
BANQUE

01 THE BCL'S ACTIVITIES

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1.1 MONETARY POLICY OPERATIONS

In Luxembourg, the Banque centrale du Luxembourg (BCL) is responsible for the implementation of monetary policy as defined by the Governing Council of the European Central Bank (ECB) for the euro area as a whole.

The objective of monetary policy is to steer interest rates and manage money market liquidity in order to maintain price stability. As such, the Governing Council decides on conventional measures and, since the financial crisis, on non-conventional measures.

1.1.1 Conventional operations

Conventional monetary policy operations are operations related to the management of the liquidity needs of the banking system. The operational framework comprises three instruments: open market operations, standing facilities and minimum reserves. Following the increase of the excess liquidity in the Eurosystem since the beginning of the financial crisis, conventional operations have gradually lost importance.

Traditionally, open market operations have three objectives: they play an important role in steering short-term money market rates, managing bank liquidity and signaling the monetary policy stance. Open market operations are conducted in a decentralised manner, through regular and ad hoc tenders, or through bilateral transactions. Open market operations comprise:

- Main Refinancing Operations (MROs): In normal times, these weekly tenders are the primary instrument for refinancing and steering short-term money market rates. Liquidity provided through this channel via reverse transactions are available for a period of one week;
- Longer-Term Refinancing Operations (LTROs), i.e. operations with a maturity longer than one week: In the conventional framework, there is only one form of LTROs having a maturity of 3 months. LTROs are conducted on a monthly basis and, unlike MROs, are not intended to signal the monetary policy stance, but to provide additional longer-term refinancing, regardless of the short-term money market fluctuations;

- Fine-Tuning Operations (FTOs): These operations, which have a variable maturity, make it possible to link the two other refinancing operations. They can be used to mitigate shocks to bank liquidity and, if necessary, to steer the day-to-day evolution of the short-term money market rates. Fine-tuning operations may take various forms: reverse transactions, currency swaps against euro, or liquidity absorptions. They can be executed through quick tenders or on the basis of bilateral transactions with counterparties;
- Structural Operations: These operations are carried out in the form of reverse transactions or through the issuance of ECB debt certificates. Structural operations aim at influencing the amount of liquidity in the banking system over the longer term. In this regard, temporary purchases by the Eurosystem in the form of outright transactions can be used to provide long-term liquidity to the banking system while the issuance of ECB debt certificates intends to create a liquidity shortage in the market if necessary.

Standing facilities are instruments that aim to provide or withdraw overnight liquidity, that indicate the general stance of monetary policy and that control overnight money market rates. Both standing facilities and open market operations are available to eligible counterparties at their request.

Minimum reserve requirements are an integral part of the operational framework of the Eurosystem's monetary policy. They essentially fulfil two functions:(i) they have a stabilizing effect on money market rates by application of the averaging provision allowing credit institutions to fulfill the reserve requirements on average over the maintenance period; (ii) they aim at increasing the demand for central bank money by creating or increasing a structural liquidity deficit. These two functions facilitate the steering of money market rates by the Eurosystem in normal times.

1.1.1.1 Open market operations in 2018

1.1.1.1.1 Main refinancing operations

Since October 2008, weekly MROs have been conducted at the MRO rate through a fixed rate tender procedure with full allotment. This allotment procedure was not reconsidered and remained applicable throughout 2018 and is intended to be maintained as long as necessary and at least until the end of the last maintenance period of 2019. In 2018, the rate on the main refinancing operations remained unchanged at 0%.

In 2018, in the euro area, the overall average participation by counterparties in MROs declined by around 73% compared to 2017. The table below shows the annual change in the average amounts per operation allocated in the euro area since 2008.

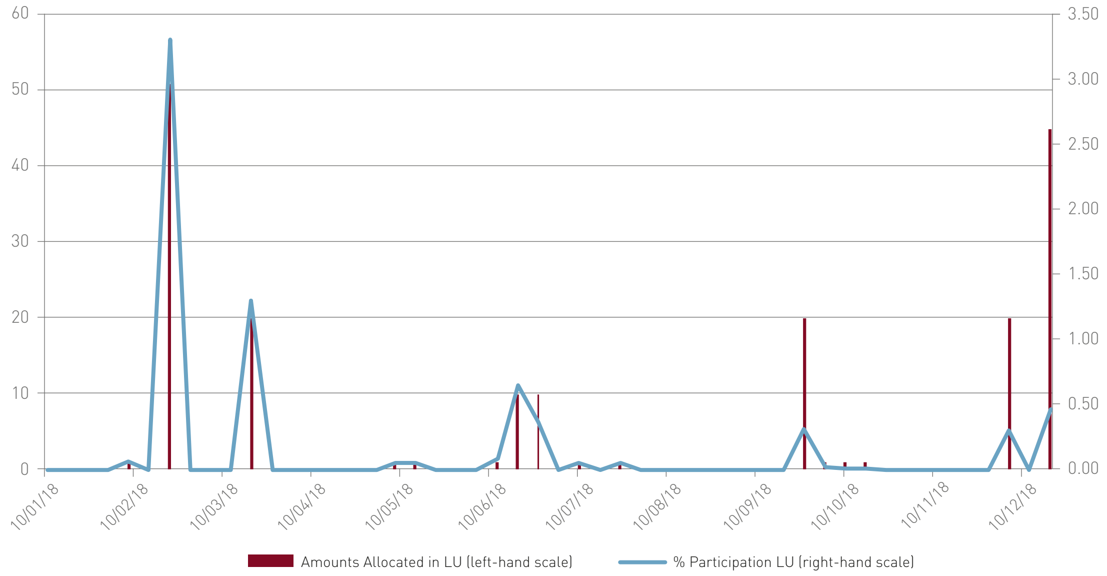
Table 1:
Average amounts per MRO allocated to the euro area as a whole and annual change

Year	Average Amount in millions of euros	Change p.a.
2008	201 113.40	
2009	149 668.23	-25.6%
2010	133 831.09	-10.6%
2011	158 967.96	18.8%
2012	97 829.27	-38.5%
2013	108 040.09	10.4%
2014	110 755.48	2.5%
2015	91 917.46	-17.0%
2016	48 495.08	-47.2%
2017	13 122.23	-72.9%
2018	3 506.11	-73.3%

Source: BCL

In 2018, one or two Luxembourg counterparties occasionally showed an interest in the MRO with a maximum participation rate of 3% of the total amount distributed in the euro area.

Graph 1:
MRO - Amounts Allocated and Participation of Luxembourg in 2018
(in € millions)



Source: BCL

1.1.1.1.2 Longer-term refinancing operations

In Luxembourg, only one counterparty participated in the first two three-month LTROs in 2018. No other participation in this type of operation was recorded.

In the euro area, the average amount allocated was around EUR 2 billion for 13 to 20 counterparties.

1.1.1.1.3 Fine-tuning operations

There were no fine-tuning operations in 2018.

1.1.1.2 Standing facilities in 2018

Luxembourg counterparties have the possibility to use the deposit or marginal standing facilities provided by the BCL at rates set in advance.

There were no changes in reference rates in 2018. Since 16 March 2016, the deposit facility rate stood at -0.40% while the marginal lending facility rate stood at 0.25%.

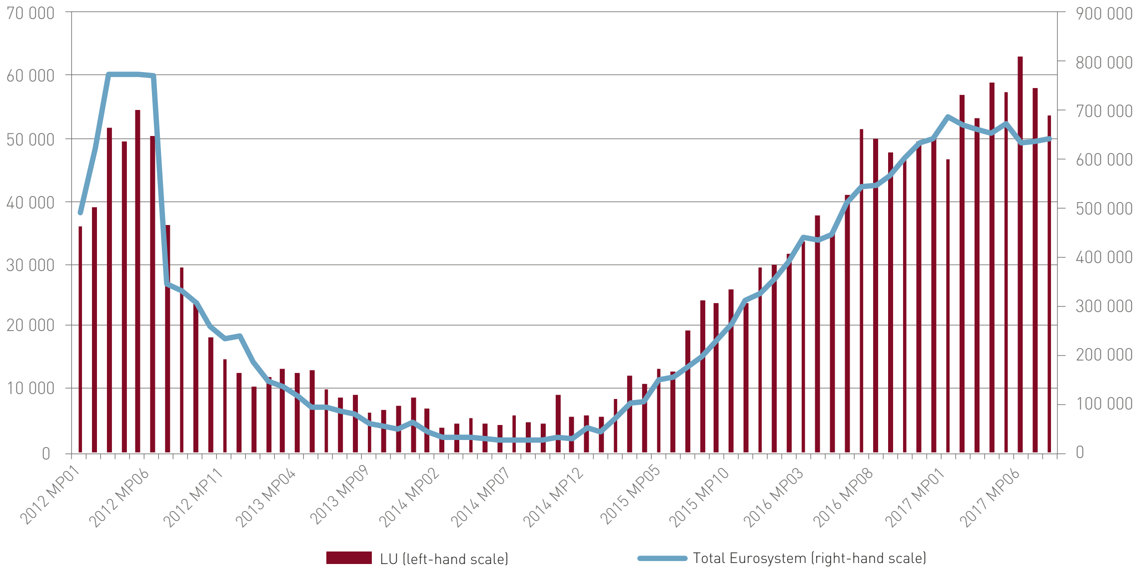
<u>Marginal lending facility</u>

The marginal lending facility was rarely used in 2018. Luxembourg counterparties only made use of this facility on an ad hoc basis.

Deposit facility

Amounts deposited with the BCL continued to grow in 2018, despite the negative interest rate applied and while the overall amounts deposited in the euro area decreased. The development in Luxembourg is due to the increased liquidity surplus held by the Luxembourg financial sector and the requirement for banks to comply with the short-term liquidity ratio (LCR). In 2018, on a daily average, EUR 55.6 billion were deposited by the banks with the BCL under the deposit facility which represents an increase of 20% compared to 2017.

Graph 2:
Evolution of the deposit facility in Luxembourg and the euro area (Average Daily Amount)
(in € millions)



Source: BCL

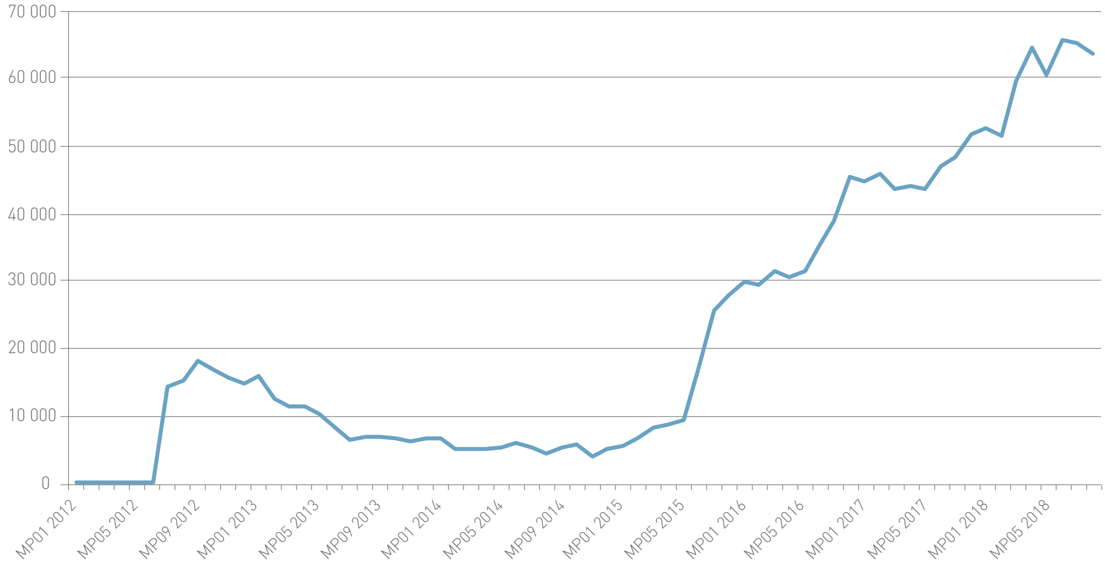
1.1.1.3 Minimum reserves in 2018

Since January 2012, the reserve requirement ratio has been set at 1% of certain liabilities with a maturity up to 2 years on the banks' balance sheets.

The remuneration rate on the deposit facility (-0.4%) is also applied to the excess reserves. Accordingly, counterparties are indifferent between leaving their excess liquidity on their current account with the BCL or using the deposit facility.

The amount of excess reserves in Luxembourg increased continuously since 2015. This upward development can be explained by the liquidity injected into the market through the asset purchase programmes and by the regulatory requirements to comply with the short-term liquidity ratio. In 2018, the daily average of excess reserves for all Luxembourg counterparties amounted to EUR 60.5 billion – an increase of 31% compared to 2017.

Graph 3:
Total of Daily Average Excess Reserves for Luxembourg Counterparties since 2012
(in € millions)



Source: BCL

1.1.2 Non-conventional transactions

1.1.2.1 Temporary currency auctions facilities

The Governing Council of the ECB decided in 2014 to continue providing one-week US dollar liquidity to euro area banks until further notice. This measure has remained in force throughout 2018.

As in previous years, only a few Luxembourg counterparties participated in the US dollar operations during 2018. At the euro area level, participation also remained low with increased demand observed in the year-end operation in which 12 counterparties borrowed USD 4.2 billion in total. In 2017, 21 counterparties had borrowed a total of USD 11.9 billion.

1.1.2.2 Extension of the maturity of operations

Since 2007, the ECB conducted several types of non-conventional longer-term refinancing operations in order to address the challenges posed during the different phases of the financial crisis.

The table below provides an overview of these operations. Except for the second series of targeted LTRO, all other operations have matured.

Table 2:
Overview of non-conventional longer-term refinancing operations (LTROs) since 2007

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)
Supple-mentary 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	2 599	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	1 019	800	*Enhanced credit support measures to support bank lending and liquidity in the Eurozone money market*
Targeted LTRO	8	Sep-14	Jun-16	130	432	306	*Enhance the functioning of the monetary policy transmission mechanism by supporting bank lending to the real economy*
Targeted LTRO II	4	Jun-16	Mar-17	399	740	514	*Strengthening the transmission of the monetary policy by further incentivising bank lending to the real economy*

Sources: BCL, ECB

The first series of targeted longer-term refinancing operations involved eight operations conducted from September 2014 to June 2016. All of them matured on 26 September 2018.

The second series of targeted operations involved four operations, conducted from June 2016 to March 2017. Each of them has a four-year maturity including the possibility of early repayment after two years. They will mature in 2020 and 2021. The purpose of these operations is to strengthen the transmission of monetary policy by providing banks with greater incentives to lend to the real economy. Counterparties that have exceeded the reference threshold in terms of lending will receive an interest rate equal to the deposit facility rate prevailing at the time of the tender/auction.

At the end of 2018, liquidity provided to euro area banks via targeted LTROs accounted for 98% of the total amount of liquidity provided via all refinancing operations.

Table 3 below shows the amounts outstanding as of 31 December 2018 in the four targeted operations that were conducted from September 2014 to March 2017 for Luxembourg and the euro area.

Table 3:
Targeted LTRO Amounts allocated in the euro area in millions of euros and Luxembourg share

	Date	Maturity	LUXEMBOURG	EURO AREA	%
TLTRO II.1	Jun-16	Jun-20	3 571.44	379 854.14	0.94%
TLTRO II.2	Sep-16	Sep-20	-	44 306.68	-
TLTRO II.3	Dec-16	Dec-20	-	61 482.82	-
TLTRO II.4	Mar-17	Mar-21	1 525.00	233 203.66	0.65%
Total TLTRO II			**5 096**	**718 847**	**0.71%**

Sources: BCL, ECB

No non-conventional targeted longer-term refinancing operations were conducted in 2018.

1.1.2.3 The Asset Purchase Programme

In addition to the non-conventional measures related to the credit operations as of 2009, several securities purchase programmes were implemented in order to counter the medium-term risks of a too long prolonged period of weak inflation.

Since 2016, the extended asset purchase programme incorporated the following sub-programmes aiming at purchasing securities of the public and the private sector:

- 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).

Table 4:
Monthly Pace of Net Purchases under the Asset Purchase Programme

From March 2015 to March 2016	€ 60 billion
From April 2016 to March 2017	€ 80 billion
From April 2017 to December 2017	€ 60 billion
From January 2018 to September 2018	€ 30 billion
From October 2018 to December 2018	€ 15 billion

Source: BCL

On 13 December 2018, the Governing Council decided to end the net purchases under the APP as of 1 January 2019. The Governing Council decided at the same time to continue the reinvestments of matured securities bought under the Programme. Reinvestments will be maintained as long as necessary in order to maintain favourable liquidity conditions and a high degree of monetary support.

Table 5:
Outstanding amounts under the extended asset purchase programme at 31 December 2018
(in € millions)

Asset-Backed Securities Purchase Programme	Covered Bond Purchase Programme	Public Sector Purchase Programme		Corporate Sector Purchase Programme	TOTAL of Securities held for Monetary Policy Purposes
ABSPP	*CBPP3*	*PSPP-Government Bonds*	*PSPP-Supranationals*	*CSPP*	
27 534	262 201	1 877 541	224 507	178 050	2 569 833

Source: ECB

1.1.2.4 Other Asset Purchase Programmes – Completed Programmes

1) Securities Markets Programme (SMP)

In May 2010, the Governing Council launched an exceptional programme for securities markets.

The aim of this programme was to remedy the malfunctioning of certain segments of the euro area debt securities markets and to restore an appropriate monetary policy transmission mechanism.

The SMP ended in September 2012, following the Governing Council's decision to introduce outright monetary transactions (see below). To offset the impact of these bond purchases, the Eurosystem has taken specific actions to absorb the liquidity injected through the SMP. These absorption operations ceased in June 2014.

As at 31 December 2018, the outstanding value of cumulated purchases under the securities market programme for the euro area as a whole was around EUR 73 138 million.

2) Covered Bond Purchase Programme (CBPP and CBPP2)

Covered bonds are key instruments for the refinancing of credit institutions. This market was particularly affected by the financial crisis. To revitalise it, the Eurosystem had set up two programmes to purchase covered bonds on the primary and secondary market. The first CBPP, which amounted to EUR 60 billion, started in July 2009 and ended on 30 June 2010. CBPP2, initially targeted at EUR 40 billion, started in November 2011 and ended on 31 October 2012. For the second programme, only EUR 16.4 billion were purchased following the improvement in the supply and demand ratio of euro area covered bonds.

As at 31 December 2018, the outstanding value of the cumulative purchases under the CBPP and CBPP2 in the euro area totaled EUR 8.333 billion.

3) Outright Monetary Transactions (OMT)

The programme for outright monetary transactions was announced by the Governing Council on 6 September 2012. The aim of this programme is to preserve the adequate transmission and singleness of monetary policy in the euro area.

These transactions may only be activated to purchase securities from a country that has strictly adhered to the terms and conditions laid down in a programme of the European Financial Stability Fund (EFSF) or the European Stability Mechanism (ESM). Such programmes may take the form of a macroeconomic adjustment programme or a precautionary programme.

If applied, transactions would focus on the short end of the yield curve, in particular government bonds with a residual maturity of between one and three years.

This programme has not been activated yet.

1.1.3 Management of collateralisation of Eurosystem credit operations

In 2018, the Eurosystem continued its work aimed at enhancing collateral management. This work took place, amongst others, in the group AMI-SeCo, in which the Eurosystem in its capacity as catalyst analyses together with market participants dossiers related to collateral mobilisation. AMI-SeCo documents are published on the ECB's website. Furthermore, in the context of work related to its "Vision 2020", the Eurosystem will reinforce harmonisation of its collateralisation procedures.

List of eligible assets

According to Article 18 of the Statute of the ESCB and the ECB, all Eurosystem credit operations are conducted on the basis of "adequate collateral".

As such, each counterparty provides assets as collateral for its credit operations conducted with a national central bank of the Eurosystem. 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 assets 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 implication of one or more securities settlement systems. Non-marketable assets are mobilised according to procedures developed by each national central bank (domestic mobilisation), or with the intermediation of a correspondent central bank (cross-border mobilisation).

In 2018, there was only one change related to eligible assets. On 7 February 2018, the Governing Council decided to amend the collateral eligibility criteria applicable to unsecured debt instruments issued by credit institutions or investment firms or their closely-linked entities. The decision ECB/2018/3 is available on the website of the ECB.

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 of the Eurosystem since January 1999. In accordance with the statutes of the Eurosystem and in line with its share in the ECB's capital key, the BCL initially transferred € 74.6 million in foreign exchange assets to the ECB.

The capital allocation key is adjusted every five years on the basis of gross domestic product (GDP) and population. Following Lithuania's adoption of the euro in 2015, the weighting of the BCL in the capital key of the ECB was set at 0.2030% as of 1 January 2017.

On 31 December 2018, the ECB's reserves managed by the BCL corresponded to a market value of 365.4 million euros. One of the objectives of the management of these foreign exchange reserves is to ensure that the ECB has a sufficient amount of liquidity at all times for possible intervention in the foreign exchange markets. Security and liquidity are therefore essential requirements for the management of these reserves.

In the same context, the amount of gold assets, which are actively managed, is determined by the ECB while taking into account strategic considerations as well as market conditions.

1.3 MANAGEMENT OF THE BCL'S ASSETS

1.3.1 Conceptual Framework

1.3.1.1 Objectives of the investment policy

The main objectives of the investment policy are to generate regular income and to ensure positive performance over the long term while taking into consideration capital preservation and liquidity. The BCL applies an investment policy that is prioritised by the following objectives:

- Security and stability of the financial assets;
- Coverage of the operational expenses;
- Generation of profit.

The BCL applies coordinated, progressive and proactive investment policy, in line with the principle of risk diversification and based on modern portfolio management theory.

The investment approach incorporates:

- an analysis of economies 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 capital value of the assets by following a risk-diversification process and by requiring investment to be a of a specific quality;
- the application of strict risk control measures.

Investment decisions are based on both technical and fundamental analysis. Investment decisions are made taking into account:

- market risk (interest rates, exchange rates, equity prices, commodity prices);
- credit risk (minimum credit ratings criteria by international rating agencies);
- liquidity risk (concentration limits by sector, issuer and issue, with efforts to ensure geographic diversification in the daily management).

1.3.1.2 Performance Measurement

The quality of investment decisions is measured by comparing the performance to external benchmarks which have been developed by large investment firms. This allows performance attribution to be carried out at all decision-making levels (strategic, tactical) as well as in the 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 has thereby allowed the BCL to provide asset management services to third parties and to hold own fund asset portfolios in order to diversify the bank's income. These guidelines also include the risk mitigation framework for asset management.

Level 2: The Executive Board

The Executive Board defines and quantifies the risk management framework. It determines the maximum risk allowance (MRA) which corresponds to the maximum level of risk that can be taken in the management of the assets of the BCL. It specifies risk management measures such as 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.

Level 3: The Asset and Liability Management Committee ALCO

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

Level 4: The tactical committees

Tactical committees develop proposals for tactical benchmarks that comply with the permitted deviation relative to the strategic benchmark and monitor the evolution of the portfolios on a short-term basis.

The tactical committees consist of the following:

- the Tactical Investment Committee for the BCL's own funds;
- the Foreign Exchange Committee for the pooled reserves of the ECB;
- the Tactical Investment Committee for the pension fund of the BCL.

Level 5: The Portfolio Management Team

The Portfolio Managers execute transactions, in strict compliance with the limits set, which cover both portfolio and individual investment limits.

1.3.3 Risk Control

The Risk Management unit monitors the positions of all the portfolios in order to assess risks and check compliance with 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 Structure and Composition of the Portfolios

The bulk of the BCL's own funds are invested in fixed income securities denominated in euro.

The strategic orientation enables diversification into other asset categories.

Investment Portfolio

The investment portfolio consists of assets which represent the own funds of the BCL. The main objective of the euro-denominated portfolio is to maximise the return while taking the abovementioned risk constraints into account (see section 1.3.2). As of 31 December 2018, the total market value (including accrued interest) amounted to € 840 million.

In 2018, the portion of fixed income securities with maturities greater than three years decreased from 51% to 35% of the portfolio, while the percentage of bonds with a maturity of one to three years increased from 19% to 51%. At the end of 2018, the portion of floating rate bonds and fixed-rate securities with a maturity under one year fell from 30% to 14% of the portfolio.

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

Liquidity Portfolio

This portfolio comprises the other assets, largely based on an agreement within the Eurosystem for TARGET2 accounts and other liabilities.

This portfolio also aims to increase the revenue of the bank. The instruments used are mainly short-term fixed-coupon bonds, variable rate bonds and commercial paper, provided that these instruments comply with the strict and predefined investment criteria. In respect of negative short-term interest rates, this portfolio has been closed for an indefinite period.

Table 6:
Breakdown of reserves as of 31 December 2018

	Investment portfolio	Liquidity Portfolio
<1 year	14%	0%
1-3 years	51%	0%
> 3 years	35%	0%

Own Reserve Portfolio in Foreign Currencies

The main purpose of the portfolio of own reserves in foreign currencies is to have an intervention portfolio in place in addition to the common foreign exchange reserves transferred to the ECB. The principal objective of this portfolio is to maintain security and liquidity. As of 31 December 2018, the total market value of this portfolio in foreign currency amounted to € 170 million.

Pension Fund Portfolio

The management of this fund is presented in section 2.2.3 of this Annual Report.

ECB Reserve Portfolio

The management of this portfolio is described 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) which incorporates six central banks within the Eurosystem, offering institutional clients (central banks, public authorities and international organisations) a comprehensive range of services for managing euro denominated reserves in a standardized framework as defined by the ECB.

Mr Roland Weyland, Executive Director of the BCL

1.4 BANKNOTES AND COINS

The *Banque centrale du Luxembourg* (BCL), in cooperation with the European Central Bank (ECB) and the other National Central Banks (NCBs) of the Eurosystem, is in charge of putting the euro banknotes and coins into circulation. It participates in maintaining 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 contributes to the promotion of the Grand Duchy of Luxembourg.

1.4.1 Production of banknotes and coins

Within the Eurosystem, the euro banknote production is assigned on the basis of a decentralised pooling scenario adopted in 2002. Each NCB is responsible for providing a part of the total banknote requirements. Euro banknotes are produced in accordance with the needs identified by the participating NCBs and aggregated by the ECB.

In this context, in 2018 the BCL was responsible for the production of eight million of € 5 banknotes of the "Europa" series for the Eurosystem's needs (compared to 14.21 million of € 50 banknotes of the "Europa" series in 2017). The BCL allocated the production of these banknotes via a tender procedure. This tender is organised with several other central banks (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. Due to sufficient stocks of euro coins in the denominations from 2 euro to 20 cent, the BCL has ordered the production of only two million 10 cent coins and three million 5 cent coins of the 2018 series. In order to contribute at the European level to the reduction of unused coin stocks, the BCL has bought from De Nederlandsche Bank excess stocks of 5.4 million 2 cent coins and 5.1 million 1 cent coins.

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 the course of 2018 amounted to 3.4 million. The number of € 10 and € 20 banknotes deposited exceeds the number of banknotes issued. Financial institutions have indeed deposited higher amounts of these banknotes at the BCL than the amount they withdrew. This phenomenon is explained by the fact that these denominations are brought into the country via tourists and, particularly, by cross-border workers.

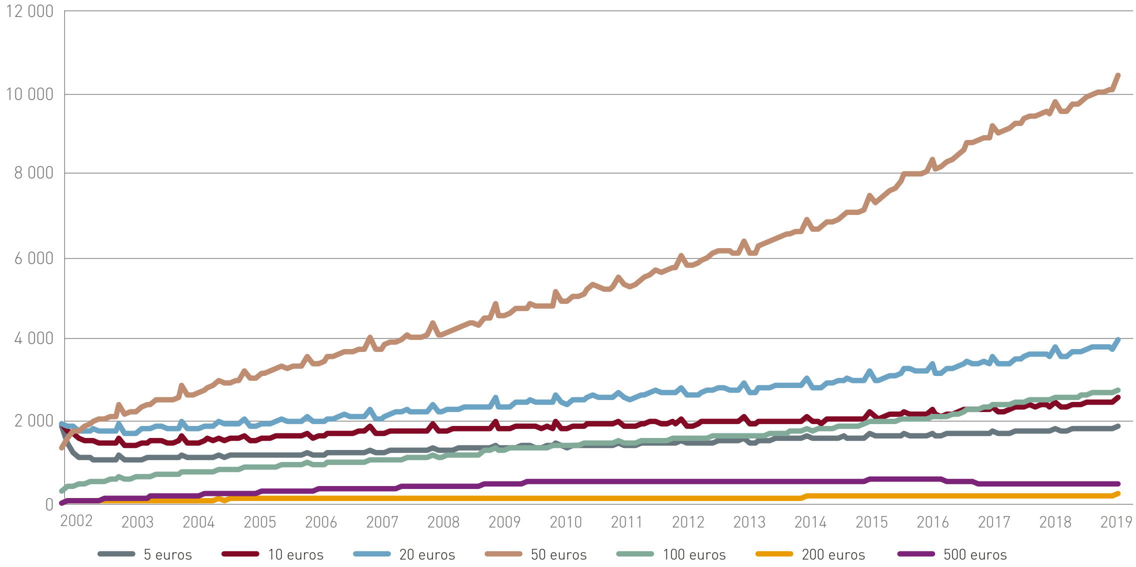
For denominations of € 100, € 200 and € 500 the demand continues to increase in Luxembourg. However, this increase was lower for the last two denominations.

At the European level, the number of € 500 banknotes in circulation slightly increased in 2018, after the ECB's announcement in May 2016 of the Eurosystem's decision to stop production and issuance of this denomination. The decrease observed in 2017 had been partially offset by a higher demand for banknotes of € 200, but especially for banknotes of € 50 and € 100.

By 31 December 2018, the total number of banknotes put into circulation by the Eurosystem reached 22.6 billion, 5.6% more than the previous year.

The graph below illustrates how the circulation of the different denominations has evolved.

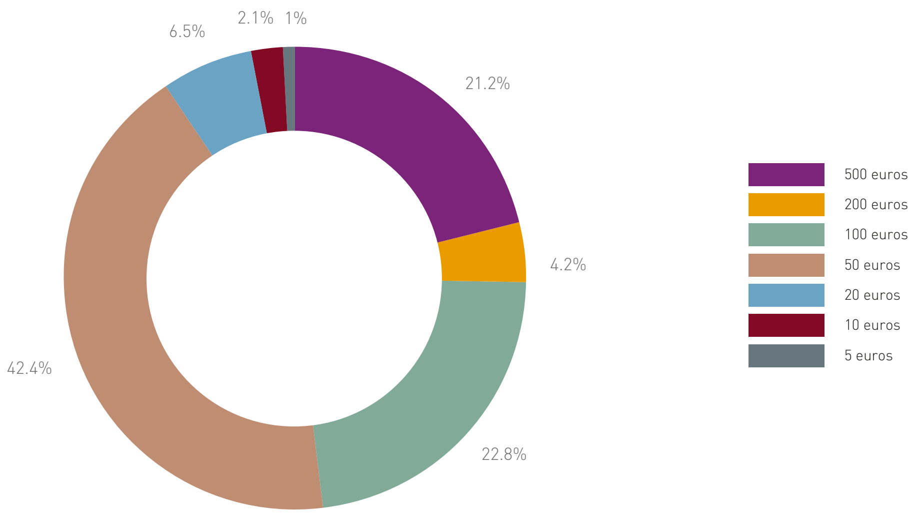
Graph 4:
Evolution of the number of euro banknotes put into circulation by the Eurosystem since 2002
(in millions of notes)



Source: ECB

In value terms, the net issuance of banknotes in Luxembourg grew by € 0.7 billion, 0.8% more than the previous year. At the European level, the net issuance grew by 60.4 billion, which equals a 5.2% increase. In the euro area, the total amount in circulation reached 1 231.1 billion by the end of 2018. The breakdown by denomination is illustrated in the graph here below.

Graph 5:
Répartition au 31 décembre 2018 de la valeur des billets en euros mis en circulation par l'Eurosystème

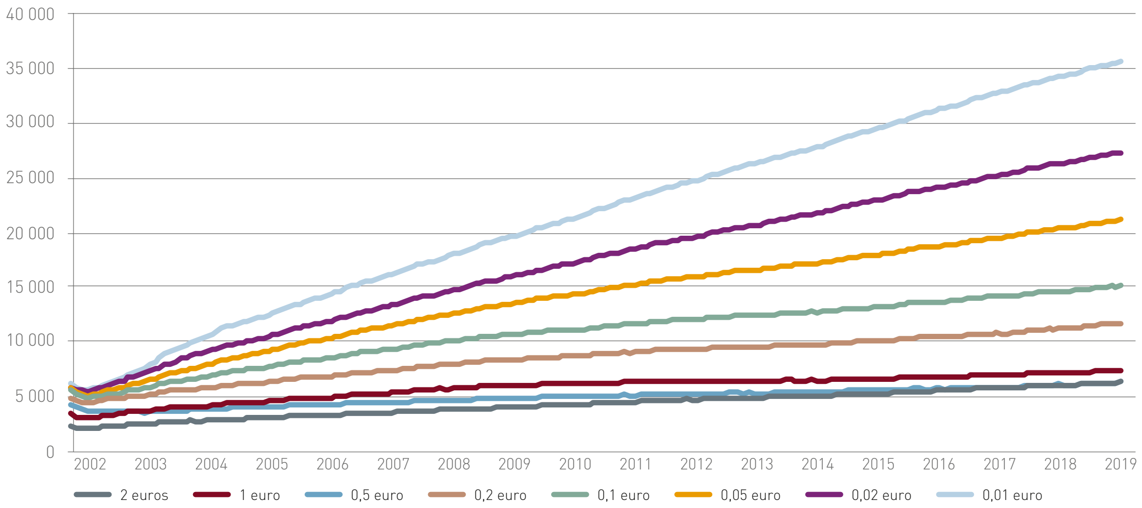


Source: ECB

1.4.2.1.2 Coins

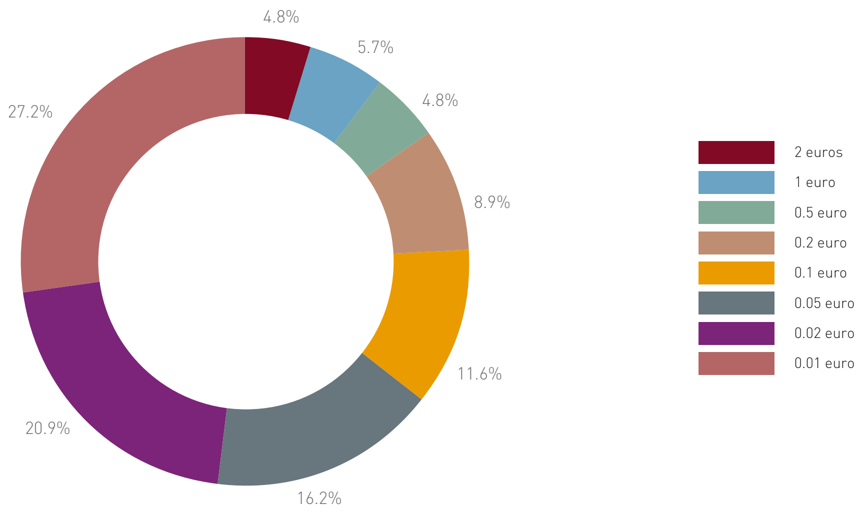
The volume of coins put into circulation in the course of 2018 increased by 28.1 million pieces, up 3.4% in comparison to the previous year. At the euro area level, the total number of euro coins in circulation grew by 3.7%, reaching 130.7 billion pieces. The value of euro coins in circulation in the euro area reached € 29 billion, a 3.6% increase compared to the previous year. The value of euro coins in circulation in Luxembourg grew by 3.5%.

Graph 6:
Evolution of the number of euro coins put into circulation in the euro area since 2002
(in millions of coins)



Source: ECB

Graph 7:
Breakdown by denomination of the volume of coins in circulation in the euro area on 31 December 2018



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 (IML) and not yet presented for exchange, fell from LUF 202.1 million to LUF 201.6 million, a 0.24% decrease. Their total value expressed in euro equals to just below 5 million.

Table 7:
LUF banknotes still in circulation at 31 December 2018

LUF	Number	Value in LUF	Value in EUR
5000	10 901	54 505 000	1 351 143.64
1000	68 236	68 236 000	1 691 526.26
100	788 881	78 888 100	1 955 584.91
	868 018	**201 629 100**	**4 998 254.83** [1]

[1 EUR = 40.3399 LUF]

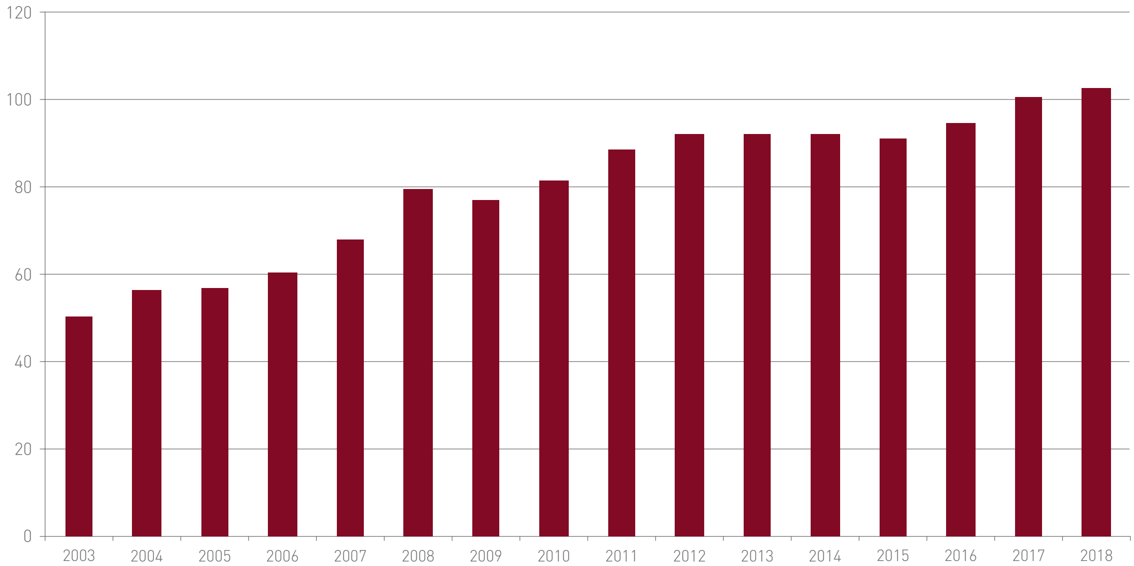
As of end-2004, coins denominated in LUF are neither exchanged nor reimbursed.

1.4.3 Sorting of euro banknotes and coins

The volume of euro banknotes returned by financial institutions to the BCL increased by 2.1% compared to the previous year, from 100.8 to 103.0 million banknotes. Over the past four years, banknote lodgements made at the BCL have steadily increased and crossed the threshold of 100 million banknotes for the first time in 2017.

The graph below shows the evolution of these lodgments at the BCL since 2003.

Graph 8:
Lodgements of euro banknotes by financial institutions at the BCL (in millions of banknotes)



Source: BCL

1 The total expressed in euro comes from the conversion of the total in francs and does not result from the sum of the three separate values.

The lodged banknotes were processed with the help of banknote sorting machines. These machines are capable of verifying the authenticity and cleanliness of each banknote. In 2018, 10.9 million banknotes of all denominations (16.4 million in 2017) were destroyed because they were unfit for circulation, representing a destruction rate of 10.1% processed by the BCL, compared to 17.4% in the previous year.

This rate varies significantly depending on denominations processed: whereas small denominations circulate more and thus wear out more quickly, the higher denominations must be replaced less often. In addition, all euro banknotes of the first series lodged at the BCL are destroyed to be replaced by notes of the "Europa" series.

1.4.4 National and international cooperation

In the fight against counterfeiting of euro banknotes and coins, the BCL closely cooperates with the European Central Bank (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 ten other NCBs (the national central banks of Belgium, Cyprus, Estonia, Ireland, Latvia, Malta, the Netherlands, Austria, Portugal and Finland) in the management and maintenance of the CashSSP application. This application enables not only to manage banknote and coin stocks and to monitor the sorting activity of fiduciary money, but also to obtain the lodgement and withdrawal announcements of local commercial banks in a safe manner.

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

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 by the € 20 on 25 November 2015. A little under two years later, on 4 April 2017, the € 50 euro banknote was put into circulation.

Unveiled to the public on 17 September 2018, the € 100 and € 200 banknotes will be put into circulation together on 28 May 2019. With the issuance of these last two denominations the "Europa" series will be complete.

As for the date of the loss of the legal tender of the first series of notes, this will be communicated in good time and well in advance. The first series of banknotes will remain redeemable at central banks for an unlimited period of time.

The "Europa" banknote series incorporates new or enhanced security features to ensure advanced protection against counterfeiting and allow the public to quickly distinguish a genuine banknote from a counterfeit.

Regarding the € 500 note, on 4 May 2016 the Governing Council decided to exclude it from the "Europa" series and stop its issue towards the end of the year 2018. Recently this date was specified and fixed at 26 January 2019.

Likewise, it is recalled that even after the issue of the € 500 banknote has been stopped, it remains a legal tender and may continue to be used as a means of payment and a store of value.

The € 500 note, like all other euro banknotes, retains its value and can be exchanged with the national central banks of the Eurosystem for an unlimited period of time.

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 1 900 sales transactions were completed in 2018. Around 4 000 parcels were sent out, corresponding to sales made through traditional mail or via the Internet shop of the BCL (https://eshop.bcl.lu). Through the collector coins and numismatic products, the BCL strives to promote the richness of the national heritage in the whole world.

In 2018, the BCL issued the following numismatic products:

- a € 2 commemorative coin dedicated to the 150th anniversary of the Luxembourg Constitution;
- the 2018 BU set comprises Luxembourg's euro coins of the 2018 series (including the first € 2 commemorative coin);
- a second € 2 commemorative coin dedicated to the 175th anniversary of the death of the Grand Duke Guillaume Ist;
- the 2018 Proof set is composed of ten coins;
- the 2016-2018 Proof set is composed of five € 2 commemorative coins issued between 2016 and 2018;
- a gold coin dedicated to the 20th anniversary of the Luxembourg Central Bank;
- a silver-niobium coin dedicated to the castle of Koerich and constituting the tenth element of the series devoted to the castles of Luxembourg;
- a silver-nordic gold coin dedicated to the reed and constituting the tenth element of the series devoted to the fauna and flora of Luxembourg;
- a nordic gold-silver coin dedicated to the hydroelectric power plant of Vianden and constituting the third element of the series devoted to the outstanding constructions in Luxembourg.

1.5 STATISTICS

The Banque centrale du Luxembourg (BCL) develops, collects, compiles and disseminates a wide range of statistics that enable it to fulfil its legal tasks within the European System of Central Banks (ESCB), the European Systemic Risk Board (ESRB) and at national level. This information is also used by other national institutions such as the National Institute of Statistics and Economic Studies (STATEC) and the Financial Sector Supervisory Commission (CSSF) in the context of their respective missions.

Within the framework of the cooperation agreement between the BCL and STATEC, the production of quarterly financial accounts statistics (with the exception of public sector data) has been carried out by the BCL since March 2013.

Within the framework of a tripartite cooperation agreement with the ECB and the European Stability Mechanism (ESM), the BCL undertook to compile macroeconomic aggregates on the basis of accounting data transmitted by the ESM. These statistical data are necessary for the ECB to compile euro area aggregates, as the ESM is considered a resident euro area financial corporation.

Within the framework of a tripartite cooperation agreement with the ECB and the European Investment Bank (EIB), the BCL collects statistical reports from the EIB. The data collected, which is in line with the statistical data collected from banks, is necessary for the ECB to compile macroeconomic aggregates.

In 2014, the People's Bank of China (PBOC) and the BCL signed a Memorandum of Understanding aimed at establishing a cooperation between the two institutions in terms of monitoring, information exchange and evaluation regarding the renminbi market. As part of this agreement, the BCL monitors developments in this market and regularly provides the PBOC with related information.

Since 2012, the BCL has been collecting statistics on payment instruments and transactions. Some of these data are transmitted in aggregated form to the ECB. In particular, the data collected provide information on the use of the various payment instruments in force in Luxembourg and on the use of the various payment channels. Payments made in electronic money are also covered by the collection.

Finally, on the basis of the cooperation agreement in the field of public finance statistics, STATEC and BCL work together to improve information flows between the two institutions.

1.5.1 New data collections

The BCL has introduced a new statistical collection[2] on the withdrawal and remittance of banknotes denominated in euros by the credit institutions and the financial services of Post Luxembourg. The first reports were submitted to the BCL in January 2019.

The BCL collects data from regulated investment funds on the basis of a common BCL and CSSF circular[3]. The BCL issued a circular[4] to extend this data collection to unregulated alternative investment funds. The latter must transmit reference data and may benefit from an exemption for the transmission of statistical reports depending on of their balance sheet size. The first reports were submitted to the BCL in October 2018.

1.5.2 Other statistical developments

The ECB, by virtue of its regulatory powers, has extended the obligation to collect statistics on securities held by resident banking groups[5]. The first reports were submitted to the BCL in October 2018. All significant banking groups included in the list drawn up by the Single Supervisory Mechanism (MSU) are subject to this collection.

In 2018, the BCL also continued to implement the AnaCredit data collection, introduced by Regulation (EU) 2016/867 of 18 May 2016 on the collection of granular credit and risk data (ECB/2016/13) and transposed by Circular BCL 2017/40 of 21 April 2017. The first reference data was submitted to the BCL in April 2018 and the first credit data collection started in October 2018.

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

In 2018, the BCL, in collaboration with the CSSF, participated in the preparation of the Financial Stability Board's shadow banking report, providing all the statistical data required for this exercise.

In 2018, several changes were implemented to meet growing public demand and to improve the information available to users, in particular on securities and direct investment data.

Finally, the BCL continued its efforts to make statistics more accessible and user-friendly, notably by improving its statistical press releases on banking activity in order to provide more detailed information on bank credit developments.

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2 Regulation of the Banque centrale du Luxembourg 2018/N° 25 of 23 July 2018.

3 Circular BCL2014/237 Circular CSSF 14/88 Amendment of the statistical collection from monetary and non-monetary investment funds.

4 Circular BCL 2018/241, see part 3.2.

5 ECB Regulation (EU) 2016/1384 of 2 August 2016 amending Regulation (EU) No 1011/2012 (ECB/2012/24) concerning statistics on securities holdings (ECB/2016/22).

1.6 PAYMENTS AND SECURITY SETTLEMENT SYSTEMS

1.6.1 Vision 2020

In the context of a strategic review of its infrastructures Target2 and T2S and of the services for management of Eurosystem collateral, the Eurosystem has elaborated the programme VISION 2020. This programme is composed of three projects with significant impact on all counterparties of the Eurosystem and other market actors.

The first, TIPS[6], is a real-time settlement service for instant customer credit transfers in central bank money. The service operates 365 days per year, 24 hours per day since its launch in November 2018.

TARGET Consolidation, the second project, which goes live in November 2021, will replace the Target2 platform with a new RTGS system[7] and by a new tool for centralised liquidity management, CLM[8].

The third project, ECMS[9] consists of a centralised collateral management system. It will be delivered in November 2022.

In order to facilitate the communication with these new systems, the Eurosystem will implement a single gateway, ESMIG[10], based on the ISO 20022 standard, which will serve as a unique entry point to all these services as from 2021.

As a member of the Eurosystem, the BCL participates in these three projects and promotes the usage of these infrastructures in Luxembourg. BCL will also support market participants in their migration projects.

1.6.2 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.[11]

At end-2018, the Luxembourgish component TARGET2-LU counted 47 direct participants (three more than in 2017), 29 indirect participants (seven less than in 2017) and three ancillary systems (identical as against 2017).

Domestic payments

In 2018, participants in TARGET2-LU exchanged a monthly average of 20 232 payments (against 20 419 in 2017) for a value of € 85.9 billion – against € 77.5 billion in 2017. Of these payments, 13 080 (64.7%) were retail payments. Their value represented a monthly average of € 6.5 billion or 7.6% of the domestic value exchanged.

In TARGET2-LU, volumes stabilised in 2018 (-1.0%).

In parallel, the domestic value exchanged increased by 10.8% in 2018. This was due to a slight increase in interbank payments (+12.7%) whereas retail payments declined by 1.5% in the meantime.

The average value of a domestic retail payment was € 499 451 whereas the average value of a domestic interbank payment was € 11 167 078 in 2018.

6 TARGET Instant Payment Settlement.

7 Real-time gross settlement.

8 Central Liquidity Management.

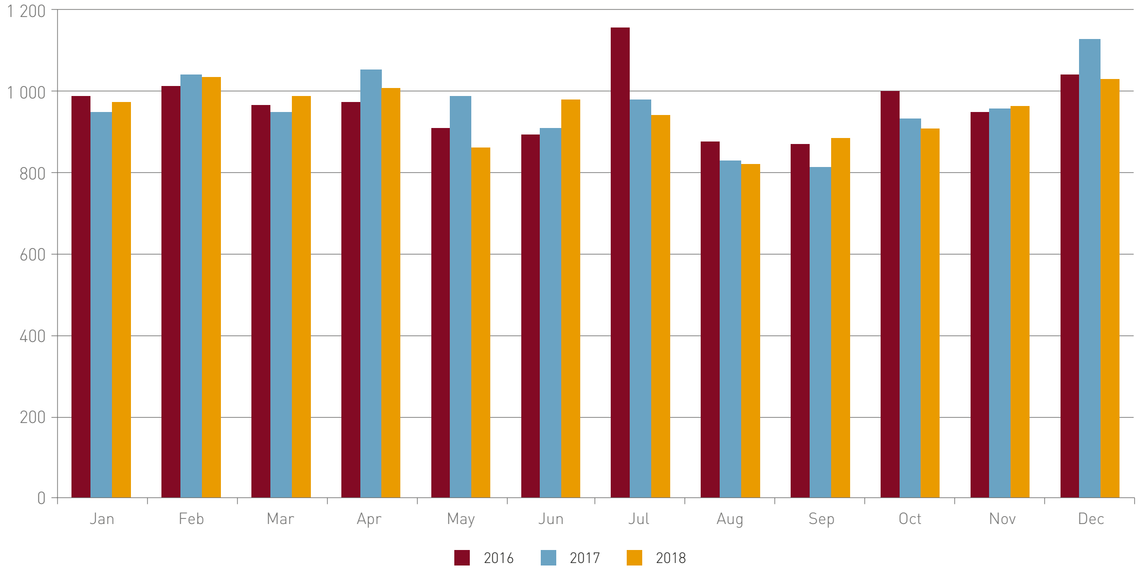
9 Eurosystem Collateral Management System.

10 Eurosystem Single Market Infrastructure Gateway.

11 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).

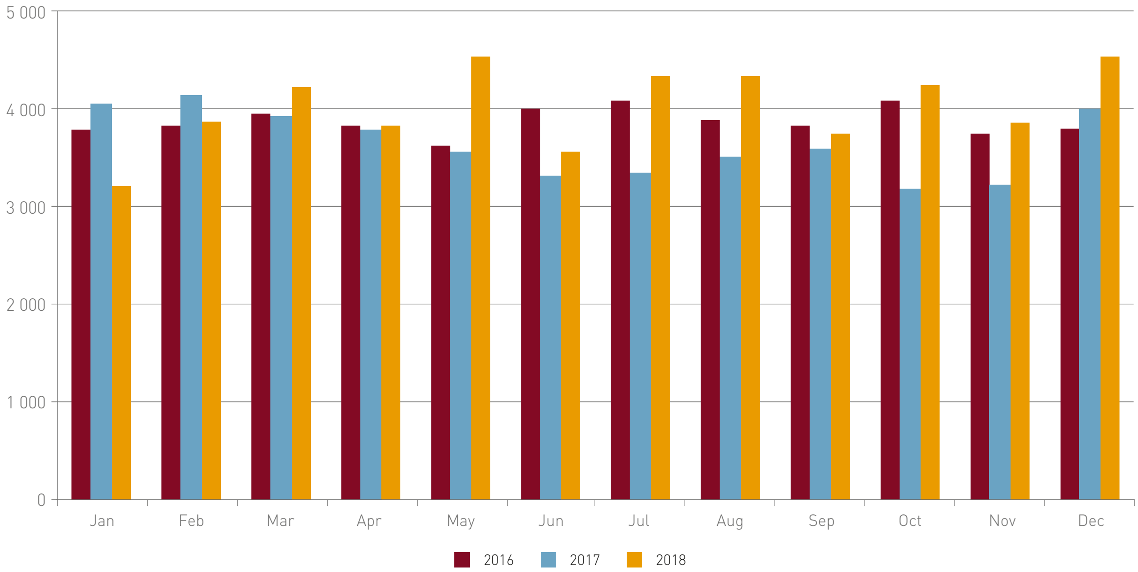
The following two charts 9 and 10 illustrate the developments in average daily volumes and values in domestic payments.

Graph 9:
Domestic payments: average daily volumes



Sources: CRAKS1 / TARGET2

Graph 10:
Domestic payments: average daily values (in euro millions)



Sources: CRAKS1 / TARGET2

Cross border payments

In 2018, participants in TARGET2-LU sent a monthly average of 111 781 payments to other countries of the EU (99 474 in 2017), an increase of 12.4%. The monthly average value of these payments increased by 3.5% to € 850 billion (€ 821 billion in 2017). The volume of retail payments increased by 9.98% to reach 48 104 payments, representing 43% of total cross border volume. The relative part of retail payments again declined by 0.9% in 2018 after it declined by 1.5% in 2016 and by 7.3% in 2017. The volume of interbank payments increased by 14.3%, thus reaching a monthly average of 63 678 transactions in 2018, compared to 55 735 in 2017.

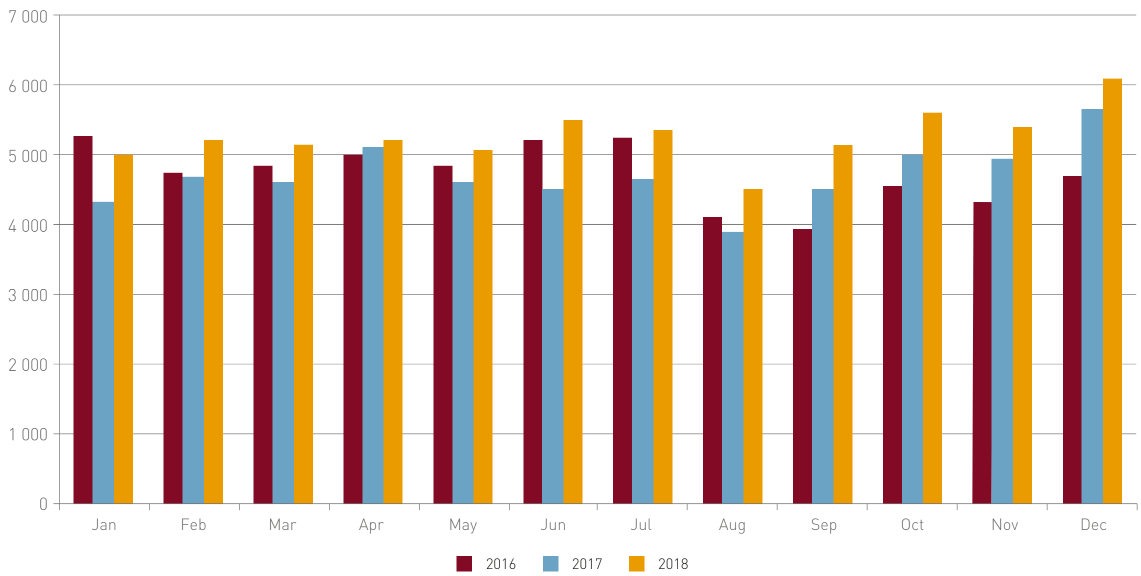
In value terms, the average monthly retail payments decreased by 5.7% to an average of € 45.5 billion, representing 5.4% of the total value exchanged. The value of monthly interbank cross border payments increased by 4.1% to € 804.2 billion.

Globally, outward cross border payments[12] increased by 12.4% in volume terms in 2018 and by 3.5% in value terms. The average value per transaction sent was € 7.6 million (against € 8.25 million in 2017). The average value of an interbank payment fluctuated from € 12.6 million in 2016 to € 13.9 million in 2017 and thereafter to € 12.6 million in 2018. The average value of a retail cross-border payment was € 946 533 in 2018.

In 2018, participants in TARGET2-LU received 106 382 payments on average per month from abroad[13] against 99 127 in 2017 (+7.3%). Participants issued 132 039 payments on average per month in 2018 against 120 595 in 2017 (+9.5%). The average value of incoming payments was € 923.4 billion or 1.5% lower than the value sent (€ 936.9 billion).

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

Graph 11:
Outward cross border payments: average daily volumes

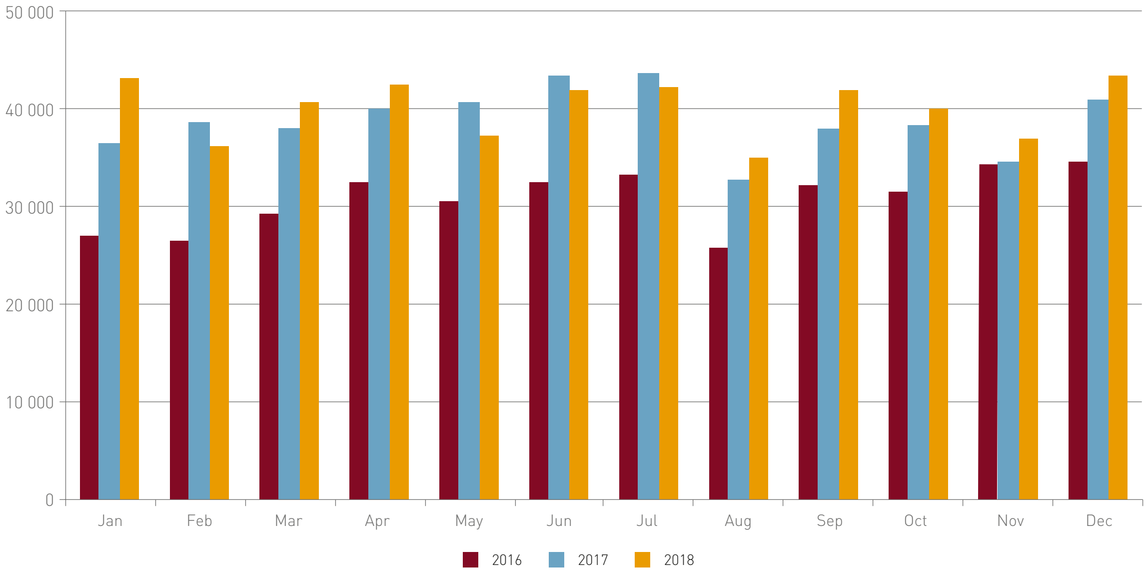


Sources: CRAKS1 / TARGET2

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

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

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



Sources: CRAKS1 / TARGET2

Aggregated figures of domestic and cross border payments

The total number of outward payments issued by participants in TARGET2-LU in 2018 amounted to 1 584 157 (versus 1 438 717 in 2017, meaning a yearly increase by 10.1%). Of these payments, 734 200 or 46.3% were retail payments.

Table 8 provides an overview of average daily volumes of payments over one year since 2014.

The average monthly value of all outward payments in 2018 was € 936.9 billion of which € 52.1 billion (5.6%) were retail payments. Similar to the previous four years, the value of 80.6% of these payments was below € 250.000.

On average, 69% (68.8% in 2017) of the retail payments and 83.9% (83.8% in 2017) of the interbank payments were settled each day before noon. They represented 48.2% and 81.9% of the respective values.

Table 8:
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)
2014	931	(20.4)	3 639	(79.6)	4 570	2 694	(37.1)
2015	932	(17.5)	4 397	(82.5)	5 329	3 102	(36.8)
2016	973	(17.1)	4 719	(82.9)	5 692	2 968	(34.3)
2017	965	(17.0)	4 701	(83.0)	5 666	3 653	(39.2)
2018	955	(15.3)	5 270	(84.7)	6 224	4 047	(39.4)
Variation 2017-2018	-1.08%		12.10%		9.85%	10.79%	

Source: BCL

TARGET2-LU compared to other systems participating in TARGET2

All national RTGS systems participating in TARGET2 transferred a monthly average of 7.4 million payments in 2018, approximately the same amount as in the previous year. Luxembourg's portion represented 1.8% of this volume (1.7% in 2017). The average monthly value exchanged summed up to € 36 041 billion (€ 36 038 billion in 2017). Luxembourg's share of the exchanged value was 2.7% (2.6% in 2017).

In 2018, 61% (the previous year 57%) of all payments in the national RTGS system which relied on TARGET 2 were domestic transactions. The part of interbank payments increased by 1% to attain 24%. In TARGET2-LU, domestic payments represented 15.3% (17% in 2017) and interbank payments 53.4% of the volume (52.9% in 2017).

The average value of a TARGET2 payment amounted € 4.9 million in 2018 (€ 4.8 million in 2017). In TARGET2-LU, this value was € 7.1 million (€ 7.5 million in 2017).

The maximum daily number of outward payments in TARGET2 was 591 009 (03 April 2018). For Luxembourg, the maximum daily amount was also reached on 03 April 2018 with 9 378 payments. This twice mentioned date was the first business day after four consecutive closing days for the weekend of Easter.

Availability and performance of TARGET2

The availability of the TARGET2 platform, and hence of TARGET2-LU, was 99.9% in 2018, compared to 100% during the two years before. The SSP received a daily average of 352 868 payment instructions, 4.7% less than in 2017. Of all the instructions during 2018, 100% were settled within five minutes after reception.

1.6.3 Retail payments in Luxembourg

Next to notes and coins, the most used payment instruments in Luxembourg are payment cards, credit transfers and direct debits.[14] Network-based electronic money, which is issued and operated by credit institutions or electronic money institutions, is mainly used for remote payments. Several banks in Luxembourg offer mobile applications enabling point-of-sale, payments, internet payments, payment of invoices or P2P payments. The main payment cards issuers and acquirers offer contactless payments[15] and without the use of a personal identification code[16].

14 Cheques are no longer daily payment instruments; their usage is on the decrease.

15 Via NFC technology.

16 The amount is generally limited to 25 euros per payment.

Table 9:
Distribution of payment instruments in Luxembourg (share in number of transactions, %)

	2017[17]	2018
Credit transfers and standing orders	29.51	28.91
Direct debits	7.74	7.04
Debit cards	32.90	32.40
Credit cards	29.76	31.57
Cheques	0.10	0.09
Total	100	100

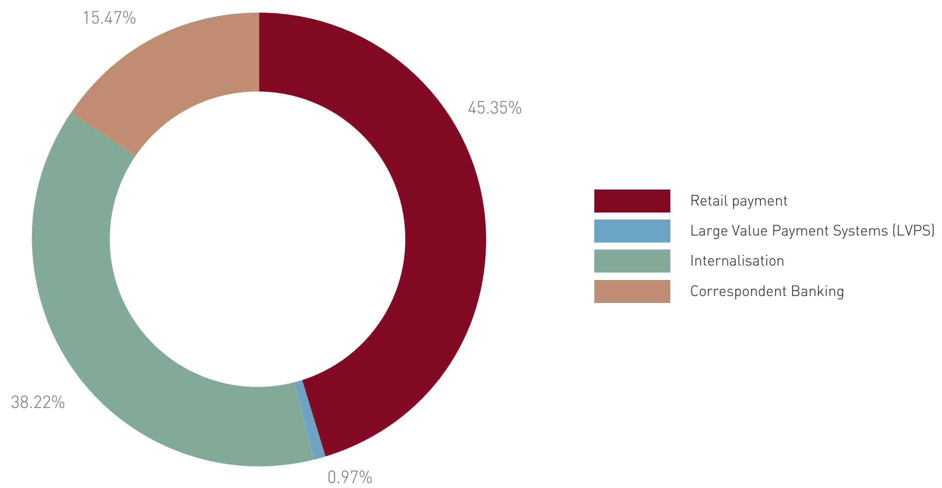
Source: BCL

Customer 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[18] and cross-border) in retail payment systems (please refer to the chart below).

Graph 13:
Share in volume of customer transfers in 2018. Distribution per settlement channel



Source: BCL

17 Revised data as compared to the annual report 2017.

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

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

Table 10:

Credit transfers sent	2017[19]	2018	Change (%)
Total volume of customer transfers (in millions of transactions)	77.26	87.89	13.76
Volume of customer transfers processed for the account of non-MFI customers[20] (in millions of transactions)	75.30	85.88	14.05
Average value of customers transfers[21] (in euro)	3 645	3 322	-8.86

Source: BCL

In 2018, banks in Luxembourg executed 87.9 million credit transfers, 85.9 million of which on request of customers that are not monetary financial institutions.

Transactions settled in retail payment systems (e.g. Step2, Equens) provide a good indicator of the use of credit transfers by households and non-financial corporations. In 2018, the average value of these transfers amounted to € 3 322.

Direct debits

SEPA[22] direct debits in Luxemburg are mainly processed in retail payment systems.

Direct debits (SEPA and non-SEPA)

	2017	2018	Change (%)
Volume (in millions of transactions)	20.26	21.40	5.63
Value (in millions euro)	11 131	12 294	10.45

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[23] in 2018 and its annual evolution are detailed in the tables below.

Number of payment cards issued in Luxembourg

Volume (number of cards)	2017	2018	Change (%)
Debit cards	767 744[24]	799 997	3.91
Credit cards	1 803 833	2 147 693	19.06

Source: BCL

19 Revised data as compared to the annual report 2017.

20 MFI stands for Monetary Financial Institution. The non-MFIs category includes corporates and households but also non-monetary investment funds.

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

22 Single Euro Payments Area

23 Payment transactions and ATM withdrawals.

24 Revised data as compared to the annual report 2017.

Transactions on cards issued in Luxembourg[25] (issuing activity)

Volume (in millions of transactions)	2017[26]	2018	Change (%)
Debit cards	86.13	98.50	14.36
Credit cards	77.90	95.99	23.22

Value (in billion euros)	2017[27]	2018	Change (%)
Debit cards	6.57	7.04	7.15
Credit cards	6.94	8.02	15.56

Source: BCL

Transactions in Luxembourg on cards issued in Luxembourg or abroad[28] (acquiring activity)

Volume (en millions de transactions)	2017	2018	Change (%)
Debit cards	57.34	62.98	9.83
Credit cards	23.46	25.78	9.89

Valeur (en milliards d'euros)	2017	2018	Change (%)
Debit cards	4.19	4.90	16.95
Credit cards	1.76	2.12	20.45

Source: BCL

The Single Euro Payments Area (SEPA) and innovations

Within the Single Euro Payments Area (SEPA), the same conditions have applied to national and cross-border scriptural payments since 2014 in the euro area (and since 2016 in the other EU countries).

As there is room for improvement in the implementation of common processes and standards, the ECB established in 2013 the Euro Retail Payments Board (ERPB). The objective is "to contribute to and to facilitate the further development of an integrated, innovative and competitive market for euro retail payments in the EU".[29] Currently the ERPB focuses on instant payments, person-to-person mobile payments, standardisation of card payment messages between the issuer and the acquirer, electronic invoice presentment and payment, and payment initiation services.[30]

Instant payments enable the beneficiary to make use of the funds within seconds after the payer has initiated the payment. The European SEPA instant credit transfer scheme became operational in November 2017.[31] It establishes the rules for payment services providers sending and receiving instant credit transfers in euro, within a country or when they are established in different countries in the SEPA area.

In order to support the integrated emergence of SEPA Instant Credit Transfers, the Governing Council of the ECB decided in June 2017 to launch TIPS (TARGET Instant Payment Settlement) as part of the Eurosystem Vision 2020 programme. TIPS provides real-time interbank settlement of customer instant payments in central bank money. Its operations began in November 2018, according to schedule.

25 Transactions in Luxembourg and abroad.

26 Revised data as compared to the annual report 2017.

27 Revised data as compared to the annual report 2017.

28 Activity of Luxembourgish acquirers only. Data on the activity of foreign acquirers in Luxembourg are not available.

29 The ECB chairs the ERPB. Members represent the supply side (payment providers) and the demand side (users) of the market. National central banks participate in meetings on a rotational basis.

30 The user initiates a payment order with a payment service provider from an account held with another payment service provider. For the legal definition and additional insight, please refer to the second Payments Services Directive (Directive 2015/2366/EU of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC).

31 The European Payments Council manages the SEPA Instant Credit Transfer (SCT Inst) scheme.
For more information: https://www.europeanpaymentscouncil.eu.

1.6.4 Securities settlement systems

Selection of eligible depositories


Mr Pierre Beck, Executive Director of the BCL

For the mobilisation of securities by its counterparties, the Eurosystem has selected eligible securities settlement systems (SSS) operated by central securities depositories (CSDs). According to the new eligibility framework for SSSs and links between SSSs, a securities settlement system or a link is eligible if it complies with two eligibility criteria specified by the Eurosystem in its General Documentation on Eurosystem monetary policy instruments and procedures. Eligibility criterion (a) requires that a SSS or a link comply with the requirements set out in Regulation (EU) No 909/2014 of the European Parliament and the Council on improving securities settlement in the European Union and on central securities depositories, and amending Directives 98/26/EC, 2014/65/EU, and Regulation (EU) No 236/2012. Eligibility criterion (b) requires that a SSS or a link comply with the legal and operational requirements specified by the Eurosystem. The new eligibility framework applies also to SSSs and links that were approved under the past eligibility framework.

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

A domestic mobilisation of securities is also possible via the triparty collateral management service operated by CBL. Detailed information on this topic, including the framework for assessment of triparty agents in view of their eligibility for collateralisation of Eurosystem credit operations, is available on the BCL's website. The system operated by VP LUX S.à r.l. became ineligible in November 2018, when it ceased operations.

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

1) The Correspondent Central Banking Model

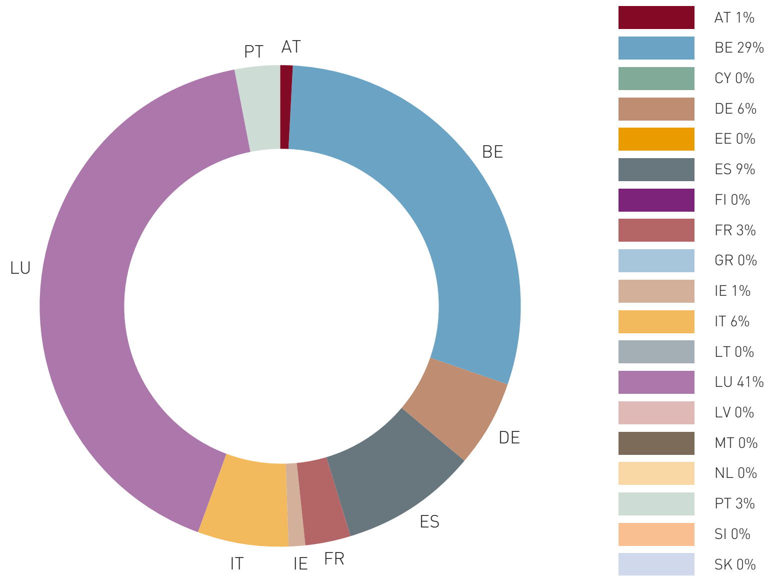
The Correspondent Central Banking Model (CCBM) enables all counterparties of the Eurosystem to use securities on a cross-border basis even if there is no eligible link between the national depository and the foreign depository in which the counterparty holds securities.

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 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 CBL, Clearstream Banking AG, Frankfurt (CBF), Euroclear Bank and Euroclear France.

While in Luxembourg counterparties use more links than CCBM, at the Eurosystem level around half of the cross-border mobilisation of securities used in Eurosystem credit operations in 2018 was performed via CCBM. In terms of value, the most active correspondent central banks in 2018 were those of Luxembourg (40.9%), Belgium (29.5%), Spain (9.4%), Germany (6.3%) and Italy (5.8%).

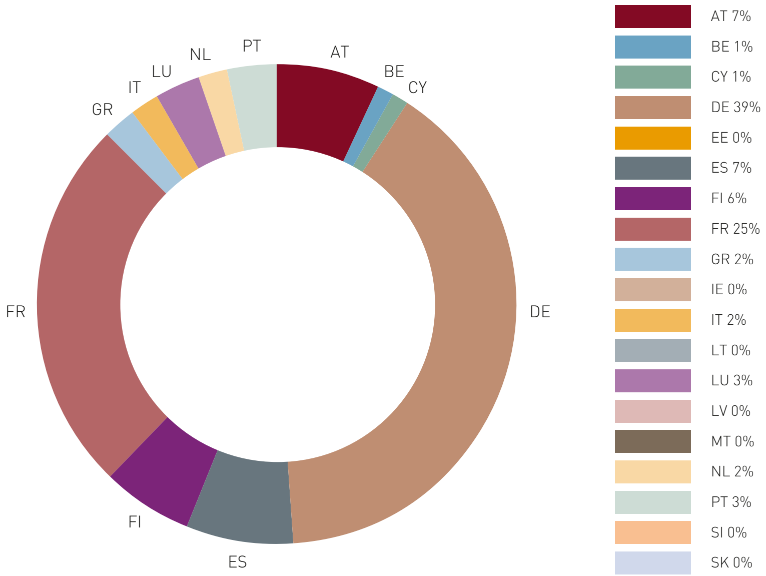
Graph 14:
Correspondent central bank 2018



Source: ECB

The most active home central banks were those of Germany (39.4%), France (25%), Austria (7.1%), Spain (7.1%) and of Finland (6.1%).

Graph 15:
Home central bank 2018



Source: ECB

2) Links established between securities settlement systems of CSDs

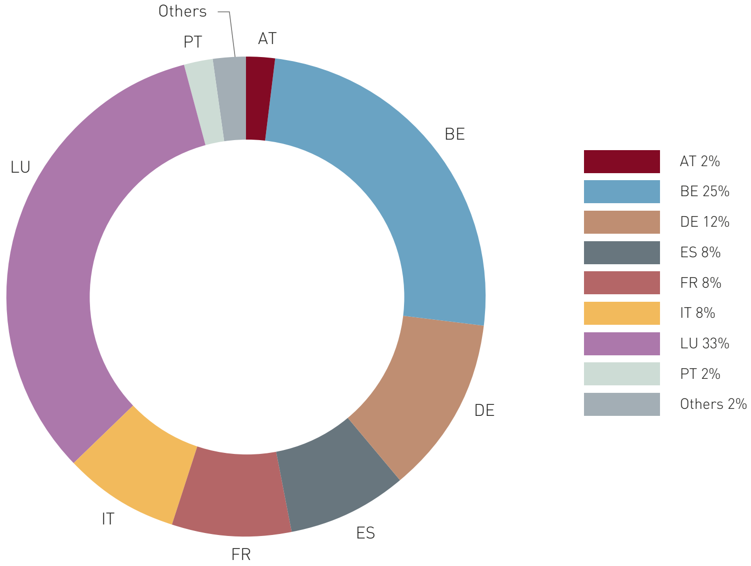
Currently two types of links are eligible, direct links and relayed links:

- in a given securities settlement system located in a country, direct links make securities issued in a 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.

In 2018, Luxembourg counterparties could use the direct links between CBL and CBF, Euroclear Bank, Euroclear Finland, KDD (Slovenia), BOGS (Greece), CDCP (Slovakia), VP SECURITIES (Denmark) and LuxCSD, as well as the relayed links of CBL via CBF between CBL and Euroclear France, Euroclear Netherlands, MaltaClear, Monte Titoli (Italy), NBB SSS (Belgium), and OeKB (Austria). Among these links, Luxembourg counterparties used primarily the links with CBF and Euroclear France. The direct link between LuxCSD and CBF was considered eligible for Eurosystem credit operations as well as the relayed links of LuxCSD via CBF between LuxCSD and Euroclear France, Euroclear Netherlands, Monte Titoli, NBB-SSS and OeKB.

It should be noted that Eurosystem counterparties use a big number of securities held in Luxembourg as collateral, be it in the CCBM, by using links between CSDs, or by using a combination of CCBM and links. In 2018, the share of Luxembourg in the cross-border use of securities within the Eurosystem was 33%.

Graph 16:
Country of issue of cross-border collateral, 2018



Source: ECB

1.6.5 TARGET2-Securities

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

The T2S platform encompasses both the securities accounts managed by the central securities depositories and the dedicated cash accounts (DCAs) 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 sales on T2S. 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 is improved on T2S thanks to several mechanisms, including the autocollateralisation service. This 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 select automatically eligible collateral, either by mobilising assets available on the participants' securities account (autocollateralisation "on stock") or by using the very securities that are being purchased (auto-collateralisation "on flow"). T2S will then pledge these securities in favour of the central bank, in exchange of which the participant receives a central bank intraday credit.

Since June 2015, the BCL has been offering DCAs to participants that requested them. The BCL has also prepared the activation of the autocollateralisation service, which is available to participants of LuxCSD on request.

1.6.6 LuxCSD

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

LuxCSD provides the following main services:

- the settlement of securities transactions in central bank money;
- the settlement of free of payment transactions;
- direct settlement 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 the Legal Entity Identifier for Luxembourg legal entities;
- a national access point to T2S.

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

Luxembourg counterparties can use LuxCSD and its links approved by the Eurosystem in order to collateralise Eurosystem credit operations.

In 2018, LuxCSD continued to reorganise its access to other securities settlement systems by using the German system CBF as main access point. This reorganisation will continue in 2019 and 2020.

The governance of LuxCSD is performed by an audit committee and by a Board of Directors. The BCL is not active in the governance bodies of LuxCSD.

1.7 FINANCIAL STABILITY AND PRUDENTIAL SUPERVISION

1.7.1 Macroprudential 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, paragraph 5, of the TFEU foresees that the European System of Central Banks (ESCB), 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 (CRD IV and CRR[32]) for the banking system[33]. The rules have been implemented in Luxembourg, notably through the transposition of CRD IV[34]. Since the CRR Regulation is directly applicable, its transposition into national law is not required. Member States have a common legal basis that provides national authorities with several macroprudential instruments.

32 Capital Requirement Directive (CRD IV) and Capital Requirement Regulation (CRR).

33 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).

34 Transposed by the Law of 23 July 2015.

At the national level, Article 2, paragraph 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[35], regarding the macroprudential mandate of national authorities, the Luxembourgish legislator has adopted the law of 1st April 2015 establishing the national macroprudential authority namely the Systemic Risk Committee[36]. Within this Committee, the BCL has a leading role in macroprudential supervision[37] and is in charge of the Secretariat, which falls under the hierarchical authority of the BCL Governor. In this context, the Secretariat is in charge of preparing the Committee's meetings, drafting Recommendations and Opinions as well as conducting macroprudential 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.[38]

1.7.1.1 Macroprudential surveillance in Luxembourg

Although the legal framework establishing the Systemic Risk Committee was adopted in 2015, the BCL had already been involved in the monitoring of systemic risks, i.e. those risks likely to impair 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. Given the importance of the banking system and the investment fund sector, the analyses conducted mainly focus on the risk assessment for these two main components of the national financial system. In this context, and given the growing importance of the parallel banking system and recent developments of the European regulatory framework, the BCL has already undertaken several analyses in order to assess the degree of interconnectedness between investment funds and the banking sector and to model vulnerabilities, which could affect investment funds by using estimated levels of probabilities of default. The temporal dimension of risk is analyzed by monitoring indicators such as the credit cycle, asset prices, leverage, maturity mismatches and other specific indicators of liquidity.

In the analyses of the Financial Stability Review, the BCL uses a dashboard of indicators, including probabilities of default, z scores[39] and a vulnerability index to assess the financial stability of Luxembourg's financial sector. The chart below provides an example of the evolution of the vulnerability index for Luxembourg banks.

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

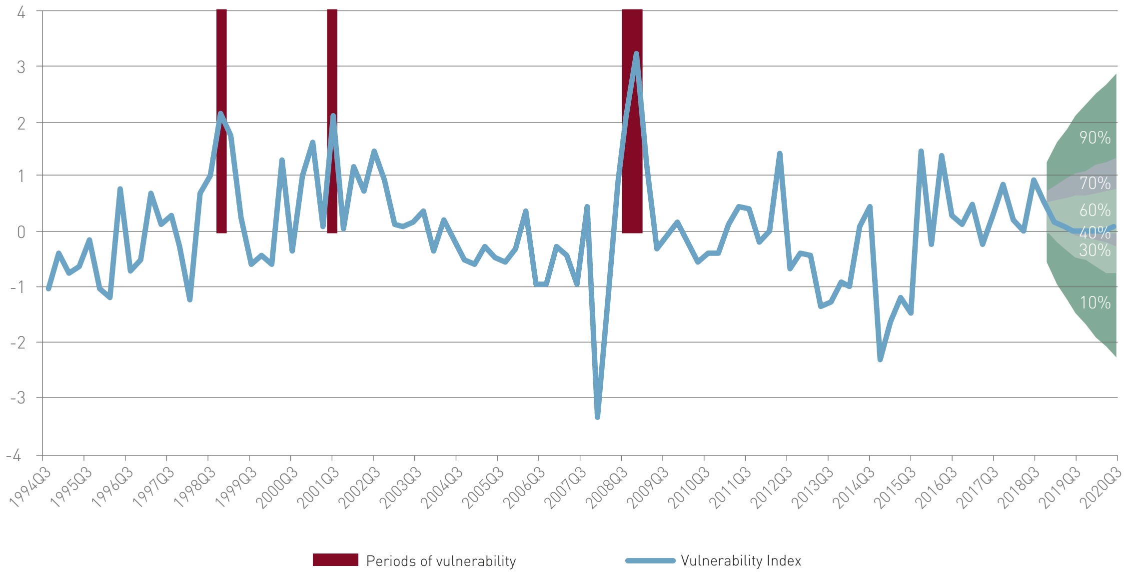
36 In French, Comité du risque systémique (CdRS). See law of 1st April 2015 establishing a Systemic Risk Committe and amending the modified law of 23 December 1998 regarding the monetary status and the Central Bank of Luxembourg.

37 See Sub- Recommendation B-3 of the Recommendation of the ESRB on the macroprudential mandate of national authorities (ESRB/2011/3).

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

39 The z score remains 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 sound ness of banks (balance sheet vs. market data).

Graph 17:
Forecast of the evolution of the vulnerability index for Luxembourg banks: 2019Q1-2020Q4



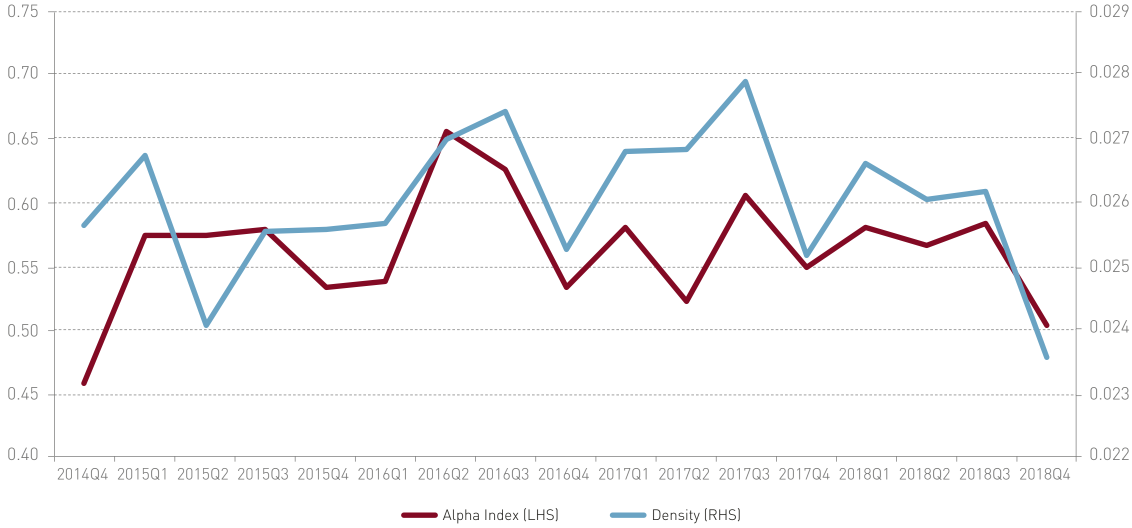
Source: BCL; Sample: 1994Q4-2018Q4. Forecast: 2019Q1-2020Q4

Measures of vulnerability for Undertakings for Collective Investment (UCITS) were also developed in order to assess potential systemic credit risk arising from the interconnections between the different categories of investment funds as well as their interactions with the macroeconomic environment. The intersectorial dimension of cyclical and structural systemic risk was analyzed using several tools that allow for the assessment of the position of the economy in the financial cycle, the interconnectedness and the size of linkages between financial institutions.

In order to assess the domestic and cross-border interbank linkages, the BCL's approach relies on network analysis techniques that focus on assessing the interconnections between the banking sector, notably custodian banks and investment funds. The construction of an indicator called the "alpha index" allows tracking potential vulnerabilities arising from significant bank and investment fund linkages.[40] The following Chart depicts 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. Any significant increase in the alpha index is subject to a deeper analysis in order to identify the relevant entities and the underlying reasons for such an increase.

40 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 lies from 0 to 1.

Graph 18:
Quarterly dynamics of the alpha index: 2014Q4-2018Q4



Source: BCL; Sample 2014Q4-2018Q4

The BCL conducts regular analyses in order to model the linkages between the financial sector and the real economy and continues to develop models for stress testing. The analysis of banks' liquidity in case of adverse shocks is also undertaken. In this context, the BCL has developed a number of indicators that take a forward looking approach. In order to anticipate risks associated with rising vulnerabilities in the banking sector, the BCL monitors the evolution of its synthetic indicator of financial vulnerability and conducts macroprudential stress tests.

The BCL continues to closely monitor the evolution of residential real estate prices and the potential vulnerabilities for households and credit institutions, possibly arising from these dynamics. To this end, the BCL has developed an econometric model, integrating supply side and demand side constraints, which facilitates a quarterly risk assessment. These results have been included in a systemic risk dashboard developed by the BCL. The dashboard incorporates a set of both quantitative and qualitative indicators aimed at detecting potential systemic risks arising within one component 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 includes multiple indicators such as an estimation of Luxembourg's financial cycle and the degree of interconnectedness within 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, macroeconomic and financial environment.

The BCL uses the Basel Committee on Banking Supervision (BCBS) D 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 indicators including certain relevant parameters such as the size of the institution, its level of interconnectedness and the probability that other banks provide similar services in the event of default (i.e. its degree of substitutability). In 2017, as one of its contributions to the Luxembourg Systemic Risk Committee (Comité du risque systémique; CdRS), the BCL extended the methodology used to identify systemically important institutions in Luxembourg. Drawing on network analysis methods, two new criteria have been included in the methodology in order to account for the interconnections between banks and investment funds. In addition, the BCL participates in the group, which has been in place to design norms regarding macroprudential supervision.

The BCL is a member of the Regional Consultative Group for Europe of the Financial Stability Board (FSB), the latter being the international body in charge of following and drafting Recommendations for the global financial system. Since 2017, the BCL has contributed to the work of the FSB on financial stability risks associated with activities conducted by non-bank financial intermediaries. The results of this analysis are published on an annual basis.[41]

Moreover, with the implementation of the Single Supervisory Mechanism (SSM), the BCL participates in the SSM groups dedicated to crisis management and risk analysis. The BCL also takes an active role in the EBA's standing committee on 'regulation and policy' and in the EBA subgroup on crisis management.

With the entry into force of the SSM, the ECB has a role in the domain of macroprudential policy. Although national authorities retain primary responsibility for the implementation of macroprudential measures, the ECB can – in coordination with those authorities – take additional measures provided in the Council's regulation concerning policies relating to the prudential supervision of credit institutions.[42]

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[43], such as the definition of risk weights targeting asset bubbles in the real estate sector, liquidity requirements, public disclosure requirements, or intra-financial sector exposures limits. Against this background, the Financial Stability Committee (FSC) of the ECB was established in order to assist decision-making bodies fulfill their responsibilities in relation to prudential supervision and financial system stability.

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

The macroprudential policy framework at the European level continues to face challenges. In particular, further harmonization of the national macroprudential toolkits would facilitate the implementation and coordination of macroprudential policy within the EU. In addition, such a harmonization would facilitate the ECB's close cooperation with the ESRB, which is the body responsible for the macroprudential oversight of the European 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 supervisory authorities, the European Commission, etc. – 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 (ASC), which has academic experts amongst its membership.

Within this structure, central banks play a major role in European macroprudential supervision given their expertise and existing responsibilities 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 also participate at the level of the ESRB General Board in order to share their expertise and specific information, although they do not hold voting rights. 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, monetary and statistical expertise through the participation of its staff members in the analysis and technical work conducted by the ESRB.

41 FSB (2018). Global Shadow Banking Monitoring Report 2017. March.

42 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.

43 See footnote 1.

The aim of the ESRB is to identify macroprudential risks at the level of the European financial system as a whole and to issue clear warnings and Recommendations, to addressees. Adherence with these Recommendations is based on a "comply or explain" principle.

The ESRB General Board holds its regular plenary meetings at a minimum frequency of four times per year. Throughout 2018, the ESRB's work focused primarily on the following topics:

- The identification and assessment of general risks of a systemic nature, followed by discussions on the necessary macroprudential actions, and the annual review of the ESRB risk dashboard. In 2018, indicators for insurance companies and central clearing counterparties were added to the ESRB risk dashboard;

- The continuation of the EU-wide risk assessment of the residential real estate market, the results of which were published in November 2016[44] and following up on the first report carried out in 2015.[45] Based on these reports, the ESRB addressed warnings to eight EU Member states, including Luxembourg, displaying the most significant vulnerabilities. In this context, a draft bill[46] related to macroprudential measures dealing with residential real estate exposures was introduced in the Chamber of Deputies on 11 December 2017. The ESRB adopted Recommendation ESRB/2016/14[47] which tasks addressees with the improved collection of real estate related data in order to facilitate an improved assessment and identification of risks in this sector;

- The improvement of the coordination aspects of the the European macroprudential framework with regard to cross-border effects of macroprudential measures adopted at national level. For example, Recommendation ESRB/2015/2 'on the assessment of cross-border effects and voluntary reciprocity of macroprudential policy measures' was amended in 2017 (Recommendation ESRB/2017/4);

- The identification of analytical tools for systemic risk and macroprudential instruments that the ESRB could develop in the coming years, notably regarding "non-banking"[48] financial activities that are carried out by insurance companies, pension funds, investment funds and "Other financial institutions". In February 2018, the ESRB recommended the European Commission to reinforce the regulation regarding liquidity and the use of leverage in the investment fund sector.

With the implementation of the CRD IV and the CRR[49] on 1st 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 buildup and release phases of this buffer;

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

- The issuance of Opinions following the notification on certain macroprudential measures.[50] To this end, an assessment team was established as a substructure of the Advisory Technical Committee in order to assess the macroprudential measures notified and to prepare the ESRB's Opinions. This assessment team includes nine representatives from central banks among the permanent members, which are designated by the General Board.

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

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

46 Draft bill n°7218/06 on macroprudential measures concerning residential real estate credits and amending the Law of the financial sector and the Law establishing a Systemic Risk Committee.

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

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

49 See footnote 1.

50 See article 458 of the CRR and article 133 of the CRD IV.

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

The BCL takes part in various ESRB expert groups on diverse topics such as market liquidity, securities financing transactions 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 for the development of a heat map by intermediate objectives. Since September 2017, the BCL has participated in the ESRB Expert Group on Macroprudential Stance, which has been tasked to develop a conceptual framework for qualifying the macroprudential stance (i.e. as expansionary or restrictive). The contribution of the group will be published in a new chapter of in the ESRB '*Handbook on Operationalizing Macroprudential Policy in the Banking Sector*'.[51] In addition, the BCL has participated in a working group tasked to propose a unified framework to activate and calibrate the counter-cyclical capital buffer (CCyB) across EU countries. The working group is evaluating potential complementary indicators to the credit-to-GDP gap for calibrating and activating the CCyB.

The involvement of the BCL in macroprudential supervision has increased considerably following the creation of the ESRB and since the establishment of the national Systemic Risk Committee, especially through its new missions within the 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 1st April 2015.[52] Thus, the Luxembourgish legislator opted for a board-based institutionnal structure for the macroprudential authority and, therefore, created a Systemic Risk Committee (the Committee) composed of all national authorities carrying 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[53] (CSSF), and (iv)the Insurance Commission[54] (CAA). The member institutions of the Committee are represented, respectively, by (i) the member of the Government who has the financial centre in his duties, (ii) the Director General of the BCL, (iii) the Director General of the 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 collegiate form of the Committee reflects the aim of the Luxembourg law to cover all parts of the domestic financial sector in order to prevent the emergence or mitigate any sources of systemic risk and contagion from one sector to another. This holistic view of the financial system is also reflected in the composition of the Committee's Secretariat: it includes a correspondent per authority represented within the Committee.

As a decision-making body, the Committee relies on its Secretariat, which plays an essential role in the preparation of meetings and the conduct 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[55], the Luxembourgish legislator has attributed the Committee's Secretariat to the BCL, under the hierarchical authority of its Governor.

51 ESRB (2019). Features of a macroprudential stance: initial considerations. April.

52 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.

53 In French, Commission de surveillance du secteur financier.

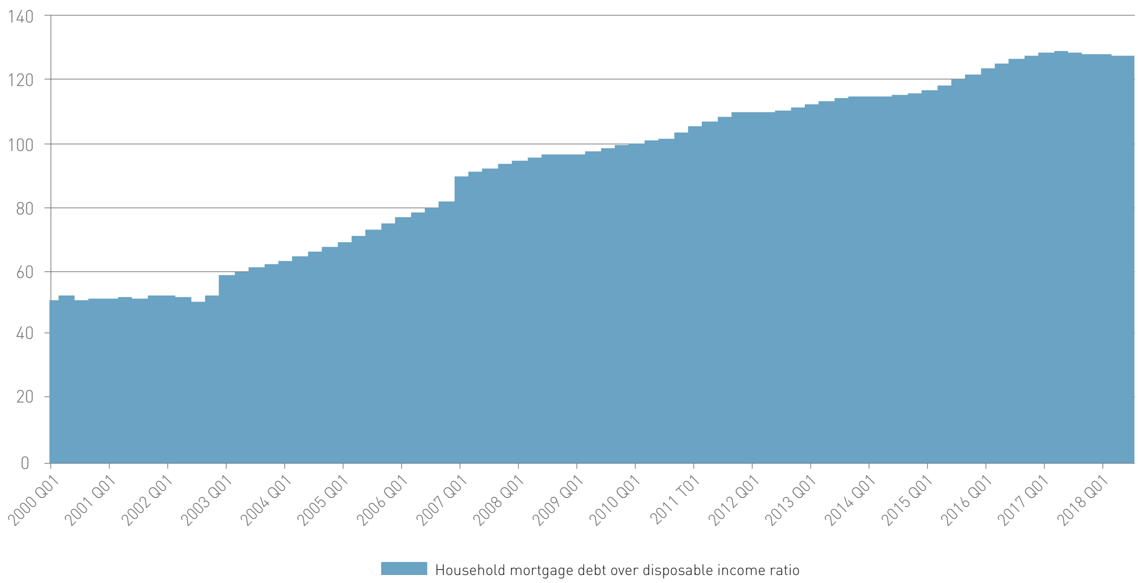
54 In French, Commissariat aux assurances.

55 See Recommendation B-3 of the Recommendation of the ESRB of 22 December 2011 on the macroprudential mandate of national authorities to Member States (ESRB/2011/3).

Thanks to its composition and the expertise of its various departments, the BCL benefits from the identification, evaluation and analytical capabilities with respect to systemic risks that are likely to emerge in the main components of the national financial system. Moreover, the Secretariat focuses on strengthening cooperation and the exchange of information between the Committee's members.

In 2018, the analyses undertaken by the CdRS focused on both the cyclical and the structural dimensions of systemic risk. The cyclical nature of systemic risk relates to its time dimension, i.e. the accumulation of vulnerabilities through time that can affect the stability of the national financial system. This dimension is captured via the extraction of the credit cycle based on data for credit to the non-financial sector (households and non-financial companies) or residential real estate prices. In Luxembourg, structural risk may be associated with the sustainability of mortgage debt of households, which amounts to 127% of household disposable income as of the fourth quarter of 2018 (Chart 19).

Graph 19:
Household mortgage debt over disposable income ratio (in %)



Sources: BCE, Statec, BCL computations. Sample: 2000Q1-2018Q4

Regarding systemic risk analyses, the BCL has further developed the analytical tools it uses to estimate the financial cycle. First, the use of statistical filtering techniques allows the BCL to identify the contribution of each economic sector (households and non-financial companies) to the overall cycle and also provides a granular view of the contribution of each individual bank.

These statistical approaches have been complemented with other empirical techniques such as the unobserved component model and wavelet analysis. Together, these different methodologies allow the BCL to better assess the evolution of credit in Luxembourg, in particular the magnitude and the length of the cycle.

These analyses revealed the development of cyclical vulnerabilities in Luxembourg associated with bank credit growth to the non-financial sector and the sustained growth in residential real estate prices against a background of increasing household indebtedness in a low interest rate environment. In order to ensure the resilience of the banking sector in case of a turn in the financial cycle, the CdRS made a recommendation to the designated authority to activate the CCyB with a buffer calibration of 0.25% for the first quarter of 2019. In accordance with the regulation in force at the EU level, the activation will be effective 1 January 2020 following the one-year phase-in period.[56]

56 The Systemic Risk Committee's Recommendation of 10 December 2018 on the setting of the countercyclical capital buffer rate for the first quarter of 2019.

The BCL has been extensively analyzing structural systemic risks associated with household indebtedness in Luxembourg. Indeed, household indebtedness has been identified has a potential source of vulnerability for the stability of the domestic banking sector.[57] In view of addressing this potential weakness, the government, following the proposal of the CdRS, submitted a draft bill on macroprudential measures for residential mortgage credit to the Chamber of Deputies. The draft bill foresees the implementation of new borrower based measures in Luxembourg such as a cap on the Loan-to-Value ratio (LTV), Debt Servicing-to-Income ratio (DSTI) as well as an extended access for the BCL to the aggregate data of public institutions. As of 31 December 2018, the legislative process remained ongoing.

Pending the availability of the new macroprudential instruments, the BCL continues to improve its analysis for instrument calibration in case these instruments would be activated. These analyses, based on survey data, aim to provide a detailed description of mortgage credit characteristics in Luxembourg. In addition, the BCL has developed a dynamic stochastic general equilibrium model in order to simulate alternative calibrations of these instruments. Together, the survey data and the results from the theoretical model will allow the authorities to determine the appropriate calibration of borrower-based measures in order to help mitigate potential risks for the stability of the Luxembourg financial system.

In accordance with its prerogatives, the Committee adopted in 2018 five Recommendations and one Opinion in order to comply with legal requirements and to reinforce the resilience of the national financial system. The Committee adopted and issued the following Recommendations and Opinion:

- Recommendations (CRS/2018/001), (CRS/2018/003), (CRS/2018/004) and (CRS/2018/006) on the setting of the countercyclical capital buffer rates, for the second, third and fourth quarters of 2018 and the first quarter of 2019, respectively; and

- Recommendation (CRS/2018/002) on the reciprocity of the 15% minimum average risk weighting measure for exposures secured by a residential property in Finland adopted by Finanssivalvonta;

- Opinion (CRS/2018/005) on the annual designation and re-examination of capital buffers for other systemically important institutions.

1.7.2 Micro-prudential supervision

1.7.2.1 Liquidity supervision

The mission to supervise the liquidity of market operators was entrusted to the BCL through an amendment made to its Organic Law[58] in October 2008[59]. The main purpose of supervising market operators' liquidity is to assess the liquidity situation and liquidity risk management of individual market operators. As shortcomings in the management of liquidity risk by certain operators were one of the main causes of the financial turmoil in 2008, liquidity management and liquidity risk management have been the subject of particular attention by supervisory authorities at international level in recent years.

Liquidity regulation is also important for a central bank because it acts as a liquidity provider to the financial system and because it can detect or even prevent a sequence of market failures, thus limiting systemic risk.

The liquidity supervision function mainly targets credit institutions, being counterparties of the BCL in monetary policy operations. Since 2014, this supervision has been part of the Single Supervisory Mechanism (SSM).

57 See for example BCL (2018). Revue de stabilité financière. Box 1.1, page 22 to 24.

58 The amended law of 23 December 1998 concerning the monetary status and the *Banque centrale du Luxembourg*.

59 The law of 24 October 2008 improving the legislative framework of the Luxembourg financial centre.

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

As part of the implementation of the Banking Union and the establishment of the SSM, the ECB assumed responsibility for the supervision of all euro area banks on 4 November 2014.

This supervision is carried out directly by the ECB for banks and banking groups considered "significant", including their subsidiaries and branches, while it is entrusted to the national competent authorities for "less significant" banks, under the ultimate responsibility of the ECB.

The main criteria used in the SSM Regulation[60] to define the importance of a bank apply at the highest level of consolidation and are:

- the size (total assets worth more than € 30 billion);
- the importance to the economy of the EU or a participating Member State (a total value of assets exceeding 20% of the gross domestic product (GDP) of the participating Member State, unless the total value of assets is less than € 5 billion); and
- the importance of the institution's cross-border activities.

The day-to-day supervision of "significant" credit institutions is conducted by Joint Supervisory Teams (JSTs), comprising staff from ECB and competent authorities, including national central banks.

The BCL participates in the JSTs of significant banks established in Luxembourg, as well as in some JSTs of significant banks established in other euro area Member States with subsidiaries in Luxembourg, to ensure the supervision of liquidity risk. In this context, the supervision of liquidity risk is conducted on the basis of common methodologies and standards jointly developed by the ECB, competent authorities and national central banks of the SSM. As less significant banks are supervised directly by the national authorities, the BCL continues to supervise liquidity risk of banks established in Luxembourg, in cooperation with the Commission de surveillance du secteur financier (CSSF).

Within the JSTs, as well as in the context of the supervision of less significant banks, the BCL performs the annual liquidity risk assessments of banks conducted as part of the Supervisory Review and Evaluation Process (SREP), in order to determine the adequacy of their liquidity risk management and liquidity resources. In this context, on-site meetings were conducted in 2018 to gain a more detailed understanding of the liquidity risk management frameworks of these banks. Furthermore, the BCL performs recurring tasks such as controlling the prudential liquidity reportings and monitoring the liquidity situation of banks.

In addition to the liquidity supervision tasks, the BCL is also represented, jointly with the CSSF, on the Supervisory Board, which plans and carries out the SSM's supervisory tasks and proposes draft decisions for adoption by the Governing Council. In this context, an interdepartmental coordination unit has been set up at the BCL. In close cooperation with the CSSF, this SSM coordination unit monitors all the cases and draft decisions submitted to the Supervisory Board and the Governing Council. In 2018, the coordination unit processed more than 1 600 written procedures submitted for decision and prepared the meetings of the Supervisory Board.

Within the framework of the SSM, the BCL also participates in the work of various groups and committees set up at the ECB level. These groups and committees assist the Supervisory Board in its decision-making.

60 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.

1.7.2.1.2 Tools for liquidity supervision

In addition to the supervisory work carried out within the SSM framework, the BCL constantly monitors market operators at the local level. This monitoring is based on regular analysis of qualitative and quantitative information at the level of individual operators and at an aggregate level. In order to monitor the liquidity situation of market operators on a daily basis, the BCL has set up a daily reporting on the liquidity situation of credit institutions since 2010. This reporting mainly concerns large credit institutions as well as credit institutions that act as counterparties in monetary policy.

Based on a database containing the historical data included in the daily liquidity reporting, the BCL developed an analysis tool to assess the short-term liquidity situation of credit institutions and changes in the liquidity situation over time on an individual basis. The BCL also developed an analysis tool to assess the liquidity vulnerabilities of individual credit institutions and to identify liquidity risks at an aggregate level. This tool was supplemented by the development of a checklist identifying all credit institutions that experienced a deterioration of their situation beyond a certain threshold during the previous quarter, while identifying the explanatory factors behind such a deterioration.

Furthermore, information from the prudential and statistical reportings for each supervised entity is summarised in dashboards. 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[61] laying down specifications for the LCR and the details of its phasing-in period, the LCR became a binding standard on 1 October 2015. The minimum requirement to cover liquidity needs is 100% as from 1 January 2018. The BCL has implemented a model to conduct simulations of the NSFR. Since the beginning of 2015, credit institutions have been submitting a quarterly prudential reporting on asset encumbrance[62]. Since April 2016, there has also been a monthly prudential reporting on additional liquidity monitoring metrics[63]. The BCL performs checks on these reports submitted by significant and less significant banks.

Following the introduction of the prudential liquidity reportings mentioned above, automated tools for processing and using this data were set up. Since the liquidity reportings are complex and heterogeneous by their nature and data sources, each analytical processing requires the development of tailor-made solutions. The objective is to offer supervisors analytical functionalities to facilitate an effective and efficient assessment of the liquidity situation of banks in the supervisory process. In particular, these tools enable supervisors to detect potential liquidity problems in an institution that may result from a negative trend in a particular reported item or from an identified absolute result.

Following the recommendations of the ESRB concerning foreign currency loans, the funding of credit institutions in US dollars and the funding of credit institutions, the BCL also performs a specific monitoring of these positions on a quarterly basis, both at an individual and aggregate level. Finally, a daily report with certain financial market indicators has also been developed. All these tools enable the necessary analyses to be carried out as part of the BCL's liquidity supervisory mission.

1.7.2.1.3 National and International Cooperation

The BCL participates in the working groups dedicated to liquidity at the level of the Basel Committee and the European Banking Authority (EBA). The BCL is also represented on the EBA Board of Supervisors and other committees and sub-groups that are relevant to its supervisory mission. As a general rule, the involvement of the BCL in these committees and working groups is done jointly with the CSSF.

61 Commission 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.

62 Commission Implementing Regulation (EU) 2015/79 of 18 December 2014 amending Implementing Regulation (EU) No 680/2014 laying down implementing technical standards with regard to supervisory reporting of institutions according to Regulation (EU) No 575/2013 of the European Parliament and of the Council as regards asset encumbrance, single data point model and validation rules.

63 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.

In addition, the Director General of the BCL is member of the Resolution Board[64], the Council for the Protection of Depositors and Investors[65], the Resolution Fund and the Luxembourg Deposit Guarantee Fund[66].

1.7.2.2 Oversight

The oversight of market infrastructures is an essential task of the ESCB given the important role of payment and securities settlement systems and infrastructures in the implementation of monetary policy, preservation of financial stability and public confidence in the currency.

The TFEU and the ESCB Statute contain a number of provisions relating to the payment systems and assign oversight responsibilities to the Eurosystem, composed of the ECB and the national central banks (NCBs) of the euro area. At the national level, in accordance with the provisions of the law of 23 December 1998 on the monetary status and the Banque centrale du Luxembourg, the BCL is responsible for ensuring the safety and efficiency of payment and securities settlement systems as well as the safety of payment instruments.

Regulation BCL 2016/N° 21 of 15 January 2016, repealing regulation BCL 2010/N° 6 of 8 September 2010 as amended, sets out, inter alia, the general framework for oversight as well as the obligations of system operators, of payment instrument issuers and of governance authorities and stipulates how the oversight activity is carried out. The regulation also specifies that the BCL carries out its oversight activity based on quantitative and qualitative information of different nature, collected on a regular or ad hoc basis from the concerned entities. This information is supplemented by regular meetings and, where appropriate, on-site visits, as well as regular self-assessments by the actors of the degree of compliance of the respective infrastructures against the applicable recommendations, standards or principles, as defined by the Eurosystem and adopted by the Governing Council of the ECB. The information collected relate in particular to the development of the infrastructures' activities, their performance, their governance as well as the risk management. In this context, the BCL coordinates and cooperates with the Commission de surveillance du secteur financier (CSSF).

The BCL carries out the oversight activities relating to systems and infrastructures operating in Luxembourg as well as to payment instruments. It also contributes to oversight activities carried out in a coordinated manner at the Eurosystem level, in particular for payment infrastructures and instruments that do not have a clear domestic anchorage. The BCL also contributes to the Eurosystem's activities aimed at enhancing the resilience of infrastructures to technological threats.

Payment systems

The BCL contributed to the oversight activities of the TARGET2 payment system operated by the Eurosystem as well as of the EURO1 and STEP2 systems operated by EBA Clearing.

The BCL was informed of the oversight activities related to the CLS[67] multi-currency payment system operated by CLS Bank International. Given the international nature of the CLS system, the oversight of this system is carried out by a group comprising the G10 central banks and the central banks of issue of the various currencies settled within CLS.

In addition to its contribution to the coordinated oversight activities of the TARGET2 payment system, the BCL also oversees certain decentralised aspects of TARGET2-LU, such as the local technical components ensuring the connectivity of the BCL to the single platform.

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64 The Resolution Board is the CSSF's internal executive body to exercise the resolution function of credit institutions.

65 The Council for the Protection of Depositors and Investors is the CSSF's internal executive body, which manages and administers the Luxembourg Deposit Guarantee Fund and the Luxembourg Investor Compensation System.

66 The Luxembourg Deposit Guarantee Fund (FGDL or Fonds de Garantie des Dépôts Luxembourg) is a public institution whose main purpose is to ensure the repayment of depositors in the event of unavailability of their deposits. The FGDL makes the necessary funds available for the repayment of deposits not available, in principle within 7 working days, and this up to 100 000 euros per person and per institution.

67 *Continuous Linked Settlement.*

Finally, the BCL monitored the development of payment systems that offer the possibility of making instant payments. Thus, in November 2018, the TIPS[68] service was launched by the Eurosystem. This new service, developed as an extension of TARGET2, aims to offer final and irrevocable settlement of instant payments in euros, in real time, 24 hours a day, every day of the year.

Overall, the payment systems listed above operated in a stable and robust manner in 2018.

Securities settlement systems

The oversight of securities settlement systems focused on the systems operated in Luxembourg by Clearstream Banking S.A. (CBL), LuxCSD S.A. (LuxCSD) and VP Lux S.à.r.l (VPLUX). In 2018, the BCL monitored the development of activities and risks related to the three systems operating in Luxembourg, through the analysis of regular information collected from the operators of these systems and the participation in meetings and thematic visits.

Furthermore, the BCL, in cooperation with the CSSF, followed up on certain recommendations issued to CBL in the context of assessments of the compliance of the securities settlement system against the CPMI-IOSCO[69] principles carried out jointly by the BCL and the CSSF in September 2016, as well as the by the International Monetary Fund (IMF) following the evaluation of CBL as part of the Financial Sector Assessment Program in December 2016.

In addition, the BCL, as the central bank of issue for the euro and in accordance with its responsibility for the oversight of securities settlement systems in Luxembourg[70], continued its review of the authorization file submitted by the respective operators of securities settlement systems operating in Luxembourg in collaboration with the CSSF. In this respect, the BCL, in cooperation with the CSSF, also participated in regular meetings with these operators.

For the purpose of its oversight of securities settlement systems, the BCL also pursued its cooperation with certain other central banks and authorities, in particular the Belgian authorities, due to the interoperable link between the securities settlement systems operated by CBL and Euroclear Bank. In this context, the BCL, pursuant to the Memorandum of Understanding signed in December 2017 between the BCL, the National Bank of Belgium and the CSSF, monitored and analyzed developments relating to the operation and mitigation of risks in relation to this link in view of its forthcoming authorization in accordance with the provisions of Regulation No 909/2014[71]. At the same time, in line with the Memorandum of Understanding signed in July 2009 between the BCL and the Czech National Bank (CNBs) concerning the oversight of the activities of Clearstream Operations Prague s.r.o. (COP), where several processes of CBL and Clearstream Services S.A. (CBL's technical agent) have been outsourced, the BCL met with the CNB. The two central banks regularly exchanged information in view of the monitoring of operational risk management and internal control within COP.

Concerning the Target2-Securities (T2S) settlement platform, which aims at offering harmonized securities settlement services in central bank money, in euros and in other currencies, the BCL contributed to the coordinated oversight of the platform through, inter alia, its participation in the assessment of the T2S platform against the principles of the CPMI-IOSCO applicable to market infrastructures. This evaluation, initiated in 2018, will continue in 2019.

Finally, on 31 December 2018, the BCL revoked the designation of the system operated by VPLUX S.à.r.l., the latter having decided to cease its activities. This revocation was made in accordance with Articles 109 and 110 of the Law of 10 November 2009 on payment services, the activity of electronic money institutions and the finality of settlement in payment and securities settlement systems, and Article 10(3) of the BCL Regulation 2016/N° 21 of 15 January 2016.

68 TIPS is the acronym for *TARGET Instant Payment Settlement*.

69 Committee on Payments and Market Infrastructures - International Organization of Securities Commissions.

70 Under Regulation No 909/2014 and the related regulatory technical standards.

71 Regulation on improving the settlement of securities transactions in the European Union and central securities depositories, published on 23 July 2014.

Cyber resilience

In 2018, the BCL actively contributed to the implementation of the Eurosystem's strategy for cyber-resilience of market infrastructures. The aim of this strategy is to strengthen the maturity of market infrastructures in terms of cyber-security, in order to increase the cyber-resilience of the financial sector as a whole. In this context, the BCL participated in the finalization of the European Red Team[72] intrusion test framework, as well as the related documents, including the guide for the selection of service providers for the intrusion test, and the guide for the establishment of the White Team[73]. In addition, the BCL helped to define the Eurosystem's oversight expectations for cyber-resilience, known as CROE[74]. These expectations, inspired from the guidelines of the CPMI-IOSCO on cyber-resilience of market infrastructures issued in June 2016, were published in December 2018 and will serve as the basis for assessment of Luxembourg designated securities settlement systems in 2019. Oversight in the field of cyber-resilience is also carried out through the BCL's participation in the ECRB[75], along with six other Eurosystem central banks.

The TIBER[76]-EU framework

The European framework for Red Team type of intrusion tests published in September 2018 will enable the oversight or supervision authorities to acquire assurance as to the level of resilience of market infrastructures against cyber-attacks. The framework provides guidance for the execution of tests, defines in particular the roles and responsibilities of the different actors, and details the steps and documents required, as well as the main points of attention in terms of risk management. It should be noted that the test must be conducted by an external entity in order to be qualified as a TIBER test. The implementation of the TIBER-EU framework is voluntary and requires the authorities in charge to put in place a local guide. Denmark, Belgium and the Netherlands have already implemented this framework.

Cyber-resilience oversight expectations (CROE)

In December 2018, the European Central Bank published the oversight expectations for cyber-resilience, which are based on the international guidelines for cyber-resilience in financial market infrastructures published in June 2016 by the CPMI-IOSCO.

These expectations meet three main objectives:

- propose detailed measures for market infrastructures to implement the guidelines, thus ensuring that they are able to induce improvements and strengthen their cyber-resilience over an extended period;
- provide clear expectations to supervisory authorities for assessing the market infrastructures under their responsibility; and
- serve as a basis for a constructive discussion between market infrastructures and their respective oversight authorities.

Payment instruments

The payment instruments include, inter alia, the credit transfer scheme, the direct debit scheme, the card payment schemes and the electronic money schemes issued and/or used by the public in Luxembourg.

In 2018, the BCL continued to monitor the evolution of issuers' activities and of payment solutions in Luxembourg and paid attention to developments in this field, in particular to security-related aspects. The BCL's oversight was based on the analysis of qualitative and quantitative information gathered by the BCL following exchanges with certain entities. For the purpose of its oversight, the BCL has also introduced a specific framework for collecting information from certain actors.

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72 A Red Team intrusion test is an exercise simulating the techniques and methods of a real hacker in order to measure the efficiency of the security controls put in place as well as an organization's resistance to cyber-attacks.

73 The term White team refers to the team within the tested entity responsible for coordinating and ensuring risk control when performing a TIBER test.

74 *Cyber Resilience Oversight Expectations.*

75 *Euro Cyber-Resilience Board.*

76 *Threat Intelligence Based Ethical Red Teaming.*

Furthermore, at the Eurosystem level, the BCL collaborated in the joint assessment exercise of an international payment card scheme against the oversight framework applicable to these schemes. The BCL also contributed to the joint assessment of the SEPA[77] direct debit, credit transfer and instant credit transfer schemes, coordinated within the Eurosystem. Finally, the BCL actively participated in the ongoing review of the oversight framework for payment instruments, as well as in the publication in September 2018 of the Eurosystem's 5th report on fraud.

Moreover, the BCL actively contributed to the work of the European Forum on 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 responsible for the oversight of payment instruments and the authorities responsible for the prudential supervision of payment service providers, on subjects related to the security of retail payments in the European Union. In 2018, the BCL focused in particular on finalizing, within this forum, the EBA recommendations on the collection of fraud statistics to be implemented under the PSD2. The final recommendations of the EBA were published in July 2018. The BCL also participated in the network of experts around the EBA PSD2 Question and Answer Tool for questions relating to the security of payment instruments.

1.8 REGULATORY AND LEGISLATIVE DEVELOPMENTS

1.8.1 European legislation

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

In 2018, discussions continued on the deepening of EMU, as well as on the broader orientation of European integration.

1.8.1.1 Banking Union

The Banking Union is based on three pillars: the Single Supervisory Mechanism (SSM) since 4 November 2014, the Single Resolution Mechanism (SRM) since 1 January 2016 and the European Deposit Insurance Scheme (EDIS)[78]. This last pillar is only harmonised at this stage and not yet unified, consisting of national Deposit Guarantee Schemes (DGS). The sections below describe the legislative developments relating to these three pillars in 2018.

1.8.1.1.1 Prudential supervision

SSM Scope

The geographical scope of the SSM covers the Members States whose currency is the euro, as well as Member States of the European Union (EU) outside of the euro area, which are subject to the banking supervision of the European Central Bank (ECB) on a voluntary basis, under a regime of close cooperation.

In 2018, no EU Member State joined the euro area. Only one EU Member State outside the euro area, Bulgaria, has made a request for the establishment of close cooperation as provided for in the SSM Regulation[79]. As of 31 December 2018, the ECB was in the process of assessing this request.

SSM supervised entities

At the euro area level, the number of institutions subject to the direct prudential supervision of the ECB remained constant throughout 2018 at 119 significant institutions.

77 *Single Euro Payments Area.*

78 In French, *Système européen d'assurance des dépôts* (SEAD).

79 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 (SSM Regulation).

The number of significant institutions having their registered office in Luxembourg increased from four to six in 2018. The six institutions under the direct supervision of the ECB are:

- ABLV Bank Luxembourg S.A.;
- Banque et Caisse d'Épargne de l'État, Luxembourg;
- Banque Internationale à Luxembourg S.A.;
- J.P. Morgan Bank Luxembourg S.A.;
- Precision Capital S.A. et
- RBC Investor Services Bank S.A.

SSM Governance

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

In addition, the SSM Regulation provides for the creation, within the ECB, of a Supervisory Board responsible for preparing draft decisions on banking supervisory matters. It is notably composed of one representative of each national competent authority and, where the national central bank (NCB) is not the national competent authority, by one representative of the NCB in addition to one from the supervisory authority. It is composed of 32 members, including one member from the BCL. This internal body of the ECB held 20 meetings in 2018.

In 2018, the Governing Council adopted approximately 1 900 prudential decisions, mainly via written procedure, based on "complete draft decisions" proposed by the Supervisory Board and according to a non-objection procedure. Banking supervision decisions in the field of macroprudential supervision are not taken according to the non-objection procedure and the Governing Council may amend the draft decisions proposed by the Supervisory Board. In addition, the non-objection procedure does not apply when it comes to determining the general framework governing practical arrangements for cooperation within the SSM, which falls within the remit of the decision-making bodies of the ECB, i.e. the Governing Council and the Executive Board.

The Governing Council continued the process of delegation of decision-making powers with regard to supervisory tasks, which it had started in 2016. The delegation has been extended, under certain conditions, to decisions concerning own funds of credit institutions[80]. The delegation mechanism aims at simplifying the decision-making process and at reducing the number of written procedures submitted to the Supervisory Board and to the Governing Council.

Joint Supervisory Teams

Joint Supervisory Teams (JSTs) are the main operational structure responsible for conducting the SSM supervision. Pursuant to the SSM Framework Regulation[81], the BCL participates in the JSTs of significant institutions that have their registered office in Luxembourg, as well as in some JSTs of significant banks established in other SSM Member States, which have subsidiaries in Luxembourg.

Review of prudential requirements

In November 2016, the European Commission presented a package of reforms of existing European banking rules. These reforms would further strengthen the resilience of EU credit institutions and reinforce financial stability.

80 Decision (EU) 2018/546 of the European Central Bank of 15 March 2018 on delegation of the power to adopt own funds decisions (ECB/2018/10).

81 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 (SSM Framework Regulation) (ECB/2014/17).

The European Commission proposed the amendment of the following legislation:

- the Capital Requirements Regulation (CRR);
- the Capital Requirements Directive (CRD IV);
- the Bank Recovery and Resolution Directive (BRRD); and
- the Single Resolution Mechanism (SRM) Regulation.

The legislative process relating to these proposals was still ongoing in 2018. On 4 December 2018, the Parliament and the Council reached a political agreement on the banking package comprising the above-mentioned provisions[82].

The Euro Summit of 14 December 2018 adopted a declaration aimed at advancing work on the Banking Union and adopting the banking package, as well as the prudential safety net for non-performing loans.

1.8.1.1.2 The resolution of banks

The SRM[83] is the second pillar of the Banking Union. It foresees a crisis management regime based on the harmonization achieved by the Directive on bank recovery and resolution[84] (BRRD[85]). It provides for a centralized European institutional framework for the resolution of significant banks and cross-border groups in the Member States participating in the SSM[86].

The SRM area corresponds to the SSM area, i.e. currently the euro zone.

The SRM comprises a Single Resolution Board (SRB[87]) and a Single Resolution Fund (SRF[88]). As the European resolution authority for the Banking Union, the SRB is responsible for preparing and enforcing the resolution of banks that are failing or likely to fail[89], 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.

In 2017, the SRB took for the first time resolution measures concerning a significant bank in the Banking Union, namely Banco Popular Español S.A. (Banco Popular).

On 24 February 2018, the SRB decided that the resolution of two other significant banks, namely ABLV Bank, AS, Latvia, and its subsidiary ABLV Bank Luxembourg S.A., was not in the public interest. In particular, the SRB found that none of these banks performed essential functions and therefore their failure should not have a significant negative impact on the financial stability of these two countries or other Member States[90].

As regards the SRF, it is established under the control of the SRB to guarantee the availability of funding, in the medium-term, in case of restructuring of a credit institution. This fund is set up through bank contributions, which initially take place at national level. In 2018, the SRB indicated that the SRF held € 24.9 billion (as at 24 July 2018). The SRF should reach the target level of at least 1% of the amount of covered deposits of all credit institutions authorised in all of the participating Member States, during a transitional period of eight years (2016-2023). The amount to be reached is approximately € 55 billion.

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82 On 15 February 2019, the Ambassadors to the EU endorsed the agreement on all four risk reduction measures.

83 Regulation (EU) No 806/2014 of the European Parliament and the Council of 15 July 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 Resolution Fund and amending Regulation (EU) No 1093/2010 (the "SRM Regulation").

84 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.

85 In French: *directive sur le redressement et la résolution des banques* (BRRD).

86 The legislative measures adopted by the EU ambassadors in February 2019 concerning a revised set of rules aimed at reducing the risks in the EU banking sector include also amendments to the SRM Regulation and the BRRD.

87 In French: *Conseil de résolution unique* (CRU).

88 In French: *Fonds de résolution unique* (FRU).

89 In French: *défaillance avérée ou prévisible.*

90 For more information, see the site of the SRB.

An intergovernmental agreement on the transfer and mutualisation of the contributions to the SRF, signed on 21 May 2014, provides for the progressive shift from the existing national resolution funds to the SRF, with relation to the banks covered by the SRM, during the above-mentioned transitional period. The contributions of banks will be allocated to different compartments corresponding to each participating Member State. According to the terms of the agreement, those compartments will be subject to a progressive mutualisation, so that they are merged at the end of the transitional period.

In a declaration adopted on 14 December 2018, the euro area summit approved the terms of reference of the SRF common safety net, which specify the modalities of its implementation. Moreover, this declaration also provides that sufficient progress has been made in the area of risk reduction. In addition, the summit approved the modalities for the reform of the European Stability Mechanism (ESM[91]) and asked the Eurogroup to prepare the necessary amendments to the Treaty establishing the ESM.

The cooperation of the ECB and the SRB is governed by an agreement signed in 2015. The SRM Regulation organises the allocation of responsibilities between the European and national competent authorities. Accordingly, the SRB is directly entrusted with the drawing-up of resolution plans and the adoption of all resolution decisions related to the entities directly supervised by the ECB, as well as cross-border groups, while the national resolution authorities are in charge of the other credit institutions. According to the SRM Regulation, the SRB and the national resolution authorities shall cooperate closely. The latter authorities are also responsible for implementing the resolution decisions of the SRB at the national level.

1.8.1.1.3 Deposit Protection

Concerning the third pillar of the Banking Union, namely the European Deposit Insurance Scheme (EDIS[92]), the European Commission published on 24 November 2015 a proposal[93] for a regulation aimed at establishing in three consecutive steps a fully-fledged EDIS by 2024.

The EDIS would help increase depositors' confidence and ensure a level playing field for all banks in the Banking Union, hence contributing to greater financial stability in the euro area in general.

To encourage progress in the ongoing negotiations at European Parliament and Council level, the Commission, in its Communication of 11 October 2017[94] on completing the Banking Union, suggested some possible alternatives with regard to the phases and timeline of EDIS. The Communication envisages a more gradual introduction of EDIS compared with the original proposal of November 2015. There would be only two phases: a more limited reinsurance phase and, subsequently, coinsurance. However, moving to this second phase would be conditional on achieving progress in reducing risks.

In 2018, the Council continued the works at technical level, in line with the Council progress report dated 12 June 2018, as revised on 15 June 2018, on the European Commission's initiatives to strengthen the Banking Union[95].

91 In French: *Mécanisme européen de stabilité* (MES).

92 In French, *Système européen d'assurance des dépôts* (SEAD).

93 Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 806/2014 in order to establish a European Deposit Insurance Scheme, 24.11.2015, COM(2015) 586 final, 2015/0270 (COD).

94 Communication to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions of 11 October 2017 on completing the Banking Union (COM(2017) 592 final).

95 On 21 January 2019, the Council of the EU published a press release following a Eurogroup meeting of the same date on the next steps concerning EDIS. According to the press release, all the elements of the Eurogroup report on the euro area reform were endorsed and it was envisaged to prepare an interim report by June 2019. In this regard, a high-level working group having a broad mandate will be established to bring the discussion to a more political and focused level.

The proposal for the EDIS regulation is based on the framework currently applicable to national Deposit Guarantee Schemes (DGS), which is provided for by Directive (EU) N° 2014/49/EU on DGS (DGSD)[96], aiming at improving the protection of depositors beyond the requirements of Directive 94/19/EC[97], as amended by Directive 2009/14/EC[98]. Such directive has improved the functioning of national DGS and offers a better protection to depositors, namely by ensuring a harmonised coverage up to € 100 000 in the whole EU and through a reduction of the delays of reimbursement to seven working days.

Finally, EDIS aims at ensuring full harmonisation of deposit protection by setting up a common fund to which all banks of the Banking Union would contribute in the context of a European system administered by a central authority, the existing Single Resolution Board. This would also allow aligning the architecture of the three pillars of Banking Union (supervision, resolution and deposit guarantee).

The third pillar of the Banking Union is supported by the Eurosystem.

1.8.1.2 Economic Governance

Due to the financial and economic crisis, work has been carried out to deepen EMU.

In the budgetary area, the reform aims to strengthen and deepen budgetary surveillance and to introduce additional surveillance for euro area Member States. The objective is to ensure the correction of excessive deficits and the integration of European recommendations on economic and budgetary policies in national budgetary procedures.

In parallel, in order to ensure the stability of the euro area as a whole, stabilisation mechanisms have been put in place. Since 1 July 2013, a permanent mechanism, the European Stability Mechanism (ESM[99]) has generally replaced the temporary stabilization mechanisms, that were set up in 2010[100].

The ESM is an international financial institution headquartered in Luxembourg.

Strengthening economic governance and completing the Banking Union remain major challenges for the consolidation of EMU.

In 2018, discussions on deepening EMU continued. They included in particular the completion of the Banking Union, the reform of the ESM and the design of a macroeconomic stabilisation instrument for the euro area.

Work to establish a Capital Markets Union[101] also continued.

Among the main contributions to this debate was a Reflection paper published on 31 May 2017 by the European Commission, together with related proposals of 6 December 2018 setting out a Roadmap to the deepening of Europe's EMU, as well as Franco-German working documents (in particular an agreement entitled "Meseberg Agreement" of June 2018).

96 In French: *Directive relative aux systèmes de garantie des dépôts* (DSGD). Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 on deposit guarantee schemes (recast).

97 Directive 94/19/EC of the European Parliament and of the Council of 30 May 1994 on deposit-guarantee schemes.

98 Directive 2009/14/EC of the European Parliament and of the Council of 11 March 2009 amending Directive 94/19/EC on deposit-guarantee schemes as regards the coverage level and the payout delay.

99 In French: *Mécanisme européen de stabilité* (MES).

100 The European Financial Stability Fund (EFSF), in French: *le Fonds européen de stabilité financière* (FESF) and the European Financial Stabilisation Mechanism (EFSM), in French: *le Mécanisme européen de stabilisation financière* (MESF).

101 In French: *Union des marchés de capitaux.*

The adoption of a comprehensive legislative package[102] aimed at reducing risks in the banking sector in the EU has led to the agreements reached at the euro area summits of 29 June 2018 and 14 December 2018 concerning the following aspects:

- a reform of the ESM which should, in the long term, also assume the role of a "safety net" for the Single Resolution Fund;
- the development of proposals for the establishment, on a voluntary basis, of a fiscal capacity for the euro area and for the Member States of the European Exchange Rate Mechanism (ERM II), limited to instruments to support convergence and competitiveness;
- a continuation of the work on the European Deposit Insurance Scheme.

The Commission has published a proposal for a Regulation[103] setting up a European Investment Stabilisation Function[104], on which the ECB delivered an opinion on 9 November 2018[105].

With regard to the reform of the ESM, the Commission has published a proposal for a Regulation on the establishment of the European Monetary Fund[106], on which the ECB delivered an opinion on 11 April 2018[107].

Under the current regulatory framework, the Eurosystem regularly emphasises the need for a time consistent application by all Member States of the provisions of the European regulatory framework governing economic and fiscal policies in order to strengthen the resilience of the economy of the area euro. Improving the functioning of EMU is considered a priority, the Eurosystem supporting the ongoing work to deepen it.

1.8.1.3 ECB Legal Acts

The ECB has adopted several legal acts, which have been published in the Official Journal of the European Union[108].

Payment systems

In the field of payment systems, the ECB has, in particular, adopted the following legal acts:

- *Guideline (EU) 2018/1626 of the European Central Bank of 3 August 2018 amending Guideline ECB/2012/27 on a Trans-European Automated Real-time Gross settlement Express Transfer System (TARGET2) (ECB/2018/20)*

Guideline ECB/2018/20 marks the launch of TARGET's[109] instant payment settlement service, which enables the settlement of individual instant payment orders in central bank money 24 hours a day and 365 days a year with immediate or almost immediate processing of such orders. Dedicated cash accounts are created in TARGET2 for this service.

- *Decision (EU) 2018/1625 of the European Central Bank of 8 October 2018 amending Decision ECB/2007/7 on the terms and conditions of TARGET2-ECB (ECB/2018/24).*

102 See Chapter 1.8.1.1.

103 Proposal for a Regulation of the European Parliament and of the Council on the establishment of a European Investment Stabilisation Function (COM(2018)387 final).

104 In French: *mécanisme européen de stabilisation des investissements*.

105 Opinion of the ECB of 9 November 2018 on a proposal for a regulation of the European Parliament and of the Council on the establishment of a European Investment Stabilisation Function (CON/2018/51).

106 Proposal for a Council Regulation on the establishment of the European Monetary Fund (COM(2017)827 final).

107 Opinion of the ECB of 11 April 2018 on a Proposal for a Council Regulation on the establishment of the European Monetary Fund (CON/2018/20).

108 See Chapter 3.1.

109 See Chapter 1.6.1.

Monetary policy and reserve management

In the field of monetary policy, the ECB has, in particular, adopted the following legal acts:

– *Guideline (EU) 2018/570 of the European Central Bank of 7 February 2018 amending Guideline (EU) 2015/510 on the implementation of the Eurosystem monetary policy framework (ECB/2018/3);*

– *Guideline (EU) 2018/571 of the European Central Bank of 7 February 2018 amending Guideline (EU) 2016/65 on valuation haircuts applied in the implementation of the Eurosystem monetary policy framework (ECB/2018/4);*

– *Guideline (EU) 2018/572 of the European Central Bank of 7 February 2018 amending Guideline ECB/2014/31 on additional temporary measures relating to Eurosystem refinancing operations and the eligibility of collateral (ECB/2018/5).*

The ECB has by means of the three guidelines listed above, amended the guidelines on the implementation of the Eurosystem's monetary policy.

The main purpose of these amendments is:

- to implement modifications to the eligibility criteria for uncovered bank bonds;
- to remove the assessment framework for SSSs and links in order to replace it with new criteria that central securities depositories will have to fulfil in order to make their systems and links eligible for Eurosystem credit operations;
- to adjust the haircuts for floating rate assets and risk control measures risk control measures for retained covered bonds with extendible maturities; as well as
- to amend the criteria on interest payment structures for eligible credit claims and to make other technical changes related to the collateral framework.

Banking supervision

The ECB has adopted several legal acts concerning the area of banking supervision, in particular:

– Regulation (EU) 2018/1845 of the European Central Bank of 21 November 2018 on the exercise of the discretion under Article 178(2)(d) of Regulation (EU) No 575/2013 in relation to the threshold for assessing the materiality of credit obligations past due (ECB/2018/26).

The ECB shall exercise the power conferred on the competent authorities to set a threshold for assessing the materiality of a credit obligation past due. This Regulation shall apply exclusively with regard to credit institutions classified as significant and irrespective of the method used for the calculation of their risk-weighted exposure amounts.

– In order to strengthen the general framework for delegating decision-making powers with regard to banking supervision, it has also adopted various decisions, in particular in the area of own funds, as well as a recommendation on dividend distribution policies.

Statistics

In the field of statistics, the ECB has, in particular, adopted the following legal acts:

– ECB Regulation (EU) 2018/318 of 22 February 2018 amending Regulation (EU) No 1011/2012 concerning statistics on holdings of securities[110];

110 Regulation (EU) 2018/318 amending Regulation (EU) No 2011/2012 on securities holding statistics (ECB/2018/7).

The amendment allows significant reporting agents (in particular credit institutions subject to direct ECB prudential supervision) to report group data directly to the ECB.

- ECB Regulation (EU) 2019/113 of 7 December 2018 amending Regulation (EU) No 1333/2014 concerning statistics on the money markets[111].

The purpose of this amendment is to broaden the collection of information by the ECB to ensure the availability of high-quality statistics on the euro money market, to ensure that the collection benefits from the extension of the mandatory use of the legal entity identifier (LEI)[112] for reporting within the Union and, finally, to serve for the development and administration of the new unsecured overnight interest rate in euro (€STR).

In addition, the ECB adopted various guidelines during the year.

ECB's capital

The ECB adopted several legal acts in November 2018 as part of the five-year adjustment of the capital key provided for in the ECB's Statute.

1.8.1.4 Litigation relating to ECB's legal acts

In 2018, the Court of Justice and the General Court of the European Union delivered several judgments and orders concerning the ECB and the EMU.

The majority of the General Court's judgments and orders concern the single supervisory and resolution mechanisms on which the General Court ruled at first instance.[113]

Several judgments of the General Court concern the EU's non-contractual liability regime for the adoption of acts in the field of EMU.[114]

The General Court also delivered judgments in cases between the ECB and its employees[115] and issued judgments concerning the regime for access to ECB documents.[116]

As far as the Court of Justice of the European Union (Court of Justice) is concerned, it also issued in 2018 judgments and orders on issues related to monetary policy and banking supervision.[117] The most important of these judgments – the *Weiss a.o.* case – is explained below.

Moreover, although not directly relevant to EMU, several judgments of the Court of Justice have direct implications for the future of the EU and, *a fortiori*, for the development of the EMU regime, for instance the judgment of the Court of Justice in Case C-621/18, *Wightman and Others v Secretary of State for Exiting the European Union* ("Brexit").

111 Regulation (EU) 2019/113 amending Regulation (EU) No 1333/2014 on money market statistics (ECB/2018/33).

112 In French: *Identifiant d'entité juridique.*

113 See, case T-733/16, Banque Postale / ECB, case T-203/18, VQ / EB, case T-641/17, Verri / ECB, case T-618/17, Activa Minoristas del Popular Asociación para la tutela de los inversores minoristas afectados por la resolución, supervisión y gestión del Banco Popular / ECB and SRB, case T-4994/47, Iccrea Banca SpA Istituto Centrale del Credito Cooperativo c/ ECB and SRB, case T-124/17, Estamede / ECB, case T-768/16, BNP Paribas / ECB, case T-758/16, Crédit agricole / ECB, T-757/16, SocGen / ECB, case T-751/16, Crédit mutuel / ECB, T-745/16, BPCE / ECB and joint cases T-133/16 to T-136/16, Caisse régionale de crédit agricole mutuel Alpes Provence a.o. / ECB.

114 Case T-786/14, Bourdouvali / Council, Commission, EIB, Eurogroup and EU; case T-681/13, Chrysostomides / Council, Commission, EIB, Eurogroup and EU.

115 Case T-827/16 QB / ECB, case T-764/16, Paulini / ECB.

116 Case T-116/17, Spiegel / BCE and case T-251/15, Espírito Santo / ECB.

117 Case C-238/18, ECB / Lettonie, case C-52/17, VTB Bank, case C-643/16, American Express, case C-594/16, Buccioni, case. C-358/16 UBS, case C-219/17, Berlusconi, and case C-493/17, Weiss a.o.

Case C-493/17, *Weiss a.o.*, concerns the validity of the ECB programme for the purchase of government bonds on secondary markets[118]. This programme was adopted by the Governing Council of the ECB on 4 March 2015 in the light of lower than expected inflation dynamics and increased risks over a period of too prolonged low inflation, which could jeopardise the achievement by the ECB of its objective to maintain price stability.

The PSPP programme has foreseen that each NCB would purchase eligible securities from central, regional or local public authority issuers of its own country, depending on the distribution key for subscription in the capital of the ECB.

Several groups of individuals have brought cases before the German Federal Constitutional Court by way of constitutional complaints challenging the validity of the PSPP, in particular on the grounds that the said programme would not respect the division of competences between the European Union and the Member States, not fall within the ECB's mandate and violate the prohibition of monetary financing (Article 123 TFEU).

In this respect, the German Federal Constitutional Court has referred several questions to the Court of Justice for a preliminary ruling on the validity of the PSPP programme with regard to Union law.

In its judgment of 11 December 2018, the Court of Justice concluded that the adoption of the PSPP did not violate the EU Treaties and referred to the arguments previously developed in the Cases "*Pringle*" (Case C-370/12) and "*Gauweiler*" (Case C-62/14).

In particular, the Court of Justice stressed that the PSPP was part of monetary policy and complied with the principle of proportionality.

By reference to the Pringle judgment, the Court of Justice recalled that, in order to determine whether a measure falls within the area of monetary policy, it was appropriate to refer mainly to the objectives of this measure. In this respect, the Court of Justice has observed that the PSPP aims to contribute to a return of inflation rates to levels below, but close to, 2% over the medium term. Therefore, given that the authors of the Treaties have chosen to provide for the maintenance of price stability, in a general and abstract manner, without precisely determining how this objective should be achieved in quantitative terms, it does not appear that the achievement of the objective of maintaining price stability, such as maintaining inflation rates below, but close to, 2% over the medium term, as adopted by the European System of Central Banks (ESCB) since 2003, is vitiated by a manifest error of assessment and thus does not go beyond the framework established by the Treaties.

In addition, recalling once more its "*Pringle*" and "*Gauweiler*" case law, the Court of Justice explained that a monetary policy measure "*cannot be treated as equivalent to an economic policy measure for the sole reason that it may have indirect effects that can also be sought in the context of economic policy*". Moreover, "*in order to exert an influence on inflation rates, the ESCB necessarily has to adopt measures that have certain effects on the real economy, which might also be sought –– to different ends –– in the context of economic policy [...]*".

As regards the principle of proportionality, the Court of Justice held that the PSPP programme did not go beyond what was necessary to increase the rate of inflation. The Court of Justice concluded that the ECB would have assessed the various interests at stake in order to avoid that clearly disproportionate disadvantages in relation to the objective of the PSPP arise during the implementation of the programme.

With regard to the monetary financing prohibition, the Court of Justice found that the ESCB was authorised, under the PSPP, to purchase bonds from public authorities and organizations of the Member States not directly, but only indirectly, i.e. on the secondary markets. Thus, the ESCB's intervention, provided for by this programme could not be assimilated to a measure of financial assistance to a Member State.

118 Public sector purchase programme (PSPP).

However, when the ESCB adopts a programme for purchasing bonds issued by the public authorities and bodies of the Union and the Member States, two limitations must be respected.

First, the ESCB cannot validly purchase bonds on the secondary markets under conditions, which would, in practice, mean that its intervention has an effect equivalent to that of a direct purchase of bonds from the public authorities and bodies of the Member States.

Second, the ESCB must ensure that its intervention is sufficiently safeguarded to reconcile it with the prohibition of monetary financing, ensuring that such a programme does not remove the incentive for the Member States concerned to conduct a sound budgetary policy, which this provision is intended to introduce. The Court of Justice held that the prohibition of monetary financing did not preclude either the possibility of the ESCB holding the purchased bonds until their maturity or the purchase of bonds with a negative yield to maturity.

According to the Court of Justice, the PSPP therefore complies with the above-mentioned safeguards.

Based on this preliminary ruling, it will be for the German Federal Constitutional Court to adjudicate on the constitutional complaints, which challenge the legality of the PSPP.

1.8.2 National legislation

1.8.2.1 Enacted Law

Central Securities Depositories

The law of 6 June 2018[119] designates the CSSF (*Commission de surveillance du secteur financier*) as the competent national authority for the authorization and supervision of central securities depositories (CSDs). It gives the CSSF the powers necessary for the performance of these tasks and establishes a sanctions regime applicable in the event of a breach of Regulation (EU) No 909/2014[120].

Some CSDs are active at the international level and were already subject to the supervision of the CSSF as a credit institution or professional of the financial sector (PFS). The regulation is adapted to the specificities of CSDs and thus takes into account their risk profile. CSDs are mainly exposed to operational risk.

Fight against money laundering and terrorist financing

The law of 13 February 2018[121] amends a certain number of laws and, in particular, the law of 12 November 2004 on the fight against money laundering and terrorist financing, governing this matter in Luxembourg. Particular emphasis is placed on the professionals' duty to conduct an in-depth analysis of the money laundering or terrorist financing risks while identifying situations in which reinforced monitoring is requested.

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119 Law of 6 June 2018 on central securities depositories and implementing Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and central securities depositories, and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 (Official Journal of the Grand Duchy of Luxembourg, Memorial A - No 462 of 8 June 2018).

120 Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012.

121 Law of 13 February 2018 1. implementing the provisions relating to the professional obligations and powers of supervisory authorities in the fight against money laundering and terrorist financing of the Directive (UE) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC; 2. implementing Regulation (EU) 2015/847 of the European Parliament et of the Council of 20 May 2015 on information accompanying transfers of funds and repealing Regulation (EC) No 1781/2006; 3. amending (a) the law of 12 November 2014 on the fight against money laundering and terrorist financing, as amended; (b) the law of 10 November 2009 on payment services, as amended; (c) the law of 9 December 1976 on the profession of notary, as amended; (d) the law of 4 December 1990 on the profession of judicial officers, as amended; (e) the law of 10 August 1991 on the profession of lawyer, as amended; (f) the law of 5 April 1993 on the financial sector, as amended; (g) the law of 10 June 1999 on the profession of accountant, as amended; (h) the law of 21 December 2012 on the family office activity, as amended; (i) the law of 7 December 2015 on the insurance sector, as amended; (j) the law of 23 July 206 on the audit profession, as amended.

It further imposes the collection of certain data related to the originators and the beneficiaries when transferring funds.

This law also provides a detailed supervisory and sanctions mechanism for the professionals concerned in case of breach of their duties as regards anti-money laundering and combating terrorist financing, but also when transferring funds.

The law now specifies that the definition of politically exposed persons includes not only Council members but also members of central bank management boards.

Covered bonds

The law of 22 June 2018[122] aims to establish the legal framework for a new type of covered bonds focusing on renewable energies. In the interests of harmonization, this law also amends the regime applying to banks issuing covered bonds in accordance with the recent recommendations of the European Banking Authority (EBA), in particular by introducing a liquidity cushion that had not previously existed in Luxembourg.

Payment services

The law of 20 July 2018[123] aims at transposing the second Directive on payment services (PSD2)[124] whose primary objective is to adapt the text of the existing framework to the new account information services and payment initiation services to better protect the users.

It further details the European passport regime and the procedure concerning the payment service providers and the electronic money institutions and enhances the cooperation procedure between authorities supervising the cross-border activities of the authorized entities.

The law introduces provisions aiming at enhancing the rights of the payment service users. In the same vein, it provides that the payment service providers are, in principle, obliged to apply a strong customer authentication when the client accesses his online account, initiates an electronic operation or performs an action by using a means of distance communications with a risk of fraud. The law also requires appropriate management procedure and reporting of the operational or important security incidents as well as a secure communication between the account managers and third-party providers.

122 Law of 22 June 2018 amending the amended law of 5 April 1993 on the financial sector with a view to the introduction of renewable energy covered bonds (Official Gazette of the Grand Duchy of Luxembourg, Memorial A - N° 521 of 26 June 2018).

123 Law of 20 July 2018: 1° Implementing the Directive (UE) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC; et 2° amending the law of 10 November 2009 on payment services (Official Gazette of the Grand-Duchy of Luxembourg, Memorial A – N°612 of 25 July 2018).

124 Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and the regulation (EU) n°1093/2010 and repealing Directive 2007/64/EC.

Markets in financial instruments

The Law of 30 May 2018[125] aims to implement in Luxembourg the Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments (MiFID II Directive[126]) and certain provisions of the Regulation (EU) No 600/2014 (MiFIR Regulation[127]). These two European legal acts have been applicable since 3 January 2018. The MiFID II Directive and the MiFIR Regulation aim to fill the regulatory gaps in the field of financial markets, which have been revealed by the 2008 financial crisis. More concretely, they aim to adapt the legislation to the transformations, that have occurred in financial markets since the entry into force of Directive 2004/39/EC, known as "MiFID". In order to make financial markets more resilient and transparent, this law covers the markets in financial instruments in the area of financial products, but also in the area of technology, while enhancing investor protection and granting more efficient powers to supervisory authorities.

Ranking of debt instruments

The Law of 25 July 2018[128] notably implements Directive (EU) 2017/2399 as regards the ranking of unsecured debt instruments in insolvency hierarchy and has been the subject of an ECB opinion[129]. The aforementioned directive aims to establish harmonised rules with respect to the ranking of unsecured debt instruments in the event of insolvency for the purposes of the European Recovery and Resolution framework and aims to improve the efficiency of the bail-in system.

Data Protection

The Law of 1st August 2018[130] should be read in conjunction with Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data. The entry into force of the Regulation in all EU Member States is foreseen for 25 May 2018.

BCL has put in place arrangements to ensure compliance with the provisions in the relevant areas.

125 Law of 30 May 2018 on markets in financial instruments:
1. transposing Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92 / EC and Directive 2011/61/EU;
2. transposing Article 6 of Commission Delegated Directive (EU) 2017/593 of 7 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council as regards the safeguarding of financial instruments and client funds, applicable product governance requirements and rules governing the granting or collection of fees, commissions or other monetary or non-monetary benefits;
3. implementing Regulation (EU) No 600/14 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012;
4. modifying:
a. the amended law of 5 April 1993 on the financial sector;
b. the amended law of 23 December 1998 establishing a Financial Sector Supervisory Commission;
c. the amended law of 5 August 2005 on financial guarantee contracts;
d. the amended law of 7 December 2015 on the insurance sector; and
e. the amended law of 15 March 2016 on over-the-counter derivatives, central counterparties and trade repositories and amending various laws on financial services; and
5. repealing the amended law of 13 July 2007 on markets in financial instruments.

126 Directive 2014/65/EU of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

127 Regulation (EU) No 600/2014 of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012.

128 Law of 25 July 2018 on:
1. transposing Directive (EU) 2017/2399 of the European Parliament and of the Council of 12 December 2017 amending Directive 2014/59/EC EU as regards the ranking of unsecured debt instruments in the insolvency hierarchy and amendment of the amended Law of 18 December 2015 on resolution, recovery and liquidation measures of credit institutions and some investment firms; and
2. amendment of various provisions of the amended law of 5 April 1993 on the financial sector
(Official Gazette of the Grand Duchy of Luxembourg, Memorial A - N° 628 of 30 July 2018).

129 ECB Opinion of 27 July 2018 (CON/2018/34).

130 Law of 1st August 2018 on the organisation of Luxembourg's National Commission for Data Protection (CNPD) and the implementation of the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), amending the Labour Code and the amended law of 25 March 2015 establishing the salary system and the conditions and procedures for the advancement of public servants (Official Gazette of the Grand Duchy of Luxembourg, Memorial A - N° 686 of 16 August 2018).

1.8.2.2 BCL Regulations

The BCL adopted several regulations, which have been published in the Official Gazette of the Grand Duchy of Luxembourg[131].

– *BCL Regulation 2018/N°23 of 16 April 2018 amending BCL Regulation 2014/N°18 of 21 August 2014 implementing Guideline ECB/2014/31 on additional temporary measures relating to Eurosystem refinancing operations and eligibility of collateral.*

This Regulation aims at implementing the decision of the Governing Council of the European Central Bank according to which commercial-mortgage-backed-securities (CMBS) are not eligible as collateral for Eurosystem credit operations.

– *BCL Regulation 2018/N°24 of 16 April 2018 implementing certain provisions of Guideline ECB/2018/3 of 7 February 2018 amending Guideline (EU) 2015/510 on the implementation of the monetary policy framework of the Eurosystem (General Documentation) (ECB/2014/60).*

This Regulation aims at implementing the amendments introduced by the Guideline ECB/2015/510[132] in terms of eligibility of the securities settlement system and the links among the systems.

– *BCL Regulation 2018/N°25 of 23 July 2018 on the collection and remittance of euro banknotes by credit institutions and the financial services of the Entreprise des Postes et Télécommunications.*

This Regulation sets out the terms of the new information collection system of the collection and remittance of euro banknotes from the BCL or another BCN of the Eurosystem from the intermediary acting on behalf of a credit institution and/or of the *Entreprise des Postes et Télécommunications*.

1.8.2.3 Legal interest rate

The legal interest rate for the year 2018 was set at 2.25%[133].

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 2018, the late payment interest rate was set at 8%[134] for the first and second semester.

The above-mentioned rate includes 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 following the entry into force of the law of 29 March 2013 on combating late payment in commercial transactions[135].

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131 See Chapter 3.2.

132 Guideline (EU) 2018/570 of the European Central Bank of 7 February 2018 amending Guideline (EU) 2015/510 on the implementation of the Eurosystem monetary policy framework (ECB/2018/3) (OJUE L95 of 13 April 2018, p.23).

133 Grand-ducal Regulation of 12 December 2017 on the determination of the legal interest rate for the year 2018 (Official Gazette of the Grand Duchy of Luxembourg, Memorial A – N° 1043 of 13 December 2017).

134 Official Gazette of the Grand Duchy of Luxembourg, Memorial B – N° 924 of 16 April 2018; Official Gazette of the Grand Duchy of Luxembourg, Memorial B – N° 568 of 5 March 2019.

135 Law of 29 March 2013 on combating late payment in commercial transactions – implementing Directive 2011/7/EU of the European Parliament and Council of 16 February 2011 on combating late payment in commercial transaction, and – amending the law of 18 April 2004 on payment deadlines and late payment interests.

1.8.2.4 Bills

Macroprudential measures

Bill No. 7218[136]

The purpose of this bill is to supplement the legislative framework regarding macroprudential tools in the event of a threat to the financial stability of the financial system in Luxembourg arising from developments in the residential real estate sector.

To this end, the bill empowers the Financial Sector Supervisory Commission (CSSF) to adopt new macroprudential tools to set the conditions for granting mortgages relating to residential property located in Luxembourg. This includes credit institutions, insurance companies and professionals involved in lending operations.

Furthermore, the bill mentions that the BCL, within the framework of the Systemic Risk Committee, carries out analysis work and studies in order to identify as early as possible the systemic risks that may emerge in the financial system. A strong analytical framework is a key element to efficient and credible macroprudential supervision. The establishment of such a framework requires access to a range of data. The bill also provides for an amendment of the Law of 1st April 2015 establishing the Systemic Risk Committee to facilitate access by the BCL to data available at State administrations and public institutions.

In its opinion of 19 February 2018, the ECB stresses in particular that:

"The ECB issued an opinion on the draft law establishing the Systemic Risk Committee in 2014137. The following observations are without prejudice to the recommendations made in that opinion, which are reiterated in this opinion, notably the principle that the ECB and the national central banks (NCBs) should play a leading role in macroprudential oversight, given their expertise and existing responsibilities in the area of financial stability (point 5.2) and that any additional task that may be entrusted to the BCL with regard to macroprudential policy must not affect the BCL's institutional, functional and financial independence, or that of its Governor. [...]

From a statistical perspective, the ECB notes the extended right of the BCL to access information available from state departments and public institutions. This is basically in line with Article 32 of the BCL Organic Law, which provides that, in order to undertake its tasks, the BCL shall be empowered to collect the necessary statistical information, either from the competent national authorities or directly from economic agents. The BCL may likewise perform spot checks of the information from these authorities and economic agents, in accordance with relevant Community law provisions and within the competences of the ESCB and the ECB. However, the draft law, which concerns the research and analysis work of the Systemic Risk Committee, should also provide for access to more granular information, to the extent and at the level of detail necessary for the performance of tasks of the ESCB. This would be a necessary condition to the exercise of the analytical capabilities of the BCL, also with regard to its role in the Systemic Risk Committee138."

136 Bill on macroprudential measures on residential mortgage loans in Luxembourg and amending: - the amended law of 5 April 1993 on the financial sector; the law of 1st April 2015 establishing a Luxembourg Systemic Risk Committee and amending the amended law of 23 December 1998 concerning the monetary status and the Central Bank of Luxembourg.

137 See Opinion CON/2014/46. All ECB opinions are published on the ECB's website at www.ecb.europa.eu

138 Paragraphs 2 and 3.3. of the ECB Opinion of 19 February 2018 (CON/2018/9).

Circulation of securities

Bill No. 7363[139]

This bill aims at creating a legal framework for the circulation of securities using new technologies for secure electronic recording in order to enhance legal certainty in this field.

The bill incorporates in the amended Law of 1st August 2001 on the circulation of securities the registration in securities accounts and the circulation of securities on the basis of secure electronic recording technologies, such as distributed ledger technology (DLT) and notably the blockchain technology. Although not explicitly mentioned, this law also validates the use of tokens that can be stored on the blockchain.

For the sake of legal certainty, the bill provides, on the one hand, that the use of secure electronic recording devices does not affect the fungibility of securities and, on the other hand, that transfers performed by these new devices are to be considered as transfers between securities accounts in the meaning of the abovementioned law of 1st August 2001.

In addition, it is also specified that the use of a secure electronic recording device has no effect on the application of the law of 1st August 2001, on the location of securities that remain located with the relevant account keeper, as well as on the validity or enforceability of securities and collateral created in accordance with the law of 5 August 2005 on financial collateral arrangements.

Security of network and information systems across the European Union

Bill No. 7314

This bill transposes Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union. Introduced in June 2018, it places "operators of essential services" and "digital service providers" under the authority of the competent bodies in Luxembourg. Several opinions of professional chambers are available warning notably against an increasing complexity of regulation. Government amendments were submitted to Parliament in October 2018.

The ECB had given its opinion in 2014 on the proposal for a directive[140], stating in its final version that the directive does not affect the regime established under EU law for the oversight of payment and settlement systems by the Eurosystem (recital 14). This provision did not prevent the ECB from issuing several opinions on draft national legislation transposing the Directive in view of an observed risk of interference with the competences of the Eurosystem and the ECB[141]. Although BCL and Eurosystem infrastructures are not explicitly referred to in the Luxembourg bill, it should nevertheless be ensured that the rules adopted by the Eurosystem/ESCB and the ECB's responsibilities under the SSM remain unaffected. In this context, a submission of the aforementioned entities and operators to the High Commission for National Protection (HCPN) power of recommendation is currently being examined.

139 Bill amending the amended law of 1st August 2001 on the circulation of securities voted on 14 February 2019 (Law of 1st March 2019 amending the amended Law of 1st August 2001 on the circulation of securities).

140 ECB Opinion of 25 July 2014 (CON/2014/58).

141 See, for example, CON/2018/47 and CON/2018/27.

1.9 COMMUNICATION

1.9.1 Publications

In accordance with its Organic Law, the Banque centrale du Luxembourg (BCL) publishes an annual report on its activities. It is available in French and English.

In 2018, the BCL published three Bulletins and 10 working papers.

The BCL working papers, available on the BCL's website, present the results of research conducted by BCL staff and include non-technical summaries.

1.9.2 Educational activities

1.9.2.1 Cooperation with high schools

The BCL has organized presentations for students from the last two years of high school whose curriculum includes economics. Classes are welcomed with their teachers in the auditorium of the Monterey building for an educational and interactive presentation on the organisation and missions of the BCL and the Eurosystem. Other topics can also be addressed depending on teachers' requests and students' questions.

In 2017-2018, the BCL organised for the fifth time in Luxembourg the Eurosystem's *Generation €uro Students' Award* school competition. This competition, which has been organised in around ten euro area countries since 2011, is aimed at secondary school pupils aged 16 to 19 years and above, especially those studying economics. It aims to improve the understanding of the role and functioning of the Eurosystem. In Luxembourg, the 2017-2018 edition of the competition, won by the *Black Swan* team from the Lycée Hubert Clément high school of Esch-sur-Alzette, ended with the national awards ceremony held at the BCL on 27 February 2018.

The winning Luxembourg team, accompanied by its professor, was welcomed to the ECB on 10 and 11 April 2018 for the European awards ceremony alongside the winning teams from the other participating countries, in the presence of Mr Gaston Reinesch, Governor of the BCL, and Mr Mario Draghi, President of the ECB.

The members of the *Black Swan* team from the Lycée Hubert Clément high school in Esch-sur-Alzette. From left to right: Mr Gaston Reinesch, Mr Carlo Klein (professor), Ross Jin, Mr Mario Draghi, Daniela Ursuleac and Katia Sousa. One team member, Jilliane Amper, was unable to attend the ceremony.

The sixth Luxembourg edition of the competition was launched on 4 October 2018 with an information session for teachers and students at the Lycée Hubert Clément in Esch-sur-Alzette. Presentations were made to participating students and teachers to prepare them for the various tests of the competition. This sixth edition ended on 4 April 2019.

1.9.2.2 Cooperation with schools

For the fourth time, the BCL participated independently in the European Money Week (*Woch vun de Suen*). From 12 to 16 March 2018, the BCL offered a programme to familiarise groups of pupils in primary education with money in general, and the security features of euro banknotes and coins in particular. During the educational sessions lasting 2h30 and organised throughout the week, students benefited from playful and interactive presentations including films and games. Then, they participated in a workshop during which they tested their knowledge of the security features of euro banknotes. The program offered by the BCL was a great success, with a total of more than 300 participating students from 12 different schools.

1.9.2.3 Presentations for groups of visitors

In 2018, the BCL continued to welcome visitors for presentations. These presentations are organised as part of a programme launched in 2015, which allows groups of 15 to 25 people to register for a presentation on the history of the BCL and the Luxembourg money as well as on the Bank's missions. This initiative is in line with the BCL's desire to make its European and national missions better known to the general public. The BCL can welcome one group of visitors per month, either on Thursday evening (6:00 pm - 7:30 pm) or Friday afternoon (2:30 pm - 4:00 pm), for a presentation in French, Luxembourgish or English, depending on the visitors' preference. Visits can be booked on request by sending an e-mail to info@bcl.lu.

Group photo of the visitors from the "Amicale du Escher Kolléisch".

1.9.3 BCL website

The BCL continued to modernise and improve its website.

In total, almost 212 000 users visited the BCL's website in 2018 (more than 39.5 million clicks for more than 14.2 million page views).

In 2018, the most consulted document was the numismatic programme, which was downloaded nearly 7 400 times.

1.9.4 Video communication

In order to better present its missions and activities, the BCL launched a series of short explanatory films in 2017. They are available on its website (www.bcl.lu) and YouTube channel.

In 2018, the BCL continued this series by producing a teaser on the Generation €uro Students' Award competition that it organizes every year. The purpose of this short film is to show potentially interested young people how the competition works.

1.9.5 BCL Library

The BCL library, inaugurated in 2005, is part of the national network of Luxembourg libraries.

The publications available at the library deal mainly with economics and law. The collection includes, inter alia, publications from international organisations and national central banks.

The library is accessible to the public by prior appointment by telephone (+352 4774 4275) or by e-mail (bibliotheque@bcl.lu).

1.9.6 Press relations

Throughout 2017, the BCL had regular contacts with the national and international press.
A total of 118 press releases were issued in 2018.

1.9.7 Information campaign about the new "Europe" series €100 and €200 banknotes

In September 2018, the BCL organised a press conference to present the new €100 and €200 banknotes. In November 2018, the Bank had a banner of nearly 150 m^2 installed on the facade of the "Pierre Werner" building on Boulevard Royal and on the facade of the Avenue Monterey building.

Information material about the new €100 and €200 banknotes and their security features can be consulted on the following dedicated website: http://www.new-euro-banknotes.eu or on the BCL website: http://www.bcl.lu.

Banner on the "Monterey" Building, avenue Monterey.
Photo: BCL

Banner on the "Pierre Werner" Building on Boulevard Royal.
Photo: BCL

1.9.8 Conferences and Events

The BCL has been involved in organising the following conferences and events:

BCL's participation in the "Orange Week"

The BCL participated again in the "Orange Week", a campaign launched by the UN Secretary General to raise awareness about violence against women and girls and end sexual violence.

Thus, the BCL headquarters were illuminated in orange from 26 to 10 December 2018, as were other public buildings, monuments and tourist sites in the Grand Duchy of Luxembourg.

Illumination of the facade of the historic building in orange.
Photo: BCL

BCL's participation in the "Light it up blue" action

The BCL also participated in the international "Light it up Blue" campaign, which aims to raise awareness about autism among the general public.

Thus, the BCL's headquarters was illuminated in blue from 30 March to 30 April 2018, as were other public or private buildings, monuments and tourist sites in the Grand Duchy of Luxembourg.

Illumination of the facade of the historic building in blue.

Photo: BCL

Open House Day

During the Open House Day, held on 21 April, 550 people visited the Bank to discover the different tasks of the Central Bank as well as its activities and history.

Photo: BCL

At the historic BCL headquarters, Mr Gaston Reinesch, Governor of the BCL, took the opportunity to answer visitors' questions.

Mr Gaston Reinesch, BCL Governor discussing with visitors

The public was informed on the BCL's 20 years of activity through panels and the screening of short educational films on the Bank's European and national missions. Visitors were also able to visit an exhibition on the history of Luxembourg's money from the time of John the Blind to the notes issued by the Luxembourg Monetary Institute, and learn about the building's very rich history.

A workshop on the security features of euro banknotes provided visitors with the opportunity to discover security features that are not visible to the naked eye thanks to the use of specific equipment.

A section specially dedicated to the youngest children has enabled them to familiarise themselves with money in a playful way, notably through an educational publication by the BCL.

A counter was opened to allow collectors to acquire the silver-niobium collector's item relating to Koerich Castle and the brilliant Set dedicated to the city of Ettelbruck. These two new BCL numismatic products were available for sale for the first time on this occasion.

The Open House Day also marked the beginning of a competition. The competition, which was dedicated to the Bank's 20th anniversary and organized as a quiz, took place on 21 April but was also accessible via the BCL's website (www.bcl.lu) until 15 June 2018. Many numismatic products issued by the BCL could be won. The answers to the questions were included in the panels of the Open House exhibition and were also included on the Bank's website.

Awards ceremony of the "20 years BCL" contest

During a ceremony held on 15 September 2018 at the Banque centrale du Luxembourg (BCL), Mr Gaston Reinesch, Governor of the BCL, congratulated the winners of the contest organized on the occasion of the BCL's 20th anniversary and held an awards ceremony.

In total, 121 BCL numismatic products were awarded, including gold coins, among them the gold coin issued on the occasion of the BCL's 20th anniversary. The draw to determine the winners was held among some 2 000 participants.

Mr Gaston Reinesch, Governor of the BCL, Mr Pierre Beck, Director of the BCL, and Mr Roland Weyland, Director of the BCL, surrounded by the winners present at the ceremony.

Donations to three charities

On the occasion of its 20th anniversary, the BCL decided not to organise any festivities but to support, on an exceptional basis, projects aimed at helping children or people in precarious situations.

At a ceremony held at the BCL, Mr Gaston Reinesch presented a donation to each of the following three associations:

- Caritas Luxembourg;
- Luxembourg Red Cross;
- Stëmm vun der Strooss.

From left to right: Mr Luc Scheer, member of the Luxembourg Red Cross Executive Board, Ms Sandra Hauser, Executive Director of the Norbert Ensch Red Cross Centre, Mr Pierre Beck, Director of the BCL, Ms Alexandra Oxacelay, Director of the Stëmm vun der Strooss, Mr Gaston Reinesch, Governor of the BCL, Mrs Marie-Josée Jacobs, President of Caritas Luxembourg, Mrs Caroline Theves, Head of Donor and Partner Relations of Caritas Luxembourg, and Mr Roland Weyland, Director of the BCL.

Bridge Forum Dialogue Conferences

On 17 May 2018, a conference on the subject *Optica Fantastica: Images to illuminate the physics of light* was organised under the chairmanship of Mr Alexandre Tkatchenko, Professor of Theoretical Chemical Physics at the University of Luxembourg.

The speaker was Sir Michael Berry, Melville Wills (Emeritus) Professor of Physics, University of Bristol.

On 18 June 2018, a conference on *The European Court of Auditors, Advocate of the Tax Payer* was organised under the chairmanship of Mr Gaston Reinesch, Governor of the BCL and Chairman of the Bridge Forum Dialogue.

The speaker was Mr Klaus-Heiner Lehne, President of the European Court of Auditors and Vice-President of the Bridge Forum Dialogue.

Mr Klaus-Heiner Lehne and Mr Gaston Reinesch.

On 26 June 2018, a conference on the subject of *Evolution of Tax Regimes* was organised.

The speaker was Professor Bruno Colmant, Professor at the Vlerick Management School (ULC), Solvay Business School (ULB), ICHEC and Faculté de Saint-Louis.

On 15 November 2018, a conference on *Understanding neurodegenerative Diseases* was organised under the chairmanship of Professor Rudi Balling, Director of the Luxembourg Centre for Systems Biomedicine (LCSB), University of Luxembourg.

The speaker was Professor Michel Goedert, Programme Leader at the Medical Research Council, Laboratory of Molecular Biology, Cambridge, United Kingdom.

Visits at the BCL

At the invitation of Mr Gaston Reinesch, Governor of the BCL, Mr Philip R. Lane, Governor of the Central Bank of Ireland, paid a working visit to the BCL on 28 February 2018.

During his visit, Mr Lane gave a presentation on Sovereign bond-backed securities (SBBS). Mr Lane spoke as the Chairman of the High-Level Task Force on Safe Assets of the European Systemic Risk Board, which published its conclusions in January 2018.

Mr Philip R. Lane and Mr Gaston Reinesch.

On 1 October 2018, Mr Gaston Reinesch welcomed Mr Benoît Coeuré, member of the Executive Board of the European Central Bank.

Mr Benoît Cœuré and Mr Gaston Reinesch.

1.9.9 Research activities and University Cooperation

The BCL published research output through its working paper series as well as the BCL Bulletin and Financial Stability Review. Several studies were published in peer-reviewed scientific journals (*Journal of Labour Market Research, Economics Letters, IZA Journal of Labor Policy, Annals of Economics and Statistics, Journal of Income Distribution, Review of Economic Dynamics*).

BCL researchers also presented their results in seminars and workshops organised by several institutions, including the ECB, the European Association of Labour Economists, the University of Evry, the European University Institute, the University of Paris-Dauphine and the *Commission de surveillance du secteur financier* (CSSF).

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). Some of these projects were developed within the partnership with the Toulouse School of Economics (TSE). This partnership takes the form of joint publications, tutoring, training, conferences and workshops as well as exchanges between BCL and TSE researchers.

The BCL is a member of the Eurosystem "Household Finance and Consumption Network". This network designed and conducted a harmonised survey on the consumption and financial behaviour of households in the euro area. In Luxembourg, this survey was carried out by the BCL in collaboration with the Luxembourg Institute of Socio-Economic Research (LISER, formely CEPS/Instead). Results of the first two survey waves were published as working papers or as text boxes in the BCL Bulletin.

In June 2018, the BCL organised a workshop on household finance and consumption and in October, it organised a workshop on the labour market. Both workshops brought together researchers active in these different domains in Luxembourg and in the Greater Region.

In November 2018, the BCL organised a workshop on virtual currencies, with the contribution of researchers from the Toulouse School of Economics, HEC Paris, the École polytechnique and the Haute école de gestion (HEG) of Geneva.

<u>University cooperation</u>

The BCL continued its cooperation with the University of Luxembourg, with several staff members lecturing at the Luxembourg School of Finance as well as at the Faculty of Law, Economics and Finance. A course on monetary and banking economics was also delivered at the *Université de Lorraine*.

In addition, the BCL organised occasional presentations for university students.

<u>Technical cooperation</u>

In the context of a multi-year LuxDev project to improve analytical capacity in the Vietnamese financial sector, in March 2018 the BCL Financial Stability and Macroprudential Surveillance division welcomed two economists from the Vietnamese National Financial Supervision Commission. On this occasion, these economists were introduced to quantitative models and techniques used at the BCL to evaluate systemic risks, as well as the conduct of macroprudential stress tests.

1.10 EUROPEAN ACTIVITIES

1.10.1 Activities at the level of the European Central Bank

The Governor of the *Banque centrale du Luxembourg* (BCL) participates in the meetings of the Governing Council and the General Council. The members of the Governing Council act in their personal capacity and not as national representatives.

Meetings of the Governing Council are normally held twice a month in Frankfurt at the headquarters of the European Central Bank (ECB). The Governing Council takes in principle monetary policy decisions every six weeks, while the remaining meetings are devoted to other topics subject to the Governing Council's decision. In 2018, some 1 600 decisions were adopted by the Governing Council by written procedure. The majority of these written procedures fall exclusively or partially within the scope of the Single Supervisory Mechanism (SSM). Written procedures are in fact the Governing Council's most widely used decision-making tool in this area. In areas related to central banking functions, the share of decisions taken during Governing Council meetings is higher.

The General Council, composed of the President and Vice-President of the ECB and the Governors of the European System of Central Banks (ESCB), normally meets quarterly in Frankfurt. The other members of the ECB's Executive Board participate in the meetings of the General Council, although they do not have the status of "members".

Committees with clearly defined mandates and areas of competence assist the ECB's decision-making bodies in the fulfilment of their tasks. The Governing Council or the Executive Board of the ECB may request them to carry out studies on specific subjects.

The committees report to the Governing Council via the Executive Board of the ECB.

In 2018, 16 Eurosystem/ESCB committees and one council were active to provide expertise in their respective areas of competence and to facilitate the decision-making process in the Governing Council.

Committees are generally composed of members of the staff of the Eurosystem central banks. However, the national central banks (NCBs) of the Member States which have not yet adopted the euro shall participate in the meetings of the committees whenever they deal with matters falling within the field of competence of the General Council. Representatives of other relevant institutions and bodies may also be invited.

To support the work related to the SSM, some of these committees meet when necessary in a composition corresponding to the SSM, i.e. including representatives of national competent authorities that are not NCBs.

Under the aegis of the committees, working groups and task forces with specific objectives meet in accordance with the committees' respective mandates. The Governing Council may also set up High Level Groups or Task Forces to study specific issues.

1.10.2 The Economic and Financial Committee

The Economic and Financial Committee (EFC) was established by the Treaty on the Functioning of the European Union (TFEU). It is composed of representatives of the Treasuries or Ministries of Finance and NCBs of the European Union Member States, as well as representatives of the European Commission and the European Central Bank (ECB).

The EFC was created in order to promote the coordination of Member States' policies for the functioning of the internal market. Its mission is, notably, to provide a framework for dialogue between the European Commission and the ECB, to follow the financial and economic situation of the Member States, to contribute to the coordination of economic and fiscal policies and to provide information on questions relating to financial markets, exchange rate policy, as well as third countries and international institutions.

The EFC convenes in full and restricted configurations. In full composition, the EFC convenes with representatives of national administrations and NCBs of the Members States of the EU, the Commission and the ECB. It plays an important role in the preparation of European positions at the G20, the IMF and the Financial Stability Board (FSB).[142] It also deals with economic policy issues discussed at the informal meetings of the Council of the EU in Economic and Financial Affairs configuration (ECOFIN)[143], to which, notably, the Governors of the NCBs of EU Member States and the President of the ECB are invited.

NCB representatives do not participate in restricted composition meetings. In the latter composition, the EFC also meets in the Eurogroup Working Group, limited to Member States of the euro area, the Commission and the ECB, to prepare the work of the Eurogroup. The latter is an informal grouping in which euro area Ministers of Finance examine specific questions pertaining to the euro as well as questions on fiscal, monetary and structural policies in the euro area.

In 2018, the EFC held ten meetings in full composition and two meetings in the Financial Stability Table format. This format includes senior representatives of the European Supervisory Authorities (ESAs)[144] and the European Systemic Risk Board (ESRB).

During its full composition meetings, the EFC continued to monitor the deepening of the Economic and Monetary Union, particularly the progress towards the Banking Union, as well as the developments towards the Capital Markets Union and the risks to the financial stability of the EU.

The EFC has various subcommittees covering, notably, the activities of the IMF, the functioning of public debt markets in the EU, as well as the production and circulation of euro coins.[145]

The BCL is a member of the Subcommittee on IMF and related issues, the SCIMF, which works to harmonise the position of Member States on IMF matters. In 2018, the SCIMF looked into, inter alia, issues relating to the adequacy and composition of IMF resources, including technical work on the 15th General Review of Quotas, as well as on the report of the Eminent Persons Group on Global Financial Governance, prepared at the request of the G20.

The Euro Coin Subcommittee covers issues related to the production and circulation of euro coins and monitors the evolution of counterfeit euro coins. The subcommittee proposes to the EFC the possible issue of commemorative € 2 coins for the celebration of European events. This subcommittee is assisted by a working group on operational aspects of coins, including coordinating the production of coins and reducing existing coin inventories through exchange or transfer of stocks between Member States of the euro area. In 2018, the sub-committee established a working group to prepare a report on the actions to be taken in the event that it is decided to issue one or more new euro coins. The BCL holds the chair of this working group.

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

143 ECOFIN is composed of Ministers of the Economy and Finance of all EU Member States.

144 Namely the European Banking Authority (EBA), the European Insurance and Occupational Pensions Authority (EIOPA), and the European Securities and Market Authority (ESMA).

145 Namely the Subcommittee on EU Sovereign Debt Markets, the Euro Coin Subcommittee and the Subcommittee on IMF and related issues (SCIMF).

1.10.3 Other European Committees

On 24 April 2013, the European Statistical System (ESS) and the ESCB signed a Memorandum of Understanding on the cooperation between the two statistical systems. In order to improve this cooperation, both systems have established the European Statistical Forum in which National Central Banks, National Statistical Institutes, the European Commission and the ECB are represented. This forum establishes an annual work programme with the major objective of improving cooperation between the two systems.

The Committee on Monetary, Financial and Balance of Payments Statistics (CMFB), for its part, continues to deal in depth with cases that fall within the common remit of the two statistical systems. The CMFB is also responsible for deciding on the development and coordination of the categories of statistics required under the policies applied by the European Council, the European Commission and the various committees that assist them. The CMFB represents National Central Banks, National Statistical Institutes, the European Commission and the ECB. Working groups with specific objectives operate under the aegis of this committee.

The European Committee of Central Balance Sheet Offices (ECCBSO), of which the BCL has been a member since 2014, is an advisory body created in 1987 by a group of European Central Banks in charge of the management of national Central Balance Sheet Offices. The Committee's initial objective was to improve the analysis of non-financial corporate data. The Committee's objectives have been extended by central banks in areas such as statistics, economic and financial research, financial stability, supervision and risk assessment to cover the use of data from non-financial corporations. It should be noted that the *Institut national de la statistique et des études économiques* (STATEC), which is responsible for the Central Balance Sheet Office in Luxembourg, is a member of this committee.

In 2018, the BCL actively contributed to the work carried out in these three forums. Progress has been achieved, notably in the areas of financial accounts, balance of payments, financial services, public finance and national accounts statistics.

1.11 NATIONAL AND EXTERNAL ACTIVITIES

1.11.1 National Activities

1.11.1.1 BCL Committee Activities

Lawyers Committee

The Lawyers Committee of the BCL met twice in 2018 and discussed topics linked to Distributed Ledger Technologies (DLT), including blockchains and Initial Coin Offerings (ICO).

Advisory Commission on Banking and Monetary Statistics

The *Commission consultative Statistiques bancaires et monétaires* (CCSBM), set up by the BCL, aims to ensure efficient collection of banking and monetary statistics by the BCL and to establish a dialogue with the credit institutions subject to statistical reporting.

Operational Crisis Prevention Group

The BCL established in 2007 the Operational Crisis Prevention Group (OCPG) with the mandate of enhancing the financial sector's preparation with regards to large scale operational disruptions.

Members and participants in meetings include the Luxembourg Bankers Association (ABBL), the supervisory authority (Commission de Surveillance du Secteur Financier, CSSF) as well as systemically important financial institutions and market infrastructures established in Luxembourg. One new member joined the group in 2018.

Further to the review of its objectives and work-plan in 2017, the group considered the information needed in case of large scale operational disruptions. The aim is to set-up privileged partnerships with key information providers. The first phase shall address the provision of electricity, telecommunication services, market infrastructures and national IT security agencies[146]. The group also worked on implementing a crisis communication tool.

The BCL informs regularly OCPG members about the work and initiatives undertaken by the Eurosystem on cyber-security. In January 2018 the Governing Council approved the establishment of a Euro Cyber Resilience Board (ECRB) for pan-European Financial Infrastructures, with the objective of enhancing the cyber resilience of financial market infrastructures and their critical service providers, as well as the wider EU financial sector.[147] In May 2018, the ECB published the European framework for testing financial sector resilience to cyber attacks, TIBER-EU[148]. The framework shall first apply to tests executed by market infrastructures.

1.11.1.2 Activities of external committees in which the BCL participates

The Economic Committee (Comité de conjoncture)

The Economic Committee acts within the framework of the legislation authorising the government to take measures to prevent redundancies for cyclical and structural reasons and to stabilise employment. The Committee contributes to the analysis of the Luxembourg economy and to the monitoring of topical economic policy issues.

The BCL's contribution to the Economic Committee is twofold: first, the BCL collects information on Luxembourg's economic situation and, second, BCL provides information on the latest developments in the financial sector and in monetary areas.

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

The BCL participates as an observer in the meetings of the Consumer Price Index Commission, which is in charge of advising and assisting STATEC in the compilation of consumer price indices. The 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.

146 Computer Emergency Response Team (CERT) and Computer Incident Response Center Luxembourg (CIRCL).

147 The ECRB, chaired by a member of the Executive Board of the ECB, will bring together representatives of i) pan-European financial market infrastructures and their critical service providers, ii) Eurosystem lead overseers of pan-European financial infrastructures (i.e. seven NCBs and the ECB), and iii) three other ESCB NCBs on a rotational basis. The European Commission, the European Union Agency for Network and Information Security, the European Banking Authority, the Single Supervisory Mechanism, the European Securities and Markets Authority, Europol, and the ECB's Directorate General Information Systems are observers. The BCL is member of the ECRB.

148 European Framework for Threat Intelligence Based Ethical Red Teaming.

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 grouping (*groupement d'intérêt économique*) whose role is to:

- provide advice to the Government as to the accounting of undertakings falling under the law of 2002[149];
- contribute to the development of an accounting doctrine;
- participate in discussions on accounting matters within European and international bodies. In 2014, the CNC became 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 2018, the CNC (the management committee and working groups) met on 28 occasions.

Following the renewal of the management committee in March 2018 for a four-year term, a work program of the CNC was drawn up for the period from 2018 to 2022. This work program defines as a priority the recasting of the Luxembourg accounting law. In the same way, the internal rules was finalized and adopted during the year 2018.

On a doctrinal level, the CNC considered several issues during 2018, including the accounting regime applicable to Reserved alternative investment funds (FIAR) and the accounting of cryptocurrencies, tokens and other transactions related to the blockchain technology.

With respect to the standard chart of accounts (Plan comptable normalisé, hereafter the "PCN"), the CNC, in collaboration with the CTIE and STATEC, has prepared and published various public communications to facilitate the entry into force of the new PCN which should apply to financial years beginning on or after 1 January 2020.

In 2018, the CNC received 24 individual derogation requests in application of Article 27 of the amended law of 2002. In addition, the CNC has drawn up a questionnaire allowing companies submitting a derogation request to carry out a self-assessment of their compliance situation under accounting law. Only requests submitted by companies in a situation of compliance can thus be the subject of a review.

In the context of its European and international activities, the CNC participated during the year 2018 to the public consultation launched by the services of the European Commission entitled "Fitness check on the EU framework for public reporting by companies". Similarly, the CNC has also contributed to the work of EFRAG, in particular through its financial support ("National Funding Mechanism (NFM)") and its participation as a member organization in the General Assembly (EFRAG GA) as well as to the Consultative Forum of Standard Setters (EFRAG CFSS).

149 Law of 19 December 2002 on the Trade Register and the Accounting and Annual Accounts of Undertakings and modifying certain other legal provisions, as modified.

Committee comptabilité bancaire

The *Committee Comptabilité Bancaire*, set up by the *Commission de surveillance du secteur financier (CSSF)*, aims at ensuring an exchange of views between the supervisory authority, the BCL and the stakeholders of the Luxembourg financial centre. The CSSF consults the committee when drafting circulars concerning bank accounting issues.

Higher Statistical Council

The *Conseil supérieur de la statistique* (CSS) acts in an advisory capacity for STATEC and issues an opinion on its annual programme. To this end, STATEC submits to the High Council for Statistics, at the end of each year, a report on the work accomplished during the previous year and a programme of work to be carried out during the coming year. The report and the programme are the subject of an opinion of the High Council for Statistics.

The BCL regularly participates in the work of this Committee as an observer.

The BCL contributes to the work of the CSS, in particular by providing its opinion on the documents submitted to it. It also provides STATEC with data collected on the financial centre to enable it to carry out its work programme.

Committee on Public Statistics

The *Comité des statistiques publiques* (CSP) has a coordinating role in the field of government statistics. Thus, it draws up an inventory of all surveys in the Luxembourg statistical system, analyses the possibilities of satisfying requests from existing sources and ensures the implementation of the statistical programme in compliance with the good practices of the Luxembourg statistical system and the relevant international standards.

The BCL regularly participates in the work of this Committee as an observer.

XBRL Luxembourg

eXtensible Business Reporting Language (XBRL) is a financial reporting standard based on Extensible Markup Language (XML) whose main objective is to improve the correctness, transparency and efficiency of internal and external reporting. The non-profit association XBRL Luxembourg brings together about twenty organisations that use XBRL or provide services related to this standard. The role of the association is to promote the XBRL standard in the Luxembourg economy.

The BCL, as a founding member of XBRL Luxembourg, is studying the possibilities of using this standard in the framework of the statistics it collects from companies in the Luxembourg financial sector.

The non-profit association XBRL Luxembourg has been dissolved at the end of 2018.

1.11.2 External activities

Activities at the IMF level

The International Monetary Fund (IMF) was created to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.

The 189 IMF members are represented by the 24 Executive Directors. Since 1 November 2012, Luxembourg has acted as a Senior Advisor in the group of countries (Constituency) led by a Belgian or Dutch Executive Director in four-year, alternating turns. Aside from the Benelux countries, the 12 other members of the constituency 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. Since January 2016, after the entry into force of the 14th General Review of Quotas, Luxembourg's quota has been set at SDR 1 321.8 million.

To supplement its quota resources, the IMF can also borrow temporarily through the New Arrangements to Borrow (NAB) or through bilateral credits from those of its members willing to lend to the Fund on a voluntary basis. After quotas, the NAB and bilateral borrowings constitute the IMF's second and third lines of defence, respectively, in terms of financial resources.

Since February 2016, Luxembourg's participation in the NAB has been SDR 493.12 million. At the end of the year, loans provided by Luxembourg under the NAB reached SDR 41.90 million.

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 for € 2.06 billion in April 2014. This line of credit initially had a two-year maturity, but after two extensions of one year each, it was scheduled to mature in April 2018. In April 2017, however, Luxembourg signed a new € 2.06 billion bilateral loan agreement that replaced the 2014 agreement and that will mature on 31 December 2019, or, under certain conditions and with agreement of Luxembourg, at the end of 2020. To date, the IMF has not drawn on these bilateral credit lines.

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. Luxembourg's quota is recorded in full on the BCL's balance sheet. On 31 December 2018, 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 189.73 million, equivalent to 14.35% of Luxembourg's quota. At the same point in time, Luxembourg held SDR 247.3 million, or 100.3% of its SDR allocation.

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. In view of its strong external position, Luxembourg is generally among the countries designated by the IMF's Executive Board to be part of the FTP in order to make available to the IMF, if requested, foreign currencies intended for countries using IMF resources.

Activities at the Bank of International Settlements (BIS) level

Established in 1930, the Bank for International Settlements (BIS) is the oldest international financial institution. The BIS promotes international cooperation between monetary authorities and financial sector supervisory authorities through meetings that it organises for these institutions' officials. Through the Basel Process framework, it also hosts at its headquarters international groups pursuing global financial stability, including the Basel Committee on Banking Supervision and the Financial Stability Board. The BIS supports them, facilitates their interaction, and helps set international standards in banking. The BIS currently comprises 60 central bank members and monetary authorities from advanced and developing countries.

The BCL is closely involved in the activities of various committees and working groups of the BIS.[150] The BCL is 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 headquarters of the BIS in Basel. The Governors and other senior officials from BIS member central banks examine recent developments and prospects of the global economy and financial markets. They also exchange views and experiences on subjects of interest to central banks.

Economic debates focus on macroeconomic and financial developments in the main advanced and emerging economies. The issues addressed by the Global Economy Meeting in 2018 included the global outlook for business investment, the conduct of monetary policy in a world characterised by large balance sheets of advanced countries' central banks, the redistributive effects of monetary policy, labour markets and the outlook for wage growth and inflation, the analysis of global external imbalances and global macro-financial risks.

The All Governors' Meeting discussed the following topics during the year under review: central bank accountability, big data and central banks, key research issues for the BIS and for central banks, Basel III finalisation, and macroprudential measures and the housing market.

Furthermore, the BCL participates in the Committee on the Global Financial System (CGFS) and in the Annual General Meeting of the BIS. The CGFS monitors financial market developments for Governors attending the Global Economy Meeting. The mandate of the CGFS is to identify and assess sources of risk in global financial markets, deepen understanding of the structural underpinnings of these markets, and promote improvements in their functioning and stability.

150 The major BIS committees and working groups are: The Financial Stability Board, the Group of Central Bank Governors and Heads of 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.

Activities within the Central Banks and Supervisors Network for Greening the Financial System

In September 2018, the BCL became a member of the Central Banks and Supervisors Network for Greening the Financial System (NGFS). This network, established during the One Planet Summit held in Paris in December 2017, exchanges best practices and shares experiences relating to the management of climate and environmental risks in the financial sector and the transition to a sustainable economy. Its goal is to contribute to the achievement of the objectives of the Paris Accord[151], which is to keep global warming "well below 2° C."

The work of the NGFS is organised around three Workstreams, Micro-prudential supervision, Macro-financial, and Scaling up green finance. The BCL is represented in the NGFS Plenary and participates in the work on macro-financial issues and the promotion of green finance (Workstreams 2 and 3). In 2018, the NGFS reviewed existing work at national, regional and international levels. It also convened in a plenary meeting on the margins of the Annual Meetings of the IMF and the World Bank in October 2018, during which the NGFS's First Progress Report was published. An exhaustive report was published in April 2019.

1.12 EUROSYSTEM PROCUREMENT COORDINATION OFFICE (EPCO)

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

The mandate of BCL to host EPCO has been established until 31 December 2019, with the possibility of renewal.

According to the terms of the ECB Decision laying down the framework for joint Eurosystem procurement[152], EPCO's main task is the identification and coordination of cases of joint procurement that are likely to bring benefits or where there is a need for harmonisation of goods and services for the Central Banks[153], as well as other eligible institutions[154] which could have interest in participating in EPCO's activities.

To achieve these objectives, EPCO has continued to focus its activities on the identification and coordination of joint procurement procedures of interest for the participating Central Banks, as well as on the management and promotion of agreements concluded for the benefits of its members.

EPCO's procurement programme approved by the Governing Council, includes IT goods and services, market data services, consultancy and training services, air transport and hotel services and banknote related items.

151 The COP212 of 12 December 2015.

152 Decision of the European Central Bank of 17 November 2008 laying down the framework for joint Eurosystem procurement (ECB/2008/17) (2008/893/EC) as modified by Decision ECB/2015/51.

153 In 2018 EPCO regrouped in total 23 Central Banks: 19 Central Banks of the Eurosystem participated in EPCO's activities, as well as 4 Central Banks that are not part of the euro-zone. Discussions have been held with other Central Banks of the ESCB expressing an interest for future participation with EPCO.

154 Since 2016, certain institutions that are not part of the ESCB can take part in EPCO's procurements under the conditions defined by the Decision ECB/2008/17.

In 2018, as part of its missions, EPCO coordinated 20 joint procurement procedures. For each procedure, one "Lead Central Bank" is nominated for its implementation in coordination with EPCO.

As part of the studies and exchanges of information carried out in collaboration with the networks of experts from the Central Banks participating in EPCO, new joint procurement opportunities were identified to be launched as of 2019.

The framework agreements in place resulting from the joint procurement procedures have generated considerable financial and administrative benefits for the Central Banks and EPCO's participating institutions.

Moreover, EPCO continued to facilitate the exchange and development of best practices, in collaboration with its experts' networks, thus promoting a reinforced cooperation in the area of public procurement within the ESCB.

The execution of the EPCO budget in 2018 (part of a multi-annual financial envelope) has proven to be lower that the budget initially allocated.