

## 2. The BCL's operations

### 2.1 Monetary policy operations

In the Grand-Duchy of Luxembourg, BCL is responsible for conducting the monetary policy as defined by the ECB, for the entire Euro zone.

The role of monetary policy is to steer interest rates and to control the liquidity in the money markets. To achieve this aim, instruments from three categories are being used:

### **Open Market Operations**

The refinancing operations conducted by the BCL (open market operations), consist of funds granted by the BCL against eligible collateral submitted by its counterparties, the financial institutions in Luxembourg.

Open market operations are split into:

- Main refinancing operations (MRO), carried out by the Eurosystem on a regular basis. MROs are realised through weekly tenders, with a oneweek maturity. Those operations play a leading role in the management of banking liquidity and in signalling the trend of monetary policy.
- Longer term refinancing operations (LTRO), carried out by the Eurosystem on a regular basis. LTRO are normally conducted through monthly tenders. They mostly have a three month-maturity. Those operations aim at providing additional longer term funding to the financial sector. They do not aim at giving signals about the orientation of the monetary policy.
- Fine tuning operations, executed by the Eurosystem on an ad hoc basis in order to counter temporary imbalances.

### **Standing Facilities**

This instrument allows for the injection and withdrawal of liquidities on a day to day basis.

There are two types of standing facilities:

 the marginal lending facility: the counterparties benefit from a marginal lending facility at BCL, which they can use in the form of a current account overdraft (against a guarantee) until the following working day.  the deposit facility: the counterparties benefit from the possibility to make deposits with BCL at the end of the day.

#### Minimum Reserves

The financial institutions of the Euro zone are subject to a system of mandatory minimum reserves to be held on accounts opened at their national central bank.

Those reserves aim at stabilising money market interest rates, and at creating a structural liquidity deficit.

### 2.1.1 Open market operations

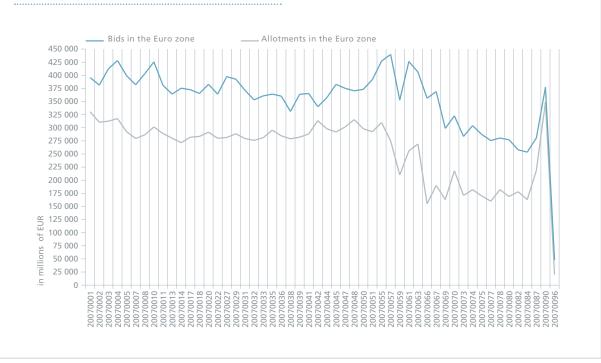
### 2.1.1.1 Main refinancing operations (MRO) in 2007

The year 2007 is divided in two halves: the first one, which was rather stable and similar in pattern to previous years, covers the period from January until the end of July; and a second one, much more volatile, which covers the period from August until the end of the year and beyond.

Chart 1 below, which shows the liquidity amounts that were bid and allotted in the Euro zone in 2007, illustrates well those two periods: until mid-20071 volumes allocated through main refinancing operations were rather stable. Afterwards, in order to face the turmoil, the ECB increasingly used the longer term refinancing operations (see below) and reduced the volume allocated through main refinancing operations accordingly. It should also be noted that the durations of the MROs at the end of the year were modified in order to take into account the public holidays. The Eurosystem extended the penultimate operation in order to provide the liquidities needed to span the year-end period. As a consequence, the last operation of the year between Christmas and New Year, was shortened and the amounts bid and allotted were very low as funding requirements were already met by the previous MRO.

1 Operation 20070050

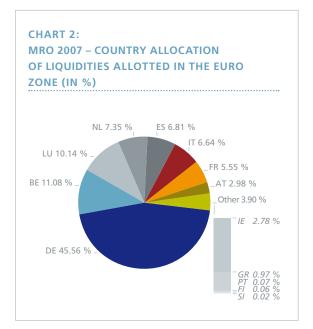
### CHART 1: MRO 2007 - BIDS AND ALLOTMENTS IN THE EURO ZONE



Luxembourg counterparties continued to take active interest in the main refinancing operations during 2007. On average, Luxembourg was allotted some 10.1% of all the liquidities allocated through MRO to the whole Euro zone (see chart 2).

As in 2006 and in the previous years, the share of Germany was the most important in the Euro zone with 45.6% of the liquidities allotted to German counterparties.

Since 2007, Slovenia participates to the open market operations of the Eurosystem.



# 2.1.1.2. Longer-term refinancing operations (LTRO) in 2007

During the second half of the year 2007, the "subprime crisis" strongly influenced the liquidity management via longer-term refinancing operations.

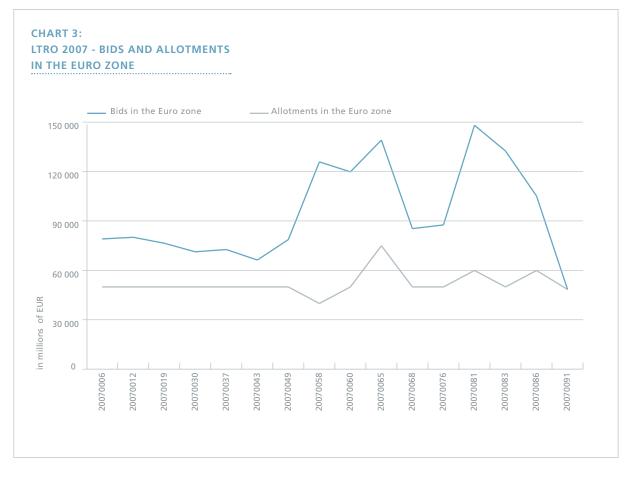
In order to face the turmoil, as from the end of August, the European Central Bank resorted to supplementary longer-term refinancing operations in addition to the regular LTRO. A first supplementary operation took place at the end of August and a second one mid-September. Those operations were renewed on several occasions<sup>2</sup>. In April 2008, a longer-term operation with an exceptional maturity of 6 months was launched.

Chart 3 below clearly illustrates the increasing bid volumes starting from the operation 20070058 on 24 August 2007. Indeed, as from this point, volumes asked by the counterparties increased substantially.

It is noteworthy that the last two operations were separated by 8 days only. This, together with the abundance of liquidities available during the last days of the year, explains the sharp decline in those operations.

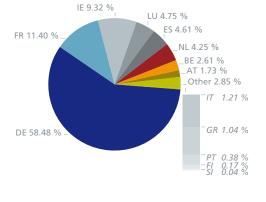
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Operations 20070058, 20070065, 20070081 ans 2007086.

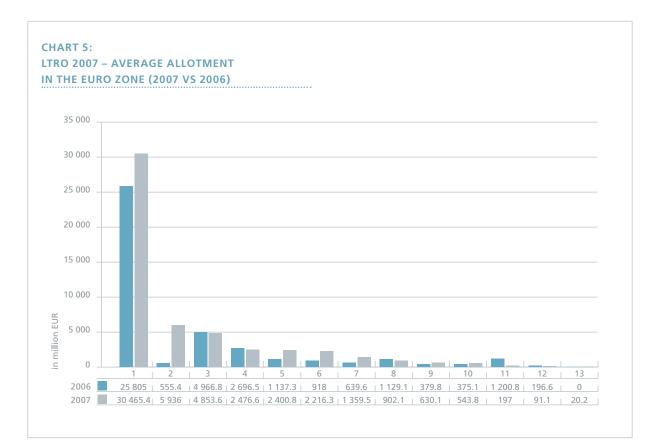


In 2007 the Luxembourg counterparties were allotted on average 4,8% of the long-term liquidities allocated to the global Euro zone. (see chart 4).





Like in 2006 and the previous years, the share of Germany is the most important in the Euro zone, with 58.5% of the liquidities allocated to the German counterparties. It should also be noted that the share of French counterparties in those longer-term operations has increased substantially. (see Chart 5 here-below).



### 2.1.1.3 Fine tuning operations in 2007

Contrary to earlier years, 2007 saw great recourse to fine tuning operations.

From the beginning of the financial turmoil, the European Central Bank resorted to this instrument in order to reestablish balanced liquidity conditions on the money markets. Seven operations were launched between the beginning of August 2007 and the beginning of October 2007. In the beginning of the crisis, these operations were liquidity providing in order to fulfil the requirements of counterparties. As of September, fine tuning operations were always liquidity absorbing in order to drain excess liquidities from the markets. Nine liquidity absorbing operations were conducted during December only.

In the beginning of 2008, the European Central Bank continued to make use of this instrument more regularly to absorb as well as to provide liquidity on an ad hoc basis.

### 2.1.2 Standing facilities

Luxembourg counterparties may have recourse to standing facilities at the BCL, these being either the deposit facility or the marginal lending facility. Recourse is made against predefined interest rates, which are directly related to the reference rate of the European central Bank.

Apart from a few exceptions, the counterparties have only used the deposit facility on the last day of the maintenance period.

### 2.1.3 Minimum reserves

The counterparties of the Eurozone are required to hold minimum reserves at the national central bank of their country of residence. Those obligations have to be met on average over the maintenance period, which allows counterparties to make free use of their liquidities over the period. This feature helps stabilising the market.

The minimum reserves system was unchanged in 2007.

Luxembourg counterparties rarely failed their obligations in 2007. Only two counterparties were imposed a sanction in this respect.



### 2.2 Foreign exchange reserves management by the BCL

In accordance with the Statute of the Eurosystem and in line with its share in the ECB's capital key, the BCL transferred  $\notin$ 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. Since 1 January 2007, following the adjustment of the weightings, which takes place every five years, and the EU's enlargement on 1 May 2004, the BCL's share in the ECB's capital key has been 0.1575%, previously 0.1568%; an additional €3.5 million has been transferred to the ECB. As at 31 December 2007, the total market value of the ECB's reserves (including accrued interest) managed by the BCL corresponded to €236.6 million.

One goal of the foreign exchange reserves management of the ECB is to ensure that the ECB has sufficient liquidity available to intervene in the foreign exchange markets if need be. Security and liquidity are, therefore, basic requirements in managing these reserves. A tactical benchmark is set up for each currency by taking into account the strategic benchmark.

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.

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

The BCL manages a US-dollar 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 Board of Directors (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 Board of Directors

The Board of Directors 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 Board of Directors also sets warning thresholds, which can lead to the calling of emergency meetings for assessment and arbitrage purposes. The Board of Directors 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 Board of Directors 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

In addition, the important role played in the asset management framework by the Organisation and Risk Management unit (OR) and the Internal Audit unit (IA) should be mentioned.

The Risk Manager of the OR 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 IA unit complements the monitoring structure 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 geochartical diversification).

#### Performance measurement

The quality of the investment decisions is measured by comparing the performance with the external benchmarks of leading investment banks. This permits 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 fixedincome securities denominated in euro. The strategic orientation permits a diversification into other asset categories.

The BCL manages five kinds of portfolios: Investment Portfolio, Liquidity Portfolio, Domestic Reserves Portfolio, Pension Fund Portfolio and Portfolios from third parties. In 2007 BCL has started to constitute a holdto-maturity portfolio. The constitution of this portfolio will be completed in 2008 according to the rules of the Eurosystem.

#### Investment Portfolio (Portfolio 1)

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 2007 the total market value (including accrued interest) amounted to  $\notin$ 1 598 million.

In 2007 the share of this portfolio invested in fixed income securities with a maturity above three years has been increased from 19% to 28%, whereas the percentage of bonds with a one to three year maturity declined from 36% to 29%. Moreover, by the end of 2007, variable rate and fixed rate bonds with maturity under one year represented 43% of Portfolio 1, about the same level as of 31 December 2006.

The securities included in this portfolio are widely diversified, not only geochartically but also in terms of sector and issuer.

### Liquidity Portfolio (Portfolio 2)

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, whose liability profile covers certain liquidity needs, also aims to maximise 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 2007, the total market value (including accrued interest) amounted to  $\notin$ 4 293.1million.

### BREAK-DOWN OF RESERVES AS OF 31 DECEMBER 2007

Maturity	Portfolio 1	Portfolio 2
0-1 year	43%	85%
1-3 years	29%	12%
3-10 years	28%	3%

### **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 2007, the total market value (including accrued interest) of this portfolio in foreign currencies amounted to €132 million.

#### **Pension Fund Portfolio**

The management of this fund is described further in section 4.3.4 of this report.

#### Investments Portfolios

The BCL provides non-standardised discretionary management services to institutional clients (central banks and international organisations). The Bank belongs to the Eurosystem service providers. 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 new framework of harmonised services defined by the ECB.

### 2.4 Banknotes and coins

Euro banknotes are produced to meet all the NCBs' banknote requirements, which are aggregated by the ECB. The production of one denomination is assigned to, at most, two NCBs. In 2007, the BCL was responsible for producing  $\notin$ 9.6 million  $\notin$ 100 banknotes for its own requirements. The production of these banknotes was entrusted to the specialised security printer *Johan Enschedé* in the Netherlands.

According to an agreement with the Luxembourg government, the BCL is in charge of the production of Luxembourg's euro coins. Following an invitation to tender, the BCL put the *Monnaie de Paris* (Mint of France) in charge of the production in 2007 of 43.5 million coins for its own requirements.



#### 2.4.1 Circulation of banknotes and coins

#### 2.4.1.1 Euro banknotes and coins

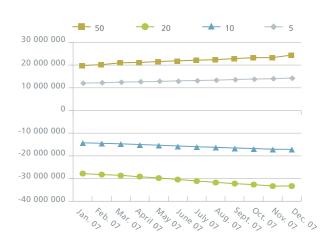
The volume of euro banknotes and coins put into circulation by the BCL exceeds, in the case of certain denominations, the volume effectively in circulation in Luxembourg, i.e. those used in the payment systems of Luxembourg, because of the movement of banknotes and coins inside the euro area.

The total net volume of euro banknotes put into circulation by the BCL in 2007 amounted to 17.7 million notes, compared with 19.3 million banknotes in 2006, a decrease of 8.3%. The volume of €10 and €20 denominations lodged with the BCL exceeds the volume issued. Credit institutions, which are BCL clients, deposited more banknotes than they withdrew from the BCL. This phenomenon can be explained by the fact that tourists and cross-border workers brought in these denominations in large quantities for their everyday expenditures in Luxembourg.

The chart below shows the change in the number of euro banknote denominations used for everyday expenditures.

#### CHART 6:

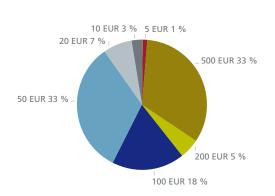
CHANGE IN THE NUMBER OF EURO BANKNOTES USED FOR EVERYDAY TRANSACTIONS PUT INTO CIRCULATION BY THE BCL



In comparison with other national central banks in the euro area, the BCL maintained its contribution to the total volume of banknotes put into circulation by the Eurosystem at 1.2%, in comparison with December 2006.

In Luxembourg and in the rest of the euro area, the year 2007, like 2006, was marked by a steady demand for higher denominations. The total value of euro banknotes put into circulation by the Eurosystem increased by 7.7% and amounted to €76.6 billion at the end of 2007, with the following value breakdown by denomination:

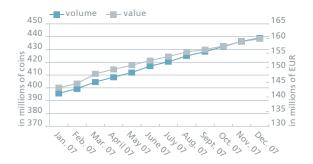
### CHART 7: VALUE BREAKDOWN BY DENOMINATION OF EUROBANKNOTES PUT INTO CIRCULATION BY THE EUROSYSTEM



Public demand for euro coins issued by Luxembourg has remained strong. The total value of the coins put into circulation increased by 13.9% in 2007, compared with 14.5% in 2006. The total value rose from €141.3 million to €160.9 million. The volume of Luxembourg's euro coins issued in 2007 increased by 48.6 million coins, a rise of 12.4%, and amounted to 438.8 million coins at the end of 2007. As in previous years, the country's coins continued to be much sought after by collectors.

The average monthly volume of coins in circulation rose to 417.9 million. The following chart shows the changing volume and value of Luxembourg's euro coins in circulation throughout 2007. The demand for coins grew steadily in the year under review.

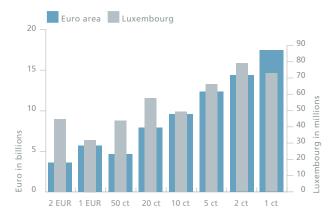
### CHART 8: TOTAL VOLUME AND VALUE OF LUXEMBOURG EURO COINS IN CIRCULATION



Luxembourg contributes 0.6% of the total value issued by all the issuing authorities of the euro area. The average value of its euro coins in circulation amounts to 36 cent in comparison with an average of 26 cent for the other euro area coins. 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 9:

### COMPARISON OF THE CIRCULATION VOLUME OF THE DIFFERENT EURO COIN DENOMINATIONS IN LUXEMBOURG TO THAT OF THE EURO AREA

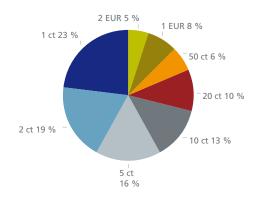


Concerning Luxembourg's coins, the 2 cent denomination remained the most common in 2007. In descending order, the sequence is as follows: 2 cent, 1 cent, 5 cent, 20 cent, 10 cent,  $\notin$ 2.50 cent and  $\notin$ 1. The corresponding ranking for the euro area as a whole is: 1 cent, 2 cent, 5 cent, 10 cent, 20 cent,  $\notin$ 1.50 cent,  $\notin$ 2.

The total value of euro coins put into circulation by the Eurosystem increased from  $\in 17.9$  billion at the end of 2006 to  $\in 19.2$  billion at the end of 2007, whereas the total volume of coins reached 75.8 billion. The following chart shows the volume breakdown by denomination:

### **CHART 10:**

### BREAKDOWN BY DENOMINATION OF THE VOLUME OF COINS OF THE EURO AREA IN CIRCULATION



### 2.4.1.2 Luxembourg franc banknotes and coins

In 2007, the total value of Luxembourg francs not yet exchanged fell by 1.1% from LUF 436.2 million to 431.5 million. This decline was due exclusively to the return of franc banknotes, the franc coins having ceased to be exchangeable at the end of December 2004. The volume of 5 000 Luxembourg-franc banknotes not yet returned underwent the most pronounced decline (- 5%), while that of 1 000 franc banknotes fell by 1.5%. The volume of unreturned 100 franc banknotes only decreased by 0.4%. These figures show that collectors prefer the lower denominations.

At the end of 2007, a total volume of 885 444 Luxembourg banknotes and 63.1 million coins, with a total value of LUF 398 million, had still not been exchanged. Numismatic products and collector coins still not exchanged amounted to LUF 33.5 million.

#### 2.4.2 Handling of banknotes and coins

The number of euro banknotes returned by financial institutions to the BCL – 66.5 million - remained nearly unchanged compared with the previous year.

The number of euro banknotes processed by sorting machines rose noticeably, by some 5.9%, from 59.7 million notes in 2006 to 61.4 million in 2007. The sorting machines carry out both authenticity tests and soiling tests. Nearly 15.9 million notes of all denominations had to be destroyed as they were unfit for circulation. The reject/destruction rate remained unchanged at 25.9% of the total number of euro banknotes sorted in 2007. Moreover, this percentage varied greatly from one denomination to another: 10.8% for the  $\notin$ 500 banknote to 50.7% for the  $\notin$ 5 note.

In the field of counterfeit monitoring, the BCL continued to work closely with the ECB and the national authorities in analysing discovered counterfeits.

### 2.4.3 Numismatic issues

Due to the ongoing collectors' interest for Luxembourg numismatic products, the BCL created several new distribution channels in 2007. Since January 2007, the retail to the public is located in the new numismatic premises of the BCL, at avenue Monterey 43, Luxembourg. In February 2007, the BCL introduced a mail order facility, followed in October 2007 by the launch of its Internet shop (eShop).

## In 2007, the BCL issued the following numismatic products:

- Two €2 commemorative coins with a distinctive national side, put on sale respectively in February and May 2007. The first issue depicts the Grand-Ducal Palace, official residence of the Grand Duke, whereas the second is dedicated to the 50<sup>th</sup> anniversary of the Treaty of Rome. Both issues have been minted with 15 000 coins each in "Brilliant Uncirculated" quality (packed as coin cards) and with 1 million coins each in circulation quality.
- The "2007 BU set" comprises Luxembourg's euro coins (1 cent to €2, including both €2 comme-

morative coins), struck in "Brilliant Uncirculated" quality and dated 2007. The mintage is limited to 15 000 sets. This set is the third one of a series of 7 sets dedicated to the different architectural periods as depicted on the euro banknotes.

- The "2007 BENELUX set" contains the 2007 series of eight euro coins of the three BENELUX countries struck in "Brilliant Uncirculated" quality. It also includes a specially designed cupronickel medal.
- The "2007 Proof set" features Luxembourg's 10 euro coins (ranging from 1 cent to €2) plus both €2 commemorative coins, all struck in "Proof" quality and dated 2007. The mintage amounts to 2 500 sets.
- The silver coin dedicated to the 30th anniversary of the European Court of Auditors was issued at the anniversary date of October 17, 2007 and represents the sixth collector coin in the silver series "European institutions". The mintage amounts to 3 000 coins. This coin has a face value of €25 and is minted with a silver fineness of 925. It has a diameter of 37 mm and a weight of 22.85 gr. As all collector coins in precious metal issued by a euro area Member State, the silver coin is legal tender only in the issuing country.
- A set of eight Slovene euro coins in circulation quality (ranging from 1 cent to €2) was issued in October 2007. This set commemorates the adhesion of Slovenia to the euro area on January 1, 2007 and extends the "cube" collection issued in 2002 by the BCL, putting together one set of euro coins of each Member State having adopted the euro.

# 2.5 Developments in the area of statistics

### 2.5.1 Money and banking statistics

The Eurosystem continued its work on the revision of regulation ECB/1001/13 and ECB/2001/18 concerning the consolidated balance sheet as well as interest rates of MFIs in order to improve the availability of euro area statistics. The objective of this revision mainly consists in the inclusion of new financial instruments, statistics concerning payments systems as well as information on securitisation in money and banking statistics.

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. In this context, it participated in the triennial survey on foreign exchange and derivatives conducted during April 2007. The results of this survey have been published in the BCL's Bulletin 2007/2.

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

The BCL publishes on its website, as well as in its periodical Bulletin, monthly and quarterly statistics on the balance sheet of Luxembourg monetary financial institutions (MFIs) and Luxembourg credit institutions as well as the interest rates applied by credit institutions on loans and deposits. Finally, the BCL also publishes information on the profit and loss accounts of Luxembourg credit institution as well an on their staff.

### 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 to inform 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 has communicated the final set of instructions concerning transmission of own and third party position on a security by security basis to the banking sector. A first transmission is requested as regards data for end of December 2008. These substantial developments will enable the BCL to respect the deadlines fixed in the ECB guideline ECB/2004/15 dated July 16<sup>th</sup>, 2004.

Finally, the BCL has jointly decided with the STATEC to increase, as from July 2008 onwards, the threshold from 12 500 euros to 50 000 euros.

### 2.5.3 Economic and financial statistics

During 2007 the BCL contributed to the ECB's conceptual development of a new data collection for the sector of financial intermediaries (investment funds and securitisation entities) that are important actors on the capital markets. This work was finalised in 2007 and thus allowing the Governing Council to adopt a new regulation, ECB/200/9, concerning statistics on assets and liabilities of investments funds.

In order to allow Luxembourg to respond to this new information request by the ECB, the BCL, in close cooperation with the Luxembourg investment fund industry through the intermediary of the Luxembourg Investment Fund Association (ALFI), modified the statistical data collection for money markets funds and defined a new data collection for non monetary investment funds. The modified data collection for money market funds as well as the new data collection for investments funds will enter into force in January 2009.

Finally, the BCL publishes its periodic newsletter and on its website information on the situation of UCIs and PFS (professionals of the financial sector).

### 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 are published annually in the "Blue Book".

The ESCB is in the process of harmonizing the described data collection. Work on this project began in 2007 and should be finalised in the course of the year 2008.

# 2.6 Payment and securities settlement systems

### 2.6.1 Real-time gross settlement systems

On 19 November 2007, the real-time gross settlement system, LIPS-Gross3, migrated its activities to the new TARGET2-LU system. As a consequence, the 2007 LIPS-Gross exercise was limited to 224 days of operation against 255 in 2006. Global figures of activity for the two years are therefore not directly comparable.

In 2007, the number of participants in LIPS-Gross decreased from 31 to 30.

### 2.6.1.1 The activity of LIPS-Gross in 2007

#### **Domestic payments<sup>4</sup>**

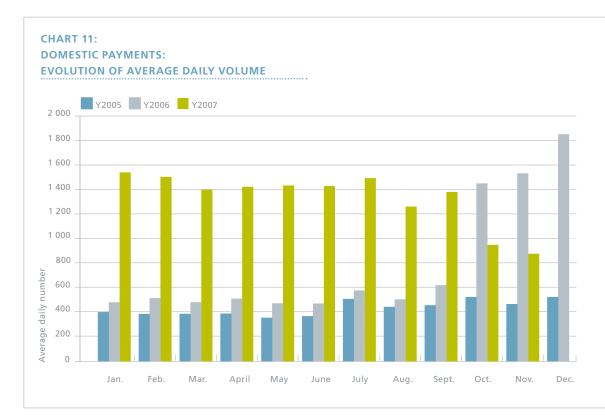
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In 2007, participants in LIPS-Gross exchanged a total of 301 148 payments (against 197 744 in 2006) for a total value of €2.880 billion euros (compared to €3.387 billion in 2006). Compared to 2006, the volume exchanged increased by 52% while the value exchanged decreased by 15%. The important increase in volume was triggered mainly by a migration of payments from LIPS-Net (the system ceased its activities in October 2006) to LIPS-Gross. The average value per transaction was thus reduced to €9.6 million.

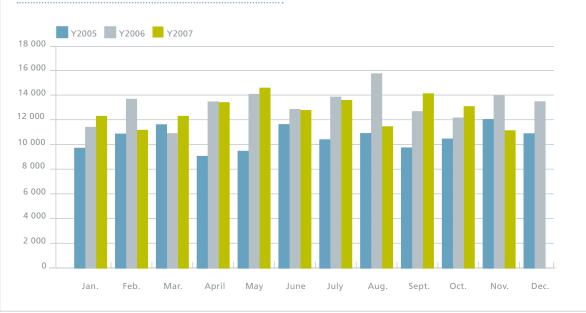
Real Time Gross Settlement System (RTGS) Domestic payments : payments exchanged between two LIPS-Gross participants

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The following charts show the evolution of daily averages in volume and value of domestic payments.



### CHART 12: DOMESTIC PAYMENTS: EVOLUTION OF THE AVERAGE DAILY VALUE

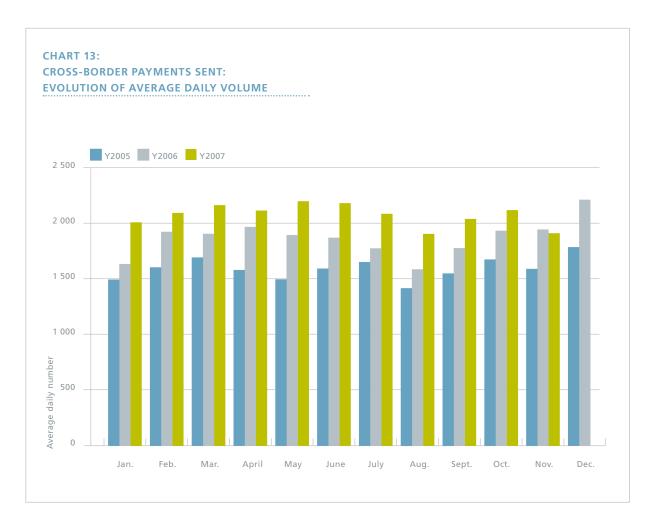


### **Cross-border payments<sup>5</sup>**

In 2007, participants in LIPS-Gross sent 464 295 payments to other EU countries (against 473 199 payments in 2006) for a total value of  $\notin$ 5 437 billion (against  $\notin$ 4 491 billion in 2006). They received 376 583 cross-border payments (compared to 404 176 payments in 2006) for a total value of  $\notin$ 5 451 billion ( $\notin$ 4 489 billion in 2006). The average value per cross-border payment sent was  $\notin$ 11.7 million (increase of 23%). For a payment received the average value was  $\notin$ 14.5 million

Cross-border payment : a payment exchanged between a participant in LIPS-Gross and a participant in TARGET (increase of 30%). Members in LIPS-Gross received less cross-border payments than they sent. The value of cross-border payments received remained above the value of payments sent.

The following charts show the evolution of average daily volumes and values of cross-border payments sent by participants in LIPS-Gross.



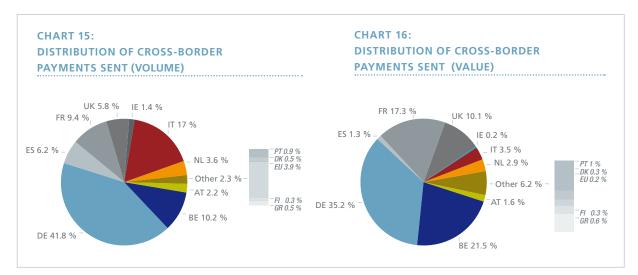
# 100

<sup>5</sup> 



CHART 14: CROSS-BORDER PAYMENTS SENT: EVOLUTION OF THE AVERAGE DAILY VALUE

In 2007, cross-border payments sent globally decreased by 2% in volume, but they increased by 21% in value. Daily averages increased however by 11% in volume and by 37% in value.



As in previous years, over 80% of cross-border payments (whether in volume or in value) were sent to five countries, among which we find our neighbouring countries.

## Aggregated figures of domestic and cross-border payments

In 2007, the total number of payments in LIPS-Gross reached a figure of 1 142 026 transactions (an increase of 4% compared to 2006).

The following tables provide an overview of daily averages of volumes and values of payments exchanged per year. Globally, volumes and values exchanged continued to increase.

### VOLUME OF PAYMENTS (DAILY AVERAGE)

	<b>DOMES</b> Volume	TIC PAYEMENTS (% volume sent)	<b>CRO</b> Volume	<b>SS-BORDER SENT</b> (% volume sent)	CROSS-B	ORDER RECEIVED (% total volume)	TOTAL SENT AND RECEIVED
2005	428	(21.20%)	1 591	(78.80%)	1 495	(42.54%)	3 514
2006	775	(29.46%)	1 856	(70.54%)	1 585	(37.59%)	4 216
2007	1 344	(39.33%)	2 073	(60.67%)	1 681	(32.97%)	5 098
Change 2007-2006	+72%		+12%		+6%		+20%

### VALUE OF PAYMENTS

(DAILY AVERAGE IN EUR MILLIONS)

	DOMESTIC PAYEMENTS		CROSS-BORDER SENT		CROSS-BORDER RECEIVED		TOTAL SENT
	Val	(% value sent)	Value	(% value sent)	Value	(%total value)	AND RECEIVED
2005	10 686	(41.21%)	15 243	(58.79%)	15 260	(37,05%)	41 189
2006	13 281	(42.99%)	17 612	(57.01%)	17 602	(36.30%)	48 496
2007	12 857	(34.63%)	24 271	(65.37%)	24 411	(39.59%)	61 465
Change 2007-2006	-3%		+38%		+39%		+26%

## LIPS-Gross compared to other systems connected to TARGET

In 2007, all national RTGS systems together executed a total of 72.6 million domestic payments (compared to 64.2 million in 2006) for a global value of  $\notin$ 395 412 billion (compared to  $\notin$ 348 765 billion in 2006). On daily average, payments between participants in Luxembourg represented 0.47% of the volume and 0.83% of the value of all national payments in TARGET.

In addition, 20.8 million of cross-border payments (19 million in 2006) for a value of  $\notin$  221 319 billion ( $\notin$ 184 777 billion in 2006) were exchanged in the course of the year. On daily average, LIPS-Gross contributed 2.54% to the volume and 2.80% to the value exchanged.

#### Availability of TARGET

The availability of TARGET as a whole increased from 99.87% in 2006 to 99.90% in 2007. The average availability of TARGET over its 9 years of existence is 99.73%.

The availability of LIPS-Gross reached 99.98% in 2007 (compared to 99.80% in 2006). Two minor technical incidents affected our system. The availability of LIPS-Gross was 100% for 10 months out of 11. Since its launch, LIPS-Gross' average availability is 99.73%.

#### 2.6.1.2 Migration to TARGET2-LU

Following the decision of the Governing Council on 24 October 2002 to harmonize the national RTGS systems on a Eurosystem level, the new platform TARGET2 was developed and all national RTGS system agreed to migrate to the common infrastructure. Luxembourg was among the first wave of countries that joined the TARGET2-platform or Single Shared Platform (SSP) on 19 November 2007. Other not yet migrated RTGS systems followed in two additional migration windows on 18 February and on 19 May 2008. With migration completed, about one thousand banks participate directly in TARGET2 and offer an indirect access to a multitude of banks throughout the world. In addition, TARGET2 is the preferred system for the settlement of its participants' positions for most European ancillary systems.

As a consequence of the migration, the system LIPS-Gross ceased its activities on 16 November 2007. On 19 November 2007, its successor, TARGET2-LU, took over the operations on the SSP of TARGET2. Twentythree of the former LIPS-Gross participants are directly connected to TARGET2-LU.

The RTGS-L Gie, owner of the LIPS-Gross system, will be dismantled in 2008.

### 2.6.2 The interbank netting system LIPS-Net

LIPS-Net, the national automated clearing system for cheques and credit transfers, was developed in the early 90s as a substitute to the manual clearing house.

Considering the limited scope for increasing its activity, insufficient economies of scale as well as the ongoing integration process at the European level<sup>6</sup>, the managers of the SYPAL-Gie, the system's owner, decided to terminate LIPS Net operations in October 2006.

Cheques, whose volumes have been steadily declined over the past few years, are exchanged and settled on a bilateral basis since 1 July 2006.

Credit transfers and standing orders are processed on the pan-European STEP2 platform operated by the Euro Banking Association (EBA).

### Luxembourg participants' activity in STEP2

The bulk of Luxemburg credit transfer and standing order transactions are since October 2006 processed by the pan-European system STEP2.

Transactions that are not processed in STEP2 are settled either via TARGET2 or on a bilateral basis.

In 2007, Luxembourg participants sent 57 000 transactions for a value of €88 million on a daily average

<sup>6</sup> The European financial sector is preparing the "Single Euro Payment Area" (SEPA), which is to be implemented by the end of the year 2010.



through the Step2 system. Domestic transactions accounted for 77% in volume (close to 44 000 operations) and 70% in value ( $\in$ 61 million).

### 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 the national central banks are effected "on the basis of adequate collateral"<sup>7</sup>. Consequently, each counterparty of the Eurosystem guarantees the credit received from a Eurosystem central bank by providing assets as collateral. These assets have to fulfill specific eligibility criteria defined by the Eurosystem, which are published on the ECB's website.

In 2007, the Eurosystem replaced its two categories of eligible assets<sup>8</sup> by a single list. This single list comprises two different asset classes, marketable assets (securities) and non-marketable assets (in particular credit claims). The inclusion of non-marketable assets has required the development by each NCB of appropriate handling procedures, as well as the development and implementation of a euro area wide credit assessment framework. In this context, the Governing Council has accepted, amongst others, the following key elements:

- between 2007 and 2012 each national central bank will apply its own threshold for credit claims.
  As from 2012, a common minimum threshold of 500 000 will be applied by the whole Eurosystem.
- the debtors of the claims provided as collateral have to be financially sound. The Eurosystem will assess the financial soundness of the debtors according to the "Eurosystem Credit Assessment Framework (ECAF)", which details the rules governing the Eurosystem's credit quality requirements. In this context, the Eurosystem also published its minimum

 Article 18 of the Statute of the ESCB and the ECB, article 22 of the founding law of the BCL.
These were the tier 1 assets, debt instruments

These were the tier 1 assets, debt instruments fulfilling uniform euro area wide eligibility criteria specified by the Eurosystem, and tier 2 assets, complementary assets on a national level. rating threshold. This threshold is set at a rating of at least A-, or by means of a probability of default no higher than 10 basis points.

The law of 13 July 2007 concerning the market on financial instruments provides for the registration of credit claims at the central bank and establishes a regime for the pledging of credit claims that is like those offered in neighbouring countries.<sup>9</sup>

### 2.6.3.2 Eurosystem as a user of securities settlement systems

### Selection of depositories<sup>10</sup> at the domestic level

In order to meet the requirement of "adequate collateral"11, the Eurosystem also assesses against specific safety criteria depositories that are safekeeping securities used in the framework of central bank credit operations. Thus, a national depository is eligible if it obtains, after verification of its compliance with the Eurosystem user standards, the formal approval of the Governing Council. In this context, the Governing Council approved in 2006 a new arrangement for the safekeeping of international securities in global bearer note form, the so-called "New Global Note" (NGN) arrangement, developed by Clearstream Banking Luxembourg (CBL), Euroclear Bank, and other market participants. The NGN arrangement is compliant with the user standards, provided that the respective NGN is safekept by an institution that has been positively assessed against these standards by the Eurosystem.

### Cross-border use of collateral

Besides using eligible domestic securities settled via the national depository, which for Luxembourg counterparties is Clearstream Banking Luxembourg (CBL), all Eurosystem counterparties may receive credit from their local national central bank by using collateral issued in a depository located elsewhere in the European Union. The Eurosystem foresees two ways for such cross-border use of collateral. Counterparties may use

- the CCBM<sup>12</sup>; and
- links established between securities settlement systems.

Currently two types of links are eligible: direct links and relayed links. In a given securities settlement system located in a country of the European Union, direct links make available securities issued in a system of another European Union 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 first 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 2007, Luxembourg counterparties had the possibility to use the direct links between CBL and Clearstream Banking Frankfurt A.G., Euroclear, the National Bank of Belgium, Monte Titoli (Italy), OeKB (Austria), and Euroclear Netherlands.

### Securities settlement in central bank money: TARGET2-Securities

The aim of TARGET2-Securities (T2S) is to further financial market infrastructure integration. T2S will thus provide to the market settlement services in central bank money. In March 2007, the Governing Council decided after thorough evaluation that the T2S system is feasible. Moreover, the Governing Council decided that the T2S system will be implemented on the technical platform used by the payment system TARGET2.

Draft user requirements were defined in 2007 on the basis of general principles and high level proposals that were previously submitted to public consultation. These user requirements were elaborated in a six-month period of intensive collaboration of a team of experts composed of representatives of the

<sup>9</sup> For more detailed information on these specific provisions see section 3.3.1.

<sup>10</sup> A depository is an institution that operates a

securities settlement system.

<sup>11</sup> Article 18 of the Statute of the ESCB and the ECB, article 22 of the founding law of the BCL.

<sup>12</sup> Correspondent Central Banking Model, see section 2.6.4.

Eurosystem, central securities depositories as well as of banks. In the framework of a second public consultation launched in December 2007, the market was invited to comment on the draft user requirements. Moreover, the market was invited to comment on the methodology for the economic impact assessment the Eurosystem will apply in order to calculate the costs, the benefits and macroeconomic impacts of T2S. Market participants' comments will be assessed before submission of the final version of the user requirements for decision of the Governing Council in summer 2008.

### 2.6.4 Correspondent Central Banking Model (CCBM)

The 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 NCB acts on behalf of the other central banks as a custodian for securities held at the national depository. This procedure involves on the one side 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 depository in which the securities deposited 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.

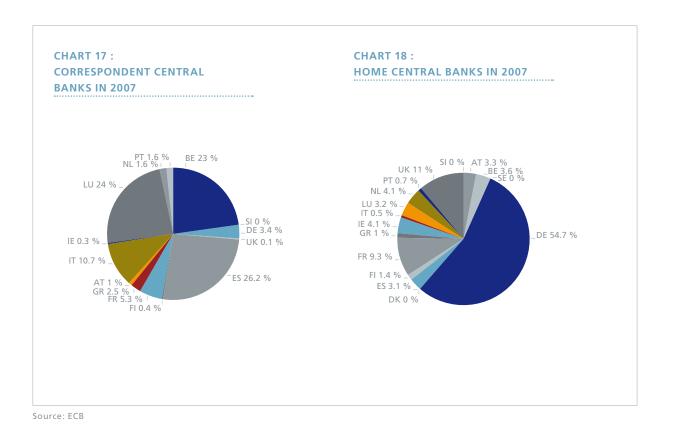
The most active correspondent central banks in 2007 have been those from Spain (26.2%), Luxembourg (24.0%), Belgium (23.0%), and Italy (10.7%). The most active home central banks have been those from Germany (54.7%), United Kingdom (11.0%), France (9.3%), the Netherlands (4.1%), and from Ireland (4.1%).

### 2.6.5 The future management of collateral by the Eurosystem

In 2007 the Eurosystem reviewed its collateral management procedures and in particular the CCBM. In view of the evolution of the counterparties' needs and in order to realise synergies, the Governing Council decided to develop a single platform for the management of domestic and cross-border collateral. 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 received from their counterparties. In order to develop a platform that meets the market's needs, the Eurosystem launched in April 2007 a first public consultation on the general principles defined for this project. Participants' answers have been taken into account while defining the user requirements for the CCBM2. A new public consultation was launched in this context in February 2008.

### 2.6.6 Night Time Link with Clearstream Banking Luxembourg

Operation of the Night Time Link procedure with Clearstream was terminated with the migration of the Luxembourg banking community to the TARGET2 system. The functionalities of TARGET2 enable the concerned banks to continue using their collateral at the BCL to guarantee the credit granted by CBL in the night clearing.



### 2.7 Financial stability

### 2.7.1 The macro-prudential surveillance

The BCL assesses regularly financial stability conditions from a macroprudential point of view based on quantitative information stemming from the prudential and statistical reporting of financial institutions established in Luxembourg. Besides this regular analysis, the BCL works on ad-hoc specific topics with a focus on risks to financial stability, which in 2007 were in particular related to the potential impact of the financial turbulences on the Luxembourg banking system. These analyses have been published in the BCL's Financial Stability Review in April 2008.

Albeit being primarily oriented towards private banking and investment fund business, the Luxembourg banking sector had to face indirect negative effects emanating from the international financial turbulences. Despite the less favourable international environment, the Luxembourg banking sector proved relatively resilient on an aggregate level due in particular to the high performances of the previous years and robust solvency ratios. A few individual banks have been affected by the crisis in a more pronounced way. The financial turmoil has highlighted risks related to complex financial instruments, evaluation and transparency issues and how fast liquidity problems can propagate across the international financial system. It has also pointed to the need for increased cooperation between central banks and supervisors at the national and international level.

Looking ahead, perspectives for 2008 remain uncertain at the international level. Banks may have to face potential further write-downs, higher refinancing costs, declining revenues from structured investment activi-

ties and investment banking in general, potential new vulnerabilities as well as the impact from a less favorable macro economic environment.

Specific analytical work carried out in 2007 includes total factor productivity, z-core index, risk aversion indicator, extraction of investor's expectations through option prices, and the update of the vulnerability index of Luxembourg banking sector.

As a member of the European system of central banks, the BCL participates to the Banking Supervision Committee (BSC) and its sub-structures as well as in the work of the Committee of European Banking Supervisors (CEBS).

### 2.7.2 The oversight of payment and securities settlement systems

In 2007, the BCL has pursued its oversight activities of payment and securities settlement systems.

The scope of its oversight covered the securities settlement system operated by Clearstream Banking Luxembourg and Lips-Gross, the real time gross payment system, until November 2007, date of its migration to Target2. Following this migration, Lips-Gross has been denotified with the European Commission in the context of the settlement finality Directive and Target2-LU, the Luxembourg legal component of Target2, has been notified. The oversight of the centralised features of Target2 is performed centrally at the level of the European system of central banks. A first assessment of the Target 2 design has been finalised in 2007.

The BCL also contributes to the work of the Payment and Settlement Systems Committee of the ESCB and its sub-structures. In this context, a framework for the oversight of euro card payment schemes has been designed and an assessment of these schemes will start in 2008. Discussions are going on as regards the oversight of other payment instruments.

