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ANNUAL REPORT 2016

BANQUE CENTRALE DU LUXEMBOURG

EUROSYSTEM

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MISSION STATEMENT OF THE BCL

The *Banque centrale du Luxembourg* (BCL) is a public institution created by Luxembourg law. The BCL's independance is based on its organic law, the Treaty on the European Union and the Treaty on the Functioning of the European Union. The BCL is a member of the European System of Central Banks (ESCB) composed of the National Central Banks of all 28 EU Member States and the European Central Bank (ECB).

THE MISSION

The Bank is a member of the Eurosystem that consists of the European Central Bank and the National Central Banks of the Member States that have adopted the euro. It takes part in the Single Supervisory Mechanism (SSM). It is in charge of managing the monetary and financial responsibilities granted to it as one of the National Central Banks of the ESCB.

At the national level, the central bank has to carry out the tasks conferred on it by the national laws and conventions.

It is developing the following fields of competence:

- Research and studies and their communication thereof, which aim to prepare, on the one hand, monetary policy decisions and, on the other hand, the development of wider knowledge concerning monetary, financial and economic issues;
- Collection and analysis of statistics in the monetary, financial and balance of payments fields;
- Implementation of monetary policy;
- Organisation and supervision of payment and securities settlement systems;
- Issuance and circulation of banknotes and coins;
- Financial asset management, both on own account and for third parties;
- Participation in the prudential supervision of the financial system and the exercise of the oversight of payment and securities settlement systems, in order to ensure the stability of the financial system in Luxembourg;
- Advisory services to legislative and regulatory authorities in financial and monetary areas.

THE VISION

The BCL intends to become a centre of competence, excellence even, whose performance will generate public confidence in the Central Bank.

Among Luxembourg institutions, the BCL ensures that it is capable of fulfilling all its national, European and international obligations.

In view of the wide variety of its duties and activities, both in the public sector and in a competitive environment, the BCL must generate an income guaranteeing its institutional, functional and financial independence.

CORPORATE VALUES

Consequently, the values associated with its action are:

- Professionalism, guaranteed by highly specialised employees, high-performance tools and a high-level infrastructure;
- Quality in all its services;
- Stability provided by its long term vision of all its activities;
- Objectivity resulting from the establishment of precise rules that are equally applied;
- Integrity, guaranteed by the transparency of its internal operations and with respect to professional ethics;
- A good governance, within and through the governing bodies concerned with the use of the highest standards in governance.

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THE GOVERNOR'S MESSAGE

The year 2016 has seen a continued economic recovery in the euro area, which has gained gradual momentum during the second half of the year. The monetary policy measures taken by the Governing Council of the European Central Bank, which aimed to prevent deflationary risks from materialising, have been effective.

In March 2016, the Governing Council took several measures to ease financing conditions and stimulate the provision of credit to the real economy. The objective of these measures was to support the economic recovery and, hence, accelerate the return of inflation toward an annual rate of below, but close to, 2 percent over the medium term for the euro area as a whole.

First, the Governing Council decided to lower the interest rate on the main refinancing operations from 0.05% to 0%, a historic low. It also lowered the interest rate on the deposit facility by 10 basis points, to -0.4%, and the interest rate on the marginal lending facility by five basis points, to 0.25%.

In addition to the key interest rates, the Governing Council decided to make two changes to the asset purchase programme, which was announced in January 2015 and implemented from March 2015 onwards. First, it decided to increase the monthly asset purchases under the programme from 60 billion euro to 80 billion euro until March 2017, or beyond if necessary. Second, it decided to broaden the programme by including investment grade securities issued by non-financial corporations established in the euro area. The purchases under the programme's new component, the corporate sector purchase programme, started in June 2016.

Finally, the Governing Council decided to launch a new series of four targeted longer-term refinancing operations. These operations, with a maturity of four years and including different modalities from the ones applied to the first series launched in June 2014, aim to incentivise credit institutions to funnel more credit to the real economy.

During its 8 December 2016 meeting, the Governing Council decided to continue the purchases under the asset purchase programme at a pace of 80 billion euro a month until March 2017 and to reduce the pace to 60 billion euro a month from April 2017 to December 2017, unless specific circumstances would lead it to make new adjustments to the programme. This decision was motivated by, on the one hand, a strengthening of the economic recovery and, on the other hand, inflationary pressures that remained subdued.

In order to underscore the accommodative stance of monetary policy and to support the anchoring of inflation expectations over the medium term, the Governing Council also maintained its forward guidance. Thus, it indicated that the key interest rates of the Eurosystem would stay at their current or lower levels over a prolonged period of time, well beyond the horizon set for the asset purchases.

The Single Supervisory Mechanism, established in November 2014, constitutes together with the Single Resolution Mechanism and the European Deposit Insurance Scheme the Banking Union. The Single Supervisory Mechanism has continued to function well in 2016 and has, inter alia, contributed to a greater stability of the banking sector and a greater harmonisation in the application of prudential rules within the euro area. The Mechanism has delved into challenges such as the weak profitability of credit institutions, the burden of non-performing loans in bank portfolios, and options and national discretions that remain barriers to a common banking regulation.

The Single Resolution Mechanism has completed its second year of operation. The Single Resolution Fund, the financial arm of the Resolution Mechanism funded by contributions by the banking sector, has become operational. An intergovernmental agreement pertaining to the transfer of the contributions to the Fund has become effective on 1 January 2016. The gradual transfer of the national resolution funds to this single fund will take place over a period of eight years. The targeted amount corresponds to at least 1 percent of the covered deposits of all banks in the euro area by 31 December 2023. Bilateral credit lines guaranteeing national compartments have been established in all participating Member States. It remains essential to set up a common backstop to further strengthen the Single Resolution Fund.

As for the proposal to establish a European Deposit Insurance Scheme, little progress has been made. This proposal, made by the European Commission in November 2015, is still under discussion; it is important to reach an early agreement on its implementation.

On 4 May 2016, the ECB announced that the Governing Council had decided to stop permanently the production of the €500 banknote and to stop its issuance by the end of 2018, thus responding to concerns that the denomination could facilitate illicit activities. The Governing Council clarified that the €500 note continued to be legal tender and that it would retain its value. Once its issue will have ceased, the €500 note will also continue to be exchangeable with the national central banks of the Eurosystem.

On 5 July 2016, the ECB presented the new €50 banknote and announced that it would be put into circulation on 4 April 2017. Following the decision of the Governing Council on the €500 denomination, only €100 and €200 banknotes remain to be issued under the new "Europe" series.

At the national level, the BCL has continued to play a pivotal role in the Systemic Risk Committee, established by the Law of 1 April 2015. The Committee decided to set up two working groups to better comprehend and quantify the risks associated with the shadow banking intermediation activities. The first group, called "Parallel Banking - Other Financial Institutions" and chaired by the BCL, aims to improve the collection of data on these players in order to specify their contours and risks. The second group, called "Parallel Banking - Interconnections between the investment fund sector and the financial sector" and chaired by the *Commission de surveillance du secteur financier* (CSSF), analyses the risks of contagion between investment funds and credit institutions. The BCL is also providing its expertise to this second working group.

In the year 2016, the BCL was also heavily involved in the International Monetary Fund's (IMF) Financial Sector Assessment Program, a large-scale exercise that takes place in principle every five years. One of the findings of the IMF has been that the lead role of the BCL in the Systemic Risk Committee should be strengthened further.

The BCL has continued to develop its educational activities. It participated in the second edition of "The Week of Money" (D'Woch vun de Suen) in March 2016, organised again the Generation €uro competition and enhanced its cooperation with economics teachers. The BCL will continue its efforts to contribute to financial education in Luxembourg in areas that are an integral part of its missions. The BCL has also developed its communication activities towards the public at large. It released a film in four languages on its European and domestic missions and continued to welcome groups of visitors. It also participated in the Open Door event for public institutions, held in September 2016. This event, in which the BCL opened two of its buildings to the public, was a genuine success with more than 600 visits.

In terms of internal governance, the composition of the Executive Board and the Council of the BCL has changed. After having assumed the role of Director since 1 January 1999, Mr Serge Kolb decided not to seek another term. Consequently, his mandate expired on 31 December 2016. On behalf of the Bank's Executive Board and staff, I would like to congratulate him for his remarkable career and thank him for the good and loyal services he has rendered to the institution.

As per a Grand-Ducal Decree of 12 December 2016, Mr Roland Weyland, formerly Senior Advisor in the BCL, was appointed Director of the BCL for a period of 6 years from 1 January 2017.

On behalf of the decision-making bodies and the staff of the BCL, I would also like to pay a final tribute to Mr Luc Coene, formerly Governor of the National Bank of Belgium and former member of the ECB Supervisory Board, who passed away in early 2017. We regret the loss of his friendship and expertise.

As usual, I would like to conclude by thanking, together with the other members of the Executive Board, the staff for their commitment and the quality of their work. The BCL continues to be a fast-growing institution driven by the evolution of its often highly complex missions. This growth inevitably poses organisational challenges and leads to increased needs in terms of human and financial resources.

Gaston Reinesch

01 THE BCL'S ACTIVITIES

1 THE BCL'S ACTIVITIES

1.1 MONETARY POLICY OPERATIONS

In the Grand Duchy of Luxembourg, the BCL is responsible for implementing monetary policy, as defined by the Governing Council of the European Central Bank (ECB) for the entire euro area.

The primary objective of the Eurosystem and its single monetary policy is to maintain price stability. In order to achieve this objective, the Governing Council decides on conventional and – since the start of the financial crisis – non-standard monetary policy measures to steer interest rates and manage the liquidity of money markets.

1.1.1 Conventional Operations

1.1.1.1 Open Market Operations in 2016

1.1.1.1.1 Main Refinancing Operations

Since October 2008, the main refinancing operations (MROs) have been conducted by the ECB at a fixed rate and with full allotment. These modalities continued to be applicable in 2016. It was decided that this tender procedure would be maintained as long as necessary and at least until the end of the last maintenance period for minimum reserves in 2017. On 10 March 2016, the Governing Council lowered the interest rate on the main refinancing operations by five basis points to 0%.

In 2016, the global average participation in the MROs in the euro area decreased by around 47% compared to 2015. The table below shows the annual evolution of the average amounts allocated to the euro area since 2008.

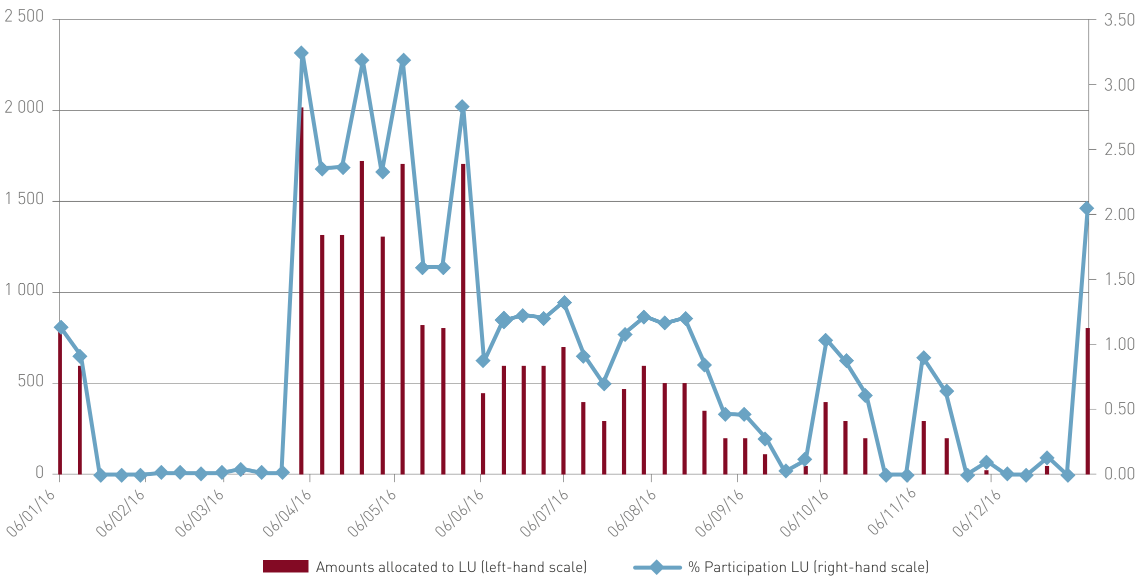
Table 1:
Average amount per MRO allocated to the euro area and variation p.a.

Year	Average amount in euros	Variation p.a.
2008	201 113 400 188.70	
2009	149 668 231 730.80	-25.6 %
2010	133 831 086 538.50	-10.6 %
2011	158 967 960 576.90	18.8 %
2012	97 829 271 153.80	-38.5 %
2013	108 040 090 000.00	10.4 %
2014	110 755 482 692.30	2.5 %
2015	91 917 463 461.50	-17.0 %
2016	48 495 075 000.00	-47.2 %

Source: BCL

While in the first quarter of 2016 there was no participation of Luxembourgish counterparties, the participation rate was around 3% of the total amount allocated to the euro area in the second quarter. After a decline, the participation rate in the last operation of the year was 2%.

Graph 1:
MRO – Amounts allocated to Luxembourg and participation ratio of Luxembourg compared to the euro area in 2016 (in € millions)

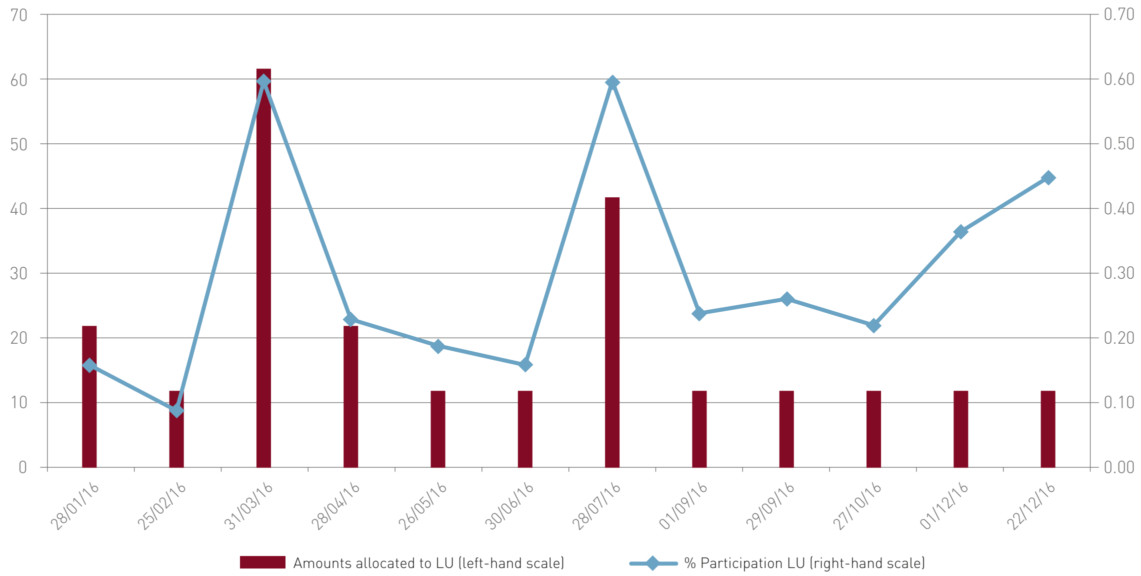


Source: BCL

1.1.1.1.2 Longer-Term Refinancing Operations (LTRO)

The participation of Luxembourgish counterparties in the three-month refinancing operations was modest in 2016. The participation ratio stood between 0.1% and 0.6%.

Graph 2:
LTRO – Amounts allocated to Luxembourg and participation ratio of Luxembourg compared to the euro area in 2016 (in € millions)



Source: BCL

1.1.1.1.3 Fine-Tuning Operations

No fine-tuning operations were conducted in 2016.

1.1.1.2 Standing Facilities in 2016

Luxembourgish counterparties may have recourse to the standing facilities offered by the BCL, i.e. the deposit and/or the marginal lending facilities, at predefined interest rates. On 10 March 2016, the Governing Council of the ECB reduced the deposit facility rate by 10 basis points to -0.40% with effect from 16 March. The marginal facility rate was lowered by five basis points to 0.25%.

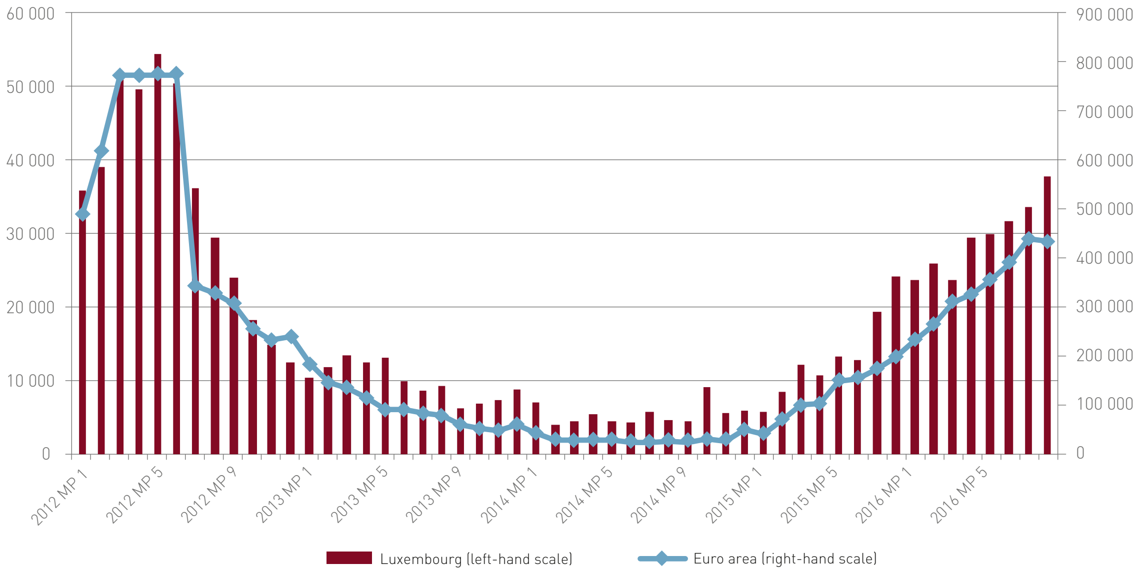
Marginal Lending Facility

Luxembourgish counterparties used the marginal lending facility only sporadically in 2016.

Deposit Facility

The amounts deposited with the BCL increased in 2016 - despite the negative interest rate – inter alia in the context of minimum liquidity coverage ratio (LCR) requirements (see Part 1.7.2.1.2 and 3.7 Glossary).

Graph 3:
Evolution of the deposit facility in Luxembourg and the euro area (Average daily amount) (in € millions)



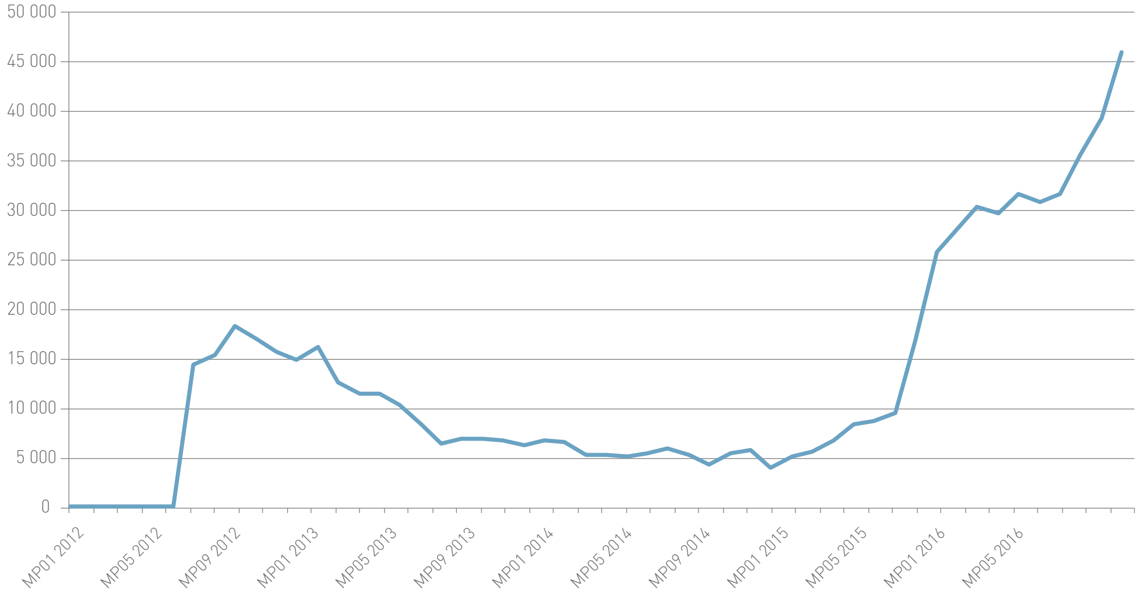
Source: BCL

1.1.1.3 Minimum Reserves in 2016

Since January 2012, the reserve ratio has stood at 1%.

The rate on the deposit facility was lowered to 0% in July 2012 and subsequently to -0.40% in March 2016. This rate is also applicable to excess reserves. Therefore, there is no difference for counterparties between leaving their excess liquidity on the current account and using the deposit facility. The amounts considered as excess reserves increased significantly in the second half of 2012 and decreased gradually afterwards, due to the reallocation of the excess reserves by the counterparties. The trend reversed from 2015 onwards, as the excess reserves increased substantially, and continued in 2016. The daily average for all the Luxembourgish counterparties increased from € 13.6 billion in 2015 to € 34 billion in 2016. As in 2015, this is notably due to the injections of liquidity through the purchase programmes and the requirements pertaining to the LCR.

Graph 4:
Average daily excess reserves of Luxembourgish counterparties since 2012 (in € millions)



Source: BCL

1.1.2 Non-conventional Operations

1.1.2.1 Temporary Currency Auctions Facilities

In 2014, the Governing Council decided to continue offering one-week US dollar liquidity-providing operations after 31 July, until further notice. This has remained valid since then.

As in 2015, there were no participants in these operations in Luxembourg in 2016. In the euro area, the participation remained low, except for the operations conducted at the end of the third quarter of 2016 and at the end of the year, when a total amount of USD six and four billion, respectively, was allocated to 12 counterparties.

1.1.2.2 Extension of Operations' Maturities

Over the last years, Longer-Term Refinancing Operations (LTRO) played an increasingly important role as far as the provision of liquidity is concerned. Before the crisis, these operations accounted only for one third of the liquidity provided by the Eurosystem. Today, they account for the majority of it.

Due to the tensions on the short end of the yield curve since August 2007 and on the medium to long part of the curve since 2010, two non-conventional operations were added to the operational framework at the end of 2011 and in the beginning of 2012. These operations matured on 29 January 2015 and on 26 February 2015 and were not renewed (see table 2 below).

On 5 June 2014, the Governing Council announced measures aiming at supporting lending to the real economy and enhancing the functioning of the monetary policy transmission mechanism. In particular, the Governing Council decided to conduct a series of eight Targeted Longer-Term Refinancing Operations (TLTRO) aiming at improving bank lending to the euro area non-financial private sector, excluding loans to households for house purchase, over a period of two years. Those eight operations were conducted from September 2014 to June 2016 and will all mature on 26 September 2018. Early repayments were allowed two years after the issue date, following a predefined calendar.

On 10 March 2016, the ECB announced a new series of four targeted operations (TLTRO II) to be conducted from June 2016 to March 2017 at a quarterly frequency. The new operations aim at strengthening the functioning of the monetary policy transmission mechanism by further incentivising bank lending to the real economy. The four operations have a four-year maturity with the possibility of early repayments after two years. No mandatory early repayment is foreseen. Counterparties exceeding the lending benchmark will be able to borrow at a rate that can be as low as the rate on the deposit facility at the time of allotment. This feature is particularly attractive in a context of negative interest rates.

At the end of 2016, the liquidity provided through the TLTRO to the banks in the euro area account for around 90% of the total amount of liquidity provided through all operations.

Table 2 below shows the outstanding amounts as of 31 December 2016 for the 11 targeted operations and the participation of Luxembourgish counterparties.

Table 3 shows an overview of all non-conventional longer-term operations conducted by the ECB since 2007.

Table 2:
Targeted Longer-Term Refinancing Operations –
Amounts allocated (in €) in the euro area and participation of Luxembourg

		Luxembourg	euro area	%
TLTRO I.1	Sept. 14	250 000 000	82 601 570 000	0.3
TLTRO I.2	Dec. 14	141 140 000	129 840 130 000	0.1
TLTRO I.3	March 15	500 000 000	97 848 230 000	0.5
TLTRO I.4	June 15	150 000 000	73 789 170 000	0.2
TLTRO I.5	Sept. 15	-	15 548 330 000	-
TLTRO I.6	Dec. 15	-	18 303 960 000	-
TLTRO I.7	March 16	-	7 342 060 000	-
TLTRO I.8	June 16	-	6 723 830 000	-
Total TLTRO I		**1 041 140 000**	**431 997 280 000**	**-**
TLTRO II.1	June 16	3 571 440 000	399 288 940 000	0.9
TLTRO II.2	Sept. 16	-	45 269 770 000	-
TLTRO II.3	Dec. 16	-	62 160 820 000	-
Total TLTRO II		**3 571 440 000**	**506 719 530 000**	
TOTAL		**4 612 580 000**	**938 716 810 000**	

Sources: BCL, ECB

After the early repayments in 2016, the outstanding amount of TLTRO I account for 48% of the amounts allocated initially in Luxembourg and 9% in the euro area.

Table 3:
Overview of the unconventional LTROs as of 31/12/2016

Type	Number of Operations Executed until End 2016	Allotment of the First Operation	Allotment of the Last Operation	Max Amount Allocated in a Single Operation (in € billion)	Total Amount Allocated in the euro area (in € billion)	Max Number of Bidders in a Single Operation	Motivation (as communicated in ECB press releases)
Supplementary 3-Month LTRO	24	Aug-07	Dec-09	75	831	146	*Supporting the normalisation of the functioning of the euro money market*
6-Month LTRO	20	Apr-08	Aug-11	50	416	181	*Supporting the normalisation of the functioning of the euro money market*
1-Month LTRO	70	Sep-08	Jul-14	135	2599	210	*Supporting the normalisation of the functioning of the euro money market*
1-Year LTRO	4	Jun-09	Oct-11	442	671	1121	*In continuity and consistency with the operations undertaken since October 2008*
3-Year LTRO	2	Dec-11	Feb-12	530	1019	800	*Enhanced credit support measures to support bank lending and liquidity in the Eurozone money market*
Targeted LTRO	8	Sep-14	Dec-16	130	432	306	*Enhance the functioning of the monetary policy transmission mechanism by supporting bank lending to the real economy*
Targeted LTRO II	3 (of a total of 4)	Jun-16	Mar-17	399	507	514	*Strengthening the transmission of the monetary policy by further incentivising bank lending to the real economy*

Source: BCL, ECB

1.1.2.3 The Asset Purchase Programme

On 4 September 2014, the Governing Council decided to start purchasing non-financial securities issued by private sector entities. The new programme encompassed an asset-backed securities purchase programme (ABSPP) and a third covered bond purchase programme (CBPP3) on both the primary and the secondary market.

On 22 January 2015, the Governing Council announced the launch of an expanded asset purchase programme including the purchase of sovereign bonds through the public sector purchase programme (PSPP). This programme was added to the existing private sector asset purchase programmes in order to address the risks of a prolonged period of low inflation. The purchases concern high quality bonds issued by euro area central governments, agencies and European institutions in the secondary market. The purchases of securities issued by central governments and agencies of the euro area are determined based on the shares of the NCBs in the key for subscription to the ECB's capital. Additional eligibility criteria are applied to securities issued by countries under an EU-IMF macroeconomic adjustment programme.

On 3 December 2015, the Governing Council decided to extend the asset purchase programme (APP) until the end of March 2017, or beyond, if necessary. Furthermore, the Governing Council included euro-denominated marketable debt instruments issued by euro area regional and local governments in the list of eligible assets.

At the meeting on 10 March 2016, the Governing Council decided to establish a new programme to purchase investment-grade euro-denominated bonds issued by non-bank corporations established in the euro area, the corporate sector purchase programme (CSPP). The purchases made under this programme are coordinated by the ECB and conducted by six National Central Banks (NCBs) on behalf of the Eurosystem. These are the central banks of Belgium, Germany, Spain, France, Italy and Finland. The purchases started on 8 June 2016. They are part of the asset purchase programme (APP) of the ECB, which includes as of today:

- the third covered bond purchase programme (CBPP3);
- the asset-backed securities purchase programme (ABSPP);
- the public sector purchase programme (PSPP);
- the corporate sector purchase programme (CSPP).

On 10 March 2016, the Governing Council also decided to increase the combined monthly purchases under the APP from € 60 billion to € 80 billion.

On 3 December 2016, the Governing Council decided that the € 80 billion monthly securities purchases should be continued until March 2017.

On 15 December 2016, the Governing Council adjusted the modalities of implementation of the asset-backed securities purchase programme (ABSPP). From 1st April 2017 onwards, the central banks of Germany, Spain, Italy, the Netherlands, Belgium and France will be asset managers.

Table 4:
Oustanding Amounts under the asset purchase programmes as of 31 December 2016 (in € millions)

Asset Backed Securities Purchase Programme (ABSPP)	Covered Bonds Purchase Programme			Public Sector Purchase Programme		Corporate Sector Purchase Programme	Total securities held within the monetary policy framework (APP)
ABSPP	*CBPP*	*CBPP2*	*CBPP3*	*PSPP-Governments Bonds*	*PSPP-Supranationals*	*CSPP*	
22 830	12 789	6 913	203 516	1 114 996	139 639	51 069	1 551 752

Source: ECB

1.1.2.4 The Securities Market Programme

In May 2010, the Governing Council of the ECB launched the Securities Market Programme (SMP).

The objective of this programme was to address the malfunctioning of specific segments of the euro area debt securities markets and to restore an appropriate monetary policy transmission mechanism.

The securities market programme ended in September 2012, following the decision of the Eurosystem to introduce Outright Monetary Transactions (see below).

In order to sterilise the impact of these bond purchases, the Eurosystem conducted specific operations aiming at reabsorbing the liquidity injected through the programme. These liquidity-absorbing operations were suspended in June 2014.

As of 31 December 2016, the total residual outstanding value of the purchases conducted under the Securities Market Programme amounted to € 102.274 billion.

1.1.2.5 Outright Monetary Transactions

On 6 September 2012, the Governing Council announced the programme for Outright Monetary Transactions (OMTs). This programme aims at safeguarding the monetary policy transmission to the economy.

Under the OMTs only the securities issued by countries that strictly adhered to the conditions foreseen in a programme of the European Financial Stability Fund or the European Stability Mechanism (EFSF/ESM), either a macroeconomic adjustment programme or a precautionary programme, can be purchased.

Such transactions would focus on the short end of the yield curve, particularly on government bonds with a maturity between one to three years.

As of 31 December 2016, the OMTs have not been activated.

1.1.3 Management of collateralisation of Eurosystem credit operations

In 2016, the Eurosystem continued its work aimed at enhancing collateral management. This work took in particular place in the COGESI[1], in which the Eurosystem in its capacity as catalyst analyses together with market participants dossiers related to collateral mobilisation. COGESI documents are published on the website of the ECB[2]. Furthermore, in the context of work related to its "Vision 2020", the Eurosystem will reinforce harmonisation of its collateralisation procedures.

1.1.3.1 List of eligible assets

According to Article 18 of the Statute of the ESCB and the ECB, in all Eurosystem credit operations liquidity is provided against adequate collateral.

Each counterparty in the Eurosystem participating in monetary policy operations must provide assets as collateral to the NCB executing the monetary policy operations. These assets have to comply with eligibility criteria specified in the Eurosystem's General Documentation on Eurosystem monetary policy instruments and procedures.

The Eurosystem accepts as collateral marketable and non-marketable assets, including credit claims. The list of eligible marketable assets is published on the ECB's website.

Eurosystem counterparties use different channels and procedures for the mobilisation of eligible assets. The mobilisation of marketable assets requires the use of one or more securities settlement systems. Non-marketable assets are mobilised according to procedures developed by each NCB (domestic mobilisation), or with the intermediation of a correspondent central bank (cross-border mobilisation).

In the course of 2016, the Governing Council took the following main measures relating to eligible assets:

- On 16 March 2016, the Governing Council decided, in application of Article 8(2) of Guideline ECB/2014/31, to lift the suspension of the application of the Eurosystem's minimum credit quality thresholds to marketable debt instruments issued or fully guaranteed by the Republic of Cyprus, with effect from 1 April 2016.

1 COGESI – *Contact Group on Euro Securities Infrastructures* was dissolved and its work has been resumed in 2017 by the new AMI SeCo – *Advisory Group on Market Infrastructures for Securities and Collateral*.

2 http://www.ecb.int.

– On 22 June 2016, the Governing Council decided to restore the eligibility of marketable debt instruments issued or fully guaranteed by the Hellenic Republic for use in Eurosystem credit operations, with effect from 29 June 2016.
– On 4 October 2016, the Governing Council decided to change to the collateral eligibility criteria and risk control measures applicable to unsecured bank bonds. These instruments will remain eligible for use as collateral for the time being, subject to additional risk control measures. In particular, starting from 1 January 2017, the limit for the use of unsecured bank bonds was reduced from 5% to 2.5%.

Further information on this matter is available on the ECB website.[3]

1.2 FOREIGN EXCHANGE RESERVE MANAGEMENT BY THE BCL

The ECB's foreign exchange reserves have been managed in a decentralised way by the national central banks since January 1999. The BCL transferred € 74.6 million in foreign exchange assets to the ECB, in accordance with the ESCB Statute and in line with the BCL's share in the ECB's capital key.

The NCBs' shares in the ECB's capital are calculated using a key reflecting the respective country's population and gross domestic product and are revised every five years and when a new member joins the euro area. The BCL's share in the ECB's capital, which stood at 0.1739% on 1 July 2013, was raised to 0.2030% on 1 January 2014 following the adoption of the euro by Lithuania.

As of 31 December 2016, the total market value of the ECB's reserves (including accrued interest) managed by the BCL corresponded to € 412.5 million. One goal of the foreign exchange reserve management of the ECB is to ensure that the ECB has sufficient available liquidity to intervene in the foreign exchange markets, should the need arise. Security and liquidity are therefore the main priorities of the BCL's foreign exchange reserve management.

For the management of the foreign exchange reserve portfolio, the main task of the BCL is to invest foreign reserves on behalf of the ECB, within the defined risk limits and fluctuation bands, with liquidity as the primary objective.

The amount of passively managed assets in gold is determined by the ECB, taking into account strategic considerations and market conditions.

1.3 MANAGEMENT OF THE BCL'S ASSETS

1.3.1 Conceptual Framework

Objectives of the investment policy

The main objectives of the investment policy are to generate regular income and, over the long term, to achieve positive performance while preserving capital, the value of securities and liquidity. In order to achieve these goals and in accordance with the principle of risk diversification, the BCL implements a coordinated, progressive and proactive investment policy based on modern portfolio theory.

The investment approach incorporates the following:

– the analysis of the global economy and international financial markets;
– an asset allocation process that involves assessing the returns on different international markets;
– the development of a clearly defined strategy;
– the preservation of the asset value by following a risk diversification process and requiring investments to be of a specific quality;
– the application of strict risk control measures.

3 https://www.ecb.europa.eu/press/govcdec/otherdec/2016/html/index.en.html.

Investment decisions are based on technical and fundamental analysis and take into account:

- Market Risk (interest rates, exchange rates, equity prices, commodity prices);
- Credit Risk (minimum credit rating criteria by international rating agencies);
- Liquidity Risk (concentration limits by sector, issuer and issue; efforts to ensure geographic diversification in daily management).

Performance Measurement

The quality of investment decisions is measured by comparing the performance to external benchmarks.

This allows performance attribution to be carried out at all decision-making levels (strategic, tactical) as well as in daily management.

1.3.2 Institutional Structure

Asset management is based on a five-level intervention structure, in addition to risk control:

Level 1: The Council

The Council approves the guidelines of the asset management framework. The Council allowed the BCL to provide asset management services to third parties and to hold its own fund asset portfolios in order to diversify the Bank's income. The guidelines also include a risk mitigation framework applied to asset management.

Level 2: The Executive Board

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

Level 3: The Asset and Liability Management Committee (ALCO)

ALCO determines the strategic benchmark according to the framework fixed annually by the Executive Board. Therefor the impact of each risk profile (market, credit and liquidity risk) which would result from the proposed investment policy is assessed, with regard to both the overall balance sheet as well as the profit and loss account of the BCL. Throughout the year, ALCO regularly evaluates the results of the investment policy.

Level 4: The tactical committees

The tactical committees monitor the evolution of the portfolios on a short-term basis and prepare proposals for tactical benchmarks that comply with the deviation from the strategic benchmark.

The tactical committees consist of the following:

- the *Comité de gestion* for the BCL's own funds;
- the *Comité réserves de change de la BCE* for the pooled reserves of the ECB;
- the *Comité de référence tactique du fonds de pension* for the pension fund of the BCL.

Level 5: The Portfolio Management Team

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

1.3.3 Risk Control

The Risk Management unit monitors the positions of all the portfolios in order to assess risks and to check compliance with the predefined limits. This monitoring is carried out daily and independently from the Front Office. It incorporates traditional portfolio risk measurements such as Value at Risk (VaR) and stress testing.

1.3.4 Portfolio Structure

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

The BCL manages different types of portfolios.

Investment Portfolio

This portfolio invests the own funds of the BCL.

The main goal of the portfolio is to maximise returns within the abovementioned risk limits (see section 1.3.2). As of 31 December 2016, its total market value (including accrued interest) amounted to € 1 714 million.

In 2016, the share of this portfolio invested in fixed income securities with a maturity above three years decreased from 53% to 50%, whereas the percentage of bonds with a one to three year maturity declined from 29% to 19%. Moreover, by the end of 2016, variable rate and fixed rate bonds with a maturity under one year represented 31% of the investment portfolio.

The securities of this portfolio are widely diversified, not only geographically but also in terms of sectors and issuers.

Liquidity Portfolio

This portfolio comprises the other assets that are largely attributable to a Eurosystem arrangement and mirrors TARGET2 accounts as well as other liabilities.

This portfolio aims to increase the revenues of the Bank. The instruments used are mainly fixed income short-term bonds, variable rate bonds and treasury bills, if they comply with strict and predefined rating criteria. As of 31 December 2016, the total market value (including accrued interest) amounted to € 249 million. The part of the portfolio that had been outsourced to an external portfolio manager since 2011 has been integrated again into the internal portfolio management.

Mr Serge Kolb, Executive Director of the BCL

Table 5:
Breakdown of reserves as of 31 December 2015

Maturity	Investment Portfolio	Liquidity Portfolio
<1 year	31%	64%
1-3 years	19%	24%
> 3 years	50%	12%

Domestic Foreign Reserves Portfolio

This portfolio aims to maintain an intervention portfolio in addition to the pooled foreign exchange reserves transferred to the ECB. Thus, the main requirements for this portfolio are security and liquidity. As of 31 December 2016, the total market value (including accrued interest) of this portfolio in foreign currencies amounted to € 167 million.

Pension Fund Portfolio

The management of this Fund is described further in section 2.2.2 of this report.

Foreign Reserves Portfolio of the European Central Bank

The management of this portfolio is described further in section 1.2 of this report.

Third Party Portfolios

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

1.4 BANKNOTES AND COINS

The BCL, in cooperation with the ECB and the other NCBs of the Eurosystem, is in charge of putting euro banknotes and coins into circulation. It contributes to maintain the public's confidence in the common currency by managing the circulation of fiduciary money and fighting against counterfeiting. Through its activities in the field of Luxembourg's numismatics, it supports the promotion of the Grand Duchy of Luxembourg.

1.4.1 Production of banknotes and coins

Within the Eurosystem, euro banknote production is assigned based on a decentralised pooling framework adopted in 2002, in which each NCB of the euro area is responsible for providing a share of the total requirements. Euro banknotes are produced in accordance with the needs identified by each participating NCBs and aggregated by the ECB.

In this context, in 2016 the BCL was responsible for the production of 15.4 million of € 50 banknotes of the Europa series for the Eurosystem (compared to 6.7 million of € 50 banknotes and 12.04 million of € 10 banknotes of the "Europa" series in 2015). The BCL allocated the production of these banknotes via a tender procedure (section 1.4.4. National and international cooperation).

Following an agreement with the State of Luxembourg, the BCL also ensures the production of Luxembourg's euro coins that it puts into circulation. Following a call for tenders, the BCL commissioned the production of 42.5 million coins of the 2016 series to cover the needs of economic agents and numismatists (compared to 43.5 million coins of the 2015 series).

1.4.2 Circulation of banknotes and coins

1.4.2.1 Euro banknotes and coins

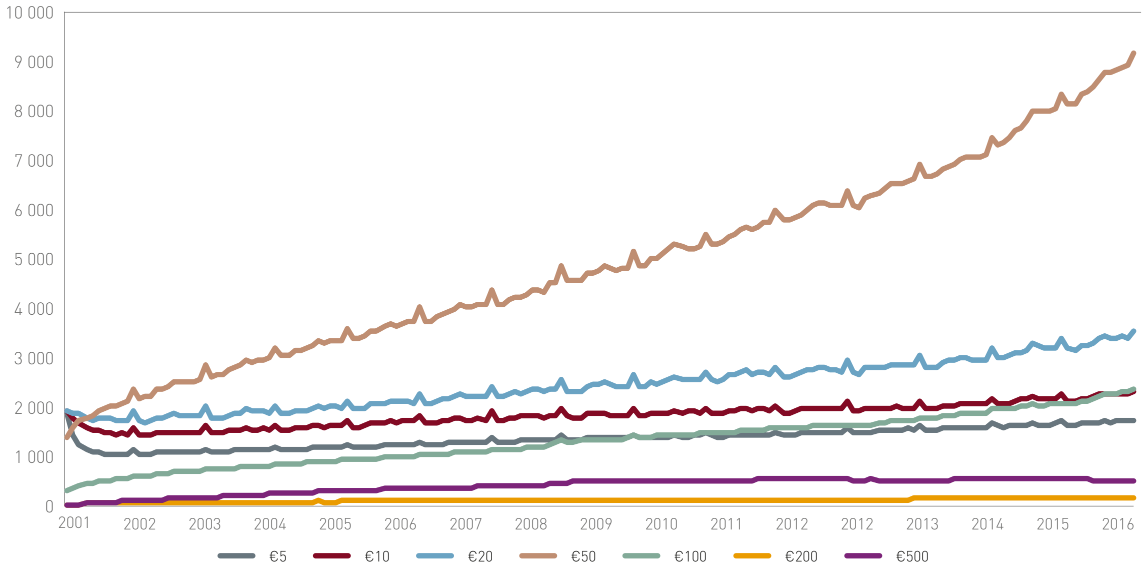
1.4.2.1.1 Banknotes

The total number of banknotes issued by the BCL in 2016 amounted to 6.5 million. The number of € 10 and € 20 banknotes deposited at the BCL exceeds the number of banknotes issued. Financial institutions have indeed deposited a higher amount of these banknotes at the BCL than the amount they withdrew. This can be explained by the numerous € 10 and € 20 banknotes brought in the country from tourists and, particularly, by cross-border workers.

Demand for banknotes in the denomination of € 500 continued to decline. At the European level, the number of € 500 banknotes in circulation diminished after the ECB's announcement in May 2016 of the Eurosystem's decision to stop production of this denomination. This decrease was partly offset by a higher demand for € 200, € 100 and € 50 banknotes. By 31 December 2016, the total number of banknotes put into circulation by the Eurosystem reached 20.2 billion, a growth rate of 7% compared to the previous year.

The graph below illustrates the trends in the evolution of the circulation of the different denominations.

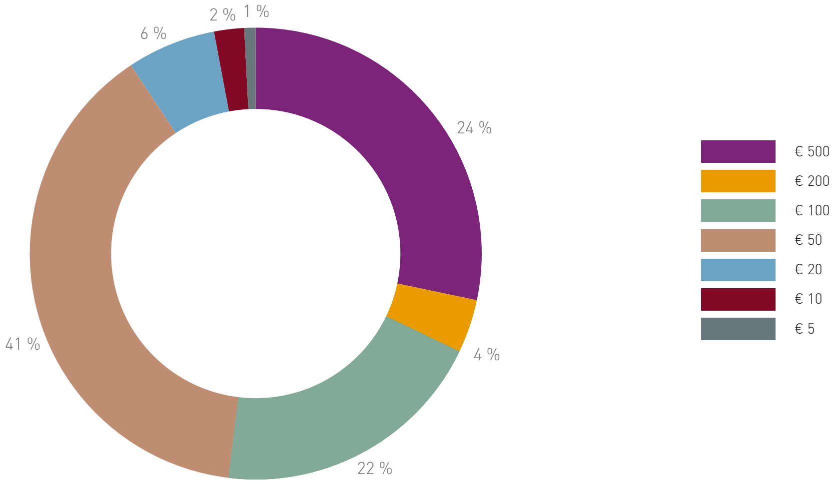
Graph 5:
Denominational breakdown of the number of euro banknotes put into circulation by the Eurosystem since 2002 (in millions of banknotes)



Source: ECB

In value terms, the net issuance of banknotes in Luxembourg grew by € 1.1 billion, a growth rate of 1.1% compared to the previous year. However, at the European level, the net issuance grew by € 42.8 billion, an increase of 3.9%. In the euro area, the total amount in circulation reached € 1 126 billion by the end of 2016. Graph 6 below illustrates the breakdown by denomination.

Graph 6:
Distribution of the value of euro banknotes put into circulation by the Eurosystem by denomination on 31 December 2016



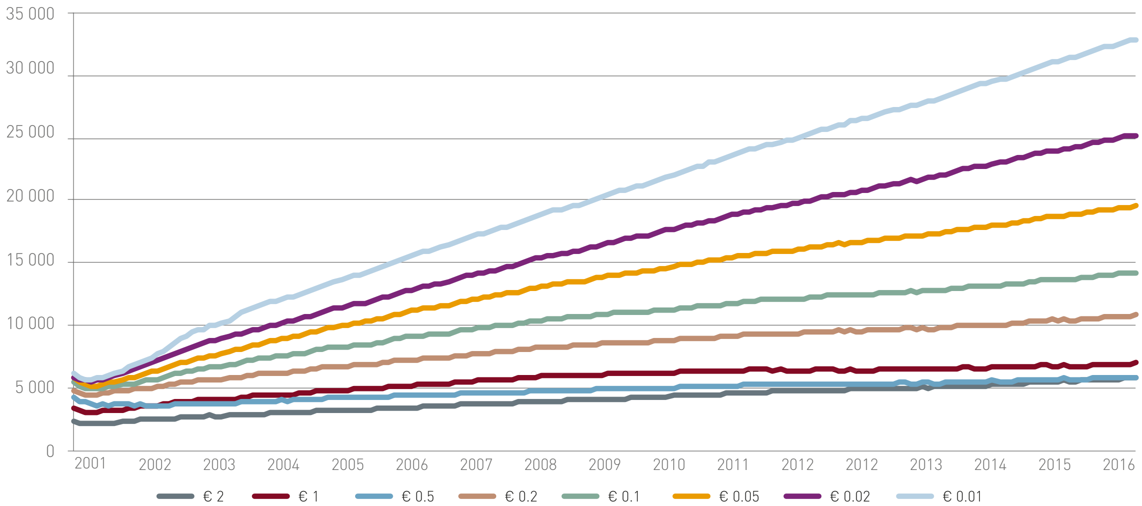
Source: ECB

1.4.2.1.2 Coins

The volume of coins put into circulation in the course of the year 2016 increased by 29.1 million, a growth rate of 3.8%. At the euro area level, the total number of euro coins in circulation grew by 4.1%, reaching 121 billion.

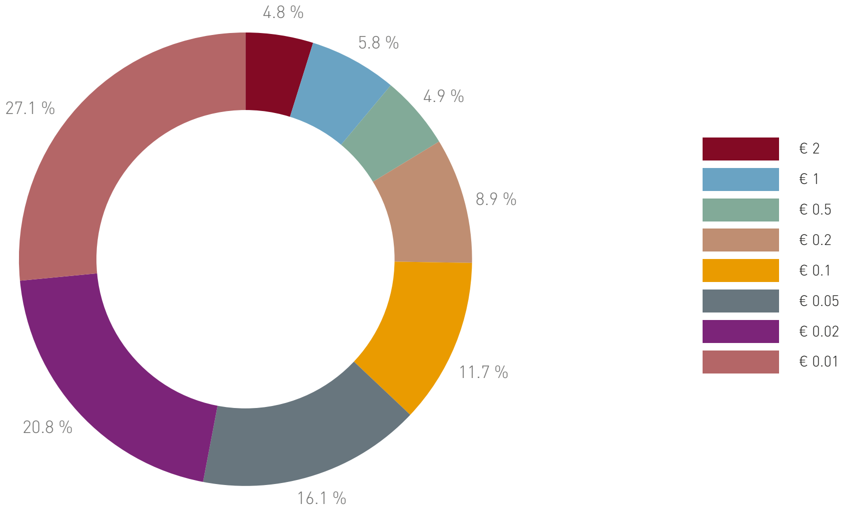
The value of euro coins in circulation in the euro area attained € 26.9 billion, a growth rate of 3.5%. The value of euro coins in circulation in Luxembourg grew by 3.4%, a similar increase to the one observed at the European level.

Graph 7:
Distribution of the number of euro coins put into circulation by the Eurosystem by denomination since 2002 (in millions of coins)



Source: ECB

Graph 8:
Breakdown of the volume of coins of the euro area in circulation by denomination on 31 December 2016



Source: ECB

1.4.2.2 Luxembourg franc banknotes

During the year under review, the total value of Luxembourg franc banknotes issued by the *Institut Monétaire Luxembourgeois* and not yet presented for exchange fell from LUF 203.2 million to LUF 202.7 million, equalling a decrease of 0.25%. Their total value expressed in euro equals 5.0 million.

Table 6:
LUF banknotes in circulation at 31 December 2016

LUF	Number	Value in LUF	Value in EUR
5000	11 017	55 085 000	1 365 521.48
1000	68 519	68 519 000	1 698 541.64
100	791 324	79 132 400	1 961 640.96
	870 860	**202 736 400**	**5 025 704.08**

[1 EUR = 40,3399 LUF]

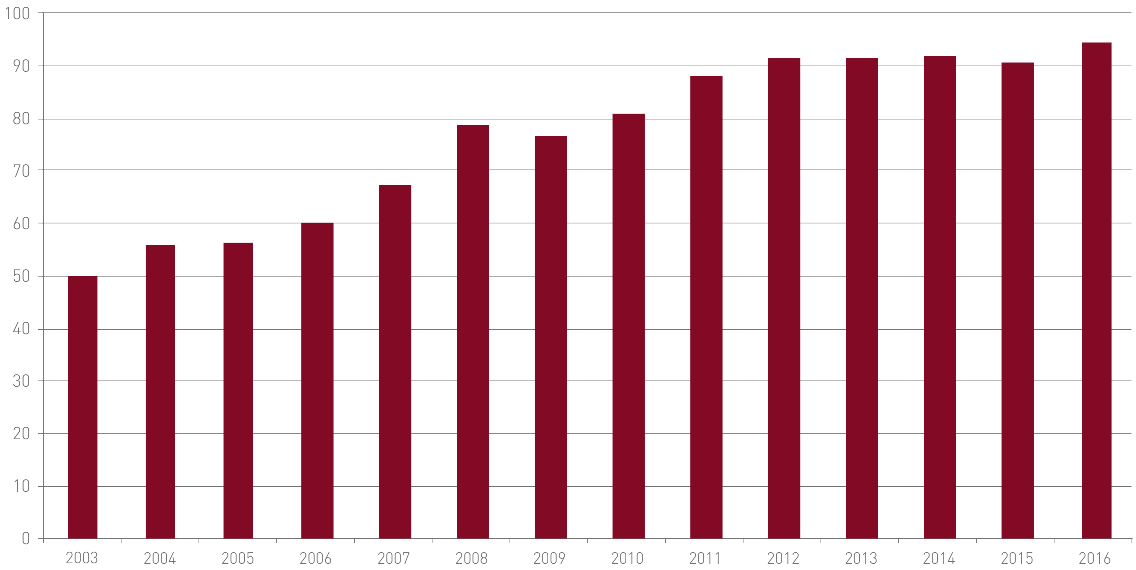
As of end-2004, coins denominated in LUF are neither exchanged nor reimbursed.

1.4.3 Sorting of euro banknotes and coins

The volume of euro banknotes returned by financial institutions to the BCL increased by 4% compared to the previous year, from 91.3 to 94.9 million banknotes. Over the past five years, banknote lodgements made at the BCL have remained above the annual threshold of 90 million banknotes.

The graph below describes the evolution of these lodgements at the BCL since 2003.

Graph 9:
Lodgements of euro banknotes by financial institutions at the BCL (in millions of banknotes)



Source: BCL

The lodged banknotes were processed with the help of banknote sorting machines that are capable of verifying the authenticity and fitness of circulation of each banknote. 10.5 million banknotes of all denominations (12.8 million in 2015) were destroyed because they were unfit for circulation, which amounts to a destruction rate of 10.6%, compared to 14.0% in the previous year. This rate shows a wide variation between the denominations processed: it ranged from 8.2% for the € 500 banknote to approximately 20% for the € 20 banknotes, due to the introduction of the banknotes of the Europa series and the systematic destruction of the banknotes of the first series.

1.4.4 National and international cooperation

In the fight against counterfeiting of euro banknotes and coins, the BCL closely cooperates with the ECB and the national authorities in charge. For the analysis of counterfeit and mutilated euro banknotes and coins, the BCL has been collaborating with the Banque de France and the Deutsche Bundesbank since 2002.

The BCL also collaborates with eight other NCBs (the national central banks of Belgium, Cyprus, Estonia, Finland, Ireland, Latvia, Malta and the Netherlands) in the management and maintenance of the CashSSP[4] application. This system allows the BCL not only to manage its banknote and coin stocks and to monitor its sorting activity of fiduciary money, but also to obtain, in a secured manner, the deposit and withdrawal announcements of local commercial banks.

The BCL has pooled its share of banknotes to be produced for the Eurosystem with seven other Eurosystem NCBs (the central banks of Cyprus, Estonia, Finland, Malta, the Netherlands, Slovakia and Slovenia) for several years. The objective of the pooling is to share the resources and experience necessary for monitoring the production of banknotes.

4 Cash Single Shared Platform

1.4.5 Issuance of the new Europa banknote series

The new Europa banknote series, which is based on the theme of "Ages and styles in Europe" like the first series, is issued in a progressive manner: The new series' first banknote, the € 5, was put into circulation on 2 May 2013, followed by the € 10 on 23 September 2014 and on 25 November 2015 by the one of € 20. Unveiled to the public on 5 July 2016, the new € 50 banknote is scheduled to be put in circulation on 4 April 2017.

In 2016, the Governing Council of the ECB concluded a review of the denominational structure of the Europa series. It decided to stop permanently the production of the € 500 banknote and to exclude it from the Europa series, taking into account the concerns that this banknote could facilitate illicit activities. The issuance of the € 500 banknote will be discontinued around the end of 2018, when the € 100 and € 200 notes of the Europa series are planned to be introduced. The other denominations, from € 5 euro to € 200 euro, will remain in place. The end of the legal tender status of the first series will be announced in due course. Banknotes of the first series will remain redeemable at the NCBs with no time limit.

New or improved security features have been incorporated into banknotes to ensure maximum protection against counterfeiting and to enable the public to distinguish quickly a genuine banknote from a counterfeit.

1.4.6 Numismatic issues

The BCL issues numismatic products on the theme of the Grand Duchy's history and culture. Through its numismatic premises, more than 1 500 sales transactions were completed in 2016. Around 3 000 parcels were sent out, corresponding to sales made through traditional mail or via the Internet shop of the BCL (https://eshop.bcl.lu).

In 2016, the BCL issued the following numismatic products:

- a € 2 commemorative coin dedicated to the 50th anniversary of the inauguration of the bridge *Grande Duchesse Charlotte*;
- the 2016 Brilliant Uncirculated set comprising Luxembourg's euro coins of the 2016 series (including the € 2 commemorative coin);
- the 2016 proof set composed of nine coins;
- a fair trade gold coin dedicated to *D'Maus Ketti*;
- a silver-niobium coin dedicated to the castle of Clervaux and constituting the eighth element of the series commemorating Luxembourg's castles;
- a silver-Nordic gold coin dedicated to the cornflower and constituting the eighth element of the series commemorating Luxembourg's fauna and flora;
- a Nordic gold-silver coin dedicated to the *Musée d'Art Moderne Grand-Duc Jean* (MUDAM) and constituting the first element of the series commemorating examples of remarkable architecture in Luxembourg.

1.5 STATISTICS

The BCL develops, collects, compiles and disseminates a wide range of statistics that allow it to fulfil its legal obligations within the European System of Central Banks (ESCB), the European Systemic Risk Board (ESRB) as well as at the national level. This information is also used by other national institutions such as the Institut National de la Statistique et des Etudes Economiques (STATEC) and the Commission de Surveillance du Secteur Financier (CSSF) for the fulfilment of their respective missions.

Overall, during the year 2016, statistics were provided on time and significant efforts were made to improve the statistics published by the BCL. In addition, in parallel with this work, the BCL collected and compiled the data that is necessary for the performance of its tasks in the areas of monetary policy and financial stability.

As part of the cooperation agreement between BCL and STATEC, the BCL has been producing quarterly financial accounts statistics (with the exception of data on the public sector) since March 2013.

In the framework of a tripartite cooperation agreement between the ECB, the European Stability Mechanism (ESM) and the BCL, the latter has undertaken to compile macroeconomic aggregates based on the accounting data transmitted by the ESM. These statistical data are necessary for the ECB to compile aggregates of the euro area, with the ESM being considered as a financial company residing in the euro area.

In 2014, the People's Bank of China (PBC) and the BCL signed a Memorandum of Understanding (MoU) to establish cooperation between the two institutions in terms of oversight, exchange of information and assessment of the renminbi market. Under this agreement, the BCL monitors developments in this market and provides regular information to the PBC.

The BCL was once again involved in the triennial survey of the global foreign exchange and derivatives market organised by the Bank for International Settlements (BIS). The main purpose of this survey is to obtain internationally comparable information on the size and structure of the foreign exchange and derivatives market, as well as on the activities in these markets. The purpose of these statistics is to improve market transparency and to help central banks, public authorities and market participants to better understand the activity of the global financial system.

The BCL also contributed to the data collection in a second round of longer-term refinancing operations. In Luxembourg, the participating banks concerned have submitted duly completed reports to the BCL.

In addition, the BCL transposed the revision of the standard deduction from the reserve base and the amendment of the Regulation on the application of minimum reserves. In 2016, the standard deduction from the reserve base for debt liabilities of up to two years was reduced from 30% to 15%. The revised regulation on the application of minimum reserves further specifies the method used to apply the standard deduction to exclude interbank liabilities from the reserve base. It is worth recalling that data on the amounts to be deposited by each bank under the reserve requirements are collected through the monthly statistical balance sheet of credit institutions.

Since 2012, the BCL has been collecting statistics on payment and payments instruments. Some of these data are aggregated and transmitted to the ECB. The collected data include information on the use of the different payment instruments in force in Luxembourg as well as the use of different settlement channels. Payments made in electronic money are also covered by the data collection.

Finally, based on the cooperation agreement in the field of statistics on government finance, STATEC and the BCL are working together to improve data exchange between the two institutions.

1.5.1 New statistical data collections

In 2016, the BCL collected new statistical data on insurance companies in accordance with Regulation ECB/2014/50 on statistical reporting requirements for insurance companies. These data, which cover the first two quarters of 2016, are currently being analysed and aggregated for future publication.

1.5.2 Other statistical developments

In May 2016, the Governing Council of the ECB adopted Regulation ECB/2016/13 on the collection of granular credit and credit risk data with the objective of establishing a granular database (AnaCredit) with harmonised data on credit and credit risk. From the end of 2018, AnaCredit will provide granular "loan by loan" information on credit to corporations and other legal entities (except natural persons) granted by euro area banks and their foreign branches.

In June 2016, the ECB adopted Decision ECB/2015/50 amending Decision ECB/2010/10 on non-compliance with statistical reporting requirements for investment funds and securitisation vehicles. As a result, the BCL and the ECB have established a compliance check regarding the minimum statistical reporting standards by implementing a database containing all infringements that have been identified throughout the month of production.

In August 2016, the ECB amended the Regulation on securities holding statistics in order to collect additional accounting and credit risk attributes from banking groups. In addition, the list of banking groups subject to data collection has been extended to all significant groups that are directly supervised by the ECB. Furthermore, the amended guideline establishes a framework for data quality management.

The BCL publishes on its website a large number of statistics relating to the financial sector and provides STATEC with some of the data required under the Special Data Dissemination Standard of the International Monetary Fund (IMF).

In 2016, several changes were implemented in order to meet the public's growing demand for statistical series and to improve the information available to users, in particular as far as credit institution data are concerned.

Finally, the BCL continued its efforts to make the statistics more accessible and user-friendly, in particular by improving its statistical press releases on banking activity with the aim of providing more detailed information on the evolution of bank credit.

1.6 PAYMENTS AND SECURITY SETTLEMENT SYSTEMS

1.6.1 TARGET2-LU

Since 19 November 2007, the real-time gross settlement system (RTGS) TARGET2 runs on the Single Shared Platform (SSP) operated in common by 25 central banks of the ESCB. Twenty of these central banks are from the Eurosystem.[5]

At end-2016, the Luxembourgish component TARGET2-LU counted 41 direct participants (four more than in 2015), 37 indirect participants (one less than in 2015) and four ancillary systems (one more than in 2015).

Domestic payments

In 2016, participants in TARGET2-LU exchanged a monthly average of 20 802 payments (against 19 866 in 2015) for a value of € 83.2 billion -against € 75.1 billion in 2015. Of these payments, 12 588 or 60.5% were retail payments. Their value represented a monthly average of € 6.0 billion or 7.2 % of the domestic value exchanged.

In TARGET2-LU, after the strong decline recorded in 2014 (-12.8%) due to the migration to SEPA[6] volumes stabilised in 2015 (+0.01%) and 2016 (+0.05%).

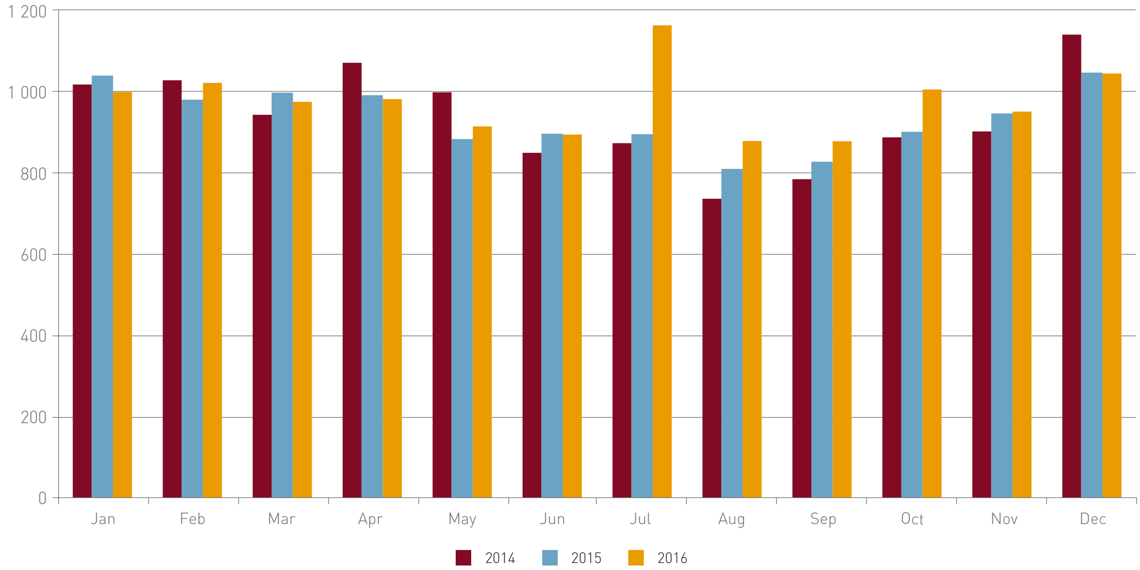
In parallel, the domestic value exchanged increased by 10.8 % in 2016. This augmentation is due to a slight decrease in interbank payments (-6.8 %) whereas retail payments rose by 10.6 % in the meantime.

Chart 10 illustrates the developments in average daily volumes in domestic payments.

5 The 25 central banks include: the ECB and the 19 NCBs plus five central banks of EU countries which have not (yet) adopted the euro (Bulgaria, Croatia, Denmark Poland and Romania).

6 *Single Euro Payments Area.*

Graph 10:
Domestic payments: average daily volumes



Source: CRAKS1/TARGET2

Cross border payments

In 2016, participants in TARGET2-LU sent a monthly average of 100 857 payments to other countries of the EU (93 894 payments in 2015), an increase of 7.4%. During the first three quarters of 2016, monthly averages increased by 16.9% relative to the corresponding period of 2015 but they declined by 14.7% during the final quarter. The average value increased by 20.2% to € 657 billion (€ 547 billion in 2015).

The volume of retail payments increased by 4.4% to reach 51 665 payments, representing 51.2% of total cross border volume. This rate of increase is substantially lower than in 2015 (+29.4%). The relative part of retail payments declined by 1.5% in 2016 whereas it grew by 3.2% in 2015. The volume of interbank payments increased by 10.7%, thus reaching a monthly average of 49 187 transactions in 2016, compared to 44 418 in 2015.

In value terms, the average monthly retail payments increased by 3.2% to an average of € 39.9 billion, representing 6.1% of the total value exchanged. The value of monthly interbank cross border payments increased by 21.5% to € 617.3 billion.

Globally, outward cross border payments[7] increased by 7.4% in volume terms in 2016, mainly thanks to the transactions of the new participants. In value they increased by 20.2% over one year. The average value per transaction sent was € 6.5 million (against € 5.8 million in 2015). The average value of an interbank payment increased from € 11.4 million in 2015 to € 12.6 million in 2016.

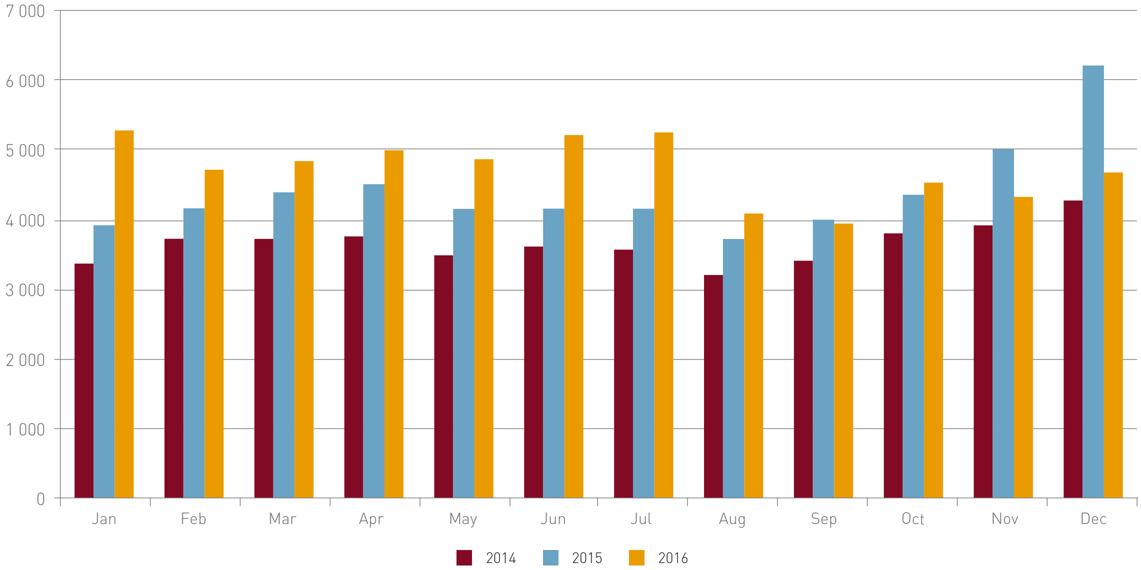
In 2016, participants in TARGET2-LU received 84 363 payments on average per month from abroad[8] against 86 044 in 2015 (-2.0%). Participants issued 121 995 payments on average per month in 2016 against 113 766 in 2015 (+7.2%). The average value of incoming payments was € 723.0 billion or 2.4% lower than the value sent (€ 740.4 billion).

Charts 11 and 12 display the development of average daily volumes and values in cross border payments sent by Luxembourgish participants.

7 From the central bank of Luxembourg to the other 24 participating central banks.

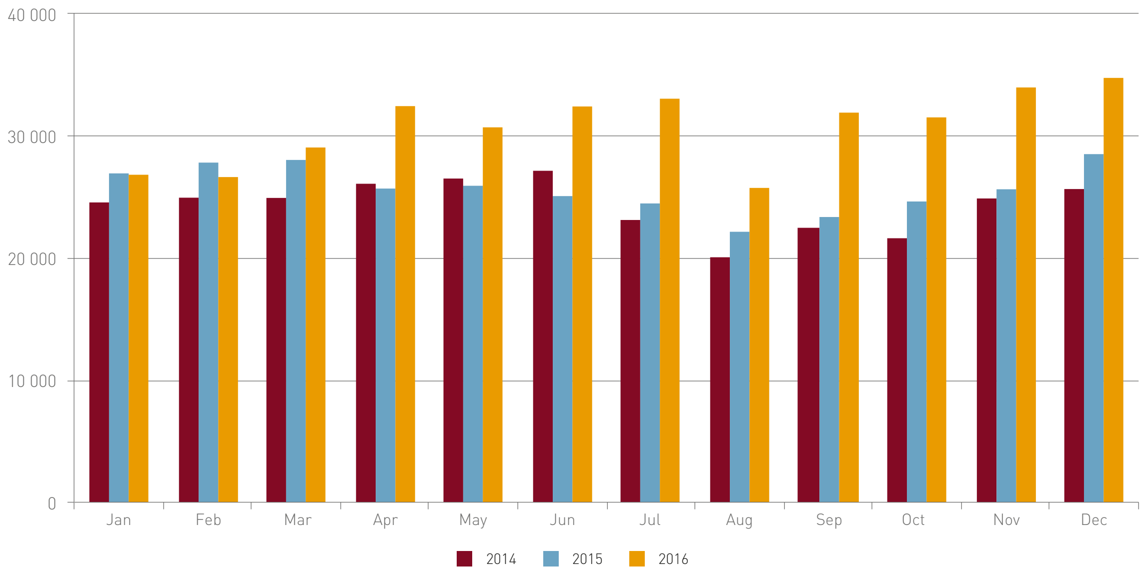
8 "Abroad" refers to the other 24 participating central banks.

Graph 11:
Outward cross border payments: average daily volumes



Source: CRAKS1/TARGET2

Graph 12:
Outward cross border payments: average daily values (in € millions)



Source: CRAKS1/TARGET2

Aggregated figures of domestic and cross border payments

The total number of outward payments issued by participants in TARGET2-LU in 2016 amounted to 1 459 906 (a yearly increase by 9.6%). Of these payments, 771 036 or 53% were retail payments.

Table 7 provides an overview of average daily volumes of payments over one year since 2013.

The average monthly value of all outward payments in 2016 was € 740 billion of which 6.2% were retail payments. Similar to the previous three years, the value of 83.3% of these payments was below € 250 000.

On average, 76.2% (77.1% in 2015) of the retail payments and 83.1% (82.8% in 2015) of the interbank payments were settled each day before noon. They represented 56.3% and 77.9% of the respective values.

Table 7:
Volumes of outward sent payments in daily averages

	Domestic		Cross border sent		Total sent	Cross border received	
	Volume	(% volume sent)	Volume	(% volume sent)	Volume	Volume	(% volume sent and received)
2013	1 067	(25.1)	3 179	(74.9)	4 246	2 497	(37.0)
2014	929	(20.4)	3 636	(79.6)	4 565	2 694	(37.1)
2015	931	(17.5)	4 401	(82.5)	5 333	3 102	(36.8)
2016	973	(17.1)	4 719	(82.9)	5 692	2 968	(34.8)
Variation 2015-2016	+ 4.5 %		+ 7.2 %		+ 6.7 %	- 4.3 %	

Source: BCL

TARGET2-LU compared to other systems participating in TARGET2

All national RTGS systems participating in TARGET2 transferred a monthly average of 7.33 million payments in 2016, approximately the same amount as in the previous year. Luxembourg's portion represented 1.7% of this volume (1.6% in 2015). The average monthly value exchanged summed up to € 38 301 billion (€ 41 236 billion in 2015). Luxembourg's share of the exchanged value was 1.9% (1.5% in 2015).

Since 2013, 62% of all payments in the national RTGS system which relied on TARGET 2 were domestic transactions. The part of interbank payments decreased by 15% to attain 29%. In TARGET2-LU, domestic payments represented 17.1% (17.5% in 2015) and interbank payments 46.9% of the volume (45.8% in 2015).

The average value of a TARGET2 payment amounted € 5.0 million in 2016 (€ 5.6 million in 2015). In TARGET2-LU, this value was € 6.1 million (€ 5.5 million in 2015).

The maximum daily number of outward payments in TARGET2 was 533 100 (30 June 2016). In 2015, the maximum amount of transactions was 512 422 (on 7 April 2015). For Luxembourg, the maximum daily amount was reached on 28 July 2016 with 10 433 payments. In 2015, the maximum was reached on 22 December with 9 578 outward payments.

Availability and performance of TARGET2

The availability of the TARGET2 platform, and hence of TARGET2-LU, was 100% in 2016, up from 99.99% in 2015. The SSP received a daily average of 360 862 payment instructions, 2.88% more than in 2015. Of all the instructions during 2016, 99.81% (99.95% in 2015) were settled within five minutes and 0.19% within 10 minutes after reception.

1.6.2 Retail payments in Luxembourg

Next to notes and coins, the most used payment instruments in Luxembourg are payment cards, credit transfers and direct debits.[9] Network-based electronic money, which is issued and operated by credit institutions or electronic money institutions, is mainly used for remote payments. As in 2015, new actors in the field of mobile and Internet payments emerged in Luxembourg. Several banks in Luxembourg offer

9 Cheques are no longer daily payment instruments; their use is declining.

mobile-based person-to-person (P2P) payments. The main card issuers furthermore pursued the issuance of contactless credit cards, now extended to debit cards.

Distribution of payment instruments in Luxembourg (share in number of transactions, %)

	2015	2016
Credit transfers and standing orders	31.69	30.58
Direct debits	8.36	8.11
Debit cards	32.66	32.21
Credit cards	27.17	28.99
Cheques	0.12	0.11
Total	100	100

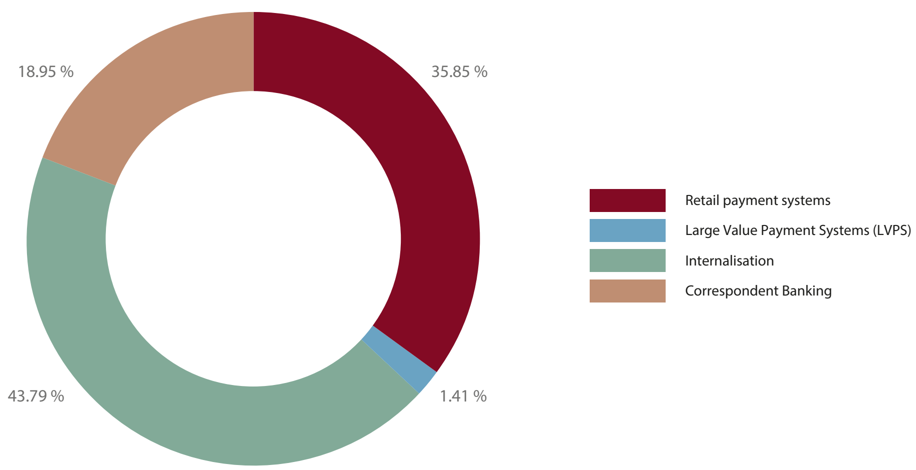
Source: BCL

Credit transfers and standing orders

Credit transfers can be processed internally in banks, through a payment system or through correspondent banking agreements.

Banks in Luxembourg process the majority of their non-internal credit transfer and standing order transactions (domestic[10] and cross-border) through retail payment systems (please refer to the chart below).

Graph 13:
Share in volume of customer transfers in 2016
Distribution per settlement channel



Source: BCL

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

The table below provides a summary – in volume and value - of the customer credit transfers and standing orders activity:

Credit transfers sent	2015	2016	Change (%)
Total volume of customer transfers (in millions of transactions)	72.31	72.78	0.65
Volume of customer transfers processed for the account of non-MFI customers[9] (in millions of transactions)	69.28	70.50	1.76
Average value of customers transfers[10] (in euro)	3 647	3 791	3.95

Source: BCL

In 2016, banks in Luxembourg executed 72.78 million credit transfers, of which 70.50 million on request of customers that are not monetary financial institutions[13].

Transactions settled in retails payment systems (e.g. Step2, Equens) provide a good indicator of the use of credit transfers by households and non-financial corporations. In 2016, the average value of these transfers amounted to € 3 791.

Direct debits (SEPA and non-SEPA)

SEPA direct debits in Luxemburg are mainly processed in retail payment systems.

Direct debits (SEPA and non-SEPA)

	2015	2016	Change (%)
Volume (in millions of transactions)	18.25	19.30	5.75
Value (in € millions)	8 490	9 896	16.56

Source: BCL

Payment cards in Luxembourg

Banks and other categories of payment services providers in Luxembourg issue debit and credit cards in international schemes.

The payment cards activity in 2016 and its annual evolution are detailed in the tables below[14].

Number of payment cards issued in Luxembourg

Volume (number of cards)	2015	2016	Change (%)
Debit cards	698 148	711 993	1.98
Credit cards	1 453 576	1 582 550	8.87[13]

Source: BCL

11 MFI = Monetary Financial Institution. The non-MFIs category includes corporates and households but also non-monetary investment funds.

12 It refers to the average value of credit transfers processed in the retail systems Step2 and Equens.

13 This category includes non-financial corporations and households but also non-monetary investment funds.

14 Payments transactions and ATM withdrawals.

15 This increase corresponds to the evolution of one financial institution's activity.

Transactions on cards issued in Luxembourg[16] (issuing activity)

Volume (in millions of transactions)	2015	2016	Change (%)
Debit cards	71.91	76.66	6.61
Credit cards	59.44	68.98	16.05

Value (in € billions)	2015	2016	Change (%)
Debit cards	5.65	5.90	4.42
Credit cards	5.66	6.22	9.89

Source: BCL

Transactions in Luxembourg on cards issued in Luxembourg or abroad[15] (acquiring activity)

Volume (in millions of transactions)	2015	2016	Change (%)
Debit cards	53.71	55.45	3.24
Credit cards	22.12	23.18	4.79

Value (in € billions)	2015	2016	Change (%)
Debit cards	4.03	4.22	4.71
Credit cards	1.81	1.90	4.97

Source: BCL

The Single Euro Payments Area (SEPA)

The SEPA (Single Euro Payments Area) project aims at achieving a single euro payment area in which all scriptural payments are treated as domestic, without any distinction between national and cross-border transactions. The SEPA migration of credit transfers and direct debits was finalised on 1 August 2014 in euro area countries.

Follow-up monitoring is necessary, however, to ensure the implementation of harmonised processes and common standards. In December 2013, the ECB created the Euro Retail Payments Board (ERPB) as a replacement for the SEPA Council to monitor the finalisation of the SEPA migration. Taking a broader perspective, the objective of the ERPB is to contribute to and to facilitate the development of an integrated, innovative and competitive market for euro retail payments. The current work plan includes instant payments[18], person-to-person mobile payments, contactless payments at point-of-sales, e-invoicing related to retail payments and payment initiation services.

1.6.3 Securities settlement systems

Selection of eligible depositories

For the mobilisation of securities by its counterparties, the Eurosystem has selected eligible securities settlement systems (SSS) operated by central securities depositories (CSDs). A securities settlement system is eligible if, after assessment against the evaluation criteria established by the Eurosystem (user standards), it receives the approval of the Governing Council.

In Luxembourg, the systems operated by Clearstream Banking S.A. (CBL), VP LUX S.à.r.l. (VP LUX), and by LuxCSD S.A. (LuxCSD) are eligible for the mobilisation of securities by Eurosystem's counterparties.

A domestic mobilisation of securities is also possible via the triparty collateral management service operated by Clearstream Banking S.A. Detailed information on this topic is available on the website of the BCL.

16 Transactions in Luxembourg and abroad.

17 Activity of Luxembourgish acquirers only. Data on the activity of foreign acquirers in Luxemboourg are not available.

18 In particular, instant SEPA credit transfers whereby the beneficiary can dispose of the funds within seconds of the initiation of the transfer.

The assessment framework

The Eurosystem applies a framework for the assessment of securities settlement systems and links between these systems. This framework relies on two assessments, on the assessment performed as "overseer of systems" and the one performed as "user of systems". These two assessments are complementary, which means that the user assessment does not reconsider aspects that were rated as satisfactory in the evaluation performed by overseers. The framework rationalises the assessment, and continues to ensure a high level of protection of the Eurosystem in its credit operations.

The framework has been applied since 2014. More detailed information as well as the questionnaires for securities settlement systems and their links are available on the website of the ECB.

Cross-border use of securities

Besides using eligible securities held at the national depository, counterparties can receive credit from their national central bank by providing collateral issued in a depository located in another country of the euro area. The Eurosystem foresees two ways of using securities cross-border.

The counterparties can make use of:

- the Correspondent Central Banking Model, or
- links established between depositories' securities settlement systems.

1) The Correspondent Central Banking Model

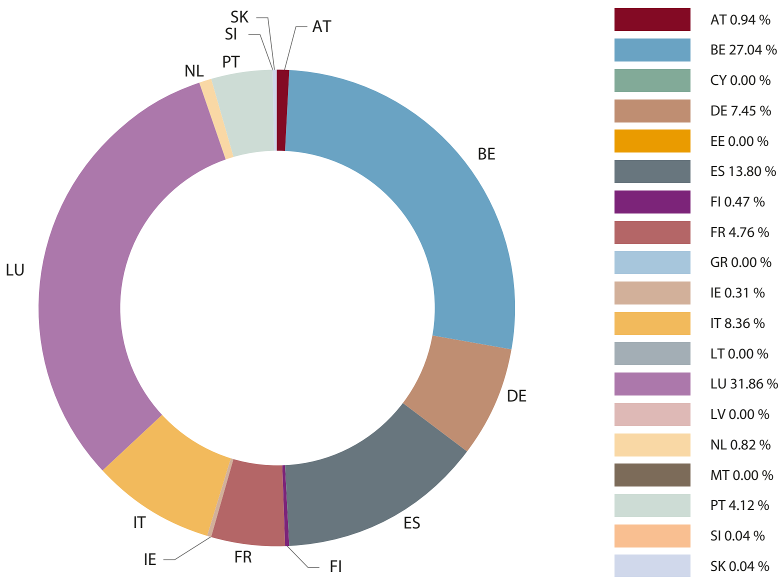
The Correspondent Central Banking Model (CCBM) enables all counterparties of the Eurosystem to use securities on a cross-border basis even if there is no eligible link between the national depository and the foreign depository in which the counterparty holds securities.

In the CCBM each national central bank acts on behalf of the other central banks as a custodian for securities held at the national depository. This procedure involves a central bank called the correspondent central bank (CCB), which differs from the central bank granting the credit to the counterparty. The CCB holds the account at the CSD in which the deposited securities are registered. Moreover, the home central bank (HCB) grants the credit to its counterparty based on the confirmations it receives from the CCB.

The CCBM is also used for the cross-border mobilisation of securities via the triparty collateral management services offered by several CSDs of the euro area amongst which also are Clearstream Banking S.A., Clearstream Banking Frankfurt (CBF), Euroclear Bank in Belgium, Euroclear France and Monte Titoli in Italy.

While in Luxembourg counterparties use more links than the CCBM, at the Eurosystem level half of the cross-border mobilisation of collateral used in Eurosystem credit operations in 2016 was performed via CCBM. In terms of value, the most active correspondent central banks in 2016 were those of Luxembourg (31.86%), Belgium (27.04%), Spain (13.80%) and Italy (8.36%).

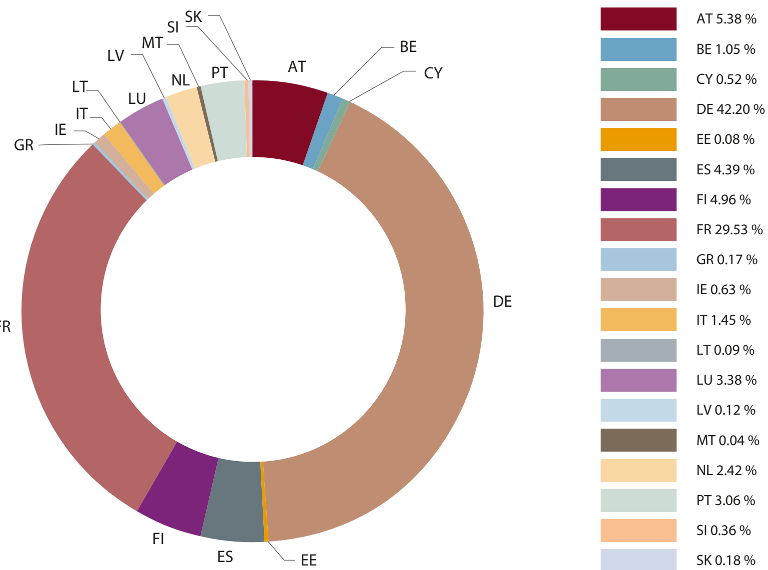
Graph 14:
Correspondent central bank (CCB) 2016



Source: ECB

The most active home central banks were those of Germany (42.20%), France (29.53%), Austria (5.38%) and Finland (4.96%).

Graph 15:
Home central bank (HCB) 2016



Source: ECB

2) Links established between securities settlement systems of CSDs

Currently two types of links are eligible, direct links and relayed links:

- in a securities settlement system located in a given country, direct links make securities issued in the system of another country available, thanks to securities accounts that the two systems maintain with each other;

- relayed links enable the transfer of securities between two systems without bilateral relationship by using a third intermediary system.

Mr Pierre Beck, Executive Director of the BCL

Eligibility of each link requires prior approval by the Governing Council. In 2016, Luxembourg counterparties could use the direct links between CBL and Clearstream Banking A.G. Frankfurt (CBF), Euroclear Bank, the SSS operated by the National Bank of Belgium, Monte Titoli (Italy), OeKB (Austria), Euroclear Netherlands, Euroclear Finland, Euroclear France, KDD (Slovenia), BOGS (Greece), CDCP (Slovakia), VP LUX and VP SECURITIES (Denmark), as well as the relayed link between CBL and Maltaclear via CBF. Among these links, Luxembourg counterparties primarily used those with CBF, Euroclear France and Monte Titoli. Moreover, the direct link between LuxCSD and CBL as well as eight relayed links of LuxCSD were considered eligible for Eurosystem credit operations.

1.6.4 TARGET2-Securities

TARGET2-Securities (T2S) is a centralised platform delivering harmonised clearing and settlement services to market participants. It allows the settlement of domestic and cross borders securities transactions in central bank money, in euro or in other currencies.

The T2S platform encompasses both the securities accounts managed by the CSDs (Central Securities Depositories) and the dedicated cash account (DCA) hosted by the central banks. The DCAs are used to provide the liquidity necessary to settle the securities purchase transactions on T2S and to receive the cash proceeds resulting from the settlement of transactions. The DCAs are funded by the RTGS account they are associated with. For euro payments, the RTGS account is a TARGET2 account.

The settlement efficiency has been improved on T2S thanks to several mechanisms, including the auto-collateralisation service, which is a credit operation automatically triggered when a participant fails to settle a securities purchase transaction because of a lack of cash on its DCA. In this case, T2S will in a first instance identify eligible collateral, either by making a selection among the assets available on the participants' securities account (auto-collateralisation "on stock"), or by using the very securities that are being purchased via this transaction (auto-collateralisation "on flow"). T2S will then pledge these securities in favour of the central bank, in exchange of an equivalent intraday credit facility.

The implementation of T2S has been organised in waves, each of these grouping a series of centralized securities depositaries (CSDs). Since the first migration wave the national central banks have had, the obligation to deliver DCAs to their participants upon their request.

The T2S technical platform went live in June 2015, as the first migration wave took place. Since then, the BCL has been delivering DCAs to the Luxembourg participants upon request.

As the third wave took place, in September 2016, the BCL contributed to the migration of VP Lux (one of the two Luxembourg based CSDs) and supported the participants who requested the opening of a DCA in view of this wave.

The BCL also worked towards the activation of the auto-collateralisation services (briefly depicted in the previous paragraph) in view of the fourth T2S migration wave, scheduled in February 2017. The second Luxembourg CSD, LuxCSD, is to be migrated onto the T2S platform during this wave.[19]

The following table provides an overview of the CSDs composition in the respective migration waves[20].

WAVE 1 22 June 2015	WAVE 1b 31 August 2015	WAVE 2 28 March 2016	WAVE 3 12 September 2016	WAVE 4 6 February 2017	FINAL WAVE 18 September 2017
Bank of **Greece** Securities Settlement System (BOGS) SIX SIS Ltd (**Switzerland**) CSD: Depozitarul Central S.A. (**Romania**) **Malta** Stock Exchange	Monte Titoli S.p.A. (**Italy**)	Interbolsa (**Portugal**) National Bank of **Belgium** Securities Settlement System (NBB-SSS)	Euroclear ESES (**France, Netherlands, Belgium**) VP LUX S.à.r.l. (**Luxembourg**) VP Securities A/S (**Denmark**)	Clearstream Banking A.G. (**Germany**) LuxCSD S.A. (**Luxembourg**) Központi Elszámolóház és Értéektár Zrt. - KELER (**Hungary**) Österreichische Kontrollbank Aktiengesellschaft (**Austria**) KDD - Centralna klirinško depotna družba, d.d. (**Slovenia**) Centrálny depozitár cennych papierov SR, a.s. (**Slovakia**)	Iberclear - BME Group (**Spain**) Euroclear **Finland** Oy 3 Baltic CSDs: LCD - Latvijas Centrālais depozitārjis (**Latvia**); Lietuvos centrinis vertybinių popierių depozitoriumas (**Lithuania**); ASEesti Väärtpaberikeskus (**Estonia**)

1.6.5 LuxCSD

LuxCSD, Luxembourg's central securities depository was jointly created by the BCL and Clearstream International on the basis of an equal shareholding in 2010. It provides securities settlement services in central bank money.

The Clearstream Group is the operator of LuxCSD, allowing it to benefit from operational synergies and a functional IT platform.

LuxCSD provides the following main services:

- the settlement of securities transactions in central bank money;
- the settlement of transactions free of payment;
- direct settlement against Clearstream Banking Luxembourg counterparties or against counterparties in domestic markets;
- securities issuance services with settlement in central bank money or free of payment;
- securities custody services;
- the routing of orders in investment fund shares;
- issuance of LEI[21] (Legal Entity Identifier) for Luxembourg legal entities;
- a national access point to T2S since 6 February 2017.

Securities eligible in LuxCSD are debt securities, equities or investment fund shares, whether they are domiciled in Luxembourg or not.

19 The fourth migration wave was successfully completed during the first week end of February (4 and 5 February 2017)

20 This table illustrates the migration waves composition as of 31 December 2016. Since then the Finnish CSD has announced it will not migrate during the final wave. A new migration date is still to be defined.

21 *The LEI is a unique and global identifier that unambiguously identifies legal entities (other than physical persons) engaged in financial transactions.*

Following its positive assessment as being compliant with the Eurosystem's User Standards and accordingly its qualification as eligible infrastructure for the use of collateral in Eurosystem credit operations, Luxembourg counterparties can use LuxCSD and its links approved by the Eurosystem for collateralisation of their credit operations with the Eurosystem. The approved links of LuxCSD are those with Clearstream Banking S.A., as well as the relayed links with the CSDs of Germany, Austria, Belgium, France, Greece, Italy, the Netherlands and Slovenia.

1.7 FINANCIAL STABILITY AND PRUDENTIAL SUPERVISION

1.7.1 Macro-prudential supervision

The financial stability mandate attributed to the BCL is based on the Treaty on the Functioning of the European Union (TFEU) – through the central bank's participation in the Eurosystem – and on national legislation.

At the European level, article 127(5) of the TFEU foresees that the European System of Central Banks, in addition to its core central tasks, should contribute to 'the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system'.

The EU has adopted new prudential rules for the banking system (Capital requirements Directive (CRD IV) and Regulation (CRR))[22]. The rules have been implemented in Luxembourg, notably through the transposition of the Directive (CRD IV)[23]. Since the Regulation (CRR) is directly applicable, there is no need to transpose it into national law. Member States have now a common legal basis which includes several macro-prudential instruments.

At the national level, article 2(6) of the organic law of the BCL foresees that 'the Central Bank shall cooperate with the Government and with prudential supervision authorities at the national level, as well as with the other central banks at Community and international level, to contribute to ensuring financial stability, notably within committees set up for this purpose'. In line with the European Systemic Risk Board's (ESRB) Recommendation[24], regarding the macro-prudential mandate of national authorities, the Luxembourgish legislature has adopted the law of 1 April 2015[25] establishing the national macro-prudential authority, namely the Systemic Risk Committee[26]. Within this Committee, the BCL has a leading role in macro-prudential supervision[27] and is in charge of the Secretariat under the hierarchical authority of its Director General. In this context, the Secretariat is in charge of preparing the Committee's meetings, drafting opinions and recommendations as well as conducting macro-prudential analyses required for the decision-making process of the Committee. In addition to its financial stability mandate, due to the role of payment and securities settlement systems within the financial system, the national legislator has entrusted the BCL with the supervision of the payment and securities settlement systems[28].

1.7.1.1 Macro-prudential supervision in Luxembourg

Although the legislative framework establishing the Systemic Risk Committee was adopted in 2015, the BCL has already been involved in the surveillance of systemic risks, i.e. the risks that could affect the stability of the national financial system as a whole. To this end, the BCL must be able to identify and measure the accumulation of risks over time as well as their distribution within the financial system.

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22 See Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms modifying Regulation (EU) No 648/2012 (Regulation CCR) and Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms modifying Directive 2002/87/CE and abrogating Directives 2006/48/CE and 2006/49/CE (Directive CRDIV).

23 See the transposition in Luxembourg of the CRD IV Directive. Since the Regulation CRR is directly applicable in Member States, there is no need to transpose it.

24 See Recommendation of the ESRB of 22 December 2011 (ESRB/2011/3).

25 See Law of 1st April 2015 establishing a Systemic Risk Committee and amending the modified Law of 23 December 1998 regarding the monetary status and the Central Bank of Luxembourg.

26 In French, *Comité du risque systémique* (CdRS).

27 See Sub- Recommendation B-3 of the Recommendation of the ESRB on the macro-prudential mandate of national authorities (ESRB/2011/3).

28 Article 2(5) of the organic law of the BCL.

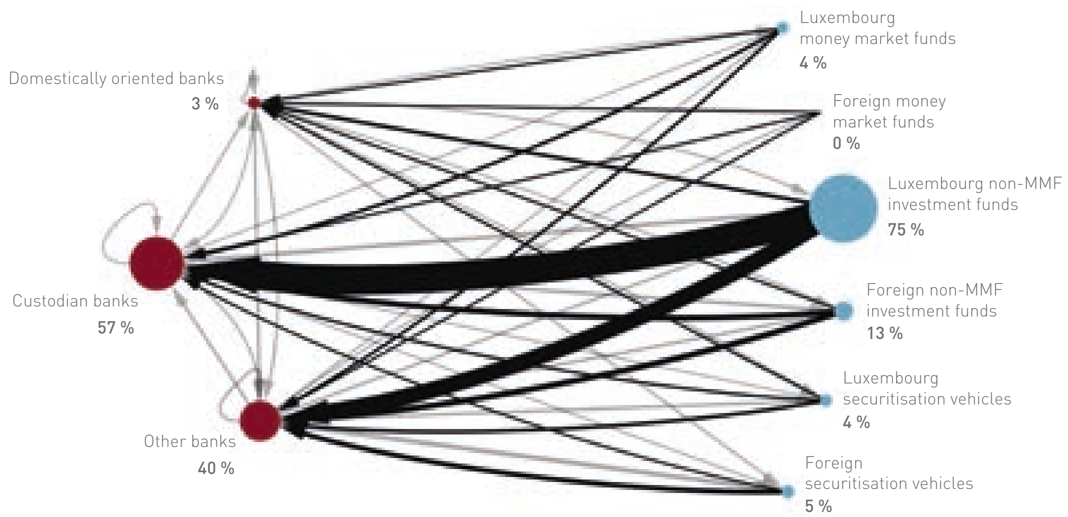
In view of the importance of the banking system and the investment fund sector for Luxembourg, the analysis conducted places significant emphasis on the assessment of risks between these two main components of the national financial system. Considering the growing importance of the parallel banking system in Luxembourg and the ongoing evolution of European regulation, the BCL has already completed several analyses in order to assess the degree of interconnectedness between investment funds and the banking sector and to model vulnerabilities which could impact investment funds by using estimated probabilities of default. The temporal dimension of risk is analysed using indicators for the credit cycle, asset prices, leverage, maturity mismatches and other specific indicators of liquidity.

Within the annual publication of the Financial Stability Review in 2016, the BCL used a broad set of indicators, including counterparty probability of default, z-scores[29] and a vulnerability index to assess the financial stability of Luxembourg's' financial sector. Measures of vulnerability for Undertakings for Collective Investment (UCITS) were also examined in order to assess systemic credit risk resulting from the interconnections between different categories of investment funds and their interactions with the macroeconomic environment. The intersectorial dimension of systemic risk is analysed using several tools which allow for the assessment of the interconnections and the size of linkages between financial institutions.

Given the international composition of the Luxembourg banking sector, the BCL employs network analysis techniques to assess both domestic and cross border interbank linkages. In 2016, specific emphasis was placed on assessing the interconnections between the banking sector, particularly custodians banks, and investment funds. In addition, the construction of an indicator called the "alpha index" allows the BCL to track potential vulnerabilities induced by the degree of interconnections[30].

For instance, the approach used by the BCL to assess the importance of the underlying risks due to the potential strengthening of links between the different components of Luxembourg's financial system is depicted in the two charts below. Any significant increase in the alpha index is analysed in a more detailed manner so as to identify the relevant entities and the underlying reasons for the dynamics.

Graph 16:
Network of Luxembourg banks' exposures to domestic and foreign investment funds (nominal exposures, 2016Q3)

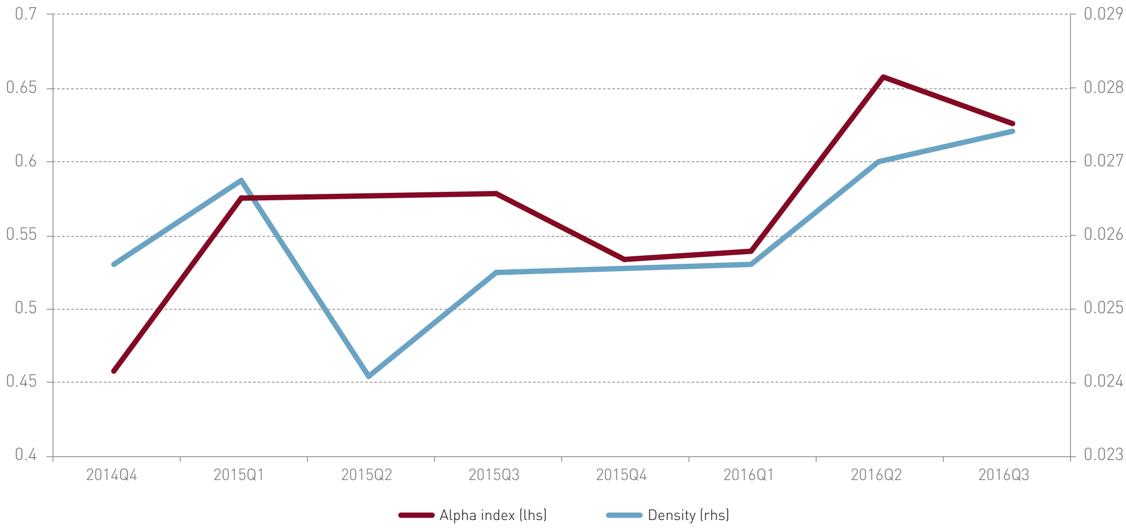


Source: BCL

29 The z-score is an approximation of the index reflecting the distance to the default threshold of a bank or a firm. The fundamental difference between the z-score and the distance to default is statistical. This difference lies in the data used to assess the financial soundness of banks (balance sheet vs. market data).

30 The alpha index is a measure of the ratio between the number of fundamental circuits observed in a network to the maximum number possible. Its value ranges from 0 to 1.

Graph 17:
Quarterly dynamics of the alpha index (2014Q4-2016Q3)



Source: BCL

The BCL regularly assesses the linkages between the financial sector and the real economy and routinely conducts liquidity stress tests. In this context, it may be noted that a number of indicators which were developed by the BCL take a forward looking approach. In order to anticipate rising vulnerabilities in the banking sector, the BCL has put special emphasis on its synthetic financial vulnerability indicators as well as on macroprudential stress tests.

The BCL has been closely monitoring changes in residential real estate prices and the potential vulnerabilities that these dynamics could create, for instance at the level of households or credit institutions. To this end, the BCL has developed an econometric model, integrating supply and demand side constraints, which allows it to assess, on a quarterly basis, the build-up of risks. These results have been included in a systemic risk dashboard that has been developed by the BCL to help authorities monitor systemic risks and whose first results look conclusive. The dashboard includes a set of both quantitative and qualitative indicators aimed at detecting potential systemic risks arising within one of the various components of the financial sector and/or within an economic sector relevant for financial stability. Information provided by the dashboard could be used as a tool to assess whether the intermediate objectives of macroprudential policy are being achieved. The dashboard also incorporates a multitude of indicators such as a measurement of the phase of Luxembourg's financial cycle, and the degree of interconnectedness of the financial sector.

This dashboard has been complemented by a number of specific studies aimed at identifying the emergence of new risks following changes in the regulatory environment. In this context, several quantitative analyses have been undertaken to assess the impact of the new Basel III liquidity and leverage requirements on Luxembourg's credit institutions.

The BCL used the Basel Committee on Banking Supervision (BCBS) G SIB framework, as well as the Guidelines developed by the European banking authority (EBA), in order to identify the domestic systemically important institutions in Luxembourg. This framework is based on a series of relevant indicators including the size of the institution, its interconnectedness and its substitutability in the event of default. The BCL participates in the BIS Macroprudential Supervision Group (MPG) in charge of monitoring systemic risk and developments related to systemically important banks.

The BCL is a member of the Regional Consultative Group for Europe of the Financial Stability Board (FSB), the international body responsible for drafting recommendations on global financial stability and the related follow-up. Moreover, with the implementation of the Single Supervisory Mechanism (SSM), the BCL participates in the SSM [Working Groups] dedicated to crisis management and risk analysis. The BCL is also actively involved in the standing committee on 'regulation and policy' and in the EBA Sub-Group on crisis management.

With the entry into force of the SSM, the ECB now has a role in the domain of macroprudential policy. Therefore, although national authorities retain primary responsibility for the implementation of macro-prudential measures, the ECB can – in coordination with these authorities – take additional measures provided in the Council's Regulation concerning policies relating to the prudential supervision of credit institutions[31].

Measures available to the ECB include the setting of the capital buffer rates as defined in CRD IV as well as the measures under article 458 of the CRR[32] such as the definition of the risk weights for targeting asset bubbles in the real estate sector, liquidity requirements, public disclosure requirements, or intra financial sector exposures. Against this background, the Financial Stability Committee (FSC) was established in order to help decision-making bodies fulfil their responsibilities in terms of financial system stability and prudential supervision.

The BCL, in performing its macroprudential supervision functions, contributes to the committees and working groups of the European System of Central Banks (ESCB), such as the FSC and its substructures. In particular, these substructures include two subgroups dedicated to macroprudential analysis and policy. The BCL also takes part in a working group on crisis management and resolution and in expert groups on legal acts and on draft technical standards.

At this stage, the macroprudential policy framework under the SSM still faces some challenges. In particular, it appears necessary to harmonise instruments in order to facilitate the conduct of macroprudential policy. Moreover, it seems crucial that the ECB continues to work closely with the European Systemic Risk Board whose scope of responsibilities covers the whole EU financial system.

1.7.1.2 The European Systemic Risk Board

The European Systemic Risk Board (ESRB) is comprised of more than 70 institutions – including central banks, national and European financial supervision authorities, the European Commission and other prudential authorities – and is composed of both a General Board and a Steering Committee. The technical work is shared between the Advisory Technical Committee (ATC), which consists of experts from the member institutions, and the Advisory Scientific Committee that has academic experts amongst its membership. Within this structure, central banks now play a major role in European macroprudential supervision in view of their expertise and responsibility in preserving financial stability.

The Governor of the BCL is a voting member of the ESRB General Board, which is the sole decision making body of the ESRB. Furthermore, the national micro prudential supervisory authorities are also members of the General Board, although they do not hold voting rights. The participation of the micro prudential authorities facilitates the sharing of expertise and the exchange of information amongst the diverse membership base of the ESRB. In this regard, the BCL is also represented at the level of the General Board as a liquidity supervisor according to a rotation principle among the other national supervisory authorities. Finally, the BCL shares its macroprudential, financial, statistical and monetary expertise through the participation of its staff members in the analyses and technical work conducted by the ESRB.

The aim of the ESRB is to identify macroprudential risks at the level of the broader EU financial system. Likewise, it also provides a mechanism for issuing clear warnings and recommendations to facilitate and trigger prompt action by the relevant national authorities under the 'comply or explain' principle.

31 See Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.

32 See footnote 48.

The ESRB General Board holds its regular plenary meetings at a minimum frequency of four times per year. In 2016, the ESRB was mainly working on the following four topics:

- the identification and assessment of systemic risk in the EU financial system, as well as the actions needed to deal with the identified vulnerabilities, and the publication of the systemic risk dashboard;

- the continuation of the EU-wide risk assessment of the residential real estate market for which the results have been published in November 2016[33] and follow the first report carried out in 2015[34]. Based on these reports, the ESRB addressed warnings to EU Member States, including Luxembourg, for which the most significant vulnerabilities have been identified. Furthermore, the ESRB adopted the Recommendation ESRB/2016/14[35] through which it invited its members to foster the collection of real estate data in order to proceed, in the future, to a better identification of risks in this sector;

- the improvement of the coordination aspects of the European macroprudential framework with regard to cross-border effects of macroprudential measures adopted at the national level. For example, Recommendation ESRB/2015/2 "on the assessment of cross-border effects and voluntary reciprocity of macroprudential policy measures" was twice amended in 2016 (Recommendations ESRB/2016/3 and ESRB/2016/4);

- the identification of analytical tools for systemic risk and macroprudential instruments that the ESRB could develop in the coming years, notably regarding activities known as "non-banking" financial activities that are carried out by insurance companies, pension funds, investment funds and "other financial institutions".

With the implementation of the CRD IV and the CRR on 1 January 2014, the ESRB was called upon to assume the following new responsibilities:

- the establishment of guidance regarding the setting of countercyclical capital buffer rates and the identification of relevant variables to guide both the build-up and release phases of this buffer;

- the development of two reports related to the residential and commercial real estate markets;

- the issuance of opinions on certain macroprudential measures[34]. To this end, an assessment team was established as a substructure of the Advisory Technical Committee in order to assess the measures undertaken and to prepare ESRB opinions. This assessment team includes nine representatives from central banks among the permanent members, which are designated by the General Board.

The BCL contributes to the work carried out by substructures of the ESRB particularly through the Advisory Technical Committee and its substructures which relate to macroprudential instruments, identification and categorisation of systemic risks and macroprudential analysis.

33 ESRB (2016). Vulnerabilities in the EU residential real estate sector.

34 ESRB (2015). ESRB reports on residential and commercial real estate and financial stability in the EU.

35 ESRB/2016/14 on closing real estate data gaps.

36 ESRB (2016). Macroprudential policy beyond banking: an ESRB strategy paper.

The BCL takes part in various ESRB expert groups on diverse topics such as market liquidity, and cross border effects of macroprudential policy and reciprocity. The BCL has also participated in several subgroups such as the board of editors of macroprudential commentaries as well as the task forces on stress testing and the development of a heat map by intermediate objectives.

The involvement of the BCL in macroprudential supervision has increased considerably following the creation of the ESRB as well as the establishment of the national Systemic Risk Committee (SRC), and especially through its new missions within the SRC Secretariat.

1.7.1.3 The Secretariat of the Systemic Risk Committee

Following the Recommendation of the ESRB of 22 December 2011, the macroprudential framework in Luxembourg was established by the adoption of the Law of 1 April 2015[37]. Thus, the Luxembourgish legislature opted for a board-based institutional structure for the macroprudential authority and, therefore, created a Systemic Risk Committee (the Committee), composed of all national authorities playing a role in financial stability. The Committee consists of four members, namely (i) the Government, (ii) the Central Bank of Luxembourg (BCL), (iii) the Financial Sector Supervisory Commission[38] (CSSF), and (iv) the Insurance Commission[39] (CAA).

The member institutions of the Committee are represented, respectively, by (i) the member of the Government responsible for financial affairs, (ii) the Director General of the BCL, (iii) the Director General of Financial Sector Supervisory Commission (CSSF) and (iv) the Director of the Insurance Commission (CAA).

Similarly, four alternate members from these institutions sit at this Committee and replace the members in case of absences. The Committee is chaired by the member of the Government and in his absence by the Director General of the BCL.

The collegial form of the Committee reflects the aim of the Luxembourg law to cover all parts of the domestic financial sector in order to mitigate or prevent the emergence of any sources of systemic risk and contagion from one sector to another.

Such a holistic view of the financial system is also reflected by the composition of the Committee's Secretariat, which counts among its membership one representative per authority represented within the Committee.

As a decision-making body, the Committee relies on its Secretariat, which, by its powers, plays an essential role in the preparation of meetings and conducts macroprudential analyses. Thus, given the expertise of central banks in macroprudential policy, and in accordance with the role entrusted to it by the ESRB Recommendation, the Luxembourgish legislature has assigned the Committee's Secretariat to the BCL, under the hierarchical authority of its Director General[40].

Moreover, aside from the usual functions of a Secretariat, it has, thanks to its composition and expertise of various departments of the BCL, genuine identification, evaluation and analytical capabilities with respect to systemic risks that are likely to emerge in the main components of the national financial system.

The establishment of an annual programme between the Committee's Secretariat and the Economics and Research Department of the BCL will allow members to rely on various inputs in their decision-making process. In addition, the Secretariat to promote and strengthen the cooperation and exchange of information between member authorities of the Committee.

37 See law of 1st April 2015 establishing a Systemic Risk Committe and amending the modified law of 23 December 1998 regarding the monetary status and the Central Bank of Luxembourg.

38 In French, *Commission de surveillance du secteur financier*.

39 In French, *Commissariat aux assurances*.

40 See Recommendation B-3 of the Recommendation of the ESRB on the macroprudential mandate of national authorities to Member States (ESRB/2011/3).

To monitor the relevant potential risks in Luxembourg, the Committee decided to set up two working groups to better understand and quantify the risks related to the "shadow banking system". The BCL chairs the first group on "Parallel Banking - Other Financial Institutions". Its main objective focuses on improving data collection related to these institutions to provide an overview of their activities and associated risks. The second group, namely the "Parallel Banking - Interconnections between the investment fund sector and the financial sector", is chaired by the CSSF, to which the BCL contributes, and undertakes analyses on the risks of contagion between investment funds and credit institutions.

In accordance with its mandate, the Committee adopted in 2016 a number of recommendations in order to comply with the ESRB's principle of reciprocating macroprudential measures taken by other European countries, and to reinforce the resilience of the national financial system. Therefore, the Committee adopted and issued the following recommendations and opinions:

- Recommendations (CRS/2016/001), (CRS/2016/003) and (CRS/2016/006) on the setting of the countercyclical capital buffer rates, respectively for the second, third and fourth quarters of 2016;

- Recommendation (CRS/2016/002) on the automatic recognition of countercyclical capital buffer rates during the transitional period;

- Opinion and Recommendation (CRS/2016/004) on the risk weights applied to all exposures to retail customers (non-SMEs) secured by real estate property in Luxembourg;

- Recommendation (CRS/2016/005) on the reciprocation of the measure of five percentage point risk weights add-on for exposures secured by real estate property located in Belgium adopted by the National Bank of Belgium;

- Opinion (CRS/2016/007) on the annual identification and review of the calibration of capital buffers for other systemically important institutions;

- Opinion (CRS/2016/008) on the reciprocation of the Estonian Systemic Risk Buffer (SRB) adopted by the Eesti Pank.

1.7.2 Micro-prudential supervision

1.7.2.1 Liquidity surveillance

The liquidity supervision of market operators has been entrusted to the BCL through a modification of its organic law on 24 October 2008. The liquidity supervision of market operators mainly aims at evaluating the liquidity situation and the management of the liquidity risk of individual operators. As the flaws in the liquidity risk management of certain operators having been one of the main causes of financial turbulences in 2008, management of liquidity and related risk have been in the focus of supervisory authorities at the international level during the last years.

Regulation of liquidity is important for a central bank because, it acts as a supplier of liquidity to the financial system in normal times and times of stress, and additionally it can detect or prevent a failure chain in the markets, thus limiting the systemic risk.

Liquidity supervision also constitutes an important support function for analyses conducted in the field of financial stability and the analysis of systemic risks, which also examines the interconnection between different market operators as well as risks of contagion. The market operators' monitoring function is thus a major source of data and information in the field of financial stability.

Particular emphasis is placed on the liquidity supervision of credit institutions, as they are the BCL counterparties in monetary policy operations. This supervision has been carried out in the framework of the Single Supervisory Mechanism (SSM) since 2014.

1.7.2.1.1 Liquidity risk supervision of credit institutions established in Luxembourg in the context of the Single Supervisory Mechanism

In the context of the implementation of the Banking Union and the establishment of the SSM, the ECB assumes responsibility for the supervision of euro area banks since 4 November 2014.

This supervision is carried out directly by the ECB for credit institutions considered "significant", including their subsidiaries and branches, while national competent authorities are in charge of the supervision of credit institutions considered "less significant", under the ultimate responsibility of the ECB.

Criteria laid down in the SSM Regulation[41] in order to determine the significance of a bank apply at the highest level of consolidation, and are mainly the following:

- its size (the total value of its assets exceeds € 30 billion);
- its importance for the economy of the Union or any participating Member State (the total value of assets exceeds 20% of GDP of the Member State of establishment, unless the total value of assets is below € 5 billion);
- its significance of the cross-border activities.

Ongoing supervision of significant credit institutions is conducted by Joint Supervisory Teams (JSTs), composed of staff from both the ECB and national competent authorities, including national central banks.

BCL participates in the JSTs of significant banks established in Luxembourg and selected JSTs of significant banks established in other Member States of the euro area with subsidiaries in Luxembourg, to contribute to liquidity risk supervision. In this context, liquidity risk supervision is conducted based on common methodologies and standards established by the SSM that have been jointly developed by the ECB, competent authorities and national central banks. Considering that less significant banks are directly supervised by the national authorities, BCL continues to supervise the liquidity risk situation of less significant banks established in Luxembourg, in cooperation with the Commission de surveillance du secteur financier (CSSF).

Within JSTs, as well as in the context of the supervision of less significant banks, BCL contributes actively to the annual liquidity risk assessments of banks conducted through the Supervisory Review and Evaluation Process (SREP) to determine the adequacy of their liquidity risk management framework and liquidity resources. In this context, on-site meetings have taken place in 2016 in order to assess more in depth the liquidity risk management framework of these banks. In addition, recurring tasks, such as the control of prudential liquidity reportings (LCR, NSFR, Additional monitoring for liquidity[42], Asset encumbrance and Funding plan) and regular analysis of the liquidity situation, have been performed in the context of the liquidity supervision of banks according to a pre-established work plan.

In addition to its task in liquidity supervision, BCL is represented, jointly with the CSSF, at the SSM Supervisory Board, which plans and conducts the supervisory tasks of the SSM and proposes to the Governing Council of the ECB draft decisions to be adopted by the latter. In this context, the BCL has established an SSM interdepartmental coordination unit, which, in close cooperation with the CSSF, is in charge of the follow-up to all the files and draft decisions submitted for approval to the Supervisory Board and the Governing Council. In 2016, the coordination unit has processed more than 1 700 written procedures subject to decision and prepared the meetings of the Supervisory Board, which generally meets twice per month.

In the framework of the SSM, BCL also participates in the work of different groups and committees established at ECB level. These groups and committees assist the Supervisory Board in its decision-making.

41 Council regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions

42 Commission implementing regulation (EU) 2016/313 of 1 March 2016 amending Implementing Regulation (EU) No 680/2014 with regard to additional monitoring metrics for liquidity reporting.

1.7.2.1.2 Tools for the liquidity surveillance

Beyond the supervisory work carried out in the context of the SSM, the BCL continuously monitors market operators at the local level. This monitoring is based on a regular analysis of qualitative and quantitative information on an individual as well as an aggregate level. In order to have a better monitoring of the liquidity position of the market operators, the BCL implemented in particular a daily reporting on the liquidity position of credit institutions. Introduced in 2010, this reporting applies to a sample of credit institutions and allows the BCL to assess the liquidity position of these entities on a day-to-day basis. Subject to this reporting are mainly credit institutions of significant size as well as credit institutions that are counterparties in monetary policy operations.

From a database containing historical data listed in this daily liquidity reporting, the BCL has developed an analytical tool that allows evaluating the short-term liquidity position of these credit institutions and the evolution of their liquidity position over time on an individual basis. In parallel, the BCL has developed an analytical tool that allows assessing the vulnerability of individual credit institutions in terms of liquidity as well as identifying liquidity risks at an aggregate level. This tool was complemented by the development of a watch list that identifies credit institutions that have suffered a deterioration in their situation beyond a certain threshold on a quarterly basis, while highlighting the parameters of the model that are at the origin of such a deterioration.

Moreover, all information available from the prudential and statistical reporting is summarised in dashboards allowing for direct and permanent access to financial information and key indicators. Particular attention is paid to the new liquidity standards, the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR). This reporting is mandatory for all credit institutions on an individual and consolidated basis. In accordance with the Delegated Act[43] providing specifications on the LCR as well as details on the period of its progressive introduction, the LCR became a binding standard on 1 October 2015. The minimum requirement was set initially at 60% starting from this date, at 70% on 1 January 2016, at 80% on 1 January 2017 and will be increased to 100% on 1 January 2018. The BCL conducts checks on reports issued by major and by smaller banks and has implemented a model that carries out simulations both on the LCR and on the NSFR.

Following the introduction of the above-mentioned prudential liquidity reporting (cf. 1.7.2.1.1), a project to implement automated data processing and processing tools was launched in 2016. Since liquidity reports are complex and heterogeneous by their nature and their data sources, each analytical processing requires the development of tailor-made solutions.

The objective of this project is to provide supervisors with user-friendly analytical features to facilitate an effective and efficient assessment of the liquidity situation of banks in the supervision process.

Following the recommendations of the ESRB on foreign currency loans, US dollar financing and financing of credit institutions, the BCL also performs a specific monitoring of these positions on a quarterly basis, at both the individual level and the aggregate level of the entities under surveillance. Finally, a daily report with financial markets indicators has also been developed. This set of tools facilitates the necessary analysis to conduct liquidity supervision.

In terms of communication and information exchange within the SSM, an Information Management System "IMAS" has been implemented, allowing the exchange of information between the ECB and the national supervisory authorities. In its first phase, this tool has been set up for the supervision of significant institutions. Thus, IMAS provides a number of tools that replicate the methodology and common standards established by the SSM and contributes to the supervision of "significant" credit institutions in a coordinated manner. In addition, IMAS provides key information relating to these banks and is connected to a reporting and document management tool. As a participant in the JST, the BCL is connected to this tool. Furthermore, it was decided to also include the "less significant" credit institutions in IMAS in order to support national competent authorities in their supervisory activity. This project was launched in 2016.

43 Commission delegated Regulation (EU) 2015/61 of 10 October 2014 to supplement Regulation (EU) No 575/2013 of the European Parliament and the Council with regard to liquidity coverage requirement for Credit Institutions.

1.7.2.1.3 National and International Cooperation

BCL continues participating in the working groups dedicated to liquidity issues at the level of the Basel Committee and the European Banking Authority. Beyond the working groups dedicated to liquidity aspects, the BCL is also a member of the Board of Supervisors of the European Banking Authority as well as of other committees and subgroups that are of relevance in the context of its supervisory mission. As a general rule, involvement in these committees and working groups is done jointly with the CSSF.

In addition to the oversight activities relating to systems and infrastructures operating in Luxembourg as well as to payment instruments available to the public in Luxembourg, the BCL contributes to the oversight activities coordinated at the level of the Eurosystem that target, among others, infrastructures and payment instruments that do not present a clear national anchorage.

1.7.2.2 Oversight

The oversight of financial market infrastructures and the promotion of the smooth functioning of the payment and securities settlement systems constitute an essential mission of the European System of Central Banks (ESCB) due to the important role these infrastructures play in the implementation of monetary policy, the preservation of financial stability and the smooth functioning of the economy.

The Treaty on the Functioning of the European Union (TFEU) and the Statute of the ESCB contain a number of provisions related to payment systems and assign oversight responsibilities to the Eurosystem, composed of the European Central Bank (ECB) and the national central banks (NCB) of the euro area. At the national level, pursuant to the Law of 23 December 1998 concerning the monetary status and the Banque centrale du Luxembourg, the BCL shall ensure the security and efficiency of payment systems and securities settlement systems as well as the security of payment instruments. In addition to the above provisions of the Organic Law, the BCL adopted Regulation 2016/N°21 of 15 January 2016, repealing Regulation BCL 2010/N°6 of 8 September 2010 as subsequently modified. The Regulation incorporates among others, the new oversight framework introduced by the Eurosystem in July 2016 and sets, inter alia, the general oversight framework as well as the obligations of system operators, issuers of payment instruments and governance authorities.

The Regulation also stipulates that the BCL carry out its oversight activity based on information and statistical data collected on a regular or ad hoc basis from the respective entities. This information is supplemented with regular meetings and, where appropriate, on-site visits and relates, among others, to the development of the infrastructures' activities, their performance, their governance and their risk management. In the context of its oversight, the BCL coordinates and cooperates with the CSSF.

In addition to the oversight activities relating to systems and infrastructures operating in Luxembourg as well as to payment instruments available to the public in Luxembourg, the BCL contributes to the oversight activities coordinated at the level of the Eurosystem that target, among others, infrastructures and payment instruments that do not present a clear national anchorage.

1.7.2.2.1 Oversight of payment systems

In 2016, the BCL contributed, by means of its participation in European committees and working groups, to the oversight activities of the TARGET2 payment system operated by the Eurosystem, as well as of the EURO1 and STEP2-T systems operated by EBA Clearing. The BCL collaborated in particular in the assessment of these three payment systems pursuant to the entry into force of the Regulation of the European Central Bank No 795/2014 on 12 August 2014 related to oversight requirements for systemically important payment systems. In application of this regulation, these three payment systems as well as CORE operated by STET S.A.S. were identified as systemically important by the Governing Council of the European Central Bank in August 2014.

In addition to its contribution to the coordinated oversight of the payment system TARGET2, the BCL is also in charge of the oversight of certain decentralised aspects of TARGET2-LU, the Luxembourg segment, such as the local technical components ensuring the connectivity of the BCL to the single platform. In this context, the BCL updated its specific Oversight Guide for local components of TARGET2 following the publication on 29 August 2016 of Annex 2 of the Oversight Guide for systemically important payment infrastructures.

The BCL was also informed of oversight developments related to the multi-currency payment system Continuous Linked Settlement (CLS) operated by CLS Bank International. Given the international nature of the CLS system, the oversight of this system is performed by a group including the G10 central banks and the central banks of issue of the settled currencies.[44] Overall, the payment systems listed above operated in a stable and resilient manner in 2016.

1.7.2.2.2 Oversight of securities settlement systems

The oversight of securities settlement systems (SSS) covers the systems operated in Luxembourg by Clearstream Banking S.A. (CBL), LuxCSD S.A. (LuxCSD), globeSettle S.A. (globeSettle) and VP LUX S.à.r.l. (VPLUX).

In this regard, the BCL monitored the functioning of these infrastructures, as well as the development of their activities and the risks to which they are exposed, by analysing the monthly reporting collected from the operators and by participating in thematic meetings and on-site visits.

Moreover, the BCL, in collaboration with the CSSF, conducted a comprehensive assessment of the securities settlement system operated by CBL and its adherence to the Principles of the CPMI-IOSCO[45] committee applicable to market infrastructures, including securities settlement systems and central securities depositories. These standards are expressed as general principles or specific minimum requirements concerning the following domains:

- General organisation (legal basis, governance, framework for the comprehensive management of risks);
- Credit and liquidity risk management (credit risk, collateral risk, liquidity risk);
- Settlement (settlement finality, money settlements, physical deliveries);
- Central securities depositories and exchange-of-value settlement systems;
- Default management (participant-default rules and procedures);
- General business and operational risk management (general business risk, custody and investment risks, operational risk);
- Access (access and participation requirements, tiered participation arrangements, financial market infrastructures links);
- Efficiency (efficiency and effectiveness, communication procedures and standards);
- Transparency (disclosure of rules, key procedures and market data).

The assessment of adherence to the principles of the CPMI-IOSCO found a high degree of compliance of the system operated by CBL. Indeed, according to the assessment, the majority of applicable Principles are fully observed by CBL. Nevertheless, four of these Principles, namely related to credit risk, to collateral, to tiered participation arrangements and to financial market infrastructures links, were assessed as broadly compliant and led to certain recommendations in order to ensure full compliance. Furthermore, a number of other recommendations were conveyed to CBL regarding areas for improvement that have nonetheless no impact on the compliance level with the concerned principles.

44 The G10 countries include: Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States.

45 Committee on Payments and Market Infrastructures – International Organisation of Securities Commissions.

Beside the assessment of the system operated by CBL, the BCL initiated a comprehensive assessment of the securities settlement systems operated in Luxembourg by LuxCSD S.A. (LuxCSD) and VP Lux S.à.r.l. (VP LUX) and their compliance with the same principles of the CPMI-IOSCO committee. These assessments will be finalised in the course of 2017.

The functioning of the securities settlement systems operating in Luxembourg was generally stable and resilient in 2016.

Moreover, in the context of Regulation N° 909/2014 on improving securities settlement in the European Union and on central securities depositories of 23 July 2014, the BCL continued its contribution to the development of related Regulatory Technical Standards. In addition, the BCL participated together with the CSSF, in meetings with the operators of securities settlement systems in Luxembourg with regard to their future authorisation as central securities depositories, in conformity with the above Regulation.

For the purpose of its oversight of securities settlement systems, the BCL also cooperated with other central banks and authorities. In particular, the BCL closely cooperated with the National Bank of Belgium (NBB) and the CSSF with regard to the interoperable link between the securities settlement systems operated by CBL and Euroclear Bank. In this context, the BCL closely followed the developments planned by these operators related to the functioning of this link and to mitigating risk by ensuring its compliance with international and European requirements. Finally, discussions also took place between the BCL, the NBB and the CSSF with a view to formalise cooperation among the authorities in this field.

Concerning the settlement platform Target2-Securities (T2S), the BCL contributed to the monitoring of the different migration waves of central securities depositories. This centralised technical platform aims at providing harmonised securities settlement services in central bank money, in euro and other currencies. The VP LUX system successfully migrated on 12 September 2016 and, since then, the settlement of VP LUX takes place in T2S. In this context, the BCL also monitored the preparation of the migration of the settlement system operated by LuxCSD. Finally, the BCL also participated in the identification of information needed for the coordinated oversight of the T2S platform.

Finally, the BCL cooperated with the International Monetary Fund (IMF) in the context of the Financial Sector Assessment Program (FSAP), which took place in December 2016. On this occasion, the IMF performed an assessment of the securities settlement system operated by CBL and its compliance with the principles of the CPMI-IOSCO committee on market infrastructures. In this regard, the IMF relied on the joint assessment conducted by the Luxembourg authorities, including interviews and written exchanges. Likewise, the IMF performed an assessment of the Luxembourg authorities' responsibilities in the field of market infrastructures according to the CPMI-IOSCO requirements in this matter. These requirements addressed to the authorities concern the following domains:

- Regulation, supervision and oversight of financial market infrastructures;
- Regulatory, supervisory and oversight powers and resources;
- Disclosure of policies with respect to financial market infrastructures;
- Application of the principles for financial market infrastructures;
- Cooperation with other authorities.

1.7.2.2.3 Oversight of payment instruments

Payment instruments include, among others, credit transfers, direct debits, payment cards and electronic money schemes used by the public in Luxembourg. In 2016, the BCL followed developments related to issuers' activities in Luxembourg, particularly concerning security aspects. BCL conducted its oversight on the basis of the regular qualitative and quantitative information collected by the Bank for this purpose. Thematic discussions were conducted with certain issuers. Likewise, for the purpose of its oversight, the BCL introduced a dedicated information gathering framework for specific actors.

Furthermore, the BCL actively contributed to the European Forum for the Security of Retail Payments (SecuRe Pay), co-chaired by the ECB and the European Banking Authority (EBA). The purpose of this forum is to facilitate a common understanding between the central banks in charge of the oversight of payment instruments and the authorities responsible for the prudential supervision of payment service providers on the security of retail payments in the European Union. In 2016, this forum worked in particular on the development of Regulatory Technical Standards on strong authentication and secure communication, in line with the mandate granted to the EBA in the revised Payment Services Directive (PSD2). For this purpose, the Working Group issued a public consultation on the proposed Technical Standards in August 2016. Thereafter, responses to the consultation were analysed and, where applicable, taken into account in the finalisation of the Technical Standards. The Technical Standards should be adopted in 2017.

Furthermore, the BCL in collaboration with the CSSF, closely followed development concerning security of customer authentication methods, which were implemented in 2016 by payment instruments' issuers in Luxembourg for electronic payments, pursuant to the recommendations for the security of internet payments issued by the ECB and the EBA.

Moreover, at the Eurosystem level, the BCL contributed to the joint assessment of an international card scheme against the applicable oversight framework for card payment schemes. Finally, the BCL also participated in the joint assessment of the SEPA[46] direct debit scheme coordinated by the Eurosystem.

1.8 REGULATORY AND LEGISLATIVE DEVELOPMENTS

1.8.1 European legislation

The Banque centrale du Luxembourg (BCL) follows with particular interest developments of European and national legislation that are relevant for the Eurosystem as well as to the deepening of the Economic and Monetary Union (EMU), notably those concerning the Banking Union, the Capital Markets Union and economic governance.

1.8.1.1 Banking Union

The Banking Union is based on three pillars: the Single Supervisory Mechanism (SSM), the Single Resolution Mechanism (SRM), and the Deposit Guarantee Scheme (DGS). The sections below describe the legislative developments in 2016 in relation to these three pillars.

1.8.1.1.1 Prudential supervision

SSM Scope

The geographical scope of the SSM consists of the Members States whose currency is the euro, as well as Member States of the European Union (EU) whose currency is not the euro that voluntarily decide to be subject to the banking supervision of the European Central Bank (ECB) under "close cooperation".

This geographical scope of the SSM did not change in 2016. No Member State of the EU whose currency is not the euro decided to enter into close cooperation as provided for by the SSM Regulation[47].

SSM supervised entities

While the number of supervised entities falling under the ECB's direct supervision remained stable around 130, changes occurred in the list of institutions considered significant and hence directly supervised by the

46 SEPA: Single Euro Payments Area.

47 Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.

ECB. Notably, the number of significant institutions having their registered office in Luxembourg decreased following internal reorganisations[48].

There were four significant institutions established in Luxembourg on 31 December 2016: Banque et Caisse d'Epargne de l'Etat, Luxembourg (with a total value of assets exceeding € 30 billion), Precision Capital S.A. (holding of Banque Internationale à Luxembourg S.A. and KBL European Private Bankers S.A., with a total value of assets exceeding € 30 billion), RBC Investor Services Bank S.A. (with a total value of assets exceeding 20% of GDP) and J.P. Morgan Bank Luxembourg S.A. (with a total value of assets exceeding 20% of GDP).

SSM Governance

The Governing Council of the ECB is the ultimate decision-making body of the ECB, including in the area of prudential supervision of credit institutions.

In addition, the SSM Regulation provided for the creation, within the ECB, of a Supervisory Board responsible for preparing draft decisions on supervisory matters. In particular, it is composed of one representative of each national competent authority and, if the national central bank (NCB) is not the national competent authority, by one representative of the national central bank in addition to one from the supervisory authority. This group is composed of 32 members, including one member from the BCL. This internal body of the ECB held 28 meetings during 2016, among which 24 took place in Frankfurt.

During 2016, the Governing Council of the ECB adopted circa 1 800 prudential decisions, mainly via written procedure, based on "complete draft decisions" that were proposed by the Supervisory Board, pursuant to a non-objection procedure. For banking supervision decisions in the field of macroprudential supervision, this non-objection procedure does not apply and the Governing Council may amend the draft decisions proposed by the Supervisory Board. Additionally, the non-objection procedure does not apply to the definition of the general framework governing practical arrangements for cooperation within the SSM that fall within the remit of the decision-making bodies of the ECB, i.e. the Governing Council and the Executive Board.

Harmonising national options and discretions

The exercise of a single supervision for the euro area by the ECB is considerably hampered by a lack of harmonisation of applicable national laws. In 2016, following a public consultation, the ECB adopted the Regulation (EU) 2016/445 of 14 March 2016 on the exercise of options and discretions available in Union law that entered into force on 1 October 2016. This regulation is accompanied by a draft guide, which was published on 24 March 2016 and completed in August 2016.

These documents specify the terms of harmonisation of the exercising of options and national discretions across the euro area that are provided for in banking legislation and that are left to the discretion of competent authorities.

The BCL contributed to the preparatory work for these documents in the High Level Group on Options and Discretions.

It is anticipated that the harmonisation of options and discretions by national competent authorities will be extended to less significant institutions. A public consultation on this matter was launched by the ECB from 3 November 2016 and was open until 5 January 2017 in view of adopting an ECB Guideline and a Recommendation in 2017.

The ECB observed that an inconsistent application of options and discretions in participating Member States of the SSM could potentially weaken the overall robustness of the supervisory framework and the consistency of prudential requirements across banks. Market participants and the general public could then have difficulties assessing the soundness and regulatory compliance of credit institutions. Besides, a high

48 UBS (Luxembourg) S.A. has been now transformed into a branch of a new company UBS Europe SE (Societas Europea) which has its registered seat in a different Member State of the SSM.

number of provisions increases the regulatory complexity and raises the cost of compliance borne by banks, in particular those operating cross borders. Finally, such a situation leaves room for regulatory arbitrage.

Joint Supervisory Teams

The Joint Supervisory Teams (JSTs) are the main operational structure for supervision conducted by the SSM. Pursuant to the SSM Framework Regulation[49], the BCL participates in the JSTs of significant banks established in Luxembourg as well as certain JSTs of "significant banks" established in other Member States participating in the SSM and having subsidiaries in Luxembourg.

Review of prudential requirements

On 23 November 2016, the European Commission presented a comprehensive package of reforms of existing European banking rules to strengthen further the resilience of EU credit institutions and to reinforce financial stability.

The European Commission proposes to amend the following legislation:

– The Capital Requirements Regulation (CRR) and the Capital Requirements Directive (CRD IV) which were adopted in 2013;

– The Bank Recovery and Resolution Directive (BRRD) and the Single Resolution Mechanism (SRM) Regulation, which were adopted in 2014 (see section below).

In particular, the European Commission proposes to harmonise:

– the ranking of unsecured debt instruments in the hierarchy of creditors in case of insolvency and

– the loss-absorbing capacity and recapitalisation capacity of banks.

The ECB is expected to provide its opinion on these legislative proposals in 2017.

1.8.1.1.2 The resolution of banks

Regulation (EU) N° 806/2014 establishing the SRM[50] in the context of the Banking Union entered into force on 19 August 2014 (SRM Regulation).

The SRM is the second pillar of the Banking Union. It provides a crisis management regime based on the harmonisation achieved by the Directive on bank recovery and resolution[51] (BRRD). It puts into place a centralised European institutional framework for the resolution of significant banks in the Member States participating in the SSM.

The SRM area corresponds to the geographical scope of the SSM, i.e. the euro area.

The SRM comprises a Single Resolution Board (SRB) and a Single Resolution Fund (SRF). As the European resolution authority for the Banking Union, the SRB is responsible for preparing and ensuring the resolution of banks that are failing or likely to fail, in cooperation with the national resolution authorities of participating Member States. The SRB is based in Brussels and is composed of six full-time members who have

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49 Regulation (EU) No 468/2014 of the European Central Bank of 16 April 2014 establishing the framework for cooperation within the Single Supervisory Mechanism between the European Central Bank and national competent authorities and with national designated authorities (the "SSM Framework Regulation") (ECB/2014/17).

50 Regulation (EU) No 806/2014 of the European Parliament and the Council of 16 April 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Bank Resolution Fund and amending Regulation (EU) n° 1093/2010.

51 Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directives 77/91/EEC and 82/891/EC, Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC and 2011/35/EC and Regulation (EU) No 1093/2010 and (EU) No 648/2012.

been appointed in 2015. Ms Elke König was appointed chair of the SRB on 1 March 2015 for a non-renewable mandate of five years.

The SRF, managed by the SRB, guarantees the availability of funding in the medium-term in case of restructuring of a credit institution. The fund is financed through contributions by banks, which initially take place at national level. On 6 July 2016, the SRB indicated that it had collected more than € 10 billion of contributions from 4 000 banks and investment firms.

The first annual report of the SRB was published in July 2016, covering the period from 1 January to 31 December 2015. It refers, among others, to the SRB, its governance structure, its resolution functions and its relations with the European Institutions.

On 28 November 2016, the SRB published its work programme for 2017. The work programme defines the strategic objectives of the SRB and the SRM. It focuses notably on resolution planning, and on how to avoid that the resolution of significant and cross-border banks in the euro area has a negative impact on the real economy and the public finances of the participating Member States.

An intergovernmental agreement on the transfer and mutualisation of the contributions to the SRF was signed on 21 May 2014 and entered into force on 1 January 2016. This agreement provides for the shift from existing national resolution funds to the SRF over a transitional period of eight years (2016-2023) for banks covered by the SRM. During that period, the banks' contributions will be allocated to different compartments corresponding to each participating Member State. According to the terms of the agreement, those compartments will be progressively mutualised and merged at the end of the transitional period.

The SRF should reach the target level of at least 1% of the amount of covered deposits of all credit institutions authorised in all participating Member States, around € 55 billion.

Moreover, a harmonised agreement, the Loan Facility Agreement, has been signed between each of the participating Member States and the SRB under which each Member State is to provide a national credit line as a guarantee for the respective national compartment in case of resolution.

As far as Luxembourg is concerned, the law of 18 December 2015 implementing the agreement on the transfer and mutualisation of contributions to the SRF, signed in Brussels on 21 May 2014, provides that the State is authorised to grant the SRB a national guarantee for a maximum of € 1 085 million, which could be used in case of resolution in Luxembourg during the transitional period.

The cooperation between the ECB and the SRB has been the object of a Memorandum of Understanding signed in 2015. The SRM Regulation provides for the allocation of tasks between European and national authorities. The SRB is directly entrusted with the preparation of resolution plans and the adoption of all resolution-related decisions in particular of the entities supervised by the ECB and cross-border groups, while the national resolution authorities are in charge of the remaining credit institutions. According to the SRM Regulation, the SRB and the national resolution authorities should cooperate closely. National resolution authorities are also responsible for implementing the resolution decisions of the SRB at the national level.

1.8.1.1.3 Deposit Protection

The third pillar of the Banking Union, namely the creation of a European system of deposit protection, is progressing very slowly.

On 24 November 2015, from a longer-term perspective of integration, the European Commission published a legislative proposal for a Regulation establishing a European Deposit Insurance Scheme (EDIS). According to the proposal, the EDIS would be set up in three consecutive steps, as proposed in the Five Presidents' Report[52], with a view to reach a European deposit guarantee scheme by 2024. The legislative process is ongoing.

52 Chapter 1.8.1.3.

The draft Regulation, is based on the framework currently applicable to national Deposit Guarantee Schemes (DGS), which is provided for by the Directive (EU) N° 2014/49/EU on the DGS (DGSD)[53], which aims to improve the protection of depositors beyond the requirements of previous legislative text, i.e. Directive 94/19/EC, as amended by Directive 2009/14/EC.

Luxembourg implemented the DGS Directive through Law of 18 December 2015.[54]

The DGS Directive provides for a broader and clearer scope of protection, shorter reimbursement periods, improved availability of information, as well as funding criteria with a view to reach a level of protection of deposits up to € 100 000.

1.8.1.2 Capital Markets Union

A Financial Union, as proposed by the Five Presidents' Report[55], not only requires the completion of the Banking Union for the euro area, but also the finalisation of the Capital Markets Union (CMU) for the EU as a whole.

The CMU is a priority for the European Commission, in addition to the strengthening of the EMU. The aim is to mobilise capital in Europe, especially for small and medium-sized enterprises (SMEs). By linking savings with growth, the CMU should lead to a rebound of investments and hence offer new opportunities for the EU single market.

The CMU is a new element of Europe's single market and its creation is a key element of the Investment Plan announced by the President of the European Commission, Jean-Claude Juncker, in November 2014.

Following the public consultation on the Green Paper "Building a Capital Markets Union", to which the Eurosystem responded[56], the European Commission adopted on 30 September 2015 an Action Plan setting out 20 key measures to achieve a single market for capital in Europe.

In addition, on 30 September 2015 the European Commission also published two proposals for Regulations relating to securitisation:

- A proposal for a Regulation laying down common rules on securitisation and creating a European framework for simple, transparent and standardised securitisation;

- A proposal for a Regulation amending the CRR.

In April 2016, the European Commission issued its first CMU status report on the progress made in the first six months since the adoption of the Union's Action Plan. Thereafter, in September 2016, the European Commission issued the Communication named "Capital Markets Union - Accelerating Reform"[57] with the objectives of finalising the first CMU measures, accelerating the next phase of the CMU and developing further CMU priorities[58].

The BCL and the Eurosystem as a whole are supportive of the CMU, in particular with respect to measures aimed at reviving securitisation. Since parts of those proposals affect the basic tasks of the ESCB, the BCL, as competent authority, delivered an opinion on the two draft Regulations on 11 March 2016 (CON/2016/11). Furthermore, the BCL maintains working contacts with the European Investment Fund (EIF) with regard to the follow-up to the legislation relating to securitisation.

53 Directive 2014/49/EU on Deposit Guarantee Schemes (DGSD).

54 Law of 18 December 2015 on the measures concerning the resolution, reorganization, winding up of credit institutions and certain investments firms as well as the schemes of deposit protection and investors compensation.

55 Chapter 1.8.1.3.

56 Building a Capital Markets Union – Eurosystem contribution to the European Commission's Green Paper, European Central Bank, 2015.

57 Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions "Capital Markets Union - Accelerating Reform", 14 September 2016 (COM(2016) 601).

58 A public consultation on the Capital Markets Union Mid-Term Review was launched in January 2017.

1.8.1.3 Economic governance

Following the financial and economic crisis, the legal framework of EMU economic governance was strengthened in 2011 and in 2013 in order to restore confidence in the public finances of the Member States of the European Union, in particular through the economic governance package (six pack)[59], the Treaty on Stability, Coordination and Governance (TSCG) and the budgetary surveillance package (two pack) [60].

As far as budgetary policy is concerned, the reform aimed to strengthen and deepen budgetary surveillance as well as introduce additional surveillance for euro area Member States in order to ensure the timely correction of excessive deficits and the inclusion of European recommendations in national economic and fiscal policies and budgetary procedures.

The various instruments of economic governance have a very complex nature, which limits the transparency of policy-making and in turn poses challenges, particularly for its implementation.

In its 2016 Annual Growth Survey the European Commission reiterated the need for the definition of economic policy within the European Union, based on the virtuous triangle of investment, structural reforms and fiscal responsibility, with the objective of creating jobs and growth.

In 2016, the European Commission used its Communication to enable a flexible interpretation of the rules under the Stability and Growth Pact (SGP)[61]. The Communication has an impact particularly on the preventive arm of the SGP. The SGP is the cornerstone of the EU's regulatory framework on economic governance and is crucial for the proper functioning of EMU. Its credibility relies on a full and consistent application of the SGP.

During the year 2016, progress was made in the implementation of the European Commission's Investment Plan for Europe, notably by extending the duration and financial reinforcement of the European Fund for Strategic Investments (EFSI)[62]. The EFSI is based on a strategic partnership between the European Commission and the European Investment Bank Group (European Investment Bank or EIB and European Investment Fund). This partnership aims to address market failures - by contributing to the reduction of risks inherent in projects - and to encourage further investments. The EIB's current contribution to this initiative amounts to € 5 billion, in addition to the guarantee of €16 billion from the budget of the European Union.

On 14 September 2016, the Commission proposed a legislative act doubling the duration and financial capacity of the EFSI[63].

The strengthening of economic governance and the completion of the Banking Union remain major challenges for EMU.

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59 It entered into force on 13 December 2011; (i) Regulation (EU) No 1173/2011 of the European Parliament and of the Council of 16 November 2011 on the effective enforcement of budgetary surveillance in the euro area (JO L 306 of 23.11.2011, p. 1); (ii) Regulation (EU) No 1174/2011 of the European Parliament and of the Council of 16 November 2011 on enforcement measures to correct excessive macroeconomic imbalances in the euro area (JO L 306 of 23.11.2011, p. 8); (iii) Regulation (EU) No 1175/2011 of the European Parliament and of the Council of 16 November 2011 amending Council Regulation (EC) No 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies (JO L 306 of 23.11.2011, p. 12); (iv) Regulation (EU) No 1176/2011 of the European Parliament and of the Council of 16 November 2011 on the prevention and correction of macroeconomic imbalances (JO L 306 of 23.11.2011, p. 25); (v) Regulation (EU) No 1177/2011 of 8 November 2011 amending Regulation (EC) No 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure (JO L 306 of 23.11.2011, p. 33); (vi) Directive 2011/85/EU of 8 November 2011 on requirements for budgetary frameworks of the Member States (JO L 306 of 23.11.2011, p. 41).

60 It entered into force on 30 May 2013; (i) Regulation (EU) No 473/2013 of the European Parliament and of the Council of 21 May 2013 on common provisions for monitoring and assessing draft budgetary plans and ensuring the correction of excessive deficit of the Member States in the euro area; (ii) Regulation (EU) No 472/2013 of the European Parliament and of the Council of 21 May 2013 on the strengthening of economic and budgetary surveillance of Member States in the euro area experiencing or threatened with serious difficulties with respect to their financial stability.

61 Communication from the Commission to the European Parliament, the Council, the European Central Bank, the Economic and Social Committee, the Committee of Regions and the European Investment Bank "Making the best use of the flexibility within the existing rules of the Stability and Growth Pact", of 13 January 2015 (COM(2015) 12 final provisional).

62 Regulation (EU) 2015/1017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal and amending Regulations (EU) No 1291/2013 and (EU) No 1316/2013 — the European Fund for Strategic Investments (OJ L 169, 1.7.2015, pp. 1-38).

63 Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EU) No 1316/2013 and (EU) 2015/1017 as regards the extension of the duration of the European Fund for Strategic Investments as well as the introduction of technical enhancements for that Fund and the European Investment Advisory Hub (COM(2016) 597 final)

In this regard, work has continued according to the calendar defined in the Five Presidents' Report (Stage 1),[64] published on 22 June 2015. The Report put forward proposals on the deepening of EMU, starting on 1 July 2015 with a view to complete it at latest in 2025.

It proposed three stages:

– Stage 1 or "deepening by doing" (1 July 2015 - 30 June 2017): stage 1 aims to build on existing instruments and treaties, boost competitiveness and structural convergence, ensure responsible fiscal policies at the national and euro area level, complete the Financial Union, and enhance democratic accountability;

– Stage 2 or "completing EMU": concrete measures of a more far-reaching nature would be agreed in order to make the convergence process more binding, for instance through a set of commonly agreed benchmarks for convergence that could be given a legal nature, as well as a euro area treasury;

– Final Stage (at the latest by 2025): once all the steps are fully in place, a deep and genuine EMU would provide a stable and prosperous place for all citizens of the EU Member States that share the single currency, attractive for other EU Member States to join if they are ready to do so.

In 2016, the European Fiscal Board[65], a consultative entity within the European Commission, became operational. Its establishment is without prejudice to the National Council of Public Finance in Luxembourg[66], which was created by the law of 21 July 2014 on the coordination and governance of public finances.

To prepare the transition from Stage 1 to Stage 2 and other possible measures for the consolidation of the euro zone, the European Commission is expected to present a white paper in 2017 outlining the next steps needed, including legal measures, to complete the EMU.

1.8.1.4 ECB Legal Acts

Monetary Policy

The ECB adopted several legal acts in the field of monetary policy, in particular:

– Guideline (EU) 2016/2298 of the ECB of 2 November 2016 amending Guideline (EU) 2015/510 on the implementation of the Eurosystem monetary policy framework (ECB/2016/31). This guideline amends Guideline (EU) 2015/510 of the ECB on the implementation of Eurosystem monetary policy (ECB/2014/60), known as the General Documentation and implemented at the national level by the General Terms and Conditions of the BCL;

– Guideline (EU) 2016/2299 of the ECB of 2 November 2016 amending Guideline (EU) 2016/65 on the valuation haircuts applied in the implementation of the Eurosystem monetary policy framework (ECB/2016/32);

– Decision (EU) 2016/810 of the ECB of 28 April 2016 on a second series of targeted longer-term refinancing operations (ECB/2016/10);

– Decision (EU) 2016/811 of the ECB of 28 April 2016 amending Decision ECB/2014/34 on measures relating to targeted longer-term refinancing operations (ECB/2016/11).

The list and content of the ECB legal acts are available on the ECB website.

64 Report by the President of the European Commission, in close cooperation with the President of the Euro Summit, the President of the Eurogroup, the President of the European Central Bank, and the President of the European Parliament "Completing Europe's Economic and Monetary Union" of 22 June 2015.

65 Commission Decision (EU) 2015/1937 of 21 October 2015 establishing an independent advisory European Fiscal Board (OJ L 282 28 October 2015, p. 37).

66 In French: Conseil national des finances publiques (CNFP).

Banking supervision

The Governing Council adopted a new Regulation:

– Regulation (EU) 2016/445 of 14 March 2016 on the exercise of options and discretions available in Union law.

In addition, the following decisions, recommendations and guidelines were published in the Official Journal of the European Union:

– Guideline (EU) 2016/256 of the ECB of 5 February 2016 concerning the extension of common rules and minimum standards to protect the confidentiality of statistical information collected by the ECB and by the national central banks for participating Member States' national competent authorities and for the ECB in its supervisory functions;

– Decision (EU) 2016/661 of the ECB of 15 April 2016 on the total amount of annual supervisory fees for 2016;

– Decision (EU) 2016/1162 of the ECB of 30 June 2016 on disclosure of confidential information in criminal investigations;

– Guideline (EU) 2016/1993 of the ECB of 4 November 2016 laying down the principles for the coordination of the assessment pursuant to Regulation (EU) No 575/2013 of the European Parliament and of the Council and the monitoring of institutional protection schemes including significant and less significant institutions;

– Guideline (EU) 2016/1994 of the ECB of 4 November 2016 on the approach for the recognition of institutional protection schemes for prudential purposes by national competent authorities pursuant to Regulation (EU) N° 575/2013 of the European Parliament and of the Council;

– Recommendation of the ECB of 13 December 2016 on dividend distribution policies.

1.8.2 National legislation

1.8.2.1 Enacted Law

1.8.2.1.1 Law of 15 March 2016 regarding OTC derivatives, central counterparties and trade repositories [...] (draft law n° 6846)[67]

The Law of 15 March 2016 (draft Law n° 6846) in particular amends the amended Law of 10 November 2009 on payment services, in order to insert the new rules regarding interoperable systems foreseen in Regulation (EU) N° 648/2012, to implement Regulation (EU) N° 260/2012 and to remove any ambiguity with regard to the free choice of the depository which payment institutions use in order to protect the funds

67 Law of 15 March 2016 regarding OTC derivatives, central counterparties and trade repositories and transposing:
The Directive 2013/14/EU of the European Parliament and of the Council of 21 May 2013 amending Directive 2003/41/EC on the activities and supervision of institutions for occupational retirement provision, Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) and Directive 2011/61/EU on Alternative Investment Funds Managers in respect of over-reliance on credit ratings; and implementing:
1. Regulation (EU) n° 260/2012 of the European Parliament and of the Council of 14 March 2012 establishing technical and business requirements for credit transfers and direct debits in euro and amending Regulation (EC) n° 924/2009;
2. Regulation (EU) n° 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories; and
3. Regulation (EU) n° 462/2013 of the European Parliament and of the Council of 21 May 2013 amending Regulation (EC) n° 1060/2009 on credit rating agencies;
and amending:
1. The Law of 23 December 1998 establishing a financial sector supervisory commission ("Commission de surveillance du secteur financier"), as amended;
2. The Law of 13 July 2005 on institutions for occupational retirement provision in the form of a pension savings company with variable capital (SEPCAV) and a pension savings association (ASSEP), as amended;
3. The Law of 10 November 2009 on payment services, as amended;
4. The Law of 17 December 2010 relating to undertakings for collective investment, as amended;
5. The Law of 28 October 2011 implementing Regulation (EC) n°1060/2009 of 16 September 2009; and
6. The Law of 12 July 2013 on Alternative Investment Fund Managers, as amended.

they have received in exchange for payment operations or issuance of electronic money. Furthermore, in order to facilitate the proper functioning of T2S, the prior amendment of Article 111 of the amended law on payment services of 10 November 2009 was required, and in particular for Luxembourg central securities depositories (CSD) to fulfil their obligations concerning settlement finality as a result of their participation in T2S.

The BCL has been involved in preparing the amendment in the above-mentioned law. The amendments aim to ensure that the moment of entry of transfer orders into the system (SFI) and the moment of irrevocability of transfer orders by the participants of a system or by third parties (SFII), are disconnected and that consequently SFII moment may occur later than SFI. Article 111 has since then been restructured in its entirety in the draft Law n° 6846 in order to assemble the provisions relating to enforceability and those relating to irrevocability. This new structure, which follows to the extent possible Articles 3 and 5 of Directive 98/26/EC of the European Parliament and of the Council of 19 May 1998 on settlement finality in payment and securities settlement systems (SFD), clarifies the distinction between the moment of entry into the system - which entails the enforceability of transfer orders in case of an insolvency procedure - and the moment of irrevocability of transfer orders - which applies not only to the system's participants but also to third parties; this should be defined by the governing rules of the system.

1.8.2.2 BCL Regulations

In 2016, the BCL issued the following two Regulations in the oversight and monetary policy fields:

- Regulation of the *Banque centrale du Luxembourg* 2016/N° 22 of 28 December 2016 amending the Regulation of the *Banque centrale du Luxembourg* 2014/N°18 of 21 August 2014 implementing the Guideline ECB/2014/31 concerning additional temporary measures relating to Eurosystem refinancing operations and eligibility of collateral and amending Guideline ECB/2007/9 and

- Regulation of the *Banque centrale du Luxembourg* 2016/N° 21 of 15 January 2016 concerning the oversight of payment systems, securities settlement systems and payment instruments in Luxembourg.

The list of BCL Regulations is available on the BCL website.

1.8.2.3 Interest rates

The legal interest rate for the year 2016 was set at 3% by the grand-ducal Regulation of 18 December 2015 on the determination of the legal interest rate for the year 2016 (Memorial A – N°250 of 24 December 2015, p. 6158).

For 2017, this rate is set at 2.25% by the grand-ducal Regulation of 23 December 2016 on the determination of the legal interest rate for the year 2017 (Memorial A – N°296 of 27 December 2016, p. 6185). It should be noted that this rate does not correspond to a particular money market reference rate.

Late payment interest rates on overdue claims in commercial transactions are calculated, unless otherwise provided for by contract, on the basis of the ECB's reference rate plus a margin. The late payment interest rate is published every six months in the Memorial B (Official Gazette). For the first half of 2016, the late payment interest rate was 8.05% (Memorial B – N°20 of 19 February 2016, p. 566). For the second half of 2016, the late payment interest was 8.00% (Memorial B – N°90 of 30 August 2016, p. 1681). The above-mentioned rates include the margin provided for by the amended law of 18 April 2004 on payment deadlines and late payment interests. This margin increased from 7% to 8% starting from 15 April 2013.

1.8.2.4 Draft law

Draft law n°7024 implementing Council Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions and amending:

1. The consolidated law of 5 April 1993 on the financial sector;

2. The consolidated law of 23 December 1998 establishing a financial sector supervisory commission ("Commission de surveillance du secteur financier");

3. The consolidated law of 5 August 2005 on financial collateral arrangements;

4. The consolidated law of 11 January 2008 on transparency requirements for issuers;

5. The consolidated law of 20 December 2010 relating to undertakings for collective investment;

6. The consolidated law of 12 July 2013 on alternative investment fund managers;

7. The consolidated law of 18 December 2015 on the failure of credit institutions and certain investment firms.

This project contains a general section on the financial sector, divided in as many chapters as laws to be modified. It gathers a series of provisions aiming at correcting substantive mistakes, either linked to the technology used, to incorrect references or to fill certain disregarded aspects. Other modifications aim at updating certain legal provisions by taking into account the new institutional architecture of the prudential supervision and of the resolution mechanism, in which existing institutions, like the ECB, or more recently created institutions, like the European Banking Authority, and more generally, the institutions of the European System of Financial Supervision, play an important role.

1.9 COMMUNICATION

1.9.1 Publications

As required by its organic law, the BCL publishes a report on its activities every year. The annual report is available in French and in English.

In 2016, the BCL also published three Bulletins and a Financial Stability Review.

In its working papers, which are available on its website, the BCL publishes the research conducted by its staff. Working papers begin with a non-technical summary. In 2016, four working papers were published.

1.9.2 Training at the BCL

1.9.2.1 Academic cooperation

The BCL continued its cooperation with the University of Luxembourg and its staff members gave several lectures within the Faculty of Law, Economics and Finance. Staff members also gave lectures on econometrics (Metz University).

The BCL also organised one off presentations of various durations for student groups.

1.9.2.2 Technical cooperation

The BCL was a shareholder of the Agence de Transfert de Technologie Financière (ATTF). This agency, established in 1999 by the Luxembourgish government, seeks to share Luxembourg's expertise in financial matters with other countries, emerging countries in particular.

1.9.2.3 Cooperation with high schools

The BCL continues to organise presentations on the BCL and the Eurosystem for secondary school students if their curriculum includes economics as a subject. Students along with their teachers are received at the auditorium of the Monterey building for educational and interactive presentations about the organisation and mission of the BCL and the Eurosystem. Other topics can also be addressed if so requested by teachers or students.

In 2015-2016, the BCL organised for the third time in Luxembourg the Eurosystem's competition for high schools, Generation €uro Students' Award. Since 2011, this competition has been organised in ten euro area countries. It is meant for secondary school students between 16 to 19 years of age, in particular students of economics. Its aim is to establish a better understanding of the role and functions of the Eurosystem. The 2015-2016 edition of the competition, won by the team Mat Esch kee Crash from the Lycée technique de Lallange, ended with a national award ceremony on 1 March 2016 at the BCL and a European award ceremony – which was attended by each participating country's winning team – on 20-21 April 2016 in Frankfurt.

Luxembourg's fourth edition of the competition was launched on 11 October 2016 with an information session for teachers and students organised at the Lycée technique de Lallange. Briefing sessions were provided to students and teachers participating in the competition to help them prepare the different stages of the competition. The fourth edition concluded with the final and the national award event at the BCL on 28 February 2017.

Luxembourg's Generation €uro Students' Award winning team members and their teacher participated in the European award event organised at the ECB on 21 April 2016, along with winning teams from the other participating countries.

1.9.2.4 Cooperation with primary schools

In 2016, for the second time, the BCL independently took part in the European Money Week (Woch vun de Suen). From 14 to 18 March, the BCL offered a programme allowing groups of pupils from cycle 4.1 of the primary school system to become acquainted with money in general and with security features of euro banknotes and coins in particular. Sessions with a duration of two and a half hours, organised throughout the week, allowed pupils to benefit from entertaining and interactive presentations, including films and games, before visiting the BCL's banknote sorting centre and a workshop where they could put into practice the knowledge they had acquired on banknotes' security features. This programme was met with great success, with a total of almost 600 participating pupils from 20 different schools.

Photo: BCL

1.9.2.5 Presentations for groups of external visitors

In 2016, the BCL continued to welcome groups of external visitors to its premises. This programme allows groups of 15 to 25 people to register for a presentation on the history and current tasks of the BCL as well as on Luxembourg's monetary history. This initiative corresponds to the BCL's desire to better inform the public of its European and national tasks.

The BCL welcomes one external group of visitors per month, either on Thursday evenings (18.00 – 19.30) or on Friday afternoons (14.30 - 16.00), for a presentation in French, Luxembourgish or English, depending on the visitors' preferences. Presentations can be organised by sending a request to the email address info@bcl.lu.

Photo: BCL

1.9.3 The BCL's website

In 2016, the BCL continued to modernise and improve its new website launched in December 2015.

The new website includes the following changes:

- enhanced graphics and significant improvements in navigation and interactivity;
- better classification of information, allowing the website to evolve in line with the BCL's tasks;
- increase in the volume of information provided and development of new content devoted to specific activities of the Bank;
- enhancement of educational / general public content;
- widening the range of bilingual (FR-EN) information.

Given the variety of audiences the BCL targets, the new website aims to help all users gain quick access to the information they are looking for.

During the year 2016, the site was reprogrammed with a responsive design in order to make navigation more pleasant by the site automatically adapting to the space available on the screen.

Almost 146 000 people (+17.1%) visited the BCL's website in 2016, over 17.2 million clicks were registered and more than 4.2 million pages consulted (+19%).

The most frequently downloaded document continues to be the numismatic programme, which was downloaded around 12 000 times.

1.9.4 The library

The library of the BCL, inaugurated in 2005, may be accessed through the network of public libraries in Luxembourg.

The library mainly contains publications on economics and law. The collection comprises works published by international organisations (such as the BIS, European Commission, IMF, OECD, World Bank, etc.) but also from National Central Banks. The majority of works focus on monetary, economic, financial and legal issues in the euro area.

The library is open to the public by appointment, which can be made either by fax (+352 4774 4910) or by email (bibliotheque@bcl.lu).

1.9.5 Press relations

On 5 July 2016, the BCL organised a press conference to present the new € 50 banknote as part of the introduction of the new euro banknote Europa series. In the same context, several press briefings were also organised in 2016.

Contacts with the national and international press were sustained throughout the year as the BCL answered many queries sent by journalists.

Overall, 88 press releases were published.

1.9.6 Information campaign for the new €20 banknote of the Europa series

During the last week of September, the BCL installed a banner of nearly 150m^2 on the façade of the Pierre Werner building located on Boulevard Royal and of the Avenue Monterey building to raise public awareness of the entry into circulation of the new € 50 banknote as of 4 April 2017.

Photo: BCL

Photo: BCL

1.9.7 Conferences and events

The BCL was involved in the organisation of the following conferences and events:

- an open house at the BCL headquarters at 2, Boulevard Royal and at the Monterey Building on 43, Avenue Monterey on 24 September. On this day, the general public was able to discover the history of the BCL's buildings, visit an exhibition on Luxembourg's monetary history and learn about the euro banknotes' security features at a dedicated workshop. A quiz contest allowed the public to test its knowledge of the BCL's missions. The BCL Governor awarded prizes to the winners at a ceremony on 25 October. The first prize was a collector coin in fairtrade gold, d'Maus Ketti, issued by the BCL.

- a conference by the Bridge Forum Dialogue association on the topic: "Recovering from the crisis: macroeconomic versus real economy and social dimensions" on 28 September at the European Investment Bank (EIB). The speaker was Mr Euclid Tsakalotos, Greek Minister of Finance.

1.9.8 Research Activities

BCL research output is disseminated through its working paper series as well as the BCL Bulletin and Financial Stability Review. Several studies were published in peer-reviewed scientific journals (*International Journal of Central Banking, Journal of Pension Economics and Finance, Journal of Money, Credit and Banking, International Journal of Finance & Economics, The World Economy, Applied Economics, Journal of Housing Economics, Quarterly Review of Economics and Finance*).

BCL researchers also presented their results in seminars and workshops organised by different institutions, including the Eurosystem, the International Monetary Fund (IMF), the European University Institute in Florence, and the universities of Cambridge (UK), Essen and Trier.

Since December 2006, the BCL has been a member of the Eurosystem "Household Finance and Consumption Network" (HFCN). This network designed and conducted a harmonised survey of the consumption and financial behaviour of households in the euro area. In Luxembourg, this survey was carried out by the BCL along with the Luxembourg Institute of Socio-Economic Research (LISER, previously CEPS/Instead). Results of the first survey wave were published as working papers or text boxes in the BCL Bulletin. The first results of the second wave, conducted in 2014, were published in 2016 as text boxes in the BCL Bulletin.

In June 2016, the BCL organised a workshop on the subject "Household Finance and Consumption" with researchers in this domain that are active in Luxembourg and in the neighbouring regions.

As indicated above, BCL researchers prepared several studies intended to contribute to the discussion within the *Comité du risque systémique* (see 1.7.1.3). Finally, BCL researchers are also developing projects within the partnership with the Toulouse School of Economics (TSE) (see 1.9.2.1). This partnership takes the form of common publications, tutoring, training, conferences and workshops, as well as exchanges between BCL and TSE researchers.

Created in 2011, the BCL Foundation aims to promote research and higher education in the BCL's fields of activity. Its Board of Directors continued to consider research on financial stability of primary importance.

The Foundation's statutes were approved by the grand-ducal Regulation of 12 March 2011.

On 31 December 2016, the Board of Directors included the following members:

- Serge Kolb, Member of the Council of the BCL and BCL Executive Director – Managing Director
- Hans Helmut Kotz, Vice-President and interim President, senior fellow at the Centre of Financial Studies, Goethe Universität, Frankfurt, Honorary Professor at Freiburg University (D) and former Member of the Board of Directors of the Deutsche Bundesbank – Director
- Jacques F. Poos, Member of the Council of the BCL – Director
- Patrice Pieretti, Professor at the University of Luxembourg and former Member of the Council of the BCL – Director
- Romain Schintgen, Member of the Council of the BCL – Director
- Henri Sneessens, Professor at the University of Luxembourg – Director
- Christian Wolff, Professor at the University of Luxembourg, Director of the Luxembourg School of Finance – Director
- Jean-Pierre Zigrand, Professor at the London School of Economics – Director

1.10 EUROPEAN ACTIVITIES

1.10.1 Activities at the level of the ECB

The BCL Governor attends the Governing and the General Council meetings. Members of the Governing Council act in their personal capacity and not as national representatives.

The Governing Council, as a rule, meets twice a month at the ECB's headquarters in Frankfurt.

Since January 2015, Governing Council meetings dedicated to monetary policy decisions take place every six weeks instead of the previous monthly schedule[68], while maintaining however as a general rule two meetings per month.

In 2016, more than 1500 decisions were taken by the Governing Council via written procedure.

The majority of written procedures exclusively or partly relate to the Single Supervisory Mechanism (SSM). As a matter of fact, written procedures are the Governing Council's most used decision tool in this area. Conversely, for central banking aspects, more decisions are taken during Governing Council meetings.

The General Council comprises the ECB President and Vice President as well as ESCB Governors and meets in Frankfurt, as a rule, on a quarterly basis.

The other members of the ECB Executive Board participate in General Council meetings, yet without "membership" status.

The Eurosystem/ESCB Committees assist the decision-making bodies of the ECB in the fulfilment of their tasks. The Governing Council and the Executive Board may ask Committees to conduct studies on specific topics. Committees report to the Governing Council through the ECB's Executive Board.

In 2016, 16 Eurosystem/ESCB committees provided expertise in their field of competence in order to support the decision making process of the Governing Council.

Committees are mainly composed of Eurosystem staff members, but for issues which fall under the competence of the General Council, staff members of ESCB central banks whose countries have not yet adopted the Euro may participate in the meetings.

If appropriate, other competent bodies may also be invited to participate in committee meetings.

In order to support the work linked to the Single Supervisory Mechanism, some of these committees meet in a composition corresponding to the SSM, i.e. including representatives of National Competent Authorities that are not national central banks.

Working groups or task forces have also been established by the committees with specific objectives in accordance with their parent Committee's mandate.

The Governing Council has also created High Level Groups to consider particular issues.

68 Up to the end of 2014, the first meeting of the month was dedicated to monetary policy while the second meeting treated the other Eurosystem missions.

1.10.2 The Economic and Financial Committee

The BCL is represented at the Economic and Financial Committee (EFC), a consultative committee composed of representatives of the Treasuries or the Ministries of Finance and the Central Banks of EU Member States as well as representatives of the European Commission and the European Central Bank (ECB).

According to Article 134(2) of the Treaty on the Functioning of the European Union (TFEU), one of the major tasks of the EFC is to "keep under review the economic and financial situation of the Member States and of the Union and to report regularly thereon to the Council and to the Commission" as well as to "contribute to the preparation of the work of the Council". The EFC also provides a framework for dialogue between the ECOFIN Council[69] and the ECB.

The EFC meets in two configurations: full and restricted. In its full composition, the EFC meets with the representatives of the Treasuries or the Ministries of Finance, National Central Banks (NCBs), the Commission and the ECB. It addresses economic developments, financial stability and matters pertaining to the IMF. NCB representatives do not participate in the meetings in restricted composition.

The EFC has held 10 meetings in full composition in 2016, and has also met three times in a specific format, the "Financial Stability Table". There it includes, in addition to representatives of NCBs, senior officials from the European Supervisory Authorities (ESAs)[70] and the European Systemic Risk Board (ESRB).

In its full composition, the EFC plays an important role in the preparation of common European positions at the G20, the International Monetary Fund (IMF), and the Financial Stability Board (FSB).[71] It also deals with economic policy issues discussed at meetings of the informal ECOFIN, to which the Governors of the NCBs of EU member states and the President of the ECB are invited.

In 2016, the EFC in full configuration continued to monitor closely the risks to financial stability in the EU, the progress towards the Banking Union, the Capital Market Union and the Investment Plan (known as the "Juncker Plan"). In addition, the EFC's High Level Working Group on the Regulatory Treatment of Sovereign Exposure finalised its report.

The EFC comprises various subcommittees that cover the functioning of public debt markets in the EU, the production and circulation of euro coins, and the IMF.[72] The BCL is a member of this last subcommittee, the SCIMF, which prepares and coordinates the positions of EU member states on IMF matters. In 2016, the SCIMF worked on issues concerning the Fund's resources, the International Monetary System, the Global Financial Safety Net and the liberalisation and management of capital flows, among other matters.

1.10.3 The European Statistical Forum, the Committee on Monetary, Financial and Balance of Payments Statistics and the European committee of central balance sheets offices

On 24 April 2013, the European Statistical System (ESS) and the ESCB signed a Memorandum of Understanding regarding cooperation between the two bodies. To further improve this cooperation, the two bodies established the European Statistical Forum (EFS), in which central banks, national statistical institutes as well as the European Commission and the ECB are represented. This forum will establish an annual work programme, whose main objective is the improvement of the cooperation between the two bodies.

The Committee on Monetary, Financial and Balance of Payments Statistics (CMFB) will continue to handle those issues that both statistical bodies have in common. The CMFB also has the task of deciding on the development and coordination of statistical categories that are required under the policy implemented by the Council, the Commission and various committees assisting them. Central banks, national statistical institutes as well as the Commission and the ECB are represented in the CMFB.

69 ECOFIN: Economic and Financial Affairs Council.

70 Specifically the European Banking Authority (EBA), the European Insurance and Occupational Pensions Authority (EIOPA), and the European Securities and Markets Authority (ESMA).

71 For the IMF and the FSB, see sections 1.11.2 and 1.7.1.1.

72 The Sub-Committee on EU Sovereign Debt Markets, the Euro Coin Subcommittee, and the Sub-Committee on IMF and related issues.

The European Committee of Central Balance Sheet Offices (ECCBSO) is an advisory body set up in 1987 by a group of European NCBs responsible for the management of the National Balance Sheet Offices. The Committee's initial objective was to improve the analysis of data for non-financial corporations. The Committee's objectives have been broadened by central banks in areas such as statistics, economic and financial research, financial stability, monitoring and risk assessment to cover the use of data from non-financial corporations. It is worth mentioning that STATEC, which is in charge of the Central Balance Sheet Office in Luxembourg, is a member of this committee.

The BCL has been a member of ECCBSO since 2014.

The BCL actively contributed to the work of these three committees in 2016. Progress has been made in particular with regard to financial accounts, balance of payments, financial services and public finances statistics as well as national accounts.

1.11 NATIONAL AND EXTERNAL ACTIVITIES

1.11.1 National activities

1.11.1.1 Relations with the Parliament

On 2 December 2016, the BCL presented its opinion on the government's draft budgetary plan on revenues and expenditures to the Financial and Budget Commission of the Luxembourg Parliament.

1.11.1.2 BCL Committees

Lawyers Committee

The Lawyers Committee of the BCL met six times in 2016. It discussed various subjects relating to the Eurosystem, such as the draft ECB regulation on the collection of granular credit and credit risk data (AnaCredit), the implementation of the BRRD in Luxembourg, the legal framework of the Corporate Sector Purchase Programme, the Distributed Ledger Technology (DLT) / Blockchain, possible sovereign debt restructuring and the regulation of hedge funds.

The Monetary and Banking Statistics Consultative Commission

The BCL has set up this consultative commission to ensure the efficient collection of monetary and banking statistics and to enhance the dialogue with reporting credit institutions. In 2016, the Commission was informed and consulted on various conceptual issues relating to the modification of statistical data collection from credit institutions, namely concerning the introduction of granular credit and credit risk data collection (the ECB's AnaCredit project).

The Balance of Payments Statistics Consultative Commission

The Balance of Payments Statistics Consultative Commission acts as an advisory group and assists the BCL in its mission to collect data in the areas of balance of payments and international investment positions. The Commission ensures an efficient organisation of data collection in order to avoid redundancies and to limit the workload for the entities requested to submit statistical data. Due to the absence of new projects, the Commission was not consulted in 2016.

1.11.1.3 External Committees

The Economic Committee (Comité de conjoncture)

The Economic Committee acts on the basis of legislation which authorises the government to take measures to stabilise employment. The Committee provides a framework for the examination of business cycle fluctuations and for the monitoring of economic policy issues when they arise. The BCL's contribution to the Economic Committee is twofold: first, the BCL collects information on Luxembourg's economic situation and, second, it contributes to the Committee's work by monitoring and commenting on the latest developments in monetary areas and in the financial sector.

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

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

Accounting Standards Board

Since October 2013, the BCL has been a member of the Accounting Standards Board (*Commission des normes comptables*, hereafter the "CNC").

The CNC is an economic interest group (*groupement d'intérêt économique*) whose role is to:

- provide accounting advice to the Government;
- contribute to the development of an accounting doctrine;
- participate in discussions on accounting matters within European and international bodies. In 2014, the CNC became a member of the EFRAG - European Financial Reporting Advisory Group as the Luxembourg representative;
- assume missions entrusted to it by the law of 30 July 2013 reforming the CNC and modifying various provisions relating to companies' accounting and annual accounts, as well as to the consolidated accounts of certain forms of companies.

During 2016, the CNC (the management committee and working groups) met on 43 occasions.

In response to the adoption of the law of December 18, 2015 transposing the directive 2013/34/UE, the CNC's doctrinal works have focused on the main modifications introduced by the new legislation and a number of doctrinal questions/answers have thus been published in 2016.

The revision of the Standard Chart of Accounts (Plan comptable normalisé) which began in 2015 continued at a steady pace during 2016 and is expected to be finalised in 2017.

Furthermore, a reflection on the reform of Luxembourg's accounting law has been launched regarding the future of derogation granted through Article 27 of the amended law of 2002. For this purpose, a statement reflecting ten years of practical application of this derogation mechanism has been established and recommendations should be finalised during the first quarter of 2017.

At the European and international levels, in 2016 the CNC responded to a public consultation launched by the European Commission on the methodology of the publication of non-financial information. The CNC also participated in preparing the response to the questionnaire issued by the Accounting Regulatory Committee regarding the national provisions of the mapping exercise on dividend distribution rules. In addition, the CNC also continued to participate on EFRAG's working groups.

Lastly, during summer 2016, the CNC also created a website (www.cnc.lu) in order to provide interested parties better access to its doctrinal works.

Committee comptabilité bancaire

The Committee *comptabilité bancaire*, set up by the *Commission de surveillance du secteur financier* (CSSF), facilitates an exchange of views between the supervisory authority, the BCL and the stakeholders of the Luxembourg financial centre. The committee is consulted on the development of CSSF circulars concerning bank accounting issues.

Higher Council for Statistics of Luxembourg

The Higher Council for Statistics carries out advisory functions for the national statistical institute of Luxembourg (STATEC) and by its mandate assesses STATEC's annual programme. Therefore, at the end of each year STATEC submits a report on the work accomplished during that year to the Board. It also submits a programme of work to be done during the year ahead. The report and programme are then assessed by the Council.

The BCL contributes to the work of the Council in two ways; firstly, it provides its opinion on documents submitted during the meetings, and secondly, it provides STATEC with data collected on the financial sector so that it can accomplish its work programme.

The Committee of Public Statistics for Luxembourg

The Committee of Public Statistics has a coordinating role in the field of public statistics. It compiles an inventory of all the surveys conducted by the Luxembourg statistical body, analyses the feasibility of responding to requests using existing sources and ensures that the implementation of the statistical programme is compliant with the best practices of the Luxembourg statistical system and international standards.

The BCL contributes to the work of the committee on a regular basis through its function as an observer.

XBRL Luxembourg

XBRL (eXtensible Business Reporting Language) is a financial reporting standard based on XML whose main objective is to improve the accuracy, transparency and efficiency of internal and external reporting.

The non-profit association XBRL Luxembourg includes some twenty organisations using XBRL and / or providing services related to XBRL technology. The role of the association is to promote the XBRL standard within Luxembourg's economy.

As a founding member of XBRL Luxembourg, the BCL analyses the potential of adopting the XBRL standard with regard to statistical reporting collected by Luxembourg financial sector companies.

1.11.2 External activities

Activities at the level of the IMF

Luxembourg is a founding member of the International Monetary Fund (IMF). The IMF's Executive Board is composed of 24 Executive Directors. As part of the amendments to the IMF's Articles of Agreement, which seek to reduce the representation of advanced European countries by two seats, Belgium and Luxembourg joined, on 1 November 2012, a group of countries (Constituency) which has been represented by a Belgian Director since November 2016. Belgium and the Netherlands take turns appointing a Director for a four-year term, thus contributing jointly to the reduction of one Director's position from an advanced European country. Luxembourg, for its part, nominates a Senior Advisor. Beyond the Benelux countries, the other 12 members of the constituency of which Luxembourg is a member, are, in decreasing order of their quotas: Ukraine, Israel, Romania, Bulgaria, Croatia, Cyprus, Bosnia and Herzegovina, Georgia, Moldova, Macedonia, Armenia and Montenegro.

Member states' quota subscriptions are an essential component of the IMF's financial resources. They correspond broadly to a country's relative position in the world economy. In the context of the 14th General Review of Quotas, which took effect on 26 January 2016, the IMF's total quotas doubled from SDR[73] 238.4 billion to SDR 476.8 billion. Luxembourg's quota increased from SDR 418.7 million to SDR 1 321.8 million, an increase of 216%. This increase of SDR 903.1 million is regulated by the Law of 10 October 2012, authorising the Government to participate in the General Review of Quotas of IMF Members, and approving the amendment to the IMF's Articles of Agreement as stipulated by Resolution n° 66-2 of the IMF Board of Governors of 15 December 2010.

To supplement its quota resources, the IMF can also borrow temporarily. The New Arrangements to Borrow (NAB), which were expanded in 2009, can provide supplementary resources of up to SDR 370 billion (about €468 billion). In addition, since 2012 – and given the delays in approving the 14th General Review of Quotas – a certain number of member countries, mainly European, also pledged to increase the IMF's resources by an equivalent of US$ 461 billion through bilateral borrowing agreements. Luxembourg contributed to this effort by signing a bilateral loan agreement to the benefit of the IMF in the amount of EUR 2.06 billion in April 2014. This line of credit initially had a two-year maturity but two extensions of one year each deferred the final maturity to 2018.

With the payment of the quota increases in February, the NAB was rolled back from SDR 370.0 billion to SDR 182.4 billion. Luxembourg's participation in the NAB has been reduced from SDR 970.59 million to SDR 493.12 million.

At the end of the year, loans provided by Luxembourg under the NAB reached SDR 86.67 million and Luxembourg held SDR 244.61 million, 99.19% of its SDR allocation compared to 99.13% at end-2015.

The BCL handles Luxembourg's financial transactions with the IMF. It holds Luxembourg's assets and liabilities with regard to the IMF in both the General Resources Account (GRA) and the SDR account.

On 31 December 2016, Luxembourg's quota, recorded in full on the BCL's balance sheet, amounted to SDR 1 321.80 million, while Luxembourg's reserve position – i.e. the difference between Luxembourg's quota and the IMF's holdings of euro denominated assets at the BCL – was SDR 188.79 million, equivalent to 14.28% of Luxembourg's quota at that time.

The financial transactions plan (FTP) of the IMF defines the currencies to be made available to its members and the distribution of reimbursements among its members on a quarterly basis.

Activities at the level of the Bank for International Settlements (BIS)

Established in 1930, the BIS is the oldest international financial institution. The BIS promotes international cooperation, on the one hand between monetary authorities and financial sector supervisory authorities through meetings that it organises for these authorities' officials, and on the other hand through the Basel Process framework in which it hosts international groups working on global financial stability including the Basel Committee on Banking Supervision and the Financial Stability Board. The BIS supports them, facilitates their interaction, and contributes to the establishment of international banking standards. At present the BIS has 60 members comprising central banks of advanced and emerging economies.

The BCL is closely involved in the activities of various committees and working groups of the BIS.[74]

Besides participating in the Committee on the Global Financial System (CGFS) and in the Annual General Meeting of the BIS, the BCL is also represented by its Governor at the Global Economy Meeting and at the All Governors' Meeting, which both take place every two months, generally at the seat of the BIS in Basel. The Governors and other senior officials from BIS member central banks examine recent developments

73 SDR: Special Drawing Rights (see glossary). On 30 December 2016, 1 SDR equalled € 1.344332.

74 The major BIS committees and working groups are: The Financial Stability Board, the Group of Central Bank Governors and Heads of Supervision, the Basel Committee on Banking Supervision, the Committee on the Global Financial System, the Committee on Payments and Market Infrastructures, the Markets Committee, the Central Bank Governance Group, the Irving Fisher Committee on Central Bank Statistics, the International Association of Insurance Supervisors and the International Association of Deposit Insurers.

and prospects of the global economy and financial markets. They also exchange views and experiences on subjects of interest to central banks.

The economic debates focus on the macroeconomic and financial situation in developed and emerging economies. Over the past year, the Global Economy Meeting has addressed, inter alia, the following subjects: the appropriate mix of monetary, fiscal, and structural policies to implement in the current environment, natural interest rates, the consequences of large exchange rate fluctuations observed recently, the risks to the globalisation of the real and financial economies, and the evolution of the drivers of international growth.

Regarding the All Governors' Meeting, the following themes were addressed, among others, during the year under review: inequalities and monetary policy, the innovation cycle, central clearing – trends and current issues; the role of central banks in financial inclusion and education, liquidity support provided by central banks, and the impact of climate change on the financial system.

Bilateral relations

<u>Working visit of the Governor of the Banque centrale du Luxembourg to Beijing in May 2016</u>

Mr Gaston Reinesch travelled to Beijing for a series of working visits. During his visit, he met with Mr Xiaochuan Zhou, the Governor of the People's Bank of China (PBC). The discussion focused on economic developments in China and Luxembourg, as well as on monetary policy in China and in the euro area. Cooperation between the BCL and PBC was also discussed. In addition, Mr Reinesch had a meeting with Mr Fulin Shang, President of the China Banking Regulatory Commission.

Mr Gaston Reinesch, Governor of the BCL and Mr Xiaochuan Zhou, Governor of the PBC

1.12 THE EUROSYSTEM PROCUREMENT COORDINATION OFFICE (EPCO)

In December 2007, the Governing Council of the European Central Bank (ECB) appointed the BCL to establish and host the Eurosystem Procurement Coordination Office (EPCO) with the objective of coordinating the joint procurement of goods and services that are necessary for the performance of Eurosystem tasks.

When the first mandate expired end of 2014, the BCL was appointed to host EPCO for a second mandate of five additional years, until 31 December 2019.

The legal framework applicable to joint Eurosystem procurement has been amended by Decision ECB/2015/51[75]. According to the terms of this decision, EPCO's main task is to identify and assess potential cases for joint procurement for the benefit of central banks that have agreed to participate in EPCO's activities[76].

In order to achieve this objective, the main priority for EPCO in 2016 was to focus on the identification and implementation of the most promising procurement opportunities for the participating central banks. These procurements have been included in the 2016 procurement plan that was approved by the Governing Council on 14 April 2016.

The procurement plan contained 18 joint procurements to be implemented in 2016 with the aim of concluding framework agreements that are open to all central banks participating in EPCO, as well as to conduct further studies of which areas are suitable for joint procurement.

Several agreements were concluded in 2016 with economic operators in fields including information technology, market data and rating agency services, consultancy and training services, air transport and hotel services or products related to the distribution of banknotes.

EPCO also provided support in the management of the framework contracts in force that led to important financial and administrative savings for the central banks and other institutions that are eligible to join EPCO's activities.

In addition, EPCO continued to develop best practices in the field of public procurement within the Eurosystem, in collaboration with the Network of Procurement Experts of the Central Banks. This network also serves as a key platform to foster a joint procurement culture within the Eurosystem and to contribute to the identification of potential cases for joint procurement.

The new legal framework widened the list of entities who may participate in EPCO's activities. In addition to ESCB Central Banks, upon invitation by the Governing Council, it is also possible for national authorities of Member States, EU institutions and bodies, or international organisations to participate in joint procurements and contracts with conditions similar to those that apply to the central banks.

The execution of the budget for 2016 (part of a multiannual financial envelope) was lower than initially allocated.

75 Decision (EU) 2016/21 of the European Central Bank of 23 December 2015 amending Decision ECB/2008/17 laying down the framework for joint Eurosystem procurement (ECB/2015/51)

76 In 2016, 17 central banks of the Eurosystem participated in EPCO's activities, as well as three central banks that are not part of the euro area, the central banks of Romania, Croatia and Sweden. Discussions have been held with other central banks of the ESCB that had expressed an interest in a future cooperation within EPCO.

02

THE BCL AS AN ORGANISATION

2
THE BCL AS AN ORGANISATION

2.1 CORPORATE GOVERNANCE

2.1.1 The Council

Article 6 of the Founding Law of 23 December 1998 defines the powers of the Council of the Bank. In 2016, the Council consisted of the following members:

President : Mr Gaston Reinesch
Members : Mr Pierre Beck
Mr Pit Hentgen
Mr Serge Kolb
Mr Jacques F. Poos
Ms Simone Retter
Mr Romain Schintgen
Mr Michel Wurth
Mr Claude Zimmer

During 2016, the Council held seven meetings. The level of participation by the members was as follows: Mr Pierre Beck (seven meetings), Mr Pit Hentgen (six meetings), Mr Serge Kolb (five meetings), Mr Jacques F. Poos (seven meetings), Ms Simone Retter (seven meetings), Mr Romain Schintgen (seven meetings), Mr Michel Wurth (six meetings) and Mr Claude Zimmer (seven meetings).

Within the framework of monitoring the financial situation of the Bank, the Council approved the financial accounts as per 31 December 2015, the budget orientations and subsequently the budget for the 2017 financial exercise.

The Audit Committee

Since 2001, the Audit Committee has assisted the Council in its choice of the statutory auditor to be proposed to the Government, in determining the scope of the potential specific verifications to be performed by the statutory auditor and in the approval of the financial accounts by the Council. It is kept informed on the internal audit plan.

The Audit Committee may invite the Head of the internal Audit Department and the statutory auditor of the Bank to participate in its work.

The Audit Committee was chaired in 2016 by one of its non-executive members, Mr Claude Zimmer, and held four meetings. At its meeting on 16 December 2016, the Council nominated the non-executive members of the Audit Committee for 2017: Mr Pit Hentgen, Ms Simone Retter and Mr Claude Zimmer.

2.1.2 The Governor

His Royal Highness Grand-Duke Henri of Luxembourg, based on a proposal by the Government in Cabinet, appointed Mr Gaston Reinesch as the Director-General (Governor) of the BCL for a six-year period as of 1 January 2013.

2.1.3 The Executive Board

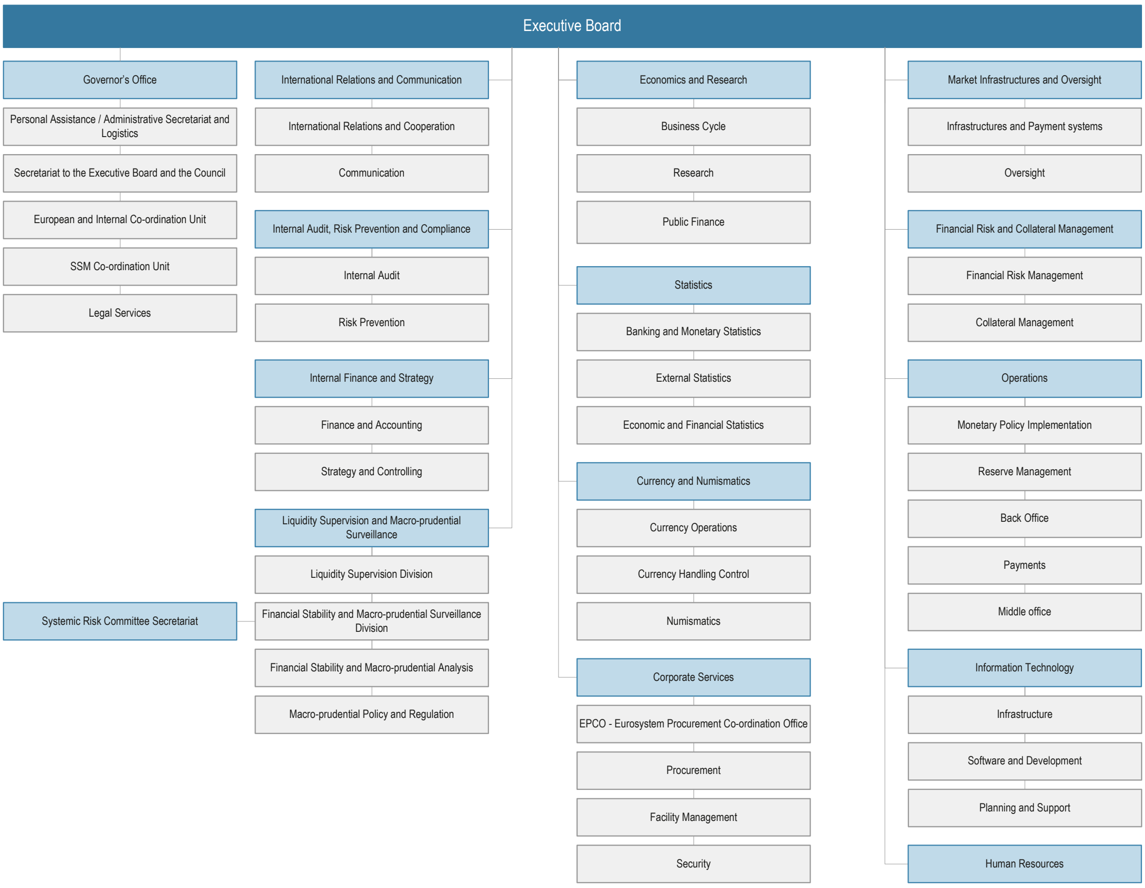
The Executive Board is the superior executive authority of the BCL. It takes the decisions and draws up the measures necessary for the BCL to carry out its tasks. Without prejudice to the independence of the Director-General from instructions in his capacity as a member of the Governing Council of the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

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

Director-General: Mr Gaston Reinesch
Directors: Mr Serge Kolb and Mr Pierre Beck

The members of the Executive Board receive a salary according to the wage scale in the public sector as well as different allowances. The remuneration components are subject to the current legal tax rates (i.e. the progressive tax rate) in Luxembourg.

2.1.4 Organisation chart as of 31 december 2016



2.1.5 Internal control and risk management

The BCL's internal control system is based on generally accepted principles in the financial sector and within the European System of Central Banks and the Single Supervisory Mechanism (ESCB/SSM), whilst taking into consideration the BCL's specific needs as a central bank.

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

Functional verifications are carried out by specific administrative units, ensuring an adequate segregation of duties in line with the BCL's activities. These units are the Financial Risk Management and Collateral Management sections, the Risk Prevention section as well as the Controlling function:

- The Financial Risk Management section is responsible for the analysis of financial risks, for the surveillance of the implementation of decisions taken by the internal committees and by the Executive Board, the surveillance of the established investment limits and the issuance of regular reports on these issues;

- The Collateral Management section is entrusted with the risk management responsibility in the field of collateral, in particular for ABS (asset-backed securities);

- The Risk Prevention section is in charge of the surveillance of operational risks, risks related to information systems and non-compliance risks.

Whereas the operational departments are responsible for identifying the risks linked to their fields of activities and for taking appropriate actions to mitigate these risks, the Risk Prevention section has the following responsibilities:

- to establish a common methodology for risk analysis;
- to provide assistance in the identification and evaluation of risks;
- to ensure periodical reporting on the residual operational risks.

The Risk Prevention section is also in charge of coordinating the Business Continuity Plan and related testing.

The purpose of the Compliance function, which is administratively located within the Risk prevention section, is to identify, assess and monitor the Bank's risk of non-compliance. The risk of non-compliance is defined as the risk of judicial, administrative or disciplinary sanctioning, of financial losses or reputational damage which could affect the BCL if it were not to comply with the laws, regulations, professional and ethical standards or internal instructions falling under the competence of the Compliance function.

The Executive Board of the BCL identified several areas of intervention for the Compliance function, in particular:

- anti-money laundering (AML) and financing of terrorist activities,
- professional code of ethics,
- prevention of market abuse,
- conflicts of interests,
- professional secrecy and confidentiality,
- privacy and protection of personal data,
- regulation of public markets.

• The Controlling function ensures that the available resources are used effectively and that a possible misuse is detected without delay. It ensures the proper functioning of the budgetary procedure and it supervises the execution of the budget. It reports on a regular basis on the follow-up thereof.

The Internal Audit unit is in charge of the independent and objective assessment of the internal control system and its functioning. The Internal Audit unit is independent from the other administrative units and reports directly to the President of the Council.

The Internal Audit unit complies with internationally accepted professional standards, as applied by the ESCB/SSM. The internal annual audit plan comprises audit missions on a national level, as well as audits that are coordinated by the Internal Auditors Committee of the ESCB, in compliance with the ESCB/SSM audit charter. The Internal Audit unit follows-up on the implementation of the recommendations issued during its audit activities.

Finally, the Audit Committee is informed about the internal control and risk management framework and of its functioning.

2.1.6 External control

In accordance with art. 15 of the BCL's organic law, the Bank's financial accounts are audited by an external auditor, nominated for five years by the Government, whose mandate is to certify the correctness and completeness of the BCL's financial accounts. Moreover, the external auditor is mandated by the Bank's Council to perform additional reviews and specific controls on an annual basis.

At European level, the BCL's external auditor's nomination is approved by the Council of Ministers of the EU, upon recommendation of the Governing Council of the ECB. In this context, the external auditor is also entrusted with the performance of some specific engagements at Eurosystem level.

The mandate of the external auditor of the BCL for the years 2014 to 2018 was granted to DELOITTE Audit S.àr.l. Luxembourg, following a selection and agreement process laid down in the ESCB/ECB Statutes (Article 27.1).

2.1.7 Codes of Conduct

A Code of Conduct defining the internal and external rules of conduct is applicable to all staff members. The Code is valid without prejudice to some rules defined by the public services legislation, the social legislation as well as existing contractual commitments and it prescribes ethical standards of nondiscrimination, integrity, independence, and professional secrecy to which the BCL's staff has to adhere strictly.

The implementation of the Code of Conduct, as far as the Director-General is concerned, was, at his request, reinforced at his expense. Furthermore, in order to avoid any suspicion of a potential conflict of interest with regard to his function as a member of the Governing Council of the ECB, the Director-General does not participate in the investment committees of the BCL, which are entrusted with the management of the BCL's own funds. In addition, as regards the latter, the Director-General does not take part in the deliberations of the Executive Board of the BCL. His responsibilities are limited, as the President of the Council, to those of an administrator.

Moreover, the European Central Bank requires the Members of the Governing Council to adhere individually to its Code of Conduct, which foresees particularly strict standards of professional and ethical conduct. The members of the Governing Council shall act with honesty, independence, impartiality, and discretion. The members shall not consider their personal interests and shall avoid any situation that may lead to a conflict of interest. These obligations extend one year after the termination of their function. The conditions for the acceptance of gifts and other benefits as well as for the participation in conferences, receptions or cultural events are also specified in the Code of Conduct.

The Governors are invited to be particularly circumspect regarding individual invitations. The same applies to their spouses or partners who are likewise obliged to respect the internationally accepted rules prevailing in this area. The possible participation of members of the Governing Council in events taking place outside of the ESCB is strictly circumscribed. Finally, members of the Governing Council must neither disclose nor make use of confidential information when performing, either directly or indirectly via intermediaries, financial transactions on a private basis.

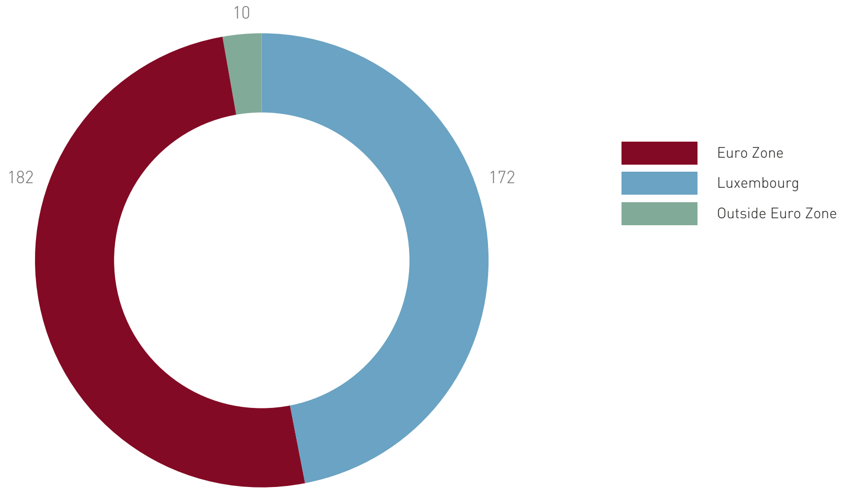
2.2 HUMAN RESOURCES AT THE BCL

2.2.1 Workforce evolution

The evolution of the BCL's workforce is the result of an original, rapid and unprecedented history in the Eurosystem. On 31 December 2016, the institution that has been established in 1998, employed 362 employees (representing 346.25 full-time equivalents) with an average growth rate of 9% over the last two years.

For reasons related to its evolution and its permanent adaptation, the BCL has recruted agents of different status and nationalities, thereby enriching the diversity of its human capital.

Graph 18:
Distribution of agents by nationality in 2016



2.2.2 Strategic approach to Human Resources Management

As at the end of 2016, to support this dynamic vision of Human Resources, the BCL launched a new policy of forward-looking management and development of its skills to align with best comparable practices, in particular with regard to succession planning, creation of skill pools, identification of potentials, rationalisation of administrative deadlines, training plans based on a more in-depth analysis of skills and the implementation of managerial practices inspired by the best performing institutions.

Within this general framework, a major challenge is to efficiently accompany this mutation and to ensure the transmission of the intrinsic values of the BCL without obstructing the renewal of teams or the development of management methods.

In addition, the BCL intends to develop its reputation as a quality employer offering a prominent employability value.

2.2.3 BCL Pension Fund

Because of the special status reserved by the legislator to the BCL, the institution established a pension fund in 2001 in order to finance the statutory pension liabilities (1st pillar) of its staff members. The BCL affiliates to this fund staff members of various statuses according to the provisions of its organic law.

The pension fund is set up within the Bank and is managed autonomously. In order to ensure exemplary transparency in its financial situation, the pension fund has its own separate accounts with an identification of its assets and its liabilities on the balance sheet of the BCL.

In order to ensure good governance, the pension fund is supervised by a decision-making body, the Steering Committee which appoints the stakeholders and validates the strategic axes and the general principles governing the investment and treasury policy of the pension fund. These strategic orientations are proposed to the Steering Committee by an advisory committee, the ALCO Committee.

Since the State does not intervene in the financing of the statutory pensions (1st pillar) of the BCL's staff members, the pension fund is exclusively financed by the pension deductions made on the salaries of the staff members in compliance with the rules of the pension scheme applicable to them according to their status and by the payments made by the Bank itself.

2.3 INTERNAL FINANCE AND STRATEGY

2.3.1 Accounting and reporting

The BCL regularly updates its accounting system and its procedures in order to meet the quality standards of the Eurosystem. As in previous years, the BCL has participated in the Working Groups on the ESCB's financial framework and has transposed the accounting revisions accordingly.

The Eurosystem imposes specific harmonised rules on the daily reporting of balance sheet data by each central bank.

The control systems are adapted to changes in the operations carried out during the period under review.

The BCL regularly checks the development of balance sheet items, off-balance-sheet items and the profit and loss accounts. Investments, revenues and expenses are monitored particularly closely with special attention to the correct execution of signing powers.

The monthly balance sheet of the BCL is published on its website.

The management information system, in the form of dashboard reports, meets the continuous need to follow the Bank's activities. These tables include all activities of the Bank. The BCL strictly monitors the development of the interest margin and compares the profitability of its investments to set benchmarks.

The BCL's decision-making bodies are regularly informed of the results of these activities in order to be able to determine future targets and actions.

2.3.2 Budget

Budget preparation, in accordance with the Organic Law of the BCL, is part of the BCL's multiannual planning process, whose primary purpose is to ensure the Bank's long-term financial equilibrium. In addition, the annual budget determines the upper boundary of the operating expenditure and investments the Bank may incur during a given financial year.

The 2016 budget of the BCL has been established in accordance with the BCL's budgetary procedure and the Guidelines set by the Bank's Council on 10 July 2015. The 2016 budget was approved by the Council of the BCL on 18 December 2015.

In particular, the 2016 budget includes the following items:

- The unconventional monetary policy operations adopted by the Eurosystem have been expanded in 2016, particularly through the broadening of the securities purchase programme;
- The Single Supervisory Mechanism (SSM) has continued to strengthen its activities, which has further increased the tasks to be executed by the BCL;
- The Eurosystem key interest rates remained at a historically low level which also had a negative impact on the revenues of the BCL;
- At the Eurosystem level, cooperation among NCBs is characterised by an ongoing consolidation of systems in operation, a significant number of common projects and common purchasing procedures among NCBs under the auspices of the Eurosystem Procurement Coordination Office (EPCO);
- At the national level, the BCL's tasks have also continued to increase, mainly in the areas of macro-prudential supervision, oversight of payment systems and securities settlement and statistical data collection. The activities of the Systemic Risk Committee for Luxembourg, to which the BCL provides the secretariat, have further developed and resulted in additional tasks for the BCL;
- The BCL has a significant number of vacant positions which shows that recruitment remains crucial for the BCL. Given the increase in its activities, additional staffing is necessary;
- The BCL has continued to make additional contributions to its pension fund as well as to the provisions for general banking risks;

- The historically low level of interest rates combined with a continuous increase in staff numbers has led to a situation where the coverage of BCL's operating expenditure by its current revenues is increasingly difficult.

The Internal Finance and Strategy Department monitors the execution of the budget and prepares quarterly reports for the Executive Board. At the end of each fiscal year, a detailed gap analysis of initial budget vs. actual expenditure is prepared. This analysis is submitted to the Executive Board and the Council of the Bank for information and approval. Finally, the conclusions drawn from this analysis are taken into account for the preparation of future budgets.

Expenditure for operating costs and investments as of 31 December 2016 remained within the boundaries set by the Bank's annual budget.

2.3.3 Strategic planning and management control

Management control aims at enhancing efficiency and accountability within the BCL, allowing the Executive Board to focus on decision making at the strategic level. To this end, management control assists the Executive Board of the Bank by providing quantitative and qualitative analyses, thus facilitating and supporting an efficient decision making process.

Via its *Project Office* function, management control is entrusted with the coordination and prioritisation as well as the management of the Bank's internal projects. In 2016, the *Project Office* team has been reinforced, allowing for improved quality control both during the selection process of different projects and during their implementation. The *Project Office* assists the *BCL's Internal Steering Committee* (BISC) and the Executive Board in the preparation of decisions for projects.

The status of ongoing projects as well as the launching of future projects is discussed on a regular basis at the BISC, for which the Section "Strategy and Controlling" provides secretariat functions. The *Overall Project Monitoring Reports* (OPMR), prepared by the Strategy and Controlling Section on the basis of monthly progress reports submitted by the individual projects reports, allow the BISC to better monitor the progress of the BCL's various projects and ensure the flow of information to the Executive Board on project related matters.

BCL representatives have also participated in a series of project controlling activities at ESCB/Eurosystem level related to the preparation and monitoring of common projects and have contributed to the further development of the underlying methodology.

Cost accounting, as an integral part of the BCL's management control function, serves as the basis for identifying, analysing and monitoring activity related costs (*Activity Based Costing*). Moreover, it establishes the financial figures for the invoicing of services. The methodology used complies with the harmonised set of rules as defined at the Eurosystem level. It consists of allocating the BCL's operational expenses according to different cost centres, i.e. to the respective entities, thus allowing for the cost of each of the BCL's activities to be identified.

In order to facilitate planning and monitoring of necessary resources, the BCL applies an analytic tool for measuring and evaluating the allocation of human resources and material with respect to the various missions of a central bank. Together with the cost accounting system, this allows the Executive Board to effectively monitor the operational performance of the Bank. Furthermore, reports containing both financial and operational indicators facilitate the alignment of tasks and activities with both the strategic orientations and the identified objectives of the Bank.

As the BCL continues to develop its activities, a more comprehensive medium and long term planning remains a core requirement. The efforts in the field of strategic planning have been intensified in order to safeguard a smooth alignment of the BCL with the current economic, financial and institutional environment. Moreover, in order to monitor the capital adequacy with respect to its financial independence, the BCL makes regular projections of its long-term financial situation. It carries out prospective analyses based on internal factors (e.g. costs and revenues) and external factors (e.g. interest rates, exchange rates and other variables of the Eurosystem and of the economic environment).

2.4 FINANCIAL STATEMENTS

Preamble

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

2.4.1 Key figures as of year-end (in euro)

	2016	2015	Change in % 2016/2015
Total assets	200 850 919 830	158 958 450 236	26%
Liabilities to credit institutions	97 433 067 129	57 237 329 129	70%
Lending to credit institutions	4 907 440 027	3 657 140 000	34%
Own funds (1), revaluation accounts, administrative provisions and specific banking risks provisions	1 300 725 096	1 273 839 511	2%
Net result from banking activities (2)	295 856 554	183 299 452	61%
Net result from banking activities adjusted by net monetary income allocation	78 089 666	128 365 796	-39%
Total net income	83 068 393	88 499 642	-6%
Administrative expenses	75 101 535	81 084 686	-7%
Net profit	1 810 813	1 776 128	2%
Cash Flow (3)	14 381 298	61 309 622	-77%
Staff	360	345	4%
BCL's weighting in the capital of the ECB	0.2030%	0.2030%	
BCL's weighting in lending to credit institutions related to monetary policy operations	0.823%	0.654%	

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

2.4.2 Report of the Réviseur d'Entreprises agréé

We have audited the accompanying financial statements of Banque centrale du Luxembourg, which comprise the balance sheet as at December 31, 2016 and the profit and loss account for the year then ended, and a summary of significant accounting policies and other explanatory information.

Directors' responsibility for the financial statements

The financial statements are the responsibility of the Directors and are approved by the Council. The Directors are responsible for the preparation and fair presentation of these financial statements in accordance with generally accepted accounting principles and those defined by the European System of central banks, and for such internal control as the Directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Responsibility of the Réviseur d'Entreprises agréé

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing as adopted for Luxembourg by the Commission de Surveillance du Secteur Financier. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Directors, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements give a true and fair view of the financial position of Banque centrale du Luxembourg as of December 31, 2016, and of the results of its operations for the year then ended in accordance with generally accepted accounting principles and those defined by the European System of central banks.

For Deloitte Audit, *Cabinet de révision agréé*
Martin Flaunet, *Réviseur d'entreprises agréé*
Partner

March 23, 2017

2.4.3 Balance sheet as at 31 December 2016

ASSETS	Notes	2016 EUR	2015 EUR
Gold and gold receivables	3	79 341 312	70 499 018
Claims on non-euro area residents denominated in foreign currency	4	843 295 653	637 580 813
- Receivables from the IMF	4.1.	662 048 036	463 802 134
- Balances with banks, security investments, external loans and other external assets	4.2.	181 247 617	173 778 679
Claims on euro area residents denominated in foreign currency	5	1 336 829 690	1 564 264 473
Claims on non-euro area residents denominated in euro	6	805 947 591	1 299 649 164
- Balances with banks, security investments and loans		805 947 591	1 299 649 164
Lending to euro area credit institutions related to monetary policy operations denominated in euro	7	4 907 440 027	3 657 140 000
- Main refinancing operations	7.1.	800 000 000	610 000 000
- Longer-term refinancing operations	7.2.	4 107 440 000	3 047 140 000
- Marginal lending facility	7.5.	27	-
Other claims on euro area credit institutions denominated in euro	8	320 107 567	10 920 730
Securities of euro area residents denominated in euro	9	4 653 662 908	3 494 337 566
- Securities held for monetary policy purposes	9.1.	3 543 927 349	1 592 425 088
- Other securities	9.2.	1 109 735 559	1 901 912 478
Intra-Eurosystem claims	10	187 320 186 464	147 672 239 627
- Participating interest in the ECB	10.1.	36 396 638	36 396 638
- Claims related to the transfer of foreign reserves	10.2.	117 640 617	117 640 617
- Other claims within the Eurosystem	10.3.	187 166 149 209	147 518 202 372
Items in course of settlement		-	160
Other assets	11	584 108 618	551 818 685
- Tangible and intangible assets	11.1.	59 870 857	62 838 449
- Other financial assets	11.2.	441 446 178	398 210 311
- Accruals and prepaid expenses	11.3.	80 619 900	88 821 256
- Sundry	11.4.	2 171 683	1 948 669
Total assets		**200 850 919 830**	**158 958 450 236**

The accompanying notes form an integral part of the financial statements.

LIABILITIES	Notes	2016 EUR	2015 EUR
Banknotes in circulation	12	2 990 103 480	2 876 503 995
Liabilities to euro area credit institutions related to monetary policy operations denominated in euro	13	97 433 067 129	57 237 329 129
- Current accounts (covering the minimum reserve system)	13.1.	60 290 467 129	35 596 035 548
- Deposit facility	13.2.	37 142 600 000	21 641 293 581
Liabilities to other euro area residents denominated in euro	14	2 758 368 960	2 424 253 596
- General government	14.1.	843 165 095	559 056 089
- Other liabilities	14.2.	1 915 203 865	1 865 197 507
Liabilities to non-euro area residents denominated in euro	15	716 136 021	259 926 093
Liabilities to non-euro area residents denominated in foreign currency	16	1 335 556 066	1 567 549 469
Counterpart of special drawing rights allocated by the IMF	17	314 344 986	313 901 066
Intra-Eurosystem liabilities	18	93 600 099 230	92 617 860 680
- Net liabilities related to the allocation of euro banknotes within the Eurosystem	18.1., 12	93 600 099 230	92 617 860 680
Items in course of settlement		67 410	-
Other liabilities	19	36 381 452	49 492 966
- Accruals and income collected in advance		18 982 015	26 763 928
- Sundry		17 399 437	22 729 038
Provisions	20	1 299 922 166	1 266 110 878
- Provision for banking risks	20.1.	933 683 166	928 178 149
- Provision for pensions	20.2.	366 070 000	337 793 729
- Other provisions		169 000	139 000
Revaluation accounts	21	173 170 124	153 630 371
Capital and reserves	22	191 891 993	190 115 865
- Capital	22.1.	175 000 000	175 000 000
- Reserves	22.2.	16 891 993	15 115 865
Profit for the year	40	1 810 813	1 776 128
Total liabilities		**200 850 919 830**	**158 958 450 236**

The accompanying notes form an integral part of the financial statements.

2.4.4 Off-balance sheet as at 31 December 2016

	Notes	2016 EUR	2015 EUR
Securities received as collateral	23	122 356 265 453	125 563 173 973
Foreign currency reserve assets managed on behalf of the ECB	24	412 511 469	396 160 538
Futures - Purchases	25	62 800 000	-
Futures - Sales	25	88 100 000	-

The accompanying notes form an integral part of the financial statements.

2.4.5 Profit and loss account for the year ending 31 December 2016

	Notes	2016 EUR	2015 EUR
Interest income	26	313 552 785	196 417 128
Interest expense	26	(25 700 277)	(50 101 113)
Net interest income	26	**287 852 508**	**146 316 015**
Realised gains/(losses) arising from financial operations	27	10 335 854	42 455 051
Write-downs on financial assets and positions	28	(879 423)	(3 827 078)
Transfer to/from provisions for risks	29	(5 535 017)	(50 067 587)
Net result of financial operations, write-downs and risk provisions		**3 921 414**	**(11 439 614)**
Fees and commissions income	30	9 255 958	9 176 688
Fees and commissions expense	30	(10 708 343)	(10 821 223)
Net result from fees and commissions	30	**(1 452 385)**	**(1 644 535)**
Income from participating interests	31	4 282 553	4 028 096
Net result of pooling of monetary income	32	(217 766 888)	(54 933 657)
Other income	33	6 231 191	6 173 339
Total net income		**83 068 393**	**88 499 644**
Staff costs	34	(39 318 938)	(36 959 511)
-Gross salaries		(37 060 345)	(34 744 189)
-Other staff costs		(2 258 593)	(2 215 322)
BCL's contribution to the legal pension scheme	35	(19 090 636)	(25 017 104)
Other administrative expenses	36	(13 653 425)	(13 623 839)
Depreciation of tangible and intangible assets	11.1., 37	(6 156 045)	(5 638 829)
Banknote production services	38	(1 430 217)	(1 727 196)
Other expenses	39	(1 608 319)	(3 757 037)
Profit for the year	40	**1 810 813**	**1 776 128**

The accompanying notes form an integral part of the financial statements.

2.4.6 Notes to the financial statements as at 31 December 2016

NOTE 1 - GENERAL INFORMATION

The Banque centrale du Luxembourg ("the BCL" or "the Bank") was founded in accordance with the law of 22 April 1998. The Founding Law of 23 December 1998 as modified, stipulates that the main task of the BCL shall be to contribute to the exercise of the tasks of the European System of Central Banks (ESCB) so as to achieve the objectives of the ESCB. The BCL is also responsible for the oversight of the general market liquidity situation and the evaluation of the market participants in this respect. The BCL is authorised to take and sell participations as well as, in exceptional circumstances, to make short-term lending to counterparties with appropriate guarantees. In addition, establishing the single supervisory mechanism, the macro-prudential authority, the single resolution mechanism, and the deposit guarantee scheme have resulted and continue to entail new missions and responsibilities for the BCL.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of the financial statements are set out below:

2.1 Layout of the financial statements

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

2.2 Accounting principles

The following accounting principles have been applied:

- economic reality and transparency;
- prudence;
- recognition of post-balance sheet events;
- continuity of methods and comparability;
- relative significance;
- going concern concept;
- recognition of charges and income in the accounting period they relate to.

2.3 Basis of preparation

The financial statements have been prepared under the historical cost convention, modified to include the valuation at market prices of securities (other than those classified as held-to-maturity and those held for monetary policy purposes), gold and of all other on-balance-sheet and off-balance-sheet assets and liabilities denominated in foreign currency.

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

2.4 Gold, assets and liabilities in foreign currencies

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

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

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

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

2.5 Rules applicable to the portfolios held by the BCL

Securities currently held for monetary policy purposes are accounted for at amortised cost (subject to impairment).

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

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

Off-balance-sheet instruments are revalued on an item-by-item basis. Daily changes in the variation margin of open interest rate futures contracts are recorded in the Profit and Loss Account.

The Agreement on Net Financial Assets (ANFA) is an agreement between the National Central Banks (NCBs) of the euro area and the European Central Bank (ECB), which together form the Eurosystem. The objective of this agreement is for the Governing Council of the ECB to ensure a full control of the consolidated balance sheet of the Eurosystem. The agreement sets rules and limits for holdings of financial assets which are related to national tasks of the NCBs other than the monetary policy[1]. As part of this agreement, the principle of a dynamic exemption is foreseen in relation to the maximum amount of net financial assets (NFA). This dynamic exemption, which applies to the BCL, adjusts the historical waiver (ensuring that the NCBs do not have to reduce their NFA below a level which is linked to their historical starting position) over time in proportion to the growth or decline of Eurosystem maximum NFA.

2.6 Recognition of gains and losses

Income and expenses are recognised in the period in which they are earned or incurred.

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

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

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

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

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

2.7 Events after the reporting period

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

2.8 Banknotes in circulation

The ECB and the euro area NCBs, which together comprise the Eurosystem, issue euro banknotes. The total value of euro banknotes in circulation is allocated to the Eurosystem central banks on the last working day of each month in accordance with the banknote allocation key.

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

The difference between the value of the euro banknotes allocated to each NCB in accordance with the banknote allocation key and the value of the euro banknotes that it actually puts into circulation also gives rise to remunerated intra-Eurosystem balances. These claims or liabilities, which incur interest, are disclosed under the sub-item "Intra-Eurosystem: Net claims/liabilities related to the allocation of euro banknotes within the Eurosystem"[1].

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

1 The annual average Net Financial Assets of the NCBs is published on the website of the ECB at the following address: https://www.ecb.europa.eu/explainers/tell-me-more/shared/data/annual_average_nfa.en.xlsx. The most recent data are published during the semester starting the next financial year.

2.9 Intra-Eurosystem claims and liabilities

Intra-Eurosystem balances result primarily from cross-border payments in the EU that are settled in central bank money in euro. They are settled in TARGET2 (Trans-European Automated Real-time Gross settlement Express Transfer system) and give rise to bilateral balances in the TARGET2 accounts of EU central banks. These bilateral balances are netted out and then assigned to the ECB on a daily basis, leaving each NCB with a single net bilateral position vis-à-vis the ECB only. Intra-Eurosystem balances of the BCL vis-à-vis the ECB arising from TARGET2, as well as other intra-Eurosystem balances denominated in euro are presented on the balance sheet of the BCL as a single net asset position and disclosed under "Other claims within the Eurosystem (net)".

There are other claims and liabilities of the BCL vis-à-vis the Eurosystem due to its participation in the capital of the ECB, the transfer of a part of foreign reserves, the interim profit distributions and accrued liabilities from the ECB resulting from the distribution of the monetary income results and the allocation of euro banknotes between the NCBs and the ECB.

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

Intra-Eurosystem claims and liabilities arising from TARGET2 balances and counterparties accounts are shown as a single net position on the balance sheet of the BCL.

2.10 Treatment of tangible and intangible assets

The tangible and intangible assets, except for land and works of art, are stated at their acquisition cost less depreciation. Depreciation is calculated on a straight-line basis over the estimated useful life of the fixed asset:

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

2.11 Pension fund

Since 1 January 1999, after the entry into force of the Founding Law of 23 December 1998, as modified, the legal pension claims (1st pillar) of the BCL's staff are fully borne by the BCL. The pension fund was set up in 2000.

The actuarial method determines the pension fund's liability related to old age, disability or survival for each member of staff. The actuarial model is based, among other things, on each member of staff's personal and past and foreseeable career data, on the forecast of the cost and standard of living as well as on an average rate of return generated by the fund's assets.

The BCL's liabilities related to pensions are shown in the account "Provisions for pensions". The provision increases as a result of regular transfers from the wage share and from the notional employer's share and decreases by pension payments to retirees. At the year end, the provision is adjusted in the light of the new actuarial calculation. In addition, if necessary, periodic transfers from the account "Booking reserve of the pension fund", equivalent to the gains generated by the fund's assets, to adjust the account "Provision for pensions".

In cases where regular transfers and the results of the pension fund would be insufficient to cover the BCL's pension liabilities, the difference between the existing provision and the accrued liabilities valued by the actuary is covered in the same trend by an additional contribution from the BCL. The BCL applies the method of projected unit credit in line with international standards.

In accordance with the prudence principle, the management body of the BCL has decided to gradually follow the measurement method from IAS 19 standard.

2.12 Provision for banking risks

In accordance with the prudence principle, the BCL's provision policy intends to cover specific and general risks resulting from the Bank's activities.

NOTE 3 - GOLD AND GOLD RECEIVABLES

As at 31 December 2016, the BCL holds 72 256.82 ounces of fine gold amounting to 79.3 million euro (72 438.56 ounces of fine gold amounting to 70.5 million euro on 31 December 2015).

On the balance sheet date, gold is valued on the basis of the euro price per fine ounce derived from the quotation in US dollars established at the London fixing on 30 December 2016.

NOTE 4 - CLAIMS ON NON-EURO AREA RESIDENTS DENOMINATED IN FOREIGN CURRENCY

	2016 EUR	2015 EUR
Receivables from the IMF	662 048 036	463 802 134
Balances with banks, security investments, external loans and other external assets	181 247 617	173 778 679
	843 295 653	**637 580 813**

Under this item are recorded the BCL's foreign exchange reserve holdings with counterparties situated outside the euro area (including international and supranational institutions and non-Eurosystem central banks).

4.1 Receivables from the IMF

This sub-item contains receivables from the International Monetary Fund (IMF) made up of reserve tranche position, SDR holdings and new arrangements to borrow. SDR are reserve assets created by the IMF and allocated by it to its members. A member's SDR holdings initially amount to the SDR allocated. Afterwards, SDR holdings are subject to fluctuations as a result of encashments and transactions. The reserve tranche position corresponds to the net amount of the quota and the IMF's currency holding and takes into account the re-evaluation of the general account. The new arrangements to borrow are credit agreements between the IMF and the Government of Luxembourg.

Within the framework of the 14th General Review of Quotas, the total Luxembourg's quota of IMF was increased, in February 2016, from SDR 418.7 million to SDR 1 321.8 million. This increase of SDR 903.1 million is regulated by the law of 10 October 2012, which authorises the Government of Luxembourg to participate in the general review of quotas of IMF Member States.

On 24 February 2016, the BCL paid to the IMF an amount of 284 674 064 euro (equivalent to SDR 225 775 000) for the increase of quota (paying up of 25% of the increase). This amount was previously paid to the BCL by the Treasury of Luxembourg in accordance with Article 4 (2) of the BCL's Organic Law in relation to its financial base.

At the same time of the quota increase, Luxembourg's contribution to the New Arrangements to Borrow to the IMF went down from SDR 970.6 million to SDR 493.12 million.

4.2 Balances with banks, security investments, external loans and other external assets

This sub-item contains balances held on accounts with banks outside the euro area as well as securities, loans and other foreign currency assets issued by non-residents of the euro area. It includes in particular the US dollar securities portfolio which could be used, if needed, for monetary policy operations.

This portfolio, which amounts to 148 million euro as at 31 December 2016 (162 million euro on 31 December 2015), mainly consists of government bonds and bonds issued by international and supranational institutions denominated in US dollars. Securities are valued at market prices. As at 31 December 2016, their value at market prices included a negative net revaluation adjustment amounting to 0.7 million euro (negative net revaluation adjustment amounting to 0.4 million euro on 31 December 2015).

Balances with banks amounted to 33.5 million euro as at 31 December 2016 (11.3 million euro on 31 December 2015).

NOTE 5 - CLAIMS ON EURO AREA RESIDENTS DENOMINATED IN FOREIGN CURRENCY

This item contains balances in foreign currency held by the BCL on accounts with euro area counterparties which amounts to 1 337 million euro as at 31 December 2016 (1 564 million euro on 31 December 2015).

NOTE 6 - CLAIMS ON NON-EURO AREA RESIDENTS DENOMINATED IN EURO

	2016 EUR	2015 EUR
Balances with banks	886 691	2 649
Available-for-sale securities portfolio	805 060 900	1 299 646 515
	805 947 591	**1 299 649 164**

This item contains balances held on accounts with banks outside the euro area as well as securities, deposits, loans and other euro-denominated assets issued by non-residents of the euro area.

The available-for-sale securities portfolio contains government bonds and bonds issued by companies outside the euro area denominated in euro. Securities are valued at market value. As at 31 December 2016, the market value of the latter comprised a negative net revaluation adjustment amounting to 4.9 million euro including the premium and discount amortisation (negative net revaluation adjustment amounting to 17.4 million euro on 31 December 2015).

NOTE 7 - LENDING TO EURO AREA CREDIT INSTITUTIONS RELATED TO MONETARY POLICY OPERATIONS DENOMINATED IN EURO

This balance sheet item represents the liquidity-providing transactions executed by the BCL with Luxembourg credit institutions.

The item is divided into various sub-items depending on the type of instrument used to provide liquidity to the financial sector:

	2016 EUR	2015 EUR
Main refinancing operations	800 000 000	610 000 000
Longer-term refinancing operations	4 107 440 000	3 047 140 000
Fine-tuning reverse operations	-	-
Structural reverse operations	-	-
Marginal lending facility	27	-
Credits related to margin calls	-	-
	4 907 440 027	**3 657 140 000**

The total Eurosystem holding of monetary policy assets amounts to 595 874 million euro of which the BCL holds 4 907 million euro.

In accordance with Article 32.4 of the Statute of the ESCB, any risks from monetary policy operations, if they were to materialise, may be shared in full by the Eurosystem NCBs, in proportion to the prevailing ECB capital key shares.

Losses can only materialise if both the counterparty fails and the recovery of funds received from the resolution of the collateral provided by the counterparty is not sufficient.

It should be noted that for specific collateral which can be accepted by NCBs at their own discretion, risk sharing has been excluded by the Governing Council of the ECB.

7.1 Main refinancing operations

Main refinancing operations are executed through liquidity providing reverse transactions with a weekly frequency and a maturity of normally one week, on the basis of standard tenders.

Since October 2008, these operations were conducted as fixed rate tender procedures. These operations play a key role in achieving the aims of steering interest rate, managing market liquidity and signalling the monetary policy stance.

7.2 Longer-term refinancing operations

These operations aim to provide counterparties with additional longer-term refinancing. In 2016, operations were conducted with maturities equal to the reserve maintenance period and with maturities between 3 and 48 months. These operations were conducted at fixed rate with allotment of the total amount bid. Additionally, in March 2016, the Governing Council introduced a new series of four targeted longer-term refinancing operations (TLTRO II). These operations have a four-year maturity, with a possibility of repayment after two years. The applicable interest rate for TLTRO II operations depends on the individual lending benchmark of the respective counterparty between the date of allotment and January 2018. The actual rate will be set in 2018 and will be between the MRO rate and the deposit facility rate at the time of the allotment. Given that the actual rate is only known in 2018 and a reliable estimate is not possible at this juncture, the deposit facility rate has been used for calculating the TLTRO II interest for 2016, as this is deemed a prudent approach.

7.3 Fine-tuning reverse operations

This sub-item includes open market operations carried out on a non-regular basis, intended primarily to meet unexpected fluctuations in market liquidity.

7.4 Structural reverse operations

These are open market operations carried out with the primary intention of bringing about a lasting change in the structural liquidity position of the financial sector vis-à-vis the Eurosystem.

7.5 Marginal lending facility

This sub-item includes a standing facility enabling counterparties to obtain overnight credit from the BCL at a pre-specified interest rate against eligible collateral.

7.6 Credits related to margin calls

This sub-item includes additional credit extended to credit institutions and resulting from the increase in the value of the securities pledged as collateral for other credits extended to these same institutions.

NOTE 8 - OTHER CLAIMS ON EURO AREA CREDIT INSTITUTIONS DENOMINATED IN EURO

This item includes the BCL's current accounts and fixed-term deposits not related to monetary policy operation with credit institutions inside the euro area.

NOTE 9 - SECURITIES OF EURO AREA RESIDENTS DENOMINATED IN EURO

	2016 EUR	2015 EUR
Securities held for monetary policy purposes	3 543 927 349	1 592 425 088
Other securities	1 109 735 559	1 901 912 478
- available-for-sale securities portfolio	*915 563 105*	*1 546 339 378*
- held-to-maturity securities portfolio	*194 172 454*	*355 573 100*
	4 653 662 908	**3 494 337 566**

9.1 Securities held for monetary policy purposes

This item contains securities acquired by the BCL within the scope of the three purchase programmes for covered bonds, the securities markets programme (SMP) and the public sector purchase programme (PSPP).

Purchases under the first covered bond purchase programme were completed on 30 June 2010, while the second covered bond purchase programme ended on 31 October 2012. The Securities Markets Programme was terminated on 6 September 2012.

In 2016 the Eurosystem programmes constituting the expanded asset purchase programme (APP), i.e. the third covered bond purchase programme (CBPP3), the asset-backed security purchase programme (ABSPP) and the PSPP, were supplemented with the corporate sector purchase programme (CSPP) as a fourth component. Under this programme, NCB may purchase investment-grade euro-denominated bonds issued by non-bank corporations established in the euro area. From April 2016 until March 2017, the combined monthly APP purchases by the NCB and the ECB increased from EUR 60 billion to EUR 80 billion on average. In December 2016, the Governing Council of the ECB decided to continue the net APP purchases after March 2017 at a monthly pace of EUR 60 billion until the end of December 2017 or beyond, if necessary, and in any case until the Governing Council of the ECB sees a sustained adjustment in the path of inflation consistent with its inflation aim. If, in the meantime, the outlook becomes less favourable, or if financial conditions become inconsistent with further progress towards a sustained adjustment of the path of inflation, the Governing Council of the ECB intends to increase the programme in terms of size and/or duration. The net purchases will be made alongside reinvestments of the principal payments from maturing securities purchased under the APP.

The securities purchased under all of these programmes are valued on an amortised cost basis subject to impairment.

The amortised cost of the securities held by BCL, as well as their market value (which is provided for comparison purposes only), are as follows:

Securities held for monetary policy purposes	2016 EUR		2015 EUR	
	Amortised cost	Market value	Amortised cost	Market value
First covered bond purchase programme	0	0	5 998 651	6 203 088
Second covered bond purchase programme	14 497 404	14 625 380	14 484 734	15 655 103
Third covered bond purchase programme	554 453 057	562 358 581	382 769 132	384 382 983
Securities markets programme	153 412 053	169 896 930	193 588 257	219 265 699
Public sector purchase programme	2 821 564 835	2 826 953 659	995 584 314	1 012 956 584
	3 543 927 349	**3 573 834 550**	**1 592 425 088**	**1 638 463 457**

Market values are indicative and were derived on the basis of market quotes. When market quotes were not available, the amortised cost was used for the evaluation of the securities portfolio.

The Governing Council assesses on a regular basis the financial risks associated with the securities held under these programmes. Annual impairment tests are conducted on the basis of the estimated recoverable amounts as at the year-end and are approved by the Governing Council.

The total Eurosystem NCB's holding of securities held in the securities markets programme, in the third covered bond purchase programme, in the corporate sector purchase programme and securities issued by international or supranational institutions held in the public sector purchase programme amounts to 472.5 billion euro as at 31 December 2016, of which the BCL holds 2 143.8 million euro. In accordance with Article 32.4 of the Statute, losses from holdings of these securities, if they were to materialise, are shared in full by the Eurosystem NCB, in proportion to the prevailing ECB capital key shares.

On the basis of the results of an impairment test as at 31 December 2016, the Governing Council decided that all future cash flows on these securities are expected to be received and that, therefore, no impairment losses should be recorded at year end.

9.2 Other securities

The securities portfolio recorded under this item includes:

- the available-for-sale securities portfolio in euro issued by residents of the euro area amount to 915.6 million euro as at 31 December 2016 (1 546.3 million euro on 31 December 2015). This portfolio contains government bonds in euro issued by Member States of the euro area and bonds issued by companies of the euro area. Securities are valued at market value. As at 31 December 2016, the market value of the latter comprised a positive net revaluation adjustment amounting to 6.5 million euro including premium and discount amortisation (negative net revaluation adjustment amounting to 6.3 million euro on 31 December 2015). In this portfolio, the BCL does not hold any security issued by the State of the Grand Duchy of Luxembourg;

- the held-to-maturity securities portfolio which securities are intended to be held until maturity. This portfolio is valued at amortised cost, purchase or transfer price adjusted by premiums, discounts and impairment. As at 31 December 2016, these securities amount to 194.2 million euro (355.6 million euro on 31 December 2015). In this portfolio, the BCL does not hold any security issued by the State of the Grand Duchy of Luxembourg.

NOTE 10 - INTRA-EUROSYSTEM CLAIMS

10.1 Participating interest in ECB

Pursuant to Article 28 of the ESCB Statute, the ESCB national central banks are the sole subscribers to the capital of the ECB. Subscriptions depend on shares which are fixed in accordance with Article 29.3 of the ESCB Statute and are subject to adjustment every five years.

The NCBs' capital key shares are as follows (in percentage):

Country	Capital key in ESCB	Eurosystem key
	from 01/01/2014	from 01/01/2015
Belgium	2.4778	3.52003
Germany	17.9973	25.56743
Estonia	0.1928	0.27390
Ireland	1.1607	1.64892
Greece	2.0332	2.88842
Spain	8.8409	12.55961
France	14.1792	20.14334
Italy	12.3108	17.48904
Cyprus	0.1513	0.21494
Latvia	0.2821	0.40076
Lithuania	0.4132	0.58700
Luxembourg	0.2030	0.28839
Malta	0.0648	0.09206
Netherlands	4.0035	5.68748
Austria	1.9631	2.78883
Portugal	1.7434	2.47672
Slovenia	0.3455	0.49083
Slovak Republic	0.7725	1.09743
Finland	1.2564	1.78487
Bulgaria	0.8590	-
Czech Republic	1.6075	-
Denmark	1.4873	-
Croatia	0.6023	-
Hungary	1.3798	-
Poland	5.1230	-
Romania	2.6024	-
Sweden	2.2729	-
United Kingdom	13.6743	-
Total	**100.0000**	**100.00000**

The capital shares of the NCBs in the ECB are shown in the following table (in euro):

	Subscribed capital since 1 January 2015	Paid-up capital since 1 January 2015
Banque Nationale de Belgique	268 222 025	268 222 025
Deutsche Bundesbank	1 948 208 997	1 948 208 997
Eesti Pank	20 870 614	20 870 614
Central Bank of Ireland	125 645 857	125 645 857
Banque de Grèce	220 094 044	220 094 044
Banco de España	957 028 050	957 028 050
Banque de France	1 534 899 402	1 534 899 402
Banca d'Italia	1 332 644 970	1 332 644 970
Central Bank of Cyprus	16 378 236	16 378 236
Latvijas Banka	30 537 345	30 537 345
Lietuvos bankas	44 728 929	44 728 929
Banque centrale du Luxembourg	21 974 764	21 974 764
Central Bank of Malta	7 014 605	7 014 605
De Nederlandsche Bank	433 379 158	433 379 158
Oesterreichische Nationalbank	212 505 714	212 505 714
Banco de Portugal	188 723 173	188 723 173
Banka Slovenije	37 400 399	37 400 399
Národná banka Slovenska	83 623 180	83 623 180
Suomen Pankki – Banque de Finlande	136 005 389	136 005 389
Subtotal for euro area NCB	***7 619 884 851***	***7 619 884 851***
Българска народна банка (Bulgarian National Bank)	92 986 811	3 487 005
Česká národní banka	174 011 989	6 525 450
Danmarks Nationalbank	161 000 330	6 037 512
Hrvatska narodna banka	65 199 018	2 444 963
Magyar Nemzeti Bank	149 363 448	5 601 129
Narodowy Bank Polski	554 565 112	20 796 192
Banca Națională a României	281 709 984	10 564 124
Sveriges Riksbank	246 041 586	9 226 559
Bank of England	1 480 243 942	55 509 148
Subtotal for non-euro area NCB	***3 205 122 218***	***120 192 083***
Total	**10 825 007 070**	**7 740 076 935**

Totals may not add up due to rounding.

The share that the BCL held in the accumulated net profits of the ECB reflects the repayment of 14.4 million euro of ECB reserves.

10.2 Claims equivalent to the transfer of foreign reserves

This sub-item represents the euro-denominated claims on the ECB with respect to the transfer of part of the BCL's foreign reserves. The claims are denominated in euro at a value fixed at the time of their transfer.

They are remunerated at the latest available marginal interest rate used by the Eurosystem in its tender for main refinancing operations, adjusted to reflect a zero return on the gold component.

As at 31 December 2016, the claim of the BCL amounts to 117 640 617 euro (117 640 617 euro on 31 December 2015).

10.3 Other claims within the Eurosystem

This sub-item represents the BCL's net claims towards the Eurosystem, mostly from transactions resulting from cross-border payments initiated for monetary or financial operations, made via the TARGET2 system, between the BCL and the other NCBs as well as the ECB. This claim amounts to 187.2 billion euro as at 31 December 2016 (147.6 billion euro on 31 December 2015). This increase results from the growth of the current accounts and of the deposit facilities related to the provision of liquidities by the Eurosystem.

The net position vis-à-vis the ECB bears interest at the marginal interest rate applying to the main refinancing operations.

NOTE 11 - OTHER ASSETS

11.1 Tangible and intangible assets

Tangible and intangible assets are as follows:

	Lands and buildings EUR	Furniture and equipment EUR	Software EUR	Other EUR	Total EUR
Cost as at 1 January 2016	114 471 182	17 519 198	9 065 144	2 787 589	143 843 113
Disposals/Transfers	-	108 297	838 230	(946 527)	-
Acquisitions	1 976 049	707 119	79 597	425 688	3 188 453
Cost as at 31 December 2016	**116 447 231**	**18 334 614**	**9 982 971**	**2 266 750**	**147 031 566**
Accumulated depreciation as at 1 January 2016	57 984 704	14 966 133	8 053 827	-	81 004 664
Disposals	-	-	-	-	-
Depreciation	4 220 033	1 085 286	850 726	-	6 156 045
Accumulated depreciation as at 31 December 2016	**62 204 737**	**16 051 419**	**8 904 553**	-	**87 160 709**
Net book value as at 31 December 2016	**54 242 494**	**2 283 195**	**1 078 418**	**2 266 750**	**59 870 857**

The sub-item "Lands and Buildings" comprises:

- the acquisition cost of the two premises located on 2, Boulevard Royal;
- the renovations made to the main building ("Siège Royal");
- the costs incurred in relation to the reconstruction and transformation of the "Pierre Werner" building;
- the costs incurred in relation to the reconstruction and transformation of the "Monterey" building;
- the acquisition cost of the building "7, Boulevard Royal";
- the renovations made to the building "7, Boulevard Royal".

11.2 Other financial assets

The components of this item are as follows:

	2016 EUR	2015 EUR
Other participating interests	91 542 852	91 273 821
Pension fund	349 903 326	306 936 490
	441 446 178	**398 210 311**

The other participating interests comprise the BCL's investments held in 2016 in SWIFT, LuxCSD SA., Islamic Liquidity Management Corporation and Bank for International Settlements.

The assets of the pension fund are recorded in the accounts under "Pension fund BCL". The balance of this account corresponds to the net asset value of the fund as calculated by the depositary bank as at 30 December 2016. In 2016, the BCL transferred an exceptional amount of 27.8 million euro to the assets of the pension fund further to the decision taken during the financial year 2015 related to the contribution to the provision for pensions.

11.3 Accruals and prepaid expenses

Most of this item consists of the accrued interests on monetary policy operations, securities and receivables from the IMF. Also included under this item are the commission receivables and the prepaid expenses, including salaries paid for January 2017.

11.4 Sundry

	2016 EUR	2015 EUR
Others	2 171 683	1 948 669
	2 171 683	**1 948 669**

This sub-item comprises miscellaneous income receivables.

NOTE 12 - BANKNOTES IN CIRCULATION

This item consists of the BCL's share of the total euro banknotes in circulation.

During 2016, the total value of banknotes in circulation within the Eurosystem increased by 4%. According to the allocation key, the BCL had euro banknotes in circulation worth 2 990.1 million euro at the end of 2016 compared with 2 876.5 million euro at the end of 2015.

The value of the euro banknotes actually issued by the BCL in 2016 increased by 1% and worth 96.6 billion euro as at 31 December 2016 (95.5 billion euro as at 31 December 2015). As this was more than the allocated amount, the difference of 93.6 billion euro (92.6 billion euro as at 31 December 2015) is shown under liability sub-item "Net liabilities related to the allocation of euro banknotes within the Eurosystem".

NOTE 13 - LIABILITIES TO EURO AREA CREDIT INSTITUTIONS RELATED TO MONETARY POLICY OPERATIONS DENOMINATED IN EURO

	2016 EUR	2015 EUR
Current accounts (including the minimum reserves)	60 290 467 129	35 596 035 548
Deposit facility	37 142 600 000	21 641 293 581
Fixed-term deposits	-	-
Fine-tuning reverse operations	-	-
Deposits related to margin calls	-	-
	97 433 067 129	**57 237 329 129**

13.1 Current accounts (covering the minimum reserve system)

Current accounts contain the credit balances on the transaction accounts of credit institutions that are required to hold minimum reserves. Banks' minimum reserve balances have been remunerated since January 1, 1999 at the latest available marginal interest rate used by the Eurosystem in its tenders for main refinancing operations. Since June 2014 the reserves held in excess of the minimum requirements are remunerated at the lower rate of either zero per cent or the deposit facility rate.

13.2 Deposit facility

This sub-item comprises the standing facility allowing credit institutions to make overnight deposits with the BCL at a pre-specified interest rate.

13.3 Fixed-term deposits

This sub-item comprises deposits made at the BCL for the purpose of absorbing market liquidity in connection with fine-tuning operations in the Eurosystem.

13.4 Fine-tuning reverse operations

This sub-item comprises other monetary policy operations aimed at tightening liquidity.

13.5 Deposits related to margin calls

This sub-item comprises deposits made by credit institutions to compensate for the decrease in the value of securities pledged as collateral for other credits granted to these same institutions.

NOTE 14 - LIABILITIES TO OTHER EURO AREA RESIDENTS DENOMINATED IN EURO

14.1 Liabilities to general government

This item records the amounts as follows:

	2016 EUR	2015 EUR
Current accounts	-	4
Account related to euro coins issued by the Treasury	280 991 031	271 556 085
Specific account of the State	422 174 064	147 500 000
Fixed-term deposit	140 000 000	140 000 000
	843 165 095	**559 056 089**

In accordance with the amendment of 10 April 2003 to the agreement between the Government of Luxembourg and the BCL establishing their financial relationship, the "Account related to euro coins issued by the Treasury" corresponds to the amount of coins issued by the BCL in the name and for the account of the Treasury.

The specific account was opened for the State of Luxembourg in 2011 in order to realise operations with the IMF.

The fixed-term deposit, unchanged since 2010, relates to the above-mentioned agreement.

14.2 Other liabilities

	2016 EUR	2015 EUR
Other liabilities	1 915 203 865	1 865 197 507
	1 915 203 865	**1 865 197 507**

As at 31 December 2016, this item included mainly a current account held by a European institution.

NOTE 15 - LIABILITIES TO NON-EURO AREA RESIDENTS DENOMINATED IN EURO

This item includes current accounts and deposits held by central banks, international and supranational institutions and other account holders outside the euro area.

NOTE 16 - LIABILITIES TO NON-EURO AREA RESIDENTS DENOMINATED IN FOREIGN CURRENCY

This item includes current accounts and deposits in foreign currency held by central banks outside the euro area.

NOTE 17 - COUNTERPART OF SPECIAL DRAWING RIGHTS ALLOCATED BY THE IMF

The amount shown under this item represents the countervalue of SDR, converted to euro at the same rate as applied to the SDR assets, which should be returned to the IMF in the event of the SDR being cancelled, the SDR Department established by the IMF being closed or if Luxembourg decides to withdraw from it. This liability, of unlimited duration, amounts to SDR 246.6 million, or 314.3 million euro as at 31 December 2016 (SDR 246.6 million, or 313.9 million euro on 31 December 2015).

NOTE 18 - INTRA-EUROSYSTEM LIABILITIES

18.1 Net liabilities related to the allocation of euro banknotes within the Eurosystem

This item consists of the liabilities of the BCL vis-à-vis the Eurosystem relating to the allocation of euro banknotes within the Eurosystem as explained in Note 12. The net position bears interest at the marginal interest rate applying to the main refinancing operations.

NOTE 19 - OTHER LIABILITIES

This item comprises mainly the accrued interest, including accrued interest on intra-Eurosystem liabilities, as well as miscellaneous expenses payable, including suppliers, and the Luxembourg francs banknotes not yet returned.

In 2016, the item "Other liabilities" also comprises the counterpart of the gains on SDR for 10.6 million euro (9.2 million euro on 31 December 2015).

The Luxembourg franc banknotes still circulating as at 31 December 2016 amount to 5.0 million euro (5.0 million euro on 31 December 2015).

NOTE 20 - PROVISIONS

Provisions are as follows:

	2016 EUR	2015 EUR
Provision for banking risks	933 683 166	928 178 149
Provision for pensions	366 070 000	337 793 729
Other provisions	169 000	139 000
	1 299 922 166	**1 266 110 878**

20.1 Provision for banking risks

Provision for banking risks includes the following items:

Provisions for specific banking risks	2016 EUR	2015 EUR
Provision covering credit and market risk	542 444 999	525 342 826
Provision covering operational risk	18 560 000	30 430 000
Provision covering liquidity risk	17 012 798	16 739 954
	578 017 797	**572 512 780**
Provisions for general banking risks	**2016 EUR**	**2015 EUR**
Provision for liabilities resulting from monetary agreements	32 341 954	32 341 954
Other provision for general banking risks	323 323 415	323 323 415
	355 665 369	**355 665 369**
	933 683 166	**928 178 149**

20.1.1 Provision covering credit and market risk

The provision of 542.4 million euro as at 31 December 2016 (525.3 million euro on 31 December 2015) corresponds to:

- 8.18% (7.54% on 31 December 2015) of the BCL's own securities portfolio existing as at 31 December 2016 and participations other than the participating interest in the capital of the ECB;
- 8.18% (7.54% on 31 December 2015) of the amount lent by the Eurosystem (main and longer-term refinancing operations) as at year-end for monetary policy purposes multiplied by the BCL's capital key in Eurosystem including securities held in the framework of the Securities Markets Programme, the third covered bond purchase programme and the corporate sector purchase programme, and the securities issued by international or supranational institutions held in the public sector purchase programme (excluding securities held by the ECB).

According to the BCL's guidelines of the Bank's Council, the objective is to target a rate of 12% on all items above. In order to achieve this objective in the light of non-conventional measures, this provision should be progressively increased by an additional amount of more than 1 100 million euro (2015: 1 000 million euro) over the next years in order to cover the potential liabilities. It is worth noting that the current financial capacity of the BCL is insufficient to generate the required level of income.

Yet this situation goes against the ECB recommendations on 7 September 2012 in relation to the capital increase of the BCL (CON/2012/69) in which it is noted that: *"The principle of financial independence requires a national central bank (NCB) within the European System of Central Banks (ESCB) to have sufficient means not only to perform its ESCB or Eurosystem-related tasks, but also its national tasks, e.g. financing its administration and own operations. [...] Financial independence primarily implies that an NCB should always be sufficiently capitalised. [...] In particular, the ECB is of the view that the higher the level of capital, reserves and provisions against financial risks is, the higher the safeguards against future losses are."*

20.1.2 Provision covering operational risk

This provision is intended to cover the risk of losses resulting from the inadequacy or fault attributable to procedures, to the human factor or to the BCL's systems or to external causes. Because of a lack of relevant statistics on the dimension of risk, the transfer to the provision is based on the Basic Indicator Approach described in the consultative working paper of the Basel Committee as being 15% of the average for the last three years of the net banking product (including payments allocated on monetary income).

In 2016, the average has been based on previous years in accordance with these rules.

20.1.3 Provision for liabilities resulting from monetary agreements

The provision created in order to face any future monetary liabilities did not change in 2016.

20.1.4 Other provision for general banking risks

This provision is intended to cover non-specific risks of losses resulting from central bank's activities. Due to the uncertainties of the financial markets, those risks can not be quantified in advance.

This provision did not change in 2016.

20.2 Provision for pensions

Provision for pensions include the following items:

	2016 EUR	2015 EUR
Provision for pensions	366 070 000	337 793 729
	366 070 000	**337 793 729**

In accordance with its Organic Law, the statutory pensions (first pillar) of its staff members are fully borne by the BCL.

The financing of pension obligations is provided on the one hand through deductions from wages and salaries in accordance with the rules governing the pension regime at the BCL and the other hand by payments made by the BCL.

The pension liabilities of the employer vis-à-vis all its staff members amounted to 366.1 million euro at 31 December 2016 compared with 337.8 million euro at 31 December 2015.

The demographic, economic and financial assumptions applied as part of the assessment of pension liabilities at 31 December 2016 are as follows:

Discount rate	3.25%
Wage growth rate (incl. index)	3.30%
Expected return on plan assets	3.55%
Pension growth rate (incl. index)	2.35%
Mortality table	German DAV 2004 tables
Disability rate	0.50%
Staff turnover	0.00%

Pension liabilities have been assessed based on the principles of the IAS 19 accounting standard. This standard requires both the use of actuarial method of projected unit credit and the use of a discount rate corresponding to the Eurozone "corporate" bond rate with an AA rating and a duration – at value date – reflecting those of the liabilities. For the fiscal year 2016, this rate was estimated at 2%.

The full adoption of the measurement features from IAS 19 standard for the fiscal year 2016 would have resulted in pension fund liabilities of a total of 526.7 million euro. As a consequence, this would have amounted in a total 160.7 million euro to make up for in 2016.

It should be noted that the adoption of this method is not mandatory for the BCL. However, in order to best reflect the economic and financial reality and to be able to meet the requirement of its Organic Law to bear all the expenses for pensions of its staff members, the BCL has decided to progressively increase its pension provisions in line with the application of the measurement features from IAS 19, thus smoothing the major burden over several years.

The difference of 28.3 million euro in pension liabilities amounting to 366.1 million euro as at 31 December 2016 compared to those at 31 December 2015 of 337.8 million euro includes:

- salary and wage deductions (employees' share) accounting for 2.8 million euro;
- a transfer from the "Booking reserve of the pension fund" account (adjustment of the actuarial value of the pension fund assets) to the account "Provision for pensions" for 7.8 million euro;
- a contribution of 19.1 million euro borne by the BCL;
- pension payments for retired staff members of 1.4 million euro.

NOTE 21 - REVALUATION ACCOUNTS

This item includes positive revaluation differences related to the spread between the exchange rate as at year-end and the average exchange rate of the BCL's currency and gold positions, as well as positive revaluation differences related to the spread between the market value as at year-end and the amortised cost for securities positions.

NOTE 22 - CAPITAL AND RESERVES

22.1 Capital

The State of Luxembourg is the sole shareholder of the BCL's capital for an amount of 175 million euro (unchanged since June 2009).

22.2 Reserves

The reserves amount to 16.9 million euro (15.1 million euro on 31 December 2015). This amount was increased by 1.8 million euro following the allocation of profit for 2015 according to the decision of the BCL's Council in application of its Founding Law (Article 31).

NOTE 23 - SECURITIES RECEIVED AS COLLATERAL

This item includes the securities received as collateral from Luxembourg credit institutions to cover their liabilities related to refinancing operations, marginal lending facilities and intra-day credits.

This item also includes the securities received as collateral in Luxembourg and used as a guarantee by commercial banks incorporated in other member states according to the "Correspondent Central Banking Model" (CCBM). This agreement allows commercial banks to obtain funding from their country of residence's central bank by using the securities held in another Member State as a guarantee.

As at 31 December 2016, the market value of these securities amounts to 122.4 billion euro (125.6 billion euro on 31 December 2015).

NOTE 24 - FOREIGN RESERVE ASSETS MANAGED ON BEHALF OF THE ECB

This item includes the foreign currency reserves at market value managed by the BCL on behalf of the ECB.

NOTE 25 - FUTURES

These items contain the purchases and sales of interest rate futures outstanding as at 31 December 2016, presented at notional amount. These transactions were conducted in the context of the management of the BCL's own investments.

NOTE 26 - NET INTEREST INCOME

This item includes interest income and expenses. Interest income and interest expense were previously presented on a gross basis. With a view to harmonizing at Eurosystem level the reporting of interest income and expense arising from Eurosystem monetary policy operations, the Eurosystem has decided from 2016 to present these items on a net basis on a balance sheet (sub-) item level under either "Interest income" or "Interest expense", depending on whether the net amount is positive or negative.

This decision of harmonisation at the Eurosystem level has not been adopted for positions unrelated to monetary policy operations, for both the balances in euro and in foreign currencies.

Interest income and expense are as follows:

Composition of interest income	Amounts in foreign currency EUR	Amounts in euro EUR	Total EUR
	2016	2016	2016
IMF	543 848	-	543 848
Lending to euro area credit institutions related to monetary policy operations	-	24 875	24 875
Current accounts (including minimum reserves) and deposits related to monetary policy operations	-	236 565 400	236 565 400
Intra-Eurosystem claims	-	15 547 993	15 547 993
Securities held for monetary policy purposes	-	10 942 915	10 942 915
Other securities	1 529 122	33 312 596	34 841 718
Other	12 152 157	2 933 879	15 086 036
Total	**14 225 127**	**299 327 658**	**313 552 785**
Composition of interest expense	**Amounts in foreign currency EUR**	**Amounts in euro EUR**	**Total EUR**
	2016	**2016**	**2016**
IMF	(271 004)	-	(271 004)
Lending to euro area credit institutions related to monetary policy operations	-	(6 595 853)	(6 595 853)
Liabilities related to the reallocation of euro banknotes in the Eurosystem	-	(9 654 765)	(9 654 765)
Other liabilities	(7 417 860)	(1 460 921)	(8 878 781)
Interest on swap operation	-	(299 874)	(299 874)
Total	**(7 688 864)**	**(18 011 413)**	**(25 700 277)**

Due to the change in accounting policy, the net interest income during 2015 has been restated as the following:

Composition of interest income	Amounts in foreign currency EUR	Amounts in euro EUR	Total EUR
	Restated amount 2015	Restated amount 2015	Restated amount 2015
IMF	235 931	-	235 931
Lending to euro area credit institutions related to monetary policy operations	-	1 546 062	1 546 062
Current accounts (including minimum reserves) and deposits related to monetary policy operations	-	49 610 575	49 610 575
Intra-Eurosystem claims	-	60 130 263	60 130 263
Securities held for monetary policy purposes	-	16 038 435	16 038 435
Other securities	1 009 843	60 715 505	61 725 348
Other	6 785 988	344 526	7 130 514
Total	**8 031 762**	**188 385 366**	**196 417 128**
Composition of interest expense	**Amounts in foreign currency EUR**	**Amounts in euro EUR**	**Total EUR**
	Restated amount 2015	**Restated amount 2015**	**Restated amount 2015**
IMF	(163 022)	-	(163 022)
Liabilities related to the reallocation of euro banknotes in the Eurosystem	-	(46 431 479)	(46 431 479)
Other liabilities	(3 491 761)	(14 851)	(3 506 612)
Total	**(3 654 783)**	**(46 446 330)**	**(50 101 113)**

NOTE 27 - REALISED GAINS / (LOSSES) ARISING FROM FINANCIAL OPERATIONS

This item includes the results from transactions in foreign currencies, from securities and from financial instruments linked to interest rates and market prices, i.e. realised gains minus realised losses on these transactions. In 2016, they amount to 17.7 million euro (42.5 million euro on 31 December 2015) and to 7.4 million euro (0.02 million euro on 31 December 2015) respectively, giving a net gain of 10.3 million euro (a net gain of 42.5 million euro on 31 December 2015).

NOTE 28 - WRITE-DOWNS ON FINANCIAL ASSETS AND FOREIGN CURRENCY POSITIONS

This item includes revaluation losses on securities for 0.9 million euro (revaluation losses on securities for 3.8 million euro in 2015).

NOTE 29 - TRANSFER TO/FROM PROVISIONS FOR RISKS

This item includes the transfers to and from provisions for banking risks and other provisions.

NOTE 30 - NET RESULT FROM FEES AND COMMISSIONS

Fees and commissions income and expense are as follows:

	Fees and commissions income EUR		Fees and commissions expense EUR	
	2016	2015	2016	2015
Securities	7 981 198	7 910 059	(10 253 370)	(10 345 671)
Others	1 274 760	1 266 629	(454 973)	(475 552)
Total	**9 255 958**	**9 176 688**	**(10 708 343)**	**(10 821 223)**

NOTE 31 - INCOME FROM PARTICIPATING INTERESTS

The ECB's seigniorage income, which arises from the 8% share of euro banknotes allocated to the ECB, as well as the income arising from the securities held under (a) SMP, (b) CBPP3, (c) ABSPP and (d) PSPP is due in full to the euro area NCBs in the financial year in which it accrues. Unless otherwise decided by the Governing Council, the ECB distributes this income in January of the following year by means of an interim distribution of profit.

It is distributed in full unless it is higher than the ECB's net profit for the year, and subject to any decisions by the Governing Council to make transfers to the provision for foreign exchange rate, interest rate, credit and gold price risks. The Governing Council may also decide to charge costs incurred by the ECB in connection with the issue and handling of euro banknotes against income earned on euro banknotes in circulation.

In 2016, the BCL received 3.5 million euro from the ECB.

In 2016, the BCL also received a dividend of 0.6 million SDR (0.8 million euro) due to the participating interest held in the Bank for International Settlements (BIS).

In total, this item amounts to 4.3 million euro as at 31 December 2016 (4.0 million euro on 31 December 2015).

NOTE 32 - NET RESULT OF POOLING OF MONETARY INCOME

The monetary income of each Eurosystem NCB is determined by measuring the actual annual income that derives from the earmarkable assets held against its liability base. The liability base consists mainly of the following items:

- banknotes in circulation;
- liabilities to credit institutions related to monetary policy operations denominated in euro;
- net intra-Eurosystem liabilities resulting from TARGET2 transactions;
- net intra-Eurosystem liabilities related to the allocation of euro banknotes within the Eurosystem;
- accrued interest recorded at quarter-end by each NCB on monetary policy liabilities the maturity of which is one year or longer.

Any interest paid on liabilities included within the liability base is to be deducted from the monetary income to be pooled.

The earmarkable assets consist of the following items:

- lending to euro area credit institutions related to monetary policy operations denominated in euro;
- securities held for monetary policy purposes
- intra-Eurosystem claims equivalent to the transfer of foreign reserve assets to the ECB;
- net intra-Eurosystem claims resulting from TARGET2 transactions;
- net intra-Eurosystem claims related to the allocation of euro banknotes within the Eurosystem;
- accrued interest recorded at quarter-end by each NCB on monetary policy assets the maturity of which is one year or longer;
- a limited amount of each NCBs' gold holdings in proportion to each NCB's capital key share.

The amount of each NCB's monetary income shall be determined by measuring the actual income that derives from the earmarkable assets recorded in its books. As an exception to this, gold is considered as generating no income and the following are considered to generate income at the latest available marginal interest rate used by the Eurosystem in its tenders for main refinancing operations: (i) securities held for monetary purposes under Decision ECB/2009/16 of 2 July 2009 on the implementation of the covered bonds purchase programme, (ii) securities held for monetary policy purposes under Decision ECB/2011/17 of 3 November 2011 on the implementation of the second covered bonds purchase programme and (iii) debt instruments issued by central, regional and local governments and recognised agencies and substitute debt instruments issued by public non-financial corporations under Decision ECB/2015/10 of 4 March 2015 on the implementation of a secondary markets public sector asset purchase programme.

Where the value of an NCB's earmarkable assets exceeds or falls short of the value of its liability base, the difference shall be offset by applying to the value of the difference the latest available marginal rate for the Eurosystem's main refinancing operations.

The monetary income pooled by the Eurosystem is allocated among NCBs according to the subscribed capital key set at 0.28839% since 1 January 2015.

This item includes the net monetary income allocated to the BCL for 2016 representing an expense amounting to 217 766 888 euro (expense of 54 933 657 euro on 31 December 2015).

NOTE 33 - OTHER INCOME

Other income includes revenue for services rendered to third parties, adjustments to prior years' accruals, income from numismatic activities and the recovered functioning costs of EPCO (Eurosystem Procurement Co-ordination Office).

Other income includes also, when appropriate, the BCL's revenue from financial agreements between the Government of Luxembourg and the BCL.

NOTE 34 - STAFF COSTS

	2016 EUR	2015 EUR
Gross wages and salaries	(37 060 345)	(34 744 189)
Other staff costs	(2 258 593)	(2 215 322)
	(39 318 938)	**(36 959 511)**

This item includes the gross wages and salaries, compensations as well as other staff costs (the employer's share of contributions to the social security scheme and meal vouchers).

The amount relevant to the Board of Directors, including the amounts of the representation expenses as decided by Government in council, amounted to 726 196 euro for the year 2016 (736 878 euro for the year 2015).

As at 31 December 2016, the BCL employed 360 persons (345 on 31 December 2015). The average number of persons working for the BCL from 1 January to 31 December 2016 was 355 (334 for the year 2015).

NOTE 35 - BCL'S CONTRIBUTION TO THE LEGAL PENSION SCHEME OF ITS STAFF

	2016 EUR	2015 EUR
Notional employer's share	(5 938 502)	(5 569 053)
Adjustments to the pension liabilities	(13 152 134)	(19 448 051)
	(19 090 636)	**(25 017 104)**

This item includes the notional employer's share of the BCL determined on the basis of the gross wages and salaries for an amount of 5.9 million euro as well as the contribution of the BCL for an amount of 13.2 million euro as a result of the revaluation of pension liabilities (see also Note 20.2 "Provisions for pensions"). It is worth noting that the BCL contribution amounted to 19.4 million euro in 2015.

NOTE 36 - OTHER ADMINISTRATIVE EXPENSES

This item includes the indemnities incurred in order to align the BCL's workforce to its needs from both a recruitment and a qualification perspective, the expenses for external consultants, leasing, cleaning and repairing of buildings and equipment, small goods and materials and other services and supplies. The expenses in relation to the Council meeting amounted to 93 445 euro for 2016, of which 89 356 euro for indemnities paid to the members of the Council (92 235 euro for 2015, of which 89 356 euro for indemnities).

NOTE 37 - DEPRECIATION OF TANGIBLE AND INTANGIBLE ASSETS

This item shows the depreciation applied on buildings, renovations on buildings, furniture and office equipment, computer hardware and software.

NOTE 38 - BANKNOTE PRODUCTION SERVICES

This item shows mainly the costs relating to the production and issue of banknotes denominated in euro.

NOTE 39 - OTHER EXPENSES

This item includes in particular costs relating to numismatic activities.

NOTE 40 - RESULT FOR THE YEAR

	2016 EUR	2015 EUR
Profit for the year	1 810 813	1 776 128

The fiscal year 2016 shows a profit of 1 810 813 euro (profit of 1 776 128 euro in 2015).

When taking into consideration the BCL's obligation or objective respectively relating to pension (see Note 20.2) and the provision for banking risks (see Note 20.1), the provisional results indicate a trend towards a significant structural loss.

03 ANNEXES

3 ANNEXES

3.1 BCL REGULATIONS PUBLISHED IN 2016

2016/N°22 of 28 December 2016

Amendments to the regulation of the "Banque centrale du Luxembourg" 2014/N°18 of 21 August 2014 implementing the Guideline ECB/2014/31 concerning additional temporary measures relating to Eurosystem refinancing operations and eligibility of collateral and amending Guideline ECB/2007/9.

Domain: Monetary Policy

2016/N°21 of 15 January 2016

Oversight of payment systems, securities settlement systems and payment instruments in Luxembourg

Domain: Oversight

For a complete list of regulations published by the BCL, please visit the BCL's website (www.bcl.lu).

3.2 LIST OF BCL CIRCULARS PUBLISHED IN 2016

No circular has been published in 2016.

For a complete list of circulars published by the BCL, please visit the BCL's website (www.bcl.lu).

3.3 LIST OF BCL PUBLICATIONS PUBLISHED IN 2016

3.3.1 BCL bulletins

- BCL Bulletin 2016/3, December 2016
- BCL Bulletin 2016/2, October 2016
- BCL Bulletin 2016/1, July 2016
- BCL Financial Stability Review, June 2016

For a complete list of bulletins published by the BCL, please visit the BCL's website (www.bcl.lu).

3.3.2 BCL annual report

- Annual Report 2015, French version, July 2016
- Annual Report 2015, English version, September 2016

For a complete list of annual reports published by the BCL, please visit the BCL's website (www.bcl.lu).

3.3.3 BCL working papers

- Working paper n° 104, October 2016
  Employment, wages and prices: How did firms adjust during the economic and financial crisis? Evidence from a survey of Luxembourg firms, by Thomas Y. Mathä, Cindy Veiga and Ladislav Wintr.

- Working paper n° 103, October 2016
  Characterising the financial cycle in Luxembourg, by Gaston Giordana and Sabbah Gueddoudj.

- Working paper n° 102, October 2016
  Tracking Changes in the Intensity of Financial Sector's Systemic Risk,
  by Xisong JIN and Francisco Nadal de Simone.

- Working paper n° 101, October 2016
  La provision forfaitaire permet-elle de réduire la procyclicité de l'activité bancaire au Luxembourg?
  by Gaston Giordana and Jean-Baptiste Gossé.

For a complete list of working papers published by the BCL, please visit the BCL's website (www.bcl.lu).

3.3.4 BCL brochures

- La Banque centrale du Luxembourg, French version, January 2015
- The Banque centrale du Luxembourg, English version, January 2015
- Die Banque centrale du Luxembourg, German version, September 2015
- Brochure of the BCL's numismatic products (2016)

3.3.5 Information material about the security features of Euro banknotes and coins

For a complete list of the information material concerning the security features of Euro banknotes and coins, please visit the BCL's website (www.bcl.lu).

3.3.6 Publications and external presentations of BCL staff

3.3.6.1 External publications of the BCL's staff members

- Arrondel, L., Bartiloro, L., Fessler, P., Lindner, P., Mathä, T.Y., Savignac, F., Rampazzi, C., Schmidt, T., Schürz, M. and Vermeulen, P. (2016) *How Do Households Allocate Their Assets? Some Stylized Facts Derived from the Eurosystem Household Finance and Consumption Survey*, International Journal of Central Banking 12(2): 129-220.

- Bouchet, M., Marchiori, L., and Pierrard, O. (2016) *Pension reform in a worst case scenario: public finance versus political feasibility*, Journal of Pension Economics and Finance, in press, https://doi.org/10.1017/S1474747215000451.

- Ehrmann, M. and Ziegelmeyer, M. (2016) *Mortgage Choice in the Euro Area – Macroeconomic Determinants and the Effect of Monetary Policy on Debt*, Journal of Money, Credit and Banking, forthcoming.

- Giordana, G. (2016) *Welfare and Stochastic Dominance for the Measurement of Banks' Domestic Systemic Importance: Analytical Framework and Application*, International Journal of Finance & Economics 21(2):192-208, April.

- Le Blanc, J., Porpiglia, A., Teppa, F., Zhu, J. and Ziegelmeyer, M. (2016) *Household Saving Behavior in the Euro Area*, International Journal of Central Banking 12(2): 15-69.

- Lodigiani, E., Marchiori, L. and Shen, I-L. (2016) *Revisiting the Brain Drain Literature with Insights from a Dynamic General Equilibrium World Model, The World Economy*, in press, https://doi.org/10.1111/twec.12269.

- Mathä, T.Y. and Shwachman Kaminaga, A. (2017) *Regional Wages and Market Potential in the Enlarged EU: An Empirical Investigation*, Applied Economics 49(4): 376-385, http://dx.doi.org/10.1080/00036846.2016.1197372.

- Mathä, T.Y., Porpiglia, A. and Ziegelmeyer, M. (2016) *Cross-border commuting and consuming: An empirical investigation*, Applied Economics, in press, http://dx.doi.org/10.1080/00036846.2016.1231902.

- Mathä, T.Y., Porpiglia, A. and Ziegelmeyer, M. (2017) *Household wealth in the euro area: The importance of intergenerational transfers, homeownership and house price dynamics*. Journal of Housing Economics, in press. http://dx.doi.org/10.1016/j.jhe.2016.12.001.

- Necker, S. and Ziegelmeyer, M. (2016) *Household Risk Taking after the Financial Crisis*, The Quarterly Review of Economics and Finance 59: 141-160.

3.3.6.2 External presentations

- *Eurosystem Household Finance and Consumption Network research seminar*, Frankfurt, Germany, November 2016.

- *Workshop on Subjective Survey Data in Labour Market Research, Institute for Labour Law and Industrial Relations in the European Union (IAAEU)*, University of Trier, Germany, October 2016.

- *IMF-CEP Workshop on Monetary Policy, Macroprudential Regulation and Inequality*, Zurich, Switzerland, October 2016.

- *1st RGS/RWI Workshop on the Economics of Migration*, Essen, Germany, September 2016.

- *Economic Analysis for Macroprudential and Monetary Policymaking at Christ's College*, Cambridge, United Kingdom, September 2016.

- *4th Luxembourg Household Finance and Consumption Workshop*, Luxembourg, June 2016.

- *EUI-nomics 2016: Debating the economic conditions in the euro area and beyond*, Florence, Italy, April 2016.

3.4 EUROPEAN CENTRAL BANK PUBLICATIONS

For a complete list of documents published by the European Central Bank, as well as for the translated versions in all official languages of the European Union, please visit the ECB's website, www.ecb.int.

ORDER :

European Central Bank
Postfach 160319
D-60066 Frankfurt am Main
http : //www.ecb.int

3.5 MONETARY, ECONOMIC AND FINANCIAL STATISTICS PUBLISHED ON THE WEBSITE OF THE BCL

1. Monetary policy statistics

1.1 Financial statement of the Banque centrale du Luxembourg
1.2 Luxembourg minimum reserve statistics

2. Monetary and financial developments in the euro area and Luxembourg

2.1 Aggregated balance sheet of the Luxembourg MFIs (excluding the Banque centrale du Luxembourg)
2.2 Liabilities of the Luxembourg MFIs included in the euro area monetary aggregates

3. Capital markets and interest rates

3.1 Luxembourg bank interest rates on euro-denominated deposits and loans by euro area residents – new business
3.2 Luxembourg bank interest rates on euro-denominated deposits and loans by euro area residents - outstanding amounts
3.3 Money market interest rates
3.4 Government bond yields
3.5 Stock market indices
3.6 Exchange rates
3.7 Securities issues statistics – positions

4. Developments of prices and costs in Luxembourg

4.1 Developments in the Harmonised Index of Consumer Prices (HICP) and the National Index of Consumer Prices (NICP)
4.2 Industrial goods and commodity prices
4.3 Costs indicators and terms of trade

5. Luxembourg macro-economic indicators

5.1 GDP at market prices and its components (ESA95 version)
5.2 Selected other real economy indicators
5.3 Labour market indicators – Employment and unemployment
5.4 Labour market indicators – Employment breakdown
5.5 Consumer confidence survey
5.6 Non–financial accounts by institutional sector – time series
5.7 Non–financial accounts by institutional sector – cross section presentation
5.8 Financial accounts by institutional sector – stocks – time series
5.9 Financial accounts by institutional sector – transactions – time series
5.10 Financial accounts by institutional sector – stocks – cross section presentation
5.11 Financial accounts by institutional sector – transactions – cross section presentation

6. Luxembourg public finances

6.1 General government budgetary outcome in Luxembourg

7. Luxembourg balance of payments

7.1 Luxembourg balance of payments – summary
7.2 Luxembourg balance of payments – current account
7.3 Luxembourg balance of payments – direct investment
7.4 Luxembourg balance of payments – direct investment by Luxembourg abroad – by sector
7.5 Luxembourg balance of payments – foreign direct investment in Luxembourg – by sector
7.6 Luxembourg balance of payments – portfolio investment – by type of instrument
7.7 Luxembourg balance of payments – other investment – by sector
7.8 Luxembourg balance of payments – monthly data

3.6 LIST OF ABBREVIATIONS

ABBL	Association des Banques et Banquiers, Luxembourg
ABS	Asset-Backed Securities
ATTF	Agence de transfert de technologie financière (*Luxembourg Agency for the Transfer of Financial Technology*)
BCL	Banque centrale du Luxembourg
BIS	Bank for International Settlement
CCBM	Correspondent central banking model
CETREL	Centre des transferts électroniques Luxembourg (*Center for Electronic Transfers Luxembourg*)
CLS	Continuous linked settlement
CPMI	Committee on Payments and Market Infrastructure
CPSS	Committee on Payment and Settlement
CRD	Capital Requirement Directive
CRR	Capital Requirement Regulation
CSD	Central Securities Depositories
CSSF	Commission de surveillance du secteur financier
EBA	European Banking Authority
ECAF	Eurosystem Credit Assessment Framework
ECB	European Central Bank
EFC	Economic and Financial Committee
EFSF	European Financial Stability Facility
EIB	European Investment Bank
EMU	Economic and Monetary Union
EPC	European Payments Council
ESCB	European System of Central Banks
ESM	European Stability Mechanism
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
EUR	Euro
EUROSTAT	Statistical office of the European communities
FSB	Financial Stability Board
GDP	Gross Domestic Product
IMF	International Monetary Fund
IML	Institut Monétaire Luxembourgeois
IOSCO	International Organization of Securities Commissions
LCR	Liquidity Coverage Ratio
LFF	Luxembourg for Finance
LSF	Luxembourg School of Finance
LTRO	Longer Term Refinancing Operations
LU	Luxembourg

MRA	Maximum Risk Allowance
MRO	Main Refinancing Operations
NCB	National Central Banks
NSFR	Net Stable Funding Ratio
OECD	Organisation for Economic Cooperation and Development
PBC	People's Bank of China
SDR	Special Drawing Rights
SEPA	Single European Payment Area
SSM	Single Supervisory Mechanism
SSS	Securities settlement system
STATEC	Institut national de la statistique et des études économiques (National Institute for Statistics and Economic Studies)
TARGET	Trans-European Automated Real-time Gross settlement Express Transfer system
TFEU	Treaty on the Functioning of the European Union
UCI	Undertaking for Collective Investments
UCITS	Undertaking for Collective Investments in Transferable Securities
USD	US Dollar

3.7 GLOSSARY

Balance of payments (b.o.p.): a statistical statement that summarises, for a specific period of time, the economic transactions of an economy with the rest of the world. The transactions considered are those involving goods, services and incomes; those involving financial claims on, and liabilities to, the rest of the world; and those (such as debt forgiveness) that are classified as transfers.

Central securities depository (CSD): an entity that (i) enables securities transactions to be processed and settled by book entry, and (ii) provides custodial services (e.g. the administration of corporate actions and redemptions), and (iii) plays an active role in ensuring the integrity of securities issues. Securities can be held in physical (but immobilised) form or in dematerialized form (whereby they exist only as electronic records).

Collateral: assets pledged or otherwise transferred (e.g. by credit institutions to central banks) as a guarantee for the repayment of loans, as well as assets sold (e.g. by credit institutions to central banks) under repurchase agreements.

Corporate sector purchase programme (CSPP): On 10 March 2016, the Governing Council decided to establish a new programme to purchase investment-grade euro-denominated bonds issued by non-bank corporations established in the euro area with the aim of further strengthening the pass-through of the conventional policy measures to the real economy by improving directly the financing conditions of the euro area companies.

Correspondent Central Banking Model (CCBM): a mechanism established by the European System of Central Banks with the aim of enabling counterparties to use eligible collateral on a cross-border basis. In the CCBM, NCBs act as custodians for one another. Each NCB has a securities account in its securities administration for each of the other NCBs (and for the European Central Bank).

Council of the European Union: the institution of the EU made up of representatives of the governments of the EU Member States, normally ministers responsible for the matters under consideration and the relevant European Commissioner (see also ECOFIN Council).

Counterparty: the opposite party in a financial transaction (e.g. any party transacting with a central bank).

Covered bond purchase programmes (CBPP, CBPP2 and CBPP3): an ECB programme, based on the decision of the Governing Council of 7 May 2009 to purchase euro-denominated covered bonds issued in the euro area in support of a specific financial market segment that is important for the funding of banks and was particularly affected by the financial crisis. The purchases under the programme were for a nominal value of 60 billion euro and they were fully implemented by 30 June 2010. On 6 October 2011 the Governing Council decided to launch a second covered bond purchase programme, the CBPP2. Between November 2011 and October 2012, a nominal amount of € 16.4 billion was purchased on the primary and secondary markets. The CBBP2 ended in November 2012. On 4 September 2014, the Governing Council decided to launch a new euro-denominated covered bonds purchase programme (CBPP3) in the primary and secondary markets.

CPMI-IOSCO: The Committee on Payments and Market Infrastructures (CPMI) promotes the safety and efficiency of payment, clearing and securities settlement related arrangements. The CPMI monitors and analyses developments in these arrangements and is a global standard setter in this area. It also serves as a forum for central bank cooperation in related oversight, policy and operational matters.

The International Organization of Securities Commissions (IOSCO) is a body that brings together the world's securities regulators. The organization develops among others internationally recognized standards of regulation, oversight and enforcement aiming at protecting investors and promoting integrity of securities markets.

Credit institution: 1) an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credits for its own account; or 2) an undertaking or any other legal person, other than those under (1), which issues means of payment in the form of electronic money. The most common types of credit institutions are banks and saving banks. See also electronic money (e-money).

ECOFIN Council: Council of the European Union reuniting/meeting at the level of the ministers of economics and finance.

Economic and Financial Committee (EFC): a committee which contributes to the preparation of the work of the ECOFIN Council and the European Commission. Its tasks include reviewing the economic and financial situation of both Member States and the EU, and contributing to budgetary surveillance.

Electronic money (e-money): An electronic store of monetary value on a technical device that may be widely used as prepaid bearer instrument for making payments to undertakings other than the issuer, without necessarily involving bank accounts in the transactions.

Euro: The name of the European single currency adopted by the European council at its meeting in Madrid on 15 and 16 December 1995 and used instead of the term ECU originally employed in the Treaty.

EURO1: Multilateral net payment system providing same-day settlement at a pan-European level. EURO1 is operated by EBA Clearing and settles large-value interbank payments in euro.

Euro area: the area encompassing those Member States which have adopted the euro as the single currency in accordance with the Treaty and in which a single monetary policy is conducted under the responsibility of the Governing Council of the European Central Bank. The euro area currently comprises Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.

Eurogroup: an informal gathering of the ministers of economy and finance of the EU Member States whose currency is the euro.

European Central Bank (ECB): the ECB lies at the centre of the Eurosystem and the European System of Central Banks (ESCB) and has its own legal personality in accordance with the Treaty (ARTICLE 282(3)). It ensures that the tasks conferred upon the Eurosystem and the ESCB are implemented either through its own activities or through those of the NCBs, pursuant to the Statute of the ESCB and the ECB. The Eurosystem and the SEBC are governed by the decision-making bodies of the ECB, i.e. by the Governing Council, by the Executive Board, and, as a third decision-making body, by the General Council.

European Financial Stabilisation Mechanism (EFSM): an EU facility, based on Article 122(2) of the Treaty, that allows the European Commission to raise up to €69 billion on behalf of the EU for lending to EU Member States experiencing, or being threatened with, exceptional circumstances beyond their control. EFSM lending is subject to strong conditionality in the context of joint EU-IMF programmes.

European Financial Stability Facility (EFSF): a limited liability company established by the euro area counterparties, on an intergovernmental basis, for the purpose of providing loans to the euro area countries in financial difficulties. Such financial assistance is subject to strong conditionality in the context of joint EU-IMF programmes. The EFSF has an effective lending capacity of €440 billion, and its loans are financed through the issuance of debt securities, guaranteed by euro area countries on a pro rata basis.

European Stability Mechanism (ESM): an intergovernmental organisation established by the euro area countries on the basis of the Treaty establishing the European Stability Mechanism. It is a permanent crisis management mechanism for the euro area which issues debt instruments in order to finance loans and other forms of financial assistance to euro area countries. The ESM entered into force on 8 October 2012. It has an effective lending capacity of €500 billion and replaced both the European Financial Stability Facility and the European Financial Stabilisation Mechanism. ESM lending is subject to strict conditionality.

European System of Central Banks (ESCB): composed of the European Central Bank (ECB) and the NCBs of all 28 EU Member States, i.e. it includes, in addition to the members of the Eurosystem, the NCBs of those Member States whose currency is not the euro. The ESCB is governed by the Governing Council and the Executive Board of the ECB, and, as a third decision-making body of the ECB, by the General Council.

European Systemic Risk Board (ESRB): an independent EU body responsible for the macro-prudential oversight of the financial system within the EU. It contributes to the prevention or mitigation of systemic risks to financial stability that arise from developments within the financial system, taking into account macroeconomic developments, so as to avoid periods of widespread financial distress.

Eurosystem: the central banking system of the euro area. It comprises the European Central Bank and the NCBs of the Member States that have adopted the euro.

Executive Board: one of the decision-making bodies of the ECB. It comprises the President and the Vice-President of the ECB and four other members appointed by the European Council, acting by a qualified majority, on a recommendation from the EU Council, after it has consulted the European Parliament and the ECB.

Expanded Asset Purchase Programme (APP): Following the first and second covered bond purchase programmes (CBPP and CBPP2) conducted respectively in 2009-10 and 2011-12, the expanded asset purchase programme (APP) includes all purchase programmes under which private sector securities and public sector securities are purchased to address the risks of a too prolonged period of low inflation. It consists of the third covered bond purchase programme (CBPP3), the asset-backed securities purchase programme (ABSPP), the public sector purchase programme (PSPP) and the corporate sector purchase programme (CSPP).

Fiduciary money: banknotes and coins having the status of legal tender.

Financial stability: condition in which the financial system- comprising financial intermediaries, markets and market infrastructures- is capable of with standing shocks and the unraveling of financial imbalances, thereby mitigating the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities.

Fine-tuning operations: an open market operation executed by the Eurosystem in order to deal with unexpected liquidity fluctuations in the market. The frequency and maturity of fine-tuning operations are not standardised.

G10: The Group of Ten (G10) refers to the group of countries that have agreed to participate in the General Arrangements to Borrow (GAB), a supplementary borrowing arrangement that can be invoked if the IMF's resources are estimated to be below member's needs. The GAB was established in 1962, when the governments of eight IMF members—Belgium, Canada, France, Italy, Japan, the Netherlands, the United Kingdom, and the United States—and the central banks of two others, Germany and Sweden, agreed to make resources available to the IMF for drawings by participants and, under certain circumstances, for drawings by nonparticipants.

G20: The Group of Twenty (G20), refers to a group of key advanced and emerging market economies that was created in 1999, in response to the financial crisis in the late 1990s, to modernise the international financial architecture, strengthen policy coordination between its members, and promote financial stability. In recent years it has increasingly influenced the debate on the global economic and financial policy agenda.

The membership of the G20 comprises the G7 countries (Canada, France, Germany, Italy, Japan, United Kingdom and the United States), Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey and the European Union, which is represented by the rotating Council Presidency and the European Central Bank.

Jointly G20 members represent about 85 per cent of global gross domestic product, over 75 per cent of global trade, and two-thirds of the world's population.

General Council: one of the decision-making bodies of the European Central Bank (ECB). It comprises the President and the Vice-President of the ECB and the governors of all the NCBs of the European System of Central Banks.

Governing Council: supreme decision-making body of the European Central Bank (ECB). It comprises all the members of the Executive Board of the ECB and the governors of the NCBs of the Member States that have adopted the euro.

Harmonised index of the consumer prices (HICP): a measure of the development of consumer prices that is compiled by Eurostat and harmonised for all EU Member states.

Key ECB interest rates: the interest rates, set by the Governing Council, which reflect the monetary policy stance of the European Central Bank. They are the rates on the main refinancing operations, the marginal lending facility and the deposit facility.

Longer-term refinancing operations: a regular open market operation executed by the Eurosystem in the form of reverse transactions. Such operations are carried out through a monthly standard tender and normally have a maturity of three months. During the financial market turmoil that started in August 2007, supplementary operations with maturities ranging from one maintenance period to one year were conducted, the frequency of which varied.

Main refinancing operations: a regular open market operation executed by the Eurosystem in the form of reverse transactions. Such operations are carried out through a weekly standard tender and normally have a maturity of one week.

MFIs (monetary financial institutions): financial institutions which together form the money issuing sector of the euro area. These include the Eurosystem, resident credit institutions (as defined by Community law) and all other resident financial institutions whose business is to receive deposits and/or close substitutes for deposits from entities other than MFIs and, for their own account (at least in economic terms), to grant credit and/or invest in securities. The latter group consists predominantly of money market funds.

Open market operations: an operation executed on the initiative of a central bank to influence the financial market. With regard to their aims, regularity and procedures, Eurosystem open market operations can be divided into four categories: main refinancing operations; longer-term refinancing operations; fine-tuning operations; and structural operations. As for the instruments used, reverse transactions are the main open market instrument of the Eurosystem and can be employed in all four categories of operations. In addition, the issuance of debt certificates and outright transactions are available for structural operations, while outright transactions, foreign exchange swaps and the collection of fixed-term deposits are available for the conduct of fine-tuning operations.

Outright Monetary Transactions (OMTs): transactions that aim to safeguard an appropriate monetary policy transmission and the singleness of the monetary policy in the euro area through purchases of euro area government bonds in the secondary market based on strict and effective conditionality.

Outright transaction: A transaction whereby assets are bought or sold up to their maturity (spot or forward).

Price Stability: the maintenance of price stability is the primary objective of the Eurosystem. The Governing Council defines price stability as a year-on-year increase in the Harmonised Index of Consumer Prices for the euro area below 2%. The Governing Council has also made it clear that, in the pursuit of price stability, it aims to maintain inflation rates below, but close to, 2% over the medium term.

Public sector purchase programme (PSPP): On 22 January 2015 the Governing Council expanded its scope of intervention by announcing a securities purchase programme in the public sector (PSPP) scheduled to start on 09 March 2015. The PSPP was the latest of a suite of asset purchase programmes (APP), which included the asset-backed securities (ABSPP) and the covered bonds (CBPP3), aimed at addressing the risk of a of a too prolonged period of low inflation.
The secondary market transactions conducted under the PSPP include high quality euro-denominated instruments issued by the euro area central governments - or by regional and local governments that meet all other eligibility criteria - or by eligible international or supranational institutions and agencies established in the euro area.
The share of purchases in a national central bank's home market is conducted in proportions reflecting the respective share of the national central bank in the ECB's capital key.
Additional eligibility criteria apply to countries subject to an EU-IMF macroeconomic adjustment programme.

Real-time gross settlement (RTGS) system: a settlement system in which processing and settlement take place on a transaction-by transaction basis in real time (see also TARGET2).

SDR (Special Drawing Rights): The SDR was created by the IMF in 1969 as an international reserve asset to supplement its member countries' official reserves. Its value is currently based on a basket of four key international currencies: the euro, the Japanese yen, the pound sterling, and the US dollar. The SDR is neither a currency, nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members.

Securities Markets Programme (SMP): a programme set up in May 2010 for conducting interventions in the euro area public and private debt securities markets to ensure depth and liquidity in dysfunctional market segments with a view to restoring an appropriate monetary policy transmission mechanism. The SMP was terminated when the technical features of the Outright Monetary Transactions were announced on 6 September 2012.

Securities settlement system (SSS): a system which allows the transfer of securities, either free of payment or against payment (delivery versus payment).

Stability and Growth Pact (SGP): intended to serve as a means of safeguarding sound government finances in the EU Member States in order to strengthen the conditions for price stability and for strong, sustainable growth conducive to employment creation. The SGP has two arms – a preventive arm and a corrective arm. The preventive arm prescribes that Member States specify medium-term budgetary objectives, while the corrective arm contains concrete specifications on the excessive deficit procedure.

Standing Facilities: Standing facilities aim to provide and absorb overnight liquidity, signal the general monetary policy stance and bound overnight market interest rates. Two standing facilities, which are administered in a decentralised manner by the NCBs, are available to eligible counterparties on their own initiative: the marginal lending facility and the deposit facility.

STEP2: Pan-European Automated Clearing House (PE-ACH) for retail payments in euro. The clearing house is operated by EBA Clearing.

Systemic Risk: the risk that the inability of one participant to meet its obligations in a system will cause other participants to be unable to meet their obligations when due, with possible spillover effects such as significant liquidity or credit problems that may threaten the stability of the financial system. Such inability may be caused by operational or financial problems.

TARGET2: the second-generation TARGET system. It settles payments in euro in central bank money and functions on the basis of a single shared IT platform, to which all payment orders are submitted for processing.

TARGET2-Securtities (T2S): the Eurosystem's single technical platform enabling central securities depositories and NCBs to provide core, borderless and neutral securities settlement services in central bank money in Europe.

Treaty on the Functioning of the European Union (TFEU): Following entry into force of the Treaty of Lisbon on 1 December 2009, the Treaty establishing the European Community was renamed the Treaty on the Functioning of the European Union (TFEU). This Treaty - referred to as the Treaty of Rome (signed in Rome on 25 March 1957) - entered into force on 1 January 1958 to establish the European Economic Community (EEC). The Treaty establishing the European Community was subsequently amended by the Treaty on European Union (often referred to as the Maastricht Treaty) which was signed on 7 February 1992 and entered into force on 1 November 1993, thereby establishing the EU. Thereafter, both the Treaty establishing the European Community and the Treaty on the European Union were amended by the Treaty of Amsterdam, signed on 1 October 1997 and in force as of 1 May 1999, the Treaty of Nice, signed on 28 February 2001 and in force as of 1 February 2003, and then by the Treaty of Lisbon.

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