BANQUE	CENTRALE	DU LU	XEMBO	URG AN	INUAL	REPORT	2001

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# ANNUAL REPORT 2001 SUMMARY

## BANQUE CENTRALE DU LUXEMBOURG ANNUAL REPORT 2001

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#### Note to this Summary Report

This brochure presents an English summary of the *Rapport Annuel 2001* of the Banque centrale du Luxembourg, published in French on 22 April 2002.

The *Rapport Annuel 2001* may be requested free of charge from the BCL. It is also available on the BCL's website at <a href="https://www.bcl.lu">www.bcl.lu</a> (section "Publications").

### BANQUE CENTRALE DU LUXEMBOURG ANNUAL REPORT 2001

## GOVERNOR'S FOREWORD

Euro notes and coins were introduced on 1 January 2002. This process was successful in all countries of the Eurozone. The careful logistical organisation, the adoption of the appropriate legal framework and the good cooperation achieved with the Central Bank's partners facilitated rapid use of the new money.

In Luxembourg the procedures for changing from old money to new were especially complex in view of the variety of the former types of money in use. This also explains why the handing-in of national banknotes was slower than in other countries. The favourable reception accorded to the euro shows that the public is ready to accept ambitious reforms. The time is now ripe for structural reforms. Financial integration, the domains of economic and social policy, infrastructure and external relations are the new domains for action on the part of a Europe that has successfully created monetary union.

The consequences for financial markets of the dramatic events of autumn 2001 have demonstrated the interdependence of our economies. Globalisation both remains a desirable aim and provides a challenge for good governance at the international level and also at that of states, which like Luxembourg, are characterised by the open nature of their economy.

The Eurosystem contributes, in no small measure to the necessary reforms of public governance. Its monetary policy provides the appropriate framework for a resumption of non-inflationary growth. The Eurosystem is also developing its other aims. In this context the improvement of economic information is a priority. That is in itself an important element of good governance. Since 1 January 2002 the Banque centrale du Luxembourg has been involved in new activities in this sector. Together with Statec it is now legally responsible for the establishment of the balance of payments. It also keeps statistical indicators up to date. These will contribute to an improved analysis of financial stability — that necessary complement of monetary stability. The Central Bank enjoys a good relationship with other bodies responsible for the publication of statistics.

The Eurosystem contributes to structural reforms by means of the opinions it provides to national and European Union legislative bodies. The Banque centrale du Luxembourg wishes to strengthen its co-operation with the prudential and financial market supervisory bodies.

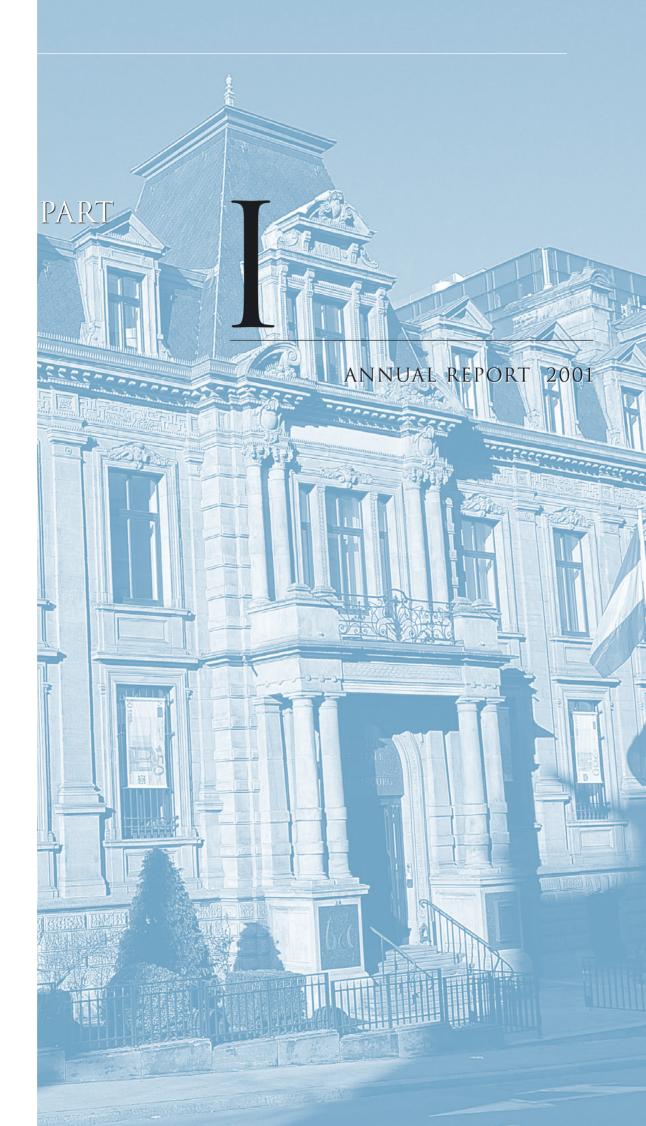
This report, which I have the honour to introduce, is an example of how, through its analyses, the Central Bank means to perform, for the benefit of society, as a centre of excellence whose activities generate public confidence.

Public opinion polls in Luxembourg and in other countries of the Eurozone show increased confidence on the part of the citizens with respect to their Central Bank. That is most encouraging for us.

On behalf of the members of the Council and the Executive Board of the BCL, I wish to thank all members of the Bank's staff for their exemplary contribution. Their devotion and readiness throughout this exercise has enabled the Bank to master the tasks it has had to accomplish and to rise to the challenges with which it has been confronted.







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THE BCL IN 2001



## THE BCL IN 2001

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#### 1 BCL's participation in the monetary and foreign exchange policy

#### 1.1 Monetary policy instruments and their use made by the BCL

In the Grand Duchy, the Banque centrale du Luxembourg (BCL) is in charge of the execution of monetary policy as it is formulated by the European Central Bank (ECB) for the whole euro area.

To implement monetary policy decisions laid down by the Governing Council of the ECB, the BCL carries out a certain number of operations (open market operations) with its counterparties (credit institutions forming the Luxembourg financial centre). These so-called liquidity-providing operations have to be based on adequate collateral i.e. underlying assets aimed at protecting the Eurosystem from incurring losses in its monetary policy operations.

Open market operations are divided into:

- main refinancing operations which are conducted through weekly standard tenders and have a maturity of two weeks
- longer-term refinancing operations, which are executed through monthly standard tenders and have a maturity of three months.

The BCL guarantees the implementation of the Eurosystem's minimum reserve system. This system, introduced on the 1st of January 1999, day of the official euro launch, applies to all the banks of the Luxembourg financial centre, whatever their judicial form or geographic origin.

The requirement for banking institutions to hold minimum reserves with the Central Bank aims at stabilising interest rates in the money market and, if necessary, may create or accentuate a structural liquidity deficit.

#### The main refinancing operations (MRO)

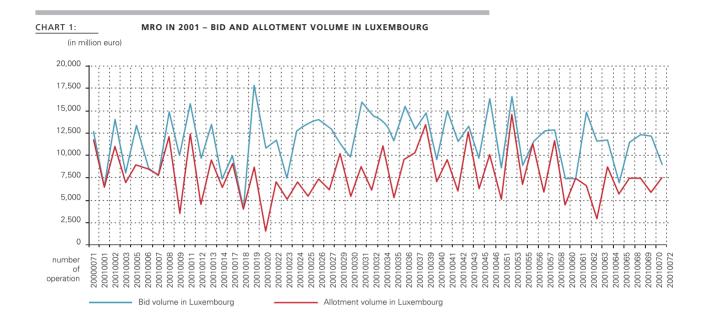
Since 28 June 2000, the main refinancing operations of the Eurosystem are conducted as variable rate tenders, using the multiple rate auction technique. Furthermore, the Governing Council also decided to set a minimum bid rate for these operations. The background to this decision was the severe overbidding problem, which had occurred under the fixed rate tender procedure.

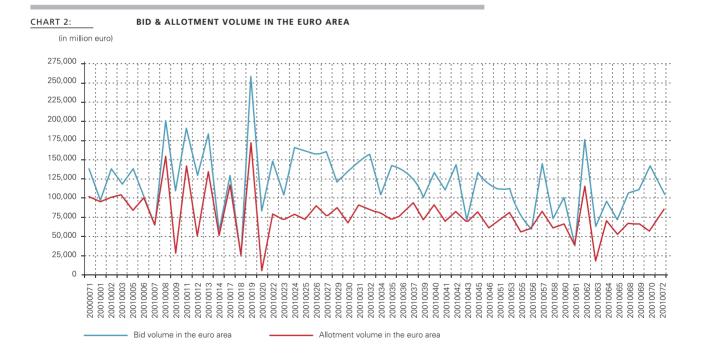
In the new procedure the minimum bid rate signals the monetary policy stance, which previously used to be indicated by the rate applied to fixed rate tenders. Furthermore, an indication of the expected liquidity needs of the banking system will be published at the time of the announcement of the weekly auction. The Governing Council also emphasised that it will retain the option of reverting to fixed rate tenders, if and when this is deemed appropriate.

The switch to variable rate tenders was a response to the severe overbidding which had developed in the context of the fixed rate tender procedure.

In 2001, the allotment ratio (i.e. the ratio between the amount allotted in the tender and the total amount of bids) averaged 64.97%. Whereas in 2000 the Eurosystem was confronted to the problem of overbidding, in 2001 the problem of underbidding appeared. This situation occured as counterparts anticipated aggressive rate cuts in 2001. As a consequence of the underbidding, the ECB had to deal with a distortion in the allotment amounts of the MRO's. The ECB therefore organised two structural operations with a duration of only 7 days, to balance out the liquidity conditions in the market.

The change in the tender procedure (switch from a fixed to a variable rate tender procedure), had also some results on the Luxembourg banking community. It allowed BCL's counterparties to see their bids better satisfied: the average liquidity volume allotted to local banks grew substantially.

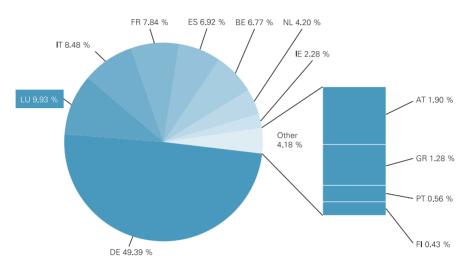




With regard to the allotment volume, Luxembourg on average ranked between the 2nd and 4th place in 2001. Overall Luxembourg ranked second (4th in 2000) for the year 2001, with 9.93% of the allotment volume in the whole euro area.



#### CHART 3: AVERAGE ALLOTMENT VOLUME IN THE EURO AREA



Compared to 2000 the average number of participating counterparties in main refinancing operations decreased from 28.4 to 21.4. This situation was also observed in the whole euro area (from 721.4 to 404.4). The drop of counterparties can be explained by the phenomena of mergers and centralisation of activities in banking groups.

#### Fine-tuning operations

Following the dramatic events in September 2001, the ECB launched two liquidity providing fine-tuning operations. The aim was to restore a normal liquidity situation in the market, disturbed by payment systems problems.

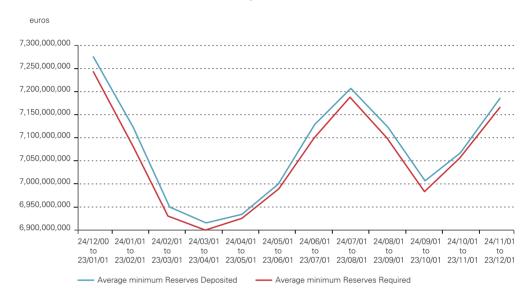
Furthermore, the ECB had arranged an EUR/USD swap facility with the FED for a duration of 30 days in order to support the banks that had been affected by payment problems in USD.

Following the introduction of euro coins and banknotes on 1st January 2002, subsequently autonomous factor developments in the euro area showed a high degree of volatility. In order to reestablish the liquidity situation the ECB executed two fine-tuning operations (4th and 10th of January 2002).

#### The minimum reserve system

In 2001, the average amount of minimum reserves hold by credit institutions in Luxembourg was estimated at  $\leq$  7.08 billion.

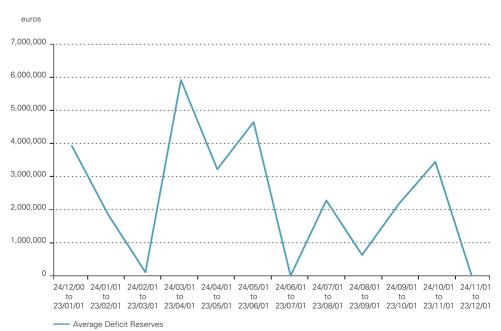
#### CHART 4: DEVELOPMENT OF THE AVERAGE MINIMUM RESERVES REQUIRED AND DEPOSITED



In the Eurosystem's minimum reserve system, the reserve requirement of an institution is calculated by multiplying the reserve ratio for each category of items in the reserve base with the amount of those items in the institution's balance sheet. In addition, institutions are allowed to deduct a lump-sum allowance from their reserve requirement.

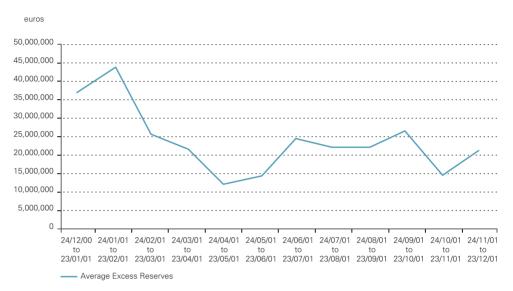
In 2001, the rates at which minimum reserves were remunerated passed from 4.77% to 3.30%.

#### CHART 5: DEVELOPMENT OF AVERAGE DEFICIT RESERVES





#### CHART 6: DEVELOPMENT OF AVERAGE EXCESS RESERVES



It is worthy of notice that 16 penalties for not respecting minimum reserve requirement have been paid in 2001 (15 in 2000).

#### 2 Other BCL financial activities

#### 2.1 Management of foreign exchange reserves

According to the Statute of the European System of Central Banks (ESCB), the BCL, as a full member of the System, had to contribute to the ECB's capital. As a result, it transferred an amount of  $\leqslant$  74.6 million in foreign exchange assets, which corresponds to 0.1492% of the ECB's capital.

The ECB's foreign exchange reserves are managed in a decentralised way by the national central banks and the BCL takes part in it since September 1999. On the 31 December 2001, total market value (accrued interest included) of the reserves managed by BCL corresponded to € 86.2 million.

One goal of the management of the ECB's foreign exchange reserves is to make sure that if required, the ECB disposes of a sufficient amount of liquidity to intervene in the foreign exchange markets. Security and liquidity are therefore basic requirements for the management of these reserves.

The "tactical benchmark" is set up by taking into account the "strategic benchmark" for each currency. It reflects the ECB's medium preference as regards revenue and risk with reference to market conditions.

A modification of 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 the modified maturity of the "strategic benchmark" in the context of fluctuation margins announced in advance by the ECB.

In the management of this portfolio, the first task of the BCL is to invest the foreign exchange reserves it was entrusted with by the BCE. This has to be done within the foreseen fluctuation margins and fixed risk limits with an aim of revenue maximisation.

The amount of assets in gold which are managed actively is fixed by the ECB by taking into account strategic considerations as well as market conditions.

#### 2.2 Management of BCL assets

The management of BCL's own assets corresponds to the principles laid down (enacted) by the ECB. The investment policy underlying the management of the assets is based on the following criteria:

- cautious investment approach
- fundamental macroeconomic analysis
- organisation of the portfolio scheme
- choice of the investment decisions
- thorough control and well calculated risk-taking.

The BCL's investment policy is trying to achieve the following goals: generate regular high incomes and provide in the long term a lasting return on investment by taking into account various considerations such as capital security, stability of the securities and liquidity subject to investment.

For that reason and with respect to the principle of equal risk distribution, the BCL implements a proactive, progressive and matching investment policy based on modern portfolio theory.

The bulk of BCL's own assets is invested in fixed income securities denominated in euro. Yet, the BCL's strategic orientation allows a diversification to other categories of assets.

The investment policy committee has to define the investment policy of BCL's financial resources. Taking into account goals and constraints on an annual basis, the committee fixes a strategic orientation for the management of the portfolios by defining an appropriate framework for the investment policy and the determination of the "strategic benchmark" oriented to revenue collection and performance calculation.

The management committee takes charge of the tactical allocation and defines the main thrust of investment. The "tactical benchmark" is set up according to the "strategic benchmark", taking into account fluctuation margins. The attention is drawn on the tactical investment strategy in the short term.

Given that the portfolios are exclusively invested in euro, the investment decisions are made by taking into account:

- the interest rate risks (average portfolio duration, yield curve position);
- the risk degree of markets (chosen sector, portfolio asset selection according to a given security, and in a lesser extent, to the geographic distribution by country).

Investment decisions are taken on the basis of technical and fundamental analysis, as well as on quantitative assessments. The management committee's role is to define reference factors which guide the management of the bank's assets, to follow the investments up, to review the strategy and the realised performance. External standard benchmarks allow a regular measure of the performance.

The cautious investment approach takes into account:

- the analysis of the different (country) economies and international financial markets;
- the allocation decision of the assets under management by appreciating the investment returns on the different international markets;
- the definition of a clear strategy;
- the capital value preservation of the assets under management by a policy of risk diversification and the maintenance of a particular quality demand of investment;
- the applying of strict risk control measures.

On 31 December 2001, the total market value of securities and assets under management (accrued interest included) corresponded to € 899.6 million, divided up into three portfolios.



#### - "Liquidity Portfolio"

The first goal of this operational portfolio is to offer liquidity to face up to cash-flow fluctuations. The instruments used are mainly short term interbank deposits, CDs, commercial papers, operations of transfer and retrocession and the purchase of variable rate bonds.

#### - "Investment Portfolios: Own Funds and Third-Party Funds"

The main goal of these two investment portfolios is to yield maximum interest.

Own and Third-Party funds portfolios follow a different investment strategy by taking into account particular demand as regards risk, revenue and liquidity. On 31 December 2001, the total market value of these funds (accrued interest included) represented € 772.2 million.

In 2001, a big part of BCL's own funds has been invested in long term bonds, given that market conditions for that kind of investment were very favourable. However around the end of the year the underlying duration of the portfolio has been reduced.

It is worth noting that the securities included in the "investment portfolios" are largely diversified according to the geographic location and credit risk of the issuer. Counterparty and credit risk limits are regularly set up and checked by the "risk management team".

#### - "Outright Portfolio"

Several securities of this investment portfolio are used for outright transactions. Outright open market transactions refer to operations where the Eurosystem buys or sells assets outright in the market (spot or forward). Outright open market operations are executed only for structural and fine-tuning purposes. These operations aim to manage the liquidity situation in the market and to steer interest rates, in particular in order to smooth the effects on interest rates caused by unexpected liquidity fluctuations in the market.

#### - "Pension Fund Portfolio"

BCL has established its pension fund in order to finance the pensions at its charge in application of the law from 23 December 1998 relating to the monetary status and to the Central Bank of Luxembourg. The orientation of the pension fund is defined by the "comité directeur". The "comité directeur" has designed the portfolio manager and the fund is managed internally at the BCL. The tactical committee determines the investment strategy of the pension fund in respect to the decisions taken by the "comité directeur", especially the allocation in currencies and assets classes of the pension fund.

The pension fund is a mixed fund, mainly invested in fixed income securities, cash and shares. However it is possible to invest in other types of assets. The management of the fund is realised in a way to guarantee a minimal performance, established by a long-term actuarial calculation. The back office function of the fund has been outsourced to a depository bank. The transfer of the funds, € 44.4 million was done on the 27 July 2001. The fund gradually increases by the revenues and the monthly contribution fees paid by the BCL as its function of employer and the contributions of the employees in their function of affiliates.

#### 3 Banking and monetary statistics

Data collection for monetary and banking statistics was marked by stability in 2001, although many concepts underwent extensive enhancements, which will be effective as from January 2003.

#### 3.1 The consolidated balance sheet of the MFI sector

Even as the compilation of money and banking statistics continued, significant conceptual work was undertaken in 2001.

The European Central Bank Regulation ECB/2001/13 concerning the consolidated balance sheet of the monetary financial institutions (MFI) sector replaced Regulation ECB/1998/16 and will be effective in January 2003.

The new regulation introduces several modifications that will allow a more detailed monthly analysis of euro area monetary aggregates. To a major extent these enhancements affect stock statistics, but they also introduce a new data collection procedure for certain flow statistics.

#### 3.2 Interest rates

In 2000, the Eurosystem started a detailed analysis of requirements in the field of interest rate statistics, in particular targeting interest rates payable and receivable as applied by credit institutions to products offered to non-financial corporations and households.

At the current stage, a set of retail interest rates is collected by the central banks of the Eurosystem following a "short-term approach". The ECB has published these figures on a monthly basis since January 1999. However, they are not harmonised across euro area member states and do not satisfy Eurosystem requirements in the context of the definition and conduct of the single monetary policy.

The past year saw the conclusion of an in-depth analysis of the needs of the Eurosystem. The new statistical requirements identified should improve the quality of interest rate information available for the analysis of the monetary policy transmission mechanism. This process lead to the adoption of European Central Bank Regulation ECB/2001/18, which will become effective in January 2003.

#### 3.3 The bank lending survey

In order to improve the information available for monetary policy decision-making, the Eurosystem decided to establish a bank lending survey in the euro area during 2002. This survey will take the form of 18 questions on the supply of and demand for credit. The questionnaire will be sent to a representative sample of about one hundred European banks. Details of this survey are in the process of being finalised.

#### 3.4 Securities issues

Within the framework of the single monetary policy, the Eurosystem needs information on the issuing of securities, as this constitutes an essential element of the underlying monetary and financial analysis.

At present, the central banks of the Eurosystem follow a "short-term approach" in this domain, relying initially on available data in order to assess the importance of this activity. However, the final objective is to achieve a greater level of harmonisation of the statistical data currently provided by member states. The needs of the Eurosystem will be evaluated more precisely in the near future so as to define more clearly the concepts that will guide statistical collection in this field.

#### 3.5 Electronic money

The BCL currently relies on data provided by Cetrel S.C. to monitor the use of electronic money in Luxembourg. Should electronic money use grow substantially in the near future, the BCL may decide to collect more detailed information.

#### 3.6 Statistics on other financial intermediaries

The Eurosystem has identified those institutions that belong to the 'other financial intermediaries' sector, as defined by ESA95, the European System of Accounts. These are mainly UCIs (Undertakings for Collective Investment) and other professionals of the financial sector.

At present, the statistical needs of the Eurosystem are met following a "short-term approach", by which central banks of the Eurosystem only provide data already available without engaging in new data collection procedures. The BCL compiles these statistics on a monthly basis for Luxembourg UCIs and transmits them to the ECB.



#### 3.7 Statistics on financial derivatives

The Eurosystem is currently evaluating its statistical needs for information on financial derivatives. Once these needs are defined, it is expected that the collection of information will initially be performed under the "short-term approach", by which information is collected from existing national sources.

#### 3.8 Balance of Payments and Luxembourg's external position

Statistics on the balance of payments and the international investment position are important for economic and monetary policy as an external disequilibrium may affect the money stock and the exchange rate.

Until 31 December 2001, information on external payments in Luxembourg was collected by IBLC, the Institut belgo-luxembourgeois du change, which received data mainly from credit institutions. These data served to establish balance of payments statistics for the Belgian-Luxembourg Economic Union. At the beginning of the third phase of economic and monetary union, the governments of Luxembourg and Belgium took the decision to cease the activities of the IBLC on 1 January 2002. From that date onwards, Belgium and Luxembourg have established separate balance of payments accounts.

Luxembourg's law of 28 June 2000 modified the decree on exchange controls of 10 November 1944 to make the BCL and the STATEC jointly responsible for balance of payments statistics and for establishing Luxembourg's international investment position. The elaboration of a data collection system, including the associated methodology, concepts and definitions, was established by common agreement.

The BCL is responsible for establishing financial operation accounts and Luxembourg's international investment position, as well as for the evaluation of the investment income statement. The BCL is also in charge of the information system for data management. STATEC is responsible for establishing the capital account and the current account (with the exception of investment income) as well as for the survey on Foreign Direct Investment.

The new system is based on the old one put in place by the IBLC. Credit institutions must inform the BCL of foreign payments made on behalf of their customers or on their own account. Residents who make foreign payments without resorting to resident credit institutions must declare their transactions to the BCL or the STATEC.

At the Eurosystem level, balance of payments statistics for the euro area are among the aggregates that are taken into account in determining the single monetary policy. The Eurosystem decided to distinguish MFI and non-MFI financial flows to better integrate balance of payments statistics in the general statistical framework. This new distinction has a direct impact on the data collection burden. The necessary changes for the compilation of Luxembourg's balance of payments were introduced in the course of 2001.

The year 2001 also saw an effort to improve the quality of external trade statistics produced at the level of the European Union. In January 2002 the Committee on Monetary, Financial and Balance of Payments Statistics accepted a common code to be used for balance of payments purposes.

In 2001 the ESCB Statistics Committee launched a discussion about possible harmonisation of data collection. Only the portfolio investment part of the balance of payments seemed to be a possible candidate for such a move. The Statistics Committee set up a technical group to analyse alternative compilation systems. A decision on a possible harmonisation scheme should be taken by end 2002.

#### 4 Payment systems and securities settlement systems

#### 4.1 Evolution of LIPS-Gross

#### 4.1.1 RTGS-L Gie members

LIPS-Gross, the real-time gross settlement system, started operations on 4 January 1999 with 31 participating banks. In 2000, a 32nd member joined. But following bank mergers, the number of participants was reduced to 30 in 2001.

#### 4.1.2 Operations during the year 2001

In 2001, LIPS-Gross domestically processed 62,336 payments (61,135 in 2000 and 53,107 in 1999) for a total value of  $\in$  1,208 billion ( $\in$  1,004 billion in 2000 and  $\in$  723.6 billion in 1999). In comparison to 2000, volumes increased by 2% and the value exchanged by 20%.

Regarding cross-border payments, LIPS-Gross participants sent out 231,852 payments in 2001 (206,332 payments in 2000 and 160,912 payments in 1999) for a total value of € 3,221 billion (€ 2,826 billion in 2000 and € 2,240 billion in 1999) via TARGET. At the same time, they received 267,751 payments (248,180 payments in 2000 and 178,063 payments in 1999) for a total of € 3,224 billion (€ 2,816 billion in 2000 and € 2,233 billion in 1999).

#### TABLE 1: INTERLINKING PAYMENTS IN 2001

	PAYMENTS SENT	PAYMENTS RECEIVED	VALUE SENT (€ BILLION)	VALUE RECEIVED (€ BILLION)
Daily average	915	1 056	12 717	12 726
Monthly average	19 321	22 313	268 454	268 627
Increase rate	+13.1%	+8.5%	+14.7%	+15.1%

The part of cross-border payments in all payments channelled through LIPS-Gross remained stable at 88.9% (88.1% in 2000) in volume and 84.2% (84.8% in 2000) in value.

As a system dedicated to large value payments, LIPS-Gross has to comply with the highest standards of security and reliability. The overall availability rate of LIPS-Gross increased from 99.64% in 2000 to 99.98% in 2001 and was 100% for 11 months of 2001.

#### 4.2 Evolution of the interbank netting system LIPS-Net

2001 may be qualified as year of consolidation for the electronic inter-bank netting system LIPS-Net. In a European context marked by the discussions on the harmonisation of fees for domestic and cross-border credit transfers, LIPS-Net has continued to offer to the Luxembourg banking community a fast and efficient tool for channelling domestic credit transfers and cheques. In the months and years to come however, the consolidation process in the European retail infrastructure will require close monitoring and appropriate decisions will need to be taken with regard to the future evolution of the system in order to avoid isolation within the euro zone.

EVOLUTION OF PAYMENTS THROUGH LIPS-NET	2000	2001	VARIATION
Number of credit transfers	11,687,869	12,564,487	7.5%
Value of credit transfers (1)	39,602.87	42,024.53	6.1%
Average value per credit transfer	3,390	3,340	-1.5%
Number of cheques	686,206	556,776	-18.9%
Value of cheques	4,073.79	5,718.61	40.4%
Average value per cheque	5,940	10,270	72.9%
Total number of operations	12,374,075	13,121,263	6.0%
Total value of operations	43,676.65	47,743.15	9.3%
Average value per operation	3,530	3,640	3.1%
	Number of credit transfers Value of credit transfers (1) Average value per credit transfer Number of cheques Value of cheques Average value per cheque Total number of operations Total value of operations	Number of credit transfers         11,687,869           Value of credit transfers (1)         39,602.87           Average value per credit transfer         3,390           Number of cheques         686,206           Value of cheques         4,073.79           Average value per cheque         5,940           Total number of operations         12,374,075           Total value of operations         43,676.65	Number of credit transfers       11,687,869       12,564,487         Value of credit transfers (1)       39,602.87       42,024.53         Average value per credit transfer       3,390       3,340         Number of cheques       686,206       556,776         Value of cheques       4,073.79       5,718.61         Average value per cheque       5,940       10,270         Total number of operations       12,374,075       13,121,263         Total value of operations       43,676.65       47,743.15

<sup>(1)</sup> millions of euro



#### 4.3 Eligible assets and their use for monetary policy operations

#### 4.3.1 Categories of collateral

All Eurosystem credit operations are based on adequate collateral provided by the counterparties. With the aim of protecting the Eurosystem from incurring losses in its monetary policy operations, ensuring the equal treatment of counterparties in the euro zone and enhancing operational efficiency, underlying assets have to fulfil precise and common criteria in order to be eligible for Eurosystem monetary policy operations.

Owing to existing disparities in Member States financial structures, a distinction is made between two categories of assets eligible for ESCB monetary policy operations. These two categories are referred to as "tier 1" and "tier 2" respectively:

Tier 1 consists of marketable debt instruments fulfilling uniform euro area wide eligibility criteria specified by the ECB. Tier 2 consists of additional assets, marketable and non-marketable, which are of particular importance to national financial markets and banking systems. Eligibility criteria are established by the national central banks, which become thereby guarantors. The specific eligibility criteria for tier 2 applied by the respective national central banks are subject to approval by the ECB.

#### 4.3.2 Assessment of the depositories by the ESCB

In order to make sure that the « adequate collateral » received by the central banks is kept in safe custody, the ESCB makes a regular assessment of securities settlement systems to ensure that they fulfil high operational efficiency and technical security standards. This assessment procedure includes links setup between SSSs for the purpose of the cross-border use of collateral.

At the end of December 2001, the domestic counterparties deposited eligible assets for a value estimated at € 36.7 billion at the BCL. They were essentially made up of tier 1 assets (98.7%). 27.8% of these assets had been issued by central governments or local communities, 66.5% by credit institutions, 4.5% by corporates and 1.2% by supranational issuers. The share of domestic collateral has considerably increased in 2001, due in particular to an important increase of the issued volumes in the "Euro-bond" market.

#### 4.3.3 The cross-border use of collateral

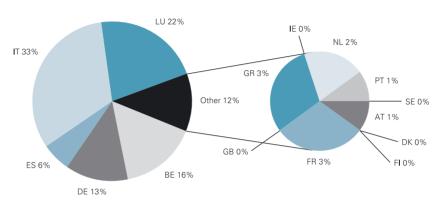
Besides from using eligible domestic securities settled via the national Central Securities Depository (Clearstream Banking Luxembourg for the Luxembourg counterparties), the ESBC counterparties may receive credit from their local NCB by using collateral located in another Member State of the ESCB. The cross-border collateral can indeed be mobilized by using either the CCBM (Correspondent Central Banking Model), or links that the local depository has set up with other securities settlement systems and which have been formally assessed by the ESCB.

Luxembourg counterparties significantly use eligible cross-border collateral. 57.6% of all eligible securities deposited by Luxembourg counterparties are used via the CCBM and 15% via links. The CCBM continues thus to be by far the most used channel for the cross-border use of collateral.

In the framework of the CCBM each national central bank acts on behalf of the other central banks as a custodian for securities accepted by its national Central Securities Depository or by its security settlement system. The model has been operational since the start of EMU. Experience acquired during the first three years of its functioning has shown that the CCBM encounters a great success with the counterparties. Actually, the value of securities in deposit has been steadily growing to reach € 156 billion at the end of 2001. 20.8% of all eligible assets in the Eurosystem are held via the CCBM.

In 2001, the use of the CCBM has been very asymmetrical. The most active correspondent central banks have been Italy (33%), Luxembourg (22%), Belgium (16%) as well as Germany (13%).

#### CHART 7: CCB



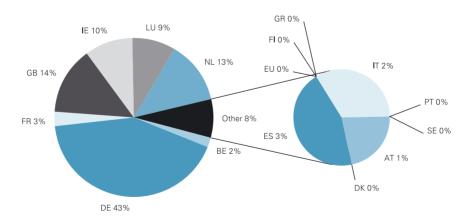
CCB: CORRESPONDENT CENTRAL BANK

Among the biggest users of the CCBM appeared the counterparties from Germany (43%), Great-Britain (14%), the Netherlands (13%), Ireland (10%) and Luxembourg (9%).

Analyses have shown that collateral held via the CCBM was used for a relative stable period of approximately four months.

The cross-border use of tier 2 assets remains marginal.

CHART 8: HCB



HCB: HOME CENTRAL BANK

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The link model has been in use since 1999. The ESCB since then has assessed the use of unilateral and bilateral links between securities settlement systems. These links, approved by the Governing Council, allow for securities held in a securities settlement system in the ESCB Member States, but issued in another of the assessed systems, to be used under certain conditions as collateral for credit operations in the whole ESCB. Thus for example, a Luxembourg bank can pledge to the Banque centrale du Luxembourg German securities, which were issued in Clearstream Banking Frankfurt, since the link Clearstream Banking Luxembourg – Clearstream Banking Frankfurt has been formally authorized by the Governing Council. Conversely, a German bank can use German securities held in Clearstream Banking Luxembourg to get credit from the Bundesbank.

#### 5 Banknotes and circulation of fiduciary money

The year 2001 was particularly active for the BCL in the field of the preparation and the organisation of the introduction of the fiduciary euro, as well as of the withdrawal of the national notes and coins denominated in francs.

#### 5.1 Monetary circulation in Luxembourg

In 2001, the global volume of national notes and coins decreased by 25.7%, coming down from LUF 4.68 billion to LUF 3.48 billion, due to the general behaviour of the public to decrease its cash holdings before the cash changeover to the euro, as well as its preference for Belgian notes which have an easier international circulation.

ABLE 3:	IN LUF (END OF PERIOD)	5 000 LUF	1 000 LUF	100 LUF	LUF DENOMINATED BANKNOTES WITHDRAWN IN OTHER EURO AREA COUNTRIES	TOTAL
	1997 variation*	3,497,730,000 6.1%	1,284,125,000 -12.4%	194,100,200 -6.2%		4,975,955,200 0.1%
	1998 variation*	3,194,890,000 -8.7%	1,090,562,000 -15.1%	185,821,900 -4.3%		4,471,273,900 -10.1%
	1999 variation*	3,190,680,000 -0.1%	853,482,000 -21.7%	168,913,800 -9.1%	-159,980,000	4,053,095,800 -9.4%
	2000 variation*	3,054,750,000 -4.3%	676,114,000 -20.8%	153,731,500 -9%	-168,910,000	3,715,685,500 -8.3%
	2001 variation*	2,398,720,000 -21.5%	435,327,000 -35.6%	141,357,900 -8.1%	-198,966,000	2,776,438,900 -25.3%

#### \* VARIATION AGAINST THE PREVIOUS YEAR

Unlike the evolution in the previous years, the seasonal variations of the fiduciary circulation showed a nearly continuous decrease.

The article 52 mechanism (exchange of in-currencies by euro zone national central banks) has been used more frequently than during the previous years. Indeed, compared to the situation of end of December 2000, the stock of LUF banknotes held by other euro area national central banks at the end of the same month in 2001 increased by 17.8%, averaging some 154 million LUF per month during the year 2001.

As to the circulation of LUF denominated coins, the volume remained nearly unchanged (0.9 billion LUF) until September. As of October 2001, the agreement between the Belgian and Luxembourg authorities concerning the withdrawal of coins denominated in francs came into effect so that the volume of coins

estimated in circulation in Luxembourg came down to some 664 million francs as of end December 2001.

#### 5.2 Management of the circulation

The monthly average number of LUF notes in circulation was 2.51 million notes, thus decreasing by 17.6% in 2001 compared to 2000. In 2001, the BCL cash department treated 6.06 million notes for an amount of 15.78 billion francs. Approximately, 2 million new banknotes have been put into circulation in replacement of unfit notes.

In the framework of the article 52 mechanism, the BCL has treated approximately 11 million notes of the euro zone countries for a total amount of 549.67 million euro.

As an agent of the National Bank of Belgium for the handling of Belgian notes circulating in Luxembourg, the BCL cash department treated 44.41 million notes. Furthermore, the BCL has been authorised by the National Bank of Belgium to destroy all the Belgian notes, definitely withdrawn in Luxembourg in the frame of the cash changeover operations.

#### 5.3 The introduction of the euro notes and coins

#### 5.3.1 The logistical operation

In the year 2001, great efforts were devoted to the timely finishing of the production of the euro notes and coins and their subsequent transportation into the vaults of the BCL. All these transports were accompanied by a special security deployment of the Grand-Ducal Police forces.

As a part of the general information campaign, the BCL had intensive contact with all sectors of the press and also with the professional cash handlers in order to familiarise the general and the specialised public with the technical details of the new currency.

The BCL set up a test centre for euro notes where note operated machine manufacturers and all related service providers were offered the opportunity to calibrate their machines with real euro notes of all productions.

Two data bases were installed, in the frame of the Eurosystem: the Currency Information System (CIS), gathering information on the development of the circulation of the euro notes and coins, and the Counterfeit Monitoring System (CMS), collecting comprehensive technical data on counterfeited notes and coins.

In order to facilitate the frontloading and subfrontloading operation, the BCL decided an extension of its opening hours for professional security carriers. Special packagings (note bundles of 25 notes, instead of 100 as normally; coin bags composed of 1 roll of each denomination) were offered in order to ease a wide distribution of notes and coins in the retail sector.

The frontloading operations began in September 2001 and at the end of December € 571 million were distributed to the banks, which represented 88% of the Franc currency in circulation. It is estimated that around € 200 million were subfrontloaded, which assured a sufficient spread of euro notes and coins for their circulation start on 1st January 2002. The BCL, followed by the banking sector, recommended a large distribution of small denominations through ATMs.

The starter kits for the public, distributed as from 15 December 2001, were a big success: nearly 600,000 kits were sold for the price of 500 LUF representing  $\in$  12,40.

In parallel to the frontloading operations, the BCL organised the withdrawal of the LUF notes and coins. By special arrangement, it was decided between Luxembourg and Belgium that the coins can be returned unsorted and recycled together in a Belgian centre.

#### 5.3.2 The legal aspects

(List of legal acts related to the euro and adopted by national and European authorities in 2002)

#### 5.3.2.1 The changeover to the euro

Law of 1 August 2001 related to the changeover to the euro on 1st January 2002 and modifying certain legislative provisions (Mémorial A n° 117, 18.09.2001, p. 2440)



#### 5.3.2.2 The issuing of euro banknotes and coins

PART

Decision of the European Central Bank of 6 December 2001 on the issue of euo banknotes. 6 December 2001 (ECB/2001/15) (OJ 20/12/2001 L 337/52)

Decision of the European Central Bank of 6 December 2001 on the allocation of monetary income of the National Central Banks of the participating Member States for the financial years 2002 to 2007. (ECB/2001/16) (OJ 20/12/2001 L 337/55)

Decision of the European Central Bank of 20 December 2001 on the approval of the volume of coins issuance in 2002 (ECB/2001/19) (OJ 28/12/2001 L 344/89)

Guideline of the European Central Bank of 10 January 2001 adopting certain provisions on the 2002 cash changeover (ECB/2001/1) (OJ 24/02/2001 L 55/80)

Guideline of the European Central Bank of 13 September 2001 adopting certain provisions on the frontloading of euro banknotes outside the euro area (ECB/2001/8) (OJ 26/09/2001 L 257/6)

#### 5.3.2.3 The legal protection of euro banknotes and coins and the fight against counterfeiting

Council Regulation (EC) No 1338/2001 of 28 June 2001 laying down measures necessary for the protection of the euro against counterfeiting (OJ 04/07/2001 L 181/6)

Council Framework Decision of 6 December 2001 amending Framework Decision 200/338/JHA on increasing protection by criminal penalties and other sanctions against counterfeiting in connection with the introduction of the euro (OJ 14/12/2001 L 329/3)

Law of 13 January 2002 adopting the International Convention for the suppression of counterfeiting and its Protocol, signed in Geneva on 20 April 1929 and modifying certain provisions of the Code pénal and the Code d'instruction criminelle (Mémorial A n° 5, 25.01.2002, p. 58)

Council Regulation (EC) No 1339/2001 of 28 June 2001 extending the effects of Council Regulation (EC) No 1338/2001 of 28 June 2001 laying down measures necessary for the protection of the euro against counterfeiting to the Member States which have not adopted the euro as their single currency (OJ 04/07/2001 L 181/11)

Council Decision of 6 December 2001 concerning the protection of the euro against counterfeiting (OJ 14/12/2001 L 329/1)

Council Decision of 6 December 2001 extending Europol's mandate to deal with the serious forms of international crime listed in the Annex to the Europol Convention (OJ 18/12/2001 C 362/1)

Decision of the European Central Bank of 8 November 2001 on certain conditions regarding access to the Counterfeit Monitoring System (CMS) (ECB/2001/11) (OJ 20/12/2001 L 337/49)

Council Decision of 17 December 2001 establishing an exchange, assistance and training programme for the protection of the euro against counterfeiting (the "Pericles" programme) (OJ 21/12/2001 L339/50)

Council Decision of 17 December 2001 extending the effects of the Decision of 17 December 2001 establishing an exchange, assistance and training programme for the protection of the euro against counterfeiting (the "Pericles" programme) to the Member States which have not adopted the euro as the single currency (OJ 21/12/2001 L339/55)

Decision of the European Central Bank of 30 August 2001 on the denominations, specifications, reproduction, exchange and withdrawal of euro banknotes (ECB/2001/7) (OJ 31/08/2001 L 233/55)

Decision of the European Central Bank of 3 December 2001 amending Decision ECB/2001/7 on the denominations, specifications, reproduction, exchange and withdrawal of euro banknotes (ECB/2001/14) (OJ 09/01/2002 L5/26)

## 5.3.2.4 The legal framework for the withdrawal of banknotes and coins denominated in Luxembourg Francs

Grand-ducal regulation of 20 December 2001 concerning the demonetization, the exchange and the withdrawal of banknotes and coins denominated in Luxembourg Francs (Mémorial A n° 162 31/12/2001, p. 3460)

Recommendation of the European Central Bank of 6 December 2001 regarding the abrogation of participating Member States' provisions limiting the amount of coins denominated in a national currency unit that can be used in a single payment (ECB/2001/17) (OJ 14/12/2001 C 356/9)

#### 5.3.2.5 The exchange conditions of other national banknotes

Guideline of the European Central Bank of 25 October 2001 amending the guideline ECB/2000/6 of 20 July 2000 on the implementation of Article 52 of the Statute of the European System of Central Banks and of the European Central Bank after the end of the transitional period (ECB/2001/10) (OJ 21/11/2001 L 304/28)

#### 6 Financial stability

#### 6.1 Introduction

The financial systems have undergone a thorough transformation in the past decades. The globalisation of the economies has deepened. The progress made in the liberalisation of establishment and of capital flows has contributed to competitive financial sectors. Technological and financial innovations have favoured the development of more vast, more liquid and more interconnected financial markets; they have also contributed to the creation and use of more complex financial instruments. However, the intensifying competition between financial institutions and financial market, the new requirements in terms of transparency and the restructuring process of many actors have increased the risks for financial stability.

The international financial structure has not been reformed in parallel with the opening up of markets. Financial crises have multiplied in the recent past and affect not only emerging markets.

Speculative bubbles have appeared, supported by an easy access to credit, the use of leveraged instruments, the growth of derivatives markets, the increase of risk taking and the herd behaviour of market participants.

Apart from monetary stability, the central banks are facing new challenges. They should contribute to financial stability within their legal order.

The year 2001 is marked by a notable economic slowdown, volatile markets and further decrease in the main stock markets. The year 2001 was also marked by crises affecting some countries (Argentina, Turkey) and markets (Japan). The terrorist attacks of 11 September 2001 in the US have suddenly increased uncertainty and further weakened the confidence of consumers and companies. Financial markets have however been resilient. Despite cautious optimism of an economic recovery, favoured by vigorous monetary policy measures and an expansionist fiscal policy in the US, the risk of deterioration still exists. The stability of the financial sector should therefore be very closely watched. This applies also to Luxembourg whose financial centre is characterised by a high degree of international openness and integration.

An intensification of the cooperation between authorities responsible for prudential supervision and authorities responsible for financial stability in Europe is highly desirable not at least in view of the fully realised Monetary Union. Political efforts in this direction are being made. The BCL regrets that the progress achieved in this respect remains rather weak and laborious.

#### 6.2 The financial sector

In the field of financial stability, the BCL pursues two missions: contribution to macro-prudential supervision and oversight of payment and securities settlement systems.

#### 6.2.1 Macro-prudential analysis

The macro-prudential analysis is based on statistical and prudential data of the financial sector and on ad-hoc information collected through dialogues with the concerned actors. The analysis relies on a surveillance of the financial sector as a whole and of the institutions of systemic importance in particular. In this context, the BCL has put in place in 2001 a set of macro-prudential indicators. The structure of these indicators is essentially based on the framework recommended by the International Monetary Fund.

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The analysis of the figures shows that the Luxembourg financial sector remains well capitalised. Its solvency ratio has slightly increased in 2001 compared to 2000 and has reached 13.7% in the weighted average and 26.1% in the simple average; this ratio is made up of primary capital to a large extent. The liquidity ratio stood at 63% in 2001 in the weighted average above the requirements of 30%. This ratio has been stable during the last years. The foreign exchange risk, measured by the net open positions in currencies, appears limited. The concentration of the banks' assets towards the financial sector remains important and represents 70% of loans and debt securities held, of which about two third are relations with entities of the group. Moreover, 15% of exposure is towards the public sector. The amount of doubtful and non performing loans in the books of the banks represents 0.6% of the large exposures credit-portfolio, a slight decrease compared to the precedent year. Furthermore, the geographical distribution of the banks' engagements shows a diversification largely with respect to industrialised countries. Exposure towards high-risk countries seems limited.

Concerning the composition of gross income, the contribution of net commissions and fees income has decreased by 2.6 percentage points in comparison with the previous year, from 41.4% to 38.8%. This is mainly due to the drop in the number of transactions in the financial markets and the diminution of primary issues of securities. The contribution of the results on financial operations has decreased by 0.7 percentage points, from 9.7% in 2000 to 9% in 2001. On the other hand, the part of the interest margin has increased by 3.5 percentage points to attain 52.3% against 48.8% the year before. This evolution can be partly explained by the decrease of the refinancing rate.

The return on assets has stayed steady at the level of 0.5% in the weighted average (0.6% in the simple average) in 2001 in comparison to 0.5% in 2000 (0.9% in the simple average). On the other hand, the return on equity related to shareholder capital has slightly increased, from 36.1% in 2000 (weighted average) to 37.3% in 2001.

Luxembourg banks seem to show a cost/income relationship which is significantly below the European average. In Luxembourg, administrative costs and depreciation of assets accounted for 47% of gross income in 2001 respectively 45% in 2000, whereas the EU average stood at 64% in 2000.

Perspectives for the international economy remain highly uncertain. If the weakness in global economic growth, the slackness of the financial markets and the deterioration of asset quality persist beyond 2002, the impact on the financial sector could be more serious than in 2001. It is of utmost importance to remain vigilant in this context.

#### The credit risk transfer instruments

In the past years, a global market of credit risk transfer between banks and also between banks and other actors of the financial sector, like insurance companies and investment funds, has emerged and developed itself rapidly. This phenomenon is accompanied by the appearance of new financial instruments, like asset backed securities, collateralised debt obligations, credit default swaps or credit linked notes. An analysis, which was limited to a restricted number of banks, shows that these are mainly buyers of credit risk transfer products. Asset backed securities and collateralised debt obligations constitute an important part of their securities investment portfolios; their share in the banks' balance sheet total ranges from 2.5% to 7%. The banks are involved in derivatives instruments like credit default swaps only occasionally. The credit risk transfer products are purchased mainly from foreign banks. Transactions within the same group are nevertheless limited.

The banks purchase investment grade products only. Desire for diversification of risks and for a higher return are quoted as the main reasons for banks to engage in this kind of activities. For management purposes, the banks consider these mechanisms of credit risk transfer as an opportunity for a better allocation of portfolios and a better management of credit risk. In the expectation of a growing credit risk transfer market in general and increasing involvement of the banks, a follow-up of the development of these activities by the BCL appears appropriate, despite their yet relatively limited size.

#### 6.2.2 Oversight of the payment and securities settlement systems

#### Legal framework

One of the fundamental competencies attributed to central banks by the Treaty establishing the European Community, is the promotion of the smooth functioning of payment systems. The Governing

Council of the ECB decided to adopt the "Core Principle for Systemically Important Payment Systems" elaborated by the "Committee on Payment and Settlement Systems" of the BIS in January 2001, as minimum standards of the Eurosystem. Missions concerning the oversight role of the BCL as regards payment and securities settlement systems are also defined in national law.

Namely, the Law of 12 January 2001, published in Mémorial A-n°16 of 6 February 2001 implementing the Directive 98/26/EC on settlement finality in payment and securities settlement systems in the modified Law of 5 April 1993 on the financial sector and completing the Law of 23 December 1998 on the creation of the Commission de Surveillance du Secteur Financier. This Law aims, on the one hand, at the transposition of the European directive on settlement finality in payment and securities settlement systems and, on the other hand, at establishing a framework for the approval and oversight of these systems.

The implementation of the oversight mission has been defined in two circulars published by the BCL. Circular BCL 2001/163 of 23 February 2001 states the competences of the BCL in relation to the oversight of payment and securities settlement systems. Circular BCL 2001/168 of 5 December 2001 puts in place general policy and procedures in relation to the oversight of payment and securities settlement systems.

#### Policy and procedures

Within the scope of its oversight mission, the BCL focuses on the prevention of systemic risk, the promotion of efficient operation, the safeguard of transmission channels of monetary policy operations and a safe environment for the use of collaterals.

To these ends, the BCL elaborated a paper in 2001, based on the legal dispositions, on general policy and procedures as regards the oversight of payment and securities settlement systems. In order to define the oversight activity, the applicable standards and the duties of the systems in this context, the BCL has drawn on the standards, recommendations and rules issued by official international institutions and taken into account the evolution of market practices. The BCL's approach relies to a large extend on the self-assessment of the entities subject to oversight.

The BCL's oversight covers five essential elements of a system: the operator, the technical agent, the participants, the system's internal rules and contracts and the legal and regulatory environment. The operator is the central system organisation providing products and services to the participants. The technical agents are the suppliers of service where an operator has located or centralised a significant portion of its operational or IT infrastructure.

The key features of oversight in its application can be summarised as follows:

- knowledge and understanding of the various systems and their interrelationships,
- BCL recognition of important systems, operators and technical agents,
- the application of the recommendations and standards, relating to payment, securities settlement and other mechanisms,
- self-assessment conducted by operators and/or technical agents,
- the use of independent key functions for compliance, internal audit and risk management where relevant,
- good records and/or easy access to information when required,
- monitoring relevant changes in the business environment and assessing the impact on systems,
- the use of routine and ad hoc inspections.

In addition to the paper on general policy and procedures, a 'Manual of instructions' defines in particular the information required on a regular or on an ad-hoc basis.

#### Entities subject to oversight

The payment and securities settlement systems notified by the BCL to the European Commission on



12 February 2001 are subject to the BCL's oversight. These are RTGS-L Gie (LIPS-Gross), Sypal-Gie (LIPS-Net) and Clearstream Banking Luxembourg (CBL). The technical agents currently subject to oversight are: the Banque centrale du Luxembourg for RTGS-L Gie and LIPS-Gross, CETREL for Sypal-Gie and LIPS-Net, and Clearstream Services for operational and IT services.

Besides the notified systems in which the BCL participates, other systems can be put under its oversight especially when they are particularly relevant to systemic stability.

#### Internal organisation

In line with the principles of governance in this regard, the oversight and operational missions of the systems are internally separated at the BCL in different departments.

#### 6.3 Other issues

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The BCL has assisted the International Monetary Fund in the context of its analysis of the stability of Luxembourg's financial system ("Financial Stability Assessment Program", FSAP). The Fund has welcomed the Bank's implementation of its oversight mission concerning payment and securities settlement systems and the setting up of a set of macro-prudential indicators.

The preliminary conclusions of the Fund emphasise the soundness, efficiency and adequate supervision of the Luxembourg financial sector. Moreover, the observance of various standards and codes approved by international organisations has been pointed out including the payment systems' efficiency and soundness, respecting the standards of the CPSS ("Committee on Payment and Settlement Systems") on which the Eurosystem's standards rely.

The BCL takes part in the joint ESCB-CESR ("Committee of European Securities Regulators") working group, whose work focuses on the elaboration of standards and recommendations for securities settlement systems and central counterparties on the European level.

#### 7 Communication activities of the BCL

During the year 2001, the Banque centrale du Luxembourg has reexamined its communication strategy in its double role of contributing to the Eurosystem's communication policy on the one hand, and, on the other hand, enhancing public understanding of its competences through its own activities and publications.

The BCL is the relay of the Eurosystem in Luxembourg. It ensures the dissemination of ECB information material and documents, free of charge, to different target groups. Many ECB publications are available in the official languages of the EU on the ECB's website www.ecb.int, which provides links to the websites of all European NCBs, the BCL included.

The new working papers series of the BCL, published from 2001 onwards under the names of their authors, seeks to disseminate the results of research conducted within the BCL. Working paper n° 1 is "An assessment of the national labour market on employment, unemployment and their link to the price level in Luxembourg" whereas working paper n° 2 analyses the "Stock market valuation of old and new economy firms".

The BCL's bilingual website contains the latest news as well as information on the organisation of the Bank and the services provided. It shows on average 319 000 hits (number of pages consulted) and 13 000 visitors a month.

In 2001, the BCL concentrated its efforts on preparing the cash-changeover, especially through the Euro 2002 Information Campaign, organised jointly by the ECB and the NCB's of the eurozone.

#### Euro 2002 information campaign objectives:

#### a) to provide information on

- appearance of the banknotes and coins, including their colours and dimensions,
- security features, which will enable the public to recognise genuine banknotes and coins (these features were unveiled in September 2001),
- denominations,
- cash-changeover modalities in Luxembourg.

#### b) the training of the "cash-handlers" (cashiers, police staff, security agents, ...)

Information on the Euro cash-changeover in Luxembourg was provided by the Banque centrale du Luxembourg in coordination with the Ministry of Finance and other national key players.

After 4 January 2001, the BCL conducted the national part of the information campaign on the euro. The campaign was coordinated by the ECB, but executed nationally by the NCBs.

In parallel with the activities planned by the Eurosystem, the BCL set up its own communication activities.

The Partnership Programme was one of the main components of the campaign, and it was officially announced on 30 January 2001 at the BCL.

#### National communication activities

A multitude of national communication activities were organised during the year 2000 and 2001. The most important were:

- a brochure "Introducing euro banknotes and coins in the Grand-Duchy of Luxembourg"; published in October 2000.
- the maintenance of a regular presence in the national media through the publication of press articles entitled "Den Euro-eis Suen" as well as TV and radio spots. In total 32 €uro-news were published.
- the presence of the BCL, together with its partners at the Foire Internationale du Luxembourg Spring 2002 and Autumn 2002 and the students' fair.
- the organisation of euro road-shows in the largest shopping centres of Luxembourg, the railway station of the City of Luxembourg and the entrance hall of the BCL to increase public awareness of the new currency.
- as in all the other countries of the eurozone, the BCL convened on 3 July 2002 the main national actors of the cash-changeover process for a one day conference on the euro.
- the joint media campaign of the Eurosystem was one of the most important exercises of the campaign. It was carried on from mid-September 2001 until early January 2002.
- more than 200 million information leaflets were distributed from October onwards throughout the eurozone.
- the presentation of the euro-kit and the €change-centres on 13 December 2001.
- the distribution of more than 7 million "Be a euro Superstar" posters to pupils in the eurozone via the national education system.
- the installation of a free-of-charge infoline (number 8002 0101)

The websites <u>www.bcl.lu</u> and <u>www.euro.ecb.int</u> offered updated information on the introduction of euro banknotes and coins in Luxembourg and in all the other countries of the euro area. The latter, a multilingual website of the Eurosystem, has been launched in January 2001. It offers updated information on euro banknotes and coins.

30 PART THE BCL IN 2001

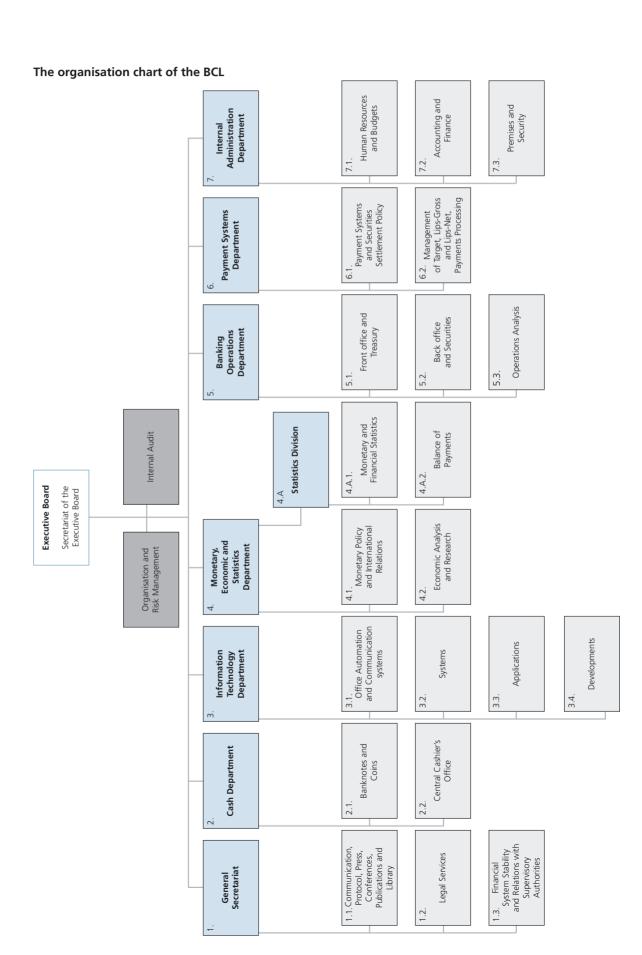


### 8 The organisation of the BCL

#### 8.1 The Executive Board of the BCL

In 2001, the Executive Board comprises:

Director: Yves Mersch
Director: Andrée Billon
Director: Serge Kolb



32 PART THE BCL IN 2001



#### 8.2 The Council of the BCL

In 2001, the composition of the BCL Council was the following:

President: Yves Mersch

Members: Andrée Billon Jean Hamilius

Mathias Hinterscheid

Serge Kolb Patrice Pieretti Nico Reyland Michel Wurth

During the year, the Council held five meetings.

In the framework of its patrimonial attributions, it approved the acquisition of the building previously housing the Banque nationale de Belgique (BNB) located in the Boulevard Prince Henri. The Council also endorsed the 2001 financial accounts as well as the budget for the financial year 2002. It also took note of the creation of the Bank's pension fund through the levy on the reserve fund on 1 April 2002, in line with the BCL organic law.

The Council has regularly been informed about the evolution of the cash-changeover process. In addition, it observed and commented on a regular basis domestic as well as international economic and financial developments and was briefed on the decisions taken by the ECB Governing Council.

The Council decided the setting up of an Auditing Committee, which met for the first time in February 2002.

#### 8.3 BCL Resources

#### 8.3.1 Staffing

During the year 2001, the staff of the BCL has increased by 10.3% to reach a total of 182 agents at 31 December 2001. The BCL has recruted 29 new agents while there have been 12 leavers.

The staff members are of six differents nationalities thus contributing to cultural enrichment and diversity.

The average age of the BCL staff members has slightly increased from 35,1 in 2000 to 35,5 on 31 December 2001. The staff is formed by 29% female and 71% male agents.

#### 8.3.2 The BCL Pension Fund

The Bank has set up this vehicle in order to finance the pensions it is in charge of, in application of the law of 23 December 1998 concerning the monetary status and the Banque centrale du Luxembourg.

Whereas in 2000 efforts concentrated on introducing the pension fund, in 2001 the focus was mainly on the launch of the operational activity.

A steering committee composed by the three BCL directors, two members elected by the staff, one member nominated by and amongst the workforce representatives (A-BCL) as well as two co-opted members, organises and supervises the fund's management. It has adopted the regulation of the BCL pension fund and communicated to each individual agent his affiliation.

The unique withdrawal from the Bank's reserves, foreseen by article 35(4)(c) of the aforementioned law has been made on 1 April 2001. Thereby, the capital of the fund became equivalent to the discounted pension liabilities (€ 42,762,252.76), as certified by a registered external actuary. In compliance with the above article, the central bank's external auditor has verified and certified the appropriateness and accuracy of this operation within a special report. The management of the assets is conducted by experts. The investment strategy is essentially long term oriented and based on the concept of risk diversification.

#### 9 Annual accounts

#### 9.1 Key figures at the end of the financial year

	EUR 2000	EUR 2001	% VARIATION
Balance sheet total	20,968,264,254	18,273,636,286	-13%
Bank deposits	4,911,694,804	5,981,169,410	22%
Claims on banks	19,325,913,603	16,511,127,821	-15%
Own funds <sup>1</sup> , revaluation accounts, administrative			
provisions and provisions for specific banking risks	264,601,880	296,879,839	12%
Operating profit on banking activities <sup>2</sup>	35,206,775	47,532,693	35%
Administrative expenses	16,552,939	23,776,660	44%
Profit for the year	3,066,462	5,535,573	81%
Cash Flow <sup>3</sup>	41,442,047	61,197,976	48%
Part of BCL in ECB capital	0.15%	0.15%	
Part of BCL in monetary policy operations of the Eurosyster	n 7.18%	8.08%	

<sup>&</sup>lt;sup>1</sup> Capital, reserves, provisions for general banking risks and net profit transferred to reserves

#### 9.2 Balance sheet as at 31 December 2001

The BCL's annual accounts are based on the harmonised model of the Eurosystem and set up according to the standardised rules of the mentioned model.

The balance sheet total grew from  $\leq$  0.4 billion in 1997 (for the IML) up to  $\leq$  21 billion in 2000, to fall to  $\leq$  18.3 billion in 2001. This decrease is only due to the relatively low allotment of the main refinancing operations to commercial banks at the end of year that is not in line with the average higher volume throughout the year.

The average amount of minimum reserves to be observed on a monthly basis was  $\in$  7.3 billion for the period 24 December 2001-23 January 2002 (at the end of December 2000 :  $\in$  7.2 billion).

Concerning the off-balance sheet items, the item « Custody deposits » (€ 77.3 billion in 2001 against € 57.9 billion in 2000), which represents the banks securities deposits covering their commitments resulting from the monetary policy operations, shows a notable increase.

Concerning the profit and loss account, the interest income and interest expenses have grown drastically and symmetrically. Those are mainly linked to the Eurosystem operations conducted by the BCL with the counterparts of the financial sector. The net result on interest increased by 27% to  $\le$  46.7 million (at December 2000 :  $\le$  36.9 million).

The profit for the year 2001 amounts to € 5.5 million against € 3.1 million for the previous year.

<sup>&</sup>lt;sup>2</sup> Net result on interest, commissions and financial operations

<sup>&</sup>lt;sup>3</sup> Profit of the year plus value adjustments (net) and provisions for banking risks (net)



#### Balance sheet as at 31 December 2001

	2001	2000
	EUR	EUR
ASSETS		
Gold and gold receivables	24,052,246	22 ,373 ,880
Claims on non-euro area residents		
denominated in foreign currency	119 ,723 ,095	82,320,948
<ul> <li>receivables from the IMF</li> </ul>	119 ,576 ,877	82 ,163 ,186
<ul> <li>balances with banks and security investments, external loans</li> </ul>		
and other external assets	146 ,218	157,762
Claims on non-euro area residents denominated in euro	1,626,956	262,634
<ul> <li>balances with banks, security investments and loans</li> </ul>	1,626,956	262,634
Lending to euro area credit institutions related to monetary		
policy operations denominated in euro	16 ,443 ,086 ,730	19 ,281 ,561 ,908
- main refinancing operations	13 ,298 ,064 ,800	17 ,316 ,665 ,300
- longer-term refinancing operations	3 ,145 ,021 ,930	1 ,964 ,896 ,608
Other claims on euro area credit institutions denominated in euro	68,041,091	44 ,351 ,695
Securities of euro area residents denominated in euro	200,053,535	198 ,102 ,637
Intra-Eurosystem claims	82 ,060 ,000	82,060,000
- participating interest in ECB	7 ,460 ,000	7 ,460 ,000
<ul> <li>claims equivalent to the transfer of foreign currency reserves</li> </ul>	74,600,000	74,600,000
Items in course of settlement	404,860	90,025
Other assets	1,334,587,773	1,257,140,527
<ul> <li>tangible and intangible fixed assets</li> </ul>	62 ,342 ,524	54,490,631
- other financial assets	638 ,785 ,285	561,318,843
<ul> <li>off-balance sheet instrument revaluation differences</li> </ul>	253 ,938	575,590
<ul> <li>accruals and deferred expenditure</li> </ul>	54,600,170	55 ,284 ,751
- sundry items	578,605,856	585 ,470 ,712
TOTAL ASSETS	18,273,636,286	20 ,968 ,264 ,254

#### Balance sheet as at 31 December 2001

	2001	2000
	EUR	EUR
LIABILITIES		
Banknotes in circulation	647 ,418 ,833	660 ,719 ,842
Liabilities to euro area credit institutions related to monetary policy		
operations denominated in euro	5 ,881 ,093 ,187	4,911,694,804
<ul> <li>current accounts (covering the minimum reserve system)</li> </ul>	5 ,881 ,093 ,187	4,911,694,804
Other liabilities to euro area credit institutions denominated in euro	100 ,076 ,223	0
Liabilities to other euro area residents denominated in euro	596 ,710 ,486	584,765,367
- general government	581,405,933	569 ,212 ,620
- other depositors	15 ,304 ,553	15,552,747
Liabilities to non-euro area residents denominated in euro	63 ,571 ,015	51 ,294 ,798
Counterpart of special drawing rights allocated by the IMF	24 ,152 ,567	23 ,738 ,441
Intra-Eurosystem liabilities	10 ,575 ,042 ,860	14,361,449,504
- liabilities related to TARGET accounts	10 ,573 ,901 ,554	14,360,466,095
- liabilities related to other operational requirements within the Eurosystem	1,141,306	983 ,409
Items in course of settlement	0	16 ,836 ,853
Other liabilities	41,313,143	84,209,223
<ul> <li>off-balance sheet instrument revaluation differences</li> </ul>	57,125	675,065
<ul> <li>accruals and deferred income</li> </ul>	38,775,867	64 ,476 ,444
- sundry items	2 ,480 ,151	19 ,057 ,714
Provisions	181 ,013 ,810	91,551,449
Revaluation accounts	28 ,502 ,272	18 ,996 ,660
Capital and reserves	129 ,206 ,317	159,940,851
- capital	25,000,000	25 ,000 ,000
- reserves	104,206,317	137 ,890 ,363
<ul> <li>deferred results</li> </ul>	0	- 2 ,949 ,512
Profit for the year	5 ,535 ,573	3 ,066 ,462
TOTAL LIABILITIES	18,273,636,286	20 ,968 ,264 ,254
TOTAL ETABLETTES	18,273,030,280	20,300,204,234

36 PART THE BCL IN 2001



#### Off-balance sheet as at 31 December 2001

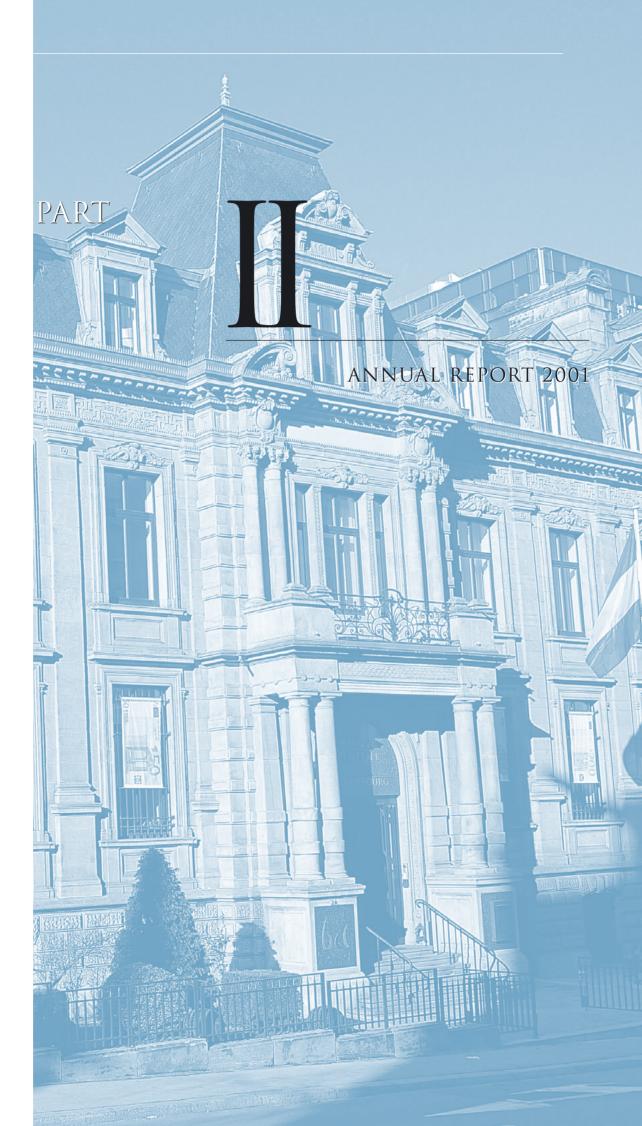
	2001	2000
	EUR	EUR
Custody deposits	77 ,322 ,587 ,983	57 ,911 ,702 ,463
Foreign currency reserves assets administrated on behalf of the ECB	86 ,133 ,972	82 ,433 ,757
Forward transactions	28 ,432 ,437	68 ,038 ,525
Numismatic collection	107,972	107,972
TOTAL	77 ,437 ,262 ,364	58 ,062 ,282 ,717

## Profit & Loss account for the financial year 2001

	2001	2000
	EUR	EUR
Interest income	889 ,797 ,713	662 ,448 ,686
Interest expenses	- 843 ,094 ,782	- 625, 538, 468
Net interest income	46 ,702 ,931	36 ,910 ,218
Realised gains/losses arising from financial operations	1,485,245	- 714 ,097
Write-downs on financial assets and positions	- 172 ,408	- 976,081
Transfer to/from provisions for foreign exchange rate and price risks	- 41 ,716 ,374	- 35 ,530 ,837
Net result of financial operations, write-downs and risk provisions	- 40 ,403 ,537	- 37 ,221 ,015
Fees and commissions income	4 ,727 ,254	3 ,335 ,941
Fees and commissions expenses	- 5 ,210 ,329	- 3 ,349 ,206
Net result from fees and commissions	- 483 ,075	- 13 ,265
Net result of pooling of monetary income	- 1,141,306	- 983 ,556
Net income of participating interests	3 ,009 ,213	0
Other income	35,815,538	25 ,323 ,956
Total net income	43 ,499 ,764	24 ,016 ,338
Staff costs	- 12,916,121	- 10 ,434 ,251
Other administrative expenses	- 7 ,346 ,125	- 5 ,386 ,182
Depreciation of tangible and intangible fixed assets	- 4 ,840 ,724	- 3 ,110 ,369
Banknote production costs	- 3 ,005 ,101	- 523 ,906
Other expenses	- 9 ,856 ,120	- 1,495,168
PROFIT FOR THE YEAR	5 ,535 ,573	3 ,066 ,462







# THE ECONOMIC SITUATION IN LUXEMBOURG

Part	Ш	THE	ECONOMIC S	SITUATION IN	LUXEMBOURG
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## THE ECONOMIC SITUATION IN LUXEMBOURG

#### Inflation

Luxembourg's national index of consumer prices (NICP) increased on average by 2.7% in 2001, after growing by 3.2% in 2000. This slowdown largely reflects the fall in oil prices during most of 2001. Indeed, the oil products sub-index of the NICP fell by some 23.3% between December 2000 and January 2002, although it recovered in the first half of 2001 due to a temporary rebound of euro oil prices.

Underlying inflation, which tracks economic processes more closely by excluding goods whose prices are more volatile, increased throughout 2001. On this measure, the annual percentage change in prices rose from 2.4% in January 2001 to 3.1% one year later. The acceleration of underlying inflation can mainly be attributed to wage increases resulting in part from the automatic wage indexation of April 2001. Other contributing factors include lagged and indirect effects of previous oil price increases and the volatility of food prices following recent outbreaks of livestock diseases.

The annual rate of change in services prices rose from 2.3% in December 2000 to 4.2% in October, November, and December 2001. In this context, it is worth recalling that over the last six years services prices increased whenever automatic wage indexations occurred (the reader may wish to refer to an article on this subject published in the French version of the 2000 BCL Annual Report).

The increase in food prices was mainly caused by health concerns related to recent episodes of livestock diseases. Unfavourable weather conditions in certain regions of the euro area were also a factor towards the end of 2001. In year-on-year terms, food price inflation increased from around 4% at the beginning of 2001 to some 5.5% in the second half of the year.

#### CHART 1: **INFLATION AND OIL PRICES**



The harmonised index of consumer prices (HICP) allows for an international comparison of annual inflation rates. This reveals that the differential between Luxembourg and the euro area has turned to the benefit of Luxembourg since June 2001. However, HICP excluding unprocessed food and energy grew faster in Luxembourg than in the euro area throughout 2001.

Inflation is set to decelerate in 2002 on the back of an average negative contribution from energy prices and moderating growth of the HICP excluding energy. The latter is favoured by lower imported inflation as well as weaker growth in services prices. The next automatic wage indexation is expected in June 2002.

Preliminary figures released by the National Statistical Institute show that most sectors saw slower value added growth in 2001 than in 2000. The slowdown in the euro area mostly affected sectors producing for export. Starting in the second quarter of 2001, the industrial sector experienced a continuous decrease in its production level that was exacerbated by the events of September 11th. Towards the end of 2001 and the beginning of 2002, business survey indicators still did not suggest a swift rebound for the industrial sector. However, the construction sector saw robust growth in 2002, mainly due to sustained domestic demand for housing and related work. Retail sales also grew strongly, underpinned by robust purchasing power among Luxembourg households.

#### 2 Economic growth

According to current estimates, real GDP growth in Luxembourg slowed in 2001 to 5.1% from 7.5% the year before. This deceleration is in line with the generalised slowdown observed at the European level, but the national growth rate remains well above the European average. Domestic demand sustained Luxembourg's economic growth in 2001, while net exports slowed, explaining the weaker real GDP growth.

Private consumption expenditure, the most important component of domestic demand, increased by 3.4%. This is slightly higher than in the previous year (3.1%). In part this was due to the still quite favourable growth of national employment as well as the effect of tax cuts. Public consumption expenditure grew at the same pace as in 2000 (+4.5%). Gross capital formation also continued to grow strongly (5.9%), despite the general economic slowdown. This can be partly attributed to an inertia effect, as many investments are planned in advance and need time to be implemented efficiently.

While domestic demand continued to contribute favourably to GDP growth in 2001, it must be stressed that a large part of domestic demand is imported, so it also contributed significantly to the reduction of net exports.

Real export growth slowed to 8.5% from 16.4%. The volume of exported goods followed the trend in foreign demand while exported services continued to grow rapidly (+10%). Net exports contributed only 1.3 percentage points to GDP growth, which represents 5.9 percentage points less than in 2000.

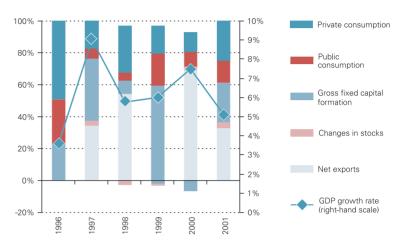
According to the current official estimates, export prices fell more sharply than the prices of imported goods and services. As a result, the economy experienced a deterioration of the terms of trade, with real income growing by less than real GDP.







CHART 2: CONTRIBUTION (IN P.P.) TO REAL GDP GROWTH



SOURCE: Eurostat, STATEC and BCL calculations

#### 3 Labour market

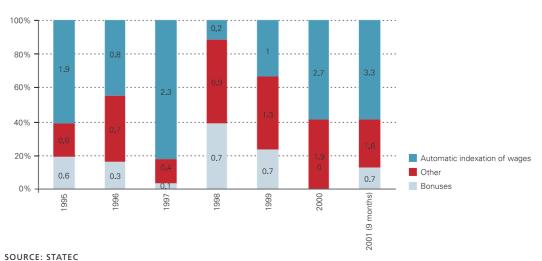
Despite lower GDP growth in 2001, employment growth remained close to record levels (+5.3% as defined in the national accounts). Nevertheless, a deceleration can be observed throughout the year, in line with the cyclical slowdown of economic activity. Most newly created jobs are still taken up by non-residents (75%).

Residents' participation rate continued to increase, reaching 63.7% in 2001 (after 62.7% in 2000). This rate is still slightly below the EU15 average, mostly because of significantly lower participation of women (50.1% in Luxembourg compared with 53.8% in the European Union).

Unemployment started to increase during the second half of the year. Its yearly average remains virtually unchanged from 2000 (2.6%), but since October 2001, the rate is higher than it was one year before. This can be explained mostly by the cyclical slowdown and is in line with the observed decrease of employment growth.

Labour costs grew strongly in 2001 (5.3%; nominal wage per employee). Two major factors played a part in this increase: automatic indexation of wages to consumer prices contributed strongly (3.1 percentage points), and high profits (partly earned in 2000) allowed for more generous bonuses.

CHART 3: FACTORS INFLUENCING NOMINAL WAGE GROWTH



#### 4 The financial sector in Luxembourg

#### 4.1 Monetary financial institutions

On 31 December 2001, the Luxembourg financial centre included 618 monetary financial institutions (MFIs), 36 less than a year earlier. The number of credit institutions decreased by 13 units and money market funds by 23 units.

The aggregate balance sheet of Luxembourg's monetary financial institutions increased by 15.8% during the year under review to reach a total of € 817,602 million as of 31 December 2001.

#### 4.2 Credit institutions

The process of concentration accelerated throughout 2001, with several mergers among Luxembourg branches of foreign banks. In comparison with the previous year-end, the number of banks officially registered in Luxembourg went down from 202 to 189.

#### 4.2.1 Mergers and Acquisitions

Five liquidations, the creation of 2 new credit institutions and 10 mergers or acquisitions marked 2001. Nevertheless, increasing concentration was not the only factor responsible for reducing the number of credit institutes by 13. Several banks that had invested significantly in new technologies or who made e-banking their core business were strongly affected by the downturn. They either had to abandon the "virtual" aspect of their activities or had to return to more profitable banking activities. Adverse trends on international stock exchanges, especially the fall in new technology valuations, considerably reduced customers' interest in trading. However, Luxembourg's credit institutions persisted in their efforts to approach a diversified customer base even in foreign countries where they are not physically present. In the short run, this approach to banking may be only an additional service to the traditional approach that involves direct contact with customers.

#### 4.2.2 Number of credit institutions

On 31 December 2001 Luxembourg's financial centre included 189 credit institutions. Among these institutions, 128 were subject to Luxembourg law and the remaining 61 were institutions subject to foreign law. The degree of internationalisation increased slightly during 2001. Luxembourg's credit institutions established 21 branches in foreign countries; 15 branches are established in another EU Member State and 6 branches are established outside the EU. The geographical origin of the 189 credit institutions established in Luxembourg end-2001 is as follows: Germany (58 banks), Belgium / Luxembourg (24), Italy (21), France (15), Switzerland (13), Scandinavian countries (10), the U.S. (9), Japan (5) and the remaining 34 banks originate in fourteen different countries.

#### 4.2.3 Aggregate balance sheet

As in previous years, the Luxembourg banking sector grew strongly, confirming its importance to the national economy.

As at 31 December 2001, the aggregate balance sheet of credit institutions stood at € 721,000 million, an 11.3% increase from 31 December 2000. This was the strongest increase in recent years, which had already witnessed very good performances by banks in Luxembourg. In 1998 the aggregate balance sheet grew 4.7%, in 1999 it grew 10.6%, and in 2000 it grew 8.2%.

The growth rate was not constant throughout 2001, and paradoxically increased following the tragic events of September 11th. The aggregate balance sheet rose during the first quarter of 2001 and then declined during April, dropping from € 674,442 million on 31 March 2001 to € 667,635 million on 30 April 2001. The balance sheet then returned to positive growth over two months and fell again during summer 2001. It diminished slightly from € 701,260 million on 30 June 2001 to € 697,469 million on 31 July 2001, before reaching the bottom at € 671,968 million on 31 August 2001. These reductions in assets are mainly explained by a fall in receivables and interbank liabilities. During the last four months of the year, assets showed continuous growth once more, particularly during September and December, which suggests that Luxembourg's banks weathered the international economic deceleration quite well. This may reflect portfolio shifts towards safe and liquid assets, such as bank deposits or bonds issued by the banking sector.





#### 4.2.4 Aggregate balance sheet structure

As mentioned above, interbank operations over the year had an important influence on the aggregate balance sheet. In fact, the structure of the aggregate balance sheet indicates the growing importance of interbank operations for Luxembourg banks.

On the asset side, increased banking activity can be explained by the rise of interbank credits (+14.9%) to reach 50.8% of the aggregate balance sheet, accounting for 64.7% of aggregate balance sheet growth. Credits granted to the non-banking private sector also increased significantly (+13.5%). New mortgage contracts for buildings in Luxembourg continued to grow strongly (+18.15%). Almost all new mortgages were granted to residents (2,648 million out of 2,734 million euros). The total volume of mortgage lending is almost twice the average for the period 1993 to 1997, with most lending concentrated in the first two quarters of the year.

The asset side was also marked by an increase in the securities business (+9.1% shares and other participations and +4.3% in bonds). However, holdings of money market instruments declined strongly (-80.1%).

On the liability side, deposits by public administrations and the private non-banking sector were relatively stable (+1.1%), representing 31.5% of the aggregate balance sheet. The main change was an increase in interbank deposits (+16.9%). Luxembourg banks apparently preferred to raise finance by issuing debt securities (+17.4%) which added to a total of 7,750 million euros (7.3% of the aggregate balance sheet), rather than by collecting new deposits. Money market instruments also grew significantly (+28.3%), reaching 27,598 million euros or 3.8% of the aggregate balance sheet.

#### 4.2.5 Profit and Loss account

Luxembourg credit institutions weathered slack financial markets and the worldwide economic deceleration quite well. Despite the growing number of Luxembourg banks establishing branches abroad, these have contributed little to results. A distinction between consolidated and unconsolidated results is therefore not strictly necessary, so the following discussion focuses on the consolidated account, including branches abroad.

Despite weakness in the financial markets and the slowdown in economic activity, gross revenue before provisions was stable, actually growing by 1.8%.

Gross income amounted to  $\leqslant$  8,130 million as at 31 December 2001, increasing by 5.8% ( $\leqslant$  447 million) since 31 December 2000. Two opposing factors contributed to this evolution. On the one hand, the interest margin improved by  $\leqslant$  845 million (+23.7%) and amounted to  $\leqslant$  4,412 million; increasing balance sheet activities and the drop in short term interest rates could explain this development. On the other hand, other net income decreased by  $\leqslant$  398 million (-9.7%) to  $\leqslant$  3,718 million; fluctuation on financial markets negatively affected this source of income, with a drop in net commissions (-6.6%) reflecting lower asset values and less active portfolio management.

Increases in overhead costs (personnel, administrative expenditures and depreciation of tangible assets) offset a large part of this increase in gross income. During 2001 overhead costs increased by about € 370 million (+10.8%), standing at € 3,804 million as at 31 December 2001.

As a result, the aggregate result before provisions remained fairly steady, with a modest increase (1.8% or  $\leq$  77 million) to  $\leq$  4,326 million. In 2000, the increase was 19.9%.

## 4.2.6 Financial derivatives

2001 was characterised by a considerable increase in the volume of derivative financial instruments held by Luxembourg banks: +58.2% (an increase of € 272,957 million) to reach € 742,342 million on 31 December 2001 (excluding branches of banks originating in other EU member states).

This amount represented 126.1% of the total balance sheet of these institutions, compared to only 88.5% the previous year.

Interest rate derivatives remain the main category of instruments, with a continued predominance of interest rate swaps (71.6% of the total amount of derivatives contracts, for an amount of  $\leqslant$  531,858

million on 31 December 2001). However, the volume of options contracts grew (+160% during the year, from  $\le 63,944$  million on 31 December 2000 to  $\le 166,549$  million on 31 December 2001, that is to say 22.4% of the total amount of contracts against only 13.6% on December 2000). The increased use of options contracts confirms the trend observed in 2000.

Finally, concerning market structure, about 80% of transactions are still in OTC contracts, as opposed to exchange traded derivatives. However, the latter have continued to increase their share (from 12.4% end-2000 to 20.4% at 31 December 2001).

#### 4.3 Employment in the financial sector

On 31 December 2001, the financial sector (including other financial professionals as well as those in credit institutions) employed 2,093 individuals, an increase of 1,554 (+5.9%) from the previous year-end. Nonetheless, the growth rate of employment declined from the high level in 2000 (+10.65%), in part due to increasing concentration among credit institutions. Employment in the financial sector still represents roughly 10% of total employment in Luxembourg and is considered a driving force in the labour market. Only 29.8% of employees in the financial sector are Luxembourg nationals. This proportion was 34.4% end-1999 and 31.4% end-2000.

The number of individuals employed in banks totalled 23,894 on 31 December 2001, an increase of 859 (+3.7%) from a year earlier. The previous year, this increase was +8.7%. Other financial professionals employed 4,198 individuals, an increase of 694 (+19.8%) over the same period.

#### 4.4 Investment funds

The Luxembourg investment fund industry had a mixed year in 2001. The net asset value of Luxembourg undertakings for collective investment (UCIs) experienced a series of rises and falls, mainly due to adverse financial market trends. However, overall net asset value progressed favourably and even managed to achieve a new record high at 31 December 2001.

On 31 December 2001, the number of UCIs had increased by 123 and totalled 1,908 (1,785 a year earlier, an increase of 155 units). The number of fund compartments continued to grow and reached 7,519 at the end of 2001, increasing by 523 during 2001. Although this growth rate was lower than in 2000, it was steady over the year.

The total net asset value of Luxembourg UCIs was marked by financial market instability throughout 2001. It declined sharply until the end of the first quarter (€ 862.7 billion), regained some strength by the end of the second quarter (€ 918.4 billion), and then fell sharply until the end of September. At this point total net asset value dropped to its lowest yearly level (€ 835.6 billion) following the terrorist attacks. During the last quarter of 2001 signs of economic recovery combined with the upward trend on financial markets ensured the renewal of investors' confidence, contributing to a strong increase in total net asset value. On 31 December 2001, the total net asset value of the Luxembourg investment fund industry reached a record high of € 928.4 billion against € 874.6 billion on 31 December 2000. This represents an increase of 6.2% in comparison with 19.1% growth during 2000. Net capital investment amounted to € 121.7 billion in 2001, against € 168.2 billion in 2000.

Money market funds are part of the MFI sector and therefore are subject to the statistical reporting of the BCL. Their number remained relatively stable last year, reaching 429 units at the end of December 2001 against 452 units the year before (a reduction of 23 units). The net asset value of money market funds experienced a sharp increase over the period under review, growing from € 58.0 billion on 31 December 2000 to € 95.6 billion on 31 December 2001, a rise of € 37.6 billion (+64.8%).

#### 5 External trade

The trade deficit continued to deteriorate in 2001 under the effect of increasing imports in the equipment and transportation sectors (e.g. aircraft and satellites) combined with the fall of exports in manufacturing sector.

## 6 The balance of payments

## 6.1 The current account

During 2001 the current account surplus deteriorated by almost 42% compared with the previous





year. This decline was due to the worsening of the balance of goods deficit, the drop in the surplus of financial services, and the structural deficit due to the compensation of non-resident employees.

#### 6.2 Foreign direct investment

From 1995 to 1999 Luxembourg's economy benefited from massive inflows of foreign direct investment. Foreign direct investment increased gradually since 1995, when it was 102% of GDP, to reach 127% of GDP in 1999. The stock of foreign direct investments in 1999 was estimated at 21.3 billion euros. This reflects the attractiveness of Luxembourg's financial centre. In fact, the banking sector represents 70% of all foreign investment. Industry attracts 14% while the insurance sector represents only 5.3% of foreign investment.

In terms of geographical origin, 80% of foreign direct investment in Luxembourg comes from other EU members. Direct investment from the United States represents 13.9% while investment from Japan and Switzerland amount respectively to 2.8% and 2.1%.

The amount invested abroad by Luxembourg residents represents only a third of foreign direct investment in Luxembourg. Therefore, Luxembourg's economy is a net beneficiary of foreign direct investment.

#### 7 **Public finance**

#### 7.1 The central government budget

The 2002 budget adopted by Luxembourg's Parliament on the 21 December 2001 is characterised by an expansionist stance. Total expenditures should grow by about 10% due to much higher social transfers following the adoption of new measures such as a new allowance for the education of children and a steep increase in family allowances. A significant boost to investment expenditures should also contribute to a sustained growth of total expenditures. This investment effort is designed to upgrade education, transportation and administrative infrastructures.

By contrast, central government revenues should record only a moderate increase under the new fiscal package. The central feature of the tax reform is the easing of personal income and corporate taxes. The total cost to the Luxembourg central government should reach about 2.5% of GDP. This should be added to the impact of the reduction in personal income taxes in 2001 (1% of GDP).

The implementation of the 2001 and 2002 fiscal reforms should contribute to enhance the competitiveness of the Luxembourg economy. The effective rate of the corporation tax collected by the central government ("Impôt sur le revenu des collectivités") reaches 22% of gross income after the reform, down from 30% before, which is significantly less than in the surrounding countries. Likewise, the marginal personal income tax has been adjusted downwards from 46% in 2000 to 42% in 2001 and 38% in 2002. The joint result is that the Luxembourg central government will rely increasingly on indirect taxes. These should account for more than 47% of total ordinary public receipts in 2002. This proportion was about 45% in 2000 and less than 40% in 1997 and 1998.

#### 7.2 The general government account

The central government measures mentioned above should have a significant impact on the position of general government as a whole, which also includes local governments and the social security system. The expenditures of the latter will accelerate starting in March 2002 due to the generous pension measures accorded during the roundtable on private sector pensions. The cost of the proposed measures should reach about € 130 million on a full-year basis, i.e. approximately 0.5% of

The set of measures described above will translate into a significant decrease in the general government surplus in 2002. According to the third update of the Luxembourg stability programme, this surplus should shrink to 2.8% of GDP in 2002 (see table). It should increase to 3.1% in 2003 and 3.4% in 2004. Over the three successive years of the forecast horizon, the cyclically adjusted budget surplus should be 2.5%, 2.6% and 2.8% of GDP.

However, these projections should be interpreted with caution, as the data presented above are conditional on preliminary hypotheses concerning the macroeconomic environment. In addition,

#### TABLE 1: MAIN INDICATORS OF THE GENERAL GOVERNMENT ACCOUNTS

(as percentages of GDP)

	2000	2001	2002P	2003P	2004P
Surplus presented in the stability programme	6.2	4.1	2.8	3.1	3.4
of which central government	3.0	1.0	0.0	0.3	0.4
of which local governments	0.5	0.3	0.2	0.2	0.3
of which social security	2.7	2.8	2.6	2.7	2.7
Cyclically adjusted surplus (1)	5.6	3.2	2.5	2.6	2.8

 ${\tt SOURCE: STATEC, third update of the Luxembourg stability programme.} \\$ 

P: projections

government revenues are notoriously difficult to forecast in Luxembourg, especially corporate tax receipts. In any event, significant room for manoeuvre should be maintained in order to address long-term challenges such as population ageing.

## 8 Stock market activity

The LuxX index closed at 1116 points at the end of 2001, declining by 19.4% from its level at the end of 2000. The performance of the LuxX index is in line with the global decline of international stockmarkets during 2001, which has been exacerbated by the events of September 11.

<sup>(1)</sup> Surpluses presented in the stability programme, adjusted by the BCL for the impact of the business cycle.







#### **Abbreviations**

BCL Banque centrale du Luxembourg
CCBM Correspondent central banking model

CPI Consumer price index

CSSF Commission de surveillance du secteur financier

ECB European Central Bank

ESCB European System of Central Banks

EU European Union

EUR Euro

GDP Gross domestic product

Institut belgo-luxembourgeois du change

IMF International Monetary Fund

IML Institut Monétaire Luxembourgeois (1983-1998)

LIPS-Gross
Luxembourg Interbank Payment System Real-Time Gross Settlement System
LIPS-Net
Luxembourg Interbank Payment System Real-Time Net Settlement System

LUF Luxembourg franc

MFI Monetary Financial Institution
MRO Main refinancing operations
NCB(s) National central bank(s)

NICP National index of consumer prices

OECD Organisation for Economic Cooperation and Development

RTGS system Real-Time Gross Settlement system

STATEC National statistical institute of Luxembourg

SSS Securities settlement system

TARGET System Trans-European Automated Real-time Gross settlement

Express Transfer system

UCI Undertaking for Collective Investments
UEBL Union économique belgo-luxembourgeoise

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