

Artist: Dani Neumann  
Title: Drei Elemente  
Material: Oil on canvas  
Format: 180 x 100 cm  
BCL collection

## 2. THE BCL'S OPERATIONS

### 2.1 Monetary policy

In Luxembourg, the BCL is responsible for implementing monetary policy as formulated by the ECB for the whole of the euro area. Refinancing operations, also called open market operations, provide liquidity against collateral to counterparties, i.e. the credit institutions in Luxembourg.

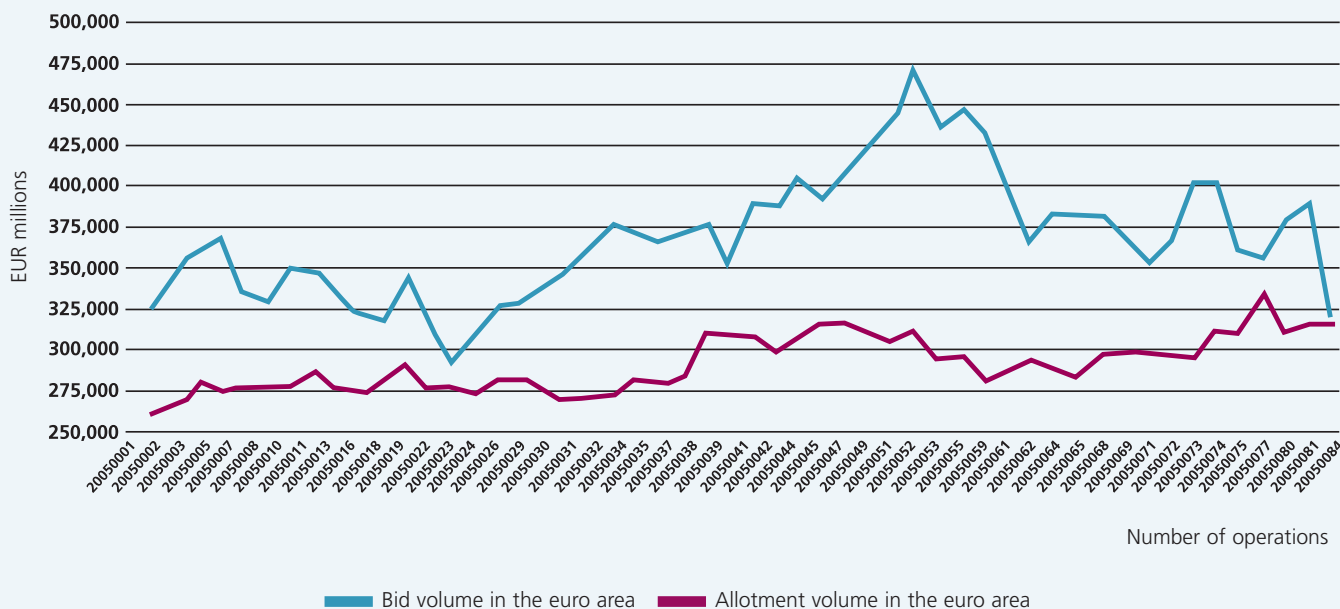
Open market operations are divided into:

- main refinancing operations (MROs), which are conducted regularly through weekly standard tenders, with a maturity of one week, and
- longer-term refinancing operations (LTROs), which are conducted regularly through monthly standard tenders, with a maturity of three months.

#### Main refinancing operations (MROs)

The main refinancing operations of the Eurosystem are conducted as variable rate tenders, using the multiple rate auction procedure.

CHART 1: MROs IN 2005 - BID AND ALLOTMENT VOLUME IN THE EURO AREA

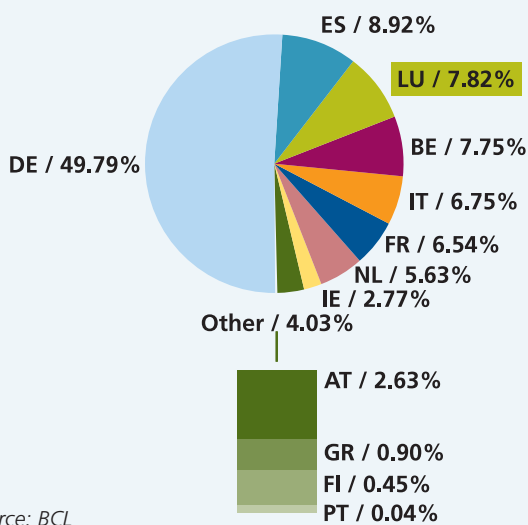


Source: BCL

## 2. THE BCL'S OPERATIONS

In 2005 Luxembourg ranked third in the allotment volume behind Germany and Spain with, on average, 7.8% of the total euro area volume. This ranking was confirmed during the first quarter of 2006, when Luxembourg's allotment volume amounted to 8.4%.

**CHART 2: MROS IN 2005 - AVERAGE ALLOTMENT SHARE IN THE EURO AREA**



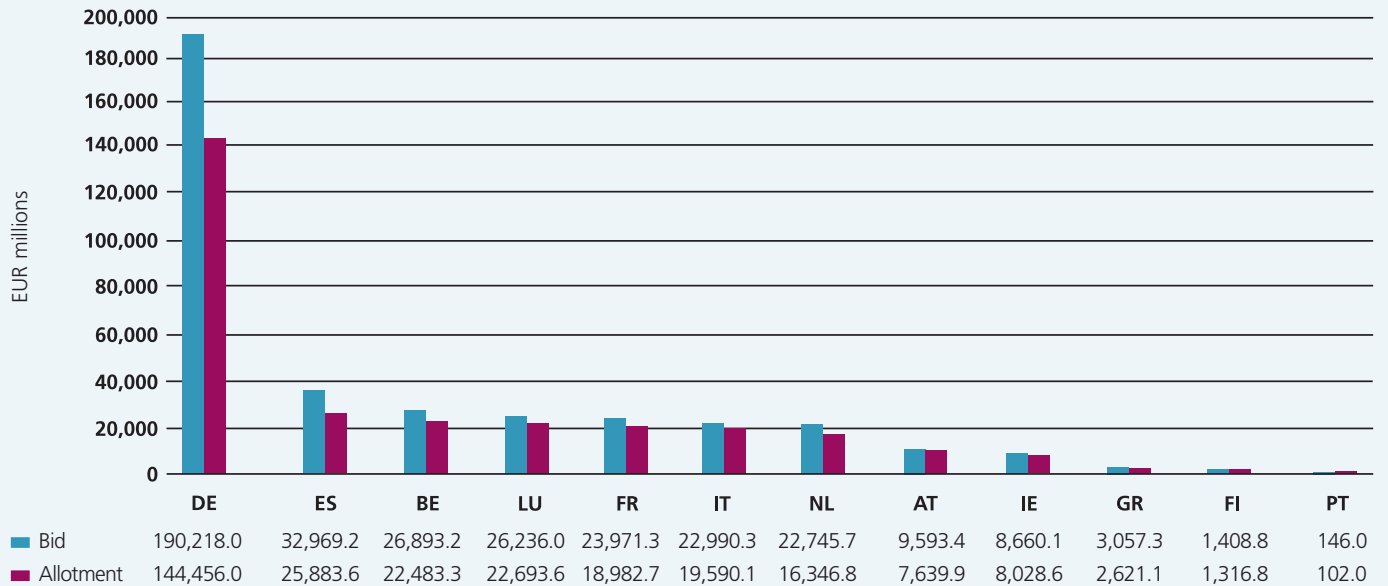
Source: BCL

Compared with 2004, the average percentage allotted in Luxembourg decreased from 8.6% to 7.8%.

In 2005, the number of counterparties participating in MROs remained stable in Luxembourg, with an average of 20 banks in comparison with 19 in 2003 and 18 in 2002. In the euro area, the number of participating counterparties rose, on average, from 339 in 2004 to 351 in 2005, reversing the declining trend observed between 1999 and 2003. This increase in the euro area could be explained by the reduction in the maturity from two weeks to one week and by the simplification of the new framework in 2004.

During the first quarter of 2006, the average number of participating counterparties in MROs rose to 23 banks in Luxembourg and 392 banks in the euro area.

CHART 3: MROs IN 2005 - AVERAGE BID AND ALLOTMENT VOLUME IN THE EURO AREA



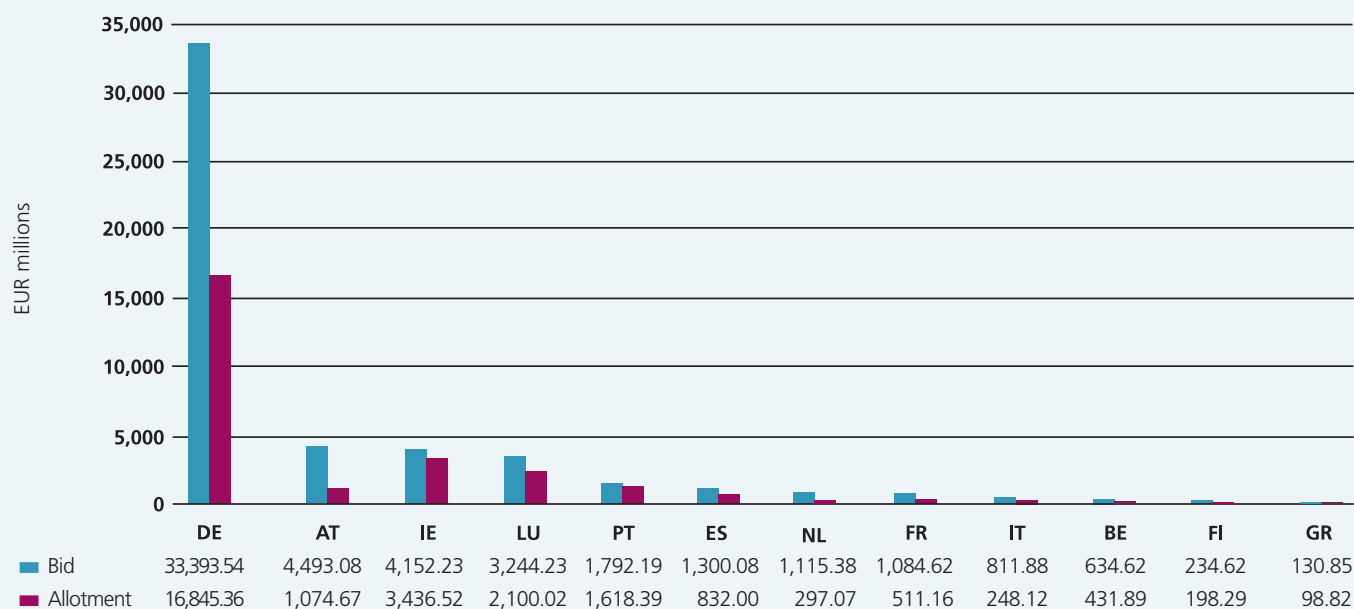
Source: BCL

#### Longer-term refinancing operations (LTROs)

With regard to the allotment volume for LTROs in the euro area, Luxembourg ranked, on average, third in 2005 (with 7.6% of the allotment volume in 2005). The average number of participating counterparties, seven, remained broadly unchanged in 2005 but rose to nine in the first quarter of 2006.

## 2. THE BCL'S OPERATIONS

CHART 4: LTROs IN 2005 - AVERAGE BID AND ALLOTMENT VOLUME IN THE EURO AREA



Source: BCL

In December 2005, the ECB's Governing Council decided to raise the allotment amount from €30 billion to €40 billion for each LTRO, starting in January 2006.

### Fine-tuning operations

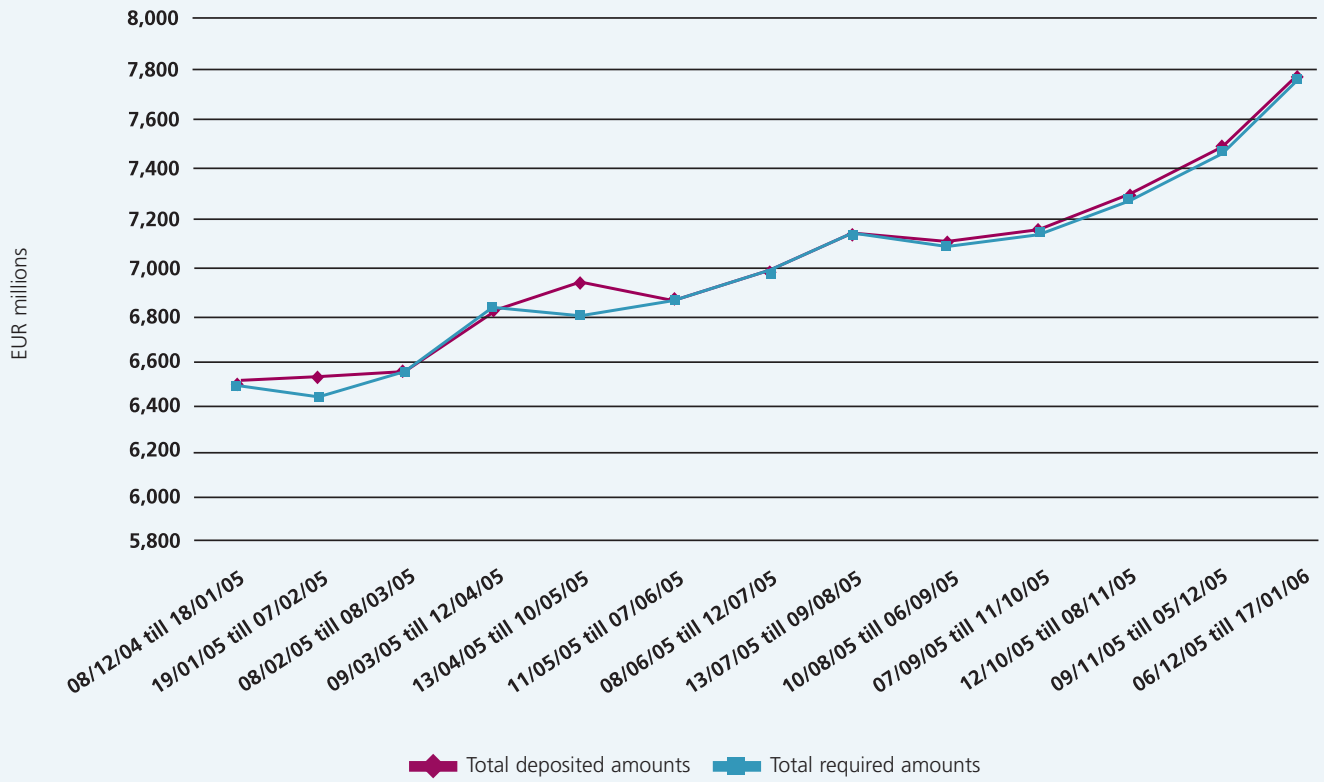
Short-term rate fluctuations increased during the final days of the reserve maintenance periods. This reflects the fact that, as the allotment of the last MRO during a reserve maintenance period now occurs eight days before its end, the risk of a liquidity imbalance is thereby increased. In order to restore neutral liquidity conditions, the ECB carried out several fine-tuning operations on the last day of the reserve maintenance period whenever it expected a significant imbalance. Eight fine-tuning operations were conducted in 2005 (in comparison with three in 2004).

In the first quarter of 2006, the ECB conducted four fine-tuning operations. The ECB also improved its communication by announcing these operations and their estimated amounts beforehand.

### Minimum reserve system

From 8 December 2004 until 17 January 2006, the average amount of minimum reserves held by credit institutions in Luxembourg was estimated at €7.015 billion. The deposited amounts are remunerated at the average MRO rate of the ECB during the reserve maintenance period.

CHART 5: DEVELOPMENT OF THE AVERAGE REQUIRED AND DEPOSITED MINIMUM RESERVES



Source: BCL

The deposited amounts are remunerated at the average MRO rate of the ECB during the reserve maintenance period.

## 2. THE BCL'S OPERATIONS

### Changes in the remuneration rate in 2005

The rates at which minimum reserves were remunerated increased from 2.07% to 2.29% in 2005.

Periods	08/12/04 18/01/05	19/01/05 07/02/05	08/02/05 08/03/05	09/03/05 12/04/05	13/04/05 10/05/05	11/05/05 07/06/05	08/06/05 12/07/05	13/07/05 09/08/05	10/08/05 06/09/05	07/09/05 11/10/05	12/10/05 08/11/05	09/11/05 05/12/05	06/12/05 17/01/06
Rate (%)	2.07%	2.06%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.06%	2.06%	2.07%	2.29%

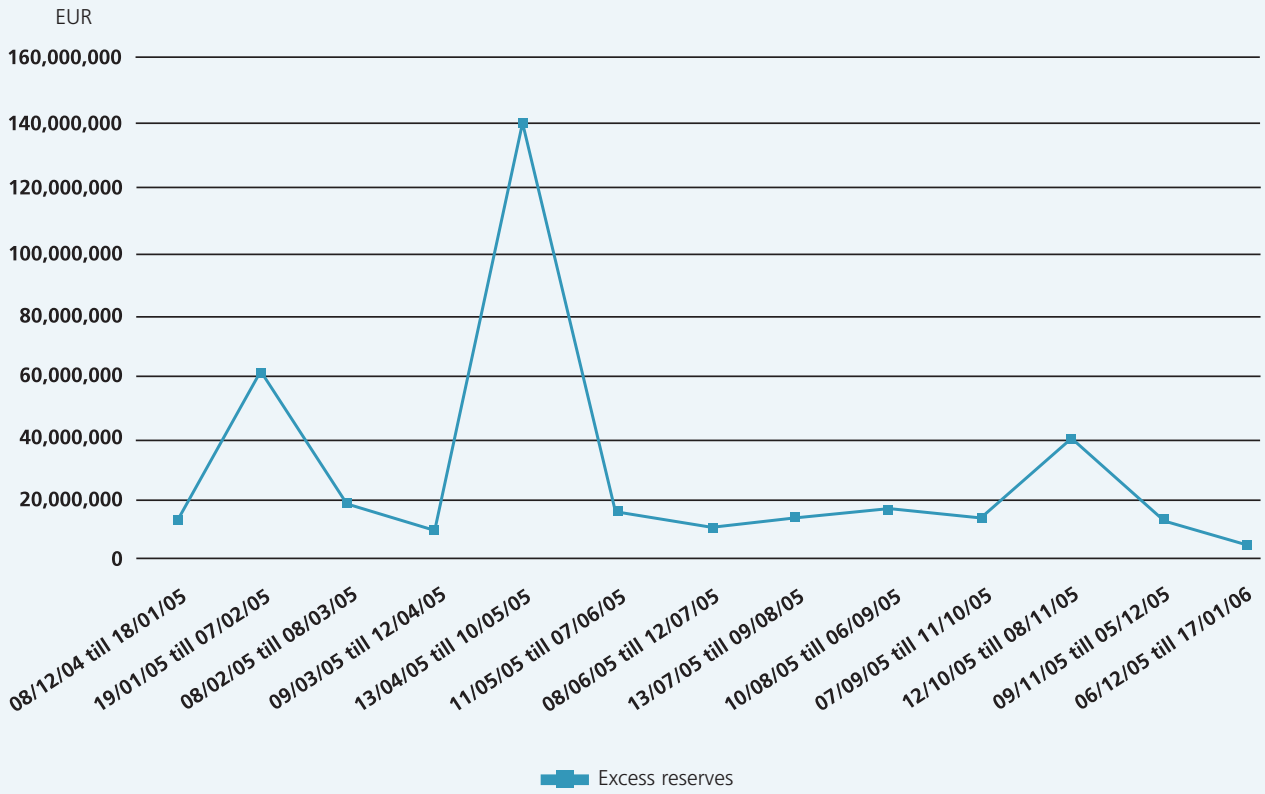
Counterparties paid five sanctions for not respecting minimum reserve requirements in 2005, compared with seven in 2004.

CHART 6: DEVELOPMENT OF AVERAGE DEFICIT RESERVES



Source: BCL

CHART 7: DEVELOPMENT OF AVERAGE EXCESS RESERVES



Source: BCL

Excess of minimum reserves, which by definition are not remunerated, remained at a high level throughout the year.



## 2. THE BCL'S OPERATIONS

### 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 €74.6 million in foreign exchange assets to the ECB, an amount which corresponded to 0.1492% of the capital key as at 31 December 2003.

The ECB's foreign exchange reserves have been managed in a decentralised way by the national central banks since January 1999. Since 1 May 2004, 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 0.1568%; an additional €12.6 million has been transferred to the ECB. As at 31 December 2005, the total market value of the ECB's reserves (including accrued interest) managed by the BCL corresponded to €92.4 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 modified maturity 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. This framework comprises two kinds of risk mitigation: institutional mitigation and operational mitigation.

##### ■ 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 are as follows:

- 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

In conclusion, the portfolio managers implement the decisions of the tactical committees within the limits of the approved investment policy. The transactions are executed in strict compliance with the limits set, covering both the overall and specific investment limits.

#### 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 OR unit<sup>1</sup> 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.

## 2.3.2 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:*

- technical and fundamental analyses, as well as on quantitative assessments;
- market risks (interest rates, exchange rates, equity prices, commodity prices);
- credit risks (minimum credit ratings criteria by international rating agencies);
- liquidity risks (limits by sector, by issuer, by issue and by geographic 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.

<sup>1</sup> The risk manager is a member of the OR unit.

## 2. THE BCL'S OPERATIONS

### 2.3.3 Structure of portfolios

The bulk of the BCL's own funds are invested in fixed-income securities denominated in euro. The strategic orientation permits a diversification into other asset categories.

The BCL manages five kinds of portfolio: Investment Portfolio, Liquidity Portfolio, Domestic Reserves Portfolio, Pension Fund Portfolio and Institutional Portfolios.

#### 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 at 31 December 2005, the total market value (including accrued interest) amounted to €980.5 million.

In 2005 a significant proportion of the funds was invested in long-term bonds, as market conditions for that kind of investment were favourable. However, towards the end of the year the underlying duration of the portfolio was reduced.

The securities included in this portfolio are widely diversified not only geographically 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 mirror 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 (eurocommercial paper), provided that they comply with strict and predefined rating criteria. As at 31 December 2005, the total market value (including accrued interest) amounted to €2,821 million.

#### 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 at 31 December 2005, the total market value (including accrued interest) of this portfolio in foreign currencies amounted to €125 million.

#### Pension Fund Portfolio

The management of this fund is described further in section 4.2.4 of this report.

#### Institutional Portfolios

The BCL provides discretionary management services to institutional clients (central banks and international organisations).

Since 1 January 2005 the Bank has acted as a Eurosystem service provider. 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.

TABLE 1: ALLOCATION AS AT 31 DECEMBER 2005

Maturity	Portfolio 1	Portfolio 2
0-1 year	45%	81%
1-3 years	22%	10%
3-7 years	24%	9%
> 7 years	9%	0%

## 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 2005, the BCL was responsible for producing 4.8 million €500 banknotes for its own requirements. The production of these banknotes was entrusted to the *Oesterreichische Banknoten- und Sicherheitsdruck GmbH*, a security printing company in Vienna, Austria.

According to an agreement with the Luxembourg government, the BCL is in charge of the production of Luxembourg's euro coins, in addition to the task conferred on it by its Founding Law of 23 December 1998 to put the euro coins into circulation. Following an invitation to tender, the BCL put the *Rahapaja Oy (Mint of Finland)* in charge of the production in 2005 of 45.6 million coins for its own requirements. Following a renewed invitation to tender, the BCL signed an agreement with the Mint of Finland at the end of September 2005 for the production of 31.3 million Luxembourg euro coins dated 2006 in order to satisfy the demand for coins in 2006.

### 2.4.1 Circulation of banknotes and coins

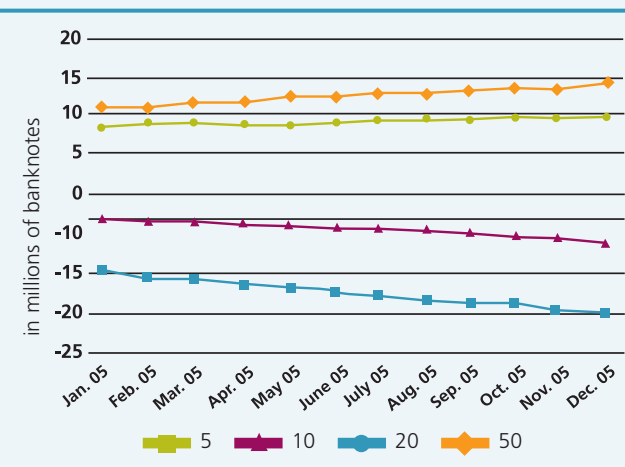
#### 2.4.1.1 Euro banknotes and coins

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 2005 amounted to 20.88 million notes, compared with 23.22 million banknotes in 2004, a decrease of 10.1%. 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.

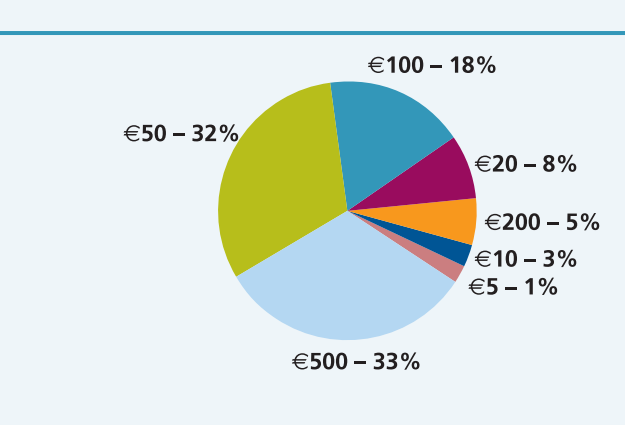
The chart below shows the change in the number of euro banknote denominations used for everyday expenditures.

**CHART 8: 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 increased its contribution to the total volume of banknotes put into circulation by the Eurosystem from 0.93% at end-2004 to 1.10% in December 2005. In Luxembourg and in the rest of the euro area, the year 2005, like 2004, was marked by a steady demand for higher denominations used mainly for saving and precautionary purposes, a sign of increased trust in the euro. The total value of euro banknotes put into circulation by the Eurosystem increased by 12.76% and amounted to €565.22 billion at the end of 2005, with the following value breakdown by denomination:

**CHART 9: BREAKDOWN BY DENOMINATION OF EURO BANKNOTES PUT INTO CIRCULATION BY THE EUROSYSTEM**

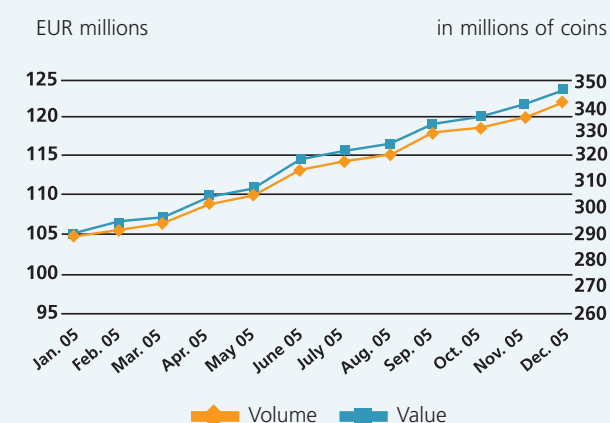


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Public demand for euro coins issued by Luxembourg has remained strong. The total value of the coins put into circulation increased by 19.1% in 2005, compared with 27.5% in 2004. The total value rose from €103.65 million to €123.41 million. The volume of Luxembourg's euro coins issued increased by 54.57 million coins (more than 260 tonnes of metal), a rise of 19.2%, and amounted to 338.14 million coins at the end of 2005. This volume is equivalent to a total weight of 1,639 tonnes, i.e. 3.6 kg or around 735 coins, with a value of €268, for each inhabitant of Luxembourg. As in previous years, the country's coins continued to be much sought after by collectors.

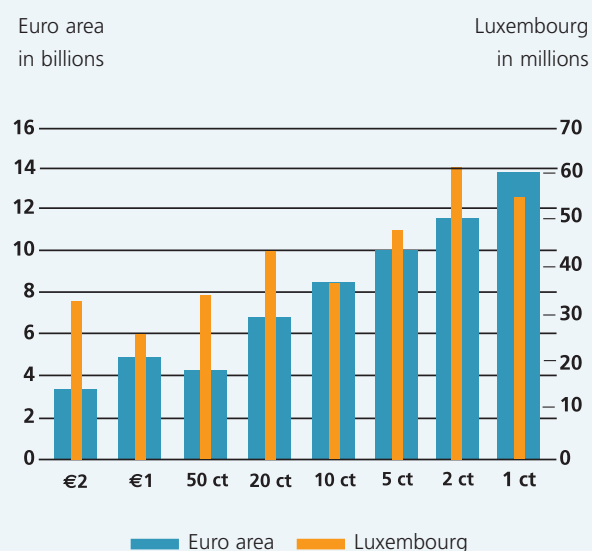
The average monthly volume of coins in circulation rose to 312.43 million. The following chart shows the changing volume and value of Luxembourg's euro coins in circulation throughout 2005. The demand for coins grew steadily in the year under review.

**CHART 10: TOTAL VOLUME AND VALUE OF LUXEMBOURG EURO COINS IN CIRCULATION**



Compared with the other euro area countries, Luxembourg increased its contribution to the total number of coins put into circulation by all the participating Member States from 0.50% in 2004 to 0.54% in 2005; Luxembourg contributes 0.74% 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 36.5 cent in comparison with an average of 26.4 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.

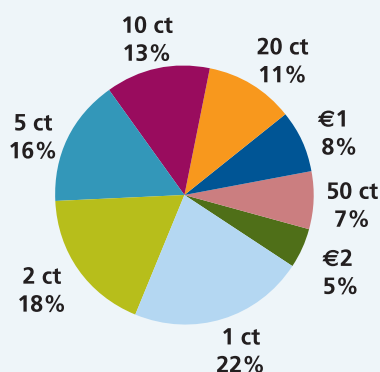
**CHART 11: COMPARISON OF THE CIRCULATION VOLUME OF THE DIFFERENT EURO COIN DENOMINATIONS IN LUXEMBOURG TO THAT OF THE EURO AREA**



Concerning Luxembourg's coins, the 2-cent denomination remained the most common in 2005. Compared with 2004, the ranking according to volume remained unchanged in 2005, confirming the public's preference for denominations with a face value starting with 2. In descending order, the sequence is as follows: 2 cent, 1 cent, 5 cent, 20 cent, 10 cent, 50 cent, €2, €1. The corresponding ranking for the euro area as a whole is: 1 cent, 2 cent, 5 cent, 10 cent, 20 cent, €1, 50 cent, €2.

The total value of euro coins put into circulation by the Eurosystem increased from €15.35 billion at the end of 2004 to €16.64 billion at the end of 2005, whereas the total volume of coins reached 62.98 billion. The following chart shows the volume breakdown by denomination:

**CHART 12: BREAKDOWN BY DENOMINATION OF THE VOLUME OF COINS OF THE EURO AREA IN CIRCULATION**



#### 2.4.1.2 Luxembourg franc banknotes and coins

In 2005, the total value of Luxembourg francs not yet exchanged fell by 2.2%, from LUF 452 million to 442 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 (-9.1%), while that of 1,000-franc banknotes fell by 2.7%. The volume of unreturned 100-franc banknote only decreased by 1.1%. These figures show that collectors prefer the lower denominations. The return of banknotes in 2005 took the form of a nearly linear curve with a very marked fall in December 2005. The table below shows the total value of unreturned Luxembourg franc banknotes for the five last years.

**TABLE 2: TOTAL VALUE OF UNRETURNED LUXEMBOURG FRANC BANKNOTES BETWEEN 2001 AND 2005**

End of period	in LUF				
	LUF 5,000	LUF 1,000	LUF 100	LUF banknotes withdrawn abroad	Total
2001	2,398,720,000	435,327,000	141,357,900	-198,966,000	<b>2,776,438,900</b>
variation*	-21.5%	-35.6%	-8.1%		<b>-25.3%</b>
2002	93,855,000	83,749,000	83,781,100	0	<b>261,385,100</b>
variation*	-96.1%	-80.8%	-40.7%		<b>-90.6%</b>
2003	80,720,000	79,038,000	82,003,000	0	<b>241,761,000</b>
variation*	-14.0%	-5.6%	-2.1%		<b>-7.5%</b>
2004	75,625,000	76,702,000	81,592,200	0	<b>233,919,200</b>
variation*	-6.3%	-3.0%	-0.5%		<b>-3.3%</b>
2005	68,750,000	74,651,000	80,670,900	0	<b>224,071,900</b>
variation*	-9.1%	-2.7%	-1.1%		<b>-4.2%</b>

\* compared with the preceding year.

## 2. THE BCL'S OPERATIONS

The total volume of unreturned Luxembourg banknotes decreased by 91.9% between end-2001 and end-2005.

At the end of 2005, a total volume of 895,110 Luxembourg banknotes and 63.1 million coins, with a total value of LUF 408.7 million, had still not been exchanged. Numismatic products and collector coins still not exchanged amounted to LUF 33.5 million.

Nearly 900 Luxembourg franc banknotes were returned to the BCL by financial institutions, whereas just over 1,600 Belgian franc banknotes were returned.

Luxembourg and Belgian franc banknotes can still be exchanged at the counters of the BCL.

### 2.4.2 Handling of banknotes and coins

The number of euro banknotes returned by financial institutions to the BCL – 56.81 million – remained nearly unchange compared with the previous year. The volume of returned notes involved more than 1,760 lodgement operations registered and managed by the Cash Department. Furthermore, the number of withdrawals of euro banknotes by financial institutions exceeded 3,900 operations. These were likewise registered and managed by the Cash Department, and represented a decrease of 11% compared with 2004.

The public also made use of the services offered by the BCL over its counters to exchange banknotes and coins which were unfit for circulation as well as to buy numismatic products. Nearly 9,000 transactions were conducted over the counter in 2005, i.e. an average of 35.5 operations per working day. Some 200 transactions for professional numismatists were also carried out, a field of activity more actively pursued by the Bank in 2005. All in all, the Cash Department registered and managed over 14,800 transactions concerning notes, coins and numismatic products.

The number of euro banknotes processed by sorting machines rose noticeably, by some 7%, from 54.23 million notes in 2004 to 57.96 million in 2005. The sorting machines carry out both authenticity tests and soiling tests. Nearly 16.2 million notes of all denominations had to be destroyed as they were unfit for circulation. The reject/destruction rate fell from 33% in 2004 to 28% of the total number of euro banknotes sorted, due to a slight improvement in the quality of certain denominations (€10, €50 and €200) lodged with the BCL. Moreover, this percentage varied greatly from one denomination to another: 5% for the €200 banknote to 55% for the €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

The BCL took the opportunity in 2005, as in 2004, to issue a €2 commemorative coin with a distinctive national side, thus maintaining the interest of collectors in numismatic products put on sale by the BCL. The coin, which shows Grand Duke Henri and Grand Duke Adolphe, marks the former's 50th birthday and the fifth anniversary of his accession to the throne, as well as the 100th anniversary of the death of Grand Duke Adolphe.

The BCL issued the following numismatic products in Luxembourg in 2005:

- The "2005 BU set" comprises Luxembourg's euro coins (1 cent to €2, including the €2 commemorative coin with a distinctive national side), struck in "Brilliant Uncirculated" quality and dated 2005. The mintage is limited to 20,000 sets.
- The "2005 Benelux set" contains the 2005 series of eight euro coins of the three Benelux countries struck in "Brilliant Uncirculated" quality. It also includes a silver medal specially designed for the 50th anniversary of the Benelux Parliament – the theme of this set.
- The "2005 Proof set" features Luxembourg's eight euro coins (ranging from 1 cent to €2) and the €2 commemorative coin, all struck in "Proof" quality and dated 2005. The mintage amounts to 1,500 sets.
- The silver coin "Council of the European Union", issued in January 2005 to mark Luxembourg's Presidency of the Council and with a mintage of 10,000, is the country's third collector coin in silver in the series "European institutions". This coin has a face value of €25 and is minted with a silver fineness of 925. Its diameter is 37 mm and its weight 22.85 g.

Collector coins in precious metal issued by a euro area Member State are only legal tender in the issuing country.





## 2. THE BCL'S OPERATIONS

### 2.5 Developments in the area of statistics

#### 2.5.1 Monetary and financial statistics

The BCL publishes monthly and quarterly aggregated balance sheet statistics on Luxembourg's credit institutions and money market funds. It also publishes monthly statistics on interest rates applied by credit institutions on loans and deposits for households and non-financial corporations in Luxembourg and the rest of the euro area. The BCL additionally publishes various statistics on investment funds and other professionals of the financial sector as well as data on employment in the country's financial sector.

In 2005, the BCL started work on the development of new statistical requirements for other financial intermediaries such as investments funds. This work will be finalised by the adoption of an ECB Regulation.

#### 2.5.2 Balance of payments and international investment position

The BCL publishes quarterly statistics on Luxembourg's balance of payments as well as on the international investment position and reserve assets on its website and in its quarterly bulletin. Furthermore, the BCL and the *Service central de la statistique et des études économiques (STATEC)* provide, in a joint press release, information on the main developments in the balance of payments when publishing new data.

In 2005, the BCL started developing a new system for collecting statistical data relating to portfolio investments. A considerable amount of work is required here in order to comply with the European Central Bank Guideline ECB/2004/15 dated 16 July 2004. This new compilation system will be based on a security-by-security collection method and should become operational in January 2008.

#### 2.5.3 Financial accounts

The BCL and *STATEC* have performed a detailed stock-taking exercise of the information needed and defined a common plan for compiling financial accounts for Luxembourg. The government has entrusted *STATEC* with the compilation of financial accounts and requested it to liaise with the BCL in this area.

#### 2.5.4 The IMF Special Data Dissemination Standard

In 1996, the IMF introduced its Special Data Dissemination Standard (SDDS), which aims to improve the production and publication of a large set of macroeconomic statistics.

In 2005, Luxembourg's institutions continued to adapt their statistical framework to fit this standard. The BCL has in particular made available to all interested parties statistics on the analytical accounts of the BCL, the MFI sector, the balance of payments (jointly with *STATEC*), the international investment position, and on the external debt and reserve assets, within the periods required by the SDDS.

## 2.6 Payment and securities settlement systems

### 2.6.1 Real-time gross settlement systems

The number of participants in LIPS-Gross<sup>2</sup>, Luxembourg's real-time gross payment system, remained unchanged in 2005 at 31.

#### 2.6.1.1 LIPS-Gross activity in 2005

##### Domestic payments<sup>3</sup>

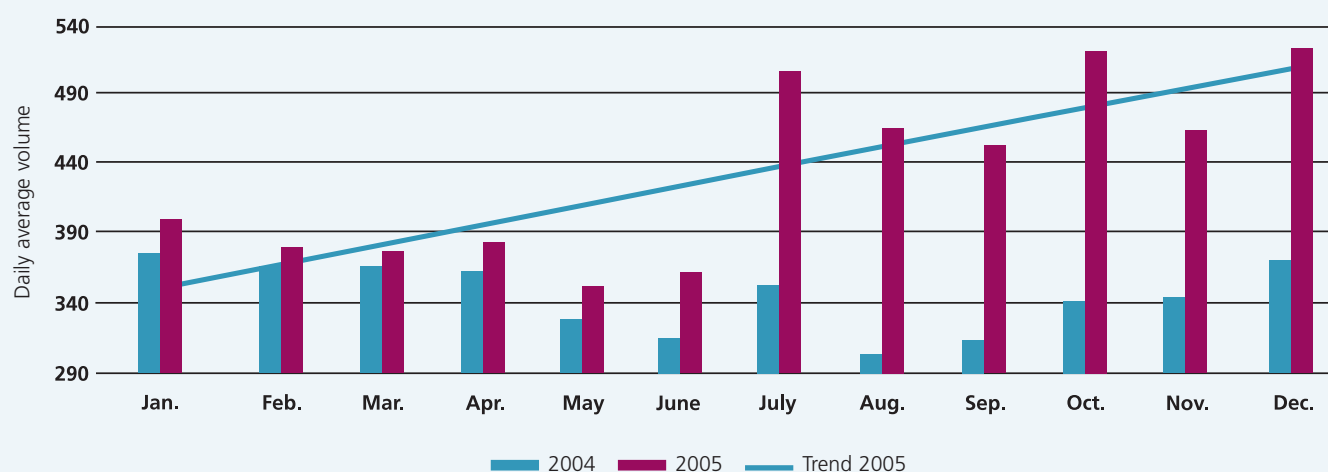
In 2005, LIPS-Gross participants exchanged a total of 109,567 payments (89,128 in 2004) for a total value of €2,736 billion (€2,258 billion in 2004). In comparison with 2004, the volume increased by 23% and the value exchanged rose by 21%. The average value per payment was €25 million.

The following charts show the daily average volume as well as the daily average value of domestic payments.

Compared with 2004, domestic traffic rose strongly in the second half of 2005. This increase was generated by a limited number of participants.

The amounts exchanged in January and February 2005 were much higher than in the corresponding period of 2004, mainly because of a change<sup>4</sup> in the tender procedure for the Eurosystem's MROs, for which the maturity was shortened from two weeks to one week.

CHART 13: DOMESTIC PAYMENTS: DAILY AVERAGE VOLUME



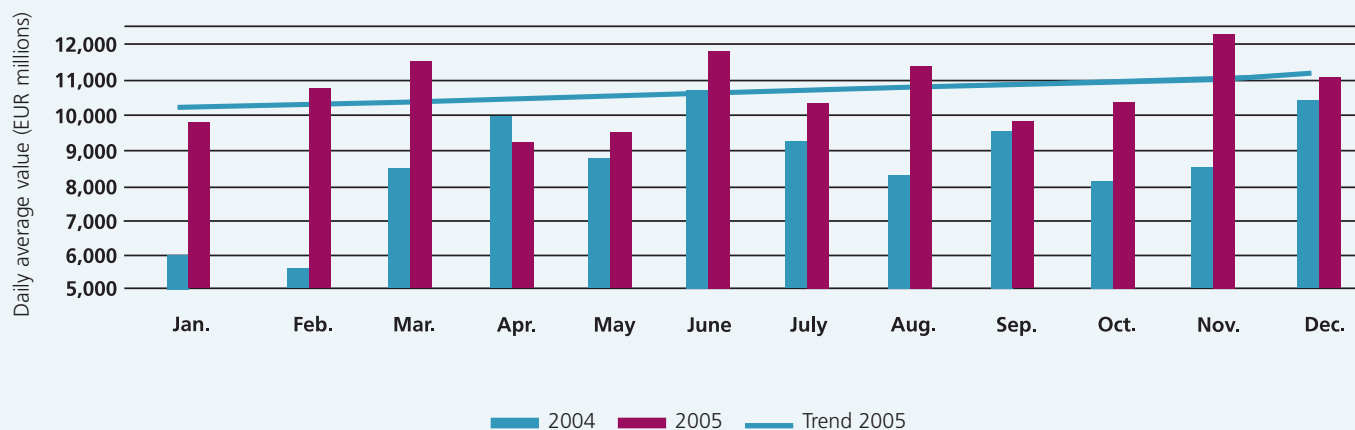
<sup>2</sup> Real-Time Gross Settlement System (RTGS)

<sup>3</sup> Domestic payment: payment exchanged between two LIPS-Gross participants.

<sup>4</sup> The new procedure came into force in February – March 2004.

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CHART 14: DOMESTIC PAYMENTS: DAILY AVERAGE VALUE

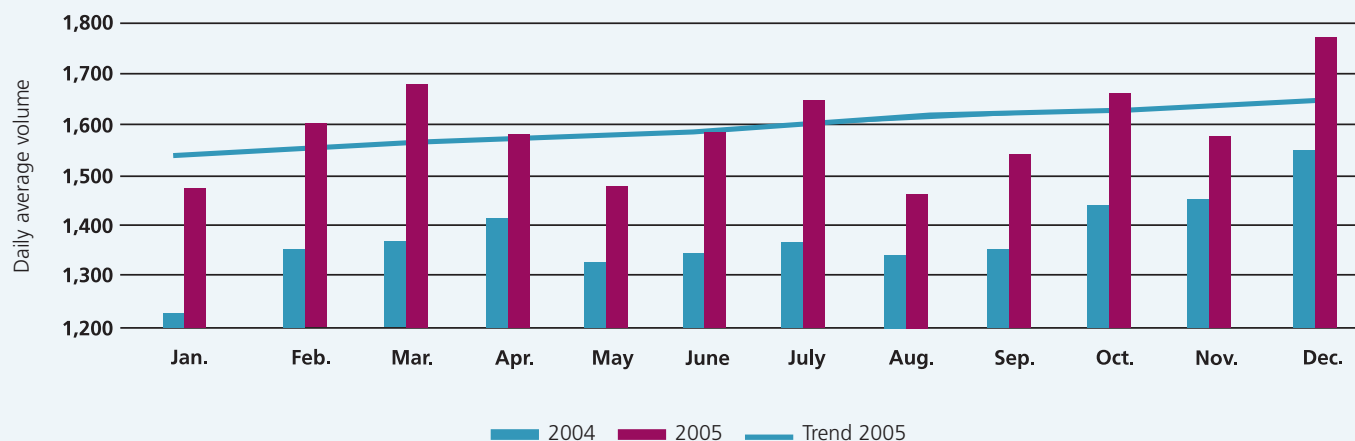


### Cross-border payments<sup>5</sup>

In 2005, LIPS-Gross participants sent 407,375 payments to other countries in the European Union (357,317 in 2004) for a total value of €3,902 billion (€3,241 billion in 2004). In return, the participants received 382,732 cross-border payments (321,711 in 2004) for a total value of €3,907 billion (€3,242 billion in 2004). The average value per payment sent was €9.6 million (an increase of 5.6%). The average value per payment received is €10.2 million (an increase of 1.3%).

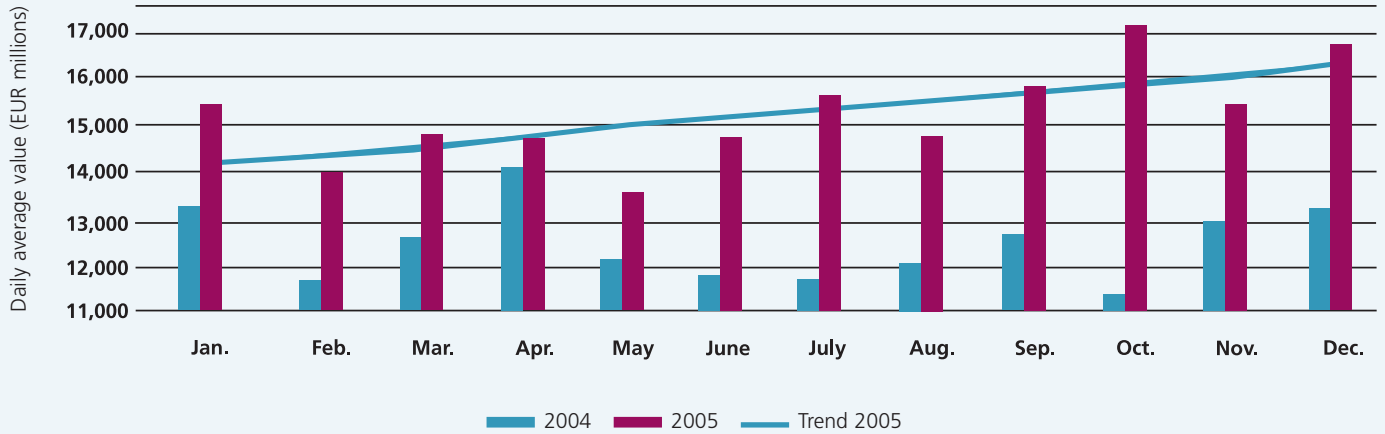
The following charts show the daily average volume and value of cross-border payments by Luxembourgish participants.

CHART 15: CROSS-BORDER PAYMENTS SENT: DAILY AVERAGE VOLUME



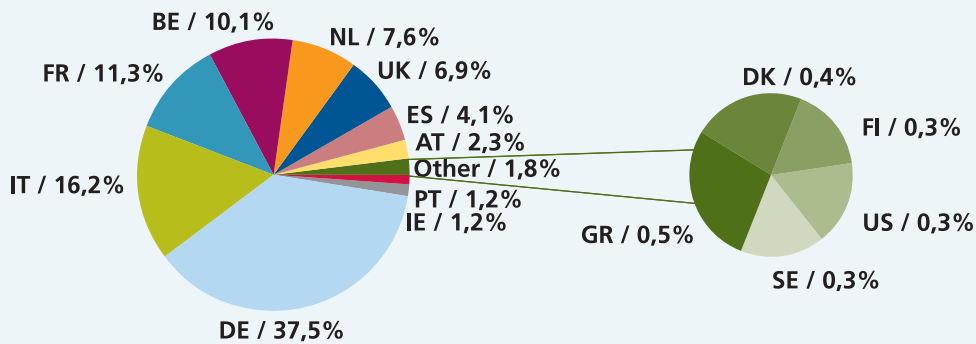
<sup>5</sup> Cross-border payment: payment exchanged between a LIPS-Gross participant and a TARGET participant.

**CHART 16: CROSS-BORDER PAYMENTS SENT: DAILY AVERAGE VALUE**



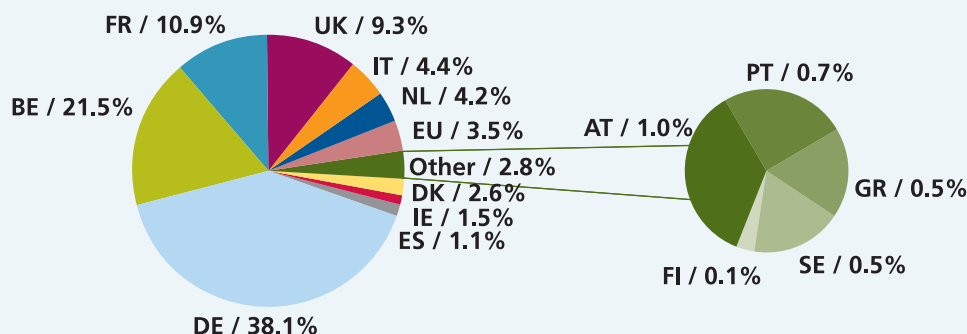
In 2005, the volume of cross-border payments increased by 14% and the value by 20%. Around ten banks contributed to this development.

**CHART 17: DISTRIBUTION OF CROSS-BORDER PAYMENTS SENT (IN VOLUME)**



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CHART 18: BREAKDOWN BY VALUE OF CROSS-BORDER PAYMENTS SENT



Whether in volume or in value, more than 80% of cross-border payments are sent to five countries, three of which are direct neighbours of Luxembourg.

### Aggregated figures for domestic and cross-border payments

The total number of payments processed by LIPS-Gross in 2005 amounted to 922,370, with a peak of 5,327 transactions on 30 June.

The following table provides an overview of daily average volumes and values exchanged per year. Overall, volumes as well as values exchanged continued to increase.

TABLE 4: VALUE (IN EUR MILLIONS) OF PAYMENTS (DAILY AVERAGE)

	Domestic Payments		Cross-border sent		Cross-border received		Total sent and received
	Volume	(% volume sent)	Volume	(% volume sent)	Volume	(% total volume)	
<b>2003</b>	5,932	(31.81%)	12,715	(68.19%)	12,760	(40.63%)	<b>31,407</b>
<b>2004</b>	8,717	(41.06%)	12,515	(58.94%)	12,519	(37.09%)	<b>33,752</b>
<b>2005</b>	10,686	(41.21%)	15,243	(58.79%)	15,260	(37.05%)	<b>41,189</b>
<b>Variation 2005-2004</b>	<b>+23%</b>		<b>+22%</b>		<b>+22%</b>		<b>+22%</b>

TABLE 3: VOLUME OF PAYMENTS (DAILY AVERAGE)

	Domestic Payments		Cross-border sent		Cross-border received		Total sent and received
	Volume	(% volume sent)	Volume	(% volume sent)	Volume	(% total volume)	
<b>2003</b>	379	(25.18%)	1,125	(74.82%)	1,205	(44.49%)	<b>2,708</b>
<b>2004</b>	344	(19.96%)	1,380	(80.04%)	1,242	(41.88%)	<b>2,966</b>
<b>2005</b>	428	(21.20%)	1,591	(78.80%)	1,495	(42.54%)	<b>3,514</b>
<b>Variation 2005-2004</b>	<b>+24%</b>		<b>+15%</b>		<b>+20%</b>		<b>+18%</b>

The change in the trend which started in 2004 continued in 2005: the members of the RTGS-L GIE received fewer cross-border payments than they sent. Nevertheless, the value of cross-border payments received still exceeds the value of cross-border payments sent.

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

In 2005, all the national RTGS systems processed a total of 58.5 million domestic payments (52.4 million in 2004) for a value of €324,089 billion (€297,857 billion in 2004). With 109,567 national payments for a total amount of €2,736 billion, Luxembourg accounted for 0.19% of the total volume and 0.84% of the total value.

In addition, 17.7 million cross-border payments (16.8 million payments in 2004) were processed during the year for a total value of €164,812 billion (€146,137 billion in 2004). Luxembourg contributed 2.23% to this volume and 2.37% to the value exchanged.

#### Availability of TARGET

The overall availability of TARGET reached 99.83% in 2005 (99.80% in 2004). TARGET's average availability figure during its six years of existence has been 99.69%.

The overall availability of LIPS-Gross declined from 99.97% in 2004 to 99.94% in 2005 because of a minor technical problem. However, it was 100% available for 11 months out of 12 in 2005. LIPS-Gross' average availability figure during its six years of existence has been 99.69%, identical to TARGET's.

#### 2.6.1.2 TARGET2

Work on the development and implementation of TARGET2 continued in 2005 at the BCL and at other European central banks.

On 24 November 2005, the BCL invited the representatives of credit institutions in order to discuss important decisions taken by the Governing Council of the ECB, notably its endorsement of the technical specifications and its setting of the go-live dates for the system, which will become operational in phases.

Luxembourg will be part of the first wave of migration on 19 November 2007. The Governing Council finally determined the pricing, which will consist of two components: an annual fee and a transaction fee. In order to prepare for the migration of Luxembourgish participants, the BCL organised several meetings of a technical nature in 2005.

#### 2.6.2 The interbank netting system LIPS-Net

13 credit institutions are connected to the network. This figure has remained unchanged since 2004.

#### Transactions in 2005

In terms of volumes of payments exchanged, the total number of transactions increased by 3.73% in 2005 to 13.74 million. The total value exchanged in 2005 amounted to €62.28 billion, a 10% increase relative to 2004.

The daily average volume of transactions went up to 54,572. The highest volume (121,817) was registered on 3 May.

TABLE 5:

	2004	2005	Variation
Number of <b>credit transfers</b>	13,043,626	13,585,880	4.16%
Value of credit transfers (EUR millions)	45,846	50,551	10.26%
Average value per credit transfer (EUR)	3,515	3,791	5.86%
Number of <b>cheques</b>	174,396	124,694	-28.50%
Value of cheques (EUR millions)	2,567	2,372	-7.60%
Average value per cheque (EUR)	14,719	24,577	29.24%
Number of transactions related to the <b>settlement of balances of debit and credit cards</b>	28,951	30,363	4.88%
Value of transactions related to the settlement of balances of debit and credit cards (EUR millions)	8,363	9,352	11.82%
Average value per transaction related to the settlement of balances of debit and credit cards (EUR)	267,775	350,126	6.62%
<b>Total number of operations</b>	<b>13,246,973</b>	<b>13,740,937</b>	<b>3.73%</b>
<b>Total value of operations (EUR millions)</b>	<b>56,776</b>	<b>62,275</b>	<b>9.69%</b>
<b>Average value per operation (EUR)</b>	<b>4,286</b>	<b>4,607</b>	<b>5.74%</b>

## 2. THE BCL'S OPERATIONS

### Credit transfers

As in previous years, the seasonal trend was confirmed: the volumes exchanged in August and September were quite low, whereas the month of December showed the most activity.

In 2005, the average number of credit transfers exchanged per day in the national compensation amounted to 53,956 transactions with a daily average amount of around €201 million. The total value of credit transfers exceeded €50 billion in 2005 (a 10.3% increase compared with 2004).

CHART 19: CREDIT TRANSFERS: DAILY AVERAGE VOLUME

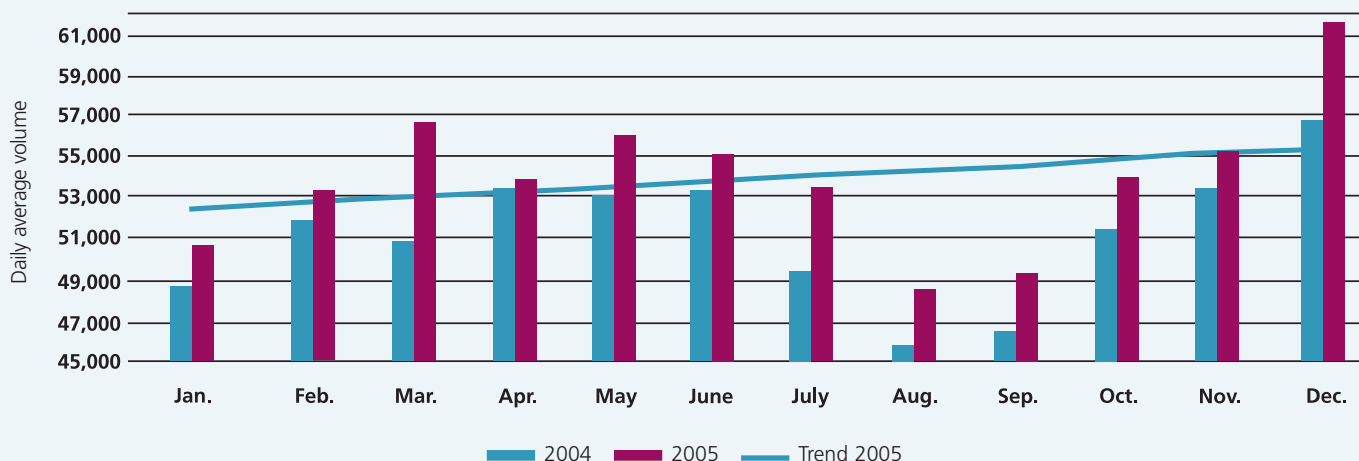
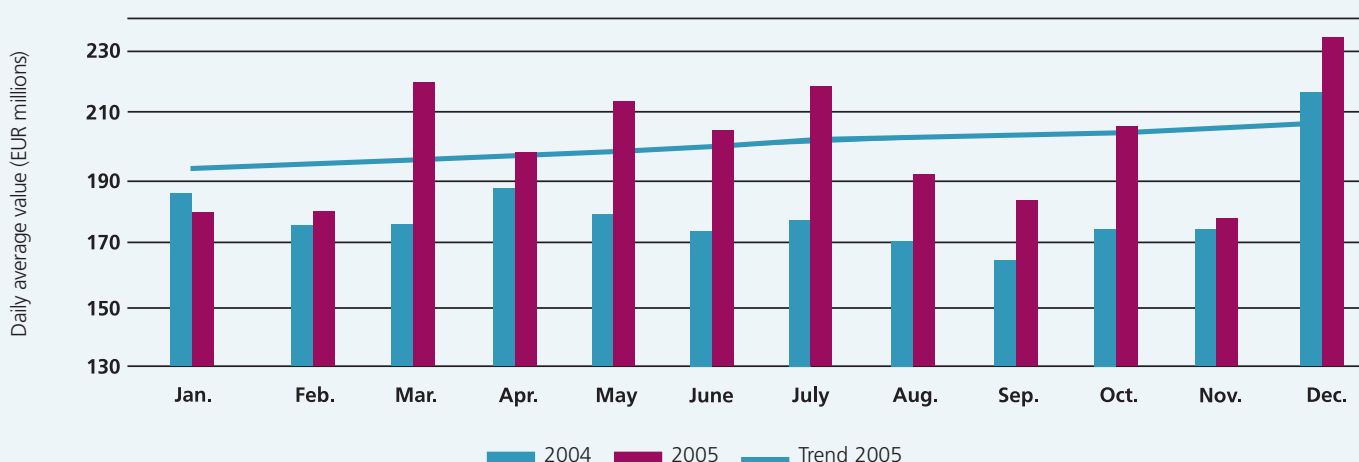


CHART 20: CREDIT TRANSFERS: DAILY AVERAGE VALUE



## Cheques

The declining trend in cleared cheques which started in 2001 with the disappearance of the Eurocheque guarantee slowed down in 2005 (-29% compared with -37% the previous year). The total value of cheques also decreased in 2005, but to a smaller extent (-7% compared with 2004). The average value of cheques exchanged in the compensation sharply increased, to €19,022 in 2005, up from €14,719 in the preceding year. In 2005, the average daily number of cheques exchanged amounted to around 500 transactions and the daily average value rose to around €9.5 million.

## Debit and credit cards

In May 2003, the settlement of credit card balances was integrated into the clearing system, a step already taken in respect of debit cards. As a result, balance settlement operations between card issuers have strongly increased since then. In contrast to customer payment operations (credit transfers and cheques), interbank settlement operations are less numerous (less than 1% of the volume) but represent a not inconsiderable part of the values exchanged in the compensation (15%). Within LIPS-Net, the proportion (both in terms of volume and value) of balance settlement operations for debit and credit cards has remained stable.

## Evolution of the LIPS-Net system

The development of the LIPS-Net system in the early 1990s required substantial investments. Considering the limited scope for increasing its activity, insufficient economies of scale as well as integration prospects at the European level<sup>6</sup>, the managers of the SYPAL-GIE, the owner of the system, have decided to terminate its operations in October 2006 and to transfer its credit exchange activity to the pan-European STEP2 platform operated by the Euro Banking Association (EBA). Luxembourgish participants will thus be able to benefit from economies of scale and from the coverage of a European system for retail payments. The exchange of cheques will in future be organised on a bilateral basis between the participants.

<sup>6</sup> Achievement of the Single Euro Payment Area (SEPA).

<sup>7</sup> Article 18 of the Statute of the ESCB and the ECB, Article 22 of the Founding Law of the BCL.

<sup>8</sup> These are the tier one assets (debt instruments fulfilling uniform euro area-wide eligibility criteria specified by the Eurosystem) and tier two assets (additional assets that are of particular importance to national financial markets and banking systems).

## 2.6.3 General framework of eligible collateral in the Eurosystem credit operations

### 2.6.3.1 List of eligible assets

All credit operations of the ECB and the national central banks are performed "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 fulfil specific eligibility criteria defined by the Eurosystem, which are detailed in a publication entitled "The implementation of monetary policy in the euro area" available on the ECB's website.

In 2005 the Eurosystem continued to work towards replacing its two categories of eligible assets<sup>8</sup> by a single list of eligible assets applicable for the whole of the euro area.

This single list will be progressively implemented. Following the decision to accept credit claims as collateral for central bank credit as from January 2007 throughout the euro area, the Eurosystem is working on the procedures and systems necessary for handling these assets. In this context, the Governing Council has accepted, among 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 of the 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 (ECAAF), which details the rules governing the Eurosystem's credit quality requirements. In this context, the Eurosystem also published its minimum rating threshold in 2005. 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 BCL filed with the government a pre-draft law which envisages the registration of credit claims at the central bank and establishes a regime for the pledging of credit claims which is like those offered in neighbouring countries.

Another significant change in 2005 was the acceptance of debt securities denominated in euro and issued in the euro area by those G10 members outside the European Economic Area (United States, Canada, Japan and Switzerland).



## 2. THE BCL'S OPERATIONS

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

#### Selection of depositories<sup>9</sup> at the domestic level

In order to meet the requirement of "adequate collateral"<sup>10</sup>, 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.

#### 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 by a depository located elsewhere in the euro area. The Eurosystem foresees two ways for such cross-border use of collateral. Counterparties may use

- the CCBM<sup>11</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 euro area, direct links make available securities issued by 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 first two systems have bilateral accounts. The possibility of using relayed links was approved by the Governing Council in 2005. Links have to be approved by the Governing Council before being used for the collateralisation of central bank credit operations. In 2005, Luxembourg counterparties used 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.

### 2.6.4 Correspondent Central Banking Model (CCBM)

In the framework of 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 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 received by the CCB.

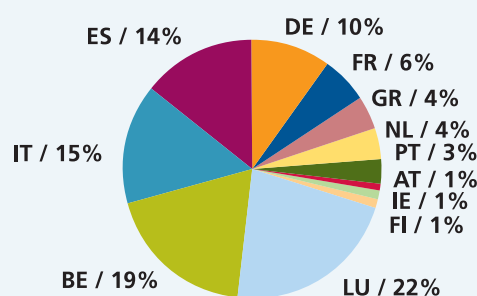
The CCBM has been a success with the counterparties and, as it remains the main channel for the cross-border mobilisation of collateral, the Governing Council has decided to continue the CCBM until 2007. The efficiency of the model has been further increased by the decision to limit the maximum processing time to one hour for each operation.

Across the euro area, usage of the CCBM has remained very uneven. The most active correspondent central banks have been those from Luxembourg (22%), Belgium (19%), Italy (15%), and Spain (14%).

The most active home central banks have been those from Germany (59%), the Netherlands (10%), France (7%) and Ireland (6%).

As in previous years, the cross-border use of tier two assets has remained marginal.

CHART 21: CORRESPONDENT CENTRAL BANKS IN 2005



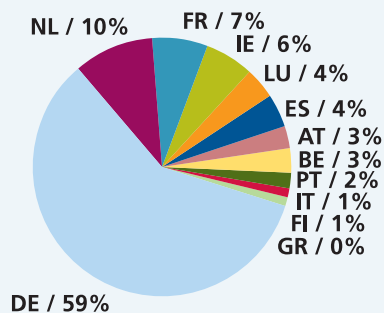
Source: ECB

<sup>9</sup> A depository is an institution that operates a securities settlement system.

<sup>10</sup> Article 18 of the Statute of the ESCB and the ECB, Article 22 of the Founding Law of the BCL.

<sup>11</sup> Correspondent Central Banking Model, see section 2.6.4.

CHART 22: HOME CENTRAL BANKS IN 2005



Source : ECB

### 2.6.5 Night-time link with Clearstream Banking Luxembourg

Night-time link (NTL) is a complementary service introduced by the BCL and CBL in 2002. It enables banks in Luxembourg to improve the use of their cash and securities deposited with the BCL, while at the same time increasing the financial safety of the night-time securities settlement operated by CBL.

The NTL procedure is divided into two parts:

1. A customer of CBL can use its cash and collateral available at the BCL to guarantee credit granted by CBL for the clearing process taking place at night. The guarantee is issued by the BCL in favour of CBL on behalf of the customer.
2. At the end of the night-time processing, reimbursement of credit granted by CBL is automatically made by the BCL on behalf of the customer.

The BCL considers that the night-time link, by offering new collateralisation possibilities to the banking community, contributes to improving the safety of securities transactions. This procedure also enables banks to manage their liquidity in a more centralised way.

### 2.6.6 Committee of Payment Systems and Securities Settlement Systems

The Committee of Payment Systems and Securities Settlement Systems (CSPRT) has continued its work on Luxembourg's level of preparation for any large-scale technical and operational risks. A working group, the Large-Scale Disruption Task Force (LSDTF), has been established by the BCL, the *Commission de Surveillance du Secteur Financier* (CSSF), and institutions from Luxembourg's financial sector, in order to analyse in detail the country's situation as a financial centre in this respect. The results of the work were published in the BCL's *Revue de Stabilité Financière* (financial stability review) in April 2006.

## 2. THE BCL'S OPERATIONS

### 2.7 Financial stability

#### 2.7.1 Macro-prudential surveillance

In 2005 the BCL continued to perform its macro-prudential surveillance of Luxembourg's banking sector, based on a set of macro-prudential indicators complemented by a monitoring of the activities and results of systemically important credit institutions. This analysis has in turn been supported by a monitoring of structural, regulatory and prudential developments that may affect financial stability.

In addition, the BCL intends to step up its stress-testing of the banking sector and its studies in this field.

Macro-prudential indicators for 2005 show a rise in income, balance sheet assets and own funds of credit institutions under Luxembourg law. The share of the interest margin in total revenues is decreasing while the share of commission revenues is rising. Moreover, operating costs linked to the banking product remain favourable compared with the European average.

Net value adjustments in the books of banks subject to Luxembourg law have been reduced, both in terms of volume and in respect of their own funds. The relative proportion of collateralised loans in total loans slightly declined. Intra-group activities remained important, especially for large credit institutions. The hunt for higher return has increased credit institutions' to risk countries. Credit to the non-financial corporate sector has grown positively for the first time since 2001. Credit to households has continued to rise, albeit representing only a small part of Luxembourg credit institutions' exposures, which are mainly concentrated on financial institutions. The share of non-performing loans in total exposures has stabilised at a low level. Net foreign currency positions remained modest in relation to own funds. The degree of concentration of banking activities, as measured by the Gini coefficient, remained stable despite the steady decline in the number of banks.

Overall, based on the macro-prudential analysis in 2005, Luxembourg's banking sector seems to be sound and well positioned to face potential instability risks given comfortable liquidity and solvency ratios combined with asset quality and earnings ratios indicating no major threats to financial stability.

An in-depth analysis of recent financial stability developments was published in the BCL's *Revue de Stabilité Financière* in April 2006.

In addition to publishing national macro-prudential indicators at the national level, the BCL actively participates in producing indicators at the level of the ECB and the IMF.

At the level of the European System of Central Banks (ESCB), the BCL contributes to the work of the Banking Supervision Committee, which brings together the central banks and EU supervisors and, among other tasks, analyses the macro-prudential situation and structural developments in the European banking sector from a financial stability point of view.

The BCL also participates in the work of the Committee of European Banking Supervisors (CEBS) set up by the European Commission.

At the national level, the BCL has proposed the establishment of a financial stability committee, in the context of a draft bill revising the BCL's Founding Law which was sent to the government in February 2006.

It is intended that this committee, under the coordination of the BCL, will operate as a forum for cooperation and organise the dialogue between the different supervisory authorities and the BCL. It will contribute to the implementation of Memoranda of Understanding adopted at the European level between competent authorities and deal with inter-sectoral issues as well as serve as a forum for reflection on issues of general interest related to the stability of the global financial system. In addition, the committee will organise a regular exchange of qualitative and quantitative information on individual credit institutions, infrastructures and market developments, and operate in the field of crisis prevention as well as crisis management. It can also serve, under the leadership of the BCL as the authority responsible for liquidity provision, as the organiser of crisis simulation exercises.

## 2.7.2 Oversight of payment and securities settlement systems

The BCL's oversight of payment and securities settlement systems derives from its mission to contribute to financial stability. It focuses on operators and technical agents of Luxembourg's two major payment systems, i.e. LIPS-Gross, the real-time gross settlement system, and LIPS-Net, the retail net settlement system, as well as the securities settlement system operated by Clearstream Banking Luxembourg.

The oversight activity, which aims to ensure the smooth functioning and efficiency of payment and securities settlement systems and thus to contribute to financial stability, is performed in accordance with the requirements defined by the BCL in its policy and procedures document of December 2001. In this context, operators and technical agents subject to oversight supplied in 2005 a set of information of a general, statistical and financial nature which has been followed up on a regular basis.

The BCL also contributes to the work of the Payment and Settlement Systems Committee and its sub-groups at the level of the European System of Central Banks (ESCB). The Committee's objective is to help the ESCB promote the smooth functioning of payment systems, notably in the field of oversight. Thus, parallel to the oversight performed at the national level, the LIPS-Net and LIPS-Gross payment systems are subject to a harmonised common oversight stance carried out by the ESCB central banks, based on the Core Principles for Systemically Important Payment Systems. In this context, an assessment of retail payment systems was undertaken in 2005 and concluded that LIPS-Net fully complied with the principles.

The two national payment systems, LIPS-Net and LIPS-Gross, are currently restructuring. In 2005 LIPS-Net's operator decided to close its payment system on 6 October 2006. Banks will exchange their retail payment orders through STEP2, the system operated by the Euro Banking Association and overseen by the ECB. Moreover, LIPS-Gross will cease operating at the end of 2007, when TARGET, the ESCB's real-time gross settlement system, of which LIPS-Gross forms the Luxembourg part, will be replaced by TARGET2, operating on a shared single platform. As far as oversight is concerned, even though key aspects of TARGET2 will be subject to joint oversight by the participating central banks, the BCL will keep its competence in assessing the new system's decentralised aspects.

The BCL also helped to draw up standards for clearing and securities settlement systems in the EU via a joint task force involving the ESCB and the Committee of European Securities Regulators (CESR).

