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

	2008	2009	09 q4	10 q1	April-10
HICP	3.3	0.3	0.4	1.1	1.5
Unprocessed food	3.5	0.2	-1.5	-0.8	0.7
Processed food	6.1	1.1	0.5	0.6	0.6
Non-energy industrial goods	0.8	0.6	0.3	0.1	0.2
Energy	10.3	-8.1	-3.2	4.8	9.1
Services	2.6	2.0	1.7	1.5	1.2
HICP ex energy and unprocessed food	2.4	1.3	1.0	0.9	0.7

Source: Eurostat

The June 2010 Eurosystem staff projections foresee inflation reaching its trough in 2009 and re-accelerating thereafter. Average annual HICP inflation is anticipated between 1.4 and 1.6% in 2010 compared to 0.3% in 2009. For 2011, inflation should be between 1.0% and 2.2%. Compared with the March 2010 ECB staff projections, the inflation projections have been revised up.

1.1.6 Output, demand and labour market developments

In 2009, economic activity continued to deteriorate in the euro area. GDP decreased by -4.1% after +0.6% in 2008. Nonetheless, after the deep recession, real GDP picked up (faster than expected) in the third quarter of 2009 and available evidence suggests that recovery continued to strengthen during the first quarter of 2010, confirming previous signs of improvement in economic activity.

Even though annual growth rates of exports and imports remain largely negative, on a quarterly basis, there are some signs of recovery in international trade during the second half of 2009. In addition to net exports, the gravity of the crisis was particularly well reflected by the fall in domestic demand, and especially by investment and private consumption. After a sharp slowdown during the first quarter of 2009, private consumption gradually recovered and stabilized by the end of the year. The decline in private consumption had a direct impact on imports, the annual growth rate of which declined from +1.1% in 2008 to -12.0% in 2009. Although the depressed economic environment and the permanent uncertainty continue to dampen investment in the euro area, there are some signs of improvement during the past few months.

Regarding the labour market, the phase of weakness entered in 2008 continued to worsen in 2009 as evidenced by the decrease in employment (-1.9% in annual terms) and the corresponding increase in the unemployment rate, which increased by almost 2.0 percentage points (from 7.5% in 2008 to 9.4% in 2009). The latest available evidence suggests that the situation seems to have stabilized somewhat during the last few months. In fact, the deterioration in employment had slowed down by the end of 2009 (in quarterly terms), and the unemployment rate has increased at a slower pace since September 2009.

Table 1.2: Composition of real GDP growth (Percentage changes, seasonally adjusted data)

	Annual rate of change			Annual rate of change					Quarterly rate of change				
	2007	2008	2009	2009	2009	2009	2009	2010	2009	2009	2009	2009	2010
				Q1	Q2	Q3	Q4	Q1	Q1	Q2	Q3	Q4	Q1
Real Gross Domestic Product	2.8	0.6	-4.1	-5.3	-5.6	-3.9	-1.7	0.8	-2.5	-0.1	0.4	0.1	0.2
of which:													
Domestic Demand	2.4	0.6	-3.5	-3.8	-4.4	-3.3	-2.4	0.2	-2.4	-0.7	0.4	-0.1	0.7
Private consumption	1.6	0.4	-1.2	-1.9	-1.6	-1.3	-0.1	0.1	-0.6	0.1	-0.2	0.2	-0.1
Public consumption	2.3	2.1	2.6	3.2	2.7	2.6	2.0	1.8	0.7	0.7	0.7	0.0	0.6
Gross fixed capital formation	4.8	-0.6	-10.9	-11.6	-12.8	-10.8	-8.3	-4.9	-5.1	-1.7	-1.0	-1.3	-1.1
Net exports (contribution to real GDP growth in p.p.)	0.4	0.0	-0.7	-1.6	-1.2	-0.7	0.7	*	-0.2	0.6	0.0	0.2	*
Exports of goods and services	6.3	1.0	-13.2	-16.6	-18.1	-13.3	-4.7	6.2	-8.4	-1.1	2.8	1.7	2.5
Imports of goods and services	5.5	1.1	-12.0	-13.5	-15.9	-12.1	-6.5	4.6	-8.1	-2.7	2.8	1.2	4.0
Employment	1.8	0.7	-1.9	-1.3	-1.9	-2.2	-2.1	*	-0.8	-0.5	-0.5	-0.3	*

Sources: Eurostat, Eurosystem

According to the Eurosystem staff projections for macroeconomic developments in the euro area, average annual real GDP growth is projected to be between 0.7% and 1.3% in 2010 and between 0.2% and 2.2% in 2011. These projections for 2010 and 2011 have been revised upwards compared with the previous ones (December 2009).

Real GDP grew modestly in the first and second quarter of 2010. Over the remainder of 2010, growth is expected to remain subdued, as the factors that temporarily boosted growth in the initial phase of the recovery, such as the fiscal stimuli and the inventory cycle, diminish in strength. Further ahead, the economic pick-up is projected to strengthen, supported by gradually rising domestic demand. The lagged effects of monetary policy moves and the significant efforts to restore the functioning of the financial system are expected to strengthen economic activity over the full projection horizon. Growth in 2010 and 2011 is, however, projected to remain weaker than before the recession, owing to the ongoing need to improve balance sheets in various sectors, while private consumption is dampened by high unemployment, precautionary savings and modest income growth.

Table 1.3: Macroeconomic Projections for the euro area (average annual percentage changes)

	2009	2010	2011
HICP	0.3	1.4 – 1.6	1.0 – 2.2
Real GDP	-4.1	0.7 – 1.3	0.2 – 2.2
Private consumption	-1.2	-0.2 – 0.4	-0.2 – 1.6
Government consumption	2.6	0.3 – 1.3	-0.3 – 1.1
Gross fixed capital formation	-10.8	-3.4 – -1.2	-2.1 – 2.7
Exports (goods and services)	-13.2	5.5 – 9.1	1.1 – 7.9
Imports (goods and services)	-12.0	3.8 – 7.0	0.4 – 6.8

Source: BCE

Among the domestic components of GDP, non-residential private investment is expected to remain fairly weak during 2010, limited by high spare capacity, weak and uncertain demand prospects, low profitability and financing constraints; but to recover slowly thereafter. After some short-term weather-related volatility early in 2010, residential investment is projected to remain subdued, dampened by ongoing adjustments in housing markets in some countries. In line with the fiscal packages announced in several euro area countries and their subsequent withdrawal, government investment in real terms is expected to stabilise over 2010, before declining markedly the following year.

Private consumption growth is expected to rise modestly in 2010 before gradually accelerating the following year. Real incomes are expected to be dampened by the weakness of projected employment growth. At the same time, the savings ratio is projected to remain substantially above its pre-crisis level, as some precautionary savings continue to be held in a context of high economic uncertainty and modest prospects for income growth. However, the savings ratio is expected to fall somewhat as the economic situation gradually improves. Euro area exports rebounded towards the end of last year, and grew strongly again in early 2010. Over the projection horizon, the recovery in exports is expected to continue, driven by foreign demand and higher competitiveness. As a consequence, net trade is projected to contribute positively to GDP growth in both 2010 and 2011.

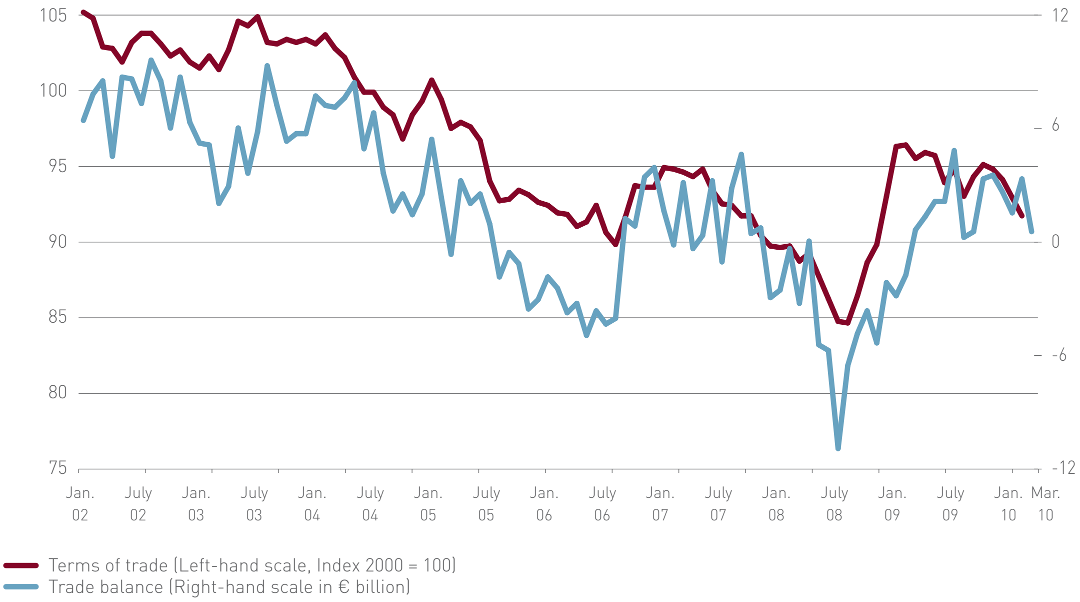
The Governing Council continues to view the uncertainties in this outlook as broadly balanced. On the upside, the global economy and foreign trade may recover more strongly than projected and confidence may improve more than expected, with the result that the recovery becomes self-sustaining. On the downside, concerns remain relating to renewed tensions in some financial market segments. In addition, the possibilities of a stronger or more protracted than expected negative feedback loop between the real economy and the financial sector, renewed increases in oil or other commodity prices, an intensification of protectionist pressures, or a disorderly correction of global imbalances, may weigh on the downside.

1.1.7 External Trade

In 2009, the euro area external trade in goods recorded a surplus of €22.7 billion, compared with a deficit of €51 billion in 2008. This reversal occurred alongside a strong fall both in goods exports and imports. As a result of a sudden decline in global demand, goods exports dropped by 18%, reaching €1 278 billion in 2009. Monthly developments in the volume index shows a sudden fall in goods exports from September 2008 to February 2009, when the international financial crisis intensified. Since the second quarter of 2009, goods exports started to stabilize and to recover gradually. However, in 2009 as a whole, the monthly volume index declined by 17% on average as compared with 2008. Declining export prices (-1.7%) also contributed, to a lesser extent, to the decrease in export value in 2009.

In 2009, Euro area goods imports declined further in value (-22%) than exports, reaching €1 255 billion. Import volumes dropped, albeit to a lesser extent (-14% in 2009 as a whole) than export volumes, through the first half of the year and began to stabilize only in the third quarter of 2009. Meanwhile, the monthly import price index declined further (-9% on average) than the export price index (-1.7%), driven by the fall in oil prices that began in summer 2008, contributing to the improvement in the euro area's terms of trade. This later development supported the reversal in the euro area trade balance.

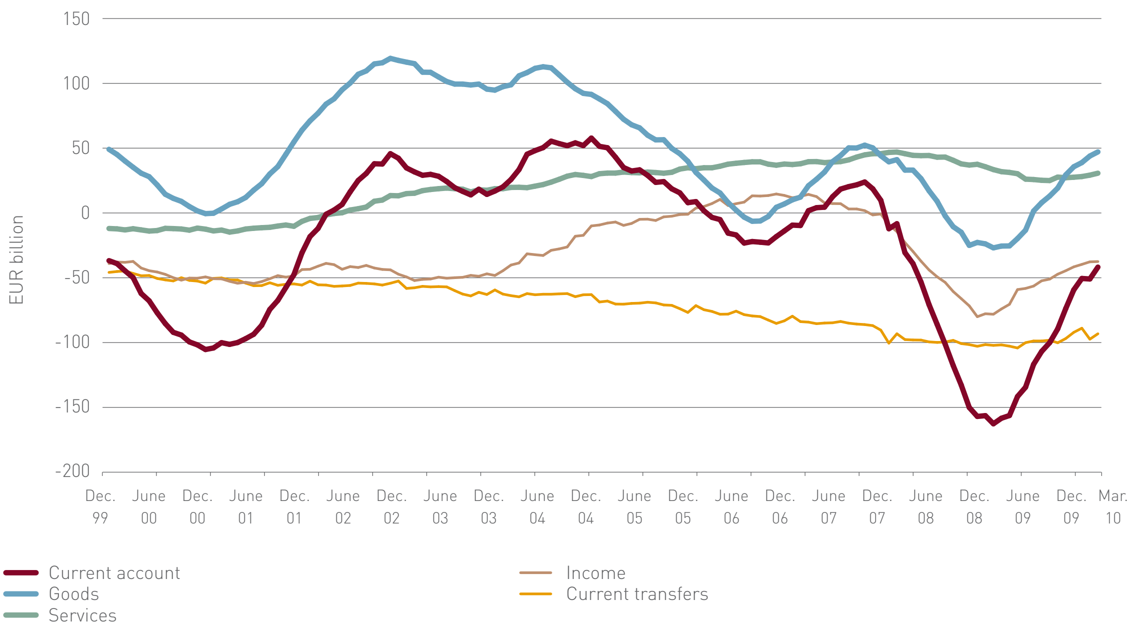
Chart 1.5: Monthly developments in the euro area trade balance and in the terms of trade (seasonally adjusted data)



Source: Eurostat

1.1.8 Balance of Payments

Chart 1.6: Current account balance and its components (12-month cumulated transactions)



Source : ECB

In 2009, the deficit in the current account of the euro area decreased substantially, reaching €56 billion (or 0.7% of euro area GDP), compared with a deficit of €154 billion in 2008. This improvement resulted mainly from the shift in the goods balance from a large deficit in 2008 to a surplus in 2009. Lower deficits in the income balance and in the current transfers also contributed to the overall narrowing of the current account deficit in 2009. However, these positive developments were partly offset by a fall in the surplus of the services balance.

In the financial account, the euro area recorded net inflows of €45 billion in 2009 as a whole, compared with net inflows of €163 billion in 2008. This development reflects lower net inflows in debt instruments and more outflows in other investments.

1.2 ECONOMIC SITUATION IN LUXEMBOURG

1.2.1 Prices and costs

1.2.1.1 Consumer prices

Headline inflation was characterised by increased volatility over the course of 2009. NICP inflation fell sharply in the first half of the year, from 1.1% in December 2008 to -0.7% in July 2009, only to reaccelerate sharply thereafter, to 2.3% at the end of 2009 and further to 2.4% in May 2010. Overall, consumer prices increased by only 0.4% in 2009, their lowest rate since 1987.

Chart 1.7: Inflation indicators (annual percentage changes)

Source: Statec

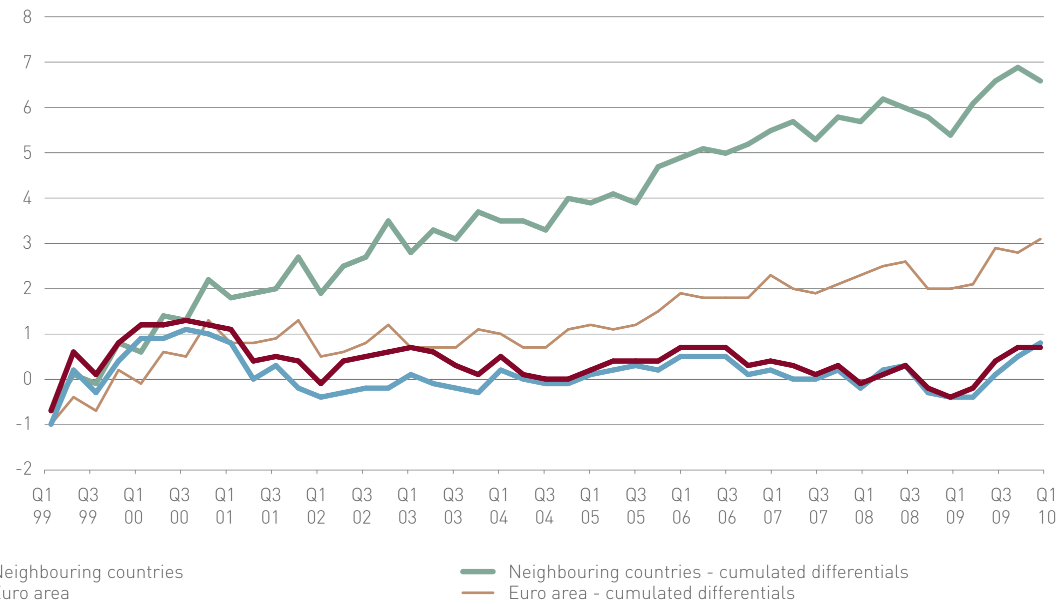
The HICP index was even more volatile, as the annual inflation rate fell from 0.7% in December 2008 to -1.5% in July 2009, then turned positive again in November, rising to 2.5% in December 2009 and further to 3.0% in May 2010.

The reversal of the headline inflation rates and the recent adverse developments are exclusively the result of energy prices in the context of the renewed rise in the price of oil over the course of 2009. Excluding oil-related products, the inflation rates have been on a steady downward trend, falling from 2.4% in January 2009 to 1.7% at the end of 2009 and below 1.3% in May 2010.

Luxembourg's inflation differentials against the euro area and against the three neighbouring countries deteriorated again in the second half of 2009. Over the period from the beginning of phase III of EMU in 1999 to the beginning of 2010, Luxembourg's cumulated inflation differential stood at 3.2 percentage points vis-à-vis the euro area and 6.7 percentage points vis-à-vis Luxembourg's neighbouring countries (see chart).

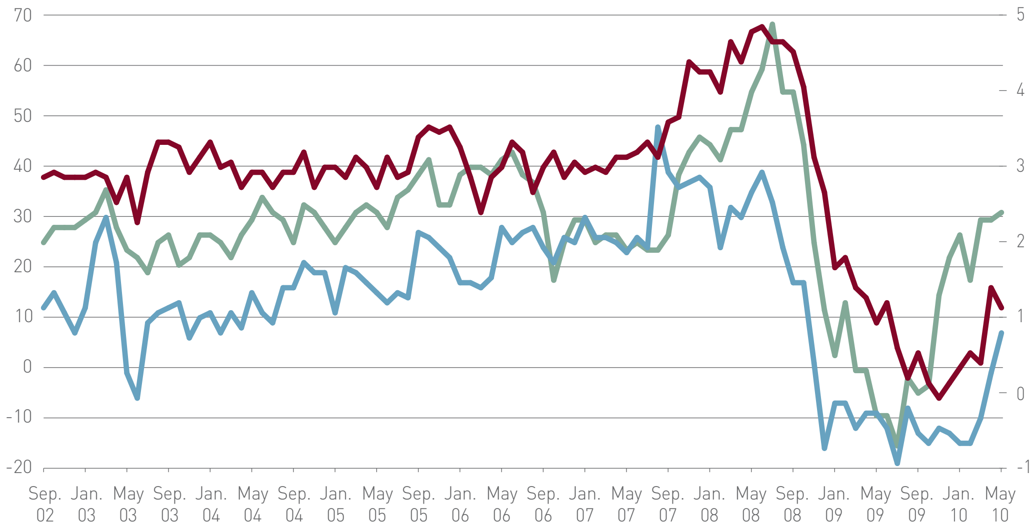
According to the BCL's consumer survey, qualitative inflation perceptions fell sharply from mid-2008 through early 2009, turned negative from August to the end of 2009, and then rebounded in the beginning of 2010. These sharp reversals were in line with the large swings observed in the headline inflation rates. Consumers' inflation expectations remained negative throughout 2009 in spite of headline inflation turning in mid-2009 and becoming positive towards the end of the year.

Chart 1.8: Inflation differentials (in percentage points)



Sources: Statec, Eurostat, own calculations

Chart 1.9: Consumer price inflation - observations, perceptions and expectations



Sources: BCL, Statec

Inflation projections

Assumptions

At the end of May 2010, the price of oil fluctuated around 80 USD per barrel and the financial markets were anticipating a rise to around 84 USD per barrel in June 2011. The quote for one euro against the dollar stood at 1.26, which corresponds to depreciation with respect to both the average of 2009 and the previous exercise.[1] On average, the price of oil in euros is expected to fall by 39% in 2010 compared to 2009. Compared to the previous exercise, this result is sharply higher owing to higher oil prices and to the depreciation of the euro against the dollar. Detailed assumptions are given in the following table.

Table 1.4: Asssumptions underlying the inflation projections

	2008	2009	2010	2010-Q1	2010-Q2	2010-Q3	2010-Q4	2011-Q1	2011-Q2
Price of oil in USD/barrel	98	62	79	77	81	79	81	82	83
Exchange rate USD/EUR	1.47	1.39	1.30	1.38	1.29	1.26	1.26	1.26	1.26
Price of oil in € (annual percentage changes)	24	-33	39	61	46	31	27	18	5

Source: BCL

The decline in inflation excluding energy is expected to come to an end soon. The inflation rates should first stabilise, and thereafter embark on an upward trend.

1 BCL, Bulletin 2010/1, pp.30-33

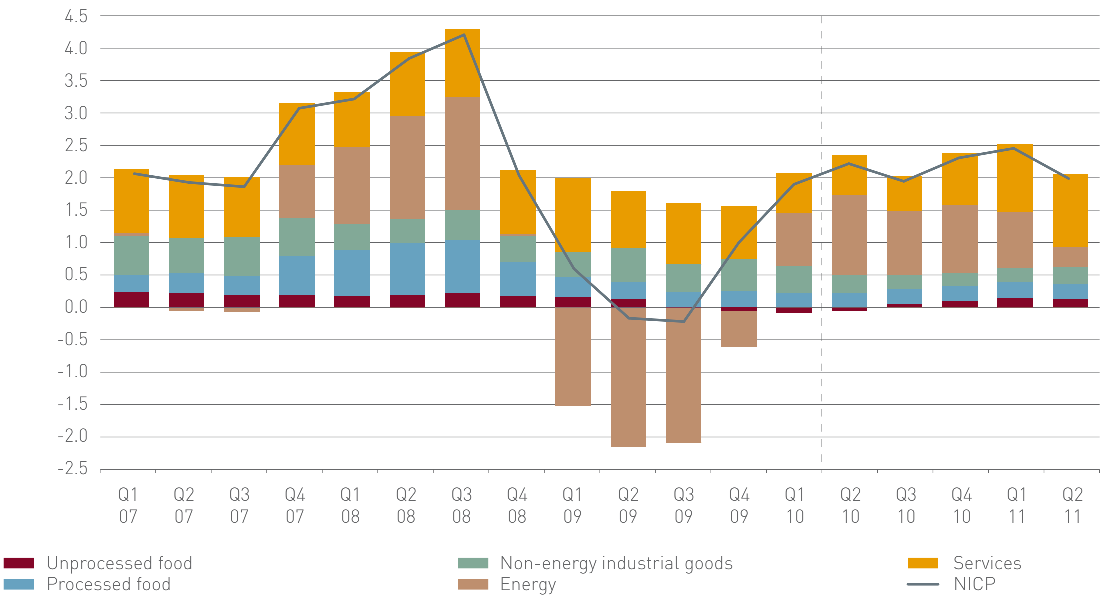
Indeed, the disinflation process should soon end as several driving forces have already reached or are about to reach a turning point. Industrial producer prices have already stabilised and could rise as a result of the doubling of oil prices since the end of 2008. The depreciation of the euro against the dollar will also lift the euro area's import prices. However, despite the higher input costs, demand seems insufficiently strong to induce a surge in consumer prices. The labour market could stabilise with the end of the recession, but the employment and unemployment dynamics would still constrain households' disposable income in the euro area. Luxembourg's imported consumer price inflation, as proxied by the Eurosystem's projections for HICP inflation in the euro area, is set to accelerate sharply in 2010, though it should remain below 2%, before stabilising thereafter. Services inflation would also soon reverse its downward trend as wages are set to re-accelerate sharply. The automatic 2.5% general wage hike, expected for mid-2010, and the adjustment in the minimum wage announced for January 2011 would drive services inflation above 2.5%.

Results

On the basis of the euro oil price assumptions, the contribution of the energy component to headline inflation would remain positive throughout the whole projection horizon (see chart). On average, the HICP energy index would increase by 13% in 2010, before dropping off to around 6% in the first half of 2011. Compared to the previous exercise, the projections for the energy component of inflation have been sharply revised up, in line with the adjustments to the common assumptions.

The projections for the HICP and the NICP excluding energy remain largely unchanged. NICP ex energy inflation would drop from 1.8% in the second half of 2009 to 1.3% in 2010. Thereafter, the prospects would deteriorate as the expected wage dynamics would push it close to 1.9% in the first half of 2011.

Chart 1.10: Contributions to NICP inflation



Sources: Statec, BCL projections

Table 1.5: Inflation projections and revisions compared to the previous exercise (in annual percentage changes, resp. in percentage points)

	2009	2010	2010-1st half	2010- 2nd half	2011-1st half
NICP	0.4	2.2 (0.6)	2.1 (0.4)	2.2 (0.8)	2.3
NICP ex energy	1.9	1.3 (0.1)	1.2 (-)	1.3 (0.1)	1.9
HICP	0.0	2.9 (0.8)	3 (0.5)	2.9 (1.1)	2.7
HICP energy	-15.9	13.1 (7.0)	14 (5.3)	12.2 (8.6)	6.2
HICP ex energy	2.3	1.7 (-)	1.6 (-0.1)	1.8 (0.1)	2.2
Impact of government measures on the NICP, in pp	0.1	0.3			
Impact of government measures on the HICP, in pp	0.5	0.7			

Source: BCL

Headline inflation accelerated to 2.4% in May 2010. It could moderate close to 2.0% in the coming months before rising again towards the end of the year. Except for one or two months, the monthly inflation rates are also projected to remain above 2.0%. On average, headline inflation in 2010 is expected at 2.2% for the NICP and 2.9% for the HICP. These rates are considerably higher than the corresponding 2009 averages, the historical average and the average inflation rates projected for the neighbouring countries.

The automatic wage indexation scheme as it prevailed prior to the 2006 Tripartite agreement has been re-introduced as of January 2010. On the basis of these inflation projections, the next 2.5% automatic wage increase would be due in mid-2010, a few months earlier than previously projected.

1.2.1.2 Industrial producer prices

Industrial producer prices decreased on average by 8.3% in 2009. This price development was mostly due to both energy and intermediate good prices. Prices for consumption and capital goods increased, but at a more moderate pace.

The last figures indicate an increase in industrial producer prices during the first quarter of 2010 (+1.0%, after +0.4% during the fourth quarter of 2009). The breakdown reveals that a price decline was recorded for all sectors during the first quarter of 2010, except for intermediate goods.

The available data from the harmonized business surveys, however, suggest that the increase in prices by producers should continue over the next few months.

Table 1.6: Industrial producer prices (changes with respect to the previous period)

	2008	2009	2008-T4	2009-T1	2009-T2	2009-T3	2009-T4	2010-T1
Total	7.8	-8.3	-2.2	-4.6	-5.9	-1.7	0.4	1.0
Intermediate goods	7.4	-14.2	-3.9	-6.8	-9.9	-2.6	0.6	2.5
Capital goods	4.5	1.5	1.0	-0.2	0.0	0.6	0.7	-1.1
Consumer goods	1.9	2.6	0.5	1.6	-0.3	-0.1	0.8	-0.6
Energy	17.0	-0.8	0.0	-4.3	-0.4	-1.4	-0.5	-1.0

Source: STATEC

1.2.1.3 Construction prices

The price of construction services rose by 1.1% over the course of 2009 (after +3.2% in 2008). This moderate increase probably reflected price developments observed in the intermediate sector during 2009. Moreover, the overall moderation of wage growth in 2009 has certainly caused a slight drop in salary costs in the construction sector as labour is a significant input in the construction sector.

Chart 1.11: Construction prices

Sources: Statec, BCL calculations

Box 1.1:

PRICE AND COST COMPETITIVENESS – RECENT DEVELOPMENTS AND PERSPECTIVES FOR 2010-12

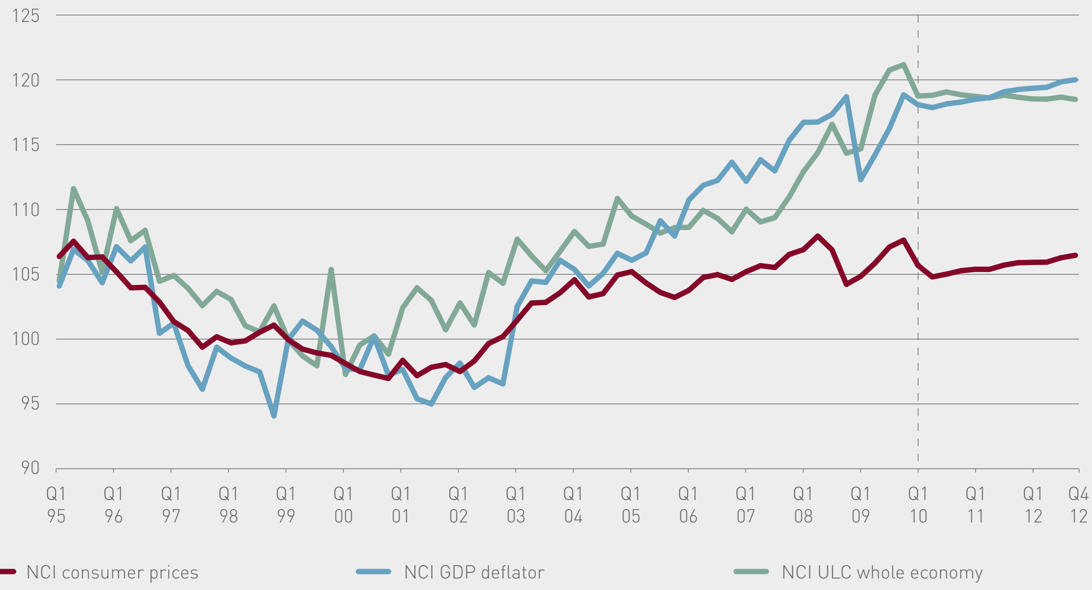
In 2009, the price and cost competitiveness indicators returned to the deteriorating trend that has marked them since 1999. As anticipated in the last annual report, the brief improvement in 2008 was a transitory phenomenon rapidly reversed in 2009 given the acceleration of inflation. According to the results of the recent Eurosystem projection exercise, the deterioration of Luxembourg's competitiveness should continue through 2012, although at a slower speed.

The competitiveness indicators calculated by the BCL are real measures of the effective exchange rate, where different price or cost variables are used as deflators. These indicators compare prices/costs in Luxembourg with a weighted average of prices/costs in Luxembourg's main trading partners[1] all expressed in a common currency. The weight attached to each trading partner reflects its importance in Luxembourg's external trade.[2]

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

2 There has been a methodological change since the last publication. Different country weights are now used for the periods 1998-2000, 2001-2003 and 2004-2006, to better capture the changing structure of international trade.

Chart 1: National Competitiveness Indicators based on consumer prices, GDP deflator and unit labour costs in whole economy



Sources: Eurosystem and BCL calculations

The graph illustrates Luxembourg's competitiveness indicators extended through 2012 using the recent Eurosystem projections.[3] For each curve, an increase signals that prices or costs are increasing faster in Luxembourg than in its trading partners (deteriorating competitiveness). The indicator based on consumer prices fell sharply in the second semester of 2008, but for the year as a whole it registered a deterioration of +0.73%. It then rose through-out 2009, almost reaching its historical peak of 2008Q2. According to the projections, there should be an improvement again in 2010 (-1%), but a deterioration in 2011 (+0.38%) and in 2012 (+0.53%).

According to the most recent national accounts figures, the indicator based on the GDP deflator improved by -1.70 % in 2009. The projections anticipate a sharp deterioration in 2010 (+2.4%) and slower deterioration in 2011 and 2012 (+0.7 %). Thus, this indicator should deteriorate over the whole projection horizon, but at a rate below its historical average since 1999Q1 (+1.66 %).

The indicator based on unit labour costs in the whole economy deteriorated strongly in 2008 (+4.3%). Revisions to the underlying data led to a new deterioration in 2009 (+3.76%). According to the projections, cost-competitiveness should slightly deteriorate in 2010 (+0.6%) and slightly improve in 2011 and 2012 (-0.13%).

3 The years 2010-2012 are based on projections of the deflators for the 16 euro area countries and technical assumptions for the UK, Switzerland, USA and Japan.

1.2.2 Sectoral developments

1.2.2.1 Industry

The industrial production per working day index, which is corrected for price developments, fell sharply in 2009. The sectoral breakdown of production per working day suggests fairly heterogeneous developments in the different sectors in 2009. Production of both consumption goods and energy decreased only slightly compared to 2008, whereas the other sectors experienced a large fall in production levels. The latest data indicate that during the first quarter of 2010, the production per working day went up in all branches of the industrial sector excluding capital goods. The confidence indicator based on harmonised monthly business surveys has continued to improve since the beginning of the year 2010. It therefore suggests that industrial production should continue to rise in Luxembourg over the coming months.

Table 1.7: Indicators for the industrial sector (in annual percentage changes)

	2008	2009	2008-T3	2008-T4	2009-T1	2009-T2	2009-T3	2009-T4	2010-T1
Production per working day (ppwd)- Industry	-5.3	-16.3	2.1	-17.9	-24.7	-21.3	-17.3	1.5	14.6
Intermediate goods (ppwd)	-7.0	-16.6	1.7	-22.7	-29.1	-24.7	-17.4	12.4	24.0
Capital goods (ppwd)	-0.3	-30.4	3.6	-13.2	-30.5	-34.1	-31.9	-24.4	-9.4
Consumer goods (ppwd)	-6.0	-4.9	-0.4	-14.2	-15.7	-5.1	-5.3	8.6	18.8
Energy (ppwd)	-6.0	-2.7	2.0	-10.7	-8.0	0.1	-2.4	0.5	8.8

Source: STATEC

1.2.2.2 Construction

In 2008 and in the beginning of 2009, the construction sector showed some signs of resilience. In 2009, turnover accelerated to 12%, and production per working day (ppwd) increased by 1.1%. Over the first quarter of 2010, ppwd and hours worked decreased slightly, probably because of bad weather conditions.

The economic indicators related to the housing sector indicate a fresh decline in building permits in 2009, while apartment prices decreased by 2.1% over the same period. The latest figures indicate that apartment prices rose by 3.2% in comparison with the preceding quarter during the first quarter of 2010. The number of new loans to households (for house purchases) increased by 34.2% in 2009. Over the same period, the amount of outstanding loans to households (for house purchases) decreased significantly.

Table 1.8: Indicators for the construction sector (in annual percentage changes)

	2008	2009	2008-T3	2008-T4	2009-T1	2009-T2	2009-T3	2009-T4	2010-T1
Turnover - Total	2.3	12.0	4.2	2.9	-2.6	15.9	2.4	29.1	-4,4
Production per working day -Total	-2.0	1.1	-1.0	-3.8	0.7	-3.9	5.6	3.1	-1,3
Hours worked	-0.2	-0.9	1.5	-1.6	0.2	-2.4	3.5	-4.9	-2,0
Building permits	-18.6	-8.5	2.6	-26.7	-36.7	6.7	-2.8	-4.4	-
Loans for house purchase - outstanding amounts	10.7	6.4	10.6	8.4	6.9	6.2	5.8	6.7	6,6
Loans for house purchase - new business	13.8	34.2	43.1	-13.4	7.6	16.8	41.7	70.0	6,4
Mortgage rates	4.9	2.4	5.1	4.6	3.1	2.3	2.0	2.0	2,0

Source: STATEC

1.2.2.3 Trade and other sectors

In 2009, turnover in wholesale trade decreased significantly. Turnover in retail trade was rather stable. However, retail trade data need to be interpreted carefully as they are affected by e-commerce activities. After correcting for these activities, the turnover growth rate would have been -0.4% in 2009. Car registrations declined strongly in 2009, while motor vehicle repair saw a marked decrease in sales. Developments in the other service sectors have been rather heterogeneous (see table).

The latest available statistics in these areas show a more favourable outlook. Car registrations increased by 11% over the first three months of this year, in comparison to the same period in 2009. The latest statistics indicate notable increases in turnover in retail sales and the transport sector over the two first months of the year 2010.

Table 1.9: Turnover and car registrations (in annual percentage changes)*

	2008	2009	2008-T3	2008-T4	2009-T1	2009-T2	2009-T3	2009-T4	2010-T1**
Car registrations	2.0	-9.7	10.7	-6.7	-10.4	-12.4	-11.8	-9.7	11.0
Trade and Repair of motor vehicles and motorcycles	3.5	-9.8	4.8	5.4	-3.5	-14.7	-13.6	-6.7	-13.1
Wholesale excluding motor vehicles and motorcycles	-3.1	-15.3	-3.4	-16.5	-19.6	-32.5	-12.3	10.5	-2.4
Retail trade	6.2	-0.1	7.9	-0.3	-3.6	-5.2	-1.5	9.7	9.2
Retail trade (corrected for mail order)	2.6	-0.4	3.5	-0.8	-2.0	-1.9	-2.0	4.0	1.0
Transport	8.7	-15.0	9.2	8.8	-13.6	-21.5	-12.8	-12.4	12.1
Programming, consultancy and other computing activities	0.5	5.4	16.3	-13.1	23.2	3.7	-3.4	-0.8	-8.7
Legal, accounting and business consultancy activities	12.0	-10.5	4.1	5.9	5.0	-20.8	0.8	-23.8	5.8

* Value.
** Data recover the January-February 2009 and 2010 period for all series except car registrations.

Source: STATEC

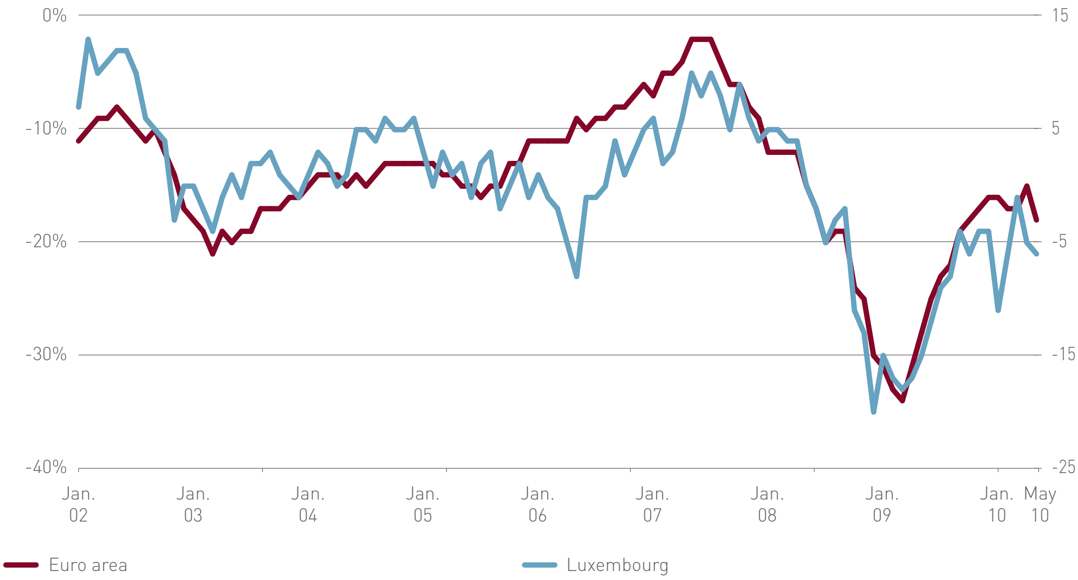
1.2.3 Consumer survey

Consumer confidence in Luxembourg[2] has been on a downtrend since mid-2007, which coincided with the start of the financial turmoil, reaching its historical minimum in December 2008. Consumer confidence then improved throughout 2009. Since the beginning of 2010, its movements have been more volatile than those of the euro area. The latest data nevertheless suggest a halt of the improvement in both European and Luxembourg consumer confidence since the beginning of this year.

The latest consumer survey dates from May 2010, and it indicates that the consumer confidence indicator has slightly decreased. Different components of the indicator, however, behaved in different ways. Consumers' expectations as regards the general economic situation in Luxembourg and their financial situation declined markedly in May, while consumers' expectations as regards unemployment in Luxembourg improved for the fourth time in a row. Finally, consumers' expectations as regards their savings improved since April.

2 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.

Chart 1.12: Consumer confidence indicators (seasonally adjusted data)



Sources: BCL and European Commission

1.2.4 Economic growth

The first release of national accounts data for 2009 has highlighted the depth of the recession. Even though all GDP components, except for public consumption, have contributed to the negative output growth (-3.4%), the evolution of GDP is essentially due to the negative contribution of net exports (-0.3 p.p.) and domestic demand (-3.5 p.p.).

The negative contribution of foreign trade is mainly due to the decrease in exports (-7.6% in 2009 after 1.5% in 2008), but this effect has been mitigated by the parallel and slightly higher (in percentage terms) decrease in imports (-9.2% in 2009 after 3.3% in 2008). Beside exports, the deterioration in gross capital formation (-17.1% in 2009) has been the main driver of the negative contribution of domestic demand to GDP growth. Furthermore, as a result of the deterioration in the labour market, private consumption growth has dropped by 4.5 percentage points to -0.6% in 2009.

Although the increase in compensation per employee slowed for the second year in a row (from 3.6% in 2007 to 2.0% in 2008 and 1.7% in 2009), reflecting the deterioration in the labour market, unit labour costs have continued to rise as a result of the decrease in labour productivity for the second year in a row (-4.3% in 2009 after -4.5% in 2008). These figures should be interpreted with caution as they are subject to future revisions.

The latest available evidence suggests that the domestic economy has picked up again recently. In fact, quarterly data point to the rebound of GDP growth since the third quarter of 2009. On the labour market, even though employment growth remains historically low, it has strengthened since the second half of 2009.

Table 1.10: Annual national accounts: first estimate of 2009 real GDP growth

	April 2010 national accounts								Contributions to GDP growth							
	Yearly rate of change															
	2002	2003	2004	2005	2006	2007	2008	2009	2002	2003	2004	2005	2006	2007	2008	2009
Domestic demand (excluding stocks)	2.6	0.5	3.3	5.2	2.2	4.2	3.2	-4.7	2.9	1.1	1.6	4.0	0.9	3.4	1.6	-3.5
Private consumption	5.8	-5.3	2.2	2.6	2.7	2.8	3.9	-0.6	2.4	-2.2	0.8	1.0	1.0	0.9	1.2	-0.2
Public consumption	4.6	4.1	4.5	3.3	2.8	2.9	3.0	2.9	0.7	0.7	0.7	0.6	0.5	0.4	0.4	0.4
Gross Capital Formation	-4.4	8.8	4.4	11.1	0.8	7.6	2.3	-17.1	-1.1	1.9	1.0	2.4	0.2	1.5	0.5	-3.4
of which:																
a) Gross fixed capital formation	5.5	6.3	2.7	2.5	4.7	12.6	-0.1	-14.9	1.2	1.4	0.6	0.5	1.0	2.4	0.0	-2.9
b) Changes in inventories	-64	-173	-318	-4	144	-48	96	35	-0.8	-0.7	1.0	0.0	0.7	-0.5	0.5	0.4
c) Acquisitions less disposals of valuables	-259.0	-126.8	-232.6	-540.5	-97.8	-1 105.4	-2.2	274.5	-1.5	1.2	-0.6	1.9	-1.5	-0.4	0.0	-0.9
Net exports	11.3	5.9	7.8	6.2	15.6	11.4	-6.3	-0.8	2.0	1.1	1.9	1.5	4.0	3.6	-2.1	-0.3
Imports	0.8	6.9	11.8	4.2	12.9	8.3	3.3	-9.2	-1.0	-8.4	-13.3	-5.3	-16.8	-11.4	-4.8	12.9
Exports	2.1	6.8	11.1	4.5	13.3	8.8	1.5	-7.6	3.0	9.5	15.2	6.8	20.7	14.9	2.7	-13.1
Gross Domestic Product	4.1	1.5	4.4	5.4	5.6	6.5	0.0	-3.4	4.1	1.5	4.4	5.4	5.6	6.5	0.0	-3.4
GDP deflator	2.1	6.0	1.8	4.6	6.8	3.0	5.0	-0.7								
Employees	3.4	1.9	2.4	3.1	3.9	4.7	4.9	0.9								
Total employment	3.2	1.8	2.2	2.9	3.6	4.4	4.7	0.9								
Compensation per employee	3.1	1.1	3.3	4.6	3.3	3.6	2.0	1.7								
Labour producivity	0.8	-0.3	2.1	2.5	1.9	2.0	-4.5	-4.3								
Unit labour cost	2.2	1.4	1.2	2.1	1.4	1.6	6.8	6.3								
Profit margins	-0.2	4.6	0.5	2.5	5.4	1.3	-2.0	-6.7								

Sources: STATEC, BCL calculations

Box 1.2:

POTENTIAL OUTPUT – A VERY GRADUAL EXIT FROM THE CRISIS

Table 1: Estimates of the output gap and potential growth

	Real GDP (bn EUR)	Linear Trend	Hodrick-Prescott	Harvey-Jaeger	Kuttner	Apel-Jansson	Production Function
		Output Gap Estimates					
2005	26.24	3.0%	0.7%	0.7%	0.7%	-1.2%	0.8%
2006	27.71	3.8%	2.8%	2.7%	2.8%	0.4%	2.3%
2007	29.50	5.5%	6.1%	5.9%	6.1%	3.1%	4.3%
2008	29.51	0.9%	3.1%	2.8%	3.1%	0.2%	0.2%
2009	28.50	-7.1%	-2.9%	-3.5%	-2.9%	-5.6%	-4.5%
2010	29.34	-8.7%	-2.5%	-3.3%	-2.5%	-4.7%	-2.4%
2011	30.00	-10.8%	-2.4%	-3.4%	-2.4%	-4.1%	-0.8%
2012	30.99	-12.3%	-1.7%	-3.0%	-1.7%	-2.9%	1.2%
	Revisions	Output Gap Revisions with respect to estimates published in 2008					
2005	0.1%	-0.1%	-0.5%	-1.5%	-3.9%	3.0%	-0.2%
2006	-0.7%	-0.9%	-1.8%	-2.4%	-5.0%	4.1%	-1.5%
2007	0.5%	0.3%	-1.0%	-1.3%	-4.8%	5.2%	-2.2%
2008	1.4%	1.3%	-0.6%	-0.8%	-1.5%	0.7%	-3.2%
2009	2.8%	2.6%	0.2%	0.1%	2.7%	-2.2%	-1.7%
	Real GDP growth	Potential Growth Estimates					
2005	5.4%	4.7%	3.7%	3.8%	5.7%	4.3%	3.8%
2006	5.6%	4.7%	3.4%	3.4%	5.3%	3.9%	4.0%
2007	6.5%	4.7%	2.8%	3.0%	5.8%	3.6%	4.3%
2008	0.0%	4.7%	3.1%	3.3%	0.6%	3.0%	4.3%
2009	-3.4%	4.7%	2.6%	2.8%	-1.1%	2.0%	1.1%
2010	2.9%	4.7%	2.5%	2.8%	4.9%	2.1%	0.8%
2011	2.3%	4.7%	2.4%	2.7%	3.1%	1.8%	0.7%
2012	3.2%	4.7%	2.4%	2.7%	3.3%	1.9%	1.2%
	Average real growth	Average potential growth					
1985-2009	4.7%	4.7%	4.6%	4.7%	4.6%	4.7%	4.7%
2001-2009	3.0%	4.7%	3.7%	3.8%	3.4%	4.0%	3.9%

Sources: BCL calculations, STATEC data

According to the most recent projections, potential growth in Luxembourg will remain weak over the horizon 2010-2012. The estimates are surrounded by significant uncertainty, but most of the methods[1] implemented in this box anticipate a fall in potential growth towards a range between 2% and 3%. It bears repeating that these potential growth estimates are not the basis of the BCL projections but are conditioned on its results. Thus, they incorporate the assumption that the financial crisis will have a persistent effect on Luxembourg's growth, consistent with the experience of such crises in other countries.[2] The effects of the crisis should appear as a joint fall in the level of potential output and its rate of growth. In a context of weak international demand, expected growth in Luxembourg should not return to its historical average even in 2012. Of course, the high degree of uncertainty means that growth could be stronger than anticipated, especially if foreign demand recovers more strongly than expected. In its latest country report for Luxembourg, the OECD stresses that

1 For more details, see BCL Working Paper No. 4.

2 European Commission, DG ECFIN (2009) "Impact of the current economic and financial crisis on potential output," European Economy Occasional Paper 49.

international reforms of financial regulation represent a major challenge for our financial centre, but also an opportunity to take advantage of new markets, which could allow a return to higher potential growth once cyclical effects dissipate.[3]

According to all the methods considered here, the real contraction of GDP in 2009 changed the sign of the output gap,[4] which in 2008 ranged from +0.2% to +3.1% and in 2009 ranged from -7% to -2.9%. This confirms the assessment already published in the 2008 BCL Annual Report. It seems likely that observed GDP has fallen below its potential level.

As indicated in the table, the linear trend method provides an implausible estimate of the output gap in 2009 (-7%), and the estimates for 2010-2012 suggest an endpoint bias. According to the other methods, the output gap in 2009 ranged between -2.9% and -5.6%. The Apel-Jansson model finds the largest output gap, partly because it considers inflation and unemployment developments. Very low inflation in 2009 and the rapid increase in unemployment represent two signs of low tensions on the factor markets, thus suggesting a higher level of potential output. This results in a more negative output gap.

3 OCDE (2010) Luxembourg, Economic Surveys volume 2010/5, text box 1.1.

4 The output gap is the distance between observed GDP and potential GDP measured as a percentage of potential GDP.

According to the 2010-2012 projections, all the methods (except the linear trend) anticipate a gradual fall in the output gap. A positive gap appears at the end of the horizon only according to the production function approach.

Turning to potential growth, the linear trend is the only method to assume this is unchanged through the business cycle. For the other methods, estimated potential growth in 2009 is below 3%. This is the opposite situation to what was forecast for 2009 two years ago. For the 2010-2012 projections, potential growth is expected between 0.7% (production function) and 3.3% (Kuttner). This range is consistent with projections of Luxembourg potential growth published by other institutions.

Table 2: Luxembourg Potential Growth Estimates

	2010	2011
European Commission (April 2010 forecasts)	2.1 %	2.5 %
Statec (Note de Conjoncture 2-09, November 2009)	2.0 %	2.5 %
OECD (Economic Outlook 86, November 2009)	1.7 %	2.3 %

Sources: European Commission, Statec, OECD.

1.2.5 Financial sector

During the year 2009, the number of credit institutions in Luxembourg declined by three overall compared to 2008, from 152 to 149. This is the result of four new constitutions, three mergers and four liquidations. In January 2010, the number of registered credit institutions increased by one unit and then, in April, one merger occurred. Therefore, as of end of May 2010, the number of credit institutions in Luxembourg is 149.

1.2.5.1 Credit institutions' balance sheets

Between December 2008 and December 2009, the aggregated balance sheet of Luxembourg banks decreased by 14.4% (134 101 million euros) to reach 797 461 million euros at the end of 2009.

The year 2009 saw a decline of 96 892 million euros (-20.6%) in interbank loans on the asset side. Over the same period, loans to non-banking customers fell by 17 073 million euros (-8.3%) to 188 149 million euros.

The value of the investment portfolio fell by 7 167 million euros (-3.2%) in 2009, to reach 214 425 million euros. This moderate decline can be explained by the makeup of the portfolio, 91% of which is invested in fixed income securities, and only 9% in variable income securities. Lastly, other assets, which include derivative financial instruments, fell by 38.8% in 2009.

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 108 585 million euros, to reach the amount of 370 593 million at the end of 2009 (-22.7% compared to 2008). This drop could be explained by the reduction of liquidity operations managed by the central banks over the course of 2009.

The deposits from non-banking customers represented 266 619 million euros at the end of 2009, 7% less than at the end of 2008. These represent the second largest source of income for the banks.

Lastly, the outstanding amount of debt securities at the end of 2009 was 81 914 million euros, 2.3% more than at the end of 2008.

Table 1.11: Main figures relative to the asset side of the aggregate balance sheet (in million euros, outstanding amounts at the end of the period)

Assets	Amounts in million euros			Variation in million euros and in %				Relative weight [1]
				2008/12 - 2009/12		2009/12 - 2010/03		
	2008/12	2009/12	2010/03	in million euros	in %	in million euros	in %	2010/03
Interbank loans	471 281	374 389	352 740	-96 892	-20.6	-21 649	-5.8	45.2
Loans to non-banking customers	205 222	188 149	189 186	-17 073	-8.3	1 037	0.6	24.2
Portfolio investment	221 593	214 425	218 729	-7 167	-3.2	4 304	2.0	28.0
Other assets	33 466	20 497	20 155	-12 969	-38.8	- 342	-1.7	2.6
Total assets	931 562	797 461	780 811	-134 101	-14.4	-16 650	-2.1	100.0

1) Relative weight in relation to total assets.

Source: BCL

Table 1.12: Main figures relative to the liability side of the aggregate balance sheet (in million euros, outstanding amounts at the end of the period)

Liabilities	Amounts in million euros			Variation in million euros and in %				Relative weight [1]
				2008/12 - 2009/12		2009/12 - 2010/03		
	2008/12	2009/12	2010/03	in million euros	in %	in million euros	in %	2010/03
Interbank debts	479 178	370 593	350 862	-108 585	-22.7	-19 731	-5.32	44.94
Deposits to non-banking customers	286 692	266 619	266 274	-20 073	-7.0	- 345	-0.1	34.1
Debt securities issued	80 062	81 914	83 220	1 851	2.3	1 307	1.6	10.7
Other liabilities	85 630	78 336	80 455	-7 294	-8.5	2 119	2.7	10.3
Total liabilities	931 562	797 461	780 811	-134 101	-14.4	-16 650	-2.1	100.0

1) Relative weight in relation to total liabilities.

Source: BCL

Loans to non-bank residents

At the end of 2009, the amount of outstanding loans granted to non-bank residents of Luxembourg was 62 936 million euros, compared to 64 722 million euros at the end of 2008. During the final quarter of 2009, these loans fell by 8.5% (5 871 million euros). A major reason for this decrease was the strong decline in the demand for loans from other financial intermediaries. However, during the first quarter of 2010, the amount of outstanding loans granted to non-bank residents rose by 2 338 million euros (+3.7%) to reach 65 273 million euros.

The evolution in the amount of loans granted to other financial intermediaries is mostly driven by the undertakings for collective investment (UCIs), which represent the main part of the other financial intermediaries in Luxembourg. The UCI's demand for loans is linked to the evolution of the financial markets; for example, when the markets started to fall, investors requested the compensation of their securities. To avoid selling securities during a time of uncertainty on the financial markets, the UCIs made recourse to bank loans. This explains why the end of the third quarter of 2008 was characterized by the unprecedented amount of 41 026 million euros of loans granted to other financial intermediaries, while at the end of 2009 the outstanding amount of loans was only 26 676 million euros. However, they rose again to 28 220 million euros during the first quarter of 2010.

Unlike loans granted to other financial intermediaries, the outstanding amount of loans granted to insurance corporations and pension funds was relatively low, 180 million euros, at the end of 2009.

The recourse of the general government to bank loans in 2009 (2 457 million euros) was quite stable compared to 2008. This stability could be explained by the December 2008 bond issue of two billion euros, which prevented the need for further bank loans.

Outstanding loans to resident households increased by 8.1% in 2009, to reach 19 131 million euros. This increase is mainly due to a growth in mortgage loans of 941 million euros in 2009. In December 2009, 82.8% of the loans to resident households were granted for real estate projects.

Table 1.13: Credits granted by credit institutions to non-bank residents (in million euros, outstanding amounts at the end of the period)

	Amounts in million euros			Variation in million euros and in %				Relative weight [1]
				2008/12 - 2009/12		2009/12 - 2010/03		
	2008/12	2009/12	2010/03	in million euros	in %	in million euros	in %	2010/03
Total	**64 722**	**62 936**	**65 273**	**-1 786**	**-2.8**	**2 338**	**3.7**	**100.0**
General government	2 406	2 457	2 415	50	2.1	- 42	-1.7	3.7
Other financial intermediaries / Financial auxiliaries	27 950	26 676	28 220	-1 274	-4.6	1 543	5.8	43.2
Insurance corporations / Pension funds	247	180	195	- 68	-27.3	15	8.5	0.3
Non financial corporations	16 427	14 492	15 206	-1 934	-11.8	713	4.9	23.3
Households / Non profit institutions serving households	17 691	19 131	19 238	1 440	8.1	107	0.6	29.5

1) Relative weight to total credit to non-bank residents.

Source: BCL

Deposits of non-bank residents

At the end of 2009, the outstanding amount of deposits by non-bank residents received by credit institutions amounted to 145 469 million euros, as against 166 157 million euros at the end of 2008 (12.5% less). However, during the first quarter of 2010, this amount rose by 5 401 million euros.

The deposits from the other financial intermediaries represent the largest part of the deposits received by the credit institutions. At the end of 2009, the amount of outstanding deposits from the other financial intermediaries was 96 700 million euros, 18.3% less than in 2008. This decline could be explained by the revival of the financial markets in 2009, which encouraged the financial intermediaries to turn away from safe savings products (like bank deposits) to invest in the markets.

Households and non-profit institutions serving households held 15.8% of bank deposits in December 2009 (22 765 million euros), 1% less than at the end of 2008.

The central government's deposits declined strongly in 2009. Indeed, the outstanding amount of the central government's deposits was 3 344 million euros at the end of 2009, as against 5 354 million euros the previous year (37.5% less). However, in the first quarter of 2010, the amount of these deposits increased by 568 million euros (17%) to reach 3 912 million euros.

Deposits by non-financial corporations rose by 18.1% in 2009, which brings their outstanding amount to 16 976 million euros. This rise continued during the first quarter of 2010.

Table 1.14: Non-bank residents deposits received by credit institutions (in million euros, outstanding amounts at the end of the period)

	Amounts in million euros			Variation in million euros and in %				Relative weight [1]
				2008/12 - 2009/12		2009/12 - 2010/03		
	2008/12	2009/12	2010/03	in million euros	in %	in million euros	in %	2010/03
Total	**166 157**	**145 469**	**150 870**	**-20 688**	**-12.5**	**5 401**	**3.7**	**100.0**
General government	5 354	3 344	3 912	-2 010	-37.5	568	17.0	2.6
Other financial intermediaries / Financial auxiliaries	118 422	96 700	99 366	-21 722	-18.3	2 667	2.8	65.9
Insurance corporations / Pension funds	5 006	5 684	5 455	678	13.5	- 229	-4.0	3.6
Non financial corporations	14 380	16 976	19 174	2 596	18.1	2 198	12.9	12.7
Households / Non profit institutions serving households	22 995	22 765	22 963	- 230	-1.0	197	0.9	15.2

1) Relative weight to total non-bank residents deposits.

Source: BCL

Box 1.3:

BANK DELEVERAGING AND THE IMPACT ON LOAN SUPPLY IN LUXEMBOURG

Since the onset of the financial turmoil, deleveraging in the financial sector has been a dominant characteristic of the world economy and a major propagation mechanism of the subprime crisis to the real economy. The aim of this box is to analyse the scale of this dynamic in the Luxembourg banking sector.

As the chart illustrates, the Luxembourg banking sector has been characterized by a deleveraging process since the third quarter of 2008. An examination of the aggregate bank balance sheet indicates that the deleveraging process has taken place through a simultaneous decrease in total assets and an increase in equity (between 2008Q4 and 2010Q1, -19.4% and +11.6% respectively).

More specifically, most of the balance sheet adjustment comes from the contraction of interbank activity, which amounted to around 70% of the drop in the size of total assets over the period under review. This is attributable to the importance of the interbank market in Luxembourg, and the substantial repatriation of international capital flows.

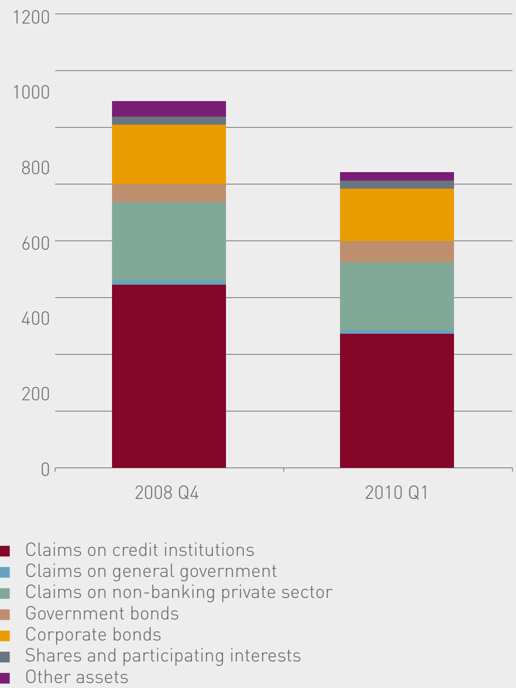
Moreover, the security portfolio has been reduced by 15 billion euros (7% of the size of the total asset reduction in the banking sector), and has at the same time been characterized by restructuring towards less risky assets (mostly government bonds).

Finally, the outstanding amount of credit to the non-banking private sector has been reduced by 35 billion euros (16% of the size of the total asset reduction in the banking sector) since October 2008. Financial corporations represented two third of this adjustment, while the non-resident non-financial corporate sector accounted for most of the remaining asset reduction.

Chart 1: Leverage ratio in the Luxembourg banking sector (assets/equity)

Source: BCL

Chart 2: Evolution of the size and structure of the Luxembourg banking sector asset (billion euros)



Source: BCL

Overall, the deleveraging process in the Luxembourg banking sector does not seem to have translated to date into a substantial drop in credit to the resident non-financial private sector. This conclusion is confirmed by the Bank Lending Survey, which indicates a relatively modest tightening of lending standards owing to refinancing difficulties and banks' capital position. According to this source of information, this phenomenon has contributed only marginally to the slowdown of credit to the resident non-banking private sector (and concerns mainly non-financial corporations), the demand-side and the deterioration of banks' risk perceptions being the main determinants.

Table 1: Evolution of the outstanding amount of credit by sector and geographical origin of the counterparty, 2008Q4 to 2010Q1 (billion euros)

	Credit to financial corporations	Credit to non-financial corporations	Credit to households
Luxembourg	- 7.9	-0.9	+1.7
Other euro area countries	-4.3	-5.1	+0.5
Rest of the world	-8.5	-4.5	-1.8

Source : BCL

1.2.5.2 Retail interest rates in Luxembourg

During 2009, main refinancing operations interest rates were reduced twice, by 50 basis points each time, on 21 January and 11 March, followed by two reductions of 25 basis points each, on 8 April and 13 May. The rates remain unchanged at 1.00% since 13 May 2009.

New financing conditions were quickly passed on to customers and non-financial corporations, either through reduced variable interest rates or reduced interest rates according to changed market conditions on new contracts.

The cost of new housing loan contracts with variable interest rate conditions decreased by 219 basis points between the end of December 2008 (4,22%) and the end of December 2009 (2,03%). At the end of the first quarter of 2010, a further interest rate increasing of 9 basis points was passed on to customers and drove housing loans with variable interest rates up to 2.00%. New housing loans contracts were set back to a historically feeble level of 1.91% at the end of January 2010.

End March 2010, domestic banks granted 300 million euros of housing loans for new business, compared to 326 million in 2009 and 238 million in 2008 (monthly average of the corresponding year).

After the first quarter of 2009, which was characterized by a slow downward trend for consumption loan rates, these rates rose and stabilized around 5% between the second quarter of 2009 and the end of the year. During first quarter of 2010, there was an even more significant decline due to the so-called Luxembourgish "car festival". Between December 2008 and December 2009, the cost of new business consumption loans with fixed interest rates over one and up to five years decreased by 103 basis points from 6.20% down to 5.17%. Between December 2009 and March 2010, this dropped by a further 143 basis points down to 3.74%.

The cost of consumption loans with fixed interest rates over five years, was reduced by 148 basis points between December 2008 (6.24%) and December 2009 (4.76%). From December 2009 until March 2010 costs in this category declined by another 51 basis points (4.25%).

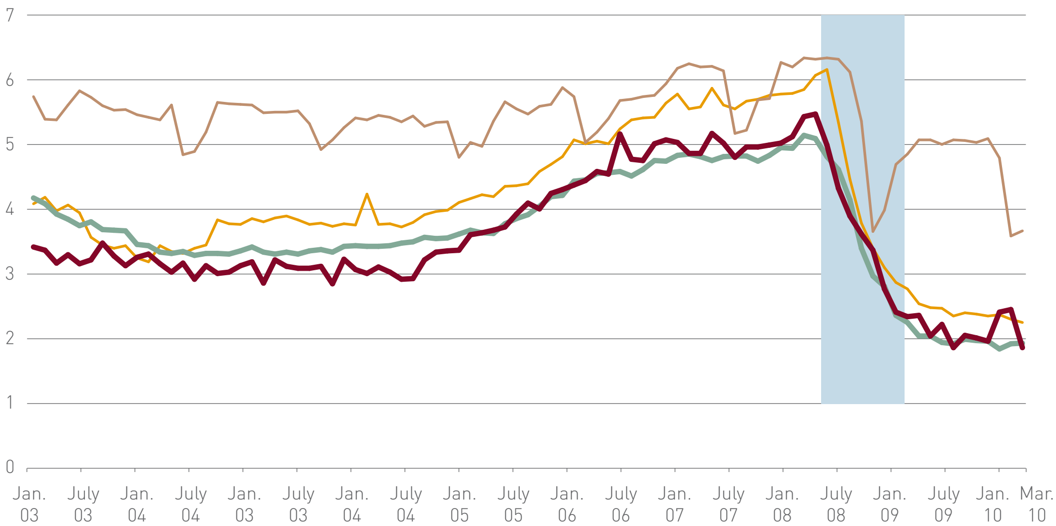
Interest rates on other loans category plunged between December 2008 (3.39%) and December 2009 (1.77%) by 162 basis points. This trend continued with a reduction of 1 basis point observed from December 2009 to March 2010 (1.76%). A majority of the other loans category is offered to non-domestic counterparts (mainly households out of Monetary Union).

The cost for new loans to non-financial corporations (NFCs) and for contracts below one million euros dropped by 213 basis points between December 2008 (4.54%) and December 2009 (2.41%) and by a further 9 basis points throughout the first three months of 2009 (2.32% in March 2010).

Regarding new contracts over one million euros, interest rates decreased by 194 basis points during 2009 and 10 basis points between December 2009 and March 2010, reaching a level of 1.93% as of the end of March 2010.

Between December 2008 (2.59%) and March 2010 (0.36%) term deposits rates (with maturities below one year) for households plunged by 223 basis points. Interest rates offered to non-financial corporations in the same category tumbled by 203 basis points from 2.36% in December 2008 down to 0.33% in March 2010.

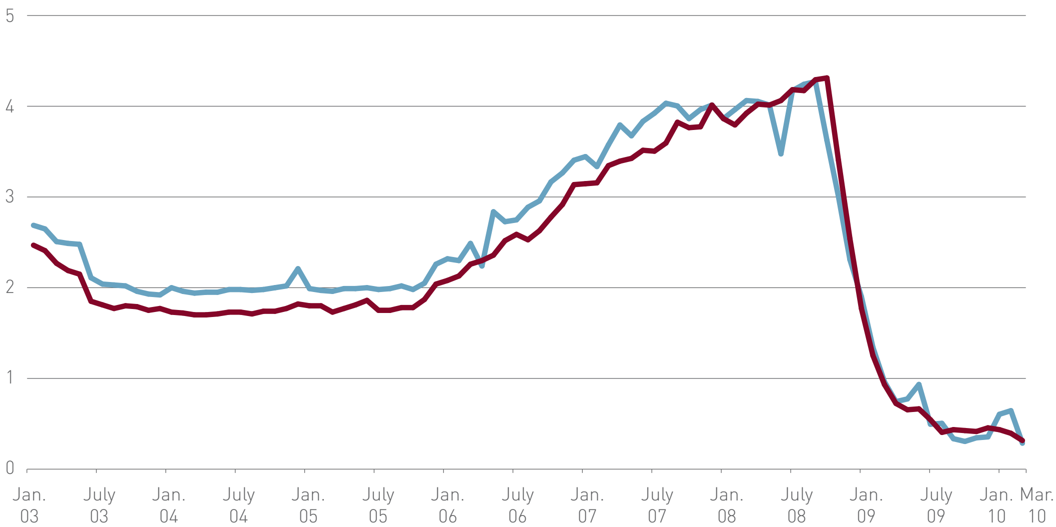
Chart 1.13: Loans to households and to non financial corporations between January 2003 and March 2010 (in %)



Decline period for the Eurosystem's main refinancing interest rate
Loans to NFCs (up to 1 million EUR)
Housing loans
Consumption loans
Loans to NFCs (over 1 million EUR)

Source: BCL

Chart 1.14: Households' and non financial corporations' deposits: development of interest rates between January 2003 and March 2010 (in %)



Households' deposits with agreed maturity
NFCs deposits with agreed maturity

Source: BCL

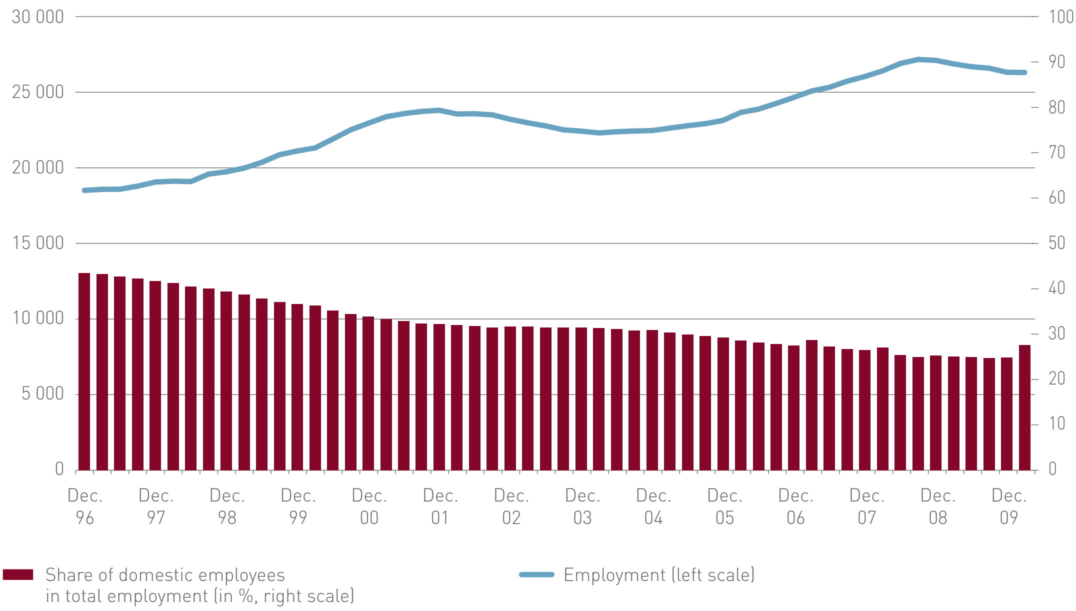
1.2.5.3 Employment in the banking sector

Employment in Luxembourg's banking sector decreased by 2.9% between December 2008 and December 2009. This represents a loss of 792 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 2010, 26 404 people were working in the banking sector in Luxembourg, compared with 26 416 at the end of December 2009.

The share of Luxembourgish employees in total employment, in the banking sector, accounted for 27.7% at end of March 2010. This share is higher than in previous years.

Chart 1.15: Evolution of the employment in the banking sector between December 1996 and March 2010



Source: BCL

1.2.5.4 Credit institutions' profit and loss accounts

Luxembourg credit institutions have achieved a result before provisions and tax of 6 190 million euros at the end of December 2009. This represents an increase of 3.4% compared to December 2008. The net result has strongly increased, from 177 million euros in 2008 to 2 627 million euros in 2009. Indeed, the depreciations and net provisions have fallen by 51.5% between 2008 and 2009.

Owing to the financial crisis, depreciations and net provisions were substantial in 2008. The decline in uncertainty has contributed to a reduction in depreciations and net provisions in 2009. However, one has to be cautious, as new depreciations or needed provisions, as a consequence of the economic situation, cannot be ruled out.

The results of the credit institutions in 2009 are characterized by a fall in the interest margin and by a rise in other net income due to an increase in the valuation of securities portfolios.

Table 1.15: Aggregate profit and loss account of Luxembourg credit institutions
Results of Luxembourg banks, including their foreign branches
(in million euros, outstanding amounts at the end of the period)

				Variation	
	Debit and credit items	2008	2009	in million euros	in %
1	Interest receivable	60 968	27 755	-33 213	-54.5
2	Income from securities	1 515	773	-742	-49.0
3	Interest payable	55 023	21 906	-33 117	-60.2
4	Interest margin (1+2-3)	7 460	6 622	-838	-11.2
5	Income from commission	3 801	3 188	-613	-16.1
6	Income from foreign exchange	384	103	-281	-73.2
7	Other net income	- 830	794	1 624	ND
8	Net income (5+6+7)	3 355	4 085	730	21.8
9	Gross income (4+9)	10 815	10 707	-108	-1.0
10	Staff costs	2 635	2 491	-144	-5.5
11	Other administrative expenditures	1 931	1 747	-184	-9.5
12	General administrative expenditures (10+11)	4 566	4 238	-328	-7.2
13	Write-downs of non-financial fixed assets	264	279	15	5.7
14	**Results before provisions and tax (9-12-13)**	**5 985**	**6 190**	**205**	**3.4**
15	Depreciations and net provisions	5 540	2 688	-2 852	-51.5
16	Result before tax	445	3 502	3 057	687.0
17	Tax on income and profit	268	875	607	226.5
18	**Net result**	**177**	**2 627**	2 450	1 384.2

1) Data has been verised in the light of new information.

Source: BCL

Profit

During the year 2009, the interest margin decreased by 838 million euros compared to 2008 (11.2% less). However, if one does not take into account the income from securities, the interest margin realized in 2009 would be close to that of 2008. Indeed, the year 2007 distinguished itself with excellent results, which led to high incomes from securities in 2008.

Furthermore, the interest receivable and the interest payable have respectively fallen by 54.5% and 60.2% compared to 2008. These drops can be explained by the decrease in the volume of activities and by lower interest rates.

Income from commissions fell by 16.1% in 2009, to reach the outstanding amount of 3 188 million euros.

The 1 624 million euros increase in other net income between 2008 and 2009 could be explained by the increase of the valuation of the securities portfolios held by the banks.

Altogether, gross income of banks has fallen by 1% during the year 2009. Its outstanding amount is 10 707 million euros.

Loss

Regarding costs faced by banks in 2009, general administrative expenditures have fallen by 7.2%, other administrative expenditures by 9.5%, and staff costs by 5.5%. However, staff costs have started to rise again during the last quarter of 2009, and this upward trend has continued during the first quarter of 2010.

Table 1.16: Quarterly profit and loss account of Luxembourg credit institutions[1]
Results of Luxembourg banks, excluding their foreign branches (in million euros, outstanding amounts at the end of the period)

						Variation in %			Variation in million euros		
	Debit and credit items	2009/03	2009/06	2009/09	2009/12	Variation from Q1 to Q2	Variation from Q2 to Q3	Variation from Q3 to Q4	Variation from Q1 to Q2	Variation from Q2 to Q3	Variation from Q3 to Q4
1	Interest receivable	10 752	6 047	5 623	4 874	-43.8	-7.0	-13.3	-4 705.0	-424.0	-749.0
2	Income from securities	157	250	100	258	59.2	-60.0	158.0	93.0	-150.0	158.0
3	Interest payable	8 887	4 641	4 337	3 651	-47.8	-6.6	-15.8	-4 246.0	-304.0	-686.0
4	Interest margin (1+2-3)	2 022	1 656	1 386	1 481	-18.1	-16.3	6.9	-366.0	-270.0	95.0
5	Income from commission	830	804	806	697	-3.1	0.2	-13.5	-26.0	2.0	-109.0
6	Income from foreign exchange	27	- 60	157	36	-322.2	-361.7	-77.1	-87.0	217.0	-121.0
7	Other net income	- 54	532	93	151	ND	-82.5	62.4	586.0	-439.0	58.0
8	Net income (5+6+7)	803	1 276	1 056	884	58.9	-17.2	-16.3	473.0	-220.0	-172.0
9	Gross income (4+9)	2 825	2 932	2 442	2 365	3.8	-16.7	-3.2	107.0	-490.0	-77.0
10	Staff costs	638	579	614	626	-9.2	6.0	2.0	-59.0	35.0	12.0
11	Other administrative expenditures	434	397	425	467	-8.5	7.1	9.9	-37.0	28.0	42.0
12	General administrative expenditures (10+11)	1 072	976	1 039	1 093	-9.0	6.5	5.2	-96.0	63.0	54.0
13	Write-downs of non-financial fixed assets	65	59	71	68	-9.2	20.3	-4.2	-6.0	12.0	-3.0
14	Results before provisions and tax (9-12-13)	1 688	1 897	1 332	1 204	12.4	-29.8	-9.6	209.0	-565.0	-128.0
15	Depreciations and net provisions	-1 115	-1 377	- 789	- 646	ND	ND	ND	-262.0	588.0	143.0
16	Result before tax	- 139	- 123	- 118	- 91	ND	ND	ND	16.0	5.0	27.0
17	Tax on income and profit	2 326	2 476	1 946	1 830	6.4	-21.4	-6.0	150.0	-530.0	-116.0
18	Net result	-2 122	-2 294	-1 757	-1 671	ND	ND	ND	-172.0	537.0	86.0

1) Discrepancies may arise from rounding.

Source: BCL

A comparison between the first quarter of 2009 and the first quarter of 2010 shows that the interest receivable and the income from securities are falling, and so are the interest payable and interest margin. However, total revenues, in particular foreign exchange income, are rising.

Table 1.17: Aggregate profit and loss account of Luxembourg credit institutions at the end of March 2009 & 2010.
Results of Luxembourg banks, excluding their foreign branches
(in million euros, outstanding amounts at the end of the period)

	Debit and credit items	2009/03	2010/03	Variation in %	Variation in million euros
1	Interest receivable	10 752	5 085	-52.7	-5 667
2	Income from securities	157	143	-8.9	- 14
3	Interest payable	8 887	3 775	-57.5	-5 112
4	Interest margin (1+2-3)	2 022	1 453	-28.1	- 569
5	Income from commission	830	917	10.5	87
6	Income from foreign exchange	27	115	325.9	88
7	Other net income	- 54	309	ND	363
8	Net income (5+6+7)	803	1 341	67.0	538
9	Gross income (4+9)	2 825	2 794	-1.1	- 31
10	Staff costs	638	685	7.4	47
11	Other administrative expenditures	434	444	2.3	10
12	General administrative expenditures (10+11)	1 072	1 129	5.3	57
13	Write-downs of non-financial fixed assets	65	67	3.1	2
14	Results before provisions and tax (9-12-13)	1 688	1 598	-5.3	- 90

Source: BCL

1.2.5.5 Undertakings for collective investment

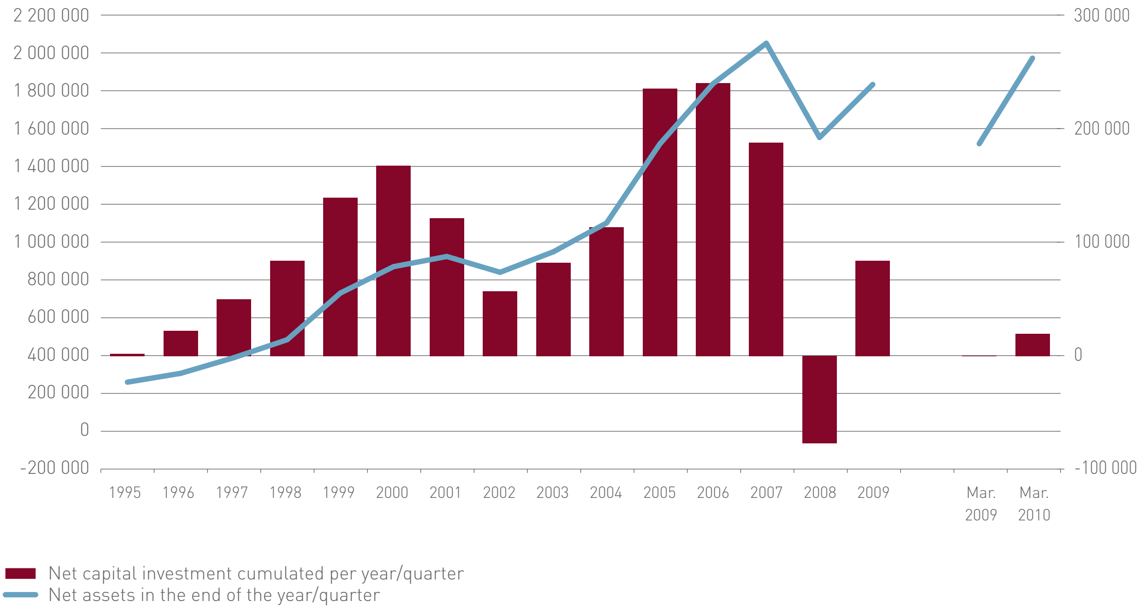
The evolution of the number of funds

At the end of 2009, the official list recorded 3 463 UCIs, compared to 3 372 at the end of 2008. This represents an increase by 91 units in 2009. The rate of creation of new UCIs has been slower in 2009 compared to previous years and with 53 new units, the rate of creation of new UCIs increases but remains quite low in the first quarter of 2010.

Net asset value

In 2009, the UCIs' net global property increased considerably. Between December 31, 2008 and December 31, 2009, the net asset value rose by about 281 billion euros to reach 1 840.9 billion euros, representing an increase of 18%. The upward movement of the net asset value had been noticeable since spring 2009 due to the good performance of financial markets. In parallel, a capital increase of 84.3 billion euros and a market effect of 196.9 billion euros were recorded for the year 2009. This upward movement of the UCIs' net global property was confirmed in the first quarter of 2010 with a net asset value of 1 980.5 billion euros.

Chart 1.16: Development of the net assets and of the net capital investment (in million euros)



Source: CSSF

Table 1.18: Global situation of undertakings for collective investments
(in million euros, outstanding amounts at the end of period, except where otherwise stated)

	Number of UCIs	Number of subfunds	Net asset value	Net capital investment[1) 2)]	Variation of financial market[2) 3)]	Annual change in EUR million	Annual percentage change	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

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" column reflects the change in net assets, which is due to the fluctuation of financial markets.

Source: CSSF

1.2.5.6 Money market funds

The number of money market funds

By the end of December 2009, 479 units were recorded on the official list, compared to 477 units at the end of 2008, representing an increase of only 2 units. During the first quarter of 2010, the number of money market funds continued to rise moderately by 2 units, reaching 481 units by March 31, 2010.

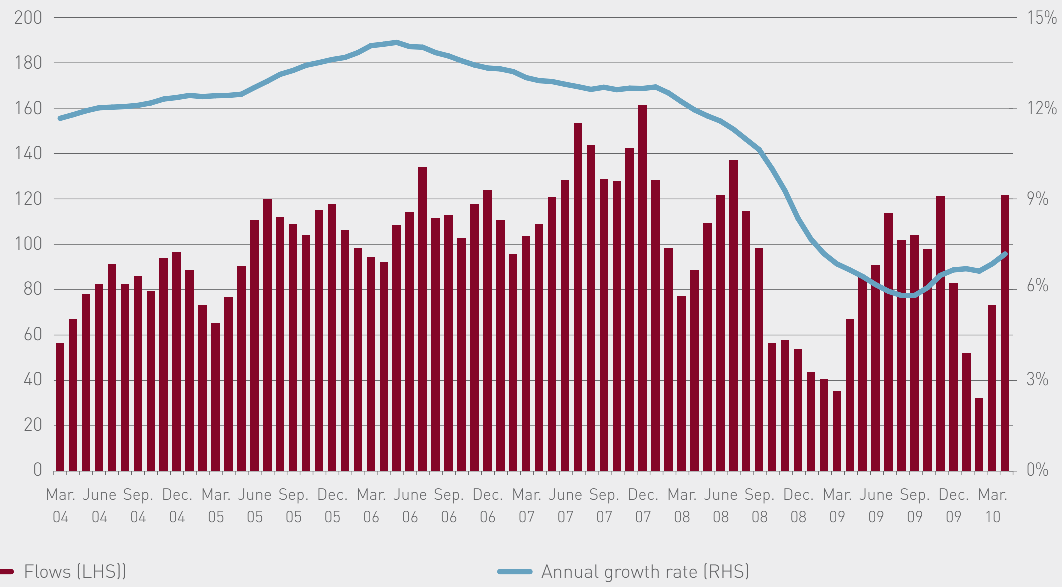
The balance sheet of money market funds

Over the course of 2009, the balance sheet of monetary funds decreased by 6.2%, from 340.2 billion on December 31 2008 to 319.2 billion on December 31 2009. But in the first quarter of 2009, the balance sheet continued its increase, reaching 358.9 billion on March 31, 2009. However in April 2009, due to the good performance of financial markets and low money market interest rates, the upward trend of money market funds ran completely out of steam. The downward movement of money market funds continued into the first quarter of 2010, with their balance sheets reaching 310.4 billion by March 31, 2010.

Box 1.4:

THE EVOLUTION OF CREDIT TO HOUSEHOLDS AND NON-FINANCIAL CORPORATIONS

Chart 1: Mortgage loans to Luxembourg residents (in million euros and percentages per annum, three-month moving averages)



Source: BCL

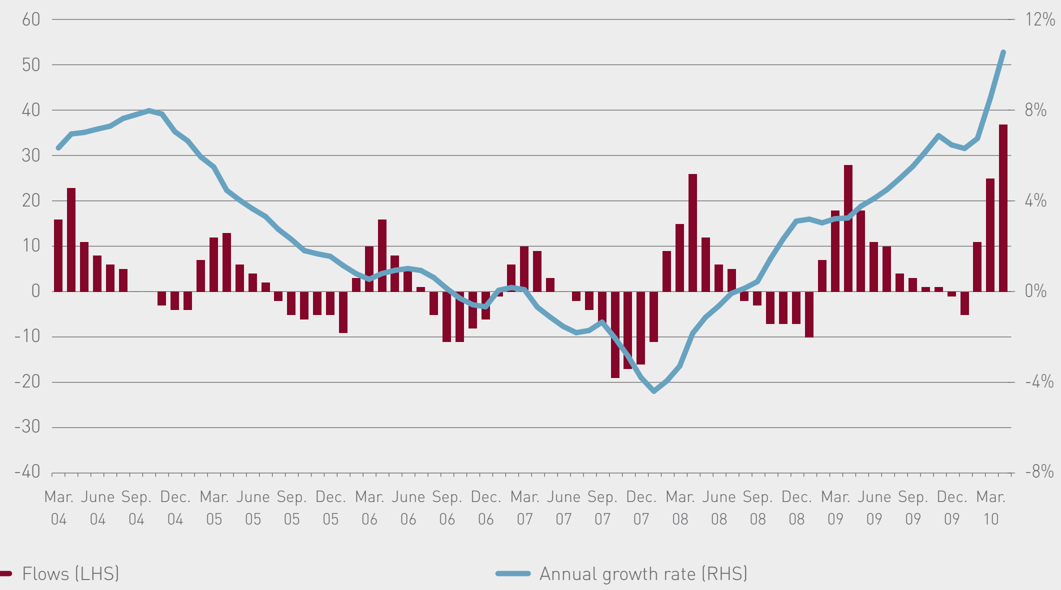
This box reviews the latest credit developments regarding loans to households and to non-financial corporations (NFCs).

Household credit

Chart 1 plots the evolution of loans for house purchase to Luxembourg residents in terms of flows (i.e. monthly changes in outstanding amounts) and annual growth rates.

While loans for house purchase have picked up pace in the course of 2009, their progression remains less important than in the period preceding the crisis. Both the annual growth rate and the flows at first continued their downward trend, before rebounding in the course of 2009, with the rise in monthly flows preceding the rebound in annual growth rates. Although loan dynamics have somewhat slowed down around the turn of the year, the latest data point to a renewed pickup in lending. All in all, the hypothesis of a turning point in the mortgage credit cycle already advanced in a previous publication is thus substantiated by the latest available data.

Chart 2: Consumer credit to Luxembourg residents (in million euros and percentages per annum, three-month moving averages)



For statistical reasons, one large bank is excluded from the December 2009 flows. The annual growth rate has been adjusted from December 2009 onwards.

Source: BCL

The Bank Lending Survey (BLS) offers some insight into demand- and supply-side factors. The survey indicates that, overall, banks have left their credit standards unchanged over the review period. Indeed, although there was a net tightening of lending standards in the first quarter of 2009, this tightening was followed by a net easing in the fourth quarter. Net demand was positive for most of the period under review, though it is worth mentioning that demand was rather weak at merely 14% (the equivalent of one bank) since the sharp rebound recorded in the second quarter of 2009.

It should be noted that seasonality is a particularly pertinent issue with regard to consumer lending. In particular, the monthly flows tend to taper down considerably after the automobile festival in the first quarter of the year; developments are especially lacklustre in the second half of the year. The annual growth rate, on the other hand, has continued to trend upwards throughout 2009 and, despite a brief drop later in the year, hit a new high in April 2010. Credit dynamics have thus picked up at a considerable pace compared to previous years.

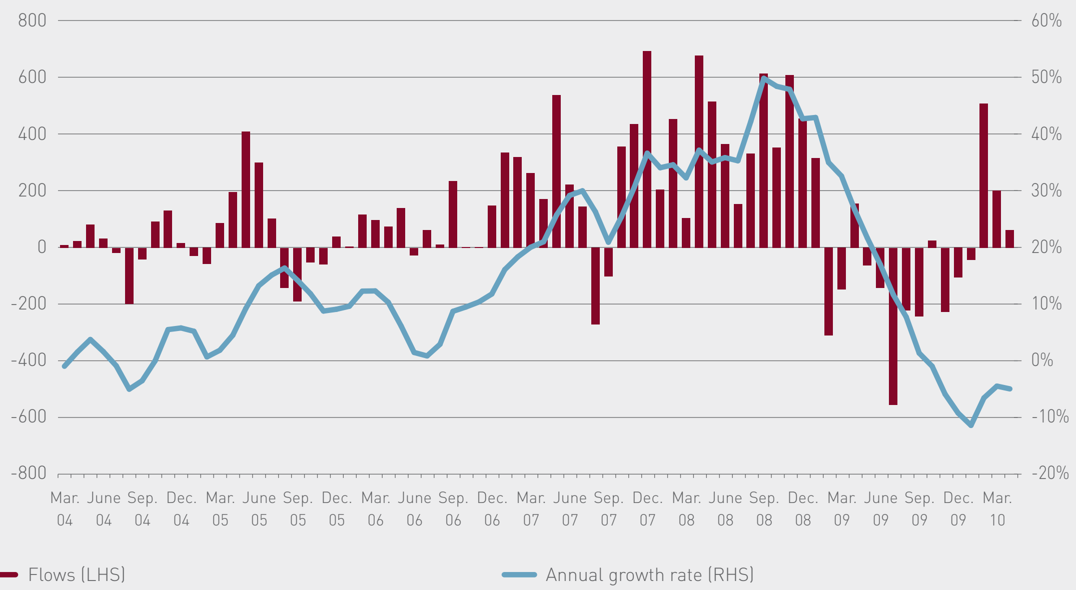
Credit standards applied to consumer credit (and other loans) generally followed the same trend as those applied to mortgage loans. Net demand has fallen overall, although there was a strong rebound in the second quarter of 2009.

Corporate credit

Overall, the evolution of credit to NFCs resident in Luxembourg was not very favourable and, for most of the period under review, loans to firms contracted. The annual growth rate has fallen sharply in 2009 and became negative in the second half of the year, in sharp contrast to the record growth rates recorded in 2008 (50% and more). Around the turn of the year there was a trend reversal in the annual growth rate which, however, remained negative. The latest data, however, point to a renewed slowdown. All in all, corporate credit developments remain lack-lustre.

BLS data indicate that banks have continued to tighten their credit standards. However, the tightening was rather weak for most of the review period, while actually remaining unchanged in the latest survey round (pertaining to the first quarter of 2010). To the extent that the evolution of lending standards has leading indicator properties, past tightening will most likely continue to weigh on credit dynamics even when banks actually begin to ease their lending standards. Net demand at first remained positive, though weakly so, before deteriorating from the third quarter of 2009. It should be noted that the aggregated survey results do not distinguish the geographical origin of the counterparty.

Chart 3: Credit to NFCs resident in Luxembourg (in million euros and percentages per annum, three-month moving averages)



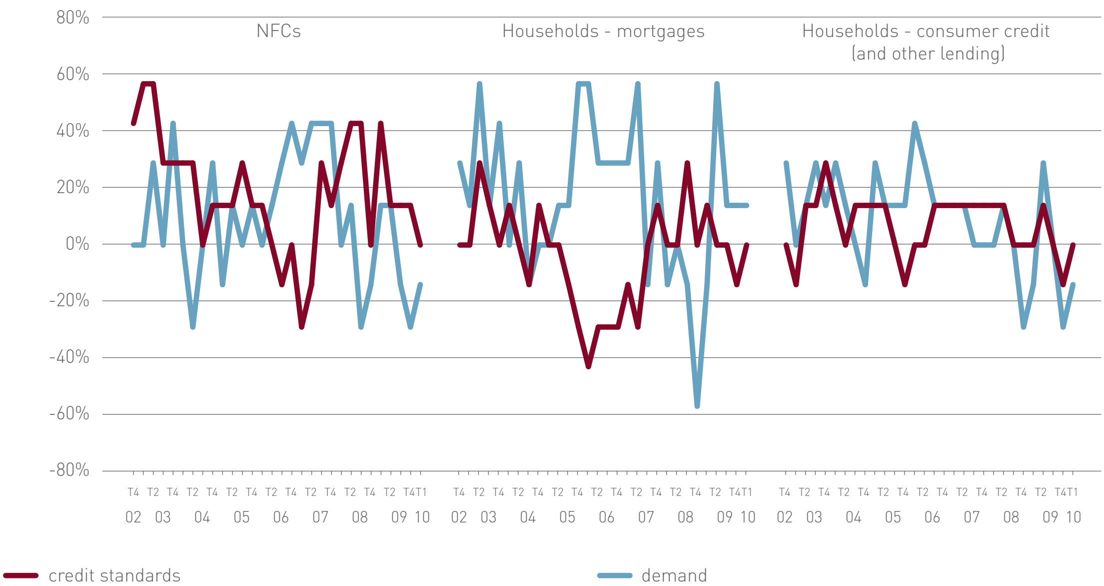
Source: BCL

1.2.6 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 contains a number of questions on the supply of and demand for credit, covering the household sector as well as non-financial corporations (NFCs). Results are generally expressed in terms of "net percentages". Concerning those questions on credit standards, net percentages refer to the difference between those banks that reported a tightening and those that reported an easing of credit standards. For the questions on credit demand, net percentages refer to the difference between those banks that reported a fall in demand and those that reported a rise.

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

Chart 1.17: The evolution of credit standards and loan demand in Luxembourg (net percentages)



Source: BCL

NFCs: While banks have generally continued to tighten their lending standards, net percentages have decreased in the course of 2009 as well as in the first quarter of 2010. All in all, the recorded net tightening was relatively weak for most of the period under review, while banks have left their credit standards unchanged in the first quarter of 2010. Although the impact of risk perceptions on lending standards has virtually vanished, banks continue to indicate that margins on riskier loans are widening. The tightening impact of the cost of funds and balance sheet constraints has also practically disappeared.

Net demand at first remained positive, though only slightly so, before deteriorating as of the third quarter of 2009. Lower financing needs for fixed capital investment and for mergers/acquisitions and corporate restructuring largely account for the fall in demand, though this was somewhat counterbalanced by higher financing needs for inventories and working capital, and for debt restructuring.

Households: Overall, credit standards applied to mortgage loans remained unchanged. Indeed, the net tightening in lending standards recorded in the first quarter of 2009 was offset by a net easing recorded in the final quarter. Net demand was mostly positive throughout the review period; however, it stood at only +14% since the strong rebound recorded in the second quarter of 2009. Banks have reported an improvement in the housing market outlook, as well as in consumer confidence, though these elements have failed to contribute to a rise in demand.

Lending standards applied to consumer credit (and other lending) have largely followed the same trend as those applied to mortgage loans. Overall, loan demand has fallen in net terms, in spite of a strong rebound recorded in the second quarter of 2009. Consumer confidence contributed to lower loan demand.

1.2.7 The Luxembourg Stock Exchange

Between end-2008 and end-2009, the LuxX index increased by 40%, going from 980.9 to 1 371.5. The index subsequently continued its upward trend before falling sharply in April 2010. In mid-May, the LuxX stood at 1 421.5. While the LuxX index largely followed the same trend as the major international stock indices, its progression was in comparison particularly strong.

It is worth noting that the composition of the index was revised twice in 2009: first in January, when Reinet Investments S.C.A. (a securitisation vehicle) and Intercultures S.A. (a holding company which primarily invests in various agricultural companies in Africa) were added to the index; and again in July, when Cegedel S.A. was removed from the basket.

Chart 1.18: The LuxX index and other major international indices
(Index: 01/01/2009 = 100 unless otherwise indicated; daily data)

Source: Bloomberg

ArcelorMittal shares, which make up 20% of the index, rose particularly strongly over the review period (+64%). However, the other main components also performed strongly. Thus, Reinet Investments S.C.A. and SES S.A., which each make up 20% of the index, rose by 62% and 31% respectively. Regarding banking or financial shares, KBC Group and Foyer S.A. rose by 42% and 39% respectively. The shares of RTL Group S.A. rose by 54%.

At end-2009, there were a total of 45 660 listings on the Luxembourg Stock Exchange (of which 5 915 were in the alternative Euro MTF market), compared to 49 097 in 2008. This represents a fall of 7%. In the first quarter of 2010, the number of listings fell further to 44 680.

The relative shares of listed securities remained more or less stable. Thus, the share of bonds remained largely unchanged at roughly 68%, while the share of UCITS stood at roughly 16%; the share of warrants also stood at 16% while shares continued to make up less than 1% of total listings.

1.2.8 The Labour market

1.2.8.1 Employment

Table 1.19: 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)
2003	2.0	0.3	1.9	3.8	0.7	1.8	3.5%	3.5%	5.2%
2004	2.6	0.3	2.4	4.7	1.9	1.9	3.9%	3.9%	5.7%
2005	3.2	0.3	3.0	5.8	1.7	2.1	4.2%	4.2%	6.1%
2006	4.1	-0.6	3.8	6.7	2.0	2.1	4.4%	4.4%	6.3%
2007	4.6	0.5	4.4	7.9	2.3	2.3	4.4%	4.4%	6.1%
2008	5.0	2.4	4.8	7.2	3.2	3.2	4.4%	4.4%	5.7%
2009Q1	2.7	0.8	2.6	3.5	2.0	3.2	5.5%	5.2%	6.8%
2009Q2	1.5	1.4	1.5	1.5	1.4	2.8	5.4%	5.7%	6.7%
2009Q3	0.3	1.7	0.4	-0.2	0.9	2.4	5.6%	5.9%	6.9%
2009Q4	0.2	2.4	0.3	-0.4	0.9	2.4	6.1%	5.9%	7.5%
2010Q1	0.4	2.8	0.6	0.1	1.0	1.8	6.4%	6.0%	7.8%
Jan-09	3.3	1.1	3.2	4.5	2.3	3.3	5.5%	5.0%	6.7%
Feb-09	2.6	0.6	2.4	3.4	1.8	3.0	5.6%	5.2%	6.9%
Mar-09	2.2	0.6	2.1	2.7	1.8	3.2	5.5%	5.4%	6.8%
Apr-09	1.9	1.2	1.8	2.1	1.6	3.0	5.5%	5.5%	6.8%
May-09	1.6	1.7	1.6	1.8	1.5	2.8	5.4%	5.7%	6.7%
Jun-09	1.0	1.4	1.0	0.7	1.2	2.7	5.4%	5.8%	6.7%
Jul-09	0.7	1.5	0.7	0.3	1.1	2.6	5.5%	5.9%	6.8%
Aug-09	0.3	1.7	0.4	-0.1	0.9	2.4	5.6%	5.9%	6.9%
Sep-09	0.0	1.8	0.1	-0.7	0.7	2.2	5.7%	5.9%	7.1%
Oct-09	0.0	2.2	0.1	-0.7	0.8	2.3	5.9%	5.9%	7.3%
Nov-09	0.2	2.4	0.3	-0.4	0.9	2.4	6.1%	5.9%	7.5%
Dec-09	0.3	2.7	0.4	-0.2	0.9	2.3	6.3%	6.0%	7.7%
Jan-10	0.3	2.7	0.4	-0.2	1.0	1.9	6.4%	5.9%	7.8%
Feb-10	0.5	2.8	0.6	0.2	0.9	1.8	6.5%	6.0%	7.9%
Mar-10	0.5	2.8	0.7	0.2	1.0	1.7	6.2%	6.0%	7.7%
Apr-10	0.5	2.3	0.6	0.3	0.9	1.4	6.0%	6.0%	7.6%

* Data from January to April are estimates

Sources: IGSS, STATEC and BCL calculations

The current crisis is characterized by the simultaneous and generalized slowdown of activity through nearly all economic sectors. Except for the sector "other services" (including public administration and other sectors less exposed to international competition), all economic sectors have experienced either a slowdown or a net decrease in employment.

Regarding the various components, cross-border workers seem to have been particularly impacted by the economic downturn. This sharper reaction of non-resident employment could result from the fact that non-resident workers are overrepresented in temporary employment contracts as well as in sectors that are particularly exposed to international demand.

Another striking feature of the crisis is the exponential increase of short-time work reaching a record high in June 2009 (10 290 workers).[3] Since November 2009, short-time work and expenditures thereon have continuously decreased. In a highly uncertain environment, in order to insure against further unforeseeable declines in activity, firms continue to apply—though to a lesser extent than previously—for short-time authorizations. Nevertheless, it is important to highlight that short-time work schemes have not been able to prevent lasting job losses, particularly in the industrial sector.

Chart 1.19: Evolution of short-time work
(number of workers effectively affected and number of workers potentially affected)

Remark: Data related to the number of workers effectively affected by short-time work from January to June 2010 are estimates.

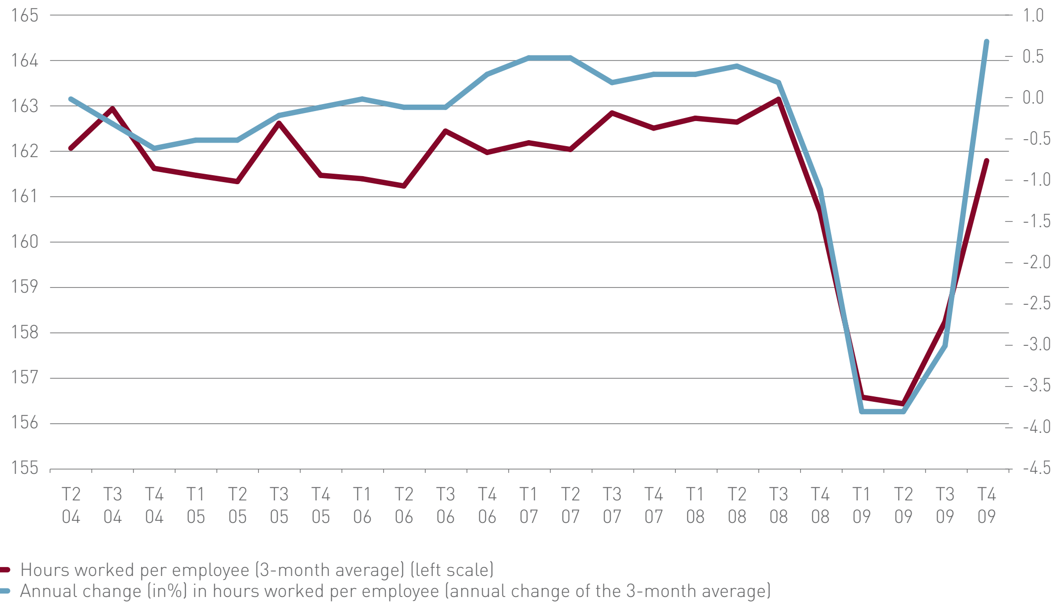
Sources: ADEM, Statec

According to IGSS, hours worked per employee have temporarily decreased during the first half of 2009, in line with the evolution of short-time work. However, these figures have to be interpreted with caution as the introduction of the *Statut Unique* has made difficult the comparison of 2009 data with older data.[4]

3 This corresponds to the number of workers for which firms have requested short-time permissions. The record high for the number of workers effectively affected by short-time work was reached in April 2009 with 8 159 people.

4 From 1 January 2009, compensation for hours during which the employee has been ill is paid by the employer (for the first 13 weeks of illness). As a result, even though these hours don't correspond to hours actually worked, they are accounted for as such in 2009. Though, in order to be able to compare the yearly figures of hours worked, we had to include the hours during which the employee has been ill, but for which the employer had to pay the compensation, in total hours worked. Furthermore, hours worked could be slightly underestimated for some months in 2009. In fact, another difference introduced by the *Statut Unique* relates to the fact that now, employers have to declare the number of hours effectively worked while previously they had to declare a monthly average.

Chart 1.20: Evolution of the number of hours worked per employee
(3-month average and annual change of the 3-month average)



Source: IGSS

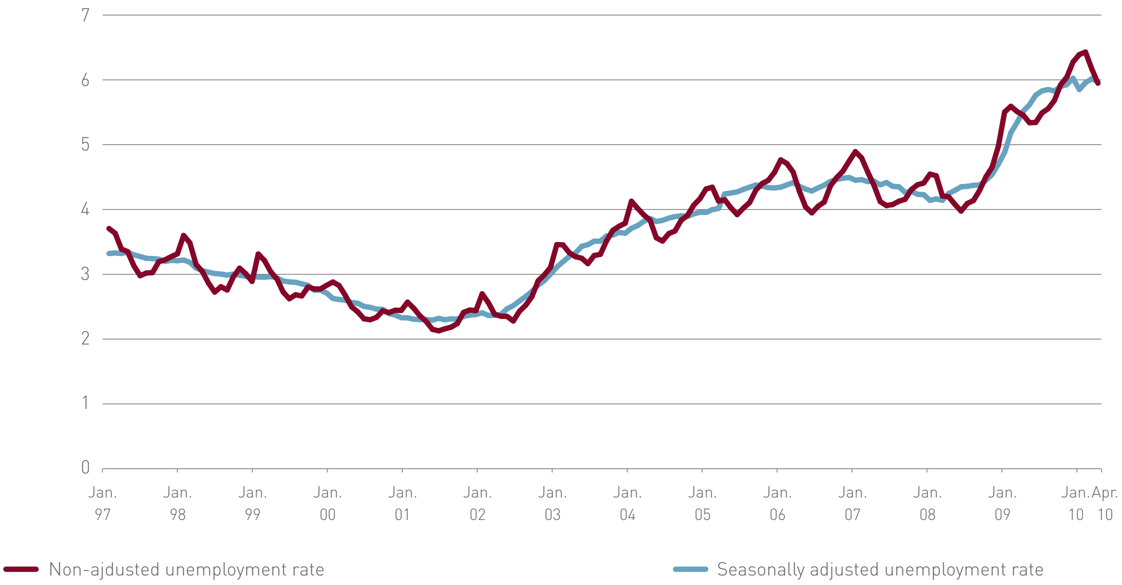
1.2.8.2 Unemployment

Unemployment took off during 2009 and reached a record high of 5.7% (yearly average). The seasonally adjusted unemployment rate increased until July 2009 and stabilized around 5.9%-6.0% thereafter.

The stagnation of the narrow unemployment rate can to some extent be explained by the increase of short-time work as well as by the increasing number of people beneficiating from "special measures for employment." Another possible factor is the long-term unemployed becoming discouraged and deciding to no longer register at ADEM. In addition, as stated before, the crisis has particularly affected cross-border commuters, who are not included in national unemployment figures.

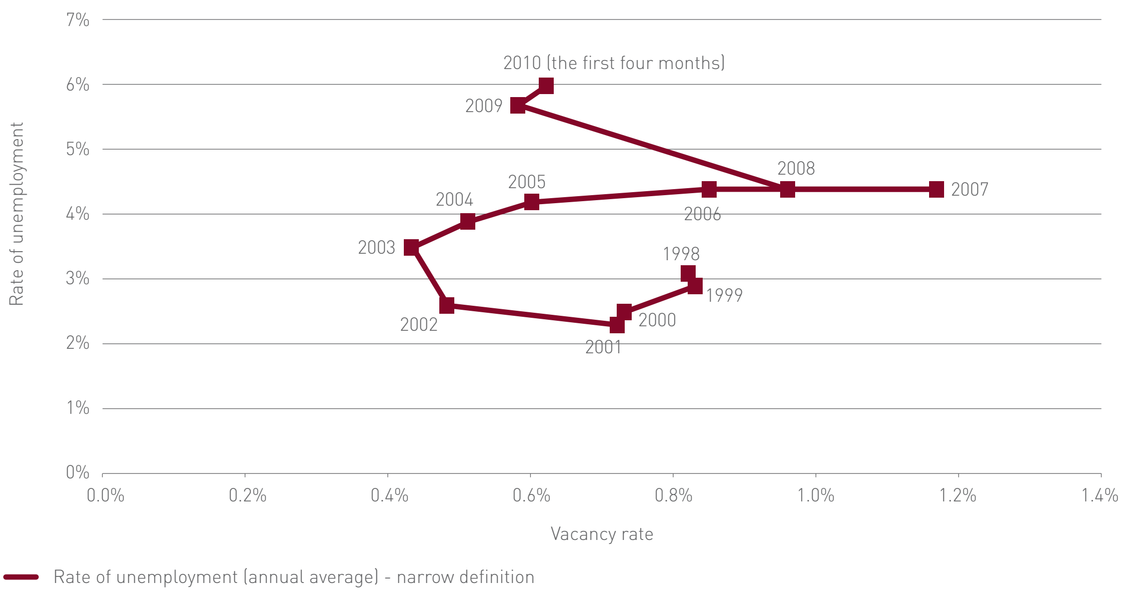
The deterioration and subsequent stabilization of the unemployment rate has also been reflected in moves along the Beveridge curve, first towards the upper left and afterwards towards the upper right of the curve, indicating that the labour market deteriorated as a consequence of the slowdown of economic activity.

Chart 1.21: Unemployment rate (narrow definition)



Source: Adem

Chart 1.22: Beveridge Curve



Sources: Adem, IGSS

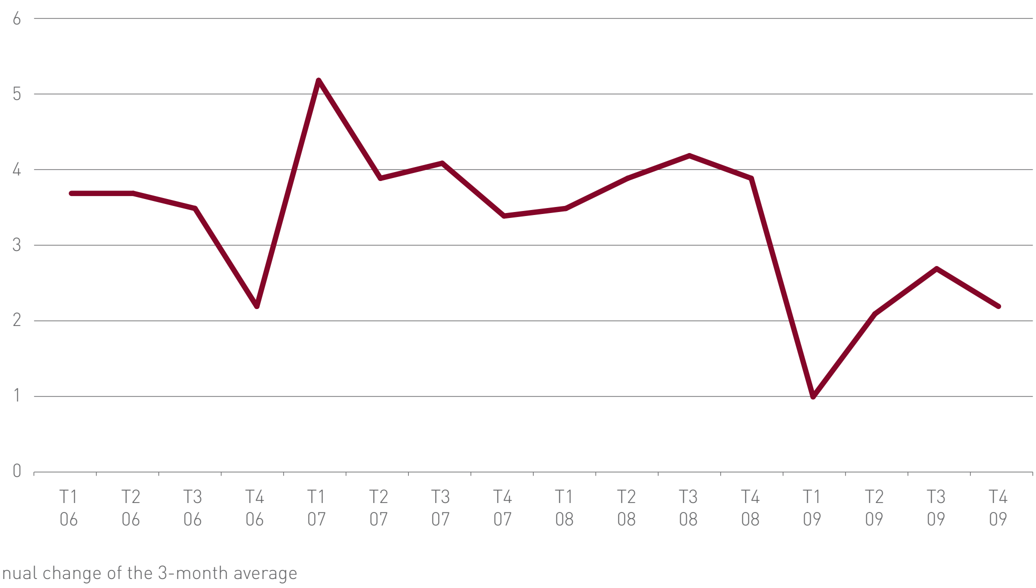
Regarding cross-border unemployment, the only reliable (but imperfect) indicator is the number of E301[5] certificates established by ADEM, which has increased after the crisis.

The latest available evidence suggests that labour market conditions have been improving in the last few months.

1.2.8.3 Labour costs

According to IGSS, compensation per employee rose by 2.0% in 2009, which seems reasonable given current provisional figures for national accounts (+1.7%). Compensation per employee decelerated during the first quarter of 2009 and accelerated afterwards, probably as a result of the automatic wage indexation.

Chart 1.23: Annual change (in %) in compensation per employee (3-month average)



Source: IGSS

It is important to reiterate that, as a result of the introduction of the *Statut Unique*, data from 2009 is not directly comparable to previous data. In order to be able to compare the figures, compensation per employee includes the compensation paid out by the *Caisse Nationale de Santé*. Under the hypothesis that compensation for illness remained stable compared to the previous years, its inclusion in compensation per employee should not influence the nature of our conclusion.

5 This certificate is established by ADEM and can be used by cross-border workers who have lost their job, in order to request unemployment benefits in their home country. However, the evolution of these requests has to be interpreted with caution as a same cross-border worker may request more than one certificate, overestimating cross-border workers' job losses. On the other side, Belgium cross-border commuters are not always required by the home country to provide these certificates so that this could lead to an underestimation of the job losses of non-residents.

Box 1.5:

ON THE INTEREST TO DIFFERENTIATE SOCIAL CONTRIBUTIONS IN LUXEMBOURG

We demonstrate through the DSGE model LOLA (see Pierrard and Sneessens, 2009, for a detailed exposition) how two modifications in the social contribution scheme could improve the functioning of the labour market in Luxembourg. The first modification is to reduce taxation of older workers (on the employees' side), in order to encourage longer work time. This measure is fully financed through higher income from the increase in labour supply. The second modification is to reduce taxation of low-skilled workers (on the employers' side). This measure is financed through a slight increase in employers' taxation of other workers.

Measure 1: Inactivity rate of older workers

The inactivity rate of the older workers is higher in Luxembourg than in any other OECD country. To induce people to work longer, the OECD (see for instance Duval, 2003) suggests reducing taxation of older workers. Moreover, the net replacement rate (ratio between the level of pension and past wages) is very high in Luxembourg, and small decreases could again induce people to work longer, while remaining socially acceptable. The LOLA model shows that an immediate reduction, by 10 percentage points, in the taxation of workers between 55 and 65 years old (on the employees' side), is initially not costly for the government budget because there are few old workers. Moreover, this policy stimulates the labour supply from these workers and their activity rate increases by about 15 percentage points. Higher employment increases the income from social contributions and, in the end, the policy is fully financed. Similarly, the LOLA model shows that an immediate reduction, by 10 percentage points, in the replacement ratio improves the government budget, but also stimulates the activity rate of older workers. As a result, employment and GDP increase, as does taxable income. In the long run, the budget balance improves by about 5% of GDP.

Measure 2: Low-skilled and long-term unemployment

In Luxembourg, about half of the unemployed are low-skilled workers. Moreover, long-term unemployment has strongly increased over the last 10 years. How could we improve the situation of these workers without further deteriorating public finances? A natural way to stimulate labour demand would be to reduce employment costs through lower taxation (on the employers' side). In particular, these reductions should target those with low wages. Indeed, it is easier to identify the wage level than the qualification level, and low–skilled workers usually have low wages. Moreover, the labour demand elasticity with respect to wages is usually high for the low skilled, because they are easy to substitute (see for instance Crépon and Desplatz, 2001, or Pierrard, 2004). Finally, stimulating low-skilled employment, which is mainly found outside the financial sector, would help to diversify the economy.

Simulations with LOLA show that lower taxation, targeted at those with wages below P15[1], with an *ex post* cost of 1% of GDP, reduces the unemployment rate by 0,5 percentage points. Lower taxation with a similar *ex post* cost but not targeted at those with low wages only reduces the unemployment rate by 0,1 percentage points. To completely offset the budgetary cost of such a measure, we foresee a"global package" where a reduction in taxation by 10 percentage points targeted at low wage workers is combined with an increase in taxation by 1 percentage point on all other workers. This global package is budget neutral and reduces the unemployment rate by 0.4 percentage point.

1 The P15 wage means that 15% of the workers have wages lower than it. According to the Statec (2009), the P15 wage corresponded to roughly 1800 EUR in 2006 (gross yearly wage transformed into monthly basis).

Of course, this kind of policy reduces the average productivity of the economy although, according to LOLA, this effect is quite marginal. Moreover, leaving a fraction of the population out of the working economy may generate huge indirect costs for society, e.g. either in public health or because of the lack of safety. Finally, in its latest survey on Luxembourg, the OECD (2010) also suggests implementing a similar policy (called 'working poor' policy).

Reforming the labour market should not only focus on the demand side but also on the supply side of the labour market. First, an unemployed worker has the right to receive unemployment benefits, but also has the duty to accept a job if one is offered. The Public Employment Agency (PEA or ADEM in Luxembourg) must therefore fix strict requirements, and punishments for abuses (see BCL, 2008). Second, the PEA must follow up on a worker as soon as (s)he enters unemployment, in order to avoid skill depreciation, stigmatization or discouragement. Finally, the PEA must check *ex post* through systematic evaluations that their active labour market policies are efficient and do not generate perverse effects.

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1.2.9 External Trade

The world economic slowdown negatively affected Luxembourg external trade in 2009. When compared with 2008, exports and imports of goods declined by 23% in 2009. This fall, however, had a positive impact on Luxembourg's trade deficit, which narrowed by 21% in 2009. The large negative impact of the world economic slowdown is also reflected in the quarterly developments in trade volumes. Export volumes dropped successively by 23%, 22% and 5% during the first three quarters of 2009, before rebounding by 5% in the last quarter of the year. Import volumes decreased respectively by 13%, 17%, and 14% during the first three quarters of 2009. Import volumes continued, however, to decline (4%) in the last quarter of the year. Declining import and export prices (almost in the same proportions), due to the fall in oil prices, also contributed to the decrease in trade values.

Table 1.20: External Trade of Luxembourg (Value in € millions and Change as % if compared with the same period a year earlier)

Period	Exports		Imports		Balance	
	Value	Change	Value	Change	Value	Change
2004	9 747.1	10.3%	13 637.4	12.6%	-3 890.3	18.8%
2005	10 319.4	5.9%	14 187.1	4.0%	-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	3.3%
2008	11 890.4	0.4%	17 290.3	6.0%	-5 399.9	21.0%
1st quarter	3 062.0	-1.9%	4 108.1	1.4%	-1 046.1	12.0%
2nd quarter	3 226.8	6.6%	4 543.9	6.1%	-1 317.1	5.8%
3rd quarter	3 040.5	10.1%	4 553.0	16.5%	-1 512.5	32.1%
4th quarter	2 561.1	-12.8%	4 085.3	0.3%	-1 524.2	31.6%
2009	9 145.2	-23.1%	13 345.3	-22.8%	-4 200.1	-22.2%
1st quarter	2 243.1	-26.7%	3 308.3	-19.5%	-1 065.1	1.8%
2nd quarter	2 167.5	-32.8%	3 213.4	-29.3%	-1 042.8	-20.6%
3rd quarter	2 395.0	-21.2%	3 216.4	-29.4%	-821.4	-45.7%
4th quarter	2 339.5	-8.7%	3 607.2	-11.7%	-1 267.7	-16.8%
2010						
1st quarter	2 429.2	8.3%	3 514.5	6.2%	-1 085.4	1.9%

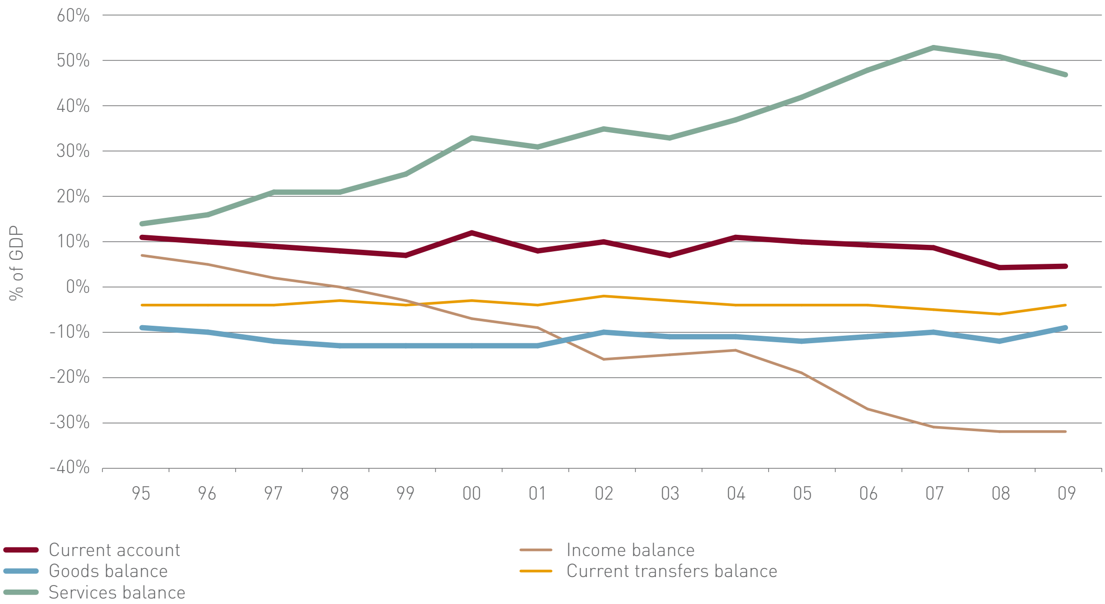
Source: STATEC

1.2.10 Balance of payments

In 2009, the Luxembourg current account surplus stabilised at its 2008 level (€2 billion or 5.6% of GDP). This result reflected contrasting developments in the main partial balances. The services balance continued to deteriorate due to the fall in exports of financial services in the wake of the financial turmoil. Meanwhile, the goods balance and the current transfers balance improved substantially, offsetting the decline in the services surplus.

In the financial account, Luxembourg's net outflows stabilised at the same level as in 2008 (€1.8 billion), as large outflows in direct investments and in portfolio investments (including financial derivatives) were offset largely by inflows in other investments.

Chart 1.24: Developments in the Luxembourg's current account and its components



Sources: BCL, Statec

1.2.11 Macroeconomic projections

Since the previous projection exercise, Luxembourg's economy has fared better than expected. The latest data have confirmed the economy's emergence from the recession which lasted about five quarters, from the second quarter of 2008 to the second quarter of 2009. The rebound in the second half of 2009 was almost as spectacular as the preceding plunge, as the economy has already managed to recover more than half of the 7% loss of total output. Real GDP is now estimated to have contracted by 3.4% in 2009, a slightly better performance than predicted six months ago by any national or international institute publishing macroeconomic projections. The carryover on annual average real GDP growth in 2010 is now estimated at 1.8%.

Recent developments

In the first half of 2010, the expansion of economic activity probably continued, though at a more moderate pace than in the second half of 2009. The performance also differed across sectors.

The financial sector's performance in the first half of 2010 was mixed, and marked by a reversal of fortunes on the financial markets towards mid-April. While the run-up in stock markets in the first quarter of 2010 had a positive impact on the net asset value of the mutual fund industry and the operational results of the banking sector, the second quarter performance should be tainted by the return of uncertainty. Spooked by the dire public finances in some euro area countries, sovereign bond yields increased sharply and led to more general financial market turmoil. The heightened risk perception and the fall in stock markets will most likely weigh on the financial sector's performance in the second quarter of the year.

The non-financial sector has escaped this turmoil and its production is steadily nearing the pre-recession peaks. Favoured by the global expansion and the inventory cycle, industrial production increased by about 4% quarter-on-quarter in early 2010, thus at roughly the same speed as in the two preceding quarters. The business surveys hint at a continuation of that trend in the second quarter, which is in line with the positive news of the decline in the use of short-time work. Nevertheless, these benign developments should not conceal the fundamental issue. The very fact that companies have made recourse to short-time work schemes highlights the dire state of the manufacturing sector. Production levels are still low, below pre-crisis peaks and also too low for the existing workforce.

Technical assumptions and the international environment

Technical assumptions about interest rates, exchange rates, commodity prices and financial markets are presented in the table 1.23. The global economic recovery was stronger than expected in 2009, thanks to international trade. Looking ahead, world economic growth is expected to reach 4.2% in 2010 according to the European Commission and 4.0% according to the IMF. For 2011, neither of them anticipates any (notable) acceleration in world economic growth. International trade is therefore expected to strongly rebound in 2010 and decelerate in 2011.

Table 1.21: Projections of international institutions and technical assumptions in annual percentage changes (revisions in percentage points) [1]

	2009	2010	2011	2012
World trade (EC)	-12.1 (+1.9)	8.9 (+5.3)	6.3 (+1.7)	-
World GDP (IMF)	-0.6 (+0.5)	4.2 (+1.1)	4.3	-
World GDP (EC)	-0.9 (+0.3)	4.0 (+0.9)	4.0 (+0.5)	-
Real GDP euro area (IMF)	-4.1 (+0.1)	1.0 (+0.7)	1.5 (+0.6)	-
Real GDP euro area (EC)	-4.1 (-0.1)	0.9 (+0.2)	1.5 (-)	-
Real GDP euro area (Eurosystem)	-4.1	0.7 – 1.3	0.2 – 2.2	-
World demand for Luxembourg	-11.4 (+0.1)	6.1 (+3.1)	3.8 (+0.5)	5.1
Oil in USD/barrel[1]	62	79 (-2)	84 (-2)	86
Exchange rate USD/EUR[2]	1.39	1.29 (-0.20)	1.26 (-0.23)	1.26
Short-term interest rate	1.23	0.8 (-0.4)	1.1 (-0.4)	1.7
World demand for Luxembourg	3.9 (-0.1)	3.5 (-0.5)	3.9 (-0.7)	4.3

1) Revisions in comparison with the December 2009 projections.
2) Revisions en points d'indice

Sources: European Central Bank, European Commission, IMF

Real GDP grew modestly in the first and second quarters of 2010 in the euro area. Over the remainder of 2010, growth is expected to remain subdued, as the factors that temporarily boosted growth in the initial phase of the recovery – such as the fiscal stimuli and the inventory cycle – diminish in strength. According to Eurosystem forecasts, average annual real GDP growth is projected between 0.7% and 1.3% in 2010 and between 0.2% and 2.2% in 2011. With regard to real GDP growth, the projection ranges for 2010 and 2011 have been revised upwards compared with previous ones (December 2009).

The world demand for Luxembourg declined from mid-2008 to mid-2009. According to the underlying scenario, it should rebound strongly until the end of 2010. Thereafter, it should slow down over the next quarter before recovering a normal growth path.

Real GDP and demand components

As regards real GDP growth in Luxembourg, both the improvement in economic activity in the second half of 2009 and the continuation of the expansion in early 2010 yield a more favourable outlook than expected in the previous exercise. Real GDP growth in 2010 is now expected to be in a range between 2.6% and 3.2%.

The convergence to a normalised growth path in the subsequent years would be very gradual as the expansion would remain below past trend growth. Annual average growth in 2011 is expected to be between 1.8% and 2.8%, with a renewed acceleration to between 2.5% and 3.9% in 2012. These medium-term projections are a testimony to the expected lower potential growth that could result from the restructuring of the financial services sector.

It is only in mid-2011 that output levels would surpass the pre-recession peaks. This long period of "lost output" would leave its marks on the labour market. World trade might have regained strength, but employment would remain weak for a couple of quarters, which would weigh on the dynamics of domestic demand and prevent stronger real GDP growth.

In 2009, all demand components of GDP experienced a contraction, except public expenditures. In 2010, the upturn was kick-started by the reversal of export dynamics, the normal path for a very small open economy. Domestic demand should strengthen in 2010, but at a modest pace. These muted dynamics are expected to continue in 2011 when the impact of the recently announced government measures kicks in. Private consumption in particular will feel the brunt of the fiscal consolidation plan. Export dynamics should slow down in line with the expected moderation of trade expansion. Overall, a rebalancing of growth should slowly emerge, but the associated growth rates should remain rather low by historical standards.

The emergence from the recession had a positive impact on business confidence. According to the latest investment surveys in the manufacturing sector, companies do not plan to reduce their investment expenditures in 2010 compared to 2009, but rather to keep them flat (see chart). On that basis, private investment could now stabilise in 2010 though at a very low level. Gross fixed capital formation in the economy as a whole is set for a gradual re-acceleration after the drop in 2009. Public investment would not provide a strong impetus as the central government plans to freeze its investment expenditures at 2009 levels. But the outlook has improved for private investment. First, as output levels are nearing the pre-crisis peaks, needs for new equipments are slowly emerging. Second, demand prospects improved with the revival of world trade. Finally, financing conditions remain favourable as interest rates charged on loans to non-financial companies are at historic lows (see also under 1.2.5.2).

Private consumption is set for very modest growth. The stagnation of employment and the low real wage growth do not provide much impetus to reinvigorate demand. On top of that, households' real disposable income will feel the brunt of the recently announced fiscal consolidation measures, above all the higher direct taxes on households' income and cuts in social transfers. If households do not dig into their savings to compensate for those income shortfalls, private consumption could even decline. The impact on real GDP growth would however be muted, as a large share of private consumption is imported.

Overall, as expected, the total impact of these fiscal consolidation measures on economic activity, should be modest (for further information, please see box 1.7).

Table 1.22: Macroeconomic projections and revisions compared to December 2009
(in annual percentage changes, resp. in percentage points)

	2009	2010	2011	2012		2009	2010	2011
Real GDP	-3.4	2.6 - 3.2	1.8 - 2.8	2.5 - 3.9		0.3	1.0	0.1
HICP	0.0	2.9	2.5	2.2		-	0.8	0.4
HICP energy	-15.9	13.1	4.2	1.3		-	8.3	2.1
HICP ex energy	2.3	1.7	2.3	2.3		-	-0.1	0.2
NICP	0.4	2.2	2.1	1.8		-	0.7	0.3
NICP ex energy	1.9	1.3	1.9	1.9		-0.1	-0.1	0.1
Contribution of indexation to nominal wage increase	2.5	1.7	2.3	1.4		-	0.6	0.4
Compensation per employee	1.7	2.7	3.0	2.3		1.0	1.4	0.4
Employees	0.9	-0.2	0.0	0.8		-0.1	0.4	-
Unemployment rate	5.8	6.2	6.3	6.4		-	-0.7	-0.8

Source: BCL

The Labour market and wages

The recession might have ended, but the contraction of economic activity was deep and production levels are unlikely to surpass their pre-recession peaks before 2011. In the medium term, a permanent cut in employment should prevail over the temporary reduction in hours worked. According to our projections, employment should fall in 2010 before stabilizing in 2011 and increasing thereafter. "Partial unemployment" is expected to mutate into unemployment of both residents and non-residents. Unemployment is thus predicted to rise from 5.8% in 2009 to 6.2% in 2010, 6.3% in 2011 and 6.4% in 2012.

The adjustment in employment also had an impact on wage developments. Adjusted for the increase due to the automatic wage indexation scheme, wages fell by 0.8% in 2009. However, average changes give no indication of the distribution of the wage shock caused by the recession. When the increases in both the minimum wage and public sector wages are taken into account, it is clear that the impact of the crisis must have been much stronger for other groups of employees. In the coming years, real wages are expected to increase only slightly, and mainly as a result of the increase in hours worked. The evolution of nominal wages would therefore be mainly due to the impact of the automatic indexation to past inflation. According to our inflation projections, the next automatic wage hikes are due in July 2010 and August 2011. Nominal wages should thus increase by 2.7% in 2010, 3.0% in 2011 and 2.3% in 2012. These figures have been revised upwards as a result of the acceleration of inflation (impacting the automatic indexation of wages) and the stronger and faster than expected rebound of economic activity.

Regarding real negotiated wages, their dynamics should reflect the very weak employment prospects. These projections are based on the assumption that the real minimum wage will be adjusted in January 2011. Whereas the government has not yet announced the size of this adjustment, we have assumed an increase of 2.0%. Furthermore, despite the ongoing negotiations over public sector wages, we have assumed a stagnation of real wages in both 2010 and 2011.

Consumer prices

Inflation prospects have deteriorated considerably in recent months, mostly on account of the energy component. Indeed, the projections for the CPI excluding energy have barely changed from the previous exercise. With respect to the CPI excluding energy, however, the recently favourable dynamics are set for a turn-around, and the corresponding inflation rates are expected to re-accelerate soon. Most of the driving forces of the CPI excluding energy have already bottomed out or are set for a near-term reversal. Industrial producer prices could rise again with the recent and projected upturn in the euro price of oil. The Eurosystem staff projects higher inflation for the euro area, which would feed through to Luxembourg prices via the import channel. Finally, wage costs are expected to edge higher, amongst other reasons, because of the earlier than previously projected timings of the automatic wage indexations.

NICP and HICP inflation are expected to accelerate sharply in 2010 to, respectively, 2.2% and 2.9%. The rebound compared to the very low inflation rates in 2009 is essentially accounted for by the energy component. The more moderate dynamics of this component in 2011 and 2012 would also entail a softening of the headline inflation rates, whereas the CPI excluding energy would accelerate. In spite of NICP inflation falling below 2% in the medium term, the scenario remains unfavourable as Luxembourg's headline inflation would again be higher than the corresponding inflation rates in the neighbouring countries.

Risk assessment

The BCL indicator for economic activity is not directly used for macroeconomic projections but rather as a complement. According to the BCL indicator, economic growth was buoyant during 2010 Q1 and Q2. As of the second quarter of 2010, the carryover on annual average real GDP growth in 2010 is estimated to be around 3%. Therefore, our expected GDP growth for 2010 to be between 2.6 and 3.2% appears quite careful.

1.2.12 Public finances

The general government recorded a deficit of 0.7% of GDP in 2009, following a surplus of 2.9% in 2008. This deterioration was mainly caused by an acceleration of expenditure growth (which amounted to more than 9% in nominal terms) which, also given the decline in GDP, gave rise to an increase of about 5 percentage points in the expenditure-to-GDP ratio. This increase in spending was due, among other factors, to the implementation of fiscal stimulus measures in response to the economic crisis. According to BCL estimates, the fiscal stimulus indeed accounted for 1.5% of GDP in 2009. The most prominent measures were the limited indexation of tax brackets to inflation (impact of 0.9% of GDP), the introduction of three new tax credits ("*crédits d'impôts*") and the reduction in the registration tax for companies ("*droit d'apport*").

The deterioration in the fiscal position was, however, moderated by a much better than expected performance of tax and social contribution revenues. Corporate taxes proved especially resilient, as they increased by 2% in 2009 in spite of the economic crisis. This favourable evolution reflects, *inter alia*, long lags in the collection of corporate taxes. All in all, the revenue ratio increased in spite of significant tax cuts. Investment spending was also lower than planned. The government debt ratio increased slightly and reached 14.5% of GDP in 2009, compared to 13.7% in 2008.

Table 1.23: Fiscal developments, 2008-2012

	2008	2009	2010	2011	2012	2009	2010	2011	2012
			(as a percentage of GDP)				(percentage change in nominal level)		
Total revenue	40.1	41.6	40.2	40.1	39.9	-0.3	0.6	4.0	4.6
Fiscal burden	36.2	38.1	36.6	36.4	36.1	0.9	0.1	3.6	4.4
Total expenditure (EDP)	37.2	42.4	43.0	43.4	43.1	9.4	5.6	5.3	4.4
Interest payments	0.3	0.5	0.7	0.9	1.0	65.1	46.5	30.7	17.3
							(change in percentage points of GDP)		
Budget balance (EDP)	2.9	-0.7	-2.8	-3.3	-3.2	-3.6	-2.0	-0.5	0.1
Cyclical component	1.0	0.3	-0.1	-0.5	-0.6	-0.7	-0.4	-0.4	-0.1
Cyclically adjusted primary balance	2.2	-0.5	-1.9	-1.9	-1.6	-2.7	-1.5	0.1	0.3
Consolidated gross debt	13.7	14.5	19.3	24.3	28.6	0.8	4.8	5.1	4.3
Structural revenue[1)]	40.2	40.1	39.4	39.7	39.9	-0.1	-0.8	0.3	0.2
Structural expenditure[1)]	38.3	41.1	42.0	42.4	42.4	2.8	0.9	0.4	0.0
Latest stability programme									
Budget balance (EDP)	2.5	-1.1	-3.9	-5.0	-4.6	-3.6	-2.8	-1.1	0.4
Consolidated gross debt	13.5	14.9	18.3	23.9	29.3	1.4	3.4	5.6	5.4

1) As a percentage of trend GDP.

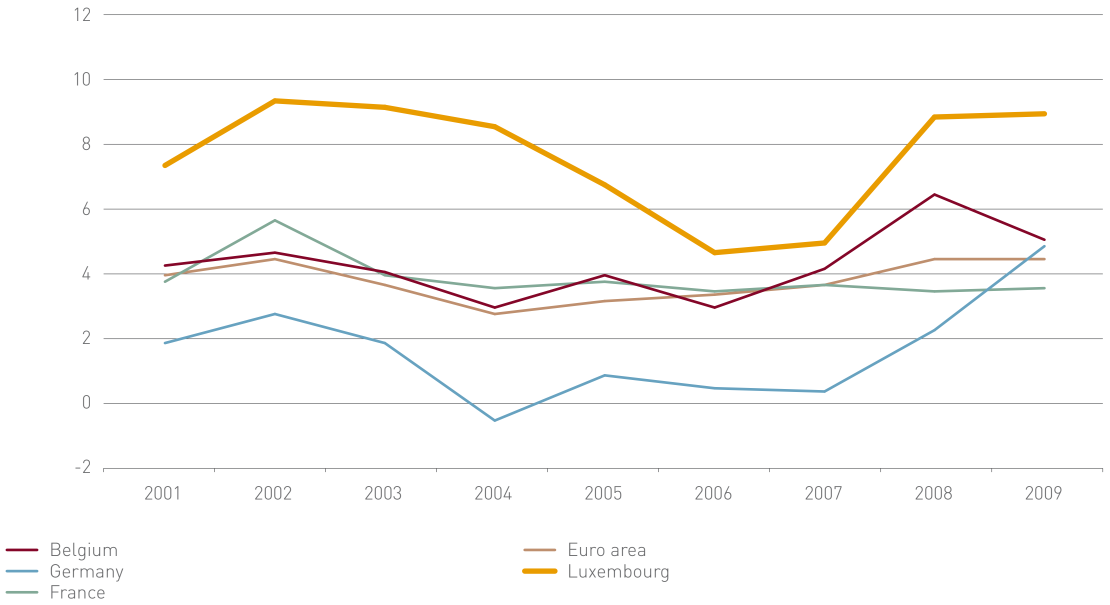
The government deficit was broadly in line with the target of 0.6% of GDP envisaged in the February 2009 stability programme update, as revenues held up in spite of lower than projected economic growth.

Budgetary projections for the period from 2010 to 2012

The general government deficit is projected to increase markedly over the projection horizon, approaching 3% of GDP this year and then rising further to between 3% and 3.5% in 2011-12. The deterioration is largely structural in nature, although the impact of the economic cycle is also assessed as somewhat negative, mainly on account of unfavourable composition effects. At the same time, government debt as a percentage of GDP is projected to almost double, from 14.5% in 2009 to 29% in 2012. This unfavourable evolution would be observed in spite of the adoption, by the Luxembourg authorities, of a consolidation package announced by the Prime Minister on 5 May. The composition of this package is summarised in the table 1 (table from box 1.7). This package amounts to about 1% of GDP in 2011 and in 2012. It would rest on lower investments (economy evaluated with respect to the "spontaneous" increase as estimated by BCL, not based on the planned investments expenditure, which are usually only partly implemented). Current expenditure would also be lower by about EUR 100 million, but with a much larger impact in 2011 due to a temporary measure (increase in pensions partly delayed from January 2011 to January 2012, but not cancelled). However, the fiscal adjustment would primarily rest on higher taxes, especially on households.

The revenue ratio is projected to decline over the projection horizon in spite of the new measures, largely on account of an unfavourable composition of growth. Moreover, having performed surprisingly strongly last year, corporate income tax receipts are expected to fall sharply in 2010 as a lagged response to the crisis (also partly reflecting the way in which these taxes are collected). Spending growth is projected to moderate gradually over the projection horizon, owing both to consolidation measures and the unwinding of past stimulus measures. Nonetheless, the structural spending ratio is projected to rise further in 2010 and 2011, before stabilising in 2012. This reflects the high and entrenched public expenditure growth rate in Luxembourg, which is illustrated in the following chart. Current expenditure in Luxembourg grew by 7.8% a year on average from 2000 to 2009. The corresponding rate reached 3.9% in the euro area and 1.8% only in Germany.

Chart 1.25: Current expenditure growth rate of the general government of Luxembourg compared to neighbouring countries



Sources: Eurostat, BCL calculations

The ESCB projection points to lower deficits than those targeted in the last update of the stability programme. Notwithstanding a more favourable macroeconomic scenario, differences are also partly attributable to favourable base-year effects, as the 2009 deficit turned out to be lower than expected in the stability programme. Risks to the fiscal projections mainly relate to a potential deterioration in the macroeconomic outlook, which could imply further revenue losses and/or increases in unemployment-related spending. Furthermore, corporate income taxes are extremely volatile in Luxembourg. The projections related to this revenue item should therefore be interpreted with caution.

Policy issues

Luxembourg recorded budget surpluses until 2008. Although this can partly be attributed to the implementation of consolidation measures adopted on the occasion of the Tripartite Coordinating Committee meeting in 2006, these surpluses were also achieved in an exceptionally favourable macroeconomic context, including substantial financial profits, which boosted government revenues. Although the ESCB projection points to Luxembourg being the only euro area country with a deficit below the 3% of GDP reference value in 2010, this is not expected to be the case anymore in 2011. This is in part due to sizeable fiscal stimulus measures, only some of which are to be reversed from 2011 onwards. In other words, the stimulus measures for Luxembourg cannot all be characterised as "timely, targeted and temporary".

Unfavourable fiscal developments in 2011 and 2012 are expected in spite of the impact of the consolidation measures announced by the Prime Minister on 5 May 2010. The consolidation package amounts to slightly more than 1% of GDP, but this impact would be partly offset by lower corporate income taxes, and the rate of expenditure growth would still be quite high. The measures announced by the Prime Minister do not primarily focus on expenditure restraints. The new measures will lead to a decrease in current expenditure of only about EUR 100 million from 2011 onwards, whereas taxes on households will go up by more than EUR 260 million in 2011. As explained in Box 2, this focus on higher taxes could have a negative impact on the economy in general and on labour demand in particular. This would in turn worsen the fiscal balance impact. As a result, according to the BCL general equilibrium dynamic model, the consolidation package would improve the fiscal balance by at most 0.4% of GDP over the medium-term – and not by 1% of GDP as suggested by mechanistic calculations.

As the deficit notified by the government for 2010 in the context of the Spring 2010 EDP notification exceeded 3% of GDP, the European Commission has initiated an excessive deficit procedure by preparing a report under Article 126(3) of the Treaty. However, the procedure has been put on hold, as the deficit planned for 2010 is close to the 3% of GDP reference value and the excess over this value has been deemed exceptional and temporary by the Economic and Financial Committee. The ESCB projection points to steps being necessary to keep the deficit below the reference value in 2011.

The February 2010 Stability Programme update sets Luxembourg's medium-term objective as the achievement of a structural surplus of 0.5% of GDP. This is less ambitious than the minimum value of 0.75% of GDP recommended by the European Commission. This is unfortunate, not least since according to the European Commission's latest Ageing Report (2009), the increase in age-related spending in Luxembourg will be the strongest in the EU over the coming decades. Structural measures must therefore be adopted as soon as possible in order to address these challenges and in view of the risk that the sustainability of public finances could be further eroded by a lower future potential growth rate in the aftermath of the financial crisis. 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.

Overall, the deficit-to-GDP ratio is projected to exceed the 3% reference value. The medium-term objective of a small budget surplus is still to be achieved and substantial further adjustment and/or reform will still be needed to address the fiscal challenge posed by an ageing population. This problem is particularly acute in Luxembourg. According to BCL calculations further explained in Box 1.8, the public debt ratio should exceed 60% of the GDP reference value around 2027 if no additional measures are taken. The authorities have already announced that they will present new measures in order to contain pension expenditure in the future. BCL hopes that these measures will be in tune with this daunting task.

Box 1.6:

IMPACT OF THE 2009 FISCAL STIMULUS

In March 2009, the Luxembourg government announced a package of measures intended to fight the economic crisis unleashed by the failure of Lehman Brothers in September 2008. The government estimated the overall impact of these measures at more than 3.2% of GDP, which in relative terms was one of the most ambitious fiscal measures in the European Union. This text box attempts to quantify the actual impact of this plan on the Luxembourg economy. First of all, BCL analysis revealed that some of the measures announced were spread over several years, so that part of the fiscal stimulus announced would not occur in 2009 but only in 2010, 2011 or even in 2012. Second, part of the measures were eliminated from the analysis because they involved automatic adjustments already foreseen by the law and therefore did not fit the idea of a discretionary measure aimed at exceptional circumstances. Lastly, more than a year after the government announcement, current information on the 2009 budget exercise provides some idea of how much was actually implemented. At present, it appears that the discretionary part of the fiscal stimulus actually implemented in 2009 was only 1.5% of GDP, or 580 million euros.

This amount was distributed across the different public finance variables present in the BCL macro-econometric model.[1] Thus the measures actually introduced in 2009 were reclassified as follows:

1. A cut in the direct tax rate paid by households corresponding to a fall in revenues of 322 million euros (this reduction is independent of the endogenous fall in revenues linked to weaker domestic demand and the resulting cut in production and the wage bill);
2. A cut in the direct tax rate paid by firms corresponding to a fall in revenues of 117 million euros (independent of the endogenous fall in revenues linked to the fall in gross operating surplus due to lower production);
3. An increase in transfers to households of 91 million euros;
4. An increase in subsidies on production of nearly 13 million euros;
5. An increase in public investments of 48 million euros.

These assumptions were introduced in the model using add factors calibrated to generate the anticipated effect on each element of public finances considered in isolation. The solution of the model then allowed the system of simultaneous equations to interact, determining the level of all endogenous variables in 2009 in a baseline scenario that excluded the exceptional fiscal measures, and in an alternative scenario that included them. Results are expressed in percentage deviation from the level in the baseline scenario (without measures).

The most important impact is on private consumption. With respect to the scenario "without measures", household disposable income increased by more than 2.2%, boosting private consumption by 1.23% in real terms. Public consumption is not affected. On the other hand, higher public investment leads to a 0.83% increase in real gross fixed capital formation for the whole economy. By assumption, exports are unchanged, but imports increase by 0.34% in response to higher consumption and investment. As a result, domestic demand contributes an additional 0.63% to real GDP growth following the fiscal stimulus, but the contribution of net exports falls (-0.52%), which yields a total impact of only 0.11% additional percentage points of GDP growth. Thus the multiplier attached to the overall package of measures is very low

1 Guarda (2005) "The Luxembourg block of the Multi-Country Model," in Fagan & Morgan (eds.) Econometric Models of the Euro-area Central Banks, Edward Elgar Publishing.

(approximately 0.1). Each euro of fiscal deterioration produces only ten cents of additional growth in 2009.

At first sight, this result may seem disappointing, but it is plausible for the following reasons.[2] First, the Luxembourg economy is very small and very open, which implies significant "leakage" through higher imports. Second, the package of measures announced in 2009 stressed lower taxation rather than higher expenditure, which requires longer periods before it affects economic activity. Third, so far monetary policy has been expansionary, but the rapid increase in euro area public debt may already encourage households to increase savings, in anticipation of future increases in interest rates and fiscal pressure. Finally, as emphasised by the European Commission, the measures announced by the Luxembourg Government were not clearly temporary in nature, which could reduce their effectiveness as countercyclical policy.

This box has focussed on the impact of measures taken at the national level and deliberately ignored the existence of an EU coordinated fiscal effort to fight the crisis. Measures taken simultaneously in 2009 by governments in Germany, France, Belgium and our other trading partners will have supported foreign demand addressed to Luxembourg, probably with a much larger effect for the Luxembourg economy through the stabilisation of our exports. These spillover effects are considered in the projection exercise, but are beyond the scope of this box, which has merely focussed on the domestic effects of the national measures.

2 See Spilimbergo, Symansky & Schindler (2009) "Fiscal multipliers" IMF Staff Position Note SPN/09/11 and Ilzetzki, Mendoza & Vegh (2009) "How big are fiscal multipliers?" CEPR Policy Insight No. 39 and Coenen et al. (2010) "Effects of fiscal stimulus in structural models," IMF Working Paper WP/10/73 as well as ECB (2010) "Euro area fiscal policies and the crisis," Occasional Paper 109.

Box 1.7:

IMPACT OF THE FISCAL CONSOLIDATION ANNOUNCED ON 5 MAY 2010

This box evaluates the consolidation measures announced by the Prime Minister on 5 May 2010 before the Luxembourg Parliament. First, they are briefly reviewed and their purely "static", mechanical budgetary impact is calculated. This estimate does not take into account the impact of the new measures on domestic demand and net exports nor the related "second-round effect" on public finances. This is done in the second and third parts of the box, where this knock-on effect is estimated. This is done first on the basis of the BCL bloc of the multi-country model (MCM) and then on the basis of the general equilibrium model LOLA. The MCM model estimates the net budgetary impact of the new measures at about 1% of GDP. This is close to the "static" impact evaluated in the first part of the box, which illustrates the extreme weakness of fiscal multipliers in Luxembourg. Indeed the country epitomises the case of a small, open economy with large leakage effects. The net impact of the measures inferred on the basis of LOLA is much lower, as it would amount to at most 0.4% of GDP over a medium-term horizon. This reflects the fact that LOLA takes into account the adverse effect of higher taxes on the economy, including *inter alia* labour supply.

The new consolidation measures: static impact on public finances

On 5 May 2010, Prime Minister Jean-Claude Juncker announced a new fiscal consolidation package before Parliament. These measures

Table 1: New budget consolidation measures announced on 5 May 2010 by Prime Minister (EUR million)

	Expenditure	2011	2012
1	**Public investment (central government)** capped at 2009 level (768.6 mio EUR)	**96**	**70**
2	**Cut in capital transfers (investments)**	**10**	**10**
3	**Cut in government operating expenses**	**28.5**	**29.4**
	- cut in assessment costs (-20%)	10	10.5
	- cut in administrative costs, travel expenses, ...	10	10
	- hiring limits for new civil servants	8.5	8.9
	- freeze on indexation over next 4 years (to be confirmed)	0	0
4	**Transfers to households**	**85.5**	**49.5**
	- pension adjustment to real wages (0.95% in 2011 and 0.95% in 2012)	39	-3.6
	- elimination of family allowance for children 21 years and over and new rules for university grants and loans	44	46
	- education contribution paid only at 65 years of age (currently 60)	1.5	3.1
	- new treatment of interest payments in housing subsidies	1	4
5	**General 10% cut in subsidies to firms**	**4**	**4**
6	**Government cofinancing of sewage treatment cut from 90 to 75% (no impact on consolidated balance)**		
	Total expenditure	**224**	**163**
	Receipts	2011	2012
1	New 39% tax rate on labour income above 83,586 euros	26	39
2	Solidarity tax raised from 2.5% to 4% (6% for taxable income > 300,000 euros)	40	42
3	New crisis tax 0.8%	80	82
4	Firms' solidarity tax raised by 1%	12	12
5	Commuting expenditure deduction halved from 2011 onwards	50	50
6	Abolition of reduced registration and transcription fees when buying dwellings (Bëllegen Akt)	70	70
7	No adjustment of fiscal brackets for inflation		
8	Reduction in corporate income tax abadoned		
9	New maximum for bonus payments firms can deduct from taxes		
10	New charge for certain types of companies (e.g.: Société de participation financière)		
11	Accident insurance contribution rate set at 1.25% across all sectors		
	Total receipts	**278**	**295**
	Impact on budget balance of public sector	**502**	**458**

Note: figures report net impact with respect to BCL baseline scenario with unchanged policy.

were intended to address the deteriorating public finances and to contribute to ensuring that the Luxembourg general government returns to fiscal balance in 2014. These measures are summarised in the table below. Only those measures that were sufficiently detailed and that will likely be adopted by Parliament are listed in the table.

Expenditure-decreasing measures

The measures are the following:

1. Lower public investments. Central government investment expenditure will be frozen at the level recorded in 2009, namely EUR 768.8 million. Several projects will be delayed or even cancelled.

2. Lower central government operating expenditure. For instance decrease in expert fees by 20%, lower administrative and travel expenditure. Fewer civil servants will be recruited in 2011 and 2012 and the wages of civil servants will be frozen over the next four years.

3. Lower transfers to households.

   (i) Pensions should have increased by 1.9% in January 2011, in line with real wage developments. Instead, this increase will be split in two parts: +0.95% in January 2011 and +0.95% again in January 2012. This will deliver a temporary decline in expenditure in 2011.
   (ii) Children allowances will be cancelled for children aged 21 or over (currently 27).
   (iii) New policy as regards transfers and loans to students.
   (iv) Education allowance ("*forfait d'éducation*") paid from the age of 65, compared to age 60 currently.
   (v) Less generous tax credits for notary acts ("Bëllegen Akt") and more stringent conditions for interest reliefs.

4. Subsidies to companies decreased by 10%.

Revenue-increasing measures

The measures will deliver approximately EUR 300 million:

1. New 39% personal income tax rate for taxable incomes higher than 83 583 euros a year.

2. Higher solidarity levy on households. The solidarity levy is equal to 2.5% of the personal income tax for the moment. It will reach 4%, and even 6% for taxable incomes higher than 300 000 euros.

3. New "crisis tax" equal to 0.8% of overall income (wages, rents, dividends,…).

4. Higher solidarity levy on corporations. This levy is currently equal to 4% of "IRC" ("*Impôt sur le revenu des collectivités*") corporate taxes. The new rates will reach 5% instead.

Considered as a whole, the expenditure-decreasing and revenue-increasing measures will amount to EUR 502 million in 2011 and EUR 458 million in 2012 according to the BCL estimates. However, additional measures will probably be adopted later on, as they will probably not be sufficient to ensure that public finances are back to balance in 2014. But only the measures already announced and sufficiently spelled out are included in our calculations.

Table 2: Consolidation measures: impact according to the BCL bloc of the MCM model (% deviation with respect to the baseline scenario "no consolidation")

	2011	2012
Real GDP	-0.14	-0.07
Private consumption	-0.99	-0.41
Public consumption	-0.41	-0.37
Gross fixed capital formation	-1.59	-1.16
Exports (goods & services)	0.00	0.00
Imports (goods & services)	-0.38	-0.22
Contributions to real GDP growth:		
Domestic demand (% of GDP)	-0.73	-0.42
Net exports (% of GDP)	0.59	0.35
Budget balance (% of GDP):		
Consolidated public sector	**1.18**	**1.07**

Sources: calculations BCL

These assumptions have been incorporated into the ***BCL bloc of the MCM model*** in about the same manner as in the previous box related to the counter-cyclical measures adopted in 2009. The results (expressed as percentage deviation from the scenario without consolidation) appear in the attached table.

In 2011, the higher taxes paid by households contribute to a fall in disposable income by 1.8%, which induces a decrease in household consumption of 0.99% compared to the "no consolidation" scenario. Due to the decreased operating costs of the central government, public consumption is also lower than in the baseline, by 0.41%.

The limited increase in direct taxes paid by companies, along with the reduced public investments, weaken gross fixed capital formation, which is 1.59% lower than in the "no consolidation" scenario. All in all, the contribution of domestic demand to GDP growth is reduced (-0.73 GDP points compared to the "no consolidation" scenario). However, imports are also lower (-0.36% of GDP), and as a result lower domestic demand is largely offset by higher net exports (+0.59 GDP point). In 2011, GDP should be 0.14% lower than in the "no consolidation" scenario, which is quite limited.

In 2012, the decrease in household transfers is less pronounced than the year before. Disposable income and therefore private consumption are higher as a result: the latter is reduced relative to the no consolidation scenario by 0.41% only. In addition, public investments are lower than in the baseline, but to a lesser extent than in 2011. All in all, domestic demand is still lower than in the "no consolidation" baseline, but by 0.42% only. The net result is that GDP in 2012 is lower than in the no consolidation scenario by 0.07% only.

It should be borne in mind that the consolidation measures analysed here are the ones announced by the Prime Minister on 5 May 2010. The calculations do not take into account the impact on net exports of potential measures adopted in foreign countries.

As the impact of the measures on domestic demand is offset to a significant extent by lower imports, multipliers are low and the final budgetary impact of the consolidation measures is close to the static impact estimated in the first table of this box.

LOLA

The use of the dynamic stochastic general equilibrium model LOLA (see Pierrard and Sneessens, BCL WP N° 36, 2009, for a detailed exposition) may offer complementary insights. We summarize the different measures proposed by the government into three categories: (i) a decrease in public consumption, (ii) a decrease in transfers to households and (iii) an increase in the taxation of households' income. We assume the different measures are permanent.

First, lower public consumption does not affect the other variables in the model. Second, lower transfers to households reduce private consumption. To offset this effect, households will work more and in fine GDP slightly increases. The net effect on public finance is positive. Third, higher taxation on households' income immediately improves the public finance. On the other hand, the increase in labour taxation reduces labour supply. This results in lower output and higher social expenditures and the net effect on the public finance is negative.

These three measures together amount *ex ante* to about 1% of GDP. However, *ex post*, LOLA shows that the expected positive effects on public finance are much lower (around 0.35% of GDP). However, although rather weak, these effects are quite persistent since they are still present after 10 years.

Why do we obtain such weak estimated results, compared for instance with the results obtained from the MCM? The main reason is the implied general equilibrium effects of labour taxation on the labour supply, which is explicitly modelled in LOLA. Moreover, the general equilibrium effects are amplified because of the forward-looking nature of agents, i.e. agents in the model are fully aware that the shocks will be permanent.

Box 1.8:

LONG-TERM SUSTAINABILITY OF PUBLIC FINANCES IN LUXEMBOURG: AN APPRAISAL AFTER THE CONSOLIDATION MEASURES ANNOUNCED ON 5 MAY 2010

This box contains an assessment of the long-term sustainability of the Luxembourg public finances over the 2010-2040 period. The consolidation measures announced by the authorities on 5 May 2010 are duly taken into account in this exercise. The salient conclusion is that these measures are still grossly insufficient to address Luxembourg's deeply entrenched fiscal sustainability problem, and that additional measures should be considered. Only resolute action based on the conjunction of two pillars could ensure the sustainability of our public finances. The first pillar is the implementation of the EUR 1.5 billion effort presented in the 11th update of the Luxembourg Stability Programme. The second pillar is a structural reform of the social security system, focused in particular on a "ticking time bomb", namely the pension systems.

Reference simulation: the salient assumptions

The simulations carried out in this section mainly rely on two sources: the works of the Ageing Working Group of the Economic policy Committee (AWG), and the 2010-2012 BCL macroeconomic projections, presented elsewhere in this report. By assumption, economic growth is to reach 2.2% a year after 2012, with the rates forecast by the BCL from 2010 to 2012. The 2.2% assumption is clearly less favourable than the one privileged by the AWG, but this seems much more reasonable in the aftermath of the economic and financial crisis.

The relatively classic demographic assumptions will not be mentioned in detail in this section, as they are presented in the EPC report. It is appropriate to note the large number of immigrants, at a level of 3 000 to 4 000 people per year.

Public revenues and costs reflect from BCL projections until 2012, and the previously mentioned assumptions from 2012 onwards. It is appropriate to note that all these projections are carried out in structural terms. Economic cycles are certainly not modelled by the AWG from 2012 to 2060. For the 2010-2012 periods, the BCL has carried out projections on structural general government revenue and expenditure balance. These projections notably induce the calculation of the structural budgetary balance. In clear, these revenues and costs are "cleared" of the impact of economic cycles and temporary measures.

On the expenditure side, it is supposed that the wage bill of public sector employees will experience the same evolution as that of the private sector, which implies 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 (GDP growth of 2.2% and increase of productivity of 1.7% per year), which seems moderate compared to evolutions 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 clear increase of primary expenditure linked to these four sectors, by 13% of GDP, between 2012 and 2040. However, this impact is tempered by the treatment reserved to family allowances. This post, which carries a certain weight in Luxembourg, is not considered in the EPC study. To infer the long-term evolution of this post, which will represent about 3% of GDP in 2012 according to the BCL unchanged policy assumption, national family allowances are presumed not to be indexed to prices, along with decisions approved by the *Comité de Coordination Tripartite* in April 2006. In the same perspective, it is also presumed that the Luxembourg 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 projections presented in this section, the cost of these benefits will fall from 2.8% of GDP in 2012 to only 1.1% of GDP in 2040. This decrease of 1.7% of GDP covers more than one sixth of the additional cost expected from pensions (10.9% of GDP).

On the revenue side, the general rule to which the scenarios discussed below stick, is that revenues grow proportionally to GDP. An example is social contributions paid by active people. Note that the wage bill itself is supposed to remain stable relative to GDP. However, there are several exceptions to the proportionality principle between revenue and GDP. 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 succeeds in mitigating somewhat the fiscal impact of population ageing, cannot be ignored. Indeed, it improves the primary public balance by about 1% of GDP from 2012 to 2040, which represents a little more than 10% of the increase in expected pension expenditures over the same period. Second, as indicated below, interest receivable is estimated according to general government assets, and consequently does not remain stable compared to GDP. Finally, direct taxes on corporations, which should reach a historically low level in 2011 and 2012, are supposed to gradually regain their 2010 level (at least as percentages of GDP) by 2015. Afterwards, taxes on companies are stable compared to GDP.

Another distinguishing factor compared to the AWG is the inclusion of interest receivable - notably on pension reserves - and interest payable. The rate of return on capital is supposed to attain 4% per year, which would be appreciatively the rate observed in the last years. The implicit interest rate on debt is also fixed at 4% in nominal terms all through the 2013-2040 period. The debt evolution dynamic considers an important constraint: the central government is surely not supposed to fund these deficits by drawing funds from pension reserves. A gross consolidated debt can therefore be accompanied by significant positive assets.

Table 1: Reference simulation: general government revenue, expenditure, balances and indebtedness (as % of underlying GDP)

	2012	2014	2015	2020	2025	2030	2035	2040
Total revenue	**39.9**	**40.2**	**40.3**	**40.2**	**39.9**	**40.0**	**40.2**	**40.4**
Direct taxes	13.0	13.2	13.4	13.5	13.6	13.8	14.0	14.1
Indirect taxes	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
Social contributions	11.8	11.9	11.9	11.9	12.0	12.1	12.2	12.3
Interest income	1.0	1.1	1.0	0.8	0.2	0.0	0.0	0.0
Others	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Total expenditure	**42.4**	**43.0**	**43.4**	**45.4**	**48.1**	**51.5**	**55.8**	**59.7**
Social transfers	21.3	21.8	22.1	23.8	26.2	28.4	30.9	32.7
Public investments	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Compensation of employees	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
Other primary expenditure	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Interest charges	1.0	1.1	1.1	1.4	1.8	3.0	4.8	6.9
Deficit (-) or surplus (+)	**-2.5**	**-2.8**	**-3.1**	**-5.1**	**-8.3**	**-11.5**	**-15.5**	**-19.3**
Public debt	27.6	29.8	31.1	39.2	48.6	86.2	134.4	191.3
Of which pension debt	-25.7	-25.4	-24.9	-17.4	0.2	28.9	68.6	117.3

Sources: Ageing Working Group, IGSS, Statec, BCL calculations.

Results of the reference simulation

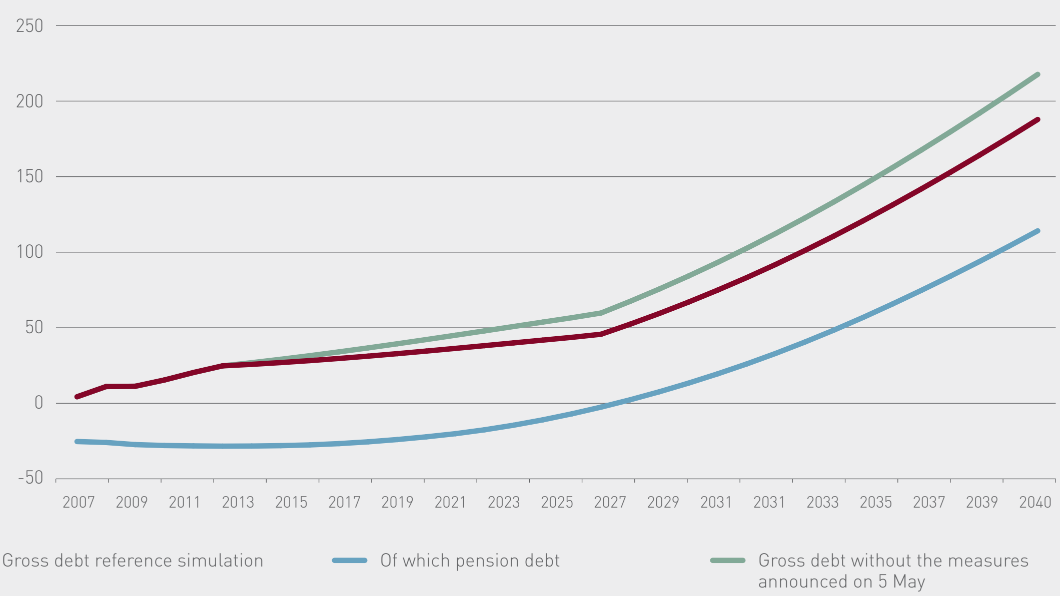
The results of the reference simulation are displayed in Table 1. It appears that the total revenue ratio would slightly increase during the reference period. Direct taxes and social contributions are indeed positively affected by the underlying rise of their common base, which is mainly composed of wages and pension incomes. Whereas by assumption the wage bill remains stable relative to GDP, this is not the case for pensions.

However, this positive impact of revenues would be largely offset by a fall in interest receivable, which would suffer from the effect of a progressive disappearance of pension reserves.

Pension expenditure should rise by 11% of GDP from 2012 to 2040. Health expenditure and dependency insurance expenditure should rise respectively by 1.6% and 0.9% of GDP over the same period of time. These increases, which total 13.4% of GDP, would only be partially countered by the diminution of family allowances (-1.7% of GDP) and of expenditures linked to unemployment (-0.2%). In total, social transfers would rise from 21% of GDP in 2012 to about 33% of GDP in 2040.

General government expenditures apart from social transfers are supposed to remain stable compared to GDP, except for interest charges, which should rise from 1% of GDP in 2012 to more than 7% of GDP in 2040. This result reflects the inherent dangers of a poorly controlled indebtedness dynamic. Because of the assumption of absolute rigidity of expenditure, the reference scenario results in growing deficits, which would largely exceed the 3% of GDP level, nearly all throughout the projection horizon. Around 2040, the general government deficit would even be close to 20% of GDP. In this scenario, the gross consolidated debt would increase in an exponential manner. It would already reach 30% of GDP by 2014 and would cross the 60% of GDP reference value in 2027. It would approach 200% of GDP by the end of the projection horizon. As indicated in the chart below, the pension system, whose indebtedness should in the end reach more than 100% of GDP in 2040, constitutes one of the major motors of the indebt-

Chart 1: Reference simulation: General government indebtedness (as % of underlying GDP)



Sources: Ageing Working Group, IGSS, Statec, BCL calculations edness dynamic. However, it is appropriate to note that other components of general government expenditure will also contribute to this dynamic, due to the importance of their structural deficits.

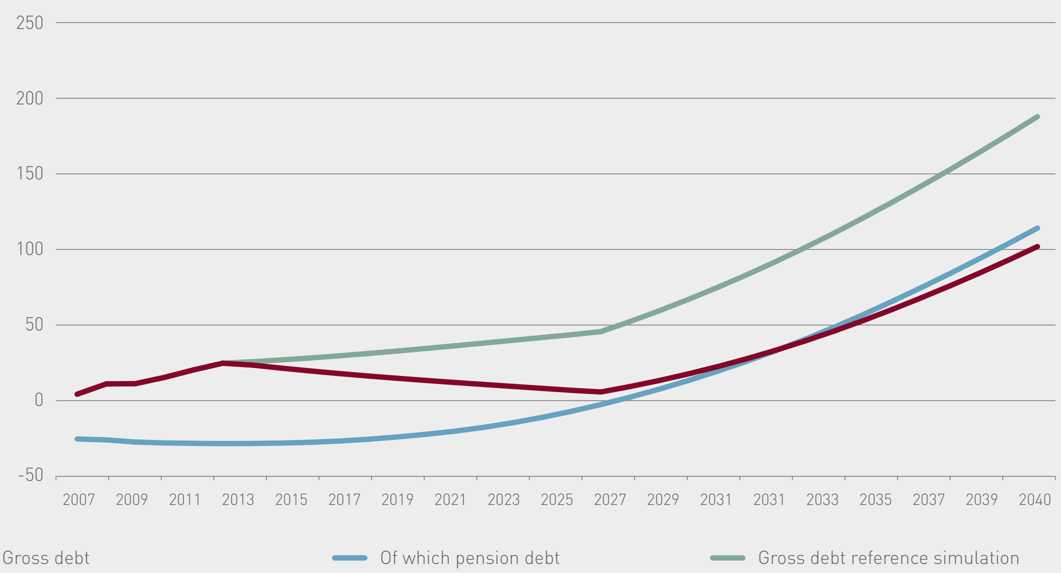
The deficits and the debt level expected for the 2013-2040 period do not constitute previsions *stricto sensu*, because it is probable that authorities will react before such deterioration occurs, in line with the unchanged policy assumption. This reference projection simply intends to illustrate the inherent dangers of a too passive budgetary policy in the coming years.

The chart above also illustrates that the measures announced by the Prime Minister on 5 May 2010 are not sufficient to address Luxembourg's fiscal sustainability problem. They are of course likely to improve the situation, but do not change the projections in a dramatic manner as illustrated by the limited difference between the brown and the green curves.

Simulation 2: Implementation until 2014 of the consolidation strategy presented in the 11th update of the Stability Programme

The second simulation illustrates the impact of the consolidation strategy presented in the 11th update of the Stability Programme, which should amount to EUR 1.5 billion (improvement of the general government balance of around 3% of GDP in 2014). In this case, as illustrated in the chart below, this effort, which would represent about three times the amount of the measures presented on 5 May, would improve the fiscal situation in a significant way. The public debt ratio would even tend to decrease before 2025. However, due to the strong structural increase in social transfers, the fiscal situation would deteriorate again from 2025 onwards, and the debt ratio would even exceed the 60% reference value in 2024. These results show that a consolidation strategy for the central government should be accompanied by lasting reforms of the social security system, with regard to pensions in particular.

Chart 2: General government indebtedness in a scenario where the consolidation effort amounts to EUR 1.5 billion until 2014 (11th update of the Luxembourg Stability Programme) (as % of underlying GDP)



Note: The total gross debt of general government could be lower than the debt of pension system by itself, as the gross official debt is a consolidated concept.

Sources : Ageing Working Group, IGSS, Statec, BCL calculations

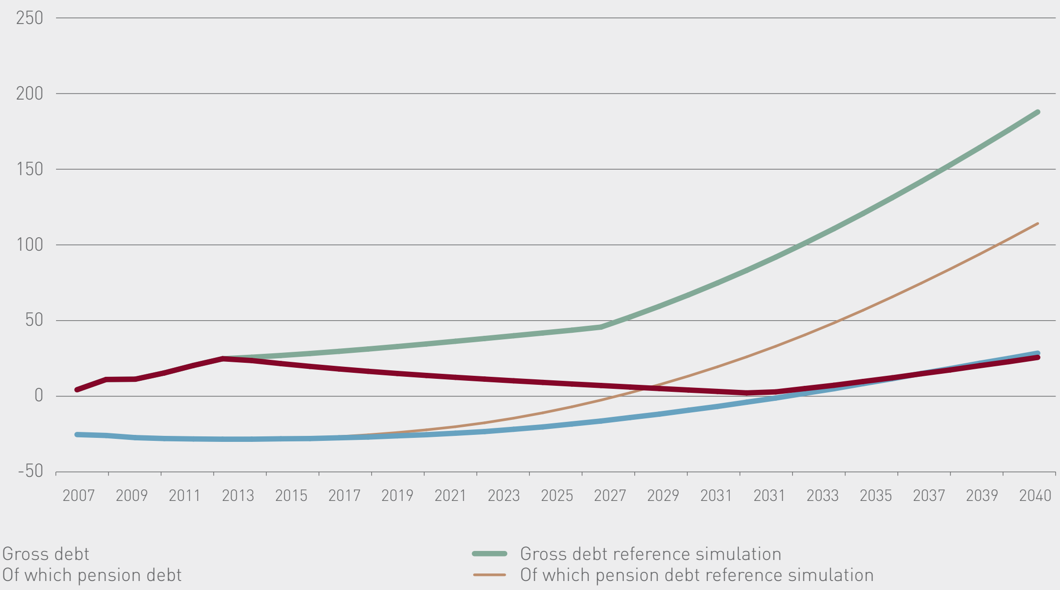
Simulation 3: EUR 1.5 billion consolidation effort and suspension of the indexation of pensions to real wages

Like the previous projection, the current simulation aims to apprehend the medium-term consequences of a consolidation strategy. This time though, this last one consists of a conjunction of two consolidation measures, namely the aforementioned EUR 1.5 billion package and a more gradual measure, which would affect exclusively the pension level. It consists of suspending the adjustment of pensions to real wages during the whole projection horizon. This adjustment currently occurs during even years, in order to stabilize the pension replacement rate. The impact on public finances of such a suspension is illustrated in the following chart.

The suspension should strongly affect the evolution of social transfers. While these would reach 33% of GDP in 2040 in the reference simulation, they would only amount to 25.6% in case of suspension of the adjustment of pensions to real wages. In other words, the impact of demographic ageing on public finances would be balanced in a significant measure. This would result in a much more favourable indebtedness dynamic than in the reference projection.

However, the average rate of replacement of wages by pensions would decrease by about 35% during the projection horizon. But this marked diminution could be palliated by a modulation of the suspension in function of the pension level, or by a shorter suspension period. In addition, the modulation could be accompanied by measures intended to diminish the cost of pensions without affecting the replacement rate, for instance an increase of the effective retirement age. Finally, transfers could be reduced in other social security branches than the pension sector, which would limit the required adjustment of the replacement rate.

Chart 3: General government indebtedness in a scenario where the consolidation effort amounts to EUR 1.5 billion until 2014 (11th update of the Luxembourg Stability Programme) and where the adjustment of pensions to real wages is suspended (as % of underlying GDP)



Note: The total gross debt of general government could be lower than the debt of pension system by itself, as the gross official debt is a consolidated concept.

Sources: Ageing Working Group, IGSS, Statec, BCL calculations

02 THE BCL'S OPERATIONS

2
THE BCL'S OPERATIONS

2.1 MONETARY POLICY OPERATIONS

In Luxembourg, the BCL is responsible for conducting the monetary policy as defined by the ECB, for the entire Euro zone. On 8 July 2009, the EIB became an eligible monetary policy counterparty of the Eurosystem.

Monetary policy uses different instruments, spread into three categories: the open market operations, the standing facilities and the minimum reserves. Besides, there were non-conventional measures adopted between 2007 and 2009.

These operations are:

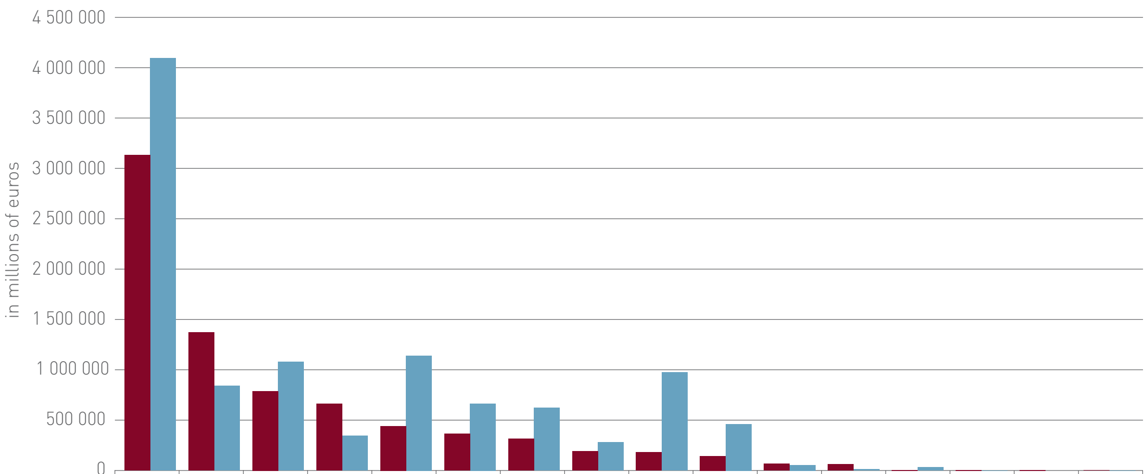
2.1.1 Open-market operations

2.1.1.1 Main refinancing operations (MRO) in 2009

Since October 2008, the MRO have been conducted on a full allotment and fixed rate basis. The fixed rate was the reference rate decided by the Board of Governors. This non-conventional measure was effective all through 2009. It is foreseen that this allotment method will be maintained for as long as necessary and at least until 12 October 2010, which corresponds to the end of the ninth maintenance period for the minimum reserves.

Chart 2.1:
MRO 2009 – Bids and allotments in the eurozone

Chart 2.2:
MRO 2009 – Bids and allotments in the eurozone compared to 2008



	DE	IE	ES	GR	LU	FR	IT	AT	BE	NL	PT	CY	FI	SI	SK	MT
2009	3 144 501.7	1 377 337.0	792 716.0	665 973.4	445 014.9	366 805.5	316 473.1	192 936.0	182 444.0	144 530.2	67 274.7	64 321.5	6 771.0	5 536.6	5 184.0	4 928.5
2008	4 108 633.7	844 820.2	1 084 417.7	347 636.9	1 145 957.2	669 375.9	625 288.1	282 630.9	978 577.3	463 092.9	56 316.0	13 823.4	33 581.8	2 450.7	-	2 407.6

2009 2008

In 2009, the participation of Luxembourgish counterparties to main refinancing operations gradually decreased. Compared with total Eurosystem counterparties' participation, Luxembourgish counterparties' participation ranked fifth or sixth, even punctually seventh, while in 2008 and the years before it had ranked second. For the volume allotted over the whole year, this participation ranks fifth.

Altogether, the Luxembourgish counterparties resorted less to the main refinancing operations in 2009 as they had sufficient liquidities.

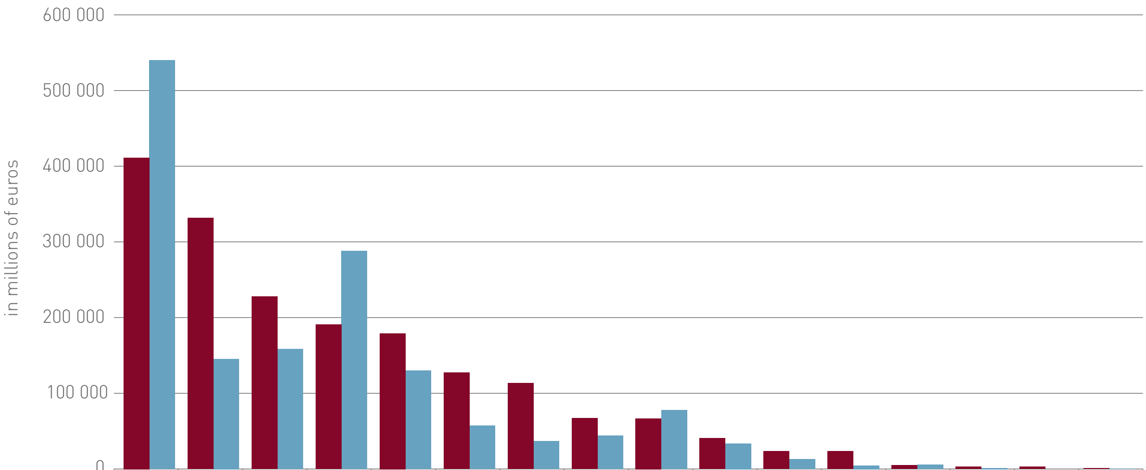
2.1.1.2 Longer-term refinancing operations (LTRO) in 2009

Along with the regular 3-month operations, the supplementary 3-month, 6-month and one-maintenance period operations that were set up in August 2007 and in September 2008 were renewed in 2009. In all those operations, all bids were satisfied at a fixed rate.

Besides, three one-year operations were added in June, September and December. The first two were fully allotted at a fixed rate while the latter was fully allotted at an adjustable rate. This will be calculated at the maturity of the operation and will be equal to the average of the minimum bid rates of the main refinancing operations that will have been conducted during the life of the operation.

Compared to 2008, the Luxembourgish counterparties increased the total volume of their participation in the longer-term refinancing operations in 2009. Nevertheless Luxembourg still ranks eighth.

Chart 2.3:
MRO 2009 – Total volume allotted in the eurozone compared to 2008



	DE	IE	ES	FR	BE	IT	GR	LU	NL	AT	PT	CY	FI	SI	SK	MT
2009	412 976.4	333 021.0	228 800.9	191 742.7	180 004.0	127 836.9	114 090.7	67 281.4	67 220.5	40 859.0	23 736.5	23 485.9	5 020.0	3 120.1	2 935.0	1 226.7
2008	541 966.8	146 078.6	159 245.9	289 322.3	130 393.6	57 546.3	37 133.1	44 108.7	78 024.4	33 985.6	13 221.0	4 830.7	5 901.7	1 534.3		525.0

2009 2008

In 2009, the Eurosystem extensively resorted to longer-term operations to restore confidence on the money markets, with a total allotted amount of 1 823.3 billion euro (compared to 1 543 billion euro in 2008). Altogether 51 operations were conducted in 2009 (53 in 2008) among which 12 regular 3-month operations. The other 39 were supplementary operations, among which 12 one-maintenance period operations, 12 three-month operations, 12 sixth-month operations and 3 one-year operations, conducted in June, September and December.

As the year went by, liquidity conditions and confidence improved and those operations were less used. On the other hand, the first one-year operation (June 2009) gathered a considerable amount (442 billions of euros).

Within the scope of the phasing-out scenario, it is foreseen that the one-maintenance period operations will be fully allotted at a fixed rate until 12 October at least. The return to a variable rate procedure for the regular 3-month procedure was foreseen for 28 April 2010. However, due to the new financial turmoil that appeared in April 2010 this was suspended for the two operations to be allotted on 26 May and 30 June 2010. Besides, it was decided that an additional 6-month operation should take place on 12 May 2010, even though the last one was initially foreseen for the 31 March 2010. In December 2009, the last one-year operation was conducted. The supplementary 3-month operations were not renewed in 2010.

The following graphs show the amounts allotted per operation for the whole euro zone.

Chart 2.4:
LTRO 3M – Allotments in the eurozone in 2009

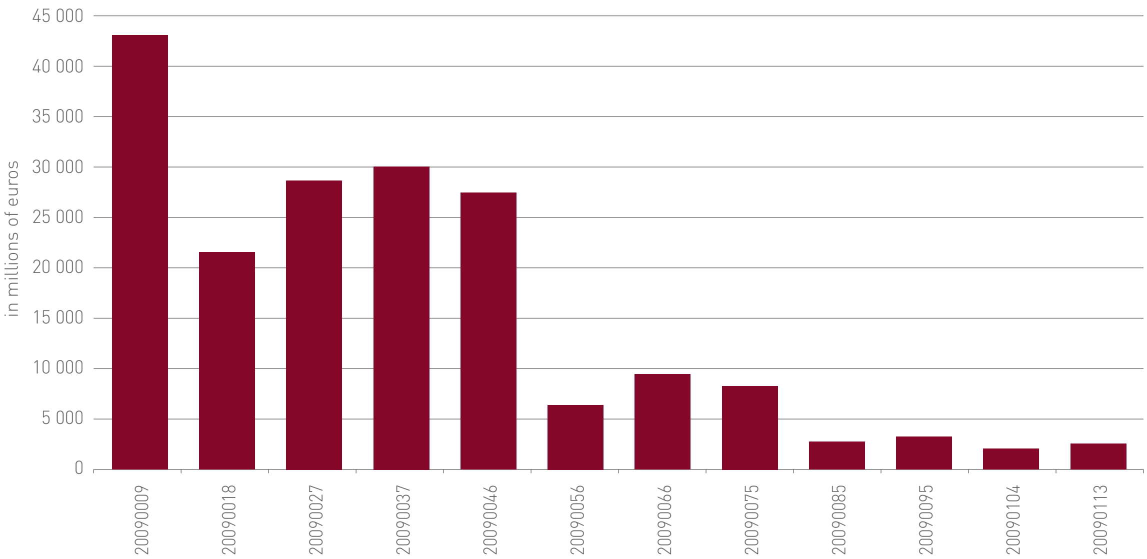


Chart 2.5:
SLTRO 1 MP – Volume allotted in the eurozone in 2009

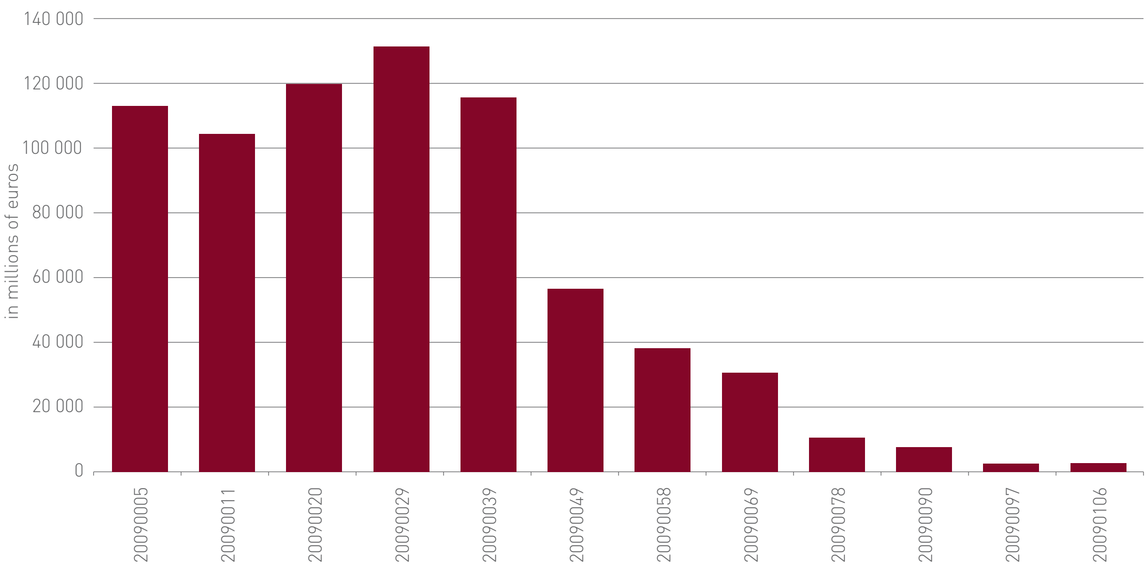


Chart 2.6:
SLTRO 3 M – Total volume allotted in the eurozone in 2009

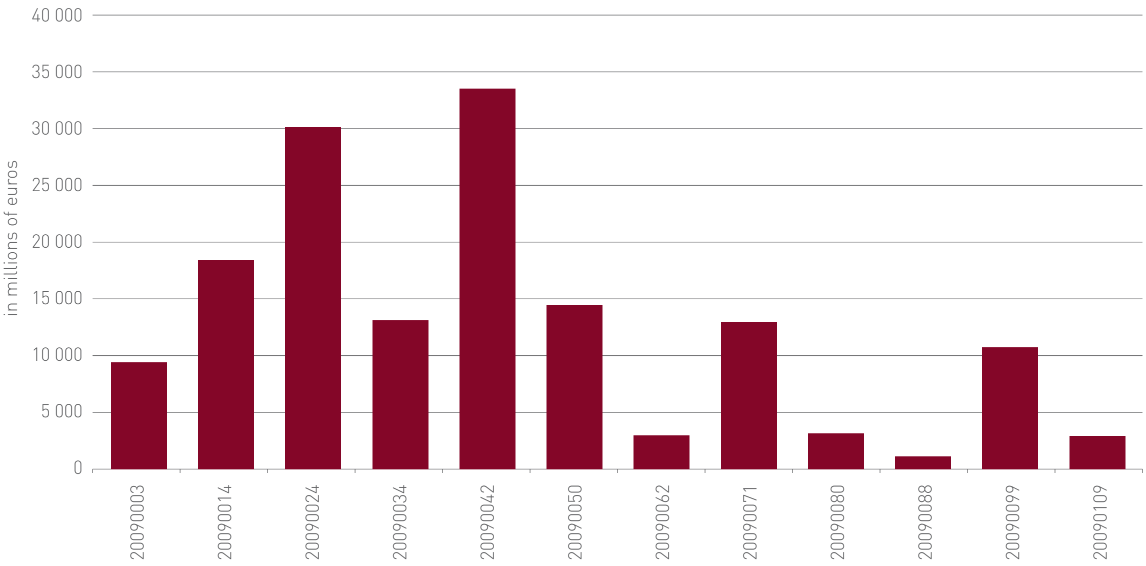


Chart 2.7:
SLTRO 6M – Total volume allotted in the eurozone in 2009

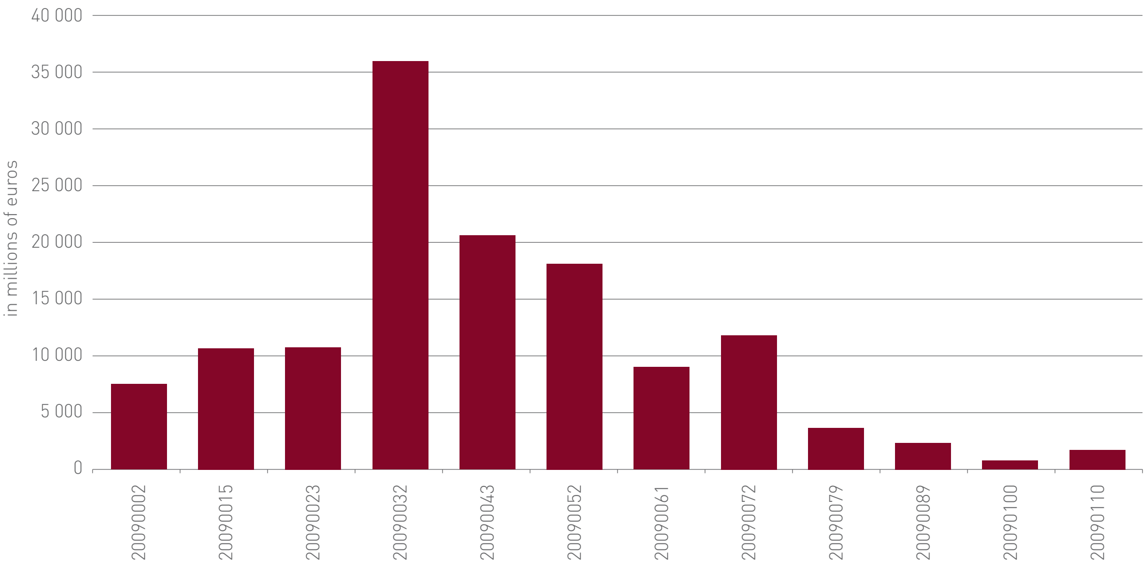
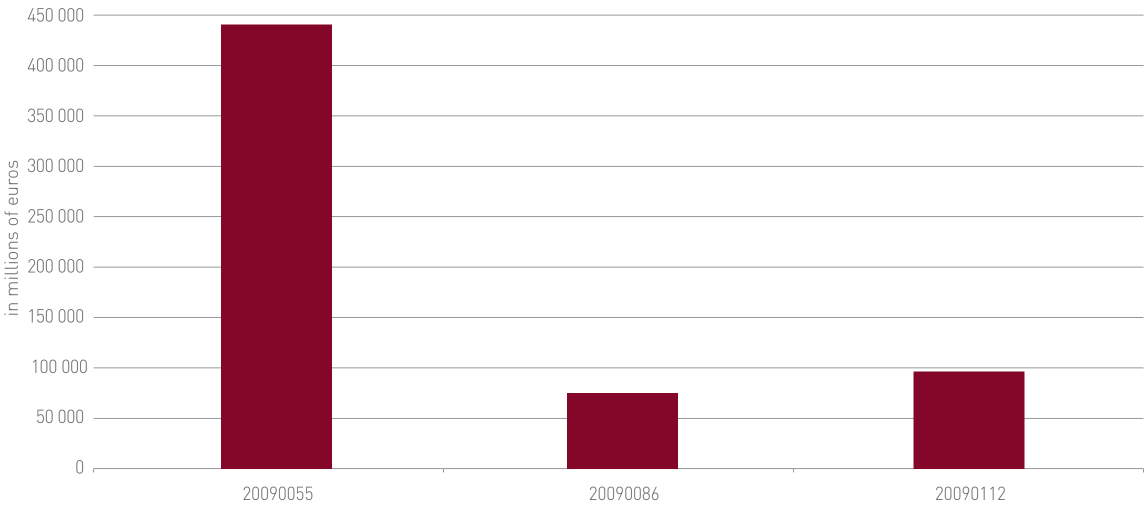


Chart 2.8:
SLTRO 12M – Total volume allotted in the eurozone in 2009



2.1.1.3 Fine tuning operations in 2009

Since 2008, this type of operations has been open to all counterparties. In 2009, fine tuning operations were used exclusively on the last day of the maintenance period, in order to absorb excess liquidities. No liquidity providing operation was conducted. Globally, fine tuning operations increased in volume over the year.

Chart 2.9:
Fine tuning operations – Total amount absorbed in 2009 in the eurozone

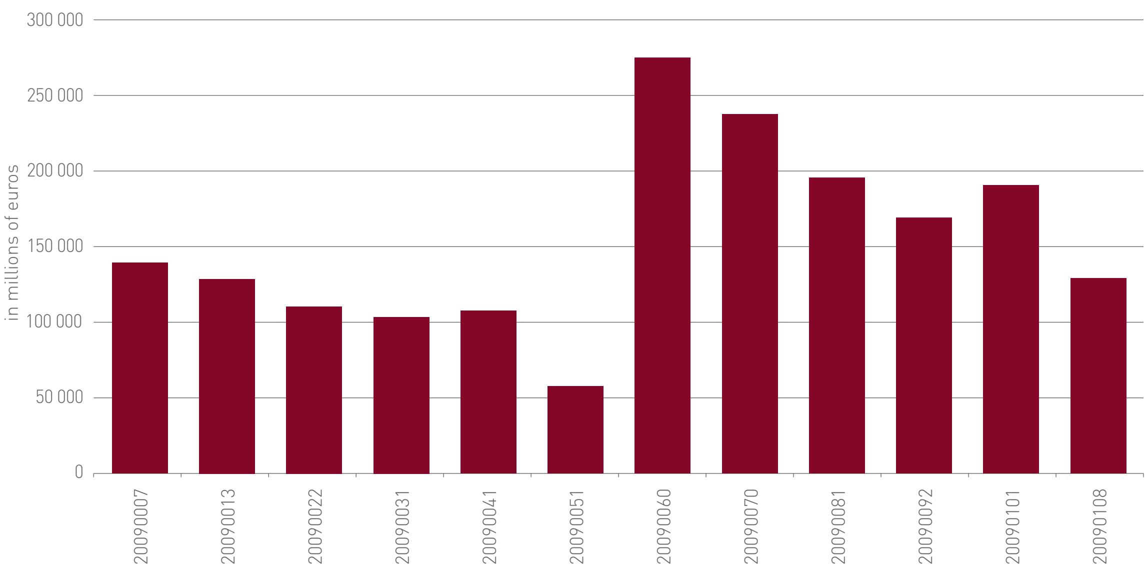
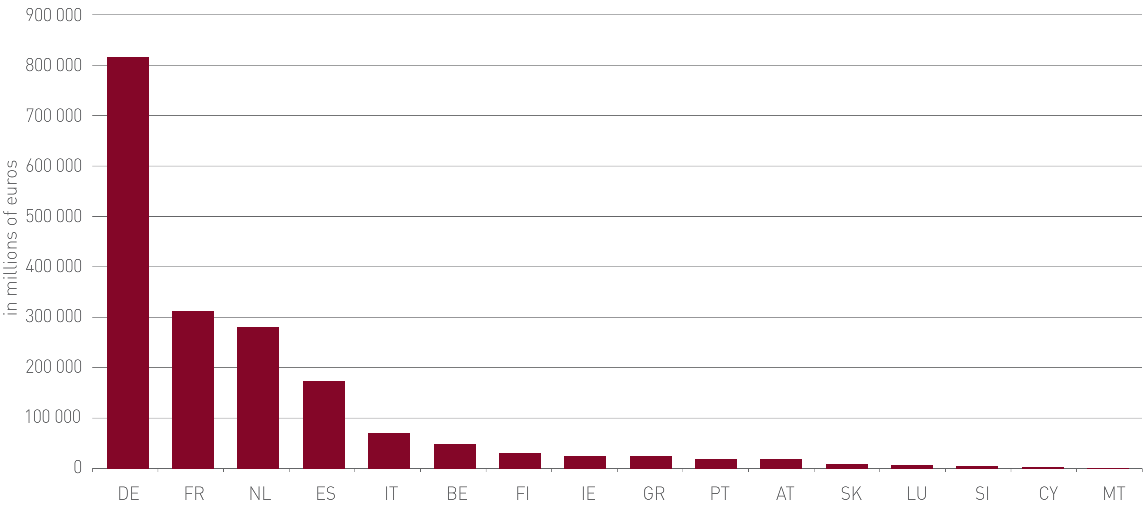


Chart 2.10:
Fine tuning operations – Volume absorbed in 2009



2.1.2 Standing facilities

Luxembourgish counterparties may resort to daily standing facilities with the BCL, i.e. deposit or marginal lending facilities, at a rate fixed beforehand. Those rates are related to the reference rate of the European central bank. Rates applied to the standing facilities consist of a corridor for the reference rate and are therefore important for the implementation of monetary policy. On 15 January 2009, following a decision adopted on 18 December 2008 by the Governing Council, the corridor made of these two rates decreased from 200 to 100 basis points symmetrically around the reference rate for main refinancing operations. On 7 May 2009, the corridor was reduced to 150 basis points, when the reference rate was cut to 1%. This measure was taken in order to ensure that the rate of the deposit facility stays above 0%, therefore encouraging the activity on the day-to-day market for blank operations. The corridor remained symmetric around the fixed rate for main refinancing operations.

During the first semester of 2009, Luxembourgish counterparties resorted less to the deposit facility, notably thanks to the return of confidence on money markets. Nevertheless, thanks to the huge amount of liquidities gathered with the first one-year operation conducted in June, the deposit facility was favoured again in the second semester of 2009.

The marginal lending facility was less used by the Luxembourgish counterparties, only punctually.

2.1.3 Minimum reserves

Euro zone counterparties are required to build reserves at the national central bank of their country of residence. Those obligations have to be kept on an average over a fixed period. The counterparties can make free use of their liquidities over the period, which helps stabilizing the market.

In 2009, the amount of excess reserves markedly decreased compared to 2008 – this year was atypical – but remained higher on an average than before the crisis.

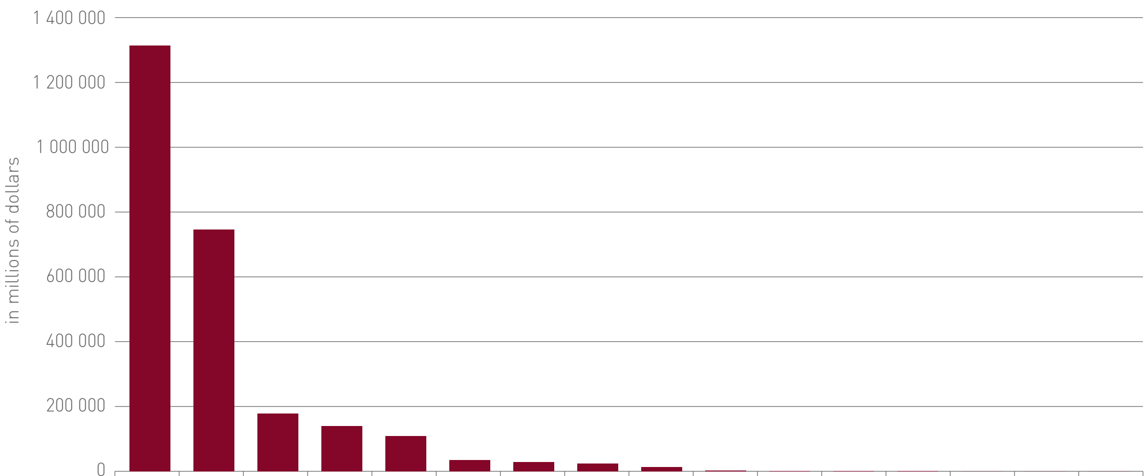
2.1.4 Temporary currency auction facilities

In late 2007, banks encountered difficulties to access the US dollar markets. The ECB thus established a swap agreement (US dollar term auction facility) with the Federal Reserve System. The ECB supplied liquidities in dollar against eligible collateral used for regular operations. These operations were conducted as reverse transactions where eligible assets are bought by the ECB under repurchase agreements, with a maturity of 7, 28, or 84 days. In 2009 all bids were satisfied at a fixed rate that was announced beforehand.

Similar operations were also conducted with the Swiss National Bank (EUR/CHF swap operations) in order to supply Swiss francs. The allotted amount that was initially set at €20 billion in 2008 was revised up to €25 billion in February 2009 and kept at this level for the rest of the year. However, since June 2009 the total amount asked has significantly decreased as counterparties met less difficulties to access this currency.

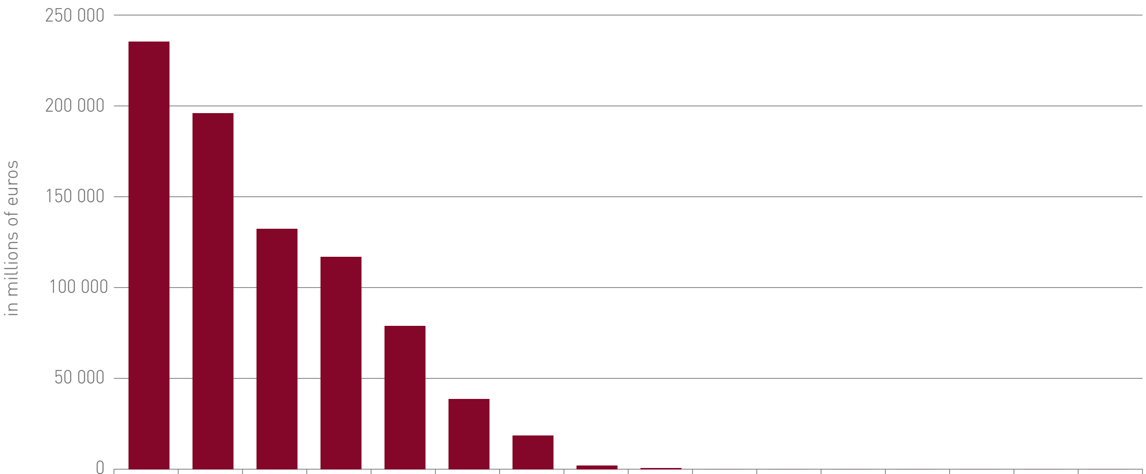
Currency operations were conducted all through 2009 but were suspended on 1st February 2010 as improvements in the functioning of financial markets were observed during the course of 2009. Following the reappearance of tensions on the currency markets it was decided to restore the access to temporary dollar facilities for the counterparties of the Eurosystem. Therefore, the ECB reactivated the swap line with the Federal Reserve. The USD operations are concluded for 7 or 84 days and are carried out at a fixed rate announced beforehand and allotted at 100%.

Chart 2.11:
USD tender operations – Total volume allotted in 2009 in the eurozone



	DE	BE	IE	FR	LU	AT	ES	NL	CY	GR	IT	MT	SI	SK	PT	FI
2009	1 318 468.6	749 097.5	179 243.2	140 195	108 663.5	35 159	28 448.5	24 460	12 675	1 702.6	1 100	140	51	0	0	0

Chart 2.12:
CHF Swaps – Total amounts allotted in 2009 in the eurozone



	AT	FR	DE	BE	LU	ES	IT	GR	SI	CY	FI	IE	MT	NL	PT	SK
2009	236 328.45	196 817.81	132 767.17	117 363.31	79 341.74	38 754.43	18 683.03	2 031.56	638.32	0	0	0	0	0	0	0

2.1.5 The covered bond purchase programme

The Governing Council decided in May 2009 to establish a programme of outright purchases of covered bonds for monetary policy purposes. This programme, which constituted a building block of the ECB's enhanced credit support approach, was launched with the aim of contributing to the revival of the covered bond market. It was announced that the Eurosystem intended to purchase euro-denominated covered bonds in the amount of €60 billion between July 2009 and the end of June 2010. These bonds, issued in the euro area, had to comply with certain criteria, which were made public to all market participants.

By 31 December 2009 the Eurosystem had purchased covered bonds for a total nominal value of around €28 billion, 24% of which was accounted for by purchases in the primary market and 76% by purchases in the secondary market. Since the announcement of the programme, new issuance in the covered bond market has picked up and spreads between yields on covered bonds and swap rates have narrowed significantly, which is also partly due to a general improvement of financial markets. This has also been accompanied by a general narrowing of other spreads, such as those on senior unsecured bank bonds.

2.2 FOREIGN EXCHANGE RESERVES MANAGEMENT BY THE BCL

In accordance with the Statutes of the Eurosystem and in line with its share in the ECB's capital key, the BCL transferred €74.6 million in foreign exchange assets to the ECB. The ECB's foreign exchange reserves have been managed in a decentralised way by the national central banks since January 1999. As a result of the EU's enlargement and the relative growth of GDP and population in Luxembourg, the BCL's share in the ECB's capital key has been 0.1747% since 1st January 2009. As of 31 December 2009, the total market value of the ECB's reserves (including accrued interest) managed by the BCL corresponded to €273.1 million.

One goal of the foreign exchange reserves management of the ECB is to ensure that the ECB has sufficient available liquidity to intervene in the foreign exchange markets if needed. Security and liquidity are, therefore, basic requirements in managing reserves. This tactical benchmark reflects the ECB's risk/return medium-term preference as regards market conditions.

A change in the tactical benchmark may affect different risk categories (for example, modified duration or liquidity risk). The Value at Risk of the tactical benchmark may differ from that of the strategic benchmark in the context of fluctuation margins announced, in advance, by the ECB.

Regarding the management of this portfolio, the prime task of the BCL is to invest foreign exchange reserves on behalf of the ECB within the prescribed fluctuation bands and fixed risk limits, the objective being return maximisation. The amount of actively managed assets in gold is specified by the ECB, taking into account strategic considerations and market conditions. The BCL manages a USD portfolio on behalf of the ECB.

2.3 MANAGEMENT OF THE BCL'S ASSETS

2.3.1 Institutional structure

Asset management is based on a five-level intervention structure, in addition to risk control:
- The Council (level 1),
- The Executive Board (level 2),
- The Asset and Liability Management Committee (ALCO) (level 3),
- The tactical committees (level 4),
- The portfolio managers (level 5).

Level 1: The Council

The Council approves the guidelines of the asset management framework. Thus, the Council has granted the BCL the possibility to provide asset management services to third parties and to hold own funds asset portfolios in order to diversify the Bank's income. The guidelines also include mitigation of the risk framework applied to asset management.

Level 2: The Executive Board

The Executive Board defines the risk management framework. Thus, it determines the maximum risk allowance (MRA) in the management of the Bank's own assets. It also specifies the risk management measures, like the Value at Risk (VaR) method and the application of stress-testing scenarios. The Executive Board also sets warning thresholds, which can lead to the calling of emergency meetings for assessment and arbitrage purposes. The Executive Board sets the limits of the framework annually.

Level 3: The Asset and Liability Management Committee ALCO

ALCO determines the strategic benchmark according to the framework fixed annually by the Executive Board by examining the impact of each risk profile (market, credit and liquidity risk) which would result from the proposed investment policies, in respect of both the overall balance sheet and the profit and loss account of the BCL. During the year, ALCO regularly assesses the results of the investment policy.

Level 4: The tactical committees

The tactical committees monitor the evolution of the portfolios on a shorter-term basis and work out proposals for tactical benchmarks that comply with the limits laid down by the strategic benchmark.

The tactical committees consist of the following:
- The *Comité de gestion*, for the BCL's own funds,
- The *Comité réserves de change* for the pooled reserves of the ECB,
- The *Comité tactical benchmark* for the pension fund of the BCL.

Level 5: The portfolio managers

The transactions are executed by the portfolio managers, in strict compliance with the limits set, covering both the overall and specific investment limits.

2.3.2 Risk control

The Risk Manager unit monitors the positions of all the portfolios in order to assess risks and to verify compliance with the pre-defined limits. This monitoring is carried out daily, independently of the Front Office. The monitoring structure has been completed with specific missions at different levels of the organisation. In addition, the Middle and Back Offices also take part in the monitoring process.

2.3.3 Conceptual framework

The investment policy objectives

The main objectives are to generate a high income on a regular basis and to ensure a total return over the long term by taking into account considerations such as capital safety, stability of securities and liquidity. In order to achieve these goals and in accordance with the principle of risk diversification, the BCL implements a coordinated, progressive and pro-active investment policy based on modern portfolio theory.

The investment approach takes into account:
- the analysis of economies and international financial markets;
- the asset allocation decisions by assessing the returns on different international markets;
- the drawing-up of a clearly defined strategy;
- the capital value preservation of the assets under management by a policy of risk diversification and the application of specific qualitative requirements with regard to investments;
- the application of strict risk control measures.

Investment decisions are based on:
- market risks (interest rates, exchange rates, equity prices, commodity prices);
- credit risks (minimum credit ratings criteria by international rating agencies);
- liquidity risks (concentration limits by sector, by issuer, by issue and by geographical diversification).

Performance measurement

The quality of the investment decisions is measured by comparing the performance with the external benchmarks of leading investment banks. This allows a given performance to be assigned to a decision level (strategic, tactical) as well as to daily management.

2.3.4 Structure of portfolios

The bulk of the BCL's own funds are invested in fixed income securities denominated in euro. The strategic orientation allows a diversification into other asset categories. The BCL manages five kinds of portfolios: the Investment Portfolio, the Liquidity Portfolio, the Domestic Reserves Portfolio, the Pension Fund Portfolio and Portfolios from third parties.

Investment Portfolio

This portfolio consists of assets (equity and bonds), which can be deemed to represent its own funds (with a longer-term investment profile). The main goal of the portfolio is to maximise the return by taking into account the above-mentioned risk constraints (see section 2.3.2). As of 31 December 2009 the total market value (including accrued interest) amounted to €1 734.3 million euros. In 2009 the share of this portfolio invested in fixed income securities with a maturity above three years was reduced from 34% to 32%, whereas the percentage of bonds with a one to three year maturity increased from 28% to 31%. Moreover, by the end of 2009, variable rate and fixed rate bonds with maturity under one year represented 37% of Portfolio 1. The securities included in this portfolio are widely diversified, not only geographically but also in terms of sectors and issuers.

Liquidity Portfolio

This portfolio comprises the other assets that are largely attributable to a Eurosystem arrangement (Agreement on Net Financial Assets) and mirrors TARGET accounts and other liabilities. This portfolio, which liability profile covers certain liquidity needs, also aims at maximising income. The instruments used are mainly fixed-income short-term bonds, variable rate bonds and certificates of deposits (ECP), provided that they comply with strict and predefined rating criteria. As of 31 December 2009, the total market value (including accrued interest) amounted to €4 332.4 million euros.

Table 2.1: Breakdown of reserves as of 31 December 2009

Maturity	Portfolio 1	Portfolio 2
0 -1 year	37%	60%
1-3 years	31%	34%
3-10 years	32%	6%

Domestic Reserves Portfolio

This portfolio aims to maintain an intervention portfolio in addition to the pooled foreign exchange reserves transferred to the ECB. Thus, the main requirements for this portfolio are security and liquidity. As of 31 December 2009, the total market value (including accrued interest) of this portfolio in foreign currencies amounted to €181.8 million euros.

Pension Fund Portfolio

The management of this fund is described further in section 4.4.3 of this report.

Third Party Portfolios

The BCL provides non-standardised discretionary management services to institutional clients (central banks and international organisations). Furthermore the Bank acts as one of the Eurosystem service providers (ESP). Six central banks within the Eurosystem offer institutional clients (central banks, public authorities and international organisations) a comprehensive range of services for managing Euro-denominated reserve assets under a framework of harmonised services defined by the ECB.

2.4 BANKNOTES AND COINS

2.4.1 Production of banknotes and coins

The euro banknotes produced meet the banknote requirements as expressed by the participating NCBs, aggregated by the ECB. The production of each single denomination is assigned to one or several NCBs. In 2009, the BCL was in charge of the production of €26.44 million worth of €20 banknotes for the Eurosystem's needs. The BCL issued a tender procedure for the fabrication of these banknotes. The BCL received 74.2 million banknotes from other NCBs for its own purposes.

According to an agreement with the Luxembourg Government, the BCL is also responsible for the production of Luxembourg's euro coins and puts them into circulation. Following a tender procedure, the BCL commissioned the production of 26.8 million coins of the 2009 series to cover the needs of economic actors and numismatists.

2.4.2 Circulation of banknotes and coins

2.4.2.1 Euro banknotes and coins

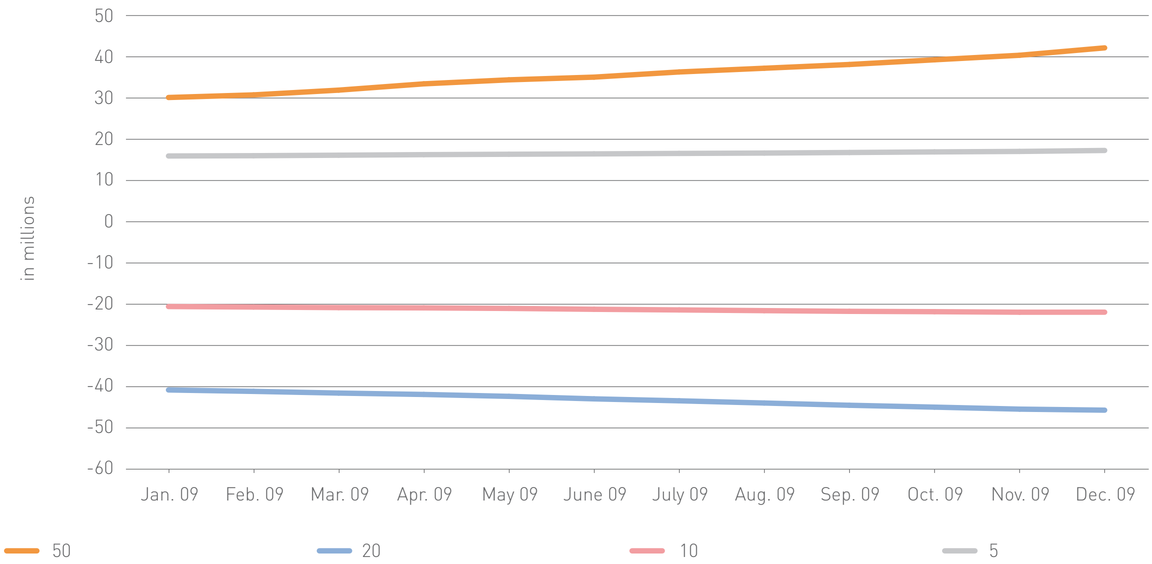
2.4.2.1.1 Banknotes

The total net volume of banknotes issued by the BCL in the course of 2009 amounts to 37 million notes compared to 23 million banknotes in 2008, which equals an increase of 21.7%. This increase is partly linked to the repercussion of the financial crisis of 2008. With regard to the euro area, the BCL contributed to some 2.6% of the total volume of banknotes put into circulation, compared with 1.3% in 2008.

On the contrary, the number of €10 and €20 banknotes lodged at the BCL exceeds the volume of banknotes issued. Financial institutions, which are BCL's clients, deposited more of these banknotes than they withdrew, demonstrating the contribution of tourists and cross-border workers, where these denominations are more widely used.

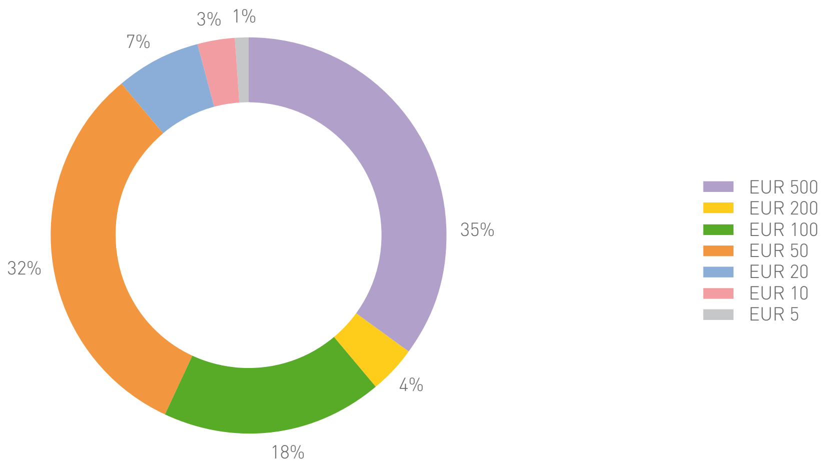
The chart below illustrates this development in the denominations mainly used for everyday transactions.

Chart 2.13:
Breakdown of the number of low denomination euro banknotes put into circulation by the BCL



Just like in 2008, the year 2009 in Luxembourg as well as in the euro area was marked by a demand for high denomination banknotes. The total value of banknotes put into circulation by the Eurosystem increased by 5.7%, from €762.78 billion at the end of 2008 to €806.41 billion by the end of 2009 with the following denominational breakdown:

Chart 2.14:
Value Breakdown by denomination of Eurobanknotes put into circulation by the Eurosystem



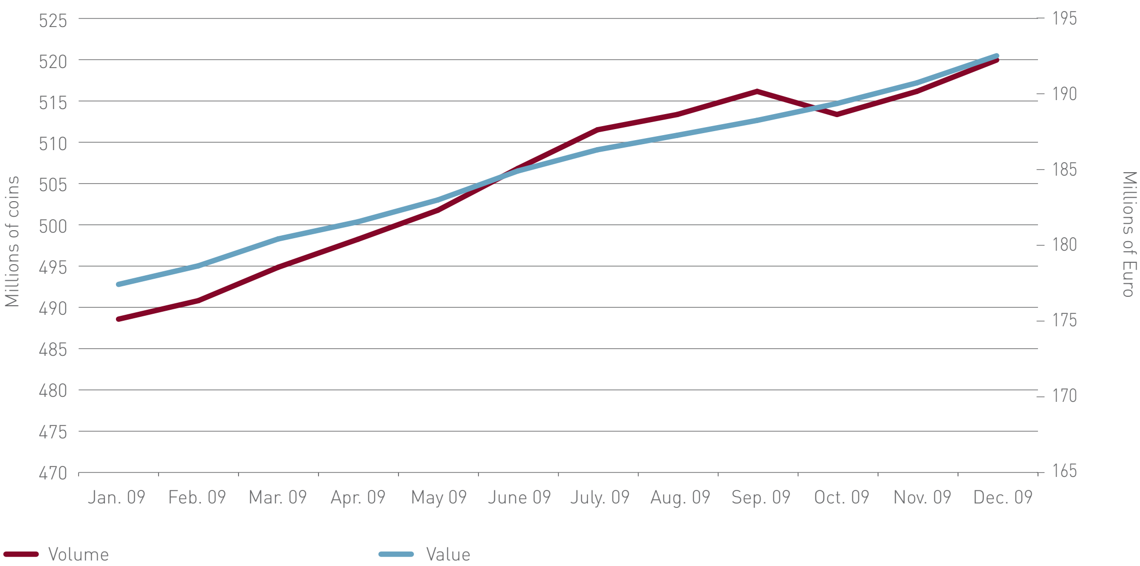
2.4.2.1.2 Coins

Luxembourg euro coins continued to be the object of strong public demand. The total value of coins put into circulation increased by 9.6% in 2009 compared to 9.2% in 2008. It rose from €175.7 million to €192.6.

The number of coins issued in the course of 2009 increased by 43.1 million, equaling a growth of 8.9%, and reached a total of 528.5 million at the end of 2009.

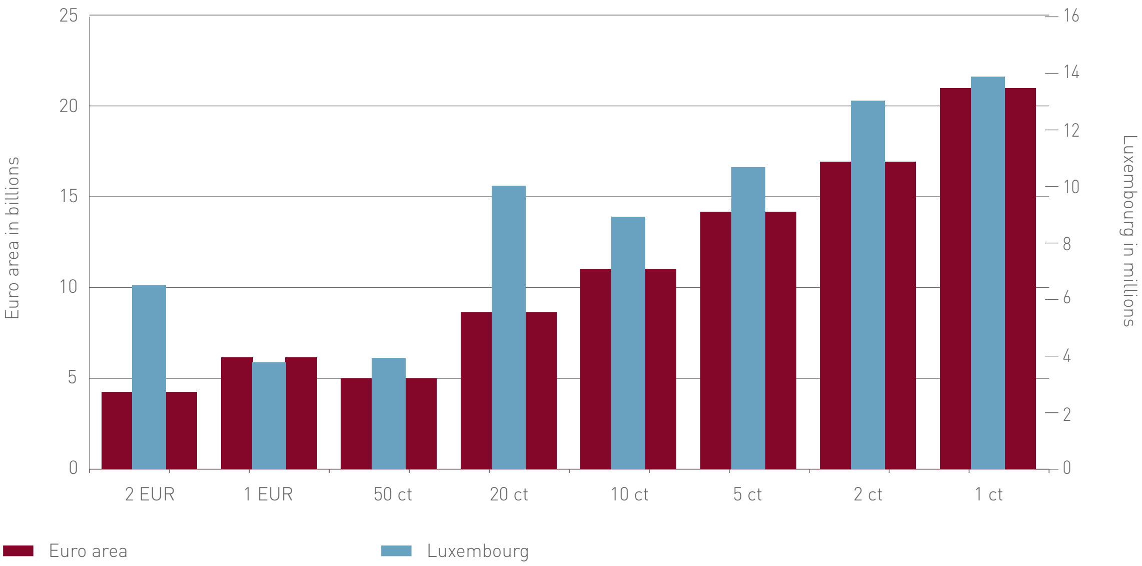
The following chart shows the development both in terms of volume and value of Luxembourg euro coins in circulation throughout 2009. The demand for Luxembourg coins grew steadily in the course of the year.

Chart 2.15:
Total volume and value of Luxembourg Euro coins in circulation



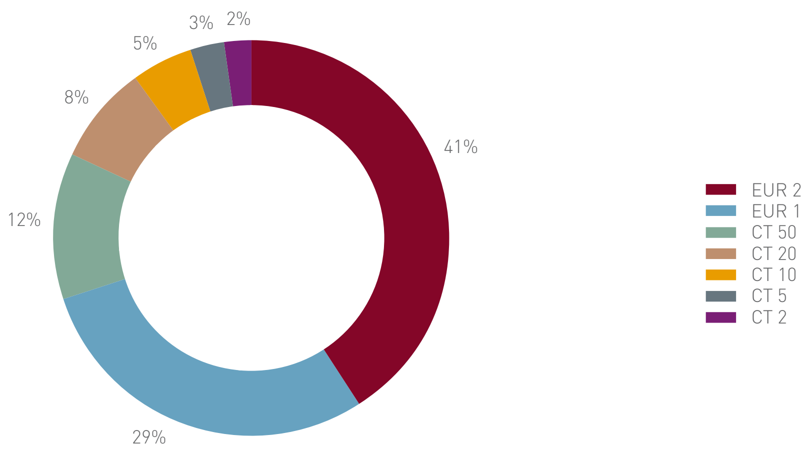
Within the euro area Luxembourg contributes to 0.8% of the total value issued by all the issuing authorities. The average value of the Luxembourg euro coins in circulation amounts to 36 cents, in comparison with an average of 24 cents in the euro area. The following chart compares the volume of the different coin denominations put into circulation by Luxembourg with the volume corresponding to the rest of the euro area.

Chart 2.16: Comparison of the circulation volume of the different euro coin denominations in Luxembourg to that of the euro area



The total value of euro coins put into circulation by the Eurosystem increased from €20.4 billion in 2008 to €21.3 billion in 2009, whereas the total volume of coins reached €87.46 billion. The following chart shows the denominational breakdown of this volume at the euro area level:

Chart 2.17:
Breakdown by denomination of the volume of coins of the euro area in circulation



2.4.2.2 Luxembourg franc banknotes and coins

In 2009, the total value of Luxembourg franc banknotes issued by the *Institut Monétaire Luxembourgeois* not yet exchanged fell from 211.4 million to 209.8 million, which equals a decline of 0.8%. Coins denominated in franc are not redeemable since the end of December 2004. The volume of 5 000 LUF banknotes not yet returned underwent the most pronounced decline with 1.8%, while that of 1 000 LUF banknotes fell by 0.6% and the 100 LUF banknotes by only 0.1%, manifestly held by collectors.

2.4.3 Handling of banknotes and coins

The number of euro banknotes returned by financial institutions to the BCL has decreased by 1.6% in comparison to the previous year, from 79.4 million to 78.1 million.

The number of euro banknotes processed by sorting machines decreased by some 7.3% from 82.4 million in 2008 to 76.0 million in 2009. These sorting machines carry out authenticity tests as well as soiling tests. Nearly 16.9 million notes of all denominations had to be destroyed as they were unfit for circulation, which equals to a destruction rate of 22.6%. This percentage varied strongly between the denominations sorted and reached from 8% for the €500 banknote to 57% for the €5.

2.4.4 Fighting counterfeiting

In the field of fighting euro counterfeiting, the BCL continues to work closely with the ECB and the competent national authorities.

2.4.5 Numismatic issues

The BCL continues to offer numismatic products through several distribution channels in order to meet the collectors' great interest. The retail to the public is located in the numismatic premises, where more than 4 300 sales operations have been carried out in 2009. Furthermore, the BCL has sent nearly 3 000 parcels to its numismatic clientele, which had made use of the mail order facility or the Internet shop of the BCL (https://eshop.bcl.lu).

In the course of 2009 the BCL issued the following numismatic products:

- Two €2 commemorative coins, struck in a quantity of 10 000 units and put on sale in January 2009. The first one depicts the effigies of the Grand Duke Henri and the Grand Duchesse Charlotte, whereas the second one is dedicated to the 10th anniversary of Economic and Monetary Union.
- The "2009 BU set", comprising Luxembourg's euro coins of the 2009 series (including the two €2 commemorative coins), produced in a quantity of 10 000 units.
- The "2009 BENELUX set" offering 8 coins of the 2009 series of each of the three member countries.
- The "2009 Proof set" features 10 coins, including both €2 commemorative coins, issued in an edition of 2 000 sets.
- A silver-niobium coin dedicated to the Castel of Vianden, issued in June 2009 in an edition of 7 500 pieces, constituting the first element of a new series devoted to the Castles of Luxembourg.
- A silver and Nordic gold coin dedicated to the common kestrel, issued in October 2009 in an edition of 3 000 units, constituting the first element of a new series devoted to the fauna and flora of Luxembourg.
- A gold coin dedicated to the deer of Orval's refuge, in the series "Cultural History of Luxembourg", issued in October 2009 in an edition of 3 000 units.
- A set of eight Slovak euro coins in circulation quality (ranging from 1 cent to €2), issued in January 2009 and commemorating Slovakia's entry to the euro area on 1 January 2009.

2.5 DEVELOPMENTS IN THE AREA OF STATISTICS

In October 2009 the EU Council adopted a new regulation concerning the statistical data collection of the ECB (Council Regulation (EC) No. 951/2009 amending Council Regulation (EC) No. 2533/98) which will allow the Eurosystem to collect the whole set of information that is necessary for the fulfilment of its missions including the missions relating to financial stability and for the whole financial sector including insurance corporations and pension funds.

Following the financial crisis that occurred in 2008 – 2009, the BCL, as a member of the Eurosystem, participated in the analysis of new information needs whose objective is to increase financial markets transparency and to enhance the statistical data coverage that is vital for the financial stability analysis. This work will lead to more timely financial sector data and improve the coverage of information on securities holdings and issues as well as on financial derivatives.

Finally, the BCL publishes on its website a vast set of statistical series concerning the Luxembourg economy in general and the financial sector in particular. The whole set of statistical series published by the BCL is adjusted on a permanent basis in order to accurately reflect economic developments in Luxembourg and to improve the data made available to the public as well as to the professionals of the financial sector.

2.5.1 Money and banking statistics

During 2009 the BCL has modified its statistical data collection in order to satisfy the new information needs set out by the ECB in its regulations ECB/2008/32 and ECB/2009/7 while covering the new information needs in the area of financial stability. This work has been realised in close cooperation with representatives of the banking sector in order to take into consideration their opinion and preferences for the implementation of the requested changes. The first reporting of these statistical series is foreseen for June 2010 in order to provide reporting agents with enough time to undertake the necessary steps for implementing the new reporting schemes.

The BCL also participates in the production of Short Term European Paper statistics that are published daily by the ECB.

The BCL also participates in the statistical work of the Bank for International Settlements (BIS) and contributes to the international banking statistics collected and published by the BIS.

Furthermore, the BCL provides information on the Luxembourg financial system to the International Monetary Fund (IMF) in order to publish them in the monthly International Financial Statistics review of the IMF as well as in the framework of the Special Data dissemination Standard (SDDS).

2.5.2 External statistics

The BCL publishes on its website quarterly statistics of the Luxembourg balance of payments as well as International investment position, External debt and Reserve assets statistics. The BCL and the STATEC disseminate, after availability of a new dataset, on a quarterly basis, a joint press statement that aims at informing the public of the large evolutions touching the balance of payments.

The BCL participates in the annual Coordinated Portfolio Investment Survey of the IMF (the so-called CPIS). The results of this survey are available on the BCL website.

In the course of the year under review, the BCL and the STATEC have lowered the burden of direct collection of "balance of payments" data from credit institutions. This was particularly the case for transactions relative to debt securities and equity shares as well as for all transactions relative to mutual funds. This decrease of the administrative burden became possible through the fact that the data collection of the banking sector was enhanced during the course of 2009 via the implementation of the security-by-security data collection on mutual funds and credit institutions. Data collected through the new security-by-security reporting are at present used for the establishment of Luxemburg's balance of payments as well as the international investment position.

2.5.3 Economic and financial statistics

During 2009 the BCL started the collection of statistical data from undertakings for collective investment that submitted the first reports in January 2009. The objective of this data collection is to provide users with a complete set of detailed data on assets and liabilities of undertakings for collective investment established in Luxembourg. In this context, it is also important to mention that the BCL participated in establishing the euro area list of undertakings for collective investment broken down by investment policy that is regularly published by the Eurosystem.

In addition, the BCL finalised the implementation work for the introduction of the collection of statistics on assets and liabilities of financial vehicle corporations engaged in securitisation that started at the end of 2009. It is also foreseen to publish a list of euro area securitisation vehicles during the first quarter of 2010.

2.5.4 Other statistics

Since some fifteen years, central banks of the ESCB collect in their respective jurisdictions statistics for the use of different means of payments and on the activity of payment systems and securities settlement. These statistics, that are largely harmonised, are published on an annual basis in the so-called "Blue Book".

The European System of Central Banks has largely harmonised the described data collection.

Finally, the BCL publishes, on its website, aggregated data on employment as well as the profit and loss accounts of credit institutions as well as various statistical series on other professionals of the financial sector.

2.6 PAYMENTS AND SECURITY SETTLEMENT SYSTEMS

2.6.1 TARGET2-LU

On 19 November 2007, the real-time gross settlement system LIPS-Gross migrated its activity to the new system TARGET2-LU. Since then, the new platform has been jointly operated by the central banks of the Eurosystem. 28 direct participants (25 in 2007) and two ancillary systems are registered with the Luxembourgish component of TARGET2 (TARGET2-LU).

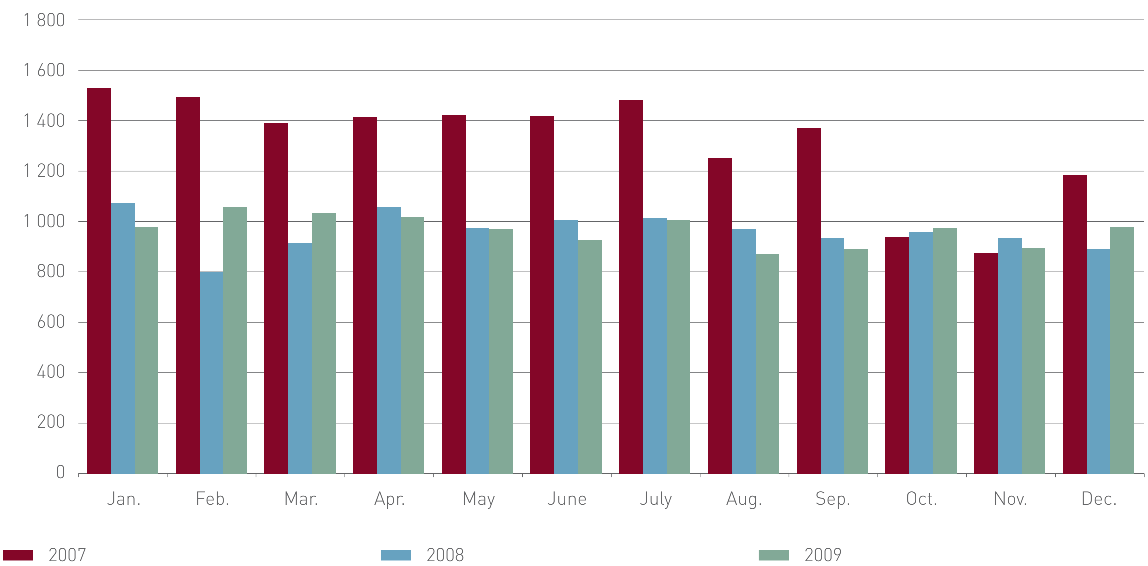
Domestic payments

In 2009, participants in TARGET2-LU exchanged a monthly average of 20 684 payments (against 21 015 in 2008) for a value of 267.8 billion euros (against 274.0 billion euros in 2008). 12 972 or 62.7% of these payments were customer payments. Their value represented a monthly average of 7.0 billion euros or 2.6% of the domestic value exchanged.

In TARGET2-LU, decreases of volumes and values have largely been triggered by the financial crisis that contributed to a decrease of interbank transactions.

The following graph illustrates the evolution of average daily volumes in domestic payments.

Chart 2.18:
Domestic payments: evolution of average daily volumes



Cross-border payments[1]

In 2009, participants in TARGET2-LU sent a monthly average of 42 232 payments towards other countries of the EU (43 772 payments in 2008) for an average value of 573.3 billion euros (600.8 billion euros in 2008). This volume included 22 821 customer payments representing 54.0% of the total. In value, customer payments amounted to a monthly average of 15.2 billion euros or 2.7% of the total value.

The volume of cross-border payments sent decreased by 3.6% and the value exchanged by 4.8% in comparison to 2008. The average value per transaction sent was 13.6 million euros (13.7 million in 2008). The financial crisis was again at the origin of these changes.

With a monthly average of 35 983 payments, participants in TARGET2-LU received less payments than they sent. However, the total value of payments received was higher than the value sent.

1 Cross-border Payment: a payment exchanged between a participant in TARGET2-LU and a participant in another composing system of TARGET2

The following graphs display the evolution of average daily volumes and values in cross-border payments sent by Luxembourgish participants.

Chart 2.19:
Cross-border payments sent: evolution of average daily volumes

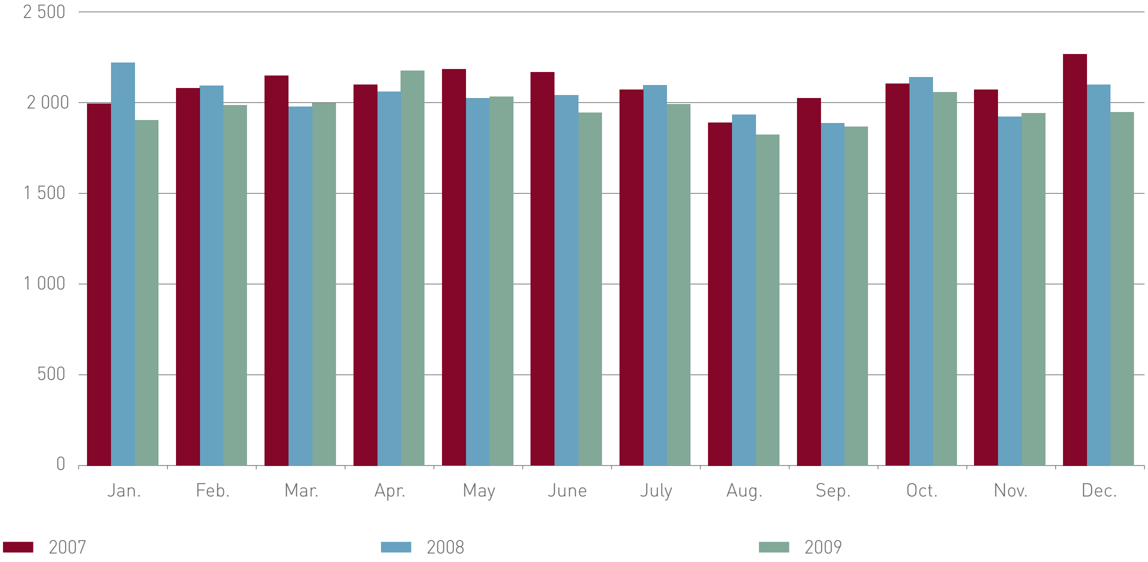
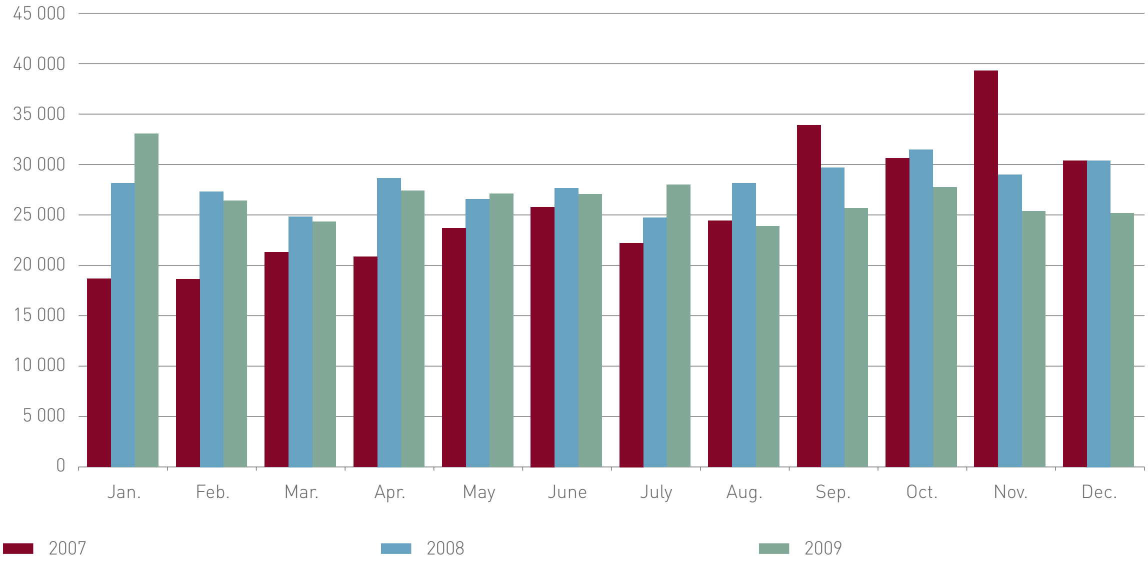


Chart 2.20:
Cross-border payments sent: evolution of average daily volumes (millon euros)



Aggregated figures of domestic and cross-border payments

The total number of payments sent by participants in TARGET2-LU in 2009 amounted to 754 980 (777 445 in 2008, decrease of 3% within one year). 35 793 or 4.7% of all payments were customer payments.

The following table provides a global overview of average daily volumes of payments per year. In general, volumes exchanged in 2009 have decreased in comparison to 2008, above all in cross-border payments.

Table 2.2: Volumes of payments in daily averages

	Domestic		Cross-border sent		Total sent	Cross-border received	
	Volume	% volume sent	Volume	% volume sent	Volume	Volume	% volume sent and received
2007	1 344	39.33%	2 073	60.67%	3 417	1 681	32.97%
2008	963	31.97%	2 049	68.03%	3 012	1 687	35.90%
2009	970	32.87%	1 981	67.13%	2 951	1 616	35.38%
Change 2008-2009	**+0.7%**		**-3.3%**		**-2.0%**	**-4.2%**	

The average monthly value of all payments sent was 841.2 billion euros of which 22.1 billion euros (2.6%) represented customer payments.

TARGET2-LU compared to other systems participating in TARGET2

In 2009, all systems participating in TARGET2 transferred a monthly average of 5.07 million domestic payments (5.77 million in 2008). The part of Luxembourg represented 0.4% of this volume.

In addition, 2.15 million of cross-border payments (2.12 million in 2008) for a value of 11 593 billion euros (17 997 billion euros in 2008) were carried out as a monthly average. Luxembourg contributed for 2.0% in the volume and for 4.9% in the value exchanged cross-border.

Availability and performance of TARGET2

The availability of TARGET2-LU was 100% in 2009, compared to 99,96% in 2008.

The SSP received a daily average of 341 552 payment instructions. 99.96% of them were settled within 5 minutes and the remaining 0.04% within 15 minutes.

2.6.2 Retail payments in Luxembourg

Next to banknotes and coins, the most used payment instruments in Luxembourg are payment cards, credit transfers and direct debits.

Credit transfers:

The settlement of credit transfers can be processed in the banks internally, on a bilateral basis between the concerned banks or through a payment system (for instance TARGET2 or STEP2[2]). The bulk of Luxembourg credit transfers and standing orders are however processed on the pan-European platform STEP2.

2 The STEP2 system is managed by the Euro Banking Association (EBA)

In 2009, Luxembourg participants sent 72 659 transactions for a value of €165 million on a daily average through the STEP2 system. Domestic[3] transactions accounted for 68% in volume (close to 49 346 operations a day) and 62% in value (€102 million). The remaining volume is cross-border.

The payments sent by the Luxembourgish community in STEP2 strongly increased in 2009 with a growth of respectively 10% in volume and 25% in value as compared to 2008. The yearly growth of the domestic activity was 2% in volume and 19% in value.

Table 2.3: Annual variation of the activity in STEP2:

Annual variation	2009/2008	2008/2007
Total volume	10%	16%
Total value	25%	50%
Domestic volume	2%	10%
Domestic value	19%	40%

Direct debits:

Until the European direct debit (Sepa Direct Debit) takes off, direct debits are domestic payments that are cleared either internally or bilaterally by banks.

In 2009, the volume of direct debits amounted to 13.97 million for a value of €6 504 million.

Payment cards in Luxembourg:

Two different types of payment cards are to be distinguished, debit cards and credit cards. The national debit card system is called Bancomat. The majority of debit cards is co-branded with the international system Maestro. Credit cards issued in Luxembourg are mainly branded Visa and Mastercard. At the end of December 2009, the total number of debit cards issued by banks in Luxembourg and managed by the Cetrel[4] reached nearly 576 000 (573 000 in 2008). The number of credit cards issued by banks in Luxembourg at the same time was over 484 000 (441 000 in 2008).

In 2009 the number of transactions[5] processed with debit cards issued in Luxembourg[6] totalled 40.59 millions (37.6 in 2008) for a value of €3.19 billion (3.01 in 2008). The number of transactions processed with credit cards amounted to 21.89 million transactions (19.88 in 2008) for an amount of €2.27 billion (2.15 in 2008).

Regarding transactions processed on Luxembourg's territory with cards issued in Luxembourg or outside the country, the volume of transactions with debit cards amounted to 38.31 million (39.24 million in 2008) for a value of €2.72 billion (€2.74 billion in 2008) and to 21.39 million (21.87 million in 2008) equivalent to €1.87 billion (€1.95 billion in 2008) for transactions processed with credit cards.

3 A credit transfer or a direct debit is considered as domestic when both the payer and the payee have their payment account with a Luxembourgish institution.

4 Centre de Transferts Electroniques; http://www.cetrel.lu

5 Payment transactions and cash withdrawals at ATMs. Data from the main cards processor.

6 Transactions in Luxembourg and abroad.

MiniCash is the name of the e-money purse in Luxembourg. It consists in a memory chip set up on a Bancomat debit card on which the cardholder can transfer an amount of money exchanged in e-money. In 2009, 2.10 million transactions were realised for a total amount of €5.49 million (compared to 2.18 million transactions for a value of €5.82 million in 2008).

The implementation of the SEPA project for non-cash payments:

The SEPA (Single Euro Payment Area) project is consistent with the setting up of the euro as a single currency. It foresees the creation of a single euro payments area in which all payments are considered as domestic, without any distinction between national and cross-border payments.

The SEPA project is being implemented by the European banking industry through the European Payments Council (EPC)[7]. The Eurosystem and the European Commission are the catalysts of this project.

SEPA aims at providing common payment instruments, which are ruled by a harmonized legal framework.

The single set of payment instruments will enable payments in euro to be realised as easily and under the same conditions as domestic payments, independently of the country of destination within the SEPA area which encompasses 32 countries:

- the *SEPA Credit Transfer* (SCT) was launched on 28 January 2008.
- the *SEPA Direct Debit* (SDD) was launched on the 1st November 2009.
- the *SEPA Cards framework*: SEPA for payment cards foresees that a cardholder is able to use its card in the SEPA area and that all merchants are able to accept all SEPA compliant cards, as far as it is economically justified. Common processing standards are being elaborated at the European level; their implementation is foreseen for 2010-2012.

In Luxembourg, the SEPA project is being coordinated by the Association des Banques et Banquiers Luxembourgeois (ABBL) through a committee regrouping the representatives of the main credit institutions active in retail banking as well as representatives of the national supervisory authorities.

The Luxembourgish banks have already widely adopted the European credit transfer for retail operations. The adoption of the European direct debit will take place in 2010.

The law of 10 November 2009, that transposes in particular the directive 2007/64/EC of 13 November 2007 regarding payment services in the internal market, brings significant changes in the field of payments in Luxembourg. A more detailed description is provided in the legal part of this annual report, more precisely in paragraph 3.3.1.2.

2.6.3 The general framework of eligible collateral in the Eurosystem credit operations

2.6.3.1 The list of eligible assets

All credit operations of the ECB and national central banks are based on "adequate collateral"[8]. Consequently, each counterparty of the Eurosystem guarantees the credit received from a Eurosystem central bank by providing assets as collateral. These assets have to fulfil specific eligibility criteria specified by the Eurosystem in the General Documentation on Eurosystem monetary policy instruments and procedures. The list of eligible assets is published on the website of the ECB.

7 For more information regarding the EPC: www.europeanpaymentscouncil.eu

8 Article 18 of the Statute of the ESCB and the ECB, article 22 of the founding law of the BCL.

This single list for Eurosystem credit operations comprises two different asset classes, marketable assets (securities) and non-marketable assets (in particular credit claims). In October 2008, the Governing Council decided to expand temporarily the list of eligible assets until end 2009. The following assets have been added to the list of eligible assets:

- Marketable debt securities denominated in USD, GBP, and JPY, provided that they are issued and settled in the euro area, that the issuer is established in the European Economic Area (EEA), and that the securities fulfil all other eligibility criteria.
- Debt instruments issued by credit institutions, which are traded on accepted non-regulated markets specified on the website of the ECB.
- Subordinated debt instruments when they are protected by an acceptable guarantee as specified in the General Documentation.
- Marketable and non-marketable assets with a credit assessment lower than A- and above or equivalent to BBB-, with the exception of asset-backed securities.

Specific haircut add-ons are applied to these instruments. Subject to positive eligibility assessment such assets are included in the list of eligible assets published and updated on a daily basis on the website of the ECB.

In May 2009 the Governing Council decided to prolong the temporary extension of the list of eligible assets until 31 December 2010.

Concerning asset backed securities (ABS), the Governing Council decided in November 2009 to require at least two ratings from an accepted external credit assessment institution for all ABS issued as of 1 March 2010. The eligibility of these assets will be determined according to the "second-best" rule meaning that not only the best but also the second best available rating must comply with the minimum threshold applicable to ABS. As of 1 March 2011, the second-best rule and the requirement to have at least two ratings will be applied to all ABS.

Eligible assets can be used throughout the whole euro area in order to collateralise credit operations with the Eurosystem. According to the nature of the assets and to the country in which they are settled, counterparties use different channels and procedures to mobilize collateral. Non-marketable assets are either mobilized via appropriate handling procedures developed by each NCB (domestic mobilisation) or via intermediation of a correspondent central bank (cross-border mobilisation). The mobilisation of marketable assets requires the involvement of one or of several securities settlement systems.

2.6.3.2 Eurosystem as a user of securities settlement systems

Selection of central securities depositories at the domestic level

In order to meet the requirement of "adequate collateral"[9], the Eurosystem also assesses against specific safety criteria securities settlement systems operated by central securities depositories (CSDs) that are settling securities used in the framework of central bank credit operations. Thus, the system of a national CSD is eligible if it obtains, after a compliance check with the Eurosystem user standards, the formal approval of the Governing Council. In this context, the Eurosystem assessed all SSSs and the links between SSSs in 2009. The evaluation showed that in Luxembourg the systems operated by Clearstream Banking Luxembourg S.A. (CBL) and by VP Lux S.à r.l. are eligible for the mobilisation of securities by the Eurosystem's counterparties.

9 Article 18 of the Statute of the ESCB and the ECB, article 22 of the founding law of the BCL.

Cross-border use of collateral

Besides using eligible domestic securities settled via the national depository, counterparties can receive credit from their national central bank by using collateral issued in a depository located elsewhere in the euro area. The Eurosystem sets two procedures for such cross-border use of collateral. Counterparties may use

– the CCBM[10]; and
– links established between securities settlement systems of CSDs.

Currently two types of links are eligible: direct links and relayed links. In a given securities settlement system located in a country of the euro area, direct links make available securities issued in a system of another euro area country, thanks to bilateral accounts that the two systems maintain with each other. Relayed links enable the transfer of securities between two systems without bilateral accounts by using a third system with which the two systems have bilateral accounts. Links have to be approved by the Governing Council before being used for the collateralisation of central bank credit operations. In 2009, Luxembourg counterparties had the possibility to use the direct links between CBL and Clearstream Banking Frankfurt A.G., Euroclear, the SSS operated by National Bank of Belgium, Monte Titoli (Italy), OeKB (Austria), Euroclear Netherlands, Euroclear France, and KDD (Slovenia).

Securities settlement in central bank money: TARGET2-Securities

In view of a fragmented post-trading market infrastructure comprising a multitude of securities settlement systems, and in view of the need to have a European securities settlement infrastructure, the Eurosystem continued in 2009 its work for the development of the system TARGET2-Securities (T2S). The go-live of T2S, which will deliver securities settlement services to CSDs, is scheduled for 2014. The project consists of the implementation of a single platform that deals with securities settlement operations of the different CSDs in a harmonised way, with simultaneous settlement of the securities leg and of the cash leg in central bank money. It is a part of the more general process of European financial integration leading to a harmonisation of procedures and to a substantial reduction of costs.

The year 2009 can be qualified as transition year, with on the one side the preparatory phase and on the other side the start of the specification phase of the project. The most remarkable events and steps in the project were:

– Establishment of the TARGET2-Securities Programme Board in spring 2009, a management body that develops proposals for the Governing Council and that effects tasks of a technical nature.
– Signature in July 2009 of a Memorandum of Understanding between the Eurosystem and central securities depositories, amongst which all CSDs of the euro area as well as nine CSDs of non-euro area European countries. The signature of the Memorandum of Understanding reconfirms the CSDs' support for the T2S project.
– Finalisation and publication of the General Functional Specifications of T2S. These specifications describe how the T2S software will fulfil the User Requirements.
– Start of the elaboration of the User Detailed Functional Specifications, which will provide relevant actors (CSDs, users, national central banks) with the necessary information for preparing interaction of their systems with T2S.

10 Correspondent Central Banking Model, see section 2.6.4.

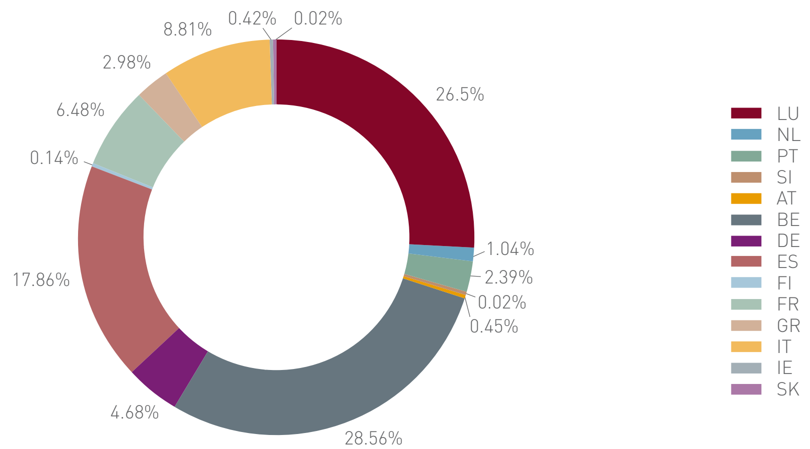
At the national level, the BCL has started to analyse issues relevant for the Luxembourg market's future access to T2S, along with CBL and Luxembourg banks. In 2010, a new CSD named LuxCSD was established. It will enable its participants to settle in central bank money compatible with the T2S platform.

2.6.4 Correspondent Central Banking Model (CCBM)

The main objective of the CCBM is to enable counterparties of the Eurosystem to use securities on a cross-border basis even if there is no eligible link between the national depository and the foreign depository in which the counterparty holds securities. For this purpose, in the CCBM each national central bank acts on behalf of the other central banks as a custodian for securities held at the national depository. This procedure involves first of all a central bank called a correspondent central bank (CCB), which differs from the central bank granting the credit to the counterparty. The CCB holds the account at the CSD in which the deposited securities are registered. The home central bank (HCB) grants the credit to its counterparty on the basis of confirmations it receives from the CCB.

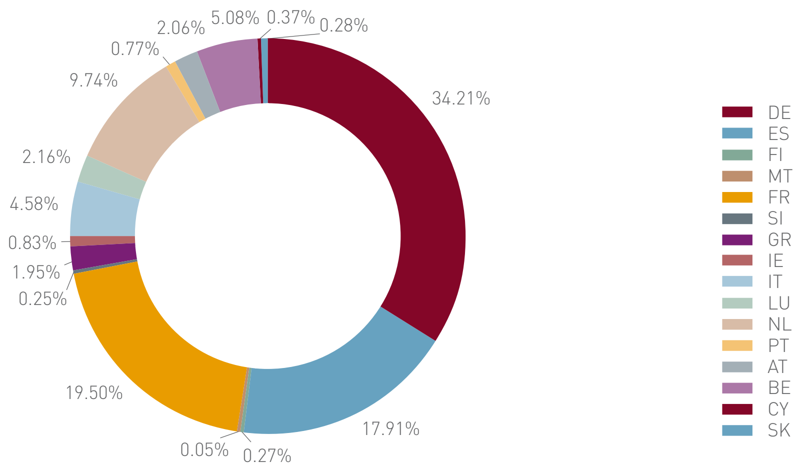
The CCBM has been a success with the counterparties and it remains the main channel for the cross-border mobilisation of collateral used in the Eurosystem's credit operations.

Chart 2.21:
Correspondent central bank in 2009



In terms of value, the most active correspondent central banks in 2009 were those of Belgium (28.56%), Luxembourg (26.15%), Spain (17.86%), and Italy (8.81%). The most active home central banks were those of Germany (34.21%), France (19.5%), Spain (17.91%), and the Netherlands (9.74%).

Chart 2.22:
Home central banks in 2009



2.6.5 The Eurosystem's future management of collateral

In July 2008 the Governing Council decided to develop and to implement a single platform for the management of collateral received from Eurosystem counterparties. This platform will be called CCBM2 (Collateral Central Bank Management) and will offer central banks the necessary functionalities for the management of securities and credit claims, both for domestic and for cross-border collateral. The operations of the platform will start before or at the latest at the same time as T2S.

The Governing Council also approved the User Requirements in July 2008, taking into account comments received from market participants in the framework of a public consultation. The User Requirements describe the functionalities of CCBM2 and constitute the basic document for the elaboration of the technical specifications of CCBM2.

In 2009, the Eurosystem continued its work to develop the technical specifications of the CCBM2 platform. These specifications will define the tasks to be accomplished by CCBM2, and its service level.

CCBM2 will closely interact with the other infrastructures operated by the Eurosystem in the area of liquidity, TARGET2 and T2S. The three systems will provide complementary services. For instance, on the basis of securities settled in T2S, CCBM2 will update a counterparty's credit line in TARGET2. Thus, for Eurosystem counterparties, CCBM2 also facilitates the realisation of benefits from TARGET2 and T2S. In this context, in 2009, the Eurosystem continued its work concerning the potential development of a single and harmonised technical access to the three infrastructures through a "Eurosystem Single Interface".

2.7 FINANCIAL STABILITY

2.7.1 Macro-prudential supervision

In 2009, the Banque centrale du Luxembourg underwent a reorganization of its supervisory and financial stability activities. This new set-up aims at improving the bank's approach to macro-prudential supervision as well as increasing the effectiveness of the risk analysis of the internally managed portfolio. In addition to the macro-prudential analysis, the assessment of systemic risk in the Luxembourg financial sector is henceforth distinct from micro-prudential liquidity supervision.

This separation follows from the modification of the organic law of the BCL, which entrusted the central bank with the responsibility for supervising the general liquidity situation on the markets as well as evaluating market operators for this purpose. Given the complementarities of the macro- and micro-prudential approaches, their functional separation has been accompanied by a strong cooperation mechanism. In particular, this process has been illustrated by a joint study focusing on the market and funding liquidity stress testing of the Luxembourg banking sector.

The financial structures and risk profiles that characterize actors in the financial market, including either banking institutions or insurance companies, might turn out to be weakening points in the context of unpredictable and abrupt developments. For this reason, the macro-prudential approach is focused on obtaining a better understanding not only of the underlying factors, but the systemic risk arising from the interconnectedness between financial actors. Work in this domain has recently been undertaken at the Central Bank of Luxembourg, allowing, on the one hand, for a diagnosis of the vulnerability of the banking sector during "normal" conditions, and, on the other hand, the stress-testing of the banking sector under simulated adverse, but plausible, scenarios.

It is of the utmost importance for the BCL to be able to anticipate the factors which could destabilize the credit institutions that represent such a dominant component of the Luxembourg financial sector. To this end, an aggregate financial vulnerability index has been monitored regularly for the last four years. As an indicator, this index offers a consistent methodological framework and includes a number of variables such as the return of shares of financial institutions, their profitability and leverage ratio, as well as variables describing the competitive structure of the banking sector, that reflect the level of vulnerability of the banking sector. The relationship between this indicator and the various macro-economic variables is significant. As a result, this indicator can be forecasted, conditioned on the macroeconomic projections for the euro area, up to a period of two years.

Since the second quarter of 2009, the rebound in value across most asset classes, primarily supported by a gradual economic recovery in most of the main industrialized countries, has been accompanied by an improvement in the profitability of Luxembourg banks. Despite historically low levels of commission income, the intermediation margin for transformation activities has increased, having benefitted from a steeper yield curve. Nevertheless, many uncertainties persist as the economic recovery has been largely supported by the extraordinary support measures taken by central banks and governments. These measures, however, remain temporary. From a macro-prudential perspective, stress-tests are used to assess the impact of "exceptional but plausible" macroeconomic shocks on the Luxembourg banking sector. In particular, stressed scenarios involving real GDP, interest rate, property prices are used to compare counterparty default risk for adverse and baseline scenarios. Counterparty default risk is proxied by the ratio of loan-loss provisions to total loans. This quantity is subsequently used to calculate Tier 1 capital requirements under the stressed scenarios.

Given its expertise and experience in the field of macro-prudential supervision, the BCL continues to contribute to the work of various committees of the European System of Central Banks as well as to their sub-committees. It is worth mentioning that the role of national central banks in the financial supervision process will be reinforced by the current reform of the European supervisory architecture, especially with the creation of the European Systemic Risk Board, ESRB (see box below).

Regarding the analysis of credit and counterparty risks for the internally managed portfolio, the objective of the BCL is to conduct a thorough examination of the various sources of risks in order to optimize investment opportunities and portfolio returns. The available analytical tools have been expanded during the year, following the internal development of a method based on bond market prices for the estimation of the risk-neutral probability of default.

Box 2.1:

THE REFORM OF THE EUROPEAN FINANCIAL SUPERVISORY ARCHITECTURE

Based on the recommendations issued by the High level group chaired by Jacques de Larosière in February 2009, the European Commission published on 23 September 2009, five legislative proposals aimed at establishing a new European financial supervisory architecture.

The proposed reform relies on the two complementary pillars of supervision, namely the micro- and macro-prudential dimensions. In particular they are used to establish:

- A European System of Financial Supervisors (ESFS), in charge of the micro-prudential supervision of the European financial system. The ESFS will consist of a network of national financial supervisors cooperating with three newly established European Supervisory Authorities (ESAs). These Authorities ensue from the transformation of the existing European supervisory committees in a European Banking Authority (EBA), a European Securities and Markets Authority (ESMA), and a European Insurance and Occupational Pensions Authority (EIOPA). The three ESAs shall contribute to i) improving the functioning of the internal market, especially through a high, effective and consistent level of regulation and supervision, ii) protecting depositors, investors, policyholders and other beneficiaries, iii) ensuring the integrity, efficiency and orderly functioning of financial markets, iv) safeguarding the stability of the financial system, and v) strengthening international supervisory coordination.

- A European Systemic Risk Board (ESRB), responsible for macro-prudential oversight of the European financial system. The ESRB shall i) determine and/or collect, as appropriate, and analyse all the information relevant for its mission; ii) identify and prioritise such risks; iii) issue warnings where risks are deemed to be significant; iv) issue recommendations for remedial action where appropriate; v) monitor the follow-up to warnings and recommendations; vi) cooperate closely with the ESFS; and vii) coordinate with international institutions on matters related to macro-prudential oversight.

Consequently, the ESRB should play an important role in developing a European macro-prudential perspective to address the issue of a fragmented risk analysis at the national level. It should also reinforce the effectiveness of early warning mechanisms by taking advantage of cooperation in micro- and macro-prudential analyses. Finally, it will allow for the translation of risk assessments into concrete policy actions.

Given the wide scope and the sensitive nature of its tasks, the ESRB will not be granted a legal personality and will not have binding powers. Its legitimacy shall come from its reputation resulting from its high level composition, the independence of its judgements, the quality of its analyses and the specificity of its recommendations. Moreover, the proposed framework will only be able to properly function if the ESRB and the ESFS cooperate in an efficient and transparent manner. On the one hand, the ESRB will provide the necessary information related to systemic risk to the ESAs. On the other hand, the three ESAs will provide the required data to the ESRB on a regular basis and will ensure a timely follow-up of the alerts and recommendations issued by the ESRB. The ESRB will also have to closely cooperate with international entities in charge of macro-prudential supervision, such as the IMF and the FSB.

The composition of the ESRB reflects the competences and the experience of central banks in the field of financial stability since its main decision-making body, the General Board, shall be mainly composed of central banks. Indeed, all the members of the General Council of the European Central Bank (ECB) shall be represented. Furthermore, the analytical work and logistical support to the ESRB will be provided by a Secretariat, which will be ensured by the European Central Bank.

Consequently, the new architecture will require an increased contribution from the Central Bank of Luxembourg to the activities of the ESRB. The BCL will donate its expertise in the fields of macroeconomic, financial and monetary analysis, through the participation of the Governor of the BCL to the General Board of the ESRB and through the contribution of its staff to analytical and technical work.

The legislative proposals from the European Commission, on which the ECB has been consulted, will have to be adopted by both the European Parliament and by the Council or only by the Council, according to the applicable legislative procedure. At its meeting on 20 October 2009, the ECOFIN Council reached a broad agreement on the texts establishing the ESRB and entrusting the ECB with specific tasks concerning the functioning of the ESRB. Afterwards, on 2 December 2009 the ECOFIN Council agreed on a general approach regarding the establishment of the three ESAs. The legislative proposals are currently being examined by the European Parliament as a package, with the view of implementing the new supervisory architecture at the beginning of 2011.

2.7.2 Micro-prudential Supervision

2.7.2.1 Liquidity Supervision

Following an amendment of its law dated 24 October 2008, the Banque centrale du Luxembourg has been entrusted with the task to supervise the liquidity situation of market operators. As opposed to macro prudential supervision, which aims at analysing the systemic risk and possible contagion effects within the financial system, liquidity supervision of the market operators is intended for assessing the liquidity situation of the individual operators as well as their liquidity risk management framework. The 2008 market turbulences being due to shortcomings in the liquidity risk management framework of financial market operators, the management of liquidity and its related risk has become one of the major topics on the agenda of supervisory authorities both at national and international throughout the last two years. This momentum has been reflected in Luxembourg by entrusting the Banque centrale du Luxembourg with the liquidity supervision of market operators.

The year 2009 has been mostly dedicated to the definition and the set-up of an appropriate framework pertaining to the performance of this new mission. In a first stage, and in order to define the scope and content of its mission, the Banque centrale du Luxembourg has published a regulation (BCL regulation 2009/N°4 dated 29 April 2009), which defines the rules and responsibilities of market operators in the field of liquidity risk management. While the general framework related to the supervision of liquidity is consistent with the principles and recommendations defined in international fora and in strict observance of the proportionality principle, the Banque centrale du Luxembourg particularly expects market operators, among them notably credit institutions, to develop adequate policies and procedures to enhance the management of liquidity, which enable them to adequately mitigate the liquidity risk at local level.

In parallel to the publication of the above mentioned regulation, the Banque centrale du Luxembourg developed its internal framework and methodology to efficiently perform its supervisory task in 2009. This framework relies on two pillars, on the one hand the ongoing off-site monitoring of market operators and on the other hand on-site inspections.

The ongoing off-site monitoring is based on the regular analysis of both qualitative and quantitative information at the level of individual market operators as well as at an aggregate level. In order to streamline and enhance the efficiency of its daily monitoring of the liquidity situation of market operators, the Banque centrale du Luxembourg also implemented a Daily Liquidity Reporting (DLR). This DLR, which is required from a selected sample of credit institutions, has been introduced in the first half of 2010.

On-site inspections of market operators allow the Banque centrale du Luxembourg to assess the existing framework and procedures established by individual market operators and to assess their compliance with best practice. In 2009, the Banque centrale du Luxembourg has been targeting, for such on-site visits, mainly credit institutions which are most exposed to liquidity risk given their size and the nature of their business model. In line with its mission, the Banque centrale du Luxembourg will extend its supervision to other market operators, mainly the investment companies and insurance companies, where the Banque centrale du Luxembourg cooperates with the Commissariat aux Assurances.

In the framework of its supervision mission, the Banque centrale du Luxembourg cooperates with the Commission de surveillance du secteur financier (CSSF). In this context, on-site inspections of the market operators are generally conducted jointly with the CSSF. The cooperation also covers the monitoring of international regulatory developments and their transposition into national supervisory practices. In practice, the Banque centrale du Luxembourg and the Commission de surveillance du secteur financier have joint representation in working groups related to liquidity at the level of the Basel Committee on Banking Supervision (BCBS) and the Committee of European Banking Supervisors (CEBS). At the end of 2009, both those committees have published proposals for liquidity risk mitigation which are currently subject to public consultation and which should lead, by the end of 2010, to the definition of new liquidity standards.

Beyond the daily supervision and the regulatory monitoring, the micro-prudential function has conducted in 2009 studies and specific analytical researches. Those studies and analytical researches have been published as Working Papers or as articles in the yearly financial stability review. The first study provided an analytical review of the liquidity risk management practices within the Luxembourg banking sector and in particular with an analysis of domestic practices in the area of liquidity stress testing and contingency funding plans. The second study dealt with the liquidity monitoring system to assess the sensitivity of credit institutions to certain liquidity drivers and triggering events. This tool allows measuring the sensitivity of credit institutions both at individual as well as at a consolidated level.

2.7.2.2 Oversight

One mission of the Banque centrale du Luxembourg, as a member of the European system of central banks, is to promote the smooth functioning of payment and securities settlement systems. This role meets several objectives.

First, central banks aim at fostering the stability of the financial system. In this respect, central banks endeavour to limit the systemic nature of a potential failure of certain infrastructures or of a major participant. Under certain circumstances, such a failure could indeed threaten the stability of other financial institutions or of the markets in general. Hence, there is a need for central banks to ensure that infrastructures have set up appropriate mechanisms for risk identification, monitoring and mitigation.

Central banks also have a complementary objective to oversee the efficiency of systems. The efficiency of systems is, among others, bound to costs and performance aspects.

Finally, central banks are concerned with the security of commonly used payment instruments with a view to maintaining the public confidence in the currency.

In 2009, the Luxembourg legislator reinforced the legal framework of the Banque centrale du Luxembourg in relation to the oversight of infrastructures. Thus, following the adoption of the law of November 10, 2009, the Banque centrale du Luxembourg (BCL) is in charge of the surveillance of the security and the efficiency of payment and securities settlement systems as well as of the security of payment instruments. In accordance with this law, the BCL published the list of overseen systems in the Mémorial and on its website. Finally, the BCL is the competent authority to receive from other European competent authorities information on participants' default as well as to communicate such information to these authorities.

Oversight of securities settlement systems

In 2009, the BCL pursued its oversight of securities settlement systems operated by Clearstream Banking SA & and by VP Lux.

The oversight framework which applies to securities settlement systems is mainly based on recommendations, which have been jointly issued by the European System of Central Banks and the Committee of European Securities Regulators in May 2009. Following the adoption of these recommendations, the BCL has launched a full assessment exercise of the system operated by Clearstream. In a next step, the system operated by VP Lux will also be assessed against the same recommendations.

BCL's oversight of the securities settlement systems is also based on a continuous assessment of various information, among which:

- general information,
- activity and incident related data,
- financial data,
- information concerning the systems' risk exposures as well as internal risk mitigation tools,
- information related to important system changes,
- information concerning governance and internal rules and procedures.

In 2009, the BCL signed a Memorandum of Understanding with the Czech National Bank as well as with the Monetary Authority of Singapore relating to the oversight of the system operated by Clearstream, for which certain activities were relocated in Prague and in Singapore.

The BCL also continued its cooperation with the Banque Nationale de Belgique and the Belgium and Luxembourg supervisory authorities in relation to the link between both international central securities depositories Clearstream and Euroclear.

Finally, the BCL is overseeing the system operated by VP Lux, in accordance with the cooperation agreement signed in December 2008 with the Danmarks Nationalbank.

Oversight of payments systems

The oversight of the TARGET2 payment system is performed on a joint basis by the Eurosystem members (including the BCL) under the coordination of the European Central Bank. In this context, the Eurosystem finalised in May 2009 an assessment report of the TARGET2 system against the "Core principles for the oversight of payment systems".

At national level, the Banque centrale du Luxembourg acts as an overseer for the local features providing the connectivity of the BCL to the single shared platform.

Oversight of payments instruments

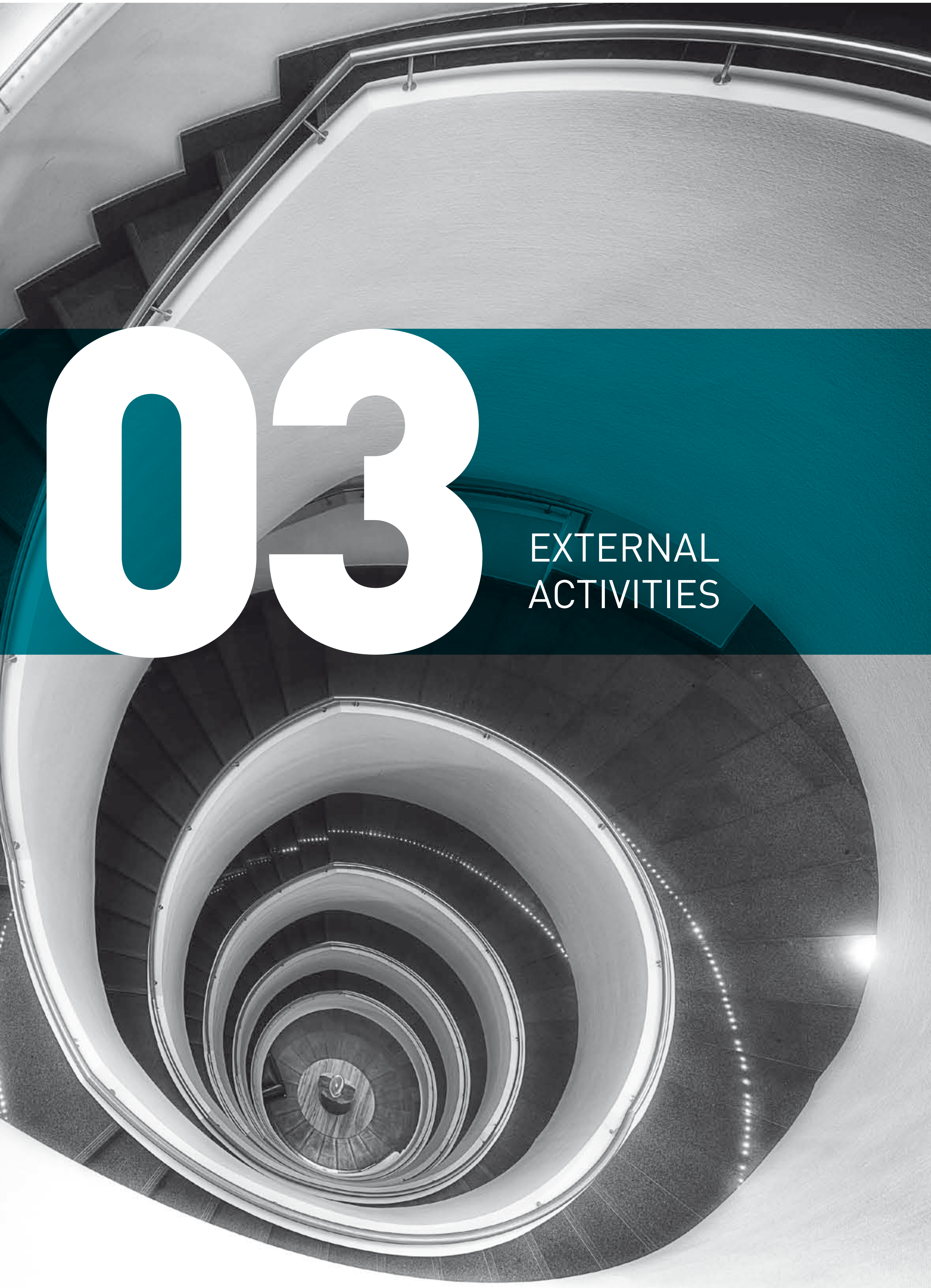
BCL's oversight of payment instruments is or will be based on the following standards of the Eurosystem:

- Oversight standards for card payment schemes (adopted in 2008);
- Harmonised oversight approach and oversight standards for payment instruments (published in February 2009);
- Two sets of oversight standards concerning credit transfer and direct debit schemes (in public consultation since August 2009);
- Future oversight standards for e-money schemes possibly foreseen for 2010.

The oversight tasks related to payment instruments include among others assessments of payment schemes against the above-mentioned standards. In this context, the BCL performed at national level an assessment of the card payment scheme operated by the "Groupement Bancomat". The evaluation of Bancomat lies within a coordinated assessment exercise of European card payment schemes by the Eurosystem.

A similar exercise is going to be performed by the Eurosystem for major credit transfer and direct debit schemes used in the Single European Payments Area as soon as specific oversight standards and assessment methodologies are finalized.

Finally, with respect to oversight activities related to e-money, the BCL defined a quantitative and qualitative reporting framework to be provided by PayPal (Europe) SARL Cie, S.C.A. and which is reviewed on a regular basis.



03 EXTERNAL ACTIVITIES

3
EXTERNAL ACTIVITIES

3.1 ACTIVITIES WITH THE INTERNATIONAL MONETARY FUND (IMF) AND OTHER INTERNATIONAL ORGANISATIONS

The BCL handles Luxembourg's financial transactions with the IMF. For this purpose, it manages Luxembourg's assets and liabilities vis-à-vis the IMF in both the general account and the Special Drawing Rights (SDR) account. As of 31 December 2009, Luxembourg's quota, recorded in full on the BCL's balance sheet, amounted to SDR 279.1 million, whereas the reserve position (the difference between Luxembourg's total quota at the IMF and the euro-denominated assets held by the IMF at the BCL) represented 18.67% of Luxembourg's quota.

The IMF's operational budget defines the currencies to be made available to its members on a quarterly basis and the distribution of reimbursements among its members. During 2009, the BCL granted credits amounting to €17.7 million.

According to Resolution 63-2 adopted on 28 April 2008 by the IMF Board of Governors, Luxembourg's quota would increase from SDR 279.1 million to SDR 418.7 million. The 19 December 2008 Law approves the amendments to the IMF Statutes and allows the Luxembourg government to take all necessary measures in view of the quota increase. However, Resolution 63-2 has not yet been accepted by the required double majority, that is by at least three fifths of the members of the institution, representing 85% of attributed voting rights.

At the end of 2009, Luxembourg held SDR 243.23 million, which represent 98.6% of its SDR allocation compared to 79.1% end 2008. This increase is mainly explained by the entry into force of a general SDR allocation on 28 August 2009 amounting to 250 billion dollars, and of a special allocation on 9 September 2009 amounting to around 33 billion dollars. The general allocation resulted in an increase of about 74% of the SDR allocation in each country. Luxembourg was allotted a total amount of SDR 229.7 million: SDR 206.9 million under the general allocation and SDR 22.8 million under the special allocation, also called "fourth amendment allocation".

As SDR trading arrangements against currencies were expected to increase following the new SDR allocations, from mid-2009 the IMF sought to widen the amounts that could be handled under voluntary SDR trading arrangements with some of its members. Thus, following a decision of the ECB Governing Council in October 2009, a great majority of Eurosystem central banks, including the BCL, decided to conclude new voluntary SDR trading arrangements with the IMF or to increase the amounts mentioned in existing agreements.

This SDR allocation is part of the mighty 1000 billion-dollar plan concluded by the London G20 Summit in April 2009 and endorsed by the International monetary and financial committee (IMFC) to curb the crisis. G20 leaders had decided to immediately provide the IMF with additional loan resources totalling 250 billion dollars, which would then be incorporated into the looser framework of new arrangements to borrow (NAB), whose amount, initially fixed at 500 billion dollars, has been exceeded. Luxembourg already participates in the former NAB up to SDR 340 million, and this amount will reach a total of SDR 970.6 million under the new NAB. The new agreements will thus go over the initial objective of 500 billion dollars.

The BCL President, being also Alternate Governor of the IMF, attended the Annual Meeting of the IMF and the meetings of the International Monetary and Financial Committee. One BCL member is on secondment to the IMF.

The BCL also attended the meetings of several working groups at the Organisation for Economic Cooperation and Development (OECD) and at the Bank of International Settlements (BIS), contributing, in particular, to the work of the OECD's Financial Markets committee (FMC) and that of the BIS' committee on the global financial system (CGFS). As every year, the BCL's Governor attended the BIS Annual General Meeting.

3.2 ACTIVITY AT THE EUROPEAN LEVEL

3.2.1 Contribution at the ECB decision-making bodies

During 2009, the Governor of the BCL participated in all 22 meetings of the Governing Council and in all four meetings of the General Council.

The Governing Council meetings are held twice a month most of them at the ECB's headquarters in Frankfurt. While the first meeting is devoted to the analysis of economic and monetary evolutions and to monetary policy decisions, the second meeting deals with issues related to the other missions of the Eurosystem. Besides these meetings, the Governing Council also takes decisions via written procedures. In 2009, some 500 legal acts were adopted by the Governing Council following this procedure; many were opinions related to draft laws at the European or national level, according to article 127 paragraph 4 of the Lisbon Treaty.

The General Council meetings, that gather the ECB President, the ECB Vice-President, and the 27 ESCB Governors together, are held in Frankfurt, four times a year.

When making decisions, the members of the Governing Council do not act as national representatives but in their personal capacity, which is reflected by the principle "one member, one vote".

Committees assist the decision-making bodies of the ECB in the fulfilment of their tasks. The Governing Council or the Executive Board can ask Committees to carry out analyses on precise topics. The Committees report to the Governing Council through the ECB Executive Board.

Committees are established by the Governing Council in accordance with article 9.1 of the ECB's rules of procedure. There are currently 16 committees, which are composed of members of the Eurosystem, but can also include, for some issues, ESCB members. Each member is appointed by the Governor of his/her national central bank or by the ECB's Executive Board. Under the aegis of Committees, working groups or task forces are established, with specific objectives, but in conformity with their Committee's mandate. The Governing Council also created High Level Groups to help solve particular issues.

The BCL contributes to the Eurosystem's and the ESCB's work through the participation in the meetings of committees, working groups and task forces of members of its staff.

3.2.2 The enlargement of the euro area

On 1 January 2009, two years after Slovenia and one year after Cyprus and Malta, the euro was introduced in Slovakia, bringing to 16 the number of euro area Member States.

3.2.3 The economic and financial committee (EFC)

A BCL representative participates in meetings of the Economic and Financial Committee (EFC). The EFC is composed of representatives from the finance ministries and central banks of EU Member States, the European Commission and the ECB. According to the Treaty, one of the tasks of the EFC is to keep under "review the economic and financial situation of the Member States and of the Union and to report regularly thereon to the Council and to the Commission".

In 2009, the EFC continued to analyse the evolution of financial stability in the EU, the risks weighing on this stability and possible reforms to be envisaged in the aftermath of the financial crisis.

The EFC also works on economic policy issues discussed at informal ECOFIN meetings, which are attended by the BCL's President and which were strongly marked, in 2009, by the economic impact of the financial crisis, especially on public finance, as well as by the proposal for reforming European financial supervision. In the context of signs of a gradual economic recovery, these discussions also dealt with the designing of appropriate exit strategies, notably vis-à-vis extraordinary fiscal measures adopted by public authorities in order to face the crisis.

3.2.4 The Committee on Monetary, Financial and Balance of Payments Statistics

In the context of the mission of the Statistical Office of the European Communities (Eurostat), the Committee of Monetary, Finance and Balance of Payments Statistics (CMFB) works on the development and coordination of statistical categories that are required under the policy implemented by the Council, the Commission and various committees assisting them. Central Banks, National Statistics Institutes as well as the Commission and the ECB are represented in the CMFB. Under the leadership of this Committee, different "task forces" operate with specific duties assigned to them.

The BCL has contributed actively in 2009 to this framework. Progress has been made particularly in terms of financial accounts, balance of payments, financial services and public finance statistics as well as national accounts.

3.3 NATIONAL ACTIVITIES

3.3.1 Legal developments

3.3.1.1 Treaty of Lisbon

3.3.1.2 Payment services, payment and securities settlement systems and payment instruments

At the national level, the organic law of the Central Bank has been amended by the law of 10 November 2009.

The law of 10 November 2009 on payment services[1] transposed into Luxembourg law the Directive 2007/64/EC dated 13 November 2007 on payment services in the internal market[2] (hereinafter, the PSD[3]), to which the BCL has contributed by participating in a working group established by the Ministry of Finance (see BCL 2008 annual Report, par. 3.3.1.6.a.) and the ECB has been consulted.

The PSD's goals are to regulate payment services uniformly within the European Union and to create a new category of financial institutions which will benefit from the European passport – the payment institutions. The PSD establishes a uniform legal framework for the achievement of the single Euro payment area (see Single Euro Payment Area project – SEPA).

The law of 10 November 2009 also transposes Directive 2000/46/EC, dated 18 September 2000, of the European Parliament and the European Council on the taking up, pursuit of and prudential supervision of the business of electronic money institutions. In addition, the 10 November 2009 law also transposes Directive 98/26/EC dated 19 May 1998 of the European Parliament and the European Council on settlement finality in payment and securities settlement systems (hereinafter the SFD[4]), which was previously part of the amended law of 5 April 1993 on the financial sector.

"Oversight" mission of the BCL

The law also ensures the strengthening of the implementation of one of the fundamental missions of the Central Bank – the mission of promoting the smooth operation of payment systems and securities settlement systems[5]. The law replacing the former law dated 10 January 2001, fully recognizes the oversight power of the BCL with respect to payment and securities settlement systems and payment instruments, by inserting a new paragraph 5 in article 2 of the BCL's organic law: "In view of its mission relating to the promotion of the smooth operation of payment systems, the Central Bank shall ensure the efficiency and safety of payment systems and securities settlement systems, as well as the safety of payment instruments".

The ECB[6] welcomed these amendments by pointing out that "a) they clarify the division of tasks between the CSSF and the BCL as far as payment instruments, payment systems and securities settlement systems are concerned, in line with article 105, paragraph 2 of the Treaty and article 3.1 of the Statutes of the ESCB and b) they broaden the BCL's oversight role to cover all payment and settlement systems, regardless of their designation under Directive 98/26/EC".

1 Mémorial A N°215 of 11 November 2009, p. 3698.

2 Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC, OJ, 5.12.2007, L319/1.

3 Payment Services Directive.

4 Settlement Finality Directive.

5 This task stems from fourth dash of article 127 (2) of the Treaty on the functioning of the European Union (ex-article 105 (2) of EC Treaty) and article 22 of the Statutes of the European system of central banks and of the European central bank.

6 Opinion of the ECB on the broadening of the Banque centrale du Luxembourg's oversight role by a draft law on payment services, electronic money institutions and settlement finality in payment and securities settlement systems. (CON/2009/46), paragraph 3.2.1, p.3.

Ancillary missions stemming from the SFD

Since the enactment of the law of 10 November 2009[7], the BCL has been in charge of the official database of the payment and securities settlement systems which are notified to the European Commission. Accordingly, the BCL published the 2009 database in the Mémorial B[8] and on its internet website.

The BCL also became[9] the competent authority in respect of: (i) providing notification of any decision involving the initiation of an insolvency proceedings against a Luxembourg participant to the relevant member States' competent authorities, and (ii) receiving from another member State or third party country, appointed to that effect, any notification of a decision initiating insolvency proceedings taken by the relevant judicial or administrative authority of that member State or third party country vis-à-vis their participation to a system.

Exercise of the oversight mission

The new article 27-3 of the organic law provides that "For the purpose of performing the missions set out in Article 2(5), the Central Bank may ask payment systems and securities settlement systems to provide any information relating to the operation of those systems which is necessary in order to assess their efficiency and safety and may also ask issuers of payment instruments to provide any information relating to those payment instruments which is necessary in order to assess their safety.

The Central Bank shall be authorised to perform on-site visits in order to collect the information referred to in paragraph 1. It shall coordinate with the Commission de surveillance du secteur financier to this end."

Such a new provision should, thus, enable the BCL to efficiently implement its oversight mission with respect to payment and securities settlement systems, by requiring, from these systems and issuers, any relevant information and by conducting on-site controls as deemed necessary.

Payment instruments concept

The payment instrument concept (as defined in article 1 paragraph 26 of the law) also covers any device which enables the transfer of electronic money. Indeed, electronic money is considered both a payment method[10] as well as a transfer of funds in the context of a payment transaction[11]. Any device or procedure which enables a payment transaction based on electronic money should, therefore, constitute a payment instrument pursuant to the PSD. The European Commission affords a broad and open interpretation in relation to different technologies that are used to initiate payment transactions. As such, the European Commission states that the concept of payment instrument covers "physical devices (such as cards or mobile phones) and/or set of procedures (such as PIN codes, TAN codes, digipass, login/password, etc) which a payment service user can use to give instructions to their payment service provider in order to execute a payment transaction[12]". This

7 See article 110 of the law dated 10 November 2009.

8 Mémorial B n°101 of 28.12.2009.

9 Pursuant to article 113.1 of the law dated 10 November 2009.

10 See article 1 paragraph 17 of the draft law, which incorporates article 1.3.a) of the directive 2000/46/EC referred to above: "electronic money institution": an undertaking or any other legal person, other than a credit institution as defined in Article 1, point 1, first subparagraph (a) of Directive 2000/12/EC which issues means of payment in the form of electronic money".

11 See article 1 paragraphs 23 and 31 of the law.

12 See Your questions on PSD, Payment services directive 2007/64/EC, p.31, available at http://ec.europa.eu/internal_market/payments/docs/framework/transposition/faq-2009_01_27_en.pdf

aspect is important not only in order to assess the scope of competence of the BCL with respect to payment instruments, but also to ensure an enhanced legal certainty of all relevant players. Indeed, the provisions regarding payment instruments shall apply, unless express derogation, to any instrument enabling a transfer of electronic money[13].

3.3.1.3 Regulatory power of the BCL

By inserting a new paragraph 1 in article 34 of the organic law of the BCL, the law of 24 October 2008 amending the organic law of the BCL has granted a regulatory power[14] to the BCL in accordance with the new provision included in the Constitution. In 2009, the BCL issued four regulations[15]. Regulations n°2, 3 and 5 aim at transposing some monetary policy acts of the ECB within the Luxembourg legal framework.

Regulation BCL 2009/N°4, dated 29 April 2009, is of particular interest, given that it seeks to specify the mission of the BCL with respect to the supervision of the general liquidity as granted by the law of 24 October 2008, referred to above. As underlined by the Government in the preamble of the law of 24 October 2008, "the regulation of liquidities is of particular importance for the Central Bank, since it can, together with solvability requirements and intervention as lender of last resort, (i) avoid a chain of defaults in the markets, and (ii) limit systemic risks in the future". Regulation 2009/4 states the principles and basic procedures for the prudential liquidity supervision by the BCL; it defines the scope and provides a general framework for the exercise of the liquidity supervision and it defines the market participants' general obligations in terms of management of the liquidity risk[16]. It is intended to be completed by specific regulations.

3.3.1.4 Independent auditor's mandate

The law of 10 November 2009 referred to above also specifies the appointment process of the independent auditor (article 124). The BCL Council proposes an independent auditor to the Governing Council in accordance with the procedure prescribed by the Statutes of the ESCB and the ECB. Once the authorization procedure at European level is completed, the auditor is appointed by the Government in Cabinet. The auditor's mandate is five years.

3.3.1.5 Share capital increase of the BCL

Under a grand-ducal regulation, dated 22 May 2009, taken on the basis of article 4 (1) of the organic law, as amended by the law of 24 October 2008, the share capital of the BCL was increased up to EUR 175,000,000 by capitalization of reserves in an amount of EUR 150,000,000.

3.3.1.6 Legal rate of interest

The rate was fixed at 4.25 per cent for the year 2009 by a grand-ducal regulation of 22 January 2009 (published in the Mémorial A no. 8 of 27 January 2009, page 88). For 2010, this rate has been fixed at 3.50 per cent by a grand-ducal regulation of 5 February 2010 (published in the Mémorial A no. 24 of 23 February 2010, page 480). It is observed that this rate does not correspond to a specific rate of reference of the money markets.

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13 See article 52 paragraph 5 of the law.

14 For more details, see BCL's annual Report 2008, paragraph 3.3.1.1.

15 For a complete list, see annex 5.2 below.

16 For a detailed analysis, see "Financial Stability Report 2009 of the BCL", pages 13-27

3.3.2 External committees

3.3.2.1 The Economic Committee (Comité de conjoncture)

The Economic Committee acts on the basis of the legislation which authorises the government to take measures to stabilise employment. Thus, the Committee provides a framework for examining business cycle fluctuations in the country's economy and for monitoring economic policy issues as they arise.

The BCL takes part in the Economic Committee for two reasons: it collects information on Luxembourg's cyclical position and it contributes to the Committee's work by monitoring and commenting on the latest developments in the monetary domain and in the financial sector.

3.3.2.2 The Consumer Price Index Commission (Commission de l'indice des prix à la consommation)

The BCL has an observer status at the meetings of the Consumer Price Index Commission (CPIC), which is in charge of advising and assisting STATEC in the preparation of consumer price indices. This Commission also issues technical opinions on the design of the monthly consumer price index and supervises the compliance of this index with national and European regulations. The BCL presents its inflation projections for Luxembourg to the CPIC and provides explanations related to BCL work in the area of consumer prices.

3.3.2.3 The Committee "Comptabilité bancaire"

The committee "*Comptabilité Bancaire*" set up by the Commission de surveillance du secteur financier (CSSF), aims at ensuring an exchange of views between the supervisory authority, the BCL and players of the Luxembourg financial centre. The committee is consulted during the preparation of CSSF circulars concerning bank accounting issues.

Committee members met once in May 2009 to discuss various aspects of IAS / IFRS, the new regulation of capital adequacy, financial reporting (FINREP) and common reporting (PRC) defined by the "Committee of European Banking Supervisors". In this context, the committee discussed the consolidation: IFRS versus CRD (Capital Requirements Directive) concerning national discretion, the link between taxonomy and FINREP IFRS taxonomy and the definition of retail banking.

3.3.2.4 The Higher Council for Statistics of Luxembourg

The Higher Council for Statistics carries out advisory functions on behalf of the national statistical institute of Luxembourg (STATEC) and is mandated to provide appraisal on the STATEC's annual programme.

The BCL contributes in two ways to the work of the Higher Council for Statistics: on the one hand, it provides its opinion on the documents elaborated during meetings and submitted to it and, secondly, it provides the STATEC with data collected on the financial centre to enable the latter to achieve its work programme.

3.3.2.5 The XBRL Luxembourg asbl

XBRL (eXtensible Business Reporting Language) is a financial reporting standard based on XML, which main objective it is to improve the correct character, transparency and efficiency of internal and external reporting. The non-profit association XBRL Luxembourg asbl includes some twenty organisations using XBRL and / or providing services related to XBRL technology. The role of the association is to promote the XBRL standard within Luxembourg's economy.

The BCL, as a founding member of XBRL Luxembourg, will analyse the potential to adopt the XBRL standard in the context of the statistical reporting it collects from companies of the Luxembourg financial sector.

3.3.3 BCL Committees

3.3.3.1 The Statistics committee

The Statistics Committee has been set up by the BCL to ensure a constant dialogue between the actors of the financial centre that are subject to statistical reporting requirements and the main users of this data. The Committee is regularly consulted on issues relating to the statistical reporting in the financial sector.

3.3.3.2 The Monetary and banking statistics consultative commission

The Monetary and banking statistics consultative commission has been set up by the BCL to enhance the dialogue between reporting agents and the central bank. The commission also ensures the efficiency of the reporting procedures in the area of monetary and banking statistics. During 2009, the Commission has been informed and consulted on various conceptual issues in relation with the revision of statistical data collection for credit institutions, the security-by-security reporting for credit institutions as well as the revision of the statistical data collection on interest rates applied by credit institutions.

3.3.3.3 The Balance of payments statistics consultative commission

The Balance of payments statistics consultative commission acts as an advisory group and assists the BCL in its mission to collect data in the areas of balance of payments and international investment position. The Commission ensures an efficient organisation of data collection in order to avoid redundancies and to limit the collection charge for the entities requested to submit statistical data.

3.3.3.4 The Economic and financial statistics consultative commission

The Economic and financial statistics consultative commission has been set up by the BCL in order to ensure an efficient organisation of the data collection in the area of economic and financial statistics as well as to enhance the dialogue between financial intermediaries and the central bank. During 2009, the Commission has been informed and consulted on various conceptual issues in relation with the revision of statistical data collection and the security-by-security reporting for undertakings for collective investment.

3.3.3.5 The Lawyers' committee (Comité des Juristes)

The Lawyers' Committee provided assistance on BCL's legal activity in particular on the new regulation relating to the supervision of liquidity and on the scope of the Bank's legal privilege provided for in article 27-1 of its organic law.

3.3.3.6 The Market operations commission

The Market operations commission focused its discussions on the impact of the financial market crisis on the monetary policy operational framework.

3.3.3.7 The Operational Crisis Prevention Group (OCPG)

The Banque centrale du Luxembourg has established the Operational Crisis Prevention Group (OCPG) with the intention to enhance the financial sector's preparation with regards to operational crises. Members include ABBL, CSSF and critical market participants.
The group met twice in 2009.

3.3.4 BCL Research Programme

In 2008, the BCL established a Research Programme fixing five main research domains:

- Business cycles and long-term trends;
- Competitiveness and productivity;
- Labour markets;
- Monetary analysis, credit and financial markets;
- Other subjects.

These main themes were confirmed in 2009 and provided a framework for research at the BCL as well as helping to raise its visibility. Research output is regularly disseminated through BCL publications and also published in peer-reviewed scientific journals (Applied Economic Letters, Weltwirtschaftliches Archiv).

BCL researchers also regularly present their work in many seminars and workshops organised by the Eurosystem and its research networks (Wage Dynamics Network, Household Finance and Consumption Network), as well as those organised by other institutions such as the Bank of England, the Nederlandsche Bank, the University of Amsterdam, the Vienna Institute of Demography and the European Association of Labour Economists (EALE). The BCL is also a member of several more academic research networks including the EABCN, SUERF and CEPR.

Lastly, the BCL developed several collaborations with external researchers in order to benefit its research projects and to share its competences. The Perfilux project has continued in collaboration with the Luxembourg School of Finance (University of Luxembourg) and STATEC, financed in part by the Fonds National de la Recherche. BCL research on the labour market was also presented at a workshop organised by the Ministry of economics during a visit of OECD experts.

3.3.5 Training at the BCL

The BCL furthered its cooperation with the University of Luxembourg, where a staff member gave lectures on institutional aspects of the Eurosystem. Other staff members gave economics lectures at the Catholic University of Louvain and at the European campus of the Miami University (MUDEC) in Luxembourg.

The BCL is shareholder of the *Agence de Transfert de Technologie financière* (ATTF). This agency, established in 1999 at the initiative of the Luxembourg government, shares with mostly emerging countries Luxembourg's know-how in financial matters. In July 2009, in the context of a study visit, the BCL held a lecture for twenty members of the Banking and Finance academy of Uzbekistan.

The BCL organises presentations on the Eurosystem and the BCL for high school students (usually in the course of their last two years) following economics classes. Classes are greeted, along with their economics teachers, at the auditorium of the Monterey building, for an educational and interactive presentation of the organisation and on the missions of the BCL and the Eurosystem. Immediately after the presentation, students are invited to test their knowledge with an interactive quiz. Other topics can also be tackled according to teachers' requests and students' questions.

3.3.6 External events

3.3.6.1 Conferences and international meetings

The Governor of the BCL attended following meetings:

- IMF spring meeting held in Washington in April and World Bank yearly meeting held in Istanbul in October;
- Half-yearly informal ECOFIN Council of Ministers;
- 16th annual meeting of Governors of French-speaking central banks, held in Nice in May. Around thirty delegations from Africa, North America, Asia, the Caribbean, Europe, the Middle East and the Pacific participated in the meeting. Working sessions were devoted to the financial crisis and its impact on economies;
- 270th ECB Governing Council meeting held in Luxembourg on 2 July. The Governing Council usually meets at the ECB's headquarters in Frankfurt, twice a month. However, two meetings a year are held in a central bank of the euro area, following a rotation system;
- Celebration of the fiftieth anniversary of the Central Bank of Malaysia in February. Outside this event, the Governor of the BCL gave a speech at the 2nd Islamic Financial Services Board Public Lecture on Financial policy and stability;
- Conferences organised by the association the Bridge Forum Dialogue (www.forum-dialogue.lu) chaired by the BCL's Governor and composed of representatives from European institutions and bodies and the nations' resources;

  The first was held in March, under the chairmanship of Mr Vassilios Skouris, President of the Court of Justice of the European Union and Vice-President of the association. Mr Hans-Gert Pöttering, former President of the European Parliament, gave a speech on the topic: "The European perspective: values, politics, the economy";

  The second, held in April and chaired by Mr Mersch, dealt with the topic: "Food economics in today's world". Speeches were given by Dr. Jacques Diouf, Director-General of the Food and Agriculture Organization of the United Nations (FAO), and Mr Jean-Louis Schiltz, Minister for cooperation and humanitarian action;
- Round table in May, on the topic "Never again: the shape of a new global financial architecture", organised by the independent group of experts Friends of Europe in Brussels;
- International symposium on the occasion of the fiftieth anniversary of Bank Al-Maghrib, organised in Marrakech on "The role of central banks and the IMF in detecting and managing financial crises: lessons of recent experience";
- Symposium organised by the Federal Reserve of Kansas City in Jackson Hole, in August. This event has been held every year since 1978. Discussions dealt with "Financial stability and macroeconomic policy";
- At the occasion of a ceremony organised in March at the BCL, the Governor received the first special postage stamp "Ten years of euro" from Mr Marcel Gross, Director General of the Post and Telecommunications Company;
- Inauguration in June of the numismatic exhibition entitled "Roman coins – Trier coins" by the BCL's Governor and by Mr Athanasios Orphanides, Governor of the Central bank of Cyprus. This exhibition illustrated the evolution of coinage over different periods of the Roman Empire, emphasizing the importance of the city Augusta Treverorum which accommodated for more than two centuries the most active monetary workshop of the Empire;

3.3.6.2 Bilateral relations

- Working visit in Laos on 15 and 16 February 2009, with Mr Phouphet Khamphounvong, Governor of the Laos Republic Bank, in order to further bilateral cooperation between the two central banks;
- Working visit at the BCL of Mr Nur Hassan Wirajuda, Foreign Affairs Minister of the Republic of Indonesia, on 5 March 2009;
- Working visits:
  - On 23 March, at the Central bank of Bosnia-Herzegovina, in order to discuss the possible extension of cooperation of the two institutions in the field of training;
  - On 25 March, at the Central Bank of Montenegro (CBM), in order to discuss with Mr Ljubisa Krgovic, Governor of the CBM and the members of the Executive Board, about different topics such as the consequences of the world economic crisis on both countries, the situation in the financial and banking sectors, and the possible future cooperation between the two institutions;
  - On 26 and 27 March, at the Central Bank of Albania;
- Working visit of Mr Somphao Phaysith, Vice Governor of the Laos Republic Bank, at the BCL on 12 May;
- Working visit of Mr Somsavat Lengsavat, Deputy Prime Minister of the Laos Republic, accompanied by a High-level delegation, on 25 May at the BCL;
- From 10 June to 13 June, successive working visits:
  - To Slovenia: after a meeting between Mr Mersch and Mr Mitja Gaspari, Minister in charge of development and European affairs, the Boards of Slovenia's and Luxembourg's central banks held their annual meetings to take stock of their cooperation agreements;
  - To Kosovo: working visit with Mr Hashim Rexhepi, Governor of the Central Bank of Kosovo. The BCL's Governor also met Mr Ahmet Shala, Economics and finance minister of Kosovo. The BCL was represented by Mr Romain Schintgen, member of the BCL Council, on the occasion of the festivities for the tenth anniversary of the Central bank of Kosovo in Pristina on 30 October.
  - To Bulgaria: celebration of the 130th anniversary of Bulgaria National Bank.
- General Assembly of the Bank of International Settlements on 29 June: Mr. Mersch and Mr. Taoufik Baccar, Governor of the Central Bank of Tunisia, signed a bilateral cooperation convention.
- On 1 July, outside the Governing Council in Luxembourg, signature of a cooperation convention on the CashSSP IT application, with the Governors of the central banks of Belgium, Finland, Ireland and the Netherlands. This platform aims at supporting daily central cash activities and to handle in a secure way the cash relations between financial institutions and their respective central bank. On 2 December, the Bank of Cyprus joined this agreement.
- Annual meeting between the BCL and the National Bank of Belgium on July 17 in Luxembourg;
- Visit of Mr Jean-Baptiste Compaore, Deputy Governor of the Central Bank of West African states, along with a delegation, at the BCL on 13 October;
- Conference organized at the BCL on 3 November and chaired by Mr Mersch, on the topic "Financial stability and banking regulation in Germany and Turkey". It gathered Mr Axel Weber, Governor of the Bundesbank, and Mr Durmus Yilmaz, Governor of the Central Bank of the Republic of Turkey, together.

3.3.6.3 Relations with the Luxembourg Parliament

On 10 November 2009, the Governor of the BCL presented the opinion of the Bank on the state budget motion to the Financial and Budget Commission of the Luxembourg Parliament.

3.4 COMMUNICATION ACTIVITIES

3.4.1 Annual reports

As required by its statutes the BCL publishes each year a report on its activities. This report is published in French and in English.

3.4.2 Periodical Bulletins

In 2009, the BCL has published 3 Bulletins and 1 Financial Stability Review. (see 5.3.1)

3.4.3 Working papers

In its working papers the BCL publishes the results of research conducted by its staff. Each working paper contains a non-technical summary. (see 5.3.3)

3.4.4 The BCL's website

The BCL 's website, www.bcl.lu, provides information about the Bank's activities and services, its internal organisation, as well as statistics about Luxembourg and the Eurosystem. It also contains links to the ECB's website and to other central banks of the ESCB. Based on its search engine and its configurable mailing list, the site offers to each visitor a clearly structured information package, suitable for professionals as well as private individuals.

All BCL publications can be viewed and downloaded from the Publications and the media section. Hard copies are available from the BCL on request, as long as stocks last.

The website is bilingual: French and English. Publications are displayed in their original language (English, French and German).

Overall, 136 464 persons visited the website in 2009 (137 337 in 2008), with 15 520 237 hits. The numismatic programme witnessed more than 20 600 downloads (15 000 in 2009).

The numismatic products electronic shop (eshop.bcl.lu), directly accessible through the BCL web-site, has attracted more than 53 500 visitors in 2009.

3.4.5 The library

The library, opened in 2005, uses the ALEPH library management system, as do a number of other central banks. This system is electronically linked with other public libraries in Luxembourg.

The library is open to the public upon request, either by telephone (+352 4774 4275) or by email (bibliothèque@bcl.lu).

3.4.6 Press relations

The Governor of the BCL gave 14 interviews to the international and national press. Six press conferences were held, on the occasion of the presentation of the BCL 's financial accounts, of the Annual Report and of the BCL's Bulletins, the Financial Stability Review and the numismatic programme. Three seminars for representatives of the press, during which the authors of the Bulletin's analyses presented their contribution, were organised. In 2009 the BCL also proposed training sessions for the members of the national press. In total, 95 press releases were published.

04 THE BCL AS AN ORGANISATION

4 THE BCL AS AN ORGANISATION

4.1 STRUCTURE OF THE BCL

4.1.1 The Council

Article 6 of the Founding Law of 23 December 1998 defines the powers of the Council of the Bank. In 2009, the Council consisted of the following members:

Governor:	Yves Mersch
Members:	Pierre Beck (as from 1 June 2009)
	Andrée Billon (until 30 April 2009)
	Pit Hentgen
	Serge Kolb
	Patrice Pieretti
	Jacques F. Poos
	Romain Schintgen
	Michel Wurth
	Claude Zimmer

During 2009, the Council held six meetings. Within the framework of monitoring the financial situation of the Bank, the Council approved the financial accounts as per 31 December 2008, the budgetary trends and subsequently, the budget for the 2010 financial exercise.

The Council also observed and commented on economic and financial developments on a national and international basis and was kept informed of the decisions taken by the Governing Council of the ECB.

Row 1, from l. to r.: Mr Jacques F. Poos, Mr Yves Mersch, Mr Serge Kolb, Mr Romain Schintgen
Row 2, from l. to r.: Mr Patrice Pieretti, Mr Pit Hentgen, Mr Michel Wurth, Mr Claude Zimmer, Mr Pierre Beck

The Audit Committee

Since 2001, the Audit Committee has assisted the Council in its choice of the statutory auditor to be proposed to the Government, in specifying the scope of the potential specific controls to be performed by the statutory auditor and in the approval of the financial accounts by the Council. It is kept informed on the internal audit plan. It may invite the head of the internal audit unit and the statutory auditor of the Bank to participate in its work. At its meeting on 11 December 2009, the Council nominated the non-executive members of the Audit Committee for 2010: Messrs Patrice Pieretti, Jacques F. Poos and Claude Zimmer. Mr Yves Mersch is an *ex officio* member in his function as President of the Council. In 2009, the Audit Committee was chaired by one of its non-executive members, Mr Pit Hentgen, and held five meetings.

4.1.2 The Executive Board

The Executive Board is the superior executive authority of the BCL. It takes the decisions and draws up the measures necessary for the Banque centrale du Luxembourg to carry out its tasks. Without prejudice to the independence of the Director-General with regard to all instructions in his capacity as a member of the Governing Council of the ECB, the decisions of the Executive Board shall be taken collectively.

The Executive Board consists of a Director-General and two Directors:

Director-General: Yves Mersch
Directors: Serge Kolb, Andrée Billon (until 30 April 2009) and Pierre Beck (as from 1 June 2009)

Mr Serge Kolb, Mr Yves Mersch, Mr Pierre Beck

The organisation chart of the BCL (as from 1 February 2010)

EXECUTIVE BOARD

Internal audit and risk prevention Section AU Internal audit Section PR Risk prevention	**SG - General Secretariat** Section SG1 Governor's office Section SG2 Legal services Section SG3 External relations and communication	**SR - Financial stability and risk control** Section SR1 Market and operation analysis Section SR2 Financial risk management
2 Board members' secretaries		**EPCO - Eurosystem procurement co-ordination office**
GENERAL DEPARTMENT A	GENERAL DEPARTMENT B	GENERAL DEPARTMENT C
Department A1 Economics and research Section A1.1 Research Section A1.2 Business cycle	**Department B1 Human resources**	**Department C1 Information technology** Section C1.1 Infrastructure Section C1.2 Software and development Section C1.3 Planning and support
Department A2 Currency and numismatics Section A2.1 Currency operations Section A2.2 Currency handling control Section A2.3 Numismatics	**Department B2 Internal finance and strategy**	**Department C2 Statistics** Section C2.1 Banking and monetary statistics Section C2.2 External statistics Section C2.3 Economic and financial statistics
Department A3 Operations Section A3.1 Monetary policy implementation Section A3.2 Front office - asset managment Section A3.3 Back office - collateral management Section A3.4 Payments	**Department B3 Corporate services** Section B3.1 Procurement Section B3.2 Facilities Section B3.3 Security	**Department C3 Prudential surveillance** Section C3.1 Liquidity surveillance Section C3.2 Oversight Section C4.1 Infrastructures and payment systems

The members of the Executive Board receive a salary according to the wage scale in the public sector as well as different allowances. They receive, in accordance with the legal provisions of the law of 22 June 1963 determining the salary scheme for civil servants, a family allowance depending on their domestic situation and a thirteenth month's allowance.

The salary components are subject to the current legal tax rates in Luxembourg. Contributions to the pension system are neither due with regard to the thirteenth month's allowance nor with the representation and BCL's Council allowances.

The basic salary paid to the board members is as follows:

	2009 €	2008 €
Yves Mersch (Director general)	159 816	155 004
Serge Kolb (Director)	148 582	144 108
Andrée Billon (Director, January - April 2009)	49 155	144 108
Pierre Beck (Director, June - December 2009)	91 780	-
Total	**449 333**	**443 220**

Besides, in relation to their function within the Bank, board members are entitled to the payment of a representation allowance (for a total amount of 69 078 euro in 2009) and to a BCL's Council allowance (for a total amount of 32 717 euro in 2009).

4.2 CORPORATE GOVERNANCE

4.2.1 The internal control system

The BCL's internal control system is based on generally accepted principles in the financial sector and the ESCB taking into consideration the BCL's specific needs as a central bank.

The Executive Board has defined the general framework and principles of the internal control system. The senior management of the BCL and their staff are responsible for the proper functioning of this supervision.

Functional checks are carried out by specific administrative units, ensuring an adequate segregation of duties. These units are the Financial stability and Financial risk management unit, the Risk Prevention unit as well as the Controlling function within the Internal Finance and Strategy department.

The Financial stability and Financial risk management unit is in particular in charge of the analysis of markets and operations, as well as financial risk management. One of its sections concentrates on systemic risk management, whereas the other section is in charge of managing risks related to monetary policy and financial risks related to the management of own funds.

The Risk Prevention unit is in charge of the management of operational risks, of the management of risks related to information systems and of the Compliance function.

Whereas the senior supervisors from the general departments are responsible for identifying the risks linked to their fields of activities and for taking appropriate actions to mitigate these risks, the risk managers have the following responsibilities:

- Establish a common methodology for risk analysis;
- Provide assistance in the identification and evaluation of risks;
- Ensure a periodical reporting.

The purpose of the Compliance function is to ensure that the BCL's activities are conforming to laws, rules and professional ethical standards, thus preventing the Bank's risk of non-compliance.

The Compliance function covers in particular the following domains:
- anti-money laundering (AML) and financing of terrorist activities,
- professional code of ethics,
- prevention of insider trading and market abuse,
- conflict of interests,
- professional secrecy and confidentiality,
- privacy and protection of personal data,
- regulation of public markets.

The Controlling function is in charge of ensuring the good execution of the budgetary procedures in the frame of the annual budget, as well as supervising the execution of the budget in the course of the year by verifying its utilisation and by analysing the gaps in the budget versus actual expenses. Furthermore, it is in charge of the oversight of projects and of the operational performance.

The Internal Audit unit ensures a second layer of control with the independent and objective assessment of the internal control system and its functioning. This unit analyses and evaluates, on the basis of predefined objectives and a specified methodology, the adequacy and effectiveness of the existing internal control system. Internal Audit is a supervisory unit independent of the BCL's other administrative units and reports directly to the President of the Council.

Finally, the Audit Committee is informed on the organisation of internal controls and of the risk management as well as their functioning.

4.2.2 External control

A first level of external controls on the Bank's activities is performed by the external auditor, nominated by the Government, who verifies the Bank's financial accounts. Moreover, the external auditor is mandated by the Bank's Council to perform yearly additional verifications and specific controls. At the European level, the external auditor of the BCL is approved by the Council of Ministers upon recommendation of the Governing Council of the ECB. In this context, the external auditor is also entrusted with the performance of a certain number of specific engagements at Eurosystem level.

The statutes of the ESCB and of the ECB provide that National Central Banks act in accordance with ECB guidelines and instructions. The respect of these provisions is monitored at European level by the Governing Council of the ECB which may request any complementary information.

4.2.3 Code of Conduct

The Code of Conduct defining the internal and external rules of conduct applicable to all staff members was reviewed in 2009. The Code is valid without prejudice to the rules defined by the public services legislation, the social legislation as well as existing contractual commitments and prescribes ethical standards of non-discrimination, solidarity, efficiency, and independence, to which BCL's staff has to adhere strictly.

Since 2002, the Governing Council adopted a particular Code of Conduct introduced by the European Central Bank requiring particular strict professional adherence to ethical standards by its members individually. The members of the Governing Council shall prove honesty, independence, impartiality, and discretion. The members shall not consider their personal interests and shall avoid any situation that may lead to a conflict of interests.

These obligations extend one year after the termination of their function. The conditions to participate in conferences, receptions or cultural events are also specified in the Code of Conduct. The Governors are invited to be particularly careful regarding individual invitations. The same rules apply to their spouses or partners who are equally obliged to respect the generally accepted rules concerning international relations.

4.3 EUROSYSTEM SERVICES

4.3.1 The Eurosystem Procurement Coordination Office (EPCO)

In December 2007, the Governing Council of the ECB designated the Banque centrale du Luxembourg to host a new coordination function, the "Eurosystem Procurement Coordination Office", from 1 January 2008 for a period of five years.

The objective of EPCO is to ensure a better coordination of the procurement of goods and services by the European Central Bank and the national Central Banks of the Eurosystem.

The procurement experts of the participating Central Banks met six times during the course of 2009 and, in particular, the activity of exchange of best practices gave rise to the creation of a reference set of information regarding public procurement procedures for all the participating Central Banks. This activity will continue in 2010 with a view to making a complete reference set available in 2012.

In order to provide a framework for joint procurement procedures, documents for essential operational procedures were developed to define the roles and responsibilities of those involved and to record the results of the deliberations of the Expert Groups.

In 2009, the first joint procurement programme was launched and significant progress was made in a number of areas. Studies in areas identified in the 2009 programme have given rise to several specific proposals for joint procurement. In December 2009, the Governing Council of the ECB approved the EPCO Procurement Plan 2010 which is even more ambitious than the 2009 Plan. Six specific joint procurement proposals resulting from studies conducted in 2009 were approved, as well as a seventh specific proposal and a new area for study.

In May 2009, the Governing Council of the ECB also approved EPCO's Annual Activity Report for 2008. This report also included the execution of the 2008 budget and the distribution of EPCO's operational costs between the participating Central Banks. Preparatory work started in 2009 with the EPCO Steering Committee in order to present a review of the operation of EPCO during 2010. The intention is to analyse the experience acquired at the half-way stage of the 5-year mandate, to provide recommendations where appropriate and, if required, propose modifications to the way EPCO operates.

In December 2009, the Governing Council of the ECB approved 1.37 €Mio as the Budget for 2010 for EPCO.

4.4 THE BCL STAFF

4.4.1 Quantitative evolution

During 2009, the BCL staff increased by 3.78% to reach a total of 247 members of staff on 31 December 2009, equivalent to 230.25 full time positions and representing a 4.30% increase compared to 2008. Staff members are of 17 different nationalities, thus contributing to the diversity of the human capital and to its cultural enrichment.

On 31 December 2009, thirty-three staff members worked part-time:
- Part-time work (50%): 10 staff members
- Part-time work (75%): 9 staff members
- Leave for part-time work: 14 staff members

Seven staff members were on full-time parental leave and five staff members were on part-time parental leave.

Finally, two staff members were on unpaid leave on this date and three staff members were on special leave.

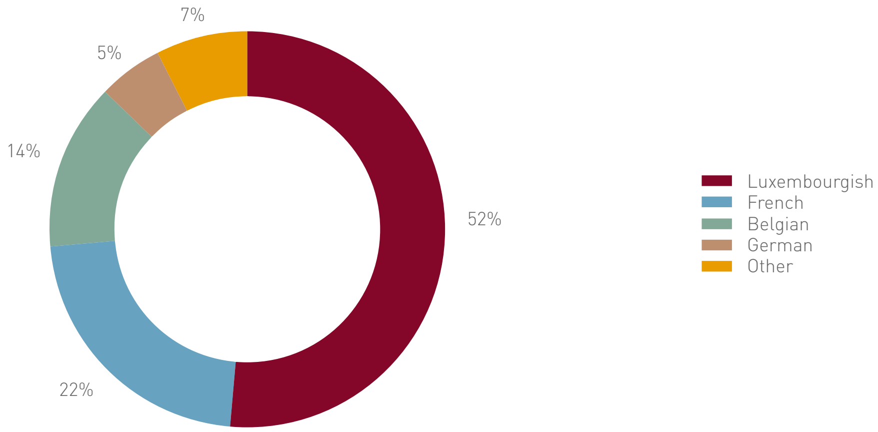
The average number of staff members working at the BCL in 2009 was of 245, compared to 229 in 2008.

The overall approved headcount ceiling for the year 2009 was 238 full time equivalent positions. This ceiling has been increased to 243 full time equivalent positions for the year 2010.

During 2009, twelve staff members left the bank. On the other hand, twenty-one new staff members joined the bank during 2009. There were some 352 applications to job advertisements at the bank. Furthermore, the BCL received 350 spontaneous job applications and 234 applications for internships or student jobs.

The BCL offered internships for a period from six weeks to two months to twelve students attending university studies related to the bank's activities and, furthermore, a subsidized internship to five students.

Chart 4.1:
Staff members by nationality



The average age of BCL staff members has increased from 40.05 years in 2008 to 40.69 years on 31 December 2009. On this date, the staff comprised 36% women and 64% men.

Chart 4.2:
Distribution of staff members per age group

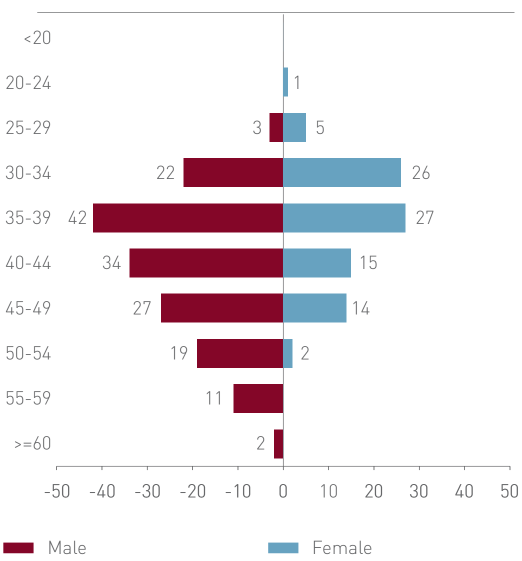
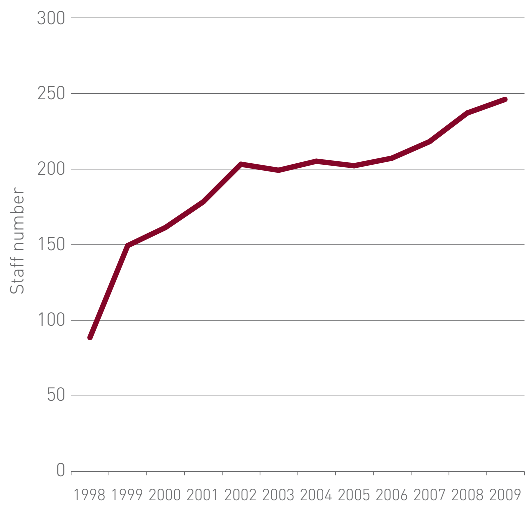


Chart 4.3:
Evolution in staff members since 1998



The staff evolution in full time equivalent during 2009 appears as follows:

	2009	2008
On 1st of January	223.75	207.50
Recruitments	12.50	16.25
On December 31	236.25	223.75
Average head-count	228.52	214.19

4.4.2 Management of human resources and training

Recruitment has continued to request a special effort, and was mainly due to new powers conferred on the Bank and the strengthening of financial stability and risk management. The internal training effort focuses on the various fields of competence of the BCL. This is particularly important in the integration of new recruits. Depending on the availability of trainers, the courses in question may also be held outside the Bank for third parties.

4.4.3 The Pension Fund

Article 14 of the Founding Law of 23 December 1998 relating to the monetary status and the Banque centrale du Luxembourg provides that legal pension entitlements of BCL agents are determined by their status (i.e., civil servant, State employee, private employee or worker).

Paragraph 4(b) of this article provides that:

"The pensions of the Bank's agents shall be paid by the Bank. These costs shall be financed by a pension fund of the Bank. The pension fund shall be financed on the one hand by statutory deductions from agents' salaries in accordance with the rules governing the pension scheme corresponding to their status, on the other hand by contributions made by the Bank itself."

The BCL's pension fund, which started operating in 2001, is governed by a set of internal rules and two committees, one executive and one consultative. The executive committee is the Comité directeur composed of the BCL's Board of Directors, two elected representatives from the staff, two co-opted members acting as delegated managers and one member designated by the Staff Committee. The consultative committee is the Tactical Benchmark Committee.

The Bank has been involved in the preparatory works, in particular amending the law of 28 July 2000 coordinating the different national pension schemes, which led to the recognition of the BCL' pension fund as social security body within the law of 19 December 2008.

The Bank meets the representatives of social security bodies as well as civil servants and administrative coordination Administration in order to determine the modalities of the cooperation agreements.

4.5 FACILITIES

Work to upgrade several technical installations was carried out in 2009.

From a budgetary point of view, the project related to the new "Monterey building" was terminated in 2009.

The initial budget was €25.9 million, whereas final cost amounted to €25.3 million.

From an administrative point of view, 2 public tenders, for office furniture and for office equipment, were undertaken in close collaboration with the procurement office of the BCL.

It is also worth mentioning that during 2009 investigations were made in order to find additional office space.

Indeed, due to ongoing recruitment of staff, the "site Royal" of the BCL will reach its maximal capacity at the end of 2010.

4.6 INTERNAL FINANCE

BCL continued to update its accounting system and its procedures in order to meet its internal quality standards and those of the Eurosystem. In 2009, BCL continued to take part in the working group relating to the operations on Eurosystem's financial matter and adopted these accounting techniques in the BCL's systems.

The Eurosystem requires the daily reporting of balance sheet data according to harmonised rules.

The controlling systems in place proved to be effective during the year.

The Bank regularly checks the development of balance sheet, off-balance-sheet and profit and loss items. Investments, revenues and expenses are in particular closely monitored with special attention paid to signing powers.

The cost accounting system gives an indication concerning costs and invoicing of services. The methodology follows the rules recommended by the Eurosystem. It consists of allocating BCL's operational expenses according to their destination, i.e. according to the respective sections and units, and it permits to allocate the costs of each of the Bank's activities. In 2010, harmonised techniques relative to project costs will continue to be developed in the Eurosystem.

The monthly balance sheet of the Bank is published on its internet site.

The management information system meets the need to follow the Bank's activities. It is based on a set of indicators, which are calculated daily, weekly, monthly, quarterly and annually. These tables include all activities of the Bank. The analysis of the profit and loss items is complemented by an analysis concerning the net profit of the various activities. The Bank strictly controls the development of the interest margin and compares the profitability of its investments to benchmarks.

The Bank performs static and dynamic assessments of its long-term financial situation. It carries out prospective analyses of external factors like interest rates, exchange rates and other variables of the Eurosystem and of the economic situation.

The Bank's decision-making bodies are regularly informed of the results in order to be in a position to decide on the future directions and actions to take.

In 2009, research to select a new software of follow-up portfolio of securities continued.

4.7 BUDGET

The setting-up of the annual budget is foreseen by the Organic Law of the BCL and forms part of a multi-year planning exercise whose primary aim is to ensure financial stability in the long term. The budget of the BCL reflects the corporate values of the Bank, which are:

- professionalism;
- quality in the provision of services;
- stability ensured by a long-term perspective;
- objectivity by precise rules applied equally to all addressees;
- integrity resulting from the transparency of operations and the respect of professional ethics.

The 2009 budget of the bank was drawn up under the terms of the budgetary procedure and the guidelines endorsed by the Council on 10 July 2008. The 2009 budget was approved by the Council on 11 December 2008.

The budget increase for 2009 was justified as follows:

- The international financial crisis prompted the Luxembourg legislator to enact new legislation in order to improve the financial sector's legal framework. This new law assigned additional tasks to the BCL in the field of surveillance and financial stability. In parallel, the BCL is currently implementing a multiyear programme to establish new statistics in the economic and financial sectors. These new tasks require a reinforcement of the staff of the Bank in both operational and support units.
- The financial crisis also increased the risks inherent to the securities portfolio of the Bank. These risks are to be phased out while retaining a high return. To this end, reinforcing the risk management team was foreseen as well as additional investments in IT and management related tools.
- The human resources budget includes automatic increases in grades and echelons, the increase of the index at 1 March 2009 and the wage agreement for public sector.

– The increase of operational expenditure excluding staff costs should not exceed the rate of inflation measured by the general index of national consumer prices index excluding energy (NCPI) which is projected at 2.2% for the year 2009 according to the latest general macroeconomic forecasts available. Increases which are linked to approved projects do not fall within the scope of this guidance.

The Internal Finance Department supervises the execution of the internal budget and prepares quarterly reports to the attention of the management. At the end of each fiscal year, a detailed analysis of the gaps observed between budget and actual expenditure is established. This analysis is submitted to the Executive Board and to the Council of the Bank for information and approval, and the lessons learned are taken into account for preparing future budgets.

The actual expenditure at 31 December 2009 of operating and investment cost remained within the limits set by the budget.

4.8 INTERNAL AUDIT ACTIVITIES

In accordance with the internationally accepted professional standards, the internal audit is an independent objective assurance and consulting activity designed to add value to and improve an organisation's operations.

The Internal Audit helps the Bank to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and management processes.

The Internal Audit unit directly reports to the President of the Bank.

The internal annual audit plan comprises audit engagements on a national level, as well as audit objects that are coordinated by the Internal Auditors Committee of the ESCB in compliance with the ESCB audit policy.

During 2009, the Internal Audit unit performed various reviews in the areas of accounting, reserve management services, banknotes, monetary and financial statistics, payment systems, pension fund management, information systems, wages and budget management, as well as in the context of various projects.

The Internal Audit unit is in charge of following-up on the recommendations issued during its audit activities.

4.9 FINANCIAL STATEMENTS AS AT 31 DECEMBER 2009

Preamble

Only the French version of the present financial statements has been reviewed by the Independent Auditor. Consequently, the financial statements only refer to the French version of the financial statements; other versions result from a conscientious translation made under the responsibility of the Board of Directors. In case of differences between the French version and the translation, the French version is binding.

4.9.1 Key figures

	2008	2009	Change in% 2009/2008
Total assets	100 645 076 227	77 049 043 144	-23%
Banks' current accounts	45 531 698 234	13 488 516 285	-70%
Claims on credit institutions	40 080 417 423	15 156 000 000	-62%
Own funds [1], revaluation accounts, administrative provisions and specific banking risks	407 930 091	752 914 346	85%
Net result of banking activities [2]	-147 779 763	233 429 734	-
Total net revenues	47 153 802	53 742 397	14%
Administrative expenses	39 286 085	42 223 811	7%
Net profit	2 830 126	6 804 200	140%
Cash Flow [3]	139 262 942	191 721 401	38%
Staff	238	247	4%
BCL's part in the capital of the ECB	0.1575%	0.1747%	
BCL's part in the Eurosystem's monetary policy operations	4.674%	2.021%	

(1) Capital, reserves, provisions for general banking risks and net profit to be affected to the reserves
(2) Net ajusted interest income, net result from fees and commissions, net result on financial operations
(3) Net profit plus depreciation of tangible / intangible assets and write-downs on financial assets, as well as net transfers to administrative provisions and provisions for banking risks

4.9.2 Report of the Independent Auditor

To the Council of the Banque centrale du Luxembourg
To the Government
To the Chamber of Representatives

REPORT OF THE REVISEUR D'ENTREPRISES

We have audited the accompanying financial statements ("les comptes financiers") of Banque centrale du Luxembourg, which comprise the balance sheet as at December 31, 2009 and the profit and loss account for the year then ended, and a summary of significant accounting policies and other explanatory notes.

Management's responsibility for the financial statements

The financial statements are the responsibility of the Executive Board and are approved by the Council. The Executive Board is responsible for the preparation and fair presentation of these financial statements in accordance with generally accepted accounting principles and those defined by the European System of central banks. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Responsibility of the Réviseur d'Entreprises

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing as adopted by the Institut des Réviseurs d'Entreprises. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the judgement of the Réviseur d'Entreprises, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the Réviseur d'Entreprises considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Directors, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements give a true and fair view of the financial position of Banque centrale du Luxembourg as of December 31, 2009, and of the results of its operations for the year then ended in accordance with generally accepted accounting principles and those defined by the European System of central banks.

Luxembourg, March 17, 2010

KPMG Audit S.à r.l.
Réviseurs d'Entreprises

K. Riehl S. Chambourdon

4.9.3 Balance sheet as at 31 December 2009

ASSETS	Note	2009 EUR	2008 EUR
Gold and gold receivables	3	55 490 933	45 352 938
Claims on non-euro area residents denominated in foreign currency	4	505 915 151	239 317 662
– Receivables from the IMF		321 492 295	54 694 836
– Balances with banks, security investments, external loans and other external assets		184 422 856	184 622 826
Claims on euro area residents denominated in foreign currency	5	71 067 245	10 825 738 929
Claims on non-euro area residents denominated in euro	6	1 601 110 558	2 235 151 662
– Balances with banks, security investments and loans		1 601 110 558	2 235 151 662
Lending to euro area credit institutions related to monetary policy operations denominated in euro	7	15 156 000 000	40 080 417 423
– Main refinancing operations	7.1	1 953 000 000	23 465 778 885
– Long-term refinancing operations	7.2	13 203 000 000	16 614 638 538
Other claims on euro area credit institutions denominated in euro	8	1 010 269 125	579 866 874
Securities of euro area residents denominated in euro	9	3 910 225 687	3 727 912 441
– Securities held for monetary policy purposes	9.1	45 317 335	-
– Other securities	9.2	3 864 908 352	3 727 912 441
Intra-Eurosystem claims	10	52 572 646 254	42 167 907 000
– Participating interest in ECB	10.1	15 784 953	10 668 158
– Claims related to the transfer of foreign reserves	10.2	100 638 597	90 730 275
– Other claims within the Eurosystem	10.3	52 456 222 704	42 066 508 567
Items in course of settlement		1 476	43 666
Other assets	11	2 166 316 715	743 367 631
– Tangible and intangible fixed assets	11.1	58 284 450	61 835 471
– Other financial assets	11.2	103 583 005	88 117 397
– Off-balance sheet instruments revaluation differences		-	303 493 840
– Accruals and prepaid expenses	11.3	195 684 787	269 921 336
– Sundry	11.4	1 808 764 473	19 999 587
Total assets		**77 049 043 144**	**100 645 076 226**

LIABILITIES	Note	2009 EUR	2008 EUR
Banknotes in circulation	12	1 858 777 355	1 586 572 000
Liabilities to euro area credit institutions related to monetary policy operations denominated in euro	13	13 488 516 285	45 531 698 234
– Current accounts (covering the minimum reserve system)	13.1	7 986 042 119	16 513 643 449
– Deposit facility	13.2	5 502 474 166	29 018 054 785
Liabilities to other euro area residents denominated in euro	14	343 930 484	386 914 979
– General government	14.1	343 928 072	386 914 979
– Other liabilities		2 412	-
Liabilities to non-euro area residents denominated in euro	15	1 173 715 978	1 011 538 123
Liabilities to non-euro area residents denominated in foreign currency	16	74 107 887	58 164 107
Counterpart of special drawing rights allocated by the IMF	17	268 473 209	18 731 884
Intra-Eurosystem liabilities	18	58 701 341 155	51 035 405 545
– Net liabilities related to the allocation of euro banknotes within the Eurosystem	18.1	58 701 341 155	51 035 405 545
Items in course of settlement	19	471	11
Other liabilities	20	190 324 104	514 129 564
– Accruals and income collected in advance		155 909 204	480 965 514
– Sundry		34 414 900	33 164 050
Provisions	21	448 753 796	242 276 198
Revaluation accounts	22	319 126 822	84 474 183
Capital and reserves	23	175 171 398	172 341 272
– Capital	23.1	175 000 000	25 000 000
– Reserves	23.2	171 398	147 341 272
Profit for the year		6 804 200	2 830 126
Total liabilities		**77 049 043 144**	**100 645 076 226**

4.9.4 Off-balance sheet as at 31 December 2009

	Note	2009 EUR	2008 EUR
Foreign exchange swap	24	-	15 002 234 740
Custody deposits	25	222 784 229 418	265 077 244 845
Foreign currency reserve assets managed on behalf of the ECB	26	273 110 588	255 797 786
Forward transactions	27	127 133 000	83 248 000
Numismatic collection		205 829	205 012
		223 184 678 835	**280 418 730 383**

4.9.5 Profit and loss account for the year 2009

	Note	2009 EUR	2008 EUR
Interest income	28	1 164 838 071	2 786 935 844
Interest expense	28	(915 296 255)	(2 555 941 232)
Net interest income	28	249 541 816	230 994 612
Realised gains / (losses) arising from financial operations	29	54 405 713	(2 584 464)
Write-downs on financial assets and positions	30	(20 885 405)	(377 639 979)
Transfer to/from provisions for foreign exchange rate and price risks	31	(199 519 974)	246 244 754
Net result of financial operations, write-downs and risk provisions		(165 999 666)	(133 979 689)
Fees and commissions income	32	19 555 931	16 879 833
Fees and commissions expense	32	(17 765 097)	(15 429 765)
Net result from fees and commissions	32	1 790 834	1 450 068
Income from participating interest	33	2 233 833	2 724 591
Net result of pooling of monetary income	34	(41 674 274)	(70 197 318)
Other income	35	7 849 854	16 161 538
Total net income		53 742 397	47 153 803
Staff costs	36	(25 846 425)	(23 226 084)
Other administrative expenses	37	(8 873 967)	(8 861 201)
Depreciation of tangible and intangible fixed assets	11.1, 38	(4 714 386)	(5 037 591)
Banknote production services	39	(1 133 127)	(722 786)
Other expenses	40	(6 370 292)	(6 476 014)
Profit for the year		**6 804 200**	**2 830 126**

4.9.6 Notes to the financial statements as at 31 December 2009

Note 1 - General

The Banque centrale du Luxembourg ("BCL") was founded in accordance with the law of 22 April 1998. The Founding Law of 23 December 1998 as modified on 24 October 2008 stipulates that the main task of the BCL shall be to contribute to the accomplishment of the tasks of the European System of Central Banks (ESCB) so as to achieve the objectives of the ESCB. The BCL is now also responsible for the oversight of the general market liquidity situation and the evaluation of the market operators in this respect. The BCL is authorised to take and sell participating as well as, in exceptional circumstances, to make short-term lending to counterparties with appropriate guarantees. The BCL is a public institution, endowed with legal personality and financial independence.

Note 2 - Accounting policies

The accounting policies applied in preparing the financial statements are described below:

2.1 Layout of the financial statements

The financial statements of the BCL have been prepared and drawn up in accordance with the generally accepted accounting principles and the rules adopted by the ESCB.

2.2 Accounting principles

The following accounting principles have been applied:
- economic reality and transparency;
- prudence;
- recognition of post-balance sheet events;
- continuity of methods and comparability;
- relative significance;
- going concern concept;
- recording of charges and income in the accounting period they relate to.

2.3 Basic principles

The financial statements are based on historical cost and are adjusted to take account of the valuation at market prices of securities, financial instruments, gold and of all the elements, both on-balance-sheet and off-balance-sheet, denominated in foreign currencies.

Transactions in financial assets and liabilities are reflected in the accounts of BCL on their settlement date.

2.4 Gold, assets and liabilities in foreign currencies

Assets and liabilities denominated in foreign currencies (including gold) are converted into euro at the exchange rate in force on the balance sheet closing date. Income and expenses are converted at the exchange rate prevailing on the date of the transaction.

Foreign currencies are revalued on a currency-by-currency basis including on-balance-sheet and off-balance-sheet items.

Securities are revalued separately from the revaluation of foreign exchange for securities denominated in foreign currencies.

Gold is revalued on the basis of the euro price per fine ounce as derived from the quotation in US dollars established at the time of the London fixing on the last working day of the year.

2.5 Securities

Following the decisions of the Governing Council of 7 May and 4 June 2009 the European Central Bank (ECB) and the National Central Banks (NCBs) started to purchase for monetary policy purposes euro-denominated covered bonds issued in the euro area. These securities are valued at amortised cost and are subject to impairment tests.

The other negotiable securities denominated in foreign currencies and in euro are valued at the market price prevailing on the balance sheet date. Securities held to maturity are valued at purchase or transfer price adjusted by premiums and discounts. Write-downs are done on securities held to maturity in case of impairment.

The revaluation took place item-by-item on the basis of their ISIN code.

2.6 Recognition of gains and losses

Income and expenses are assigned to the financial year during which they are earned or incurred.

Realised gains and losses on foreign exchange transactions, securities and financial instruments linked to interest rates and market prices are taken to the profit and loss account.

At the end of the year, unrealised revaluation gains on foreign currencies, securities and financial instruments are not considered in the profit and loss account, but transferred to a revaluation account on the liabilities side of the balance sheet.

Unrealised losses are recognised in the profit and loss account when they exceed previous revaluation gains registered in the corresponding revaluation account. They may not be reversed against new unrealised gains in subsequent years. Unrealised losses regarding a specific security, financial instrument, currency or in gold holdings are not netted with unrealised gains in other securities, financial instruments, currencies or gold holdings.

In order to calculate the acquisition cost of securities or currencies that are sold, the average cost method is used on a daily basis. If any negative revaluation differences are taken to the profit and loss account, the average cost of the asset in question is adjusted downwards to the level of the current exchange rate or market price thereof.

For fixed-income securities, the premiums or discounts arising from the difference between the average acquisition cost and the redemption price are calculated and presented on a prorata basis as part of the interest positions and amortised over the remaining life of the securities.

2.7 Post-balance-sheet events

Assets and liabilities are adjusted to take account of events occurring between the balance sheet date and the date on which the BCL's Council approves the annual accounts if such events have a material effect on the assets and liabilities on the balance sheet date.

2.8 Banknotes in circulation

The ECB and the participating NCBs, which together comprise the Eurosystem, have issued euro banknotes as from 1 January 2002. The total value of euro banknotes in circulation is allocated on the last working day of each month in accordance with the banknote allocation key.

The ECB has been allocated a share of 8% of the total value of euro banknotes in circulation from 2002, whereas the remaining 92% has been allocated to NCBs according to their weightings in the capital key of the ECB. The share of banknotes allocated to each NCB is disclosed under the balance sheet liability item "Banknotes in circulation".

The difference between the value of the euro banknotes allocated to each NCB in accordance with the banknote allocation key and the value of the euro banknotes that it actually puts into circulation gives rise to remunerated intra-Eurosystem balances. These claims or liabilities, which incur interest, are disclosed under the sub-item "Intra-Eurosystem: Net claim/liability related to the allocation of euro banknotes within the Eurosystem".

The interest income and expense on these balances is cleared through the accounts of the ECB and is disclosed under "Net interest income."

The Governing Council of the ECB has decided that the seigniorage income of the ECB, which arises from the 8% share of euro banknotes allocated to the ECB, shall be distributed in full in 2009 (partly distributed in 2008). The payment was made on the second working day of 2010. The distributed amount is shown under the caption "Income from participating interest" in the profit and loss account.

2.9 Intra-Eurosystem claims and liabilities

Intra-Eurosystem balances arising from the allocation of euro banknotes within the Eurosystem are included as a net single asset or liability under "Net liability related to the allocation of euro banknotes within the Eurosystem".

Intra-Eurosystem claims and liabilities arising from TARGET balances and counterparties accounts are shown as a single net asset or liability on the balance sheet.

2.10 Treatment of tangible and intangible assets

The tangible and intangible assets are recorded at their acquisition cost less depreciation. Depreciation was calculated on a straight-line basis over the expected economic lifetime of the assets:

	Years
Buildings	25
Renovation of buildings	10
Furniture and equipment	3-5
Computer hardware and software	4

2.11 Pension fund

As at 1 January 1999, after the entry into force of the Founding Law of 23 December 1998, as modified, the pension claims of the BCL's staff members were fully supported by the BCL. The pension fund aims to cover the risks related to ageing, infirmity and survival, and was set up in 2000. The actuarial method for determining the BCL's liabilities towards its agents was approved by the pension fund's Management Committee as at 12 February 2001.

The actuarial method determines the pension fund's liability related to ageing, infirmity or survival for each agent. The model is based on each agent's personal and career data, on the level of inflation for the next 60 years as well as on an average rate of return generated by the fund's assets.

The BCL's liabilities related to pensions are shown in the account "Provisions for pensions". The provision increases as a result of regular transfers by the agent and by the BCL as employer and decrease by pension payments to retirees. At the year end, the provision is adjusted by the actuarial value. In addition, if necessary, periodic transfers from the account "Booking reserve of the pension fund", equivalent to the revenues generated by the fund's assets, to adjust the account "Provision for pensions" to its actuarial value are booked. In cases where transfers are insufficient to cover the BCL's pension liabilities, the difference between the existing provision and the effective claim is covered by a special transfer to be supported by the BCL.

2.12 Provision for banking risks

The BCL's provision policy is intended to cover specific and general risks resulting from the Bank's activities.

Note 3 - Gold and gold receivables

As at 31 December 2009, BCL held 409.67 ounces of fine gold amounting to 0.3 million euro (968.42 ounces of fine gold amounting to 0.6 million euro as at 31 December 2008) and a top-rated gold bond issued by the International Bank for Reconstruction and Development purchased in 2002 and valued at 55.2 million euro (44.8 million euro as at 31 December 2008).

On the balance sheet date, gold is valued on the basis of the euro price per fine ounce derived from the quotation in US dollars established at the London fixing on 31 December 2009.

Note 4 - Claims on non-euro area residents denominated in foreign currency

	2009 EUR	2008 EUR
Receivables from the IMF	321 492 295	54 694 836
Balances with banks, security investments, external loans and other external assets	184 422 856	184 622 826
	505 915 151	**239 317 662**

Under this item are recorded the BCL's foreign exchange reserve holdings with counterparties situated outside the euro area (including international and supranational institutions and central banks that are not members of the Eurosystem).

This item is broken down into two sub-items:

– receivables from the International Monetary Fund (IMF) are made up of reserve tranche position and SDR holdings. SDR are reserve assets created by the IMF and allocated by it to its members. A country's SDR holdings initially amount to the SDR allocated. Afterwards, SDR holdings are subject to fluctuations as a result of encashments and transactions with others SDR holders. The reserve tranche position corresponds to the net amount of the quota and the IMF's currency holding and takes into account the re-evaluation of the general account.

  In 2009, an amount of SDR 229 667 459 was allocated to Luxembourg under the general allocation (SDR 206 899 565, in August 2009) and under the Fourth Amendment (SDR 22 767 894, in September 2009).

- balances held on accounts with banks outside the euro area as well as securities, loans and other foreign currency assets issued by non-residents of the euro area. This sub-item includes in particular the US dollar securities portfolio which could be used, if needed, for monetary policy operations.

This portfolio, which amounts to 176.9 million euro as at 31 December 2009 (167.5 million euro as at 31 December 2008), mainly contains government bonds and top-rated bonds issued by international and supranational institutions denominated in US dollars. Securities are valued at market prices. As at 31 December 2009, their value at market prices included an unrealised gain amounting to 2.9 million euro (unrealised gain amounting to 4.0 million euro as at 31 December 2008).

Balances with banks amounted to 7.5 million euro as at 31 December 2009 (2.4 million euro for balances with banks and 14.7 million euro for deposits as at 31 December 2008).

Note 5 - Claims on euro area residents denominated in foreign currency

This item decreased significantly. As at 31 December 2009, this item includes only BCL's balances denominated in foreign currency with counterparties inside the euro area.

As at 31 December 2008, this item included mainly a claim arising from reverse operations with Eurosystem counterparties amounting to 10 769.0 million euro in connection with the US dollar Term Auction Facility. Under this program, USD were provided by the Federal Reserve to the ECB by means of temporary reciprocal currency arrangement (swap line) with the aim of offering short-term US dollar funding to Eurosystem counterparties. The ECB simultaneously entered into back-to-back swap transactions with NCBs that have adopted the euro, which used the resulting funds to conduct liquidity-providing operations with the Eurosystem counterparties.

Note 6 - Claims on non-euro area residents denominated in euro

	2009 EUR	2008 EUR
Balances with banks	8 920 212	3 981 408
Securities	1 482 633 679	1 852 747 679
- marketable securities	1 382 466 794	1 703 986 030
- held-to-maturity securities	100 166 885	148 761 649
Deposits	109 556 667	378 422 575
	1 601 110 558	**2 235 151 662**

This item contains balances held on accounts with banks outside the euro area as well as securities, deposits, loans and other euro-denominated assets issued by non-residents of the euro area.

The securities portfolio recorded under this heading includes:

- The marketable securities portfolio contains government bonds and first rated bonds issued by companies outside the euro area denominated in euro. Securities are valued at market prices. As at 31 December 2009, their value at market prices included an unrealised loss amounting to 92.6 million euro (unrealised loss amounting to 261.7 million euro as at 31 December 2008).

- The "Held-to-maturity" portfolio was created in 2007. These securities are meant to be held until maturity.

This portfolio is valued at amortised cost, purchase or transfer price adjusted by premiums, discounts and impairment. There were no purchases in 2008 and in 2009. Securities already in portfolios as at 31 December 2006 were transferred at accounting value as at 1 January 2007. Securities bought in 2007 were transferred at acquisition value. Securities held to maturity are valued as described and not at market price.

As at 31 December 2009 these securities amount to 100.2 million euro (148.8 million euro as at 31 December 2008). The unrealised loss amounts to 57.4 million euro as at 31 December 2009 (unrealised loss amounting to 63.1 million euro as at 31 December 2008). One security was impaired in 2008 and 2009. The adjusted write-down amounts to 54.2 million euro as at 31 December 2009.

Note 7 - Lending to euro area credit institutions related to monetary policy operations denominated in euro

This balance sheet item represents the liquidity-providing transactions executed by the BCL with Luxembourg credit institutions.

The item is divided into various sub-items depending on the type of instrument used to provide liquidity to the financial sector:

	2009 EUR	2008 EUR
Main refinancing operations	1 953 000 000	23 465 778 885
Longer-term refinancing operations	13 203 000 000	16 614 638 538
Fine-tuning reverse operations	-	-
Structural reverse operations	-	-
Marginal lending facility	-	-
Credits related to margin calls	-	-
	15 156 000 000	**40 080 417 423**

The total Eurosystem holding of monetary policy assets amounts to 749 906 million euro of which BCL holds 15 156 million euro. In accordance with Article 32.4 of the Statutes, any risks from monetary policy operations, if they were to materialise, should eventually be shared in full by the Eurosystem NCBs, in proportion to the prevailing ECB capital key shares.

As at 31 December 2008, this item included lending to credit institutions which defaulted in 2008. According to a Eurosystem decision, these claims were reclassified to item "Other assets – sundry" in 2009.

7.1 Main refinancing operations

This sub-item records the amount of liquidity provided to credit institutions by way of weekly one-week tenders.

7.2 Long-term refinancing operations

This sub-item records the amount of credit extended to credit institutions by way of tenders with one, three, six or twelve-month maturities.

7.3 Fine-tuning reverse operations

This sub-item records open market operations carried out on a non-regular basis, intended primarily to meet unexpected fluctuations in market liquidity.

7.4 Structural reverse operations

These are open market operations carried out with the primary intention of bringing about a lasting change in the structural liquidity position of the financial sector vis-à-vis the Eurosystem.

7.5 Marginal lending facility

This sub-item records a standing facility enabling counterparties to obtain overnight credit from the Bank at a pre-specified interest rate, against eligible collateral.

7.6 Credits related to margin calls

This sub-item records additional credit extended to credit institutions and resulting from the increase in the value of the securities pledged as collateral for other credits extended to these same institutions.

Note 8 - Other claims on euro area credit institutions denominated in euro

This item includes the BCL's current accounts and fixed-term deposits not related to monetary policy operation with credit institutions inside the euro area.

Note 9 - Securities of euro area residents denominated in euro

	2009 EUR	2008 EUR
Securities held for monetary policy purposes	45 317 335	-
Other securities	3 864 908 352	3 727 912 441
– marketable securities	3 706 676 021	3 569 101 117
– held-to-maturity securities	158 232 331	158 811 324
	3 910 225 687	**3 727 912 441**

In order to report securities held for monetary policy purpose separately, the item "Securities of euro area residents denominated in euro", has been divided into two sub-positions: "Securities held for monetary policy purposes", which was introduced in order to reflect the euro-denominated covered bond portfolio, which commenced in July 2009; and "Other securities", which includes marketable and non-marketable securities that are not related to the monetary policy operations of the Eurosystem.

9.1 Securities held for monetary policy purposes

This item contains securities acquired by BCL within the scope of the purchase programme for covered bonds announced by the Governing Council on 7 May 2009.

These securities are valued at amortised cost and are subject to impairement tests.

As at 31 December 2009 these securities amount to 45.3 million euro. The unrealised loss amounts to 0.08 million euro as at 31 December 2009.

Write-downs would be done on these securities in case of impairment.

9.2 Other securities

The securities portfolio recorded under this heading includes:

- The marketable securities portfolio covers the BCL's portfolio in euro issued by residents of the euro area which could be used, if needed, for monetary policy operations. This amounted to 3 706.7 million euro as at 31 December 2009 (3 569.1 million euro as at 31 December 2008).

  This portfolio only contains government bonds in euro issued by Member States of the European Union and first rated bonds issued by companies of the euro area.

  Securities are valued at market prices. As at 31 December 2009, their value at market prices included an unrealised loss amounting to 26.7 million euro (unrealised loss amounting to 81.1 million euro as at 31 December 2008).

- The "Held-to-maturity" portfolio was created in 2007. These securities are meant to be held until maturity.

  This portfolio is valued at amortised cost, purchase or transfer price adjusted by premiums, discounts and impairment. There were no purchases in 2008 and in 2009. Securities already in portfolios as at 31 December 2006 were transferred at accounting value as at 1 January 2007. Securities bought in 2007 were transferred at acquisition value. Securities held to maturity are valued as described and not at market price.

  As at 31 December 2009 these securities amount to 158.2 million euro (158.8 million euro as at 31 December 2008). The unrealised loss amounts to 1.2 million euro as at 31 December 2009 (unrealised loss amounting to 0.6 million euro as at 31 December 2008). No unrealised losses have been booked as none relate to impairments.

Note 10 - Intra-Eurosystem claims

10.1 Participating interest in ECB

Pursuant to Article 28 of the ESCB Statutes, the ESCB national central banks are the sole subscribers to the capital of the ECB. Subscriptions depend on shares which are fixed in accordance with Article 29.3 of the ESCB Statutes and which are subject to adjustment every five years.

On 1 January 2009 due to quinquennial changes in the Eurosystem and to the entry of the National bank of Slovakia in the Eurosystem, the BCL's key in ESCB changed from 0.1575% to 0.1747%.

From 1 January 2009, BCNs participations in ESCB are as follows:

Country	Participating key in ESCB (%)	
	from 1 January 2009	until 31 December 2008
Belgium	2.4256	2.4708
Germany	18.9373	20.5211
Ireland	1.1107	0.8885
Greece	1.9649	1.8168
Spain	8.3040	7.5498
France	14.2212	14.3875
Italy	12.4966	12.5297
Cyprus	0.1369	0.1249
Luxembourg	0.1747	0.1575
Malta	0.0632	0.0622
Netherlands	3.9882	3.8937
Austria	1.9417	2.0159
Portugal	1.7504	1.7137
Slovenia	0.3288	0.3194
Slovak Republic	0.6934	-
Finland	1.2539	1.2448
Subtotal for euro area NCBs	**69.7915**	**69.6963**
Bulgaria	0.8686	0.8833
Czech Republic	1.4472	1.3880
Denmark	1.4835	1.5138
Estonia	0.1790	0.1703
Latvia	0.2837	0.2813
Lithuania	0.4256	0.4178
Hungary	1.3856	1.3141
Poland	4.8954	4.8748
Romania	2.4645	2.5188
Slovak Republic	-	0.6765
Sweden	2.2582	2.3313
United Kingdom	14.5172	13.9337
Subtotal for non-euro area NCBs	**30.2085**	**30.3037**
Total	**100.0000**	**100.0000**

On 31 December 2009, the share that the BCL holds in the capital of the ECB amounts to 15 784 953 euro. The BCL holds an amount of 10 063 860 euro on a total of subscribed capital of the ECB of 5 761 billion euro (9 073 028 euro on a total of subscribed capital of the ECB of 5 761 billion euro as at 31 December 2008).

The share that the BCL held in the accumulated net profits of the ECB reflects the repayment of 5.7 million euro by the ECB (1.6 million euro as at 31 December 2008).

10.2 Claims equivalent to the transfer of foreign reserves

This sub-item represents the euro-denominated claims on the ECB in respect of the transfer of part of BCL's foreign reserves. The claims are denominated in euro at a value fixed at the time of their transfer.

They are remunerated at the latest available marginal rate for the Eurosystem's main refinancing operations, adjusted to reflect a zero return on the gold component.

The adjustments to the capital key weightings of the ECB on 1 January 2009 also resulted in the adjustment of claim of BCL with respect to the foreign reserve assets transferred to the ECB.

As at 31 December 2009, the claim of the BCL amounts to 100 638 597 euro (90 730 275 euro as at 31 December 2008).

10.3 Other claims within the Eurosystem

This sub-item represents the BCL's net claims towards the Eurosystem, mostly from transactions resulting from cross-border payments initiated for monetary or financial operations, made via the TARGET system, between the BCL and the other NCBs as well as the ECB. This claim amounts to 52.5 billion euro as at 31 December 2009 (42.1 billion euro as at 31 December 2008) and includes seigniorage income amounting to 2 million euro (2.7 million euro as at 31 December 2008).

The net position vis-à-vis the ECB bears interest at the marginal interest rate applying to the main refinancing operations.

Note 11 - Other assets

11.1 Tangible and intangible assets

Tangible and intangible fixed assets developed as follows:

	Buildings EUR	Furniture and equipment EUR	Software EUR	Other EUR	Total EUR
Cost as at 1 January 2009	**91 902 474**	**12 932 108**	**5 925 193**	**36 846**	**110 796 621**
Disposals	-	-	-	-	-
Acquisitions	507 988	442 090	127 174	86 113	1 163 365
Cost as at 31 December 2009	**92 410 462**	**13 374 198**	**6 052 367**	**122 959**	**111 959 986**
Accumulated depreciation as at 1 January 2009	33 615 601	10 362 504	4 983 045	-	48 961 150
Disposals	-	-	-	-	-
Depreciation	3 359 359	867 919	487 108	-	4 714 386
Accumulated depreciation as at 31 December 2009	36 974 960	11 230 423	5 470 153	-	53 675 536
Net book value as at 31 December 2009	**55 435 502**	**2 143 775**	**582 214**	**122 959**	**58 284 450**

The sub-item "Buildings" comprises the acquisition cost of the premises located on the 2, boulevard Royal, the costs incurred in relation to the reconstruction and transformation of the Pierre Werner building and the renovations made to the Siège Royal (main building). The building located on the avenue Monterey was completely written off in 2003, having been demolished in order to construct a new one. Construction of this new building was finished in 2006.

The Pierre Werner building and the Avenue Monterey building are considered as new buildings and are being amortised over a period of 25 years while the costs incurred in relation to the transformation of the Siège Royal are considered as renovations and are being amortised over 10 years.

11.2 Other financial assets

The components of this item are as follows:

	2009 EUR	2008 EUR
Other participating interests	45 952	161 850
Pension fund	103 537 053	87 955 547
	103 583 005	**88 117 397**

The other participating interests comprise the BCL's investments in Swift and ATTF.

The assets of the pension fund are recorded in the accounts under "Pension fund BCL". The balance of this account corresponds to the net asset value of the fund as calculated by the depositary bank as at 31 December 2009.

11.3 Accruals and prepaid expenses

Most of this item consists of the accrued interests on monetary policy operations, securities and receivables from the IMF.

Are also included under this item the commissions receivable, prepaid expenses (including salaries paid for January 2010) and other income receivable.

11.4 Miscellaneous

	2009 EUR	2008 EUR
Others	1 808 764 473	19 999 587
	1 808 764 473	**19 999 587**

This item includes mainly the remaining outstanding claims against counterparties which defaulted in 2008 on refinancing operations undertaken by the Eurosystem, which in the previous year were disclosed under item 7 "Lending to euro area credit institutions related to monetary policy operations denominated in euro". This reclassification was decided by the Eurosystem.

This item consists also of the counterpart of the unrealised loss on SDR recorded in the financial statements of the BCL which is guaranteed by the State according to the agreement signed in May 1999 establishing the financial relationship between the State of Luxembourg and the BCL (18.7 million euro as at 31 December 2009).

Note 12 - Banknotes in circulation

This item includes the BCL's share of the total euro banknotes put into circulation by the central banks of the Eurosystem according to their weightings in the capital of the ECB, which totalled 1 858.8 million euro (1 586.6 million euro as at 31 December 2008).

Note 13 - Liabilities to euro area credit institutions related to monetary policy operations denominated in euro

	2009 EUR	2008 EUR
Current accounts (covering the minimum reserves)	7 986 042 119	16 513 643 449
Deposit facility	5 502 474 166	29 018 054 785
Fixed-term deposits	-	-
Fine-tuning reverse operations	-	-
Deposits related to margin calls	-	-
	13 488 516 285	**45 531 698 234**

This item primarily comprises credit institutions' accounts held within the framework of the requirements of the minimum reserve system as well as deposit facilities.

13.1 Current accounts (covering the minimum reserves)

This sub-item records euro-denominated accounts of credit institutions which mainly serve to meet minimum reserve requirements. These requirements have to be respected over an average unsettled period starting on the Wednesday following the first Governing Council's meeting of the month.

13.2 Deposit facility

This sub-item records the standing facility allowing credit institutions to make overnight deposits with the bank at a pre-specified interest rate.

13.3 Fixed-term deposits

This sub-item records deposits made at the Bank for the purpose of absorbing market liquidity in connection with fine-tuning operation in the Eurosystem.

13.4 Fine-tuning reverse operations

This sub-item records other monetary policy operations aimed at tightening liquidity.

13.5 Deposits related to margin calls

This sub-item records deposits made by credit institutions to compensate for the decrease in the value of securities pledged as collateral for other credits granted to these same institutions.

Note 14 - Liabilities to other euro area residents denominated in euro

14.1 Liabilities to general government

This item records the amounts as follows:

	2009 EUR	2008 EUR
Current accounts	10 509	14 306
Account related to euro coins issued by the Treasury	193 917 563	176 900 673
Fixed-term deposit	150 000 000	210 000 000
	343 928 072	**386 914 979**

The item "current accounts" records an amount of 10 099 euro owed to the Luxembourg Treasury and an amount of 410 euro owed to the CCPL.

In accordance with the amendment of 10 April 2003 to the agreement between the State of Luxembourg and the BCL establishing their financial relationship, the "Account related to euro coins issued by the Treasury" corresponds to the amount of coins issued by the BCL in the name and for the account of the Treasury.

The fixed-term deposit renewed on a monthly basis relates to the above-mentioned agreement.

Note 15 - Liabilities to non-euro area residents denominated in euro

This item includes current accounts held by central banks, international and supranational institutions and other account holders outside the euro area.

Note 16 - Liabilities to non-euro area residents denominated in foreign currency

This item includes current accounts in foreign currency held by central banks outside the euro area.

Note 17 - Counterpart of Special Drawing Rights allocated by the IMF

The amount shown under this item represents the countervalue of SDR, converted to euro at the same rate as applied to the SDR assets, which should be returned to the IMF if SDR are cancelled, if the SDR Department established by the IMF is closed or if Luxembourg decides to withdraw from it. This liability, of unlimited duration, amounts to SDR 246.6 million, or 268.5 million euro as at 31 December 2009 (SDR 17.0 million, or 18.7 million euro as at 31 December 2008).

In 2009, an amount of SDR 229.7 million was allocated to Luxembourg.

Note 18 - Intra-Eurosystem liabilities

18.1 Net liabilities related to the allocation of euro banknotes within the Eurosystem

This item consists of the liabilities of the BCL vis-à-vis the Eurosystem relating to the allocation of euro banknotes within the Eurosystem. The net position bears interest at the marginal interest rate applying to the main refinancing operation.

Note 19 - Items in course of settlement

This item contains cash desk's differences as at 31 December 2009.

Note 20 - Other liabilities

This item comprises mainly the negative revaluation differences on financial instruments linked to interest rates and market prices, accrued interest, including accrued interest on intra-Eurosystem liabilities, as well as miscellaneous expenses payable, including suppliers, and the Luxembourg banknotes not yet returned.

The Luxembourg banknotes still circulating as at 31 December 2009 amount to 5.2 million euro (5.2 million euro as at 31 December 2008).

Note 21 - Provisions

Provisions developed as follows:

	2009 EUR	2008 EUR
Provisions for banking risks	342 314 711	146 692 892
Provisions for pensions	106 389 085	95 533 306
Other provisions	50 000	50 000
	448 753 796	**242 276 198**

21.1 Provisions for banking risks

Provisions for banking risks include the following items:

	2009 EUR	2008 EUR
Provision covering credit and market risk	178 598 096	27 757 214
Buffer against counterparty risks in Eurosystem	9 064 058	12 962 213
Provision covering operational risk	16 040 000	7 710 000
Provision covering liquidity risk	15 287 989	15 141 461
Provision for doubtful debts	83 030 345	42 827 781
	302 020 488	**106 398 669**
Provisions for general banking risks	2009 EUR	2008 EUR
Provision for liabilities resulting from monetary agreements	32 341 954	32 341 954
Other provision for general banking risks	7 952 269	7 952 269
	40 294 223	**40 294 223**
	342 314 711	**146 692 892**

21.1.1 Provision covering credit and market risk

The provision for 178.6 million euro (27.8 million euro as at 31 December 2008) corresponds to:

- 2.5% of the BCL's own securities portfolio existing as at 31 December 2009 and participations other than the participating interest in the ECB;
- 2.1% of the amount lent by the Eurosystem (main and long-term refinancing operations) as at year-end for monetary policy reasons multiplied by the BCL's capital key in Eurosystem

The BCL's aim is to target a rate of 4% on all items in the medium term.

Due to market evolution in 2008, a part of the provisions previously created had to be used to offset the inherent risk on monetary policy operations as well as write-downs related to the application of the prudent Eurosystem accounting rules. As at 31 December 2009, the provisioning has been resumed according to the defined policy and taking into account the level of credits granted by the Eurosystem given the exceptional market conditions.

21.1.2 Buffer against counterparty risks in Eurosystem

In accordance with Article 32.4 of the ESCB Statutes, a buffer was established against counterparty risks in monetary policy operations. This buffer was funded among all national central banks of participating Member States in proportion to their subscribed capital key shares in the ECB prevailing at the time of default. In accordance with the general accounting principle of prudence, the Governing Council of the ECB reduced the buffer from 5 736 000 000 euro as at 31 December 2008 to 4 011 000 000 euro as at 31 December 2009. This decrease was due to revaluation of collateral and to principal payments received from the debtors.

For the BCL, the buffer decreased from 12 962 213 euro as at 31 December 2008 to 9 064 075 euro as at 31 December 2009.

21.1.3 Provision covering operational risk

This provision is intended to cover the risk of losses resulting from the inadequacy or fault attributable to procedures, to the human factor or to the BCL's systems or to external causes. Because of a lack of relevant statistics on the dimension of risk, the transfer to the provision is based on the Basic Indicator Approach described in the consultative working paper of the Basel Committee as being 15% of the average for the last three years of the net banking product (including payments allocated on monetary income).

In 2009, the average has been based on previous years in accordance with the rules.

21.1.4 Provision for doubtful debts

The provision for doubtful debts covers non paid interests from counterparty amounting to 83.0 million euro as at 31 December 2009 (non paid interests from counterparty amounting to 41.0 million euro and non paid coupons amounting to 1.8 million euro at 31 December 2008).

21.1.5 Provision for liabilities resulting from monetary agreements

The provision for liabilities resulting from monetary treaties created in order to face any future monetary liabilities monetary liabilities did not change in 2009.

21.1.6 Other provision for general banking risks

This provision, intended to cover non-specific risk of losses resulting from central bank's activities, did not change in 2009.

21.2 Provisions for pensions

Provisions for pensions include the following items:

	2009 EUR	2008 EUR
Provision for pensions	104 847 467	93 991 688
Provision for increase of PBO	1 541 618	1 541 618
	106 389 085	**95 533 306**

21.2.1 Provision for pensions

The pension claims of its agents are fully supported by the BCL. The corresponding liability is calculated on the basis of the actuarial method described in note 2.11 in consideration of current factors and amounted to 104.8 million euro as at 31 December 2009 (94.0 million euro as at 31 December 2008).

The increase of the provision during the year results from:
- monthly deductions from the gross salaries of BCL agents (employee's part) as well as the employer's share;
- pension payments to retirees;
- periodic transfers from the account "Booking reserve of the pension fund" to adjust the account "Provision for pensions" to its actuarial value;
- a transfer, if needed, to adjust the account "Provision for pensions" to its actuarial value.

21.2.2 Provision for increase of Projected Benefit Obligation

This provision was intended to cover the liability (Projected Benefit Obligation or PBO) for new agents or the changes of present value of potential payments taking into account individual parameters and the actuarial method used. The provision did not change in 2009.

Note 22 - Revaluation accounts

This item includes positive revaluation differences related to the spread between the exchange rate as at year-end and the average exchange rate of BCL's currency and gold positions, as well as positive revaluation differences related to the spread between the market value as at year-end and the amortised cost for securities positions.

Note 23 - Capital and reserves

23.1 Capital

The State of Luxembourg is the sole shareholder of the BCL's capital for an amount of 175 million euro (25 million euro as at 31 December 2008). The capital increase has been realised by incorporation of reserves amounting to 150 million euro as at 1 June 2009.

23.2 Reserves

The reserves amount to 0.2 million euro (147.3 million euro as at 31 December 2008). This amount was increased by 2.8 million euro in 2009 following the allocation of profit for 2008 according to the decision of the BCL's Council in application of its Founding Law (Article 31). Furthermore, this amount decreased in 2009 following an increase of capital by incorporation of reserves for 150 million.

	Capital EUR	Reserves EUR
As at 1 January 2009	25 000 000	147 341 272
Profit allocation for 2008 (art. 31)	-	2 830 126
Capital increase	150 000 000	(150 000 000)
As at 31 December 2009	**175 000 000**	**171 398**

Note 24 - Foreign exchange swap

As at 31 December 2008 this item included forward liabilities to the ECB which arose in connection with the US dollar Term Auction Facility established by the Federal Reserve (see also note 5 "Claims on euro area residents denominated in foreign currency") and claims arising from the transfer of US dollar liquidity against euro cash.

In addition, off-balance-sheet items included forward liabilities to the ECB and forward claims against Eurosystem counterparties outstanding as at 31 December 2008, which arose in connection to the provision of Swiss franc funding to Eurosystem counterparties by means of a swap agreement.

As at 31 December 2009, the BCL has no swap forward agreement (15.0 billion euro as at 31 December 2008).

Note 25 - Custody deposits

This item includes the securities given into custody by Luxembourg credit institutions to cover their liabilities related to refinancing operations, marginal lending facilities and intra-day credits.

This item also includes the securities given into custody in Luxembourg and used as a guarantee by commercial banks incorporated in other member states according to the Correspondent Central Banking Model (CCBM). This agreement allows commercial banks to obtain funding from their country of residence's central bank by using the securities held in another Member State as a guarantee.

As at 31 December 2009, the market value of these securities amounts to 222.8 billion euro (265.1 billion euro as at 31 December 2008).

Note 26 - Foreign currency reserve assets administered on behalf of the ECB

This item includes the foreign currency reserves at market value managed by BCL on behalf of the ECB.

Note 27 - Forward contracts

BCL can be engaged in bond and stock index futures. These instruments are mainly held for hedging purposes of interest rate risks related to the securities portfolio and for the purpose of adjusting the duration of the existing portfolio depending on market conditions.

As at 31 December 2009, the total liabilities related to these forward contracts amount to 127.1 million euro (83.2 million euro as at 31 December 2008). One security has been given as a guarantee in order to cover the initial margin deposit. This security remains on the BCL's balance sheet for an amount of 10.0 million euro as at 31 December 2009, no change compared to 2008.

Note 28 - Net interest income

This item includes interest income, after deduction of interest expense, on assets and liabilities in foreign currency and in euro. Interest income and expense are as follows:

Composition of interest income	Amounts in foreign currency EUR		Amounts in euro EUR	
	2009	2008	2009	2008
IMF	436 044	788 239	-	-
Monetary policy	-	-	388 512 529	1 362 854 926
Intra-Eurosystem claims	-	-	514 864 267	988 580 261
Securities	4 638 904	4 722 149	189 376 978	266 088 544
Gold	341 504	315 713	-	-
Other	47 128 321	137 756 418	19 539 524	25 829 594
Total	**52 544 773**	**143 582 519**	**1 112 293 298**	**2 643 353 325**

Composition of interest expense	Amounts in foreign currency EUR		Amounts in euro EUR	
	2009	2008	2009	2008
IMF	(289 516)	(476 292)	-	-
Current accounts (including minimum reserves) and deposits related to monetary policy operations	-	-	(171 296 339)	(470 702 816)
Liabilities related to the reallocation of euro banknotes in the Eurosystem	-	-	(695 147 107)	(1 937 193 702)
Other intra-Eurosystem liabilities	-	-	(125 371)	(99 331)
Interests on term deposits	-	-	(1 061 875)	(7 532 465)
Other liabilities	(694 085)	(12 120 431)	(587 115)	(3 433 167)
Interest on swap operation	(46 094 847)	(124 383 028)	-	-
Total	**(47 078 448)**	**(136 979 751)**	**(868 217 807)**	**(2 418 961 481)**

The net interest income increased. In the general context of decrease of interest rates during the year, the income on securities decreased less than refinancing costs.

Note 29 - Realised gains / (losses) arising from financial operations

This item includes the result from transactions in foreign currencies, from securities and from financial instruments linked to interest rates and market prices, i.e. gains realised minus loss realised on these transactions. In 2009, they amounted to 62.5 million euro (18.4 million euro as at 31 December 2008) and to 8.1 million euro (21.0 million euro as at 31 December 2008) respectively, making a net gain of 54.4 million euro (a net loss of 2.6 million euro as at 31 December 2008).

Note 30 - Write-downs on financial assets and positions

This item includes revaluation losses on securities for 20.9 million euro (revaluation losses on securities for 377.5 million euro, on currency for 0.002 million euro and on futures for 0.2 million euro in 2008).

Note 31 - Transfer to/from provisions for foreign exchange rate and price risks

This item includes the transfers to and from provisions for banking risks excluding the buffer against counterparty risks in Eurosystem (see note 34).

Note 32 - Net result from fees and commissions

Fees and commissions income and expense are as follows:

	Fees and commissions income		Fees and commissions expense	
	EUR		EUR	
	2009	2008	2009	2008
Securities	18 334 059	15 543 097	(17 696 294)	(15 374 090)
Others	1 221 872	1 336 736	(68 803)	(55 675)
Total	**19 555 931**	**16 879 833**	**(17 765 097)**	**(15 429 765)**

Note 33 - Income from participating interest

This item includes the dividend distributed by the European Central Bank.

In 2009, the ECB's income on euro banknotes in circulation was distributed in full. BCL's part amounted to 2.2 million euro as at 31 December 2009 (2.7 million euro as at 31 December 2008).

Note 34 - Net result of pooling of monetary income

The monetary income of each Eurosystem NCB is determined by measuring the actual annual income that derives from the earmarkable assets held against its liability base. The liability base consists of the following items:

– banknotes in circulation;
– liabilities to credit institutions related to monetary policy operations denominated in euro;
– net intra-Eurosystem liabilities resulting from TARGET transactions;
– net intra-Eurosystem liabilities related to the allocation of euro banknotes within the Eurosystem.

Any interest paid on liabilities included within the liability base is to be deducted from the monetary income to be pooled.

The earmarkable assets consist of the following items:

- lending to euro area credit institutions related to monetary policy operations denominated in euro;
- intra-Eurosystem claims equivalent to the transfer of foreign reserve assets to the ECB;
- net intra-Eurosystem claims resulting from TARGET transactions;
- net intra-Eurosystem claims related to the allocation of euro banknotes within the Eurosystem;
- a limited amount of each NCBs' gold holdings in proportion to its capital key.

Gold is considered as generating no income.

Where the value of an NCB's earmarkable assets exceeds or falls short of the value of its liability base, the difference shall be offset by applying to that difference the marginal rate on main refinancing operations.

The monetary income pooled by the Eurosystem is allocated among NCBs according to the subscribed capital key (0.25032% for the BCL in 2009).

This item includes the net monetary income allocated to BCL for 2009 representing an expense amounting to 45 572 429 euro (expense of 57 235 105 euro as at 31 December 2008).

As at 31 December 2009, this item also includes the amount of 3 898 155 euro due to the decrease of the buffer against counterparty risks in Eurosystem, as described in note 21.1.2. (construction of this buffer amounting to 12 962 213 as at 31 December 2008).

Note 35 - Other income

Other income includes revenue for services rendered to third parties, transfers from administrative provisions, income from "Monterey building" renting, income from numismatic activities and the recovered functioning costs of EPCO (Eurosystem procurement Co-ordination Office).

Other income includes also BCL's revenue from financial agreement between the State of Luxembourg and BCL.

Note 36 - Staff costs

This item includes the salaries and compensations as well as the employer's share of contributions to the pension and social security schemes. The compensations paid to the Board of Directors amounted to 518 410 euro for the year 2009 (511 570 euro for the year 2008).

As at 31 December 2009, the BCL employed 247 persons (238 as at 31 December 2008). The average number of persons working for the BCL from 1 January to 31 December 2009 was 242 (226 for the year 2008).

Note 37 - Administrative expenses

This item includes all general and recurring expenses, meaning leasing, cleaning and repair of buildings and equipment, small goods and materials, fees paid and other services and supplies as well as training expenses. The compensations paid to the members of the Council amounted to 79 037 euro in 2009 (76 019 euro in 2008).

Note 38 - Depreciation of tangible and intangible fixed assets

This item shows the depreciation applied on buildings, renovations on buildings, furniture and office equipment, computer hardware and software.

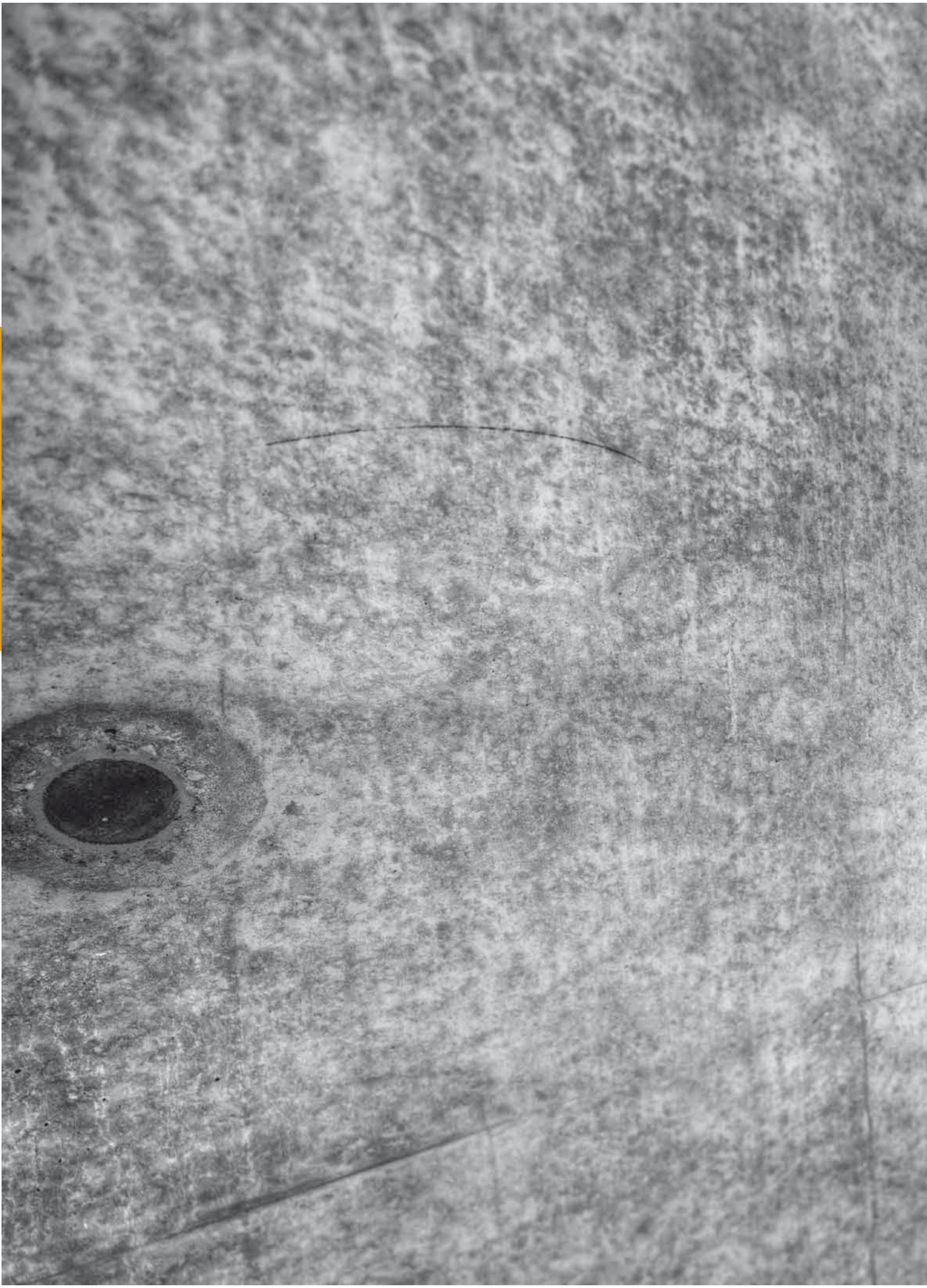
Note 39 - Banknote production services

This item shows mainly the costs related to the production and issue of banknotes denominated in euro.

Note 40 - Other expenses

In 2009, this item mainly shows costs related to numismatic activities and to consultancy.

In 2008, this item mainly showed adjustment related to pension fund, the transfer to the administrative provisions and costs related to numismatic activities.



05 ANNEXES

5
ANNEXES

5.1 LIST OF BCL REGULATIONS PUBLISHED IN 2009

2008/N°1 of 28 November 2008 (consolidated version)

Règlement de la Banque centrale du Luxembourg 2008/N°1 du 28 novembre 2008 contenant des modifications temporaires aux règles applicables à l'éligibilité des garanties, version consolidée suite au règlement de la Banque centrale du Luxembourg 2009/N°5 du 23 décembre 2009.
Domain: Monetary policy.

2009/N°5 of December 2009

Règlement de la Banque centrale du Luxembourg 2009/N°5 du 23 décembre 2009 portant modification du règlement de la Banque centrale du Luxembourg 2008/N°1 du 28 novembre 2008 contenant des modifications temporaires aux règles applicables à l'éligibilité des garanties.
Domain: Monetary policy

2009/N°4 of 29 April 2009

Règlement de la Banque centrale du Luxembourg 2009/N°4 du 29 avril 2009 relatif à la surveillance de la liquidité.
Domain: Liquidity surveillance

2009/N°3 of 19 February 2009

Règlement de la Banque centrale du Luxembourg 2009/N°3 du 19 février 2009 portant modification des instruments et procédures de politique monétaire de l'Eurosystème.
Domain: Monetary policy

2009/N°2 of 27 January 2009

Règlement de la Banque centrale du Luxembourg 2009/N°2 du 27 janvier 2009 portant modification des instruments et procédures de politique monétaire de l'Eurosystème.
Domain: Monetary policy

5.2 LIST OF BCL CIRCULARS PUBLISHED IN 2009

- CIRCULAR BCL 2009/223 of 20 May 2009: Foreign Direct Investment Survey – sent to all credit institutions and to the financial services of the Entreprise des Postes et Télécommunications;
- CIRCULAIRE BCL 2009/224 of 8 June 2009: New statistical data collection for securitisation vehicles - Sent to all securitisation vehicles;
- CIRCULAR BCL 2009/225 of 8 June 2009: Modification of the statistical data collection of credit institutions – sent to all credit institutions;
- Circular BCL 2009/226 of 10 July 2010: Abrogation de la circulaire BCL 2008/222 du 9 octobre 2008 et changements à la circulaire BCL 2008/221 du 8 octobre 2008 – sent to all credit institutions;
- CIRCULAR BCL 2009/227 of 22 July 2010: Modification of the statistical data collection for money market funds – sent to all money market funds.

5.3 LIST OF BCL PUBLICATIONS PUBLISHED IN 2009

5.3.1 BCL Bulletins

- Bulletin BCL 2009/1, March 2009;
- Revue de stabilité financière, April 2009;
- Bulletin BCL 2009/2, September 2009;
- Bulletin BCL 2009/3, December 2009.

5.3.2 BCL Annual Reports

- Rapport Annuel 2008, June 2009;
- Annual Report 2008, August 2009.

5.3.3 BCL Working Papers

- Working Paper N° 36, March 2009
  LOLA 1.0: Luxembourg OverLapping generation model for policy Analysis, by Olivier Pierrard and Henri R. Sneessens ;
- Working Paper N° 37, April 2009
  Regional wages and market potential in the enlarged EU: An empirical investigation, by Thomas Y. Mathä and Allison Shwachman ;
- Working Paper N° 38, May 2009
  Inflation dynamics with labour market matching: assessing alternative specifications, by Kai Christoffel, James Costain, Gregory de Walque, Keith Kuester, Tobias Linzert, Stephen Millard, and Olivier Pierrard ;
- Working Paper N° 39, June 2009
  Wages are flexible, aren't they? Evidence from monthly micro wage data, by Patrick Lünnemann and Ladislav Wintr ;

- Working Paper N° 40, September 2009
  Pros and Cons of various fiscal measures to stimulate the economy, by Carine Bouthevillain, John Caruana, Cristina Checherita, Jorge Cunha, Esther Gordo, Stephan Haroutunian, Geert Langenus, Amela Hubic, Bernhard Manzke, Javier J. Pérez and Pietro Tommasino ;
- Working Paper N° 41, September 2009
  Liquidity scenario analysis in the Luxembourg banking sector, by Štefan Rychtárik ;
- Working Paper N°42, December 2009
  Stress testing and contingency funding plans: an analysis of current practices in the Luxembourg banking sector, by Franco Stragiotti ;
- Working Paper N°43, December 2009
  Liquidity risk monitoring framework: A supervisory tool, by Franco Stragiotti et Štefan Rychtárik.

5.3.4 BCL Brochures

- Luxembourg numismatic products 2010.

5.3.5 Publications and external presentations of BCL Staff

5.3.5.1 Publications

- G. de Walque, O. Pierrard, H. Sneessens et R. Wouters. "Sequential bargaining in a New Keynesian Model with frictional unemployment and wage-staggering" *Annals of Economics and Statistics,* forthcoming ;
- P. Guarda and A. Rouabah. "Bank productivity and efficiency in Luxembourg: Malmquist indices from a parametric output distance function" in M. Balling, E. Gnan, F. Lierman and J-P. Schoder (eds.) *Productivity in the Financial Services Sector*, SUERF Studies 2009/4 ;
- P. Lünnemann and T. Mathä. "Mean reversion and sales" *Applied Economics Letters*. 16(12): 1271-1275 ;
- Thomas Mathä and Ladislav Wintr. "Commuting flows across bordering regions: A note", *Applied Economics Letters*, 16(7): 735 - 738 ;
- T. Mathä. "Regional mc parity: do common pricing points reduce deviations from the law one price?" *Review of World Economics / Weltwirtschaftliches Archiv*. 145(1): 155-166.

5.3.5.2 Presentations

- Seminar at University of Amsterdam, Amsterdam, March 2009 ;
- 4th European Workshop on Labour Markets, Vienna, May 2009 ;
- CESifo Summer Workshop on European Unemployment, Italy, June 2009 ;
- European Association of Labour Economists congress, Tallinn, September 2009 ;
- ICABE (International Conference on Applied Business and Economics), Greece, September 2009 ;
- WDN (Wage Dynamics Network), Frankfurt, October 2009 ;
- Seminar at De Nederlandsche Bank, Amsterdam, November 2009 ;
- Technical seminar on labour market issues, Ministry of the Economy, Luxembourg, November 2009 ;
- Seminar at Bank of England, London, December 2009.

Paper copies of publications can be obtained at the BCL's counters as long as stocks last and according to the BCL's conditions. The BCL's publications may be downloaded from the website www.bcl.lu.

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5.4 EUROPEAN CENTRAL BANK PUBLICATIONS

For a complete list of the documents published by the European Central Bank (ECB) and for the versions in all official languages of the European Union, please visit the ECB's website www.ecb.int

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5.5 LIST OF MONETARY, ECONOMIC AND FINANCIAL STATISTICS

1 Monetary policy statistics
- 1.1 Financial statement of the Banque centrale du Luxembourg
- 1.2 Luxembourg minimum reserve statistics

2 Monetary and financial developments in the euro area and Luxembourg
- 2.1 Aggregated balance sheet of the Luxembourg MFIs (excluding the Banque centrale du Luxembourg)
- 2.2 Liabilities of the Luxembourg MFIs included in the euro area monetary aggregates

3 Capital markets and interest rates
- 3.1 Luxembourg banks' interest rates on euro-denominated deposits and loans by euro area residents - new business
- 3.2 Luxembourg banks' interest rates on euro-denominated deposits and loans by euro area residents - outstanding amounts
- 3.3 Money markets' interest rates
- 3.4 Government bond yields
- 3.5 Stock market indices
- 3.6 Exchange rates

4. Developments of prices and costs in Luxembourg
- 4.1 Developments in the Harmonised Index of Consumer Prices (HICP) and the National Index of Consumer Prices (NICP)
- 4.2 Industrial goods and commodity prices
- 4.3 Costs indicators and terms of trade

5. Luxembourg real economy indicators
- 5.1 GDP at market prices and its components (ESA95 version)
- 5.2 Selected other real economy indicators
- 5.3 Labour market indicators - Employment and unemployment
- 5.4 Labour market indicators – Employment breakdown
- 5.5 Consumer confidence survey

5.6 LIST OF ABBREVIATIONS

ABBL	Association des Banques et Banquiers, Luxembourg
AGDL	Association pour la garantie de dépôts, Luxembourg
ALCO	Asset and liability management committee
BCL	Banque centrale du Luxembourg
BIS	Bank of international settlements
BLEU	Belgian Luxembourg Economic Union
BNB	Banque Nationale de Belgique
CBL	Clearstream Banking Luxembourg
CCBM	Correspondent central banking model
CERS	Committee European Securities Regulators
CPI	Consumer Price Index
CMFB	Committee on monetary, financial and balance of payment statistics
CSSF	Commission de surveillance du secteur financier
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EFC	Economic and Financial Committee
EIB	European Investment Bank
EMI	European Monetary Institute (1994-1998)
EMS	European Monetary System
ESCB	European System of Central Banks
ESP	European Service Providers
EU	European Union
EUR	Euro
Eurostat	Statistical office of the European Communities
FATF	Financial Action Task Force against money laundering
FASP	Financial sector Assessment Program
GDP	Gross domestic product
HICP	Harmonised Index of Consumers Prices
IADB	Inter American Development Bank
IGC	Intergovernmental conference

IMF	International Monetary Fund
IML	Institut Monétaire Luxembourgeois (1983-1998)
LIPS-Gross	Luxembourg inter bank payment system real-time Gross Settlement System
LIPS-Net	Luxembourg Interbank Payment System Real-Time Net Settlement System
MFI	Monetary financial institution
MRA	maximum risk allowance
MRO	main refinancing operation
NAV	net asset value
NCB	National central bank
OECD	Organisation for Economic Cooperation and Development
OFI	Other Financial Intermediaries
OPEC	Organisation of Petroleum Exporting Countries
LTRO	Longer term refinancing operation
PBO	Projected Benefit Obligation
ROA	Return on Assets
ROE	Return on Equity
RTGS system	Real-Time Gross Settlement system
RTGS-L GIE	Economic interest grouping for real-time gross settlement of payments in Luxembourg
SDDS	Special Data Dissemination Standard
SDR	Special Drawing Rights
SEC	European System of National Accounts
SWIFT	Society for Worldwide Interbank Financial Telecommunication s.c.
SYPAL-GIE	Economic interest grouping for the promotion and management of payments systems in Luxembourg
STATEC	Central service for statistics and economic studies
Target System	Trans-European Automated Real-time Gross settlement Express Transfer system
UCI	Undertaking for Collective Investment
UCITS	Undertaking for Collective Investments in Transferable Securities
VaR	Value at Risk

5.7 GLOSSARY

Base effect: When analysing business cycles, the evolution of annual variation rates of a variable are often explained by "base effects". A base effect occurs when the evolution of a variable's annual rate from month t+1 varies because of the evolution of the variable's level 12 months before and not because of the variation of the variable's level between month n and month n+1.

Balance of payments (b.o.p.): a statistical statement that summarises, for a specific period of time, the economic transactions of an economy with the rest of the world. The transactions considered are those involving goods, services and income; those involving financial claims on, and liabilities to, the rest of the world; and those (such as debt forgiveness) that are classified as transfers.

Central counterparty: an entity that interposes itself between the counterparties to the contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer.

Central securities depository (CSD): an entity that i) enables securities transactions to be processed and settled by book entry, and ii) plays an active role in ensuring the integrity of securities issues. Securities can be held in physical (but immobilized) or dematerialized form (i.e. so that they exist only as electronic records).

Collateral: assets pledged or otherwise transferred (e.g. by **credit institutions** to central banks) as a guarantee for the repayment of loans, as well as assets sold (e.g. by credit institutions to central banks) under repurchase agreements.

Consolidated balance sheet of the MFI sector: a balance sheet obtained by netting out inter-**MFI** positions (e.g. inter-MFI loans and deposits) in the aggregated **MFI** balance sheet. It provides statistical information on the **MFI** sector's assets and liabilities vis-à-vis residents of the euro area not belonging to this sector (i.e. the general government and other euro area residents) and vis-à-vis non-euro area residents. It is the main statistical source for the calculation of monetary aggregates, and it provides the basis for the regular analysis of the counterparts of M3.

Correspondent central banking model (CCBM): a mechanism established by the **European System of Central Banks** with the aim of enabling **counterparties** to use eligible **collateral** on a cross-border basis. In the CCBM, NCBs act as custodians for one another. Each NCB has a securities account in its securities administration for each of the other NCBs (and for the **European Central Bank**).

Counterparty: the opposite party in a financial transaction (e.g. any party transacting with a central bank).

Credit institution: 1) an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credits for its own account; or 2) an undertaking or any other legal person, other than those under (1), which issues means of payment in the form of electronic money. The most common types of credit institutions are banks and savings banks. See also electronic money (e-money).

Credit risk: the risk that a counterparty will not settle an obligation for full value, either when due or at any time thereafter. Credit risk includes replacement cost risk and principal risk. It also includes the risk of the failure of the settlement bank.

Deposit facility: a **standing facility** of the **Eurosystem** which counterparties may use to make overnight deposits, remunerated at a pre-specified interest rate, at an NCB (see also key **ECB interest rates**).

ECOFIN Council: the EU Council meeting in the composition of the ministers of economy and finance.

Economic analysis: one pillar of the **European Central Bank's** framework for conducting a comprehensive analysis of the risks to **price stability**, which forms the basis for the **Governing Council's** monetary policy decisions. The economic analysis focuses mainly on the assessment of current economic and financial developments and the implied short to medium-term risks to price stability from the perspective of the interplay between supply and demand in goods, services and factor markets at those horizons. Due attention is paid to the need to identify the nature of shocks affecting the economy, their effects on cost and pricing behavior, and the short to medium-term prospects for their propagation in the economy (see also **monetary analysis**).

Economic and Financial Committee (EFC): a consultative Community body which contributes to the preparation of the work of the **ECOFIN Council** and the European Commission. Its tasks include reviewing the economic and financial situation of the Member States and of the Community, and budgetary surveillance.

Economic and Monetary Union (EMU): the process that led to the single currency, the euro, and the single monetary policy in the euro area, as well as to the coordination of the economic policies of the EU Member States. This process, as laid down in the Treaty, took place in three stages. Stage Three, the final stage, started on 1 January 1999 with the transfer of monetary competence to the **European Central Bank** and the introduction of the euro. The cash changeover on 1 January 2002 completed the process of setting up EMU.

Effective exchange rate (EER) of the euro (nominal/real): a weighted average of bilateral euro exchange rates against the currencies of the euro area's main trading partners. The **European Central Bank** publishes nominal EER indices for the euro against two groups of trading partners: the EER-21 (comprising the 11 non-euro area EU Member States and 10 main trading partners outside the EU) and the EER-41 (composed of the EER-21 and 20 additional countries). The weights used reflect the share of each partner country in euro area trade and account for competition in third markets. Real EERs are nominal EERs deflated by a weighted average of foreign, relative to domestic, prices or costs. They are thus measures of price and cost competitiveness.

Electronic money (e-money): An electronic store of monetary value on a technical device that may be widely used as prepaid bearer instrument for making payments to undertakings other than the issuer, without necessarily involving bank accounts in the transactions.

EONIA (euro overnight index average): a measure of the effective interest rate prevailing in the euro interbank overnight market. It is calculated as a weighted average of the interest rates on unsecured overnight lending transactions denominated in euro, as reported by a panel of contributing banks.

ERM II (exchange rate mechanism II): the exchange rate mechanism which provides the framework for exchange rate policy cooperation between the euro area countries and the non-euro area EU Member States. ERM II is a multilateral arrangement with fixed, but adjustable, central rates and a standard fluctuation band of ±15%. Decisions concerning central rates and, possibly, narrower fluctuation bands are taken by mutual agreement between the EU Member State concerned, the euro area countries, the European Central Bank (ECB) and the other EU Member States participating in the mechanism. All participants in ERM II, including the ECB, have the right to initiate a confidential procedure aimed at changing the central rates (realignment).

EURIBOR (euro interbank offered rate): the rate at which a prime bank is willing to lend funds in euro to another prime bank, as reported by a panel of contributing banks, computed daily for interbank deposits with different maturities of up to 12 months.

Euro: The name of the European single currency adopted by the European council at its meeting in Madrid on 15 and 16 December 1995 and used instead of the term ECU originally employed in the Treaty.

Euro area: the area encompassing those Member States which have adopted the euro as the single currency in accordance with the Treaty and in which a single monetary policy is conducted under the responsibility of the **Governing Council** of the **European Central Bank**. The euro area currently comprises Belgium, Germany, Ireland, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland.

Eurogroup: an informal gathering of the ministers of economy and finance of the EU Member States whose currency is the euro.

European Central Bank (ECB): the ECB lies at the centre of the **Eurosystem** and the **European System of Central Banks** (ESCB) and has its own legal personality in accordance with the Treaty (Article 282(3)). It ensures that the tasks conferred upon the Eurosystem and the ESCB are implemented either through its own activities or through those of the NCBs, pursuant to the Statutes of the ESCB. The ECB is governed by the **Governing Council** and the **Executive Board**, and, as a third decision-making body, by the **General Council**.

European Monetary Institute (EMI): A temporary institution established at the start of stage two of **Economic and Monetary Union** on 1 January 1994. The two main tasks of the EMI were to strengthen central bank cooperation and monetary policy coordination and to make the preparations required for establishment of the **European System of Central Banks**, for the conduct of the single monetary policy and for the creation of a single currency in stage three. It went into liquidation upon the establishment of the **European Central Bank** on 1 June 1998.

European System of Accounts 1995 (ESA 95): a comprehensive and integrated system of macroeconomic accounts based on a set of internationally agreed statistical concepts, definitions, classifications and accounting rules aimed at achieving a harmonized quantitative description of the economies of the EU Member States. The ESA 95 is the Community's version of the world System of National Accounts 1993 (SNA 93).

European System of Central Banks (ESCB): composed of the **European Central Bank** (ECB) and the NCBs of all 27 EU Member States, i.e. it includes, in addition to the members of the **Eurosystem**, the NCBs of those Member States whose currency is not the euro. The ESCB is governed by the **Governing Council** and the **Executive Board** of the ECB, and, as a third decision-making body of the ECB, by the **General Council**.

Eurosystem: the central banking system of the euro area. It comprises the **European Central Bank** and the NCBs of the Member States that have adopted the euro.

Eurosystem's international reserves: These comprise the reserve assets of the European Central Bank (ECB) and the reserve assets held by the national central banks (NCBs) of the participating Member States. Reserve assets must 1) be under the effective control of the relevant monetary authority, whether the ECB or the NCB of one of the participating Member States, and 2) comprise highly liquid, marketable and creditworthy foreign (i.e. non-euro) currency-denominated claims on non-Euro area residents, plus gold, special drawing rights and the reserve positions in the International Monetary Fund of the participating NCBs.

Executive Board: one of the decision-making bodies of the **European Central Bank (ECB)**. It comprises the President and the Vice-President of the ECB and four other members appointed, since the entry into force of the **Treaty of Lisbon**, by the European Council, acting by a qualified majority, on a recommendation from the EU Council.

Fiduciary money: banknotes and coins having the status of legal tender.

Financial stability: condition in which the financial system – comprising financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unraveling of financial imbalances, thereby mitigating the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities.

Fine-tuning operation: an **open market operation** executed by the **Eurosystem** in order to deal with unexpected liquidity fluctuations in the market. The frequency and maturity of fine-tuning operations are not standardised.

Foreign exchange swap: Simultaneous spot and forward transactions exchanging one currency against another. The Eurosystem can execute **open market operations** in the form of foreign exchange swaps, where the national central banks (or the European central bank) buy or sell Euro spot against a foreign currency and, at the same time, sell or buy them back in forward transaction.

General Council: one of the decision-making bodies of the **European Central Bank** (ECB). It comprises the President and the Vice-President of the ECB and the governors of all the NCBs of the **European System of Central Banks**.

Governing Council: the supreme decision-making body of the **European Central Bank** (ECB). It comprises all the members of the **Executive Board** of the ECB and the governors of the NCBs of the Member States that have adopted the **euro**.

Harmonized index of the consumer prices (HICP): a measure of the development of consumer prices that is compiled by Eurostat and harmonized for all EU Member states.

Key ECB interest rates: the interest rates, set by the **Governing Council**, which reflect the monetary policy stance of the **European Central Bank**. They are the rates on the **main refinancing operations**, the **marginal lending facility** and the **deposit facility**.

Longer-term refinancing operation: a regular open market operation executed by the **Eurosystem** in the form of **reverse transactions**. Such operations are carried out through a monthly standard tender and normally have a maturity of three months. During the financial market turmoil that started in August 2007, supplementary operations with maturities ranging from one maintenance period to one year were conducted, the frequency of which varied.

Main refinancing operation: a regular **open market operation** executed by the **Eurosystem** in the form of reverse transactions. Such operations are carried out through a weekly standard tender and normally have a maturity of one week.

Marginal lending facility: a **standing facility** of the **Eurosystem** which counterparties may use to receive overnight credit from an NCB at a pre-specified interest rate against eligible assets (see also **key ECB interest rates**).

Market liquidity risk: the risk that transactions on the financial market cannot be concluded or can only be concluded at worse than expected conditions owing to inadequate market depth or market disruption.

Market risk: the risk of losses (in both on and off-balance-sheet positions) arising from movements in market prices.

MFIs (monetary financial institutions): financial institutions which together form the money issuing sector of the euro area. These include the **Eurosystem**, resident **credit institutions** (as defined in Community law) and all other resident financial institutions whose business is to receive deposits and/or close substitutes for deposits from entities other than MFIs and, for their own account (at least in economic terms), to grant credit and/or invest in securities. The latter group consists predominantly of money market funds.

Monetary aggregates: Currency in circulation, plus outstanding amounts of certain liabilities of monetary financial institutions and central governments that have a relatively high degree of liquidity and are held by non-MFI Euro area residents outside the central government sector. The narrow monetary aggregate M1 has been defined as currency in circulation plus overnight deposits. The "intermediate" monetary aggregate M2 comprises of M1 plus deposits with agreed maturity of up to two years and deposits redeemable at notice of up to three months. The broad monetary aggregate M3 includes M2 plus repurchase agreements, money market funds shares and units, money market paper and debt securities with a maturity of up to two years. In October 1998 the Governing Council announced a reference value for the growth of M3, which it has since reconfirmed (see also reference value for monetary growth).

Monetary analysis: one pillar of the **European Central Bank**'s framework for conducting a comprehensive analysis of the risks to **price stability**, which forms the basis for the **Governing Council**'s monetary policy decisions. The monetary analysis helps to assess medium to long-term trends in inflation, in view of the close relationship between money and prices over extended horizons. The monetary analysis takes into account developments in a wide range of monetary indicators including **M3**, its components and counterparts, notably credit, and various measures of excess liquidity (see also **economic analysis**).

Outright transaction: A transaction whereby assets are bought or sold up to their maturity (spot or forward).

Open market operation: an operation executed on the initiative of the central bank in the financial market. With regard to their aims, regularity and procedures, **Eurosystem** open market operations can be divided into four categories: **main refinancing operations**; **longer-term refinancing operations**; **fine-tuning operations**; and **structural operations**. As for the instruments used, **reverse transactions** are the main open market instrument of the Eurosystem and can be employed in all four categories of operations. In addition, the issuance of debt certificates and **outright transactions** are available for structural operations, while outright transactions, **foreign exchange swaps** and the collection of fixed-term deposits are available for the conduct of fine-tuning operations.

Price stability: the maintenance of price stability is the primary objective of the **Eurosystem**. The **Governing Council** defines price stability as a year-on-year increase in the **Harmonised Index of Consumer Prices** for the euro area of below 2%. The Governing Council has also made it clear that, in the pursuit of price stability, it aims to maintain inflation rates below, but close to, 2% over the medium term.

Real-time gross settlement (RTGS) system: a settlement system in which processing and settlement take place on an order-by-order basis (without netting) in real time (continuously) (see also **TARGET**).

Reference value for M3 growth: the annual growth rate of **M3** over the medium term that is consistent with the maintenance of **price stability**. At present, the reference value for annual M3 growth is 4,5%.

Reserve ratio: the ratio defined by the central bank for each category of eligible balance sheet items included in the reserve base. The ratio is used to calculate **reserve requirements**.

Reserve requirement: the minimum amount of reserves a **credit institution** is required to hold with the **Eurosystem** over a predefined maintenance period. Compliance with the requirement is determined on the basis of the average of the daily balances in the reserve accounts over the maintenance period.

Reverse transaction: an operation whereby the central bank buys or sells assets under a **repurchase agreement** or conducts credit operations against **collateral**.

Securities settlement system (SSS): A system which permits the holding and transfer of securities or other financial assets, either free of payment or against payment (delivery versus payment).

Securitisation: the pooling of financial assets, such as residential mortgage loans, and their subsequent sale to a special-purpose vehicle, which then issues fixed income securities for sale to investors. The principal and interest of these securities depend on the cash flows produced by the pool of underlying financial assets.

Settlement risk: the risk that settlement in a transfer system will not take place as expected, usually owing to a party defaulting on one or more settlement obligations. This risk comprises, in particular, operational risk, credit risk and liquidity risk.

Stability and Growth Pact: the Stability and Growth Pact is intended to serve as a means of safeguarding sound government finances in Stage Three of **Economic and Monetary Union** in order to strengthen the conditions for **price stability** and for strong, sustainable growth conducive to employment creation. To this end, the Pact prescribes that Member States specify medium-term budgetary objectives. It also contains concrete specifications on the excessive deficit procedure. The Pact consists of the Resolution of the Amsterdam European Council of 17 June 1997 on the Stability and Growth Pact and two Council Regulations, namely i) Regulation (EC) No 1466/97 of 7 July 1997 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies as amended by Regulation (EC) No 1055/2005 of 27 June 2005, and ii) Regulation (EC) No 1467/97 of 7 July 1997 on speeding up and clarifying the implementation of the excessive deficit procedure as amended by Regulation (EC) No 1056/2005 of 27 June 2005. The Stability and Growth Pact is complemented by the **ECOFIN Council**'s report entitled "Improving the implementation of the Stability and Growth Pact", which was endorsed by the Brussels European Council of 22 and 23 March 2005. It is also complemented by the new Code of Conduct entitled "Specifications on the implementation of the Stability and Growth Pact and Guidelines on the format and content of stability and convergence programs", which was endorsed by the ECOFIN Council on 11 October 2005.

Standing facility: a central bank facility available to **counterparties** on their own initiative. The **Eurosystem** offers two overnight standing facilities: the marginal lending facility and the deposit facility.

Systemic risk: the risk that the inability of one participant to meet its obligations in a system will cause other participants to be unable to meet their obligations when due, with possible spillover effects such as significant liquidity or credit problems that may threaten the stability of the financial system. Such inability may be caused by operational or financial problems.

TARGET (Trans-European Automated Real-time Gross settlement Express Transfer system): the real-time gross settlement (RTGS) system for the euro.

TARGET2: a new generation of the **TARGET** system which replaces the former decentralized technical structure with a single shared platform offering a harmonised service with a uniform pricing scheme.

TARGET2-Securities (T2S): the Eurosystem's single technical platform enabling **central securities depositories** and NCBs to provide core, borderless and neutral securities settlement services in central bank money in Europe.

Treaty of Lisbon (Lisbon Treaty): amends the EU's two core treaties: the Treaty on European Union and the Treaty establishing the European Community. The latter has been renamed the Treaty on the functioning of the European Union. The Treaty of Lisbon was signed in Lisbon on 13 December 2007 and entered into force on 1 December 2009.

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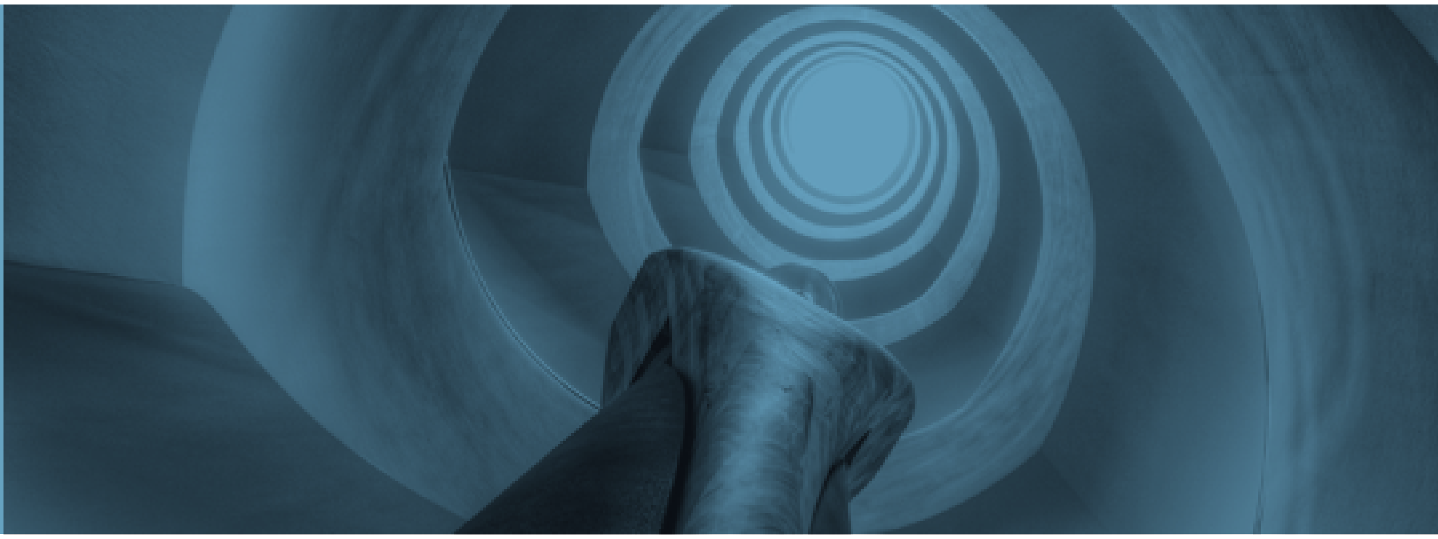

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