Clearstream Banking S.A.

Annual Accounts
as at 31 December 2018

(with report of the Réviseur d’Entreprises agréé thereon)
1. Report on Operating Activities

1.1. Operating Activities and Key Indicators

In 2018, essential factors driving business activities of Clearstream Banking S.A. were an increase in both custody volumes of international securities as well as in settlement business. In the custody business, the overall average value of securities deposited with Clearstream Banking S.A., which is the parameter determining deposit fees, increased by 1 percent to a new record level of EUR 7.5 trillion (2017: EUR 7.4 trillion).

In the international settlement business, the number of settlement transactions increased by 8 percent in financial year 2018 to 61.5 million (2017: 56.9 million). Compared with 2017, settlement of OTC securities transactions in international markets, which basically remained stable at 85 percent of total international transactions (2017: 84 percent), increased by 9 percent to 52.0 million transactions whereas the on-exchange transactions increased by 2 percent to 9.4 million transactions.

Investment Funds Services kept growing. In 2018, 13.2 million transactions were processed, an increase of 8 percent over the previous year (2017: 12.3 million). In 2018, at the end of year, circa 180,000 mutual funds and 40,000 hedge funds were available from more than 40 jurisdictions for order routing through Clearstream’s Vestima platform. The assets held under custody at Investment Fund Services form part of Clearstream’s total custody volume; they amounted to EUR 818.8 billion on average in 2018, up to 18 percent year-on-year (2017: EUR 695.6 billion).

In the Global Securities Financing (GSF) business, the average outstanding volume slightly decreased by 1 percent to EUR 233.4 billion (2017: EUR 235.0 billion). GSF products offered at Clearstream Banking S.A. cover mainly collateralisation for interbank financing transactions such as triparty repurchase agreements, secured loans and securities lending.

Average customer cash deposits declined by 4 percent year-on-year, to EUR 13.1 billion (2017: EUR 13.6 billion). However, the decrease in volume was offset by a higher interest rate level in the US – with 4 interest hikes in 2018, the latest by 0.25 percentage points in December 2018. This gave a boost to net interest income, given that around 54 per cent of cash deposits is denominated in US dollar. Consequently, net interest income generated with daily customer cash balances increased considerably.
General and administrative expenses increased by 18 percent to EUR 400.3 million (2017: EUR 340.5 million). This is mainly due to an increase in intercompany expenses to EUR 270.0 million (2017: EUR 239.1 million) and to the “Structural Performance Improvement Programme” (SPIP) within Deutsche Börse Group and in particular the Bank.

In addition, the average number of staff employed by the Bank increased in 2018, due to the fact that some employees who had a former Clearstream International S.A. employment contract signed a new employment contract with the Bank during the course of 2018.

“Structural Performance Improvement Programme” (SPIP) within Deutsche Börse Group
In the course of "Roadmap 2020" which mainly focuses on three strategic areas (organic growth, target acquisitions and investments in new technologies), a new programme (SPIP) has been set up to enhance the operational efficiency whilst reducing structural costs. This will encompass improved decision-making processes as well as streamlining the organisation. Group-wide, 350 jobs are planned to be cut, thereof 50 managers.

The target is to reduce structural costs by around EUR 100 million by end of 2020 within the overall Deutsche Börse Group. One-off costs for the strategic programme will amount to approximately EUR 200 million group-wide, most of which will be incurred in 2018.

Clearstream Banking S.A. is also affected out of cost savings. In this context, the latter incurred costs of approximately EUR 17 million in 2018.
1.2. Key Performance Indicators
To sum up, key performance indicators have developed as follows:

- Net interest income increased by 43 percent to EUR 147.6 million
- Net commission income increased by 1 percent to EUR 470.6 million
- General and administrative expenses increased by 18 percent to EUR 400.3 million
- Profit on ordinary activities before tax decreased by 9 percent to EUR 267.9 million
- Net profit for the financial year increased by 6 percent to EUR 206.5 million
- Average value of securities deposited increased by 1 percent to EUR 7.5 trillion

2. Research and Development Activities and Expected Developments
As a service provider, Clearstream Banking S.A. does not engage in research and development activities comparable with those of manufacturing companies. This section of the report has therefore been omitted.

Regarding the expected developments, Clearstream Banking S.A. expects that the bulk of drafting of post-crisis regulation is now complete, and that in the period up to 2020 the focus of regulators will be on implementation. This will require significant investment in order to ensure compliance. There is also the potential for regulatory divergence between Europe and the USA, depending on the extent to which Dodd-Frank provisions are rolled back by the Trump presidency.

Apart from that, Clearstream Banking S.A. expects global economic growth at a decreasing rate with some regions at risk of recession and continued monetary normalisation. This is likely to progress at different speeds in different geographies, which will again lead to divergence and opportunities for arbitrage.

The severity of the impact of other environmental factors, both socio-political (e.g., Brexit) and technological (e.g., blockchain), currently remain unclear. Public trust in financial services remains low in comparison to other industry sectors, which may again manifest in an unfavourable political environment for services offered by the Clearstream entities. These factors need to be monitored closely on an ongoing basis so that responses can be put in place in a rapid manner as further developments materialise.

Many of these factors are outside the entity’s control. Should one of the risks or uncertainties arise or one of the assumptions made turn out to be incorrect; the actual development of Clearstream Banking S.A. could deviate in either a positive or a negative way from the forward-looking statements and information in this report.

3. Regulatory Environment
The consequence of the global financial markets crisis is a series of regulatory initiatives taken by legislators. There is consensus on an international basis that financial stability and public confidence in the financial system need to be restored. Accordingly, the EU has consequently implemented a stability agenda following global standards. Even though most of the new
The regulatory framework has been implemented, some requirements have not yet been completely implemented or are still under review.

Brexit is adding a new dimension to the regulatory framework as it reshuffles priorities and increases the need to create a stable but also competitive EU-27 financial market. In relation to the UK’s withdrawal from the EU, it is important to consider that CSD operations will continue mostly undisrupted from Brexit, as UK clients can continue to hold accounts under Luxembourg and German law to access Central Securities Depositories (CSDs) in EU-27 or other locations. However, contingency arrangements have been established to cater for any possible unforeseen situation.

### 3.1. Financial Markets Infrastructure Regulation

#### 3.1.1. EMIR: Implementation and Review

The European Market Infrastructure Regulation (EMIR), which came into force in 2012, is a significant regulation for central counterparties and trade repositories. With the step-by-step introduction of a clearing obligation, starting in the first half of 2016, implementation has entered into its final phase.

The European Commission nevertheless commenced the official revision process for this regulation in the summer of 2015. This process resulted in the publication of legislative proposals by the European Commission in spring 2017 (EMIR Review) with the core objectives to improve efficiency of central clearing and to ensure that stability of financial markets can be ensured also post Brexit. The publication of the legislative proposals triggered the start of the legislative process within the European Parliament and Council. Both, European Parliament and Council, have finalized their positions and the revision of EMIR is now being discussed in the trilogue phase.

#### 3.1.2. Recovery and Resolution Plans for Financial Market Infrastructures

Besides the EMIR revision process, Recovery and Resolution for CCPs is the next legislative step in implementing the G20 objectives within the EU. This initiative will complement the high standards implemented through EMIR and confirm the CCPs' role as a neutral risk manager for financial markets. In this regard the EU Commission published its first legislative proposal in November 2016. The publication of the legislative proposal triggered the start of the legislative process within the European Parliament and Council. Due to higher priorities, Council discussions have been put on hold. A finalization of the regulation is not expected before Q4 2019.

In relation to the CSD recovery side of this exercise, there are clear indications by the European Commission that they do not intend to work on ad-hoc legislative proposal for CSD’s recovery considering that the requirements of the CSDR along with the CPMI-IOSCO and the FSB guidelines are considered sufficient to establish their respective recovery and resolution plans.

As way of background, back in 2012, the Committee on Payments and Market Infrastructures (CPMI), together with the International Organization of Securities Commissions (IOSCO),
published first considerations for consultation. CPMI/IOSCO provided global standards for recovery plans in October 2014. At the same time, the Financial Stability Board (FSB) published a framework for resolution plans in close cooperation with CPMI/IOSCO.

These recovery and resolution plans complement EMIR for CCPs and the CSDR for CSDs with the aim of providing financial market infrastructures with greater stability against market disruptions. In this context, one key aspect is to build upon healthy incentive structure at a European and global level introduced by EMIR, which excludes the use of public funds.

3.2. Capital Markets Union (CMU)

Together with the economic, monetary and the banking union, the capital markets union shall lead towards an integrated European financial market. The main objectives are to promote growth and job creation on a sustainable basis, and to develop a diversified financial system, which complements bank-based financing with highly developed capital markets. Another objective is to release inactive capital throughout Europe, in order to offer savers a wider variety of investment forms, and increasing corporate financing opportunities as well as introducing cross-border risk-sharing in the EU at the same time. Current plans also include the simultaneous creation of an EU domestic capital market, to promote cross-border investments and enable companies to tap different sources of finance, independent from their domicile.

According to the first European Commission’s action plan back in September 2015, by 2019 the building blocks of the Capital Markets Union should have been in place. However, today the role of capital markets in EU-27 is still underdeveloped compared to the importance of its real economy. Therefore, it is essential that the work on the CMU is being continued in the future. The European Commission has already announced two action plans with new priority areas such as “FinTech” and “Sustainable Finance”. The EU should use Brexit as an opportunity to increase the role of financial markets and to find its way to ensure an attractive environment for investors.

Clearstream Banking S.A. and Deutsche Börse Group actively support the project and assume an active role in the political debate. We believe the following basic principles to be material to a successful implementation: restoration of confidence in the financial markets improved and expanded alternative instruments for non-bank-based corporate financing, financial stability, transparency, harmonised regulatory standards and a supportive regulatory framework.

New challenges to financial integration have arisen more recently, which call for strengthening and transforming the EU’s capital markets agenda. In particular, Brexit makes it necessary to reassess how the CMU can ensure the competitiveness of EU businesses and investors.

3.3. Central Securities Depository Regulation (CSDR)

With the full adoption of the different CSDR measures in 2018, a uniform European regulatory framework for central securities depositories has been established for the first time in Europe. Clearstream Banking S.A. has filed for authorisation in 2017 within the set deadlines, and currently its authorisation file is in the process of being validated by its relevant competent authorities. The CSDR will harmonise the securities settlement systems and supervisory rules for central securities depositories throughout Europe. This will strengthen Clearstream Banking
S.A.’s business model, and allow for a smooth transition of its service range to the demanding regulatory framework introduced by CSDR.

### 3.4. Banking Regulations

#### 3.4.1. Basel III

The Basel Framework “Basel III” currently specifies the international regulatory environment governing banking activities. Implementation within the EU was largely finalised by 1 January 2014. Further adjustments had been scheduled within the transitional and adaptive regulations as well as for the phased introduction and specification through level-2 texts until 2019.

In consequence of the recent financial crisis and based on G20 decisions, the Basel Committee on Banking Supervision (BCBS) has substantially amended and updated the preceding banking framework, known as Basel II back then. Substantial cornerstones were published in 2011 and additional changes have been issued since then. Changes which have already been implemented include:

- Stricter definition of the term “capital”
- Increased capital levels
- Revised market risk framework
- Introduction of a leverage ratio

The 2017 reforms complement the initial phase of the Basel III reforms by adding revisions of the credit risk framework (standardised and model-based approaches) and the operational risk framework. The implementation of the 2017 reforms is foreseen for 1 January 2022. The European Commission is expected to come forward with a legislative proposal in the beginning of 2020 in order to implement the remaining parts of Basel III into European Law.

#### 3.4.2. CRD/CRR

By issuing the Capital Requirements Directive (CRD) and the Capital Requirements Regulation (CRR), which both became effective on 1 January 2014, the EU implemented the first cornerstones of the Basel III framework. Implementation with some transitional and phase-in arrangements is scheduled to be completed in 2019.

In November 2016, the European Commission proposed amendments to CRD IV and CRR, which take into account the ongoing changes regarding the Basel III framework and other elements of banking regulation. The proposed legislative package also reflects changes related to legislation on the Minimum Requirement for own funds and Eligible Liabilities (MREL) and the Total Loss-Absorbing Capacity (TLAC) that leads to adjustments mainly affecting the Bank Recovery and Resolution Directive (BRRD).

Key elements of the legislative proposal beside the MREL/TLAC adjustments are:

- The introduction of a binding leverage ratio of 3 percent
- The introduction of a binding net stable funding ratio (NSFR)
- A revised framework for market risk
The legislative proposals (CRR II and CRD V) were finalised in December 2018 and will enter into force not before 2021. Deutsche Börse Group had taken an active part in the discussion process regarding the modification of banking regulations, and thus addressed the regulation’s specific impact on financial market infrastructures with (limited) authorisation to engage in banking business. Furthermore, Deutsche Börse Group will continuously analyse the capitalisation of its regulated entities, making any necessary adjustments in order to ensure that risks are adequately covered.

The political agreement on the CRR II foresees important amendments from a Clearstream Banking S.A. perspective. As a CSD with a banking license, exemptions were granted to be excluded from the NSFR as well as from certain exposures under the leverage ratio. With these exemptions, the impact of the banking regulations on Clearstream Banking S.A. could be significantly reduced. However, the specificities of financial market infrastructures engaging in banking business had not been taken into account with regard to the MREL requirement. Thus, MREL has to be applied by CSDs with a banking license.

With the European Commission proposal to implement the remaining Basel III 2017 reforms in the pipeline, Deutsche Börse Group will continue its efforts in addressing the specificities of financial market infrastructures with (limited) authorisation to engage in banking business.

### 3.5. Transparency of Securities Financing Transactions

The EU bodies resolved a regulation on the transparency of securities financing transactions (Securities Financing Transaction Regulation, SFTR), which complements the proposed regulation on the introduction of a segregated banking system that ring-fences proprietary trading from the deposit and lending business. The regulation was published on 23 December 2015 in the Official Journal of the European Union. It introduces a requirement to report securities lending and repo transactions to central trade repositories. In addition, it introduces rules for repledging collateral and regulates the reporting requirements of investment fund providers with securities lending activities.

The European Commission has published the final set of Level-2 regulatory technical standards (RTS) and Implementing Technical Standards (ITS) on 13 December 2018 triggering the SFTR reporting obligations. Reporting is to start at the earliest in April/May 2020 for banks, with the remaining impacted entities to follow in three month successions. The SFTR will lead to the development of new reporting services for Clearstream Banking S.A..

### 4. Corporate Governance Structure

Clearstream Banking S.A. is a public limited liability company (“société anonyme”) organised and existing under the laws of Luxembourg.

Clearstream Banking S.A. adopted in 2016 the two-tier governance structure. Accordingly, the Executive Board is the managing and ultimate decision-making body and is authorised to carry out all actions that are considered necessary or useful to achieve the Bank’s purpose, except for those reserved to the Supervisory Board or the shareholders’ meeting by law or by the articles of association. The Executive Board fulfils its management duties under the supervision of the Supervisory Board.
The Supervisory Board has no executive and decision-making powers, but advises, monitors and supervises the Executive Board. To assist the Supervisory Board with the fulfilment of its supervisory mission, the Supervisory Board has established an Audit Committee, a Risk Committee and a Remuneration Committee. These committees have a supervisory and advisory role and report directly to the Supervisory Board.

Furthermore, Clearstream Banking S.A. has established three internal control functions, including the compliance function, the risk management function and the internal audit function. Each internal control function has been established independently from any business unit, central function or other control function within the organization. Each internal control function is under the responsibility of a head of function – the Chief Compliance Officer, the Chief Risk Officer or the Chief Internal Auditor. The internal control functions report to the Executive Board and the Supervisory Board and, if applicable, to its committees on a regular basis.

Until March 2018, the internal controls functions were outsourced to Clearstream International S.A.. Since April 2018, the corresponding employees of Clearstream International S.A. were transferred to the Bank and the outsourcing was stopped.

5. Current and Future Trends
Clearstream Banking S.A.’s core business is the settlement and custody of international bonds. Both the trading and the post-trading market environment have become more complex in recent years, and Clearstream Banking S.A.’s goal continues to be to streamline the post-trade services industry in the interest of its customers.

Clearstream Banking S.A.’s business model has been essentially revolving around the automation and standardisation of business that was previously conducted by agent banks on a more bespoke basis. Due to the historical geopolitical circumstances in Europe, market infrastructure has developed in a haphazard manner and is to this day still broadly constrained along national lines. With the advent of CSDR, roles of CSDs will become more formalised and defined. Clearstream expects this to lead to more intra-CSD competition and lower levels of competition between different classes of entities (i.e., Global Custodians and Agent Banks).

6. Risk Report
Effective and efficient risk management safeguards Clearstream Banking S.A.’s continued existence and enables it to achieve its corporate goals in the long term. To this end, Clearstream Banking S.A. has established a risk strategy and a risk management framework, which defines roles, processes and responsibilities and is binding for all staff.

6.1. Risk Strategy
Clearstream Banking S.A.’s risk strategy (as covered by the Clearstream Holding AG risk strategy) is based on its business strategy and sets limits specifying the maximum risk permitted for operational risks, financial risks and business risks. This is done by laying down respective requirements for risk management, risk control and risk limitation. Clearstream Banking S.A.
ensures that appropriate measures are taken to avoid, reduce and transfer, or intentionally accept, risk.

The risk strategy enables risks to be identified and controlled in a timely and adequate manner. Information is captured and assessed on the basis of the structured and consistent procedures in place. The results of the assessments are collected in the reporting system, which is used to systematically analyse and control the risks. Risk reports are prepared on a regular and an ad-hoc basis, and cover existing as well as potential risks identified.

Clearstream Banking S.A. follows a number of different principles in its risk management:

- Each member of the Executive Board bears the ultimate responsibility for risk management of Clearstream Banking S.A.
- All responsible management levels must always be informed about the relevant risks of Clearstream Banking S.A. in an open, timely and complete manner.
- The awareness of risk and the associated risk culture is ensured by clear organisational structure, defined responsibilities and roles, viable processes and continuous knowledge transfer to employees.
- Effective and efficient risk management supports Clearstream Banking S.A. in achieving its corporate goals and safeguards Clearstream Banking S.A.’s continued existence. The risk management framework is designed to provide complete, timely and consistent risk-related information in order to ensure the identification, assessment and monitoring and reporting of risks.

### 6.2 Risk Management Framework

Clearstream Banking S.A.’s risk management framework ensures that all management committees within Clearstream Banking S.A. are able to control the risk profile of the entire Bank, as well as specific material risks, in a timely manner. The aim is to identify developments that could threaten Clearstream Banking S.A.’s interests and to take appropriate countermeasures promptly.

#### 6.2.1 Governance

Through the governance structure of its risk management framework, Clearstream Banking S.A. ensures a strong awareness of risk throughout Clearstream Banking S.A. and the effectiveness and efficiency of the risk management framework.

The Executive Board of Clearstream Banking S.A. is responsible for Clearstream Banking S.A. risk management. The Executive Board monitors the effectiveness of the risk management framework. In addition, the Clearstream Banking S.A. Risk Committee (RC) reviews and acknowledges the risk strategy, and the quarterly Risk Reports.

Clearstream Banking S.A. appointed a Chief Risk Officer (CRO) who is responsible for the risk management and reports to all concerned committees of Clearstream Banking S.A. The quarterly Risk Reports issued by the CRO contain assessments of existing and new risks that are identified from ongoing interaction between Business and Risk Management. The Executive Board of Clearstream Banking S.A. is informed of the contents of these reports.
The business areas ultimately identify risks and report them promptly to the risk management. In addition, the business areas also perform risk control, inform their respective management about developments in risk indicators and continuously improve the quality of the risk management processes.

The risk management ensures that the comprehensive risk management framework is applied and that it complies with the same minimum standards in all companies belonging to Clearstream Banking S.A..

In addition, within Clearstream Banking S.A. other areas such as Group Credit and Treasury perform relevant risk management tasks. Furthermore, Financial Accounting & Controlling reports to the supervisory authorities in compliance with regulatory guidelines. It is also responsible for the budget controlling. Independent audits by the Internal Auditing function ensure that the risk control and risk management are adequately organised and that they perform their duties.

6.2.2 Risk Management Process

The risk management framework is used to implement the risk strategy for which the Executive Board is responsible. For example, all potential losses must be identified in adequate time, captured centrally, assessed (i.e., quantified in financial terms as far as possible), reported to the Executive Board together with recommendations, and controlled. Therefore, Clearstream Banking S.A. risk management process comprises five different stages.

Step 1: Risk identification
In this initial step, threats and causes of losses or malfunctions are identified. Risks can arise from either internal activities or are due to external factors. All matters that could have a material impact on Clearstream Banking S.A. business or that might change the risk profile of Clearstream Banking S.A. must be recognised as early as possible. It is the responsibility of all business areas and their employees to identify these potential risks.

Step 2: Risk notification
All business areas must inform the risk management regularly and, in urgent cases, on an ad hoc basis of any potential risks they have identified and quantified. This procedure guarantees that all potential risks and threats are captured centrally.

Step 3: Risk assessment
The risk management assesses the risk potential in a quantitative and qualitative manner based on the information available. The Value at Risk (VaR) method is used for the quantitative assessment of a potential risk (see the section on “Risk management methods” of this management report). Clearstream Banking S.A. uses a risk matrix for the qualitative assessment of specific risks, in particular regulatory requirements. This matrix allows risks to be observed over a period exceeding the usual observation period of twelve months. This helps to ensure that the risk profile of Clearstream Banking S.A. is observed in a comprehensive manner over several years.
Step 4: Risk control
All business areas and their employees are responsible for the risk control and for taking measures to limit potential losses. There are four possible responses for assessing the risk controls: risk mitigation, risk avoidance, external risk transfer, or deliberate risk acceptance. Each business area within Clearstream Banking S.A. decides and implements the most appropriate alternative in each case.

Step 5: Risk reporting
The responsible Executive Board and committees are informed of any material risks, their assessment and possible immediate countermeasures. If appropriate, the Executive Board receives further recommendations so that they can trigger suitable measures.

In addition, an “Internal Capital Adequacy Assessment Process” (ICAAP) report is provided to the Executive Board of Clearstream Banking S.A. once a year, thus fulfilling the provisions of the second pillar of the Basel II regulatory framework. In this report, the current risk situation is reported and the capital resources of Clearstream Banking S.A. are assessed. In accordance with the third pillar of Basel II, Clearstream Banking S.A. also meets a broad obligation to publish its business activities in its capacity as a financial institution. In particular, Clearstream Banking S.A. regularly reports to the supervisory authorities on the methods of its risk management and the assessment of capital resources.

In relation to “Pillar III” information and disclosures to be published by credit institutions in accordance with Part Eight of the EU Regulation N°575/2013 of the European Parliament and of the Council of 26 June 2013 (hereafter “CRR”), Clearstream Banking S.A. is included in a comparable consolidated publication (“Pillar III Disclosure Report of Clearstream Group”) at the level of Clearstream Holding AG, a financial holding company, that includes its subordinated companies, including Clearstream Banking S.A.. This report is available on the Clearstream Group website (http://www.clearstream.com).

6.2.3 Risk Management Methods
Clearstream Banking S.A. uses various quantitative and qualitative risk management methods to monitor and control the risk profile. The combination of different methods is intended to provide a comprehensive picture of the current risk situation as accurate as possible. This allows Clearstream Banking S.A. to take appropriate measures to safeguard Clearstream Banking S.A.’s continued existence. The following section illustrates the central risk management instruments used by Clearstream Banking S.A..

Value at risk
Clearstream Banking S.A. uses a best practice-approach – value at risk (VaR) – for measuring and reporting all risks. VaR is a comprehensive way of presenting and controlling the general risk profile. It quantifies risks and lays down, for the specified confidence level, the maximum cumulative loss Clearstream Banking S.A. could face if certain loss events materialised over a specific period. Likewise, potential concentration risks can also be identified by way of VaR analyses.
Required economic capital
Clearstream Banking S.A.’s required Economic Capital (EC) can be determined using the VaR. EC measures the amount of capital that is required in order to be able to cover extreme events over a period of twelve months. EC is calculated at a confidence level of 99.98 percent. This means that losses within the next twelve months will not exceed the calculated EC with a probability of 99.98 percent.

Stress tests
Clearstream Banking S.A. also carries out stress test calculations for operational, business as well as financial risks. These stress tests simulate the occurrence of extreme losses or an accumulation of major losses in one year. Since Clearstream Banking S.A., with the exception of the OFAC settlement, has not incurred any major losses to date, potential risk scenarios are defined for this purpose. These risk scenarios describe possible loss events and their probability as well as the potential amount of a loss, which is estimated. The values determined in the stress tests are compared with the limits defined as part of the risk-bearing capacities. Both historical as well as hypothetical scenarios are considered and calculated.

Reverse stress tests
Reverse stress tests are also performed. This instrument is used to determine loss scenarios that would have to occur exceeding the risk-bearing capacities.

Regulatory requirements
Having received regulatory approval from the Luxembourg supervisory authority CSSF (Commission de Surveillance du Secteur Financier), Clearstream Banking S.A. has applied the Advanced Measurement Approach (AMA) since 1 January 2008 to calculate its capital requirements for operational risk under Luxembourg solvency regulations based on the Basel II regulatory framework. For credit and market risks, Clearstream Banking S.A. uses the standardised approach.

6.3 Risk-Bearing Capacity Concept
Clearstream Banking S.A. calculates the required economic capital ("EC") to determine the utilisation of the available risk-bearing capacity. The most conservative approach is pursued for the EC with the objective to show the dependencies. A value of 1 is assumed for both the correlation of inter-risk and inter-company diversification effects. Clearstream Banking S.A. uses its regulatory capital as the available risk-bearing capacity for its EC. EC is compared with the available risk-bearing capacity enabling to gauge the appropriate level of Clearstream Banking S.A.’s available risk-bearing capacity. Clearstream Banking S.A. also calculates EC at the level of individual risks. These are compared against limits representing a percentage of the available risk-bearing capacity defined for each individual risk.

Clearstream Risk Management reports to the Risk Committee (RC) and to the Executive Board, on a quarterly basis, the results of the utilisation of the available risk-bearing capacity. This procedure guarantees that the risk limits laid down by the Executive Board in its risk strategy are monitored and complied on a sustainable basis.
6.4 Risk Description and Assessment

6.4.1 Risk Structure

Clearstream Banking S.A. distinguishes between operational, financial, business and project risk. These individual risks constitute substantial risks for Clearstream Banking S.A.

Operational Risk

In the operational risk category, a distinction is made between availability risk, service deficiencies, damage to physical assets, legal offences and business practices. Service deficiencies, availability risk and legal risks constitute substantial operational risks for Clearstream Banking S.A.

- In the reporting year, an event, caused by a service deficiency, led to an incorrect set up of rights for Clearstream Banking S.A. Consequently, Clearstream Banking S.A. executed a buy-in (i.e. purchase of shares on the market) which resulted in a loss amount of EUR 395k.

- Availability risk results from the possible failure of operating resources essential to the services Clearstream Banking S.A. offers, making it impossible to deliver services on time or at all. The risk that the services and products offered by Clearstream Banking S.A. may not be available constitutes a substantial risk. This includes the risk that critical IT systems fail. This could mean that basic business activities of Clearstream Banking S.A. cannot be conducted for a period of time. This risk is mitigated by extensive Business Continuity Management (BCM) measures, including a redundant hardware and network infrastructure. In order to ensure the effectiveness of these measures, they are tested regularly. No material losses due to availability risk were determined in the reporting year.

- Risk associated with legal offences includes losses that could arise as a result of non- or inappropriate compliance with new or existing laws, losses from insufficient contract terms or from court decisions not adequately taken into account during normal business operations, as well as losses from fraud. Clearstream is also exposed to legal risks, in particular legal disputes that are ongoing at present. No material losses due to legal offences risk were determined in the reporting year.
• Damage to physical assets includes risks due to accidents and natural disasters, as well as terrorism and sabotage. No material losses due to damage to physical assets risk were determined in the reporting year.

• Business practices risk includes losses resulting from money laundering, violations of competition regulations, or breaches of banking secrecy. This includes, for example, non-compliance with national or international regulations. No material losses due to business practice risk were determined in the reporting year.

Clearstream Banking S.A. devotes considerable attention to mitigating the different types of operational risk mentioned above with the aim of reducing the frequency and amount of potential financial losses arising from corresponding risk events. To this end, various quality and control measures are taken to protect Clearstream Banking S.A. business from all cases of fraud and operational business losses. In addition to compliance with international best practice quality standards, these measures include a careful analysis of operational risk events that have occurred so that steps can be defined to reduce the probability of their recurrence. Apart from this, Clearstream Banking S.A. has defined business continuity measures to be taken when an incident or disaster occurs. Furthermore, Clearstream Banking S.A. has entered into insurance contracts to reduce the financial consequences of loss events.

Any residual operational risk that Clearstream Banking S.A. does not wish to retain and that can be insured at a reasonable price is transferred by taking out insurance policies. All insurance policies are coordinated centrally, thereby ensuring that uniform insurance coverage is available at any time for the entire Deutsche Börse Group at an appropriate cost-benefit ratio. Insurance policies that are relevant to risk are individually reviewed and approved by Finance Executive Management.

Financial risks
Clearstream Banking S.A. is exposed to financial risks mainly in the form of credit risk. On a smaller scale, there is also market price risk from cash investments and pension funds and liquidity risk. Exposure to the risk is mitigated through the existence of effective control measures.

Credit risk
This risk consists of the risk that a counterparty may default and be unable to meet its liabilities against Clearstream Banking S.A. in full or at all. Main drivers of Clearstream Banking S.A.’s credit risk are Treasury placements, customer borrowings and securities financing (ASL and ASLplus). When investing own funds and customer cash, Clearstream Banking S.A. respects prudent principles as laid down in its Treasury Policy. Placements are in general secured with high-quality collateral or at central banks, the main part being overnight. Clearstream Banking S.A. may grant loans to its customers to increase the efficiency of securities transaction settlements. However, these lending operations cannot be compared with those of other credit institutions. Firstly, as required by CSDR, the loans are granted only on a secured basis, with the exception of those granted to certain central banks and multilateral institutions as per Article 23(2) of Commission Delegated Regulation (EU) 2017/390 of 11 November 2016 (supplementing Regulation (EU) No 909/2014). Secondly, loans are extended solely on an extremely short-term basis for the purpose of increasing the efficiency of securities settlement.
Furthermore, credit is granted to creditworthy customers with very good credit ratings. Credit lines granted are uncommitted and can be revoked at any time.

To increase the efficiency of settlement, Clearstream Banking S.A. may lend securities to its customers in its fails lending programme (ASL). Further credit risk arises from the strategic securities lending business (ASLplus).

**Market risk**
Market risk may arise in the form of interest rate risk (caused by fluctuations in interest rates in connection with cash investments or borrowing) or currency risk (in the operating business, when recognising net revenues denominated in foreign currencies). Clearstream Banking S.A. is exposed to interest rate risk in connection with cash investments. Interest rate risk is mitigated using a limit system that only permits maturity transformation to a small extent. Even though Clearstream Banking S.A. is exposed to foreign currency risk, this is rather minimal due to the limits set in place for its various currency exposures.

**Liquidity risk**
Clearstream Banking S.A. is exposed to liquidity risk in that it may lack sufficient liquidity to meet its daily payment obligations or may incur increased refinancing costs in the event of liquidity shortfalls. Daily and intraday liquidity is monitored closely by the Treasury and Credit departments and managed with the help of a limit system. Sufficient credit lines are available to provide cover in extreme situations. In addition, Clearstream Banking S.A. performs three common liquidity stress tests and two reverse liquidity stress tests. The aim of these common liquidity stress tests is to check for possible liquidity shortfalls under different stress scenarios (base scenario, market disruption scenario, and market disruption and idiosyncratic scenario). The reverse liquidity stress tests are based on the market disruption and idiosyncratic scenario. Their aim is to determine what would need to happen to customer cash balances, for Clearstream Banking S.A., to suffer a liquidity shortfall. In the year under review, Clearstream Banking S.A. had excess liquidity at all times and no liquidity bottlenecks occurred.

**Business risks**
The business risk reflects the sensitivity of Clearstream Banking S.A. to macroeconomic developments and its vulnerability to event risks arising from other external threats. It is translated in EBIT terms, reflecting both a potential revenue decrease and a potential increase of its cost base. Clearstream Banking S.A.’s financial performance is directly or indirectly subject to the evolution of a number of macroeconomic factors and the related effects. Revenues are directly or indirectly impacted, for example, by the level of interest rates, economic growth, equity market valuations and trading volumes, the level of issuance of securities, but also investor confidence in the economic environment. Clearstream Banking S.A. could be affected by other external threats, like changes in the competitive or regulatory environment. Scenarios are established around the most significant risk events and quantitatively assessed. The respective departments monitor developments closely in order to take early mitigation actions if necessary and possible.

**Project risks**
Project risks can arise as a result of project implementation (launches of new products, services, processes or systems), which may have a significant impact on any of the three other risk categories (operational, financial and business). Project risks are assessed by Clearstream Risk
Management and are addressed in the early stages of major projects. Risks connected with the delivery of projects, such as budget risk, quality/scope risk and deadline risk, are monitored and reported by the units running the projects. Based on relevant monitoring and control, project risks are continuously analysed and assessed. Project risks can be operational, financial or business-related and are quantified in the respective risk category.

### 6.4.2 Business Continuity Management

Clearstream Banking S.A. endeavours to deliver its products and services as reliably as possible. For this reason, it attaches the greatest importance to maintaining its business operations and protecting them against incidents and disasters. Since the unavailability of its core processes and resources poses a substantial risk to Clearstream Banking S.A. and is a potential systemic risk for the financial markets in general, Clearstream Banking S.A. has established a comprehensive business continuity management (BCM) framework.

The BCM framework encompasses all the precautionary processes to ensure that business continues as normal if a crisis occurs, thus substantially reducing availability risk. It covers arrangements for all key resources (systems, space, staff, and supplier’s/service providers), including the redundant design of all critical IT systems and the technical infrastructure, as well as workspace and staff unavailability plans in each of the main operational centres for critical functions. A summary of these arrangements can be found in the “Business continuity measures” graphic below.

**Business continuity measures**

<table>
<thead>
<tr>
<th>Incident and crisis management process</th>
<th>Systems</th>
<th>Workspace</th>
<th>Staff</th>
<th>Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Systems as well as related networks are designed for continuous high-availability operations without loss of electronic data.</td>
<td>Backup workspaces are configured for mission critical functions.</td>
<td>In case of significant staff unavailability in a specific location, critical operations can be shifted to other locations.</td>
<td>Service level agreements describe contingency procedures with critical suppliers.</td>
</tr>
<tr>
<td></td>
<td>The data centres are duplicated locally to protect against a failure of an entire location.</td>
<td>The backup locations are fully equipped and always ready for immediate use.</td>
<td>Additional pandemic mitigation measures are in place in case of pandemic outbreak.</td>
<td>Contingency procedures of suppliers are regularly reviewed through a due diligence process.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remote access facilities to the Group’s systems enable teleworking.</td>
<td></td>
<td>Alternative suppliers are used where possible.</td>
</tr>
</tbody>
</table>

An incident and crisis management process has been implemented to ensure a prompt response and a coordinated approach to any emergencies. The process is designed to minimise their impact on business processes and the market and to facilitate a swift return to business as usual. Incident managers have been appointed as central points of contact in all business areas. The incident managers inform and/or alert the Executive Board depending on the severity of the incident. In cases of crisis, the Executive member responsible for the area concerned acts as the crisis manager. The business continuity measures are tested regularly by realistically simulating incidents. These tests are usually carried out unannounced. Risk management issues test reports including the test results, problems encountered and his recommendations. The test results are assessed according to the following criteria:
• Functional effectiveness – the measures must work from a functional or technical point of view.
• Executability – employees must be familiar with the incident and recovery procedures and be able to execute them.
• Recovery time – the emergency measures must ensure that operations are restored within the scheduled time.

6.5 Summary
For new identified risks appropriate measures were implemented by Clearstream Banking S.A to address them at an early stage. In the year under review, the risks to which Clearstream Banking S.A was exposed to were well managed.

As at 31 December 2018, Clearstream Banking S.A. required economic capital was amounting to EUR 758 million and was covered by a risk-bearing capacity amounting to EUR 1,099 million. The Executive Board of Clearstream Banking S.A. is sufficiently confident regarding the effectiveness of its risk management system.

6.6 Outlook
Clearstream Banking S.A. evaluates its risk environment and profile on an ongoing basis. Taking into account the stress test results, the pertaining required economic capital, and the risk management system, the Executive Board of Clearstream Banking S.A. concludes that the risk-bearing capacity is sufficient. Moreover, no risks with more than very remote probabilities are identified, which could jeopardise Clearstream Banking S.A.’s viability as a going concern.

7. Compliance function
The mission of the compliance function is to support the Bank to comply with applicable law and regulation and to remain beyond reasonable criticism in the eyes of the authorities and the markets that it serves.

The function of the compliance department (of which Clearstream Banking S.A. and the two foreign branches are a part) is to:

• Advise, guide and support business units in their business endeavours, while making sure they comply with all applicable compliance policies.
• Identify and keep available to all staff an inventory of relevant laws, regulations and standards pertinent to Clearstream Banking S.A. It must furthermore advise the Executive Board on such obligations and together in coordination with other business, administrative and control functions, inform them about any developments in these areas.
• Identify risks to the fulfilment of the compliance mission, defining mitigating controls and ensuring that the controls are performed and the control objectives fulfilled.
• To assess on a continuing basis the Bank’s exposure to financial crime risk of all types including money laundering, terrorist financing, sanctions violations, bribery and corruption, market abuse and tax offences.

• To assess on a continuing basis the Bank’s exposure to financial crime risk arising from customers and counterparties, from products and services and from the geographies to which the Bank and its customers are exposed directly and indirectly.

• To recommend appropriate actions to mitigate the Bank’s exposure to financial crime risk, including the development of monitoring and control plans.

• To ensure that controls designed to remit financial crime risk function appropriately, remain fit for purpose and are developed to reflect developments in the regulatory environment, the business environment and risk assessments.

• To assess potential impacts of planned new business activity on the Bank’s exposure to financial crime risk and on its ability to comply with applicable law, regulation and standards. This includes new products and services, new business relationships, corporate transactions and significant changes to operating processes, which could lead to breach of applicable laws, regulations and standards, and evaluate the impact of potential breaches.

• To recommend appropriate mitigating actions to mitigate the Bank’s potential exposure to financial crime risk arising from new business activities, including the development of monitoring and control plans.

• Monitor compliance with the Group Compliance Policy and implement corrective measures where appropriate.

• Monitor compliance with Compliance Procedures and implement corrective measures where appropriate.

• To establish procedures to ensure that all account holding customers and other business partners are properly documented, identified and screened and to monitor compliance with those procedures on a risk based frequency. Procedures are reviewed latest annually.

• To establish procedures to assess the AML, CTF and sanctions compliance risk of each account holding customer and to monitor compliance with those procedures according to a risk based frequency.

• To monitor the transactions and business of the Bank for suspicious activity and to take appropriate remedial action, including the fulfilment of the Bank’s reporting duties to the authorities.

• Raise the awareness of staff as to the importance of compliance and related aspects, to this end developing and implementing a training program.

• Perform controls of compliance-relevant policies and procedures implemented by the business units on a regular basis (second line of defence).

• Investigate and follow up on compliance findings previously observed to ensure that measures are effectively implemented.
• Report significant risks, cases and findings, as well as measures taken to the Executive Board and to the Audit Committee of the Supervisory Board.

• Communicate as appropriate, or as required, with relevant regulators, supervisors and other authorities.

The Compliance function is independent from any commercial or operational function and is hierarchically linked and reports directly to the Supervisory Board (Audit Committee). In order to be able to fulfil its responsibilities the Compliance function may delegate specific tasks to other functions without delegating its own responsibility to analyse and report any findings to the Executive Board. In performing its tasks the Compliance function has full and unrestricted access to any compliance-related information. It analyses the issues observed and recommends, where applicable, corrective measures to address deficiencies.

The Chief Compliance Officer is the chairman of the Clearstream Risk and Compliance Committee (CRCC). The Compliance function reports to the Clearstream Banking S.A. Executive Board, and to the Audit Committee of the Supervisory Board on a regular basis and, if applicable, provides ad-hoc reports for any significant compliance risks and findings identified to the Executive Board and related committees.

The implementation of the Compliance function and its relevant procedures are defined in the Compliance Policy of the Deutsche Börse Group and the Compliance Charter of Clearstream Banking S.A. The main applicable professional obligations are the following:

• Prevention of money laundering and terrorist financing;
• Compliance with relevant sanctions regimes and the Bank’s sanctions policy;
• Professional and banking secrecy;
• Prevention of insider dealing and market abuse;
• Prevention of fraud;
• Prevention of conflicts of interest and corruption;
• Data protection;
• Prevention of tax offences;
• Whistle blowing;
• Prevention of bribery.

8. Acquisition of Own Shares
During the financial year ending 31 December 2018, Clearstream Banking S.A. did not acquire own shares.
9. Credit Ratings
Throughout 2018, Clearstream Banking S.A. maintained strong credit ratings. Fitch and Standard & Poor’s current short-term and long-term credit ratings are respectively F1+ and A-1+ for short-term debt and AA for long-term debt.

10. Dividends Paid and Proposed
During 2018, an interim dividend of EUR 89,976 thousand was paid (2017: EUR 69,920 thousand). In April 2018, an ordinary dividend of EUR 102,120 thousand was also paid. Dividends amounting to EUR 96,600 thousand are proposed in 2019 in respect of the result of the year ended 31 December 2018.

11. Subsidiaries, Branches and Representative offices
During 2018, Clearstream Banking S.A. had the following subsidiaries:

- Clearstream Banking Japan, Limited
- REGIS-TR S.A. (Joint-Venture)
- Clearstream London Limited (since 28 December 2018)

During 2018, Clearstream Banking S.A. had five representative offices:

- New York
- Hong Kong
- Dubai
- Zug, formerly Zurich (representative office until end of September 2018, permanent establishment in Zug from 1 October 2018)
- Tokyo

During 2018, Clearstream Banking S.A. had the following branches:

- London
- Singapore

12. Employees
The average number of employees increased by 12% percent from 451 (2017) to 504 (2018) employees due to company transfers within the Clearstream Group.

13. Report on Post Balance Sheet Date Events
In 2017, the Executive Board of Clearstream International S.A. (“CI”) decided to start a project in 2018 to set up and validate a concept in order to reshape CI by transferring part of its activities (“Other Functions”) and participations to other Clearstream entities and to focus its business on performing a new Trusted Third Party role related to HQLA x and to continue its Collateral Agent function for the ASLplus service. The transfer of CI’s “Other Functions” and participations is envisaged to be completed in the course of 2019. As a consequence, the transfer of the Bank’s participation in REGIS-TR S.A., shall be investigated.
On 1 October 2018, Clearstream International S.A. purchased former SwissCanto Funds Centre Limited, now Clearstream Funds Centre Limited (CFCL). On 1 March 2019, on the effective merger date, CFCL was fully merged with the Bank.

For details on the complaint against the Bank by Castle Creek Arbitrage, LLC, see note 6.3.10 of the Annual Accounts of the Bank.

Luxembourg, 26 March 2019

Member of the Executive Board

Philippe Seyll
CEO Clearstream Banking S.A.
Phone: +352 243 3 2510

Member of the Executive Board

João Amaral
Clearstream Banking SA
Member of the Executive Board
To the Supervisory Board of
Clearstream Banking S.A.
42, Avenue JF Kennedy
L-1855 Luxembourg

REPORT OF THE REVISEUR D'ENTREPRISES AGREE

Report on the audit of the annual accounts

Opinion

We have audited the annual accounts of Clearstream Banking S.A. (the "Bank"), which comprise the balance sheet as at 31 December 2018, and the profit and loss account for the year then ended, and notes to the annual accounts, including a summary of significant accounting policies.

In our opinion, the accompanying annual accounts give a true and fair view of the financial position of the Bank as at 31 December 2018, and of the results of its operations for the year then ended in accordance with Luxembourg legal and regulatory requirements relating to the preparation and presentation of the annual accounts.

Basis for Opinion

We conducted our audit in accordance with the EU Regulation N° 537/2014, the Law of 23 July 2016 on the audit profession ("Law of 23 July 2016") and with International Standards on Auditing ("ISAs") as adopted for Luxembourg by the "Commission de Surveillance du Secteur Financier" ("CSSF"). Our responsibilities under those Regulation, Law and standards are further described in the «Responsibilities of "Reviseur d'Entreprises agréé" for the audit of the annual accounts» section of our report.

We are also independent of the Bank in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants ("IESBA Code") as adopted for Luxembourg by the CSSF together with the ethical requirements that are relevant to our audit of the annual accounts, and have fulfilled our other ethical responsibilities under those ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual accounts of the current period. These matters were addressed in the context of the audit of the annual accounts as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.
Provisions for litigation and claims (EUR 2,538 thousand)

a) Why the matter was considered to be one of most significance in our audit of the annual accounts for the year ended 31 December 2018

Clearstream Banking S.A. (the "Bank") is exposed to a number of open legal cases and regulatory investigations in a number of its markets. In the course of business, potential exposures may arise from legal or regulatory proceedings. Whether there is a liability is inherently uncertain, the amounts involved are potentially significant and the application of accounting standards to determine the amount to be provisioned, is inherently subjective. Given the business is geographically dispersed, the same matter could be subject to legal proceedings in multiple jurisdictions.

There are a number of legal and regulatory matters for which no provision has been established. There is an inherent risk that legal exposures are not identified and considered for financial reporting purposes on a timely basis. This includes the consideration on whether there is a need for the recognition of a provision or a contingent liability disclosure. The recognition and measurement of provisions and the disclosure of contingent liabilities requires considerable management judgement.

Refer to Note 2.7.3 (accounting policy on accounting for 'Other provisions'), Note 4.4 (financial disclosures note 'Other provisions'), and Note 6.3 (financial disclosures note 'Legal risks')

b) How the matter was addressed in our audit

Our procedures included:

— We inquired of the Legal Department, Claims Investigation Officer and members of the Executive Board of the Bank to obtain their view on potential legal cases and the status of ongoing significant litigation and claims;

— We inspected meeting minutes of the Executive Board, Supervisory Board, Audit Committee and Risk Committee, and documents provided by the Bank concerning significant litigation and claims;

— We received external confirmations from the Bank’s external legal counsel as at the year-end;

— We inspected legal expense accounts of the Bank to detect whether there were significant ongoing or potential legal cases not included in the Bank’s log of legal claims;

— We evaluated and tested the operating effectiveness of the review and approval internal control by Management of claim provisions being in line with the Signature Policy described in the Claims Procedure of the Bank;

— We assessed customer complaints and claims received by the Bank and the analyses prepared by Management of these complaints/claims.
Based on these procedures we challenged the timing of the recognition of provisions where there is potential exposure but it is not clear whether an obligation exists or where the Management has determined a reliable estimate is not possible. For the significant provisions we independently assessed the estimated value of the provision;

We assessed the completeness and accuracy of the disclosures detailing significant provisions for litigation and claims.

User access management over IT systems on financial reporting

a) Why the matter was considered to be one of most significance in our audit of the annual accounts for the year ended 31 December 2018

User access management key controls are an important component of the General IT Control (GITC) environment assuring only authorised access to infrastructure, financial systems and data throughout the Bank.

The Bank is dependent on the IT infrastructure for the continuity and reliability of its business processes and financial reporting. The Bank continuously makes investments to further improve its IT environment and IT systems, and large volumes of transactions are processed daily. Our audit procedures have a focus on the user access management controls over IT systems on financial reporting as if these controls are deficient and are not remediated or adequately mitigated the pervasive nature of these key controls may undermine our ability to place some reliance on fully automated and IT dependent controls in our audit. Our areas of audit focus on those systems included user access management, changes to the IT environment and computer operations.

b) How the matter was addressed in our audit

Our procedures included:

We involved KPMG IT specialists at the level of the Bank in Luxembourg as well as at the level of Deutsche Börse Group in Frankfurt for applications hosted abroad to perform audit procedures to enable us to place reliance on the IT applications and relevant controls identified that have a material impact on the financial reporting process to assess IT systems and user access controls over financial reporting.

We focused our procedures on user access management relating to the understanding, evaluation and testing of the operating effectiveness of General IT Controls (GITCs) on:

- Access to programs and data, with logical access to applications, operating systems and data;
- Change Management, with centralized change management process; testing, approval and implementation of changes; and segregation between production and test environment;
- Computer Operations, with batch monitoring; job processing; and incident management;
We evaluated the results of KPMG IT specialists involved in the testing of design, implementation and operating effectiveness of the user access management controls of the IT systems relevant for financial reporting.

Where user access management control deficiencies in design and operating effectiveness were identified in the current year, the KPMG IT specialists performed additional procedures on the related key application, including evaluation of log-in activities, analysis of security logs, and corroboration/validation procedures on the appropriateness and performance of measures implemented by the Bank.

Intercompany charges/recharges

a) Why the matter was considered to be one of most significance in our audit of the annual accounts for the year ended 31 December 2018

The Bank is highly integrated within the Group. Multiple services are provided by the Bank to other Group companies and many services are provided by Group companies to the Bank, in Luxembourg and abroad.

An ‘Intercompany Project’ set up at the Group level was also completed during the prior financial year covering the related corporate entity services and charges/recharges between Group companies during 2017, including a retrospective review of the period from 2014 to 2016.

Due to the high number of intercompany relationships, the level of audit work linked to those balances and the adjustments processed by the Bank following the ‘Intercompany Project’ in the prior year, we identified intercompany charges/recharges as a key audit matter.

Refer to Note 2.11 (financial disclosures note ‘Related party transactions’).

b) How the matter was addressed in our audit

Our audit approach included both the testing of the effectiveness of internal controls linked to intercompany charges/recharges as well as substantive procedures.

The procedures over internal controls included evaluating and testing the operating effectiveness of controls on:

— Identification by the Group Consolidation Department of related party transactions;

— Review by the Financial Accounting & Controlling (“FAC”) Department of the calculation of related party charges/recharges.
Our substantive procedures included:

— We inquired of the FAC Department on the identification of related parties and on the process for the recording of intercompany balances;

— We obtained the list of related parties of the Bank and for accounts used for intercompany charges/recharges, inspected for a selection accounts that the related parties included in these accounts were also included on the list of related parties;

— We reconciled the Bank’s intercompany charges/recharges positions as at 31 December 2018 to the Group counterparty balances for a selection of accounts. We additionally compared and confirmed these balances to the information provided by the Group auditor, KPMG AG Frankfurt;

— We re-performed the calculation of the intercompany charges/recharges computed by the Bank for a selection of significant intercompany bookings, and compared key parameters and mark-up rates/charges used in the computation to the underlying intercompany agreements.

Recognition of commission receivable from custody, settlement, global securities financing and connectivity/reporting fees charged (EUR 619,348 thousand)

a) Why the matter was considered to be one of most significance in our audit of the annual accounts for the year ended 31 December 2018

Commission receivable for the Bank consists mainly of custody fees, settlement fees, global securities financing fees (i.e. securities lending/borrowing fees and collateral management fees) and connectivity/reporting fees invoiced to customers, and amounts to EUR 619,348 thousand. This represents 91% of the commission receivable balance for the year. The custody fee is determined mainly by the value of securities held in custody, the settlement fee by the number of transactions conducted, the income from the global securities financing business by the value of securities lent or collateralized, and the connectivity/reporting fee by the number of queries from and reports to customers.

The process used to determine the commission receivable is highly automated and based on various IT systems that are connected to each other by system interfaces. Changes to the fee schedule or customer specific conditions are manually implemented by the Bank in the billing application.

Due to the significance of the amounts involved, the strong dependency on IT systems, the significant number of customer specific conditions, and the related complexity and operational risks, the process linked to the billing of these commissions is identified as a key audit matter.

Refer to Note 2.10 (accounting policy on accounting for 'Income and expense recognition') and Note 7.3 (financial disclosures note 'Commission receivable').
b) How the matter was addressed in our audit

Our audit approach included evaluating and testing the operating effectiveness of internal controls, focusing on key controls related to the recognition of the above-mentioned commission receivables. Where the commission receivable process is automated with a material impact on the financial reporting process, we involved KPMG IT specialists to test controls over the related IT systems relevant for the recognition of commission income. We then evaluated the results of these KPMG IT specialists. These control procedures included those in relation to:

- For custody and global securities financing fees, the process of determining the value of securities held in custody/lent or collateralized;
- The completeness and integrity of data transferred via system interfaces from operational applications to the billing application;
- The segregation of duties for the manual input/modification and release of a commission amount in the billing application;
- The segregation of duties over the authorization and implementation of changes to the fee schedule and customer specific conditions;
- The follow-up by the Billing Department of the month-end commission process.

Our substantive procedures included:

- We inquired of the Billing department on the commission process and the corresponding controls, including the source of data used in the calculation of the income. In addition, we re-performed the computation of a sample of commission income types and discounts;
- We performed substantive analytical procedures (predictive analyses) by comparing the recorded amount of commission receivable to a computed expectation based on the prior year income level adjusted for the evolution of key performance indicators (e.g. values of securities held under custody, number of transactions);
- We assessed customer complaints and claims relating to commission fees charged by the Bank and the related analysis prepared by Management.

Other information

The Executive Board is responsible for the other information. The other information comprises the information stated in the annual report including the management report but does not include the annual accounts and our report of "Rèviseur d'Entreprises agréé" thereon.

Our opinion on the annual accounts does not cover the other information and we do not express any form of assurance conclusion thereon.
In connection with our audit of the annual accounts, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the annual accounts or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information we are required to report this fact. We have nothing to report in this regard.

Responsibilities of the Executive Board and Those Charged with Governance for the annual accounts

The Executive Board is responsible for the preparation and fair presentation of the annual accounts in accordance with Luxembourg legal and regulatory requirements relating to the preparation and presentation of the annual accounts, and for such internal control as the Executive Board determines is necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts, the Executive Board is responsible for assessing the Bank’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Executive Board either intends to liquidate the Bank or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Bank’s financial reporting process.

Responsibilities of the Réviseur d’Entreprises agréé for the audit of the annual accounts

The objectives of our audit are to obtain reasonable assurance about whether the annual accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue a report of “Réviseur d’Entreprises agréé” that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the EU Regulation N° 537/2014, the Law of 23 July 2016 and with ISAs as adopted for Luxembourg by the CSSF will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts.
As part of an audit in accordance with the EU Regulation N° 537/2014, the Law of 23 July 2016 and with ISAs as adopted for Luxembourg by the CSSF, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

— Identify and assess the risks of material misstatement of the annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

— Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Bank's internal control.

— Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Executive Board.

— Conclude on the appropriateness of Executive Board's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our report of "Réviseur d'Entreprises agréé" to the related disclosures in the annual accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our report of "Réviseur d'Entreprises agréé". However, future events or conditions may cause the Bank to cease to continue as a going concern.

— Evaluate the overall presentation, structure and content of the annual accounts, including the disclosures, and whether the annual accounts represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the annual accounts of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter.
Report on other legal and regulatory requirements

We have been appointed as “Réviseur d’Entreprises agréé” by the Supervisory Board as at 22 March 2018 and the duration of our uninterrupted engagement, including previous renewals and reappointments, is 26 years, of which 24 years are since the Bank was granted a banking licence and became a Public Interest Entity.

The management report is consistent with the annual accounts and has been prepared in accordance with applicable legal requirements.

We confirm that the audit opinion is consistent with the additional report to the audit committee or equivalent.

We confirm that the prohibited non-audit services referred to in the EU Regulation No 537/2014, on the audit profession were not provided and that we remain independent of the Bank in conducting the audit.

Luxembourg, 26 March 2019

KPMG Luxembourg, Société coopérative
Cabinet de révision agréé

M. Eichmüller de Souza
Partner
## ASSETS

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### TOTAL ASSETS

|                   | 18,277,543      | 14,200,241      |

The accompanying notes are an integral part of these annual accounts.
Clearstream Banking S.A.

Balance sheet
as at 31 December 2018
(expressed in thousands of EUR)
(continued)

<table>
<thead>
<tr>
<th>LIABILITIES AND EQUITY</th>
<th>Notes</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LIABILITIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial liabilities held for trading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derivatives</td>
<td>3.2</td>
<td>3,046</td>
<td>20,516</td>
</tr>
<tr>
<td>Financial liabilities measured at amortised cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits from credit institutions</td>
<td>4.1.1</td>
<td>12,472,829</td>
<td>9,985,880</td>
</tr>
<tr>
<td>Repayable on demand</td>
<td></td>
<td>1,029,513</td>
<td>564,357</td>
</tr>
<tr>
<td>With agreed maturity dates or periods of notice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits from customers</td>
<td>4.1.2</td>
<td>2,914,090</td>
<td>1,953,614</td>
</tr>
<tr>
<td>Other debts repayable on demand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt securities issued</td>
<td>4.1.3</td>
<td>402,120</td>
<td>274,739</td>
</tr>
<tr>
<td>Other financial liabilities</td>
<td>4.1.4</td>
<td>96,302</td>
<td>39,998</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>16,914,854</strong></td>
<td><strong>12,818,588</strong></td>
</tr>
<tr>
<td>Other liabilities</td>
<td>4.2</td>
<td>10,713</td>
<td>15,174</td>
</tr>
<tr>
<td>Accruals and deferred income</td>
<td>4.3</td>
<td>26,782</td>
<td>21,600</td>
</tr>
<tr>
<td>Provisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provisions for pension and similar obligations</td>
<td></td>
<td>9,230</td>
<td>6,054</td>
</tr>
<tr>
<td>Other provisions</td>
<td>4.4</td>
<td>26,676</td>
<td>12,279</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>35,906</strong></td>
<td><strong>18,333</strong></td>
</tr>
<tr>
<td>Tax liabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current liabilities</td>
<td></td>
<td>22,988</td>
<td>74,172</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td></td>
<td>9</td>
<td>1,614</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>22,997</strong></td>
<td><strong>75,786</strong></td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td><strong>17,014,298</strong></td>
<td><strong>12,969,997</strong></td>
</tr>
<tr>
<td><strong>EQUITY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issued capital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid up capital</td>
<td>4.5</td>
<td>92,000</td>
<td>92,000</td>
</tr>
<tr>
<td>Share premium account</td>
<td></td>
<td>136,836</td>
<td>136,836</td>
</tr>
<tr>
<td>Reserves</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal reserves</td>
<td>4.6.1</td>
<td>9,200</td>
<td>9,200</td>
</tr>
<tr>
<td>Other reserves</td>
<td>4.6.1</td>
<td>910,410</td>
<td>863,765</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>919,610</strong></td>
<td><strong>872,965</strong></td>
</tr>
<tr>
<td>Accumulated other comprehensive income</td>
<td>4.6.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Items that will not be reclassified to profit or loss</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actuarial gains/losses on defined benefit pension plans</td>
<td></td>
<td>(4,157)</td>
<td>(3,654)</td>
</tr>
<tr>
<td>Fair value changes of equity instruments measured at fair value through other comprehensive income</td>
<td></td>
<td>2,402</td>
<td>7,477</td>
</tr>
<tr>
<td>Items that may be reclassified to profit or loss</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash flow hedges</td>
<td></td>
<td>-</td>
<td>522</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>(1,755)</strong></td>
<td><strong>4,345</strong></td>
</tr>
<tr>
<td>Profit for the financial year</td>
<td>4.7</td>
<td>206,530</td>
<td>194,018</td>
</tr>
<tr>
<td>Interim dividends</td>
<td>4.8</td>
<td>(89,976)</td>
<td>(69,920)</td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td></td>
<td><strong>1,263,245</strong></td>
<td><strong>1,230,244</strong></td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td></td>
<td><strong>18,277,543</strong></td>
<td><strong>14,200,241</strong></td>
</tr>
</tbody>
</table>

The accompanying notes are an integral part of these annual accounts.
The accompanying notes are an integral part of these annual accounts.

<table>
<thead>
<tr>
<th>OFF-BALANCE SHEET ITEMS</th>
<th>31 December 2018</th>
<th>31 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contingent liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guarantees and assets pledged as collateral security</td>
<td>6.2</td>
<td>413,238</td>
</tr>
<tr>
<td></td>
<td></td>
<td>597,888</td>
</tr>
</tbody>
</table>
Clearstream Banking S.A.

Income Statement
for the year ended 31 December 2018
(expresssed in thousands of EUR)

<table>
<thead>
<tr>
<th>Notes</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest receivable and similar income</td>
<td>7.1, 7.2</td>
<td>241,249</td>
</tr>
<tr>
<td>of which: arising from fixed-income securities</td>
<td>7.1, 7.2</td>
<td>3,518</td>
</tr>
<tr>
<td>Interest payable and similar charges</td>
<td>7.1, 7.2</td>
<td>(93,680)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>147,569</td>
</tr>
<tr>
<td>Commission receivable</td>
<td>7.1, 7.3</td>
<td>680,451</td>
</tr>
<tr>
<td>Commission payable</td>
<td></td>
<td>(209,811)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470,640</td>
</tr>
<tr>
<td>Net interest and commission income</td>
<td></td>
<td>618,209</td>
</tr>
<tr>
<td>Net profit/(loss) on financial operations</td>
<td>7.1</td>
<td>763</td>
</tr>
<tr>
<td>Other operating income</td>
<td>7.1, 7.4</td>
<td>51,740</td>
</tr>
<tr>
<td>General administrative expenses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff costs</td>
<td>7.5</td>
<td>(85,529)</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- wages and salaries</td>
<td></td>
<td>(66,702)</td>
</tr>
<tr>
<td>- social security costs</td>
<td></td>
<td>(14,184)</td>
</tr>
<tr>
<td>of which: relating to pensions</td>
<td></td>
<td>(6,715)</td>
</tr>
<tr>
<td>- other staff costs</td>
<td></td>
<td>(4,443)</td>
</tr>
<tr>
<td>Other administrative expenses</td>
<td>7.7</td>
<td>(314,784)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(400,313)</td>
</tr>
<tr>
<td>Value adjustments in respect of intangible and tangible assets</td>
<td>3.9</td>
<td>(2,486)</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- furniture, fixtures and fittings</td>
<td></td>
<td>(1,694)</td>
</tr>
<tr>
<td>- intangible assets</td>
<td></td>
<td>(792)</td>
</tr>
<tr>
<td>Profit on ordinary activities before tax</td>
<td></td>
<td>267,913</td>
</tr>
<tr>
<td>Tax on profit on ordinary activities and other taxes (tax expense related to profit or loss from continuing operations)</td>
<td>7.9</td>
<td>(61,383)</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- current tax on profit or loss on ordinary activities</td>
<td>7.9</td>
<td>(61,577)</td>
</tr>
<tr>
<td>- deferred tax</td>
<td></td>
<td>194</td>
</tr>
<tr>
<td>Profit for the financial year</td>
<td>4.7</td>
<td>206,530</td>
</tr>
</tbody>
</table>

The accompanying notes are an integral part of these annual accounts
1 General

Cedel, société anonyme (the ‘Company’) was incorporated in 1970 as a limited liability company in accordance with Luxembourg law. By virtue of a Grand-Ducal decree dated 19 July 1983, the Company was granted a licence as a ‘Professionnel du Secteur Financier’.

On 1 January 1995, the Company was granted a banking licence in Luxembourg, and changed its name to Cedel Bank, société anonyme. The activities of the Company did not change as a result of its banking status. On 13 November 1998, Cedel Bank, société anonyme, changed its name to Cedelbank, société anonyme and again on 18 January 2000 to Clearstream Banking S.A. (the ‘Bank’). The Bank provides clearing, settlement, depository and related services for internationally traded securities to professional financial institutions world-wide.

The registered office of the Bank is 42, Avenue JF Kennedy, L-1855 Luxembourg and the Bank is registered at the commercial register in Luxembourg under number B 9248.

As at 31 December 2018 and 2017, the Bank had the following direct subsidiaries:

- Clearstream Banking Japan, Ltd (created in 2009). Registered office: 27F, Marunouchi Kitaguchi Building, 1-6-5, Marunouchi, Chiyoda-ku, Tokyo, Japan. Clearstream Banking Japan is directly 100% owned by the Bank;
- REGIS-TR S.A. (created in 2010). Registered office: 42, Avenue JF Kennedy, L-1855 Luxembourg. The Bank holds 50% of the subsidiary. Since the Bank has the right to appoint the chairman of the Board of Directors, who in turn has a casting vote, there is a presumption of control;

During 31 December 2018 and 2017, the Bank had the 2 following branches:

- Clearstream Banking S.A., Singapore branch (created in 2009). Registered office: 9 Raffles Place #55-01 Republic Plaza Singapore 048619 Singapore;

As at 31 December 2018 and 2017, the Bank was directly fully owned by Clearstream International S.A.

Clearstream International S.A. is itself indirectly fully owned by Deutsche Börse AG, the ultimate parent of the Bank. The Bank is included in the consolidated financial statements of Deutsche Börse AG. Deutsche Börse’s consolidated financial statements, prepared in accordance with International Financial Reporting Standards (‘IFRSs’) as adopted by the European Union and interpretations issued by the International Accounting Standards Board, may be obtained from its registered office at Mergenthalerallee 61, D-65760 Eschborn, Germany or electronically at www.deutsche-boerse.com.
## 2 Summary of significant accounting policies and presentation of accounts

The Bank's accounting policies are in accordance with regulations in force in the Grand-Duchy of Luxembourg, and in particular the law of 17 June 1992, as amended and the CSSF circular 08/340, relating to the annual accounts and consolidated accounts of credit institutions. Management has prepared these accounts on a going-concern basis.

Since 2009, the Bank has opted for the mixed accounting regime of “Luxembourg GAAP with IAS options”. The relevant IAS options are the following:
- presentation of the balance sheet and of the income statement;
- recognition, measurement and impairment of financial instruments as per IFRS 9 as at 1 January 2018;
- IAS 19 revised June 2011;
- application of IFRS 2.43A – 43D to share-based payments.

In addition to the four options above, as a result of the application of the recognition of financial instruments at fair value, the Bank has recognised deferred taxes.

The layout of the balance sheet has been slightly modified as compared to 31 December 2017 to reflect certain updates made to the presentation of regulatory reporting of financial information further to the application of IFRS 9 since 1 January 2018. The 31 December 2017 comparative format has been modified accordingly and prior year figures have been reclassified to conform to the current financial year’s presentation, except as described below.

The Bank has implemented the above-described principles of IFRS 9 “Financial instruments” as of 1 January 2018. The implementation has resulted in changes to the accounting policies. These updates are detailed in section 2.1 “Financial Instruments”. Due to the transition method chosen by the Bank in applying the IFRS 9 principles, comparative information throughout these annual accounts has not been restated to reflect its requirements.

In accordance with annex V of the financial information templates (hereinafter “FINREP”), trade receivables as at 31 December 2018 comprising of fees receivable amounting to EUR 45,646 thousand and receivables due from affiliated undertakings amounting to EUR 45,649 have been reclassified from “Other assets” to “Cash in hand, balances with central banks and post office banks”, “Loans and advances to credit institutions repayable on demand”, “Loans and advances to credit institutions – Other loans and advances” and "Loans and advances to customers”. As at 31 December 2017 fees receivable amounting to EUR 47,866 thousand and receivables due from affiliated undertakings amounting to EUR 7,762 thousand were not reclassified and remain disclosed under caption “Other assets” (see also Note 2.6, Note 3.1.1, Note 3.1.2, Note 3.4, Note 3.6 and Note 8).

In accordance with article 83 of the law of 17 June 1992, as amended, the Bank does not prepare consolidated financial statements because the Bank only has subsidiary undertakings which are not material for the purposes of article 85(3) of the law of 17 June 1992, as amended (consolidated accounts shall give a true and fair view of the assets, liabilities, financial position and profit or loss of the undertakings included therein taken as a whole), both individually and as a whole.
2.1 Financial instruments

Accounting principles applied by the Bank to financial instruments were determined by IAS 39 “Financial instruments: Recognition and Measurement” until 31 December 2017. Beginning on 1 January 2018, accounting principles applied to financial instruments are determined by IFRS 9 “Financial instruments”.

2.1.1 Initial recognition of financial instruments

Financial assets and liabilities are recognised when the Bank becomes a party to the contractual provisions of the financial instrument.

Before 1 January 2018
Financial asset and liabilities were initially recognised at their fair value plus, in the case of financial assets or liabilities not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability.

After 1 January 2018
Regular way purchases and sales of financial assets are generally recognised and derecognised at the trade date. Purchases and sales of debt instruments classified as “at amortised cost” and of equities eligible for clearing via the central counterparties (CCPs) of Deutsche Börse Group are recognised and derecognised at the settlement date.

Financial assets are derecognised when the contractual rights to the cash flows expire or when the Bank transfers these rights in a transaction that transfers substantially all risks and rewards of ownership of the financial assets.

2.1.2 Classification and measurement of financial instruments

Before 1 January 2018
Before 1 January 2018, the Bank classified its financial instruments into the following four categories of IAS 39:

(a) financial assets and financial liabilities at fair value through profit or loss;
(b) held-to-maturity investments;
(c) loans and receivables; and
(d) available-for-sale financial assets.

After 1 January 2018
Financial assets: measurement
Since 1 January 2018, the Bank has classified its financial assets according to the following measurement categories:

(a) fair value (through other comprehensive income or through profit or loss);
(b) amortised cost.

The classification depends on the entity’s business model for managing the financial assets and contractual terms of the cash flows.
For assets measured at fair value, gains and losses will be recognised in profit or loss or in other comprehensive income. For investments in debt instruments, the recognition method will depend on the business model according to which the investment is held. For investments in equity instruments that are not held for trading, this will depend on whether the Bank made use of the option at the time of initial recognition to account for the equity investment at fair value through other comprehensive income. The classification chosen may not be changed in future periods.

The Bank reclassifies debt instruments when – and only when – its business model for managing those assets changes.

Financial assets: initial measurement
At initial recognition, the Bank measures a financial asset at its fair value through profit or loss. In the case of financial assets measured through other comprehensive income, measurement also takes into account transaction costs that are directly attributable to the acquisition of the respective asset. Transaction costs of financial assets carried at fair value through profit or loss are recognised in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

2.1.3 Subsequent measurement of financial assets and financial liabilities

Financial assets: subsequent measurement of equity instruments
Equity instruments are recognised at the settlement date.

Before 1 January 2018
Equity instruments were measured at available-for-sale financial assets. Investments in equity instruments that did not have a quoted market price in an active market and whose fair value cannot be reliably measured were measured at cost. Fair value adjustments on equity instruments were recognised in equity under “Accumulated other comprehensive income – Available-for-sale financial asset”.

After 1 January 2018
The Bank subsequently measures all equity investments at fair value through other comprehensive income (FVOCI). Where the Bank’s management opted for presenting fair value gains and losses on equity investments in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. An exception to this rule is the recognition of dividend revenue which is recognised in profit or loss.

Impairment losses (and reversal of impairment losses) on equity investments measured at FVOCI are not reported separately from other changes in fair value.

As at 31 December 2018, the Bank has designated all equity instruments as at fair value through other comprehensive income.

Financial assets: subsequent measurement of debt instruments
Debt instruments are recognised at the settlement date.
Before 1 January 2018
Debt instruments were measured at available-for-sale financial assets. Fair values of debt instruments measured at available-for-sale financial assets were calculated based on observable current quotations or by applying discounted cash flow methods when a current market price is not available. Discount rates used are based on market interest rates for financial instruments having substantially the same terms and characteristics. Realised gains and losses on debt instruments were recognised in equity under the captions “Accumulated other comprehensive income – Available-for-sale financial asset”.

After 1 January 2018
Subsequent measurement of debt instruments depends on the Bank’s business model for managing the asset and cash flow characteristics of the respective assets. There are three measurement categories to which the Bank may allocate its debt instruments:

- Amortised cost: Assets held for collection of contractual cash flows, where those cash flows represent solely payments of principal and interest, are measured at amortised cost. A gain or loss on a debt instrument that is subsequently measured at amortised cost is recognised through profit or loss when the asset is derecognised or impaired. Interest income from these financial assets is included in interest receivable and similar income using the effective interest rate method. Foreign exchange gains and losses are shown in net profit/(loss) on financial operations.

- Fair value through other comprehensive income (FVOCI): Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets’ cash flows represent solely payments of principal and interest, are measured at FVOCI. Changes in the carrying amount are shown in other comprehensive income. An exception to this rule is the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses which are recognised in profit or loss. When a financial asset is derecognised, the cumulative gain or loss previously recognised in other comprehensive income is reclassified from equity to profit or loss and recognised in other operating income or other administrative expenses. Interest income from these financial assets would be included in interest receivable and similar income using the effective interest rate method. Foreign exchange gains and losses are presented in net profit/(loss) on financial operations. Impairment expenses are shown in other administrative expenses. The Bank did not follow the business model to hold and to sell in the reporting period. Accordingly, no debt instruments were classified at FVOCI.

- Fair value through profit or loss (FVPL): Assets that do not meet the criteria for a measurement at amortised cost or at FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL and not part of a hedging relationship is recognised in profit or loss in the period in which it arises.

As at 31 December 2018, the Bank has designated its debt instruments as financial assets at amortised cost.

**Financial assets: subsequent measurement of derivatives and hedges**
Derivatives are used to hedge interest rate risk or foreign exchange risk associated with the activities of the Bank.

Derivatives are initially recognised at fair value on the date a derivatives contract is entered into and are subsequently re-measured at their fair value at the end of each reporting period. The
accounting for subsequent changes in fair value depends on whether the derivatives contract is designated as a hedging instrument.

The Bank designates currency or interest rate derivatives as hedges of foreign-exchange risk associated with the cash flows of highly probable forecast transactions and of interest rate swaps if required as hedges of interest rate risk associated with the expected issuance of fixed interest rate bonds in the future (both cash flow hedges).

The Bank has not entered into fair value hedges in 2017 or 2018.

At the inception of the hedging transaction, the Bank documents the economic relationship between hedging instruments and hedged items including whether the hedging instrument is expected to offset changes in cash flows of hedged items. The Bank also documents its risk management objective and strategy for undertaking various hedge transactions at that point in time.

The fair value of a hedging derivative is classified as a financial asset or liability irrespective of their maturities.

Cash flow hedges that qualify for hedge accounting
The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income, limited to the cumulative change in fair value of the hedged item on a present value basis from the inception of the hedge. The gain or loss relating to the ineffective portion is recognised immediately in the income statement under "Gains or (losses) from hedge accounting".

Amounts accumulated in other comprehensive income are reclassified in the periods when the hedged item affects profit or loss, as follows:

- The amount accumulated in the cash flow hedge reserve is reclassified to profit or loss as a reclassification adjustment in the same period or periods during which the hedged future cash flows affect profit or loss. If that amount is a loss and the Bank expects that the entirety or a portion of that loss will not be recovered in one or more future periods, it immediately reclassifies the amount that is not expected to be recovered into profit or loss as a reclassification adjustment.
- The gain or loss relating to the effective portion of the interest rate-related instruments hedging fixed-rate borrowings is recognised in the income statement.

When a hedging instrument expires, or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, the Bank discontinues hedge accounting. When the forecast transaction is no longer expected to occur, the cumulative gain or loss and deferred costs of hedging that were reported in equity are immediately reclassified to the income statement.

Hedge ineffectiveness is recognised in the income statement.

Hedges of a net investment in a foreign operation
The portion of the gain or loss on the hedging instrument that is determined to be an effective hedge is recognised in other comprehensive income. It is recognised in the income statement when the foreign operation is sold. The ineffective portion of the gain or loss on the hedging instrument is recognised immediately in the income statement.
Clearstream Banking S.A.
Notes to the annual accounts
as at 31 December 2018
(continued)

**Derivatives held for trading**
Gains or losses on derivative instruments that are not part of a highly effective hedging relationship are recognised immediately in the income statement.

Derivatives held for trading include foreign currency swaps. Those transactions correspond to economic hedges not fulfilling the conditions to be classified as highly effective hedges under IFRS 9. They are measured at fair value through profit or loss. Unrealised and realised gains and losses on such derivatives are recognised in the income statement respective under “Interest receivable and similar income” and “Interest payable and similar charges”.

**Financial asset: subsequent measurement of financial assets measured at amortised cost**
The following financial assets are recognised at the settlement date and are carried at amortised cost, less any write-downs for impairment:

- a) Cash in hand, balances with central banks and post office banks;
- b) Loans and advances to credit institutions repayable on demand;
- c) Loans and advances to credit institutions;
- d) Loans and advances to customers.

**Cash and cash equivalents**
Cash and cash equivalents comprise cash in hand and demand deposits as well as financial assets that are readily convertible into cash. They are subject to only minor changes in value. Cash and cash equivalents are measured at amortised cost.

Restricted bank balances mainly include cash deposits by market participants that are invested largely overnight, mainly at central banks or in the form of reverse repurchase agreements with banks.

**Financial liabilities: subsequent measurement of financial liabilities measured at amortised cost**
After initial recognition, all financial liabilities, except liabilities measured at fair value through profit or loss, are measured at amortised cost. The borrowing costs associated with the placement of financial liabilities are included in the carrying amount and accounted for using the effective interest method if they are directly attributable. Discounts are amortised over the term of the liabilities.

**Financial assets and financial liabilities: subsequent measurement of financial assets and financial liabilities measured at fair value through profit and loss**
Financial assets and financial liabilities at fair value through profit and loss are recognised at the trade date. This category includes currency swaps, forwards and interest rate swaps not classified as hedging instruments under IFRS 9. Fair value of these derivatives is calculated based on observable current market rates. Realised and unrealised gains and losses are immediately recognised in the income statement. The Bank waived the possibility to designate financial assets or liabilities at fair value through profit and loss (fair value option).
2.1.4 Impairment testing

Before 1 January 2018
Financial assets that were not measured at fair value through profit or loss were tested at each balance sheet date to determine whether there was any indication of impairment. The amount of an impairment loss for a financial asset measured at amortized cost was the difference between the carrying amount and the present value of the estimated future cash flows, discounted at the original effective interest rate.

A subsequent reversal was recognised at a maximum at the carrying amount that would have resulted if no impairment loss had been recognised.

The amount of an impairment loss for a financial asset measured at cost is the difference between the carrying amount and the present value of the estimated future cash flows, discounted at a current market interest rate. Subsequent reversal is not permitted.

In the case of available-for-sale financial assets, the impairment loss was calculated as the difference between cost and fair value. Any reduction in fair value already recognised in the revaluation reserves was reclassified to profit or loss. A subsequent reversal may only be recognised for debt instruments if the reason for the original impairment loss no longer applies.

After 1 January 2018
The Bank assesses the expected credit losses associated with its debt instruments carried at amortised cost on a forward-looking basis. The impairment is measured based on an amount equal to twelve-month expected losses or lifetime expected losses at the level of the Bank. The impairment methodology applied depends on whether there has been a significant increase in credit risk. A loss allowance equal to twelve-month expected losses is recognised unless the credit risk on a financial instrument has increased significantly since initial recognition.

In accordance with IFRS 9, a default is assumed and a transfer to stage 3 is required when a financial asset is credit-impaired, i.e. when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. The Bank has identified the following triggers to identify an event of default and which cause a transfer to stage 3 accordingly:

- Legal default: a contractual partner is unable to fulfil its contractual obligation according to an agreement with the Bank due to insolvency/bankruptcy.
- Contractual default: a contractual partner is unable or unwilling to fulfil, in a timely manner, one or more of its scheduled contractual obligations according to an agreement with the Bank. The non-fulfilment of the contractual obligation could potentially result in a financial loss for the Bank.

IFRS 9 sets out that a default is to be assumed if a debtor is past due for more than 90 days. This is only used as a fall-back at the level of the Bank, as the Bank expects to identify a debtor’s default based on the above-mentioned criteria at an earlier point in time. For trade receivables, a default is assumed for amounts which are overdue for more than 360 days.

Financial assets are considered to have low credit risk if listed bonds and other financial investments or counterparties have an investment-grade credit rating. For financial assets with a
low credit risk rating, a risk provision is calculated that is equal to the twelve-month expected loss.

For trade receivables, the Bank applies the simplified approach permitted by IFRS 9, which requires lifetime expected losses to be recognised from initial recognition of the receivables.

In case there is no reasonable expectation that the outstanding amounts can be collected, receivables are written off directly. Indicators used to arrive at the “uncollectability assumption” include the following:

- Insolvency proceedings are not started due to missing substance of the debtor;
- Insolvency proceedings have not resulted in any payment for a period of three years, and there is no indication that any amount will be received going forward;
- Enforcement activities are not pursued by the Bank due to cost-benefit analysis, or the Bank has tried unsuccessfully to collect the receivable for a period of three years.

### 2.2 Impact resulting from the first-time adoption of IFRS 9 “Financial instruments”

The Bank has adopted IFRS 9 as at 1 January 2018 resulting in changes in accounting policies and adjustments to the amounts recognized in the annual accounts. Furthermore, the Bank amended the presentation of its balance sheet to increase transparency for the financial instruments by showing most of the measurement categories of IFRS 9 on the face of the balance sheet.

<table>
<thead>
<tr>
<th>Changes in measurement categories</th>
<th>Loans and receivables</th>
<th>Available-for-sale</th>
<th>FVPL (HFT)</th>
<th>Amortised cost</th>
<th>FVPL (mandatory)</th>
<th>FVOCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial assets</td>
<td>€ thousand</td>
<td>€ thousand</td>
<td>€ thousand</td>
<td>€ thousand</td>
<td>€ thousand</td>
<td>€ thousand</td>
</tr>
<tr>
<td>Balance as at 31 Dec 2017 – IAS 39</td>
<td>12,396,062</td>
<td>1,674,616</td>
<td>2,726</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reclassify equity investments from available-for-sale to fair value through other comprehensive income</td>
<td>0</td>
<td>(4,936)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4,936</td>
</tr>
<tr>
<td>Reclassify financial assets from available-for-sale to at amortised cost</td>
<td>0</td>
<td>(1,669,680)</td>
<td>0</td>
<td>1,662,226</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reclassify financial assets from available-for-sale to fair value through profit or loss (mandatory)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reclassify loans and advances (including cash, cash balances at central banks and demand deposits) from loans and receivables to at amortised cost</td>
<td>(12,396,062)</td>
<td>0</td>
<td>0</td>
<td>12,396,062</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reclassify financial assets from loans and receivables to fair value through profit or loss (mandatory)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reclassify financial assets at fair value through profit or loss (fair value option) to fair value through profit or loss (mandatory)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Balance as at 1 Jan 2018 – IFRS 9</td>
<td>0</td>
<td>0</td>
<td>2,726</td>
<td>14,058,288</td>
<td>0</td>
<td>4,936</td>
</tr>
</tbody>
</table>
The total impact on the Bank’s accumulated other comprehensive income and profit for the financial year and reserves due to classification and measurement of financial instruments as at 1 January 2018 is as follows:

<table>
<thead>
<tr>
<th>Total impact on the Bank’s equity (expressed in thousands of EUR)</th>
<th>Accumulated other comprehensive income</th>
<th>Profit for the financial year and reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closing balance as at 31 Dec 2017 – IAS 39 / IAS 18</td>
<td>4,345</td>
<td>1,066,983</td>
</tr>
<tr>
<td>Reclassification of equity instruments from available-for-sale to fair value through other comprehensive income (FVOCI)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reclassification of debt instruments from available-for-sale to amortised cost</td>
<td>(7,199)</td>
<td>0</td>
</tr>
<tr>
<td>Reclassification of financial assets from available-for-sale to fair value through profit or loss</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Change in provision for debt instruments at amortised cost and recognition of FX revaluation</td>
<td>0</td>
<td>(255)</td>
</tr>
<tr>
<td>Change in provision for trade receivables</td>
<td>0</td>
<td>(507)</td>
</tr>
<tr>
<td>Change in deferred tax asset</td>
<td>258</td>
<td>0</td>
</tr>
<tr>
<td>Change in deferred tax liability</td>
<td>1,614</td>
<td>0</td>
</tr>
<tr>
<td>Adjustment due to adoption of IFRS 9 on 1 Jan 2018</td>
<td>(5,327)</td>
<td>(762)</td>
</tr>
<tr>
<td>Recognition of contract liability</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recognition of deferred tax asset</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Adjustment due to adoption of IFRS 15 on 1 Jan 2018</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Opening balance as at 1 Jan 2018 – IFRS 9 / IFRS 15</td>
<td>(982)</td>
<td>1,066,221</td>
</tr>
</tbody>
</table>

**Reclassification of equity instruments from available for sale to fair value through other comprehensive income (FVOCI)**

Equity instruments were categorised as available-for-sale financial assets (EUR 4,936 thousand) until 31 December 2017 and were recognised through the “Accumulated other comprehensive income”. As at 1 January 2018, no reclassification of equity instrument was reported as they have still been reported within the “Financial instruments measured at fair value through other comprehensive income (FVOCI)” caption.

All equity instruments recognised as at 1 January 2018 are designated as at FVOCI by the Bank.

**Reclassification of debt instruments from available for sale to amortised cost**

The management of the Bank assessed the business model for the financial assets classified as available for sale under IAS 39 as at 1 January 2018.

Following the analysis, debt instruments complying with the criteria to solely represent payments of principal and interest and following the business model “to hold” have been classified to the category “at amortised cost”. Related fair value gains amounting to EUR 7,199 thousand and related deferred tax amounting to EUR 1,872 were derecognised from other comprehensive income as at 1 January 2018.

**Change in deferred tax assets**

The impact on the deferred taxes is mainly driven by the reclassification of financial instruments measured at “available for sale” under IAS 39 to “amortised cost” under IFRS 9.
Clearstream Banking S.A.

Notes to the annual accounts
as at 31 December 2018
(continued)

Change in provision for debt instruments at amortised cost and recognition of FX revaluation of debt instruments from available-for-sale to amortised cost
Debt instruments measured at amortised cost are considered to be generally low risk, and thus the impairment provision is determined as twelve-months expected credit loss. The expected loss calculated as at 1 January 2018 amounted to EUR 186 thousand reducing other reserves accordingly.

As these debt instruments were denominated in USD the related foreign currency loss amounting to EUR 69 thousand arising from these valuation principles has been recognised in other reserves.

Change in provision for trade receivables
For trade receivables, the Bank applies the simplified approach to calculate the expected credit losses, which requires the use of the lifetime expected loss provision for all trade receivables. The transfer from the incurred loss model of IAS 39 to the expected loss model of IFRS 9 increased the impairment charges for trade receivables included in the caption “Other assets” by EUR 507 thousand and decreased other reserves accordingly.

2.3 New accounting standards – not yet implemented
The following standard and interpretation, which are relevant to the Bank (as it has opted under the mixed accounting regime of “Luxembourg GAAP with IAS options” to apply it from 2019), but which have not been adopted early by the Bank for 2018, have been published by the IASB prior to the publication of these annual accounts and partially adopted by the European Commission.

The following standard was already adopted by the European Commission:

IFRS 16 “Leases”
IFRS 16 establishes principles for the recognition, measurement, presentation and disclosure of leases. The objective of IFRS 16 is to ensure that lessees and lessors provide relevant information on the effects of lease contracts. The standard must be applied for financial years beginning on or after 1 January 2019; earlier application is permitted. The Bank will apply the standard as from 1 January 2019. The standard was adopted by the EU on 31 October 2017.

The Bank as lessee expects a material impact on its annual accounts from the first-time application of the new leasing standard. IFRS 16 introduces a single lessee accounting model. According to this approach, the lessee is obliged to recognise all leases: first, the lessee recognises the right-of-use asset, i.e. the lessee’s right to use the leased asset; second, the lessee recognises the lease liability, i.e. the lessee’s obligation to make lease payments.

As a result of the recognition of right-of-use assets and the corresponding lease liabilities, the Banks’s total assets are expected to increase, as at the date of conversion, by around EUR 55 million. The major portion of this amount of approximately EUR 54 million refers to long-term...
arrangements for office properties and data centres. In addition, lease agreements for company cars are expected to produce an effect of around EUR 1 million.

Furthermore, the type of expenses associated with such leases will change as well: going forward, the Bank will recognise a right-of-use asset less any accumulated depreciation and any accumulated impairment losses as well as interest expenses from lease liabilities instead of rental and lease expenses recognised in other administrative expenses.

The Bank will make use of the general practical expedients provided by IFRS 16:

- All arrangements identified as leases in the past will continue to be classified as such;
- Short-term leases (lease term of less than twelve months) and leases of low value are not recorded as right-of-use asset or lease liability, respectively.

Value-added tax included in lease payments is included neither in the lease liabilities nor in the carrying amount of the right-of-use asset, regardless of whether the Bank is entitled to make tax withholding or not.

As at the date of first-time adoption of IFRS 16, the Bank will proceed as follows:

- The transition is based on the modified retrospective approach; prior-year figures are not restated;
- The present value of the lease liabilities is calculated on the basis of the future lease payments using the incremental borrowing rate. A uniform rate is selected for similar leases;
- The measurement of the right-of-use asset is calculated on the basis of the individual agreements, either retrospectively using the interest rate applied upon first-time adoption or on the basis of the restated lease liabilities. The cumulative effects from first-time adoption of the new standard are recorded as at the date of first-time adoption directly in equity;
- In the case of agreements with a remaining term of less than twelve months at the date of first-time adoption, a decision is made on individual agreement level;
- Initial direct costs are not taken into account in the right-of-use asset.

### 2.4 Offsetting

Financial assets and liabilities are offset and the net amount is reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously. The Company has offsetting arrangements in place with Clearstream International S.A., Clearstream Services S.A. and Clearstream Banking AG (the “Offsetting Arrangements”). These were applied as at 31 December 2017 due to the intention to settle on a net basis, or realise the asset and settle the liability simultaneously. As at 31 December 2018 the Bank no longer has this intention, and therefore financial assets and liabilities are not offset and the gross amount is reported in the balance sheet (see also Note 3.6 and Note 4.1.4).
2.5 Fixed assets

2.5.1 Intangible assets

Intangible fixed assets include licences acquired for valuable consideration. They are amortised over 3 years on a straight-line basis.

Following the acquisition of Citco Global Securities Services Ltd (now Clearstream Global Securities Services Ltd) by Clearstream International S.A., the customer relationships were subsequently acquired in 2014 by the Bank from Clearstream International S.A.. These are amortised over 20 years on a straight-line basis.

2.5.2 Tangible assets

Tangible assets are included at acquisition or production cost, less accumulated depreciation. Tangible assets are depreciated over their estimated useful lives.

The rates and methods of depreciation are as follows:

<table>
<thead>
<tr>
<th>Estimated useful life</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other fixtures and fittings, tools and equipment:</td>
<td></td>
</tr>
<tr>
<td>- IT equipment</td>
<td>4 years</td>
</tr>
<tr>
<td>- building improvements</td>
<td>5 years</td>
</tr>
<tr>
<td>- office equipment</td>
<td>5 years</td>
</tr>
<tr>
<td>- telecommunications equipment</td>
<td>4 years</td>
</tr>
<tr>
<td>- furniture</td>
<td>10 years</td>
</tr>
</tbody>
</table>

Other fixtures and fittings, tools and equipment costing less than EUR 870 or whose expected useful lives do not exceed one year, are charged directly to the income statement for the year.

2.6 Other assets and other liabilities

The position “Other assets” includes mainly the pension fund reserve, deposits and VAT receivables.

In accordance with annex V of the financial information templates (hereinafter “FINREP”), trade receivables as at 31 December 2018 comprising of fees receivable amounting to EUR 45,646 thousand and receivables due from affiliated undertakings amounting to EUR 45,649 have been reclassified from “Other assets” to “Cash in hand, balances with central banks and post office banks”, “Loans and advances to credit institutions repayable on demand”, “Loans and advances to credit institutions – Other loans and advances” and "Loans and advances to customers". As at 31 December 2017 fees receivable amounting to EUR 47,866 thousand and receivables due from affiliated undertakings amounting to EUR 7,762 thousand were not reclassified and remain disclosed under caption “Other assets” (see also Note 2).
The position “Other liabilities” contains mainly commission expenses payable, social charges payables, payables related to employees, to external services received, to contracted services and other payables not under the scope of IFRS 9.

2.7 Provisions

2.7.1 Pension obligations

Pension obligations are measured in accordance with IAS 19, “Employee Benefits”. Return on plan assets is assumed to be the discount rate used to measure the pension obligation. Actuarial gains and losses are recognised directly in Equity under “Accumulated other comprehensive income”. Past service cost resulting from retrospective plan amendments is expensed immediately and in full.

Provisions for pension obligations are measured, using the projected unit credit method on the basis of actuarial reports. The fair value of plan assets, taking into account the asset ceiling rules if there are any surplus plan assets, is deducted from the present value of pension obligations. This results in the net defined benefit liability or asset. Net interest for the financial year is calculated by applying the discount rate determined at the beginning of the financial year to the net defined benefit liability determined as at that date.

The relevant discount rate is determined by reference to the return on long-term corporate bonds with a rating of at least AA (Moody’s Investors Service, Standard & Poor’s, Fitch Ratings and Dominion Bond Rating Service) on the basis of the information provided by Bloomberg, and a maturity that corresponds approximately to the maturity of the pension obligations. Moreover, the bonds must be denominated in the same currency as the underlying pension obligation.

Actuarial gains or losses resulting from changes in expectations with regard to life expectancy, pension trends, salary trends, or the discount rate as compared with the estimate at the beginning of the period or compared with the actual development during the period are recognised in Equity under “Accumulated other comprehensive income”. Actuarial gains and losses recognised in Equity under “Accumulated other comprehensive income” may not be reclassified to profit or loss in subsequent periods. Similarly, differences between the (interest) income on plan assets determined at the beginning of the period and the return on plan assets actually recorded at the end of the period are also recognised directly in Equity under “Accumulated other comprehensive income”.

The defined benefit pension plan in favour of Luxembourg employees of the Bank is funded by means of cash contributions to an “association d’épargne pension” (ASSEP), common to the Bank, its parent, Clearstream International S.A., and Clearstream Services S.A., organised in accordance with Luxembourg law. The benefits consist of a one-off capital payment, which is generally paid on reaching the age of 65. The benefit plan does not cover disability or death in service. Contributions to the “association d’épargne pension” are funded in full by the participating companies. The contributions are determined annually on the basis of actuarial reports and the amount of the obligation is calculated in accordance with Luxembourg law.
2.7.2 Employees share options plans

Depending on their individual situation, employees of the Bank may participate in a share options plan.

Accounting for the employees share option plans is in line with IFRS 2 “Share-based payment”.

2.7.3 Other provisions

In accordance with IAS 37, the other provisions take account of all identifiable risks as well as uncertain obligations, if such obligation can be reasonably estimated, and are measured in the amount of the probable obligation.

A provision for restructuring is only recognised when an entity has a detailed formal plan for the restructuring and has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement that plan or announcing its main features to those affected by it. In the creation of personnel-related restructuring provisions, certain assumptions are made with regard to, for example, fluctuation rate, discount rate and salary trends. Should the actual values deviate from these assumptions, adjustments may be necessary.

Separate provisions are also made for litigation and for potential losses in connection with operational activities and refurbishment and rent in connection with building improvements.

2.8 Deferred taxes

Deferred tax assets and liabilities are computed using the balance sheet approach in accordance with IAS 12. The deferred tax calculation is based on temporary differences between the carrying amounts in the tax accounts and the carrying amounts in the annual accounts with “IAS-option” that lead to a future tax liability or benefit when assets are used or sold or liabilities are settled.

Deferred tax assets or liabilities are measured using the tax rates that are currently expected to apply when the temporary differences reverse, based on tax rates that have been enacted or substantively enacted by the reporting date. Deferred tax assets are recognized for the carry forward of unused tax losses only to the extent that it is probable that future taxable profit will be available. Deferred tax assets and deferred tax liabilities are offset where a legally enforceable right to set off current tax assets against current tax liabilities exists and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority.

2.9 Foreign currency translation

The share capital of the Bank is expressed in euro (‘EUR’) and the accounting records are maintained in that currency.

Assets and liabilities expressed in a foreign currency are converted into EUR at the rate of exchange ruling at the balance sheet date. Income and charges in foreign currencies are converted into EUR at the rate of exchange ruling on the date of the transaction, except for those income and charge items which have been hedged against foreign exchange risk by entering into forward
foreign exchange transactions. Foreign currency gains and losses arising from these valuation principles are taken to income statement.

**2.10 Income and expense recognition**

Interest income and expense are recognised in profit or loss using the effective interest method over the respective financial instrument’s term to maturity. Interest income is recognised when it is probable that the economic benefits associated with the transaction will flow to the entity and the income can be measured reliably. Interest expense is recognised in the period in which it is incurred.

Dividend income is recognised in profit or loss on the date that the dividend is declared.

Commission receivable for the Bank consists mainly of custody fees, settlement fees, global securities financing fees (i.e. securities lending/borrowing fees and collateral management fees) and connectivity/reporting fees invoiced to customers. The custody fee is determined mainly by the value of securities held in custody, the settlement fee by the number of transactions conducted, the income from the global securities financing business by the value of securities lent or collateralized, and the connectivity/reporting fee by the number of queries from and reports to customers.

Commissions and other income and expense items are recognised in profit or loss when the corresponding service is provided.

Payments made under operating leases are recognised in profit or loss on a straight-line basis over the term of the lease. Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

**2.11 Related party transactions**

Related party transactions are concluded at arm’s length conditions. Please refer to the notes 2.4 “Offsetting”, 2.6 “Other assets and other liabilities”, 3.1.2 “Loans and advances to credit institutions repayable on demand”, 3.4 “Loans and receivables”, 3.5 “Investments in subsidiaries, joint ventures and associates”, 3.6 “Other assets”, 3.9 “Fixed assets movements”, 4.1.1 “Deposits from credit institutions”, 4.1.2 “Deposits from customers”, 4.1.4 “Other financial liabilities”, 4.8 “Dividends paid and proposed”, 6.1 “Commitments”, 7.3 “Commission receivable”, 7.4 “Other operating income”, 7.6 “Employee share option plans”, 7.7 “Other administrative expenses” and 8.3 “Risk management disclosures relating to credit risk” for further information regarding related party transactions.
3 Detailed disclosure relating to asset headings

3.1 Cash, cash balances at central banks and other demand deposits

3.1.1 Cash in hand, balances with central banks and post office banks

During the year ended 31 December 2018, the Bank was required to place, on average, a minimum of EUR 96,613 thousand (2017: EUR 103,004 thousand) with the Luxembourg Central Bank. The amount outstanding with the Luxembourg Central Bank as at 31 December 2018 was EUR 6,004,185 thousand (2017: EUR 5,487,885 thousand).

This caption also includes fees receivable amounting to EUR 1,671 thousand which have been reclassified from “Other assets” (see also Note 2).

3.1.2 Loans and advances to credit institutions repayable on demand

As at 31 December 2018, loans and advances to credit institutions amounting to EUR 7,174,383 thousand (2017: EUR 4,730,593 thousand) were repayable on demand.

Amounts due from affiliated undertakings repayable on demand amounted to EUR 183,764 thousand as at 31 December 2018 (2017: EUR 503,059 thousand).

This caption also includes receivables due from affiliated undertakings amounting to EUR 352 thousand which have been reclassified from “Other assets” (see also Note 2).

3.2 Derivatives held for trading

Financial assets and liabilities held for trading mainly include foreign currency swaps. The fair value of foreign currency swaps and forwards can be analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>16,539</td>
<td>2,726</td>
</tr>
<tr>
<td>Liabilities</td>
<td>(3,046)</td>
<td>(20,516)</td>
</tr>
<tr>
<td>Net position held for trading</td>
<td>13,493</td>
<td>(17,790)</td>
</tr>
</tbody>
</table>
The total notional value of the foreign currency swaps and forwards amounted to EUR 3,372.1 million (2017: EUR 2,571.7 million). The remaining maturity can be analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in millions of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Sight</td>
<td>1,516.3</td>
<td>832.0</td>
</tr>
<tr>
<td>Not more than one month</td>
<td>839.5</td>
<td>679.6</td>
</tr>
<tr>
<td>More than one month but no more than three months</td>
<td>1,016.3</td>
<td>1,003.7</td>
</tr>
<tr>
<td>More than three months but no more than six months</td>
<td>-</td>
<td>18.8</td>
</tr>
<tr>
<td>More than six months but no more than one year</td>
<td>-</td>
<td>37.6</td>
</tr>
<tr>
<td></td>
<td><strong>3,372.1</strong></td>
<td><strong>2,571.7</strong></td>
</tr>
</tbody>
</table>

### 3.3 Financial assets

#### 3.3.1 Equity instruments

The Bank held unlisted shares with a fair value of EUR 5,171 thousand as at 31 December 2018 (2017: EUR 4,936 thousand).

#### 3.3.2 Treasury bills and other debt securities eligible for refinancing with central banks

As at 31 December 2018, the nominal value of treasury bills and other debt securities eligible for refinancing with central banks with a remaining maturity of less than one year amounted to EUR 362,470 thousand (2017: EUR 203,701 thousand).

As at 31 December 2018 and 2017, treasury bills and other debt securities eligible for refinancing with central banks included only listed securities.

#### 3.3.3 Debt securities and other fixed-income securities

As at 31 December 2018, debt securities and other fixed-income securities amounting to EUR 491,714 thousand were not eligible for refinancing with central banks (2017: EUR 535,686 thousand).

As at 31 December 2018 and 2017, debt securities and other fixed-income securities only included listed securities.
3.4 Loans and receivables

Remaining maturity of other loans and advances to credit institutions can be analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not repayable on demand but not more than one month</td>
<td>1,163,797</td>
<td>904,909</td>
</tr>
<tr>
<td>More than one month but not more than three months</td>
<td>1,228,410</td>
<td>757,010</td>
</tr>
<tr>
<td>More than three months but not more than one year</td>
<td>166,499</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,558,706</strong></td>
<td><strong>1,661,919</strong></td>
</tr>
</tbody>
</table>

No amounts were due from affiliated undertakings as at 31 December 2018 (2017: EUR Nil).

This caption also includes fees receivable amounting to EUR 37,743 thousand which have been reclassified from “Other assets” (see also Note 2).

Remaining maturity of loans and advances to customers can be analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repayable on demand</td>
<td>931,736</td>
<td>7,816</td>
</tr>
<tr>
<td>Not repayable on demand but not more than one month</td>
<td>6,232</td>
<td>315,873</td>
</tr>
<tr>
<td>More than one month but not more than three months</td>
<td>-</td>
<td>190,952</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>937,968</strong></td>
<td><strong>514,641</strong></td>
</tr>
</tbody>
</table>

Amounts due from affiliated undertakings amounted to EUR 45,380 thousand as at 31 December 2018 (2017: EUR Nil).

This caption also includes fees receivable amounting to EUR 6,232 thousand and receivables due from affiliated undertakings amounting to EUR 45,297 thousand which have been reclassified from “Other assets” (see also Note 2).

3.5 Investments in subsidiaries, joint ventures and associates

Investments in subsidiaries correspond to the investment of EUR 736 thousand the Bank holds in its fully owned subsidiary Clearstream Banking Japan Ltd (2017: EUR 736 thousand) and to the share of 50 % it owns in its subsidiary REGIS-TR S.A., amounting to EUR 3,500 thousand (2017: EUR 3,500 thousand).

As at 31 December 2018 the equity of Clearstream Banking Japan Ltd amounted to EUR 1,478 thousand* (2017: EUR 1,343 thousand*). The profit for the financial year 2018 amounted to EUR 46 thousand* (2017: EUR 47 thousand*).

A new subsidiary, Clearstream London Limited, was incorporated on 27 December 2018. This is a fully owned subsidiary of the Bank; the authorised but yet unpaid shares are divided into 100 shares with a nominal value GBP 1 per share.

The above-mentioned equity instruments are not listed on a quoted market.

*Amounts based on unaudited IFRS management information.
**Amounts based on audited IFRS financial statements.

3.6 Other assets

This heading consists of the following:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fees receivable</td>
<td>11,940</td>
<td>60,543</td>
</tr>
<tr>
<td>VAT receivable</td>
<td>24,632</td>
<td>23,171</td>
</tr>
<tr>
<td>Receivables due from affiliated undertakings (1)</td>
<td>-</td>
<td>7,762</td>
</tr>
<tr>
<td>Deposits</td>
<td>4,315</td>
<td>4,516</td>
</tr>
<tr>
<td>Pension fund investments</td>
<td>3,980</td>
<td>3,991</td>
</tr>
<tr>
<td>Other assets</td>
<td>1,455</td>
<td>1,234</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46,322</strong></td>
<td><strong>101,217</strong></td>
</tr>
</tbody>
</table>

In accordance with annex V of the financial information templates (hereinafter “FINREP”), trade receivables as at 31 December 2018 comprising of fees receivable amounting to EUR 45,646 thousand and receivables due from affiliated undertakings amounting to EUR 45,649 have been reclassified from “Other assets” to “Cash in hand, balances with central banks and post office banks”, “Loans and advances to credit institutions repayable on demand”, “Loans and advances to credit institutions – Other loans and advances” and ”Loans and advances to customers”. As at 31 December 2017 fees receivable amounting to EUR 47,866 thousand and receivables due from affiliated undertakings amounting to EUR 7,762 thousand were not reclassified and remain disclosed under caption “Other assets” (see also Note 2).

(1) The Company has offsetting arrangements in place with Clearstream International S.A., Clearstream Services S.A. and Clearstream Banking AG (the “Offsetting Arrangements”). Refer to Note 2.4 for details. These were applied as at 31 December 2017 due to the intention to settle on a net basis, or realise the asset and settle the liability simultaneously. As at 31 December 2018 the Bank no longer has this intention, and therefore financial assets and liabilities are not offset and the gross amount is reported in the balance sheet (see also Note 2.4).

The net amount owed to Clearstream International S.A. as at 31 December 2017 of EUR 5,503 thousand is presented in “Financial liabilities measured at amortised cost - Other financial liabilities” and comprises an intercompany debtor amount of EUR 2,592 thousand and an intercompany creditor amount of EUR 8,095 thousand.
The net amount owed to Clearstream Services S.A. as at 31 December 2017 of EUR 16,360 thousand comprises an intercompany debtor amount of EUR 2,031 thousand and an intercompany creditor amount of EUR 18,391 thousand.

The net amount owed to Clearstream Banking AG as at 31 December 2017 of EUR 28 thousand comprises an intercompany debtor amount of EUR 39 thousand and an intercompany creditor amount of EUR 67 thousand.

3.7 **Prepayments and accrued income**

This heading consists of the following:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepayments and accrued income</td>
<td>3,053</td>
<td>1,882</td>
</tr>
</tbody>
</table>

3.8 **Assets denominated in foreign currencies**

Assets denominated in currencies other than EUR have a total value equivalent to EUR 10,894,490 thousand as at 31 December 2018 (2017: EUR 6,919,308 thousand).

3.9 **Fixed assets movements**

See table overleaf.
### 3.9 Fixed assets movements

(amounts in thousands of EUR)

<table>
<thead>
<tr>
<th></th>
<th>Net book value at start of financial year</th>
<th>Additions</th>
<th>Disposals (1)</th>
<th>Transfers and exchange differences (2)</th>
<th>Revaluation, amortization of premium / discounts and accrued interest (3)</th>
<th>Total value at end of financial year</th>
<th>Adjustments for the financial year</th>
<th>Write-backs for the financial year</th>
<th>Net book value at the balance sheet date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIXED ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participating interests</td>
<td>4,936</td>
<td>-</td>
<td>(261)</td>
<td>-</td>
<td>496</td>
<td>5,171</td>
<td>-</td>
<td>-</td>
<td>5,171</td>
</tr>
<tr>
<td>Shares in affiliated undertakings</td>
<td>4,236</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>4,236</td>
<td>-</td>
<td>-</td>
<td>4,236</td>
</tr>
<tr>
<td>Debt securities</td>
<td>1,669,680</td>
<td>16,804</td>
<td>(203,878)</td>
<td>30,924</td>
<td>(7,861)</td>
<td>1,505,669</td>
<td>-</td>
<td>-</td>
<td>1,505,669</td>
</tr>
<tr>
<td><strong>Total intangible assets</strong></td>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer relationships</td>
<td>13,206</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>13,206</td>
<td>(788)</td>
<td>-</td>
<td>12,418</td>
</tr>
<tr>
<td>Other intangible assets (4)</td>
<td>8</td>
<td>-</td>
<td>(2,406)</td>
<td>-</td>
<td></td>
<td>-</td>
<td>(4)</td>
<td>2,406</td>
<td>4</td>
</tr>
<tr>
<td><strong>Tangible assets</strong> of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other fixtures and fittings, tools and equipment (4)</td>
<td>6,288</td>
<td>2.762</td>
<td>(5.832)</td>
<td>40</td>
<td></td>
<td>3,258</td>
<td>(1,694)</td>
<td>4,717</td>
<td>6,281</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) In the case of debt securities, disposals correspond to the final redemption of securities. In the case of participating interests, in 2018 the participation of the Bank in SWIFT decreased from 1,058 shares to 1,002 shares following a share reallocation.

(2) Exchange differences correspond to the revaluation at the closing rate of debt securities as well as furniture, fixtures, and fittings held by representative offices and branches abroad.

(3) Amortised discount on treasury bills and other bills eligible for refinancing with central banks and on debt securities and other fixed income securities amounted to EUR 767 thousand as at 31 December 2018 (2017: EUR 380 thousand). Amortised premium on those securities amounted to EUR 6,566 thousand as at 31 December 2018 (2017: EUR 6,581 thousand).

(4) In 2018, an asset inventory clean-up was performed by the Bank. Some fully depreciated assets were permanently removed from the fixed assets register, then explaining the disposal and write-backs in the above fixed assets movements table. In addition, a loss on disposal was recorded in respect of tangible assets.
3.10 **Own securities deposited at the Luxembourg Central Bank**

As at 31 December 2018, the Bank had deposited part of its investment portfolio with a total fair value of EUR 1,106,971 thousand (2017: EUR 1,093,944 thousand) at the Luxembourg Central Bank. These securities can be pledged as collateral in case the Bank utilises the credit line made available by the Luxembourg Central Bank.

4 **Detailed disclosure relating to liability headings**

4.1 **Financial liabilities measured at amortised cost**

4.1.1 **Deposits from credit institutions**

Deposits from credit institutions can be analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repayable on demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repayable on demand</td>
<td>12,472,829</td>
<td>9,985,880</td>
</tr>
<tr>
<td>With agreed maturity dates or periods of notice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remaining maturity of 24 hours or one working day</td>
<td>1,029,513</td>
<td>564,357</td>
</tr>
<tr>
<td></td>
<td><strong>13,502,342</strong></td>
<td><strong>10,550,237</strong></td>
</tr>
</tbody>
</table>

Deposits from central banks outstanding as at 31 December 2018 amounting to EUR 1,323,159 thousand (2017: EUR 696,715 thousand) were all repayable on demand.

Amounts owed to affiliated undertakings have a total value of EUR 975,042 thousand (2017: EUR 669,533 thousand).

4.1.2 **Deposits from customers**

Deposits from customers as at 31 December 2018 amounting to EUR 2,914,090 thousand (2017: EUR 1,953,614 thousand) are repayable on demand.

Amounts owed to affiliated undertakings have a total value of EUR 66,903 thousand (2017: EUR 61,936 thousand).
4.1.3 Debt securities issued

The nominal amount of issued debt evidenced by certificates as at 31 December 2018 of EUR denominated issue was EUR 100 million (2017: EUR 100 million), USD denominated issue was USD 284 million (2017: USD 210 million) and GBP denominated issue was GBP 50 million (2017: GBP Nil).

Remaining maturity of debt evidenced by certificates was as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not repayable on demand but not more than three months</td>
<td>256,030</td>
<td>241,544</td>
</tr>
<tr>
<td>More than three months but not more than one year</td>
<td>146,090</td>
<td>33,195</td>
</tr>
<tr>
<td></td>
<td><strong>402,120</strong></td>
<td><strong>274,739</strong></td>
</tr>
</tbody>
</table>

4.1.4 Other financial liabilities

This heading consists of the following:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amounts due to affiliated undertakings (1)</td>
<td>77,054</td>
<td>22,922</td>
</tr>
<tr>
<td>Payables for fees due to sub-custodians</td>
<td>16,923</td>
<td>15,352</td>
</tr>
<tr>
<td>Other financial liabilities</td>
<td>2,325</td>
<td>1,724</td>
</tr>
<tr>
<td></td>
<td><strong>96,302</strong></td>
<td><strong>39,998</strong></td>
</tr>
</tbody>
</table>

(1) The Company has offsetting arrangements in place with Clearstream International S.A., Clearstream Services S.A. and Clearstream Banking AG (the “Offsetting Arrangements”). Refer to Note 2.4 for details. These were applied as at 31 December 2017 due to the intention to settle on a net basis, or realise the asset and settle the liability simultaneously. As at 31 December 2018 the Bank no longer has this intention, and therefore financial assets and liabilities are not offset and the gross amount is reported in the balance sheet (see also Note 2.4). As at 31 December 2018 amounts due to affiliated undertakings significantly increased in the Bank due to securities processing recharges from Clearstream Services S.A. mainly resulting from restructuring expenses and impairment of some intangible assets.

The net amount owed to Clearstream International S.A. as at 31 December 2017 of EUR 5,503 thousand is presented in “Financial liabilities measured at amortised cost - Other financial liabilities” and comprises an intercompany debtor amount of EUR 2,592 thousand and an intercompany creditor amount of EUR 8,095 thousand.

The net amount owed to Clearstream Services S.A. as at 31 December 2017 of EUR 16,360 thousand comprises an intercompany debtor amount of EUR 2,031 thousand and an intercompany creditor amount of EUR 18,391 thousand.

The net amount owed to Clearstream Banking AG as at 31 December 2017 of EUR 28 thousand comprises an intercompany debtor amount of EUR 39 thousand and an intercompany creditor amount of EUR 67 thousand.
4.2 Other liabilities

This heading consists of the following:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amounts due to employees</td>
<td>632</td>
<td>490</td>
</tr>
<tr>
<td>Amounts due to suppliers</td>
<td>4,844</td>
<td>10,305</td>
</tr>
<tr>
<td>Liabilities for social security contributions</td>
<td>1,082</td>
<td>985</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>4,155</td>
<td>3,394</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,713</strong></td>
<td><strong>15,174</strong></td>
</tr>
</tbody>
</table>

4.3 Accruals and deferred income

This heading consists of the following:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrued employee costs</td>
<td>11,483</td>
<td>9,324</td>
</tr>
<tr>
<td>Accrued fee costs</td>
<td>15,299</td>
<td>12,117</td>
</tr>
<tr>
<td>Deferred income</td>
<td>-</td>
<td>159</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26,782</strong></td>
<td><strong>21,600</strong></td>
</tr>
</tbody>
</table>

4.4 Other provisions

This heading consists of the following:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisions for litigation</td>
<td>-</td>
<td>776</td>
</tr>
<tr>
<td>Provisions for potential losses on operational activities</td>
<td>2,538</td>
<td>3,530</td>
</tr>
<tr>
<td>Provisions for restructuring (1)</td>
<td>17,379</td>
<td>3,719</td>
</tr>
<tr>
<td>Provisions for employee share plans</td>
<td>3,750</td>
<td>2,659</td>
</tr>
<tr>
<td>Provisions for refurbishment and rent</td>
<td>2,022</td>
<td>939</td>
</tr>
<tr>
<td>Other provisions</td>
<td>987</td>
<td>656</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26,676</strong></td>
<td><strong>12,279</strong></td>
</tr>
</tbody>
</table>

(1) In the course of "Roadmap 2020" which mainly focuses on three strategic areas (organic growth, target acquisitions and investments in new technologies), a new restructuring programme (SPIP) has been set up to enhance the operational efficiency whilst reducing structural costs. This will encompass improved decision-making processes as well as
streamlining the organisation. Group-wide, 350 jobs are planned to be cut, thereof 50 managers.

The target is to reduce structural costs by around EUR 100 million by end of 2020 within the overall Deutsche Börse Group. One-off costs for the strategic programme will amount to approximately EUR 200 million group-wide, most of which has been incurred in 2018.

The Bank is also affected out of cost savings. In this context, the Bank incurred costs of approximately EUR 17 million in 2018. As at 31 December 2018 the balance of ‘Provisions for restructuring’ also reflect the usage/release of provisions of prior years.

4.5 Issued capital

As at 31 December 2018 and 2017, the share capital of the Bank consisted of 920,000 ordinary shares with a nominal value of EUR 100 per share, all fully paid.

In addition to the amount of the issued share capital, the Bank has an authorised share capital of EUR 25,000 thousand divided into 250,000 ordinary shares with a nominal value of EUR 100 per share. Such authorisation is valid for a period of five years starting from 29 September 2016, the date of publication of the notarial deed amending the articles of incorporation of the Bank enacted on 22 September 2016.

4.6 Reserves

4.6.1 Legal and other reserves

The Bank is required by Luxembourg law to appropriate annually to a legal reserve 5% of its statutory net profits until the aggregate reserve equals 10% of the subscribed share capital. Such reserve amounting to EUR 9,200 thousand as at 31 December 2018 (2017: EUR 9,200 thousand) is not available for distribution. No additional appropriation to the legal reserve is required during 2018, as the Bank already fulfils the legal requirement equivalent to 10% of the subscribed share capital.

In accordance with paragraph 8a of the net wealth tax law, the Company has opted for the constitution of a special net wealth tax reserve in order to reduce its net wealth tax charge incurred during the financial year 2018, amounting to EUR 2,855 thousand. Such a reduction is subject to allocating an amount equal to five times the net wealth tax, amounting to EUR 14,500 thousand, to a special net wealth tax reserve which may not be distributed during a minimum period of five years. The total of this reserve was EUR 118,145 thousand at 31 December 2018 (2017: EUR 118,145 thousand).

4.6.2 Accumulated other comprehensive income

In accordance with IFRS 9, fair value adjustments on financial instruments are recognised in the income statement or directly in Equity under “Accumulated other comprehensive income”. The actuarial gains or losses and the difference between the expected and the actual return or loss in plan assets are recognised in Equity under “Accumulated other comprehensive income” (other items) in accordance with IAS 19.
The following table shows the movements in Equity under “Accumulated other comprehensive income” during the financial year:

<table>
<thead>
<tr>
<th>amounts in thousands of EUR</th>
<th>Available-for-sale</th>
<th>Cash Flow hedges</th>
<th>Other items (IAS 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>equity instruments</td>
<td>debt instruments</td>
<td></td>
</tr>
<tr>
<td>Amount as at 31 December 2017</td>
<td>2,150</td>
<td>5,327</td>
<td>522</td>
</tr>
<tr>
<td>Adjustment on initial application of IFRS 9, net of tax (see Note 2.3)</td>
<td>-</td>
<td>(5,327)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Restated balance at 1 January 2018</strong></td>
<td><strong>2,150</strong></td>
<td>-</td>
<td><strong>522</strong></td>
</tr>
<tr>
<td>Fair value measurement</td>
<td>342</td>
<td>-</td>
<td>(705)</td>
</tr>
<tr>
<td>Deferred taxes</td>
<td>(90)</td>
<td>-</td>
<td>183</td>
</tr>
<tr>
<td><strong>Amount as at 31 December 2018</strong></td>
<td><strong>2,402</strong></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In accordance with article 3 (2) of CSSF Regulation N° 14-02, the “Accumulated other comprehensive income” and other valuation differences above are not available for distribution.

4.7 **Movements in capital and reserves**

See table overleaf
Movements in capital and reserves

Movements in capital and reserves can be analysed as follows:

<table>
<thead>
<tr>
<th>Amounts in thousands of EUR</th>
<th>2017</th>
<th>Adjustment on initial balance at 1 January 2018</th>
<th>Allocation of profits</th>
<th>Ordinary dividend</th>
<th>Others</th>
<th>Capital contribution (1)</th>
<th>Accumulated other comprehensive income (see Note 4.6)</th>
<th>Profit 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary shares</td>
<td>92,000</td>
<td>-</td>
<td>92,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Share premium</td>
<td>136,836</td>
<td>-</td>
<td>136,836</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Legal reserve</td>
<td>9,200</td>
<td>-</td>
<td>9,200</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other reserves</td>
<td>863,765</td>
<td>(762)</td>
<td>863,003</td>
<td>124,098</td>
<td>429</td>
<td>25,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Accumulated other comprehensive income</td>
<td>4,345</td>
<td>(5,327)</td>
<td>(982)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(773)</td>
<td>-</td>
</tr>
<tr>
<td>Profit for the year</td>
<td>194,018</td>
<td>-</td>
<td>194,018</td>
<td>(194,018)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>206,530</td>
</tr>
<tr>
<td>Interim dividends</td>
<td>(69,920)</td>
<td>-</td>
<td>(69,920)</td>
<td>69,920</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(89,976)</td>
</tr>
<tr>
<td></td>
<td>1,230,244</td>
<td>(6,089)</td>
<td>1,224,155</td>
<td>-</td>
<td>(102,120)</td>
<td>429</td>
<td>25,000</td>
<td>(773)</td>
</tr>
</tbody>
</table>

(1) On 18 December 2018, Clearstream International S.A. and the Bank entered into a cash contribution agreement by which Clearstream International S.A., contributed an amount of EUR 25,000 thousand into the reserves of the Bank.
4.8 Dividends paid and proposed

During 2018, an interim dividend of EUR 89,976 thousand was paid (2017: EUR 69,920 thousand). In April 2018, an ordinary dividend of EUR 102,120 thousand was also paid.

Dividends amounting to EUR 96,600 thousand are proposed in 2019 in respect of the result of the year ended 31 December 2018.

4.9 Liabilities denominated in foreign currencies

Liabilities denominated in currencies other than EUR have a total value of EUR 11,022,455 thousand as at 31 December 2018 (2017: EUR 7,053,552 thousand).

5 Fair values per category, fair value adjustments and changes in fair value adjustments per category of financial instruments

The fair value adjustments and the changes in fair value adjustments of financial instruments measured at fair value can be analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>31 Dec 18</th>
<th>Restated balance at 1 January 2018</th>
<th>Adjustment on initial application of IFRS 9, net of tax (see Note 2.2)</th>
<th>31 Dec 17</th>
<th>Change in fair value during 2018 included in the income statement</th>
<th>Accumulated other comprehensive income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial instruments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>equity instruments</td>
<td>3,247</td>
<td>2,905</td>
<td></td>
<td>2,905</td>
<td>-</td>
<td>342</td>
</tr>
<tr>
<td>debt securities</td>
<td>-</td>
<td>-</td>
<td>(7,269)</td>
<td>7,269</td>
<td>-</td>
<td>(7,269)</td>
</tr>
<tr>
<td>Financial assets held for trading</td>
<td>16,539</td>
<td>2,726</td>
<td>-</td>
<td>2,726</td>
<td>13,813</td>
<td>-</td>
</tr>
<tr>
<td>Cash flow hedges</td>
<td>-</td>
<td>705</td>
<td>-</td>
<td>705</td>
<td>(705)</td>
<td>-</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial liabilities held for trading</td>
<td>3,046</td>
<td>20,516</td>
<td>-</td>
<td>20,516</td>
<td>(17,470)</td>
<td>-</td>
</tr>
</tbody>
</table>
6 Information relating to off-balance sheet items

6.1 Commitments

The law related to the resolution, reorganisation and winding-up measures of credit institutions and certain investment firms and on deposit guarantee and investor compensation schemes ("the Law"), transposing into Luxembourgish law the directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms and the directive 2014/49/EU related to deposit guarantee and investor compensation schemes, was passed on 18 December 2015.

The deposit guarantee and investor compensation scheme through the “Association pour la Garantie des Dépôts Luxembourg” (AGDL) was replaced by a new contribution based system of deposit guarantee and investor compensation scheme. This new system covers eligible deposits of each depositor up to an amount of EUR 100,000 and investments up to an amount of EUR 20,000. The Law also provides that deposits resulting from specific transactions or fulfilling a specific social or other purpose are covered for an amount above EUR 100,000 for a period of 12 months.

The funded amount of the “Fonds de résolution Luxembourg” (FRL) shall reach by the end of 2024 at least 1% of covered deposits, as defined in article 1 number 36 of the Law, of all authorized credit institutions in all participating Member States. This amount is collected from the credit institutions through annual contributions during the years 2015 to 2024.

The target level of funding of the “Fonds de Garantie des Dépôts Luxembourg” (FGDL) is set at 0.8% of covered deposits, as defined in article 163 number 8 of the Law, of the relevant credit institutions and is to be reached by the end of 2018 through annual contributions. The contributions are to be made in the form of annual payments during the years 2016 to 2018. When the level of 0.8% is reached, the Luxembourgish credit institutions are to continue to contribute for 8 additional years in order to constitute an additional safety buffer of 0.8% of covered deposits as defined in article 163 number 8 of the Law.

The law of 23 December 2016 on the tax reform 2017 has introduced a tax neutral reversal of the existing AGDL provisions in successive annual tranches from 2016 to 2026, under the condition that each annual tranche is at least equal to the contributions to the FGDL and FRL for that fiscal year. Any remaining balance of the AGDL provision not yet reversed at the end of this transitional period will have to be reversed and added to the taxable income of the year 2026.

On 18 January 2017, CSSF issued a circular letter relating to the abrogation of the AGDL and to the consequent accounting treatment of the AGDL reversal to enable the banks to follow from an accounting point of view the tax treatment foreseen in the law of 23 December 2016.

In 2018, no FGDL provision was recognised in the books of the Bank.

A new subsidiary, Clearstream London Limited, was incorporated on 27 December 2018. This is a fully owned subsidiary of the Bank; the authorised but yet unpaid shares are divided into 100 shares with a nominal value GBP 1 per share.
There are also commitments in existence under operating lease contracts for buildings used by the Bank in the normal course of business.

Total future minimum lease payments under non-cancellable operating leases can be analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not later than one year</td>
<td>4,900</td>
<td>5,020</td>
</tr>
<tr>
<td>Later than one year and no later than five years</td>
<td>8,900</td>
<td>13,800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13,800</strong></td>
<td><strong>18,820</strong></td>
</tr>
</tbody>
</table>

6.2 Contingent liabilities

Contingent liabilities include guarantees issued in connection with the Automated Securities Fails Financing programme in favour of the securities lenders. As at 31 December 2018, these guarantees amounted to EUR 413.2 million (2017: EUR 597.9 million).

In addition, the Bank acts as principal in securities borrowing and lending activities in connection with ASLplus. In these transactions, there is a perfect match between the securities borrowed and lent. These transactions are recognised following the guidelines of IFRS 9 “Financial instruments”. Under this standard, such securities lending transactions do not qualify for derecognition because the lenders substantially retain all the risks and rewards associated with the securities lent. Consequently the Bank does not recognise these transactions in its balance sheet. As at 31 December 2018, the market value of the securities borrowed and lent under the ASLplus programme was EUR 42,558.3 million (2017: EUR 52,142.2 million).

6.3 Legal risks

6.3.1 Peterson vs. Clearstream Banking S.A., Citibank NA et al. (“Peterson I”) and Heiser vs. Clearstream Banking S.A.

In its 2012 corporate report, Deutsche Börse Group informed about proceedings, Peterson vs Clearstream Banking S.A., the first Peterson proceeding, initiated by various plaintiffs seeking turnover of certain customer positions held in Clearstream Banking S.A.’s securities omnibus account with its US depository bank, Citibank NA, and asserting direct claims against Clearstream Banking S.A. for damages of USD 250 million. That matter was settled between Clearstream Banking S.A. and the plaintiffs and the direct claims against Clearstream Banking S.A. were abandoned.

In July 2013, the US court ordered turnover of the customer positions to the plaintiffs, ruling that these were owned by Bank Markazi, the Iranian central bank. Bank Markazi appealed, and the decision was affirmed on 9 July 2014 by the Second Circuit Court of Appeals, and then by the US Supreme Court on 20 April 2016. Once the process of distribution of funds to the plaintiffs is complete, a related case, Heiser vs Clearstream Banking S.A., also seeking turnover of the same assets, should be dismissed.
6.3.2 **Peterson vs Clearstream Banking S.A. ("Peterson II")**

On 30 December 2013, a number of US plaintiffs from the first Peterson case, as well as other plaintiffs, filed a complaint targeting restitution of certain assets that Clearstream Banking S.A. holds as a custodian in Luxembourg. In 2014, the defendants in this action, including Clearstream Banking S.A., moved to dismiss the case. On 19 February 2015, the US court issued a decision granting the defendants’ motions and dismissing the lawsuit. The plaintiffs lodged an appeal against this ruling at the competent appeals court (Second Circuit Court of Appeals), which on 21 November 2017 confirmed large portions of the decision of the trial court. Regarding another aspect, the appellate court referred the case back to the court of first instance, which shall assess whether the assets held in Luxembourg are subject to execution in the U.S. In opposition to this point, Clearstream Banking S.A. filed a petition to the US Supreme Court on 8 May 2018.

6.3.3 **Havlish vs Clearstream Banking S.A. ("Havlish")**

On 14 October 2016, a number of US plaintiffs filed a complaint naming Clearstream Banking S.A. and other entities as defendants. The complaint in this proceeding, Havlish vs Clearstream Banking S.A., is based on similar assets and allegations as in the Peterson proceedings. The complaint seeks turnover of certain assets that Clearstream Banking S.A. holds as a custodian in Luxembourg. The complaint also asserts direct claims against Clearstream Banking S.A. and other defendants and purports to seek damages of up to approximately USD 6.6 billion plus punitive damages and interest. The proceedings have been suspended due to the ongoing appeal to the US Supreme Court in the Peterson II proceedings.

6.3.4 **Criminal investigations against Clearstream Banking S.A.**

On 2 April 2014, Clearstream Banking S.A. was informed that the United States Attorney for the Southern District of New York has opened a grand jury investigation against Clearstream Banking S.A. due to Clearstream Banking S.A.’s conduct with respect to Iran and other countries subject to US sanction laws. Clearstream Banking S.A. is cooperating with the US attorney.

6.3.5 **Proceedings by the Public Prosecutor’s Office in Cologne**

In September 2017, Clearstream Banking AG and Clearstream Banking S.A. were made aware that the Public Prosecutor’s Office in Cologne had initiated proceedings for tax evasion against an employee of Clearstream Banking AG for his alleged involvement in the settlement of transactions of market participants over dividend date (cum/ex transactions). On 22 January 2018, the Public Prosecutor’s Office in Cologne addressed to Clearstream Banking AG a notification of hearing Clearstream Banking AG and Clearstream Banking S.A. as potential secondary participants (Nebenbeteiligte). Due to the early stage of the investigations, it is not possible to predict timing, scope or consequences of a potential decision. The companies are cooperating with the competent authorities.

6.3.6 **Bank Markazi vs Clearstream Banking S.A.**

In the context of the ongoing disputes regarding assets of Bank Markazi (the Central Bank of Iran), Clearstream Banking S.A. was served with a complaint of Bank Markazi on 17 January 2018 naming Banca UBAE S.P.A. and Clearstream Banking S.A. as defendants. The complaint filed before the Luxembourg courts primarily seeks the restitution of assets of Bank Markazi which the
complaint alleges are held on accounts of Banca UBAE S.P.A. and Bank Markazi with Clearstream Banking S.A. totalling approximately USD 4.9 billion plus interest. Alternatively, Bank Markazi seeks damages to the same amount. The assets sought include assets to the amount of approximately USD 1.9 billion that were turned over to US plaintiffs pursuant to a 2013 binding and enforceable US court order in a proceeding to which Bank Markazi was a party. The claim also addresses customer assets of approximately USD 2 billion, which include assets that are held at Clearstream Banking S.A. and which are currently subject to US and Luxembourg litigation brought by US plaintiffs, and addresses assets that were previously transferred out of Clearstream Banking S.A. to Banca UBAE S.P.A.

6.3.7 Banca UBAE S.p.A. vs Clearstream Banking S.A.

On 15 June 2018, Banca UBAE S.p.A. filed a complaint against Clearstream Banking S.A. in front of the Luxembourg courts. The complaint is a recourse action linked to the complaint that Bank Markazi filed against Clearstream Banking S.A. and Banca UBAE S.p.A. and asks that Banca UBAE S.p.A. be indemnified and held harmless by Clearstream Banking S.A. in case Banca UBAE S.p.A. were to lose in the Bank Markazi complaint and ordered by the court to pay damages to Bank Markazi.

6.3.8 Levin vs Clearstream Banking S.A.

On 26 December 2018, two US plaintiffs filed a complaint against Clearstream Banking S.A. and other legal persons; the plaintiffs hold claims against Iran, Iranian authorities and individuals amounting to approximately USD 28.8 million. The complaint filed in this case (Levin vs Clearstream Banking S.A.) is based on similar assets and allegations as those in the second Peterson and Havlish proceedings. The case seeks the turnover of certain assets held by Clearstream Banking S.A., as the custodian, in Luxembourg. In addition, the case also includes direct claims made against Clearstream Banking S.A. and further defendants for damages of up to around USD 28.8 million (plus punitive damages and interest).

6.3.9 Fairfield vs Clearstream Banking S.A.

Beginning in 16 July 2010, the liquidators of two investment funds domiciled in the British Virgin Islands and named Fairfield Sentry Ltd. and Fairfield Sigma Ltd. filed complaints in the US Bankruptcy Court for the Southern District of New York, asserting claims against more than 300 financial institutions for restitution of redemption payments made to investors of the funds for the redemption of shares in such funds prior to December 2008. On 14 January 2011, the liquidators of such funds asserted claims for restitution against Clearstream Banking S.A. in an amount of USD 13.5 million for redemption payments made by the funds to investors using the settlement system of Clearstream Banking S.A.. The proceedings, which were stayed for multiple years, are continuing.

6.3.10 Castle Creek Arbitrage, LLC vs Clearstream Banking S.A.

On 16 October 2018 Castle Creek Arbitrage, LLC ("Castle Creek") filed a complaint against Clearstream Banking S.A. in front of the US District Court Southern District Court of New York (the "NY Court"). The complaint asserted a number of third party beneficiary and tort claims amounting to approximately USD 1 million as reimbursement of losses allegedly incurred by Castle Creek, an indirect customer of Clearstream Banking S.A.. After Clearstream Banking S.A. filed its
motion to dismiss on 15 January 2019, Castle Creek withdrew its complaint before the NY Court on 4 February 2019.

6.4 Management and representative services supplied by the Bank

The Bank's services to third parties consist of clearing and settlement of securities transactions, safekeeping of securities, and related services, including that of fiduciary agent.

Settlement facilities referred to as ‘Technical Overdraft Facilities’ are made available to the Bank’s customers in order to maximise settlement efficiency during processing and are subject to normal credit review procedures by the Bank. These facilities are revocable at the option of the Bank and principally collateralised by cash and securities and amounted to EUR 104.4 billion as at 31 December 2018 (2017: EUR 98.3 billion). Amounts actually outstanding at the end of each business day generally represent a small percentage of such facilities. As at 31 December 2018, they amounted to EUR 2.2 billion (2017: EUR 0.7 billion).

7 Detailed information on the income statement

7.1 Geographical analysis of income

Revenue is primarily derived from operations with customers in OECD countries.

Interest receivable and similar income, commission receivable, net profit on financial operations, and other operating income may be further analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in percentage)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxembourg</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>Other European Union</td>
<td>49%</td>
<td>51%</td>
</tr>
<tr>
<td>Other Europe</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Other countries</td>
<td>31%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

7.2 Interest receivable and similar income and interest payable and similar charges

Interest receivable and similar income and interest payable and similar charges consist of the following:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest receivable and similar income on assets</td>
<td>207,761</td>
<td>126,098</td>
</tr>
<tr>
<td>Interest receivable and similar income on liabilities</td>
<td>33,488</td>
<td>37,628</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>241,249</strong></td>
<td><strong>163,726</strong></td>
</tr>
</tbody>
</table>
Clearstream Banking S.A.

Notes to the annual accounts
as at 31 December 2018
(continued)

(continued)

(continues)

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest payable and similar</td>
<td>(66,310)</td>
<td>(33,583)</td>
</tr>
<tr>
<td>charges on liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest payable and similar</td>
<td>(27,370)</td>
<td>(27,303)</td>
</tr>
<tr>
<td>charges on assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest payable and similar</td>
<td>(93,680)</td>
<td>(60,886)</td>
</tr>
<tr>
<td>charges</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although average customer cash deposits available to the Bank and placed on the market declined by 4 percent year-on-year, to EUR 13.1 billion (2017: EUR 13.6 billion), decrease in volume was offset by a higher interest rate level in the US – with 4 interest hikes in 2018, the latest by 0.25 percentage points in December 2018. This gave a boost to interest income, given that around 54 per cent of cash deposits is denominated in US dollar. Consequently, interest income generated with daily customer cash balances increased considerably.

The overall increase in the interest payable and similar charges results from a combination of several factors such as higher cost on customer cash deposits.

7.3 Commission receivable

Commission receivable consists of the following:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commission receivable – Custody fees</td>
<td>357,320</td>
<td>364,895</td>
</tr>
<tr>
<td>Commission receivable – Settlement fees</td>
<td>90,760</td>
<td>91,293</td>
</tr>
<tr>
<td>Commission receivable – Securities lending/borrowing fees (ASLplus)</td>
<td>77,195</td>
<td>71,197</td>
</tr>
<tr>
<td>Commission receivable – Connectivity/reporting fees</td>
<td>61,255</td>
<td>60,610</td>
</tr>
<tr>
<td>Commission receivable – Collateral management fees</td>
<td>32,818</td>
<td>32,194</td>
</tr>
<tr>
<td>Other commission receivable</td>
<td>61,103</td>
<td>55,082</td>
</tr>
<tr>
<td><strong>Commission receivable</strong></td>
<td><strong>680,451</strong></td>
<td><strong>675,271</strong></td>
</tr>
</tbody>
</table>

7.4 Other operating income

This caption mainly relates to recharges for services rendered by the Bank’s staff on behalf of its affiliated undertakings. In addition, an amount of EUR 9.3 million was recognized in 2018 in relation to funds received for a claim of the Bank from an insurance company for recovery of costs it incurred from criminal investigations (refer also to note 6.3.4) which are recoverable under a group wide insurance policy to protect against costs from criminal proceedings/investigations.

For the year ended 31 December 2018, the caption ‘Other operating income’ includes an amount of EUR 35,976 thousand recharged from affiliated undertakings (2017: EUR 64,856 thousand).

In 2017, an Intercompany Project was undertaken for the Group including Clearstream Services S.A., Clearstream International S.A. and Clearstream Banking S.A. The aim of this project was to identify intercompany services which were provided but not recharged or recharged incorrectly. The corrections were reflected in the 2017 annual accounts. For the year ended 31 December 2017,
the caption ‘Other operating income’ included an amount of EUR 64,856 thousand recharged from affiliated undertakings, of which an amount of EUR 31,969 thousand corresponded to prior period adjustments from 2014 to 2016 resulting from the Intercompany Project set up at the Group level.

7.5 Staff costs

In the course of "Roadmap 2020" which mainly focuses on three strategic areas (organic growth, target acquisitions and investments in new technologies), a new programme (SPIP) has been set up to enhance the operational efficiency whilst reducing structural costs. This will encompass improved decision-making processes as well as streamlining the organisation. Group-wide, 350 jobs are planned to be cut, thereof 50 managers.

The target is to reduce structural costs by around EUR 100 million by end of 2020 within the overall Deutsche Börse Group. One-off costs for the strategic programme will amount to approximately EUR 200 million group-wide, most of which has been incurred in 2018.

The Bank is also affected by these cost saving measures. In this context, the Bank incurred costs of approximately EUR 17 million in 2018.

In addition, the average number of staff employed by the Bank increased in 2018, due to the fact that some employees who had a former Clearstream International S.A. employment contract signed a new employment contract with the Bank during the course of 2018.

7.6 Employee share option plans

Group share plan (“GSP”)

Employees of Deutsche Börse Group who are not members of the Executive Board or senior executives have the opportunity to subscribe for shares of Deutsche Börse AG at a discount of 30 or 40 per cent to the issue price under the Group Share Plan (GSP). This discount is based on the employee’s length of service. Under the 2018 GSP tranche, eligible employees were able to buy up to 100 shares of the company. The purchased shares must be held for at least two years.

The expense of the discount was recharged by Deutsche Börse AG to the Bank and has been recognised under staff costs for the year. These expenses amounted to EUR 366 thousand (2017: EUR 331 thousand).

Stock Bonus Plan (“SBP”)

In the year under review, Deutsche Börse AG established an additional tranche of the SBP for senior executives who are not risk bearers.

In order to participate in the SBP, a beneficiary must have earned a bonus. The number of stock options is determined by the amount of the individual and performance-based SBP bonus for the financial year, divided by the average share price (Xetra closing price) of Deutsche Börse AG’s shares in the fourth quarter of the financial year in question. Neither the converted SBP bonus nor the stock options are paid at the time the bonus is determined. Rather, the entitlement is generally received three years after the grant date (the “waiting period”). Within this period, beneficiaries
cannot assert shareholder rights (in particular, the rights to receive dividends and attend the Annual General Meeting). Once they have met the condition of service, the beneficiaries’ claims resulting from the SBP are calculated on the first trading day following the last day of the waiting period. The current market price at that date (closing auction price of Deutsche Börse shares in electronic trading on the Frankfurt Stock Exchange) is multiplied by the number of stock options. Stock options are settled in cash.

In accordance with IFRS 2, the Bank uses an adjusted Black-Scholes model (Merton model) to calculate the fair value of the LSI and RSU shares. The valuation model does not take into account exercise hurdles. The volatilities applied correspond to the market volatilities of comparable options with comparable maturities.

The stock options from the 2014 SBP tranche were exercised in the reporting period following expiration of the waiting period. Shares of the SBP tranches 2015, 2016 and 2017 were paid to former employees as part of severance payments in the year under review.

The carrying amount of the provision for the SBP results from the measurement of the number of SBP stock options at the fair value of the closing auction price of Deutsche Börse shares in electronic trading at the Frankfurt Stock Exchange at the reporting date and its proportionate recognition over the waiting period.

Stock Plan

In the context of CRD III, the Luxembourg Commission de Surveillance du Secteur Financier (CSSF) issued a circular on remuneration policies in the banking sector that addresses key aspects of remuneration practices for sustainable corporate governance and supports their implementation in banking institutions’ day-to-day operations. According to the CSSF circular, every banking institution was required to introduce a remuneration policy that is aligned with its business strategy and corporate goals and values, as well as with the long-term interests of the financial enterprise, its clients and investors, and that minimises the institution’s risk exposure. Clearstream companies in Luxembourg have therefore revised their remuneration system for executive boards in line with the circular, and introduced a Stock Plan. The Stock Plan stipulates the allocation of a stock bonus at the end of each financial year, which will be paid in three tranches of equal size with maturities of one, two or three years after the grant date. Claims under the Stock Plan have to be cash-settled if the performance targets already agreed in the year in which the targets were specified are met, irrespective of any condition of service.

The number of stock options under the Stock Plan is determined by the amount of the individual performance-based bonus established for each Executive Board member, divided by the average market price (Xetra closing price) for Deutsche Börse AG shares in the fourth quarter of the financial year in question. As the contracts require the stock bonus to be exercised gradually, it is divided into three separate tranches, which are measured according to their respective residual term using the corresponding parameters of the Stock Bonus Plan for senior executives. This programme expired at the end of financial year 2013.

In accordance with IFRS 2, the Bank uses an adjusted Black-Scholes model (Merton model) to calculate the fair value of the stock options. An expense of EUR 450 thousand has been recognised in the income statement for 2018 (2017: EUR 342 thousand).
Clearstream Banking S.A.

Notes to the annual accounts as at 31 December 2018
(continued)

Long-term Sustainable Instrument (LSI) and Restricted Stock Units (RSU)

In 2014, the Bank introduced the Long-Term Sustainable Instrument (LSI) plan in order to provide share-based remuneration in line with regulatory requirements. This programme was extended in 2016 with the Restricted Stock Units (RSU) plan. The following disclosures relate to both plans.

The LSI remuneration model requires at least half of a part of the variable remuneration to be settled in cash and half in phantom shares of Deutsche Börse AG (LSI shares). A portion of the variable remuneration is paid in the subsequent year and another portion over a further period of three or four years. Moreover, a portion of the variable remuneration shall be converted into RSU, subject to a three-year retention period after grant and a one-year waiting period (RSU shares).

The number of LSI and RSU shares for the 2014 to 2017 tranches is calculated by dividing the proportionate LSI or RSU bonus, respectively, for the year in question by the average closing price of Deutsche Börse AG shares in the last month of a financial year. The number of LSI and RSU shares for the 2018 tranche is based on the closing auction price of Deutsche Börse shares as at the disbursement date of the upfront cash component of the 2018 tranche in 2019 or on the closing price as at the following trading day on the Frankfurt Stock Exchange. This results in individual LSI tranches for the LSI bonus, which have maturities of between one and five years. The RSU bonus is used as a basis for another four-year tranche. Payment of each tranche is made after a waiting period of one year. Neither remuneration system stipulates any condition of service. Following the expiry of the waiting period, both the LSI and the RSU shares of the 2014 to 2017 tranches are measured on the basis of the average closing price of Deutsche Börse AG shares in the last month preceding the end of the waiting period. The LSI and RSU shares of the 2018 tranche are measured at the closing auction price as at the first trading day in February of the year in which the holding period ends. Settlement is generally made in cash, although the employer has the right to settle by delivering Deutsche Börse AG shares for the 2014 tranche.

In accordance with IFRS 2, the Bank uses an adjusted Black-Scholes model (Merton model) to calculate the fair value of the LSI and RSU shares. The valuation model does not take into account exercise hurdles. The volatilities applied correspond to the market volatilities of comparable options with comparable maturities.

The carrying amount of the provisions for the LSI and the RSU results from the measurement of the number of LSI and RSU shares at the fair value of the closing auction price of Deutsche Börse shares in electronic trading at the Frankfurt Stock Exchange at the reporting date. An expense of EUR 1,782 thousand has been recognised in the income statement for 2018 (2017: EUR 960 thousand).

7.7 Other administrative expenses

For the year ended 31 December 2018, the category “Other administrative expenses” includes an amount of EUR 269,979 thousand recharged by affiliated undertakings to the Bank (2017: EUR 239,119 thousand).

The variation of the category “Other administrative expenses” comparing to the previous year is mainly due to higher recharges for securities processing from Clearstream Services S.A..
7.8 Remuneration of the external auditor

Fees billed to the Bank by KPMG Luxembourg Société coopérative; Cabinet de révision agréé and other member firms of the KPMG network during the year are as follows:

(amounts in thousands of EUR, excluding VAT)  

<table>
<thead>
<tr>
<th>Description</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit fees</td>
<td>496</td>
<td>384</td>
</tr>
<tr>
<td>Audit related fees</td>
<td>393</td>
<td>118</td>
</tr>
<tr>
<td>Tax fees</td>
<td>19</td>
<td>28</td>
</tr>
<tr>
<td>Other fees related to permissible non-audit services</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>908</td>
<td>530</td>
</tr>
</tbody>
</table>

Such fees are presented under “Other administrative expenses” in the income statement.

Please note that fees amounting to EUR 40 thousand have been reclassified from “Audit related fees” to “Audit fees” in relation to 2017.

Out of the total 2018 fees amounting to EUR 908 thousand, EUR 157 thousand are related to invoices received in 2018 but related to 2017 services. In addition, the 2018 “Audit related fees” include the Agreed upon Procedures report on the reconciliation IAS 39 / IFRS 9 as at 31.12.2017 / 01.01.2018 performed during 2018, which was requested by the CSSF to be performed by the Bank’s approved statutory auditor.

7.9 Tax on profit on ordinary activities and other taxes

The tax charge to the Bank in 2018 amounted to EUR 61,383 thousand (2017: EUR 101,990 thousand). The tax on profit in 2017 included a tax charge for prior years for an amount of EUR 27,720 thousand. This tax charge for prior years mainly concerned the tax payment with regards to the non-deductibility of the settlement payment to the U.S. Office of Foreign Assets Control (OFAC) in the year 2013.

8 Risk management disclosures

Risk management policies are described in the management report of the Bank.

8.1 Risk management disclosures relating to primary financial instruments

8.1.1 Non-trading financial activities

The following table provides an analysis of the carrying amount of financial assets and financial liabilities of the Bank into relevant maturity groupings based on the remaining periods to repayment.

The layout of the below tables has been slightly modified as compared to 31 December 2017 to reflect certain updates made to the presentation of regulatory reporting of financial information further to the application of IFRS 9 since 1 January 2018 (see also Note 2).
In accordance with annex V of the financial information templates (hereinafter “FINREP”), trade receivables as at 31 December 2018 comprising of fees receivable amounting to EUR 45,646 thousand and receivables due from affiliated undertakings amounting to EUR 45,649 have been reclassified from “Other assets” to “Cash in hand, balances with central banks and post office banks”, “Loans and advances to credit institutions repayable on demand”, “Loans and advances to credit institutions – Other loans and advances” and "Loans and advances to customers". As at 31 December 2017 fees receivable amounting to EUR 47,866 thousand and receivables due from affiliated undertakings amounting to EUR 7,762 thousand were not reclassified and remain disclosed under caption “Other assets” (see also Note 2).
Clearstream Banking S.A.

Notes to the annual accounts
as at 31 December 2018
(continued)

<table>
<thead>
<tr>
<th>Assets</th>
<th>Less than three months</th>
<th>Between three months and one year</th>
<th>Between one year and five years</th>
<th>More than five years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash, cash balances at central banks and other demand deposits</td>
<td>6,005,863</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,005,863</td>
</tr>
<tr>
<td>Loans and advances to credit institutions repayable on demand</td>
<td>7,174,383</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7,174,383</td>
</tr>
<tr>
<td>Financial assets at amortised cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt securities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treasury bills and other bills eligible for refinancing with central banks</td>
<td>180,174</td>
<td>183,030</td>
<td>581,931</td>
<td>68,820</td>
<td>1,013,955</td>
</tr>
<tr>
<td>Debt securities and other fixed income securities</td>
<td>52,800</td>
<td>88,004</td>
<td>350,910</td>
<td>-</td>
<td>491,714</td>
</tr>
<tr>
<td>Loans and advances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans and advances to credit institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other loans and advances</td>
<td>2,392,207</td>
<td>166,499</td>
<td>-</td>
<td>-</td>
<td>2,558,706</td>
</tr>
<tr>
<td>Loans and advances to customers</td>
<td>937,968</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>937,968</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits from credit institutions</td>
<td>12,472,829</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12,472,829</td>
</tr>
<tr>
<td>Deposits from customers</td>
<td>1,029,513</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,029,513</td>
</tr>
<tr>
<td>Other debts repayable on demand</td>
<td>2,914,090</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,914,090</td>
</tr>
<tr>
<td>Debt securities issued</td>
<td>256,030</td>
<td>146,090</td>
<td>-</td>
<td>-</td>
<td>402,120</td>
</tr>
<tr>
<td>Other financial liabilities</td>
<td>96,302</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>96,302</td>
</tr>
<tr>
<td>Total</td>
<td>16,743,395</td>
<td>437,533</td>
<td>952,969</td>
<td>48,592</td>
<td>18,182,589</td>
</tr>
</tbody>
</table>
## Notes to the annual accounts as at 31 December 2018 (continued)

### Assets

<table>
<thead>
<tr>
<th>Category</th>
<th>Less than three months</th>
<th>Between three months and one year</th>
<th>Between one year and five years</th>
<th>More than five years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash, cash balances at central banks and other demand deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash in hand, balances with central banks and post office banks</td>
<td>5,488,909</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,488,909</td>
</tr>
<tr>
<td>Loans and advances to credit institutions repayable on demand</td>
<td>4,730,593</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4,730,593</td>
</tr>
<tr>
<td>Financial assets at amortised cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt securities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treasury bills and other bills eligible for refinancing with central banks</td>
<td>50,021</td>
<td>154,592</td>
<td>853,985</td>
<td>75,396</td>
<td>1,133,994</td>
</tr>
<tr>
<td>Debt securities and other fixed income securities</td>
<td>-</td>
<td>-</td>
<td>535,686</td>
<td>-</td>
<td>535,686</td>
</tr>
<tr>
<td>Loans and advances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans and advances to credit institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other loans and advances</td>
<td>1,661,919</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,661,919</td>
</tr>
<tr>
<td>Loans and advances to customers</td>
<td>514,641</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>514,641</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,446,083</strong></td>
<td><strong>154,592</strong></td>
<td><strong>1,389,671</strong></td>
<td><strong>75,396</strong></td>
<td><strong>14,065,742</strong></td>
</tr>
</tbody>
</table>

### Liabilities

<table>
<thead>
<tr>
<th>Category</th>
<th>Less than three months</th>
<th>Between three months and one year</th>
<th>Between one year and five years</th>
<th>More than five years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial liabilities measured at amortised cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits from credit institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repayable on demand</td>
<td>9,985,880</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9,985,880</td>
</tr>
<tr>
<td>With agreed maturity dates or periods of notice</td>
<td>564,357</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>564,357</td>
</tr>
<tr>
<td>Deposits from customers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other debts repayable on demand</td>
<td>1,953,614</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,953,614</td>
</tr>
<tr>
<td>Debt securities issued</td>
<td>241,544</td>
<td>33,195</td>
<td>-</td>
<td>-</td>
<td>274,739</td>
</tr>
<tr>
<td>Other financial liabilities</td>
<td>39,998</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>39,998</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,785,393</strong></td>
<td><strong>33,195</strong></td>
<td>-</td>
<td>-</td>
<td><strong>12,818,588</strong></td>
</tr>
</tbody>
</table>
8.2 Risk management disclosures relating to derivative financial instruments

8.2.1 Non-trading activities

The following tables provide an analysis of the financial assets and financial liabilities of the Bank into relevant maturity groupings based on the remaining periods to repayment.

### 8.2.1.1 OTC derivatives non-trading instruments

OTC derivatives non-trading instruments are as follows:

| (amounts in thousands of EUR) | 2018 | | | | | Total |
|-------------------------------|------|-----|-----|-----|---|
| Derivative financial instruments (notional amount) | | | | | |
| Linked to exchange rates | | | | | |
| - forward | 2,374 | - | - | - | 2,374 |
| - swaps | 3,369,684 | - | - | - | 3,369,684 |
| | **3,372,058** | - | - | - | **3,372,058** |

| (amounts in thousands of EUR) | 2017 | | | | | Total |
|-------------------------------|------|-----|-----|-----|---|
| Derivative financial instruments (notional amount) | | | | | |
| Linked to exchange rates | | | | | |
| - forward | 20,692 | 56,398 | - | - | 77,090 |
| - swaps | 2,494,561 | - | - | - | 2,494,561 |
| | **2,515,253** | **56,398** | - | - | **2,571,651** |
8.2.1.2 **Derivative non-trading instruments, quoted on a regulated market**

The Bank has not entered into any derivative instruments which are quoted on a regulated market.

8.2.2 **Trading activities**

The Bank does not have trading activities.

8.3 **Risk management disclosure relating to credit risk**

Credit risk exposure can be analysed as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum credit risk exposure</td>
</tr>
<tr>
<td>Primary financial assets</td>
<td>-</td>
</tr>
<tr>
<td>- Shares and other variable-yield securities</td>
<td>-</td>
</tr>
<tr>
<td>- Participating interests</td>
<td>5,171</td>
</tr>
<tr>
<td>- Shares in affiliated undertakings</td>
<td>4,236</td>
</tr>
<tr>
<td>- Treasury bills and other bills eligible for refinancing with central banks</td>
<td>1,013,955</td>
</tr>
<tr>
<td>- Debt securities and other fixed-income securities</td>
<td>491,714</td>
</tr>
<tr>
<td>- Cash in hand with central banks</td>
<td>6,005,863</td>
</tr>
<tr>
<td>- Loans and advances to credit institutions repayable on demand</td>
<td>7,174,383</td>
</tr>
<tr>
<td>- Loans and advances to credit institutions other</td>
<td>2,558,706</td>
</tr>
<tr>
<td>- Loans and advances to customers</td>
<td>937,968</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>67,794</td>
</tr>
<tr>
<td>Undrawn credit facilities</td>
<td>-</td>
</tr>
</tbody>
</table>

| **Total** | **18,259,790** | **6,616,667** | **11,643,123** |
Clearstream Banking S.A.

Notes to the annual accounts
as at 31 December 2018
(continued)

(continued)

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(continued)
Clearstream Banking S.A.

Notes to the annual accounts
as at 31 December 2018
(continued)

(amounts in thousands of EUR)  

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks and financial institutions</td>
<td>7,419,948</td>
<td>53</td>
</tr>
<tr>
<td>Corporate customers</td>
<td>127</td>
<td>-</td>
</tr>
<tr>
<td>Public sector</td>
<td>6,705,994</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td><strong>14,126,069</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Total geographic sector risk concentrations are presented in the table below.

(amounts in thousands of EUR)  

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxembourg</td>
<td>6,791,926</td>
<td>37</td>
</tr>
<tr>
<td>Other Monetary Union member states</td>
<td>4,912,069</td>
<td>27</td>
</tr>
<tr>
<td>Other</td>
<td>6,555,795</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td><strong>18,259,790</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

(amounts in thousands of EUR)  

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxembourg</td>
<td>6,082,692</td>
<td>43</td>
</tr>
<tr>
<td>Other Monetary Union member states</td>
<td>2,940,373</td>
<td>21</td>
</tr>
<tr>
<td>Other</td>
<td>5,103,004</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td><strong>14,126,069</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The table below shows a breakdown of total credit extended by the Bank by type of collateral:

(amounts in thousands of EUR)  

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collateralised by listed investments</td>
<td>6,616,667</td>
<td>36</td>
</tr>
<tr>
<td>Unsecured</td>
<td>11,643,123</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td><strong>18,259,790</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

(amounts in thousands of EUR)  

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collateralised by listed investments</td>
<td>5,389,768</td>
<td>38</td>
</tr>
<tr>
<td>Unsecured</td>
<td>8,736,301</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td><strong>14,126,069</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
8.4 Risk management disclosure relating to market risk

The Bank uses maturity analysis to estimate the degree of sensitivity to interest rate changes (IRR) for its different portfolios. The IRR is calculated daily on the basis of the net present value (NPV) of a 1% interest rate change for trades/instruments with a remaining life to maturity less than 1 year and 2% if greater than or equal to 1 year.


9 Other information

9.1 Personnel

The average number of persons employed by the Bank is as follows:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>61</td>
<td>49</td>
</tr>
<tr>
<td>Employees</td>
<td>443</td>
<td>402</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>504</strong></td>
<td><strong>451</strong></td>
</tr>
</tbody>
</table>

The average number of people employed by the Bank increased in 2018; mainly due to the fact that some employees who had a former Clearstream International S.A. employment contract signed a new employment contract with the Bank during the course of 2018.

Management comprises all senior managers, directors and executive directors.

9.2 Administrative, managerial and supervisory bodies

Remuneration paid to the various bodies of the Bank was as follows:

<table>
<thead>
<tr>
<th>(amounts in thousands of EUR)</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisory bodies (Supervisory Board and Audit Committee members)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- pension expenses</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Administrative and managerial bodies (Executive Board members and other managers)</td>
<td>15,848</td>
<td>12,843</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- remuneration paid in respect of the employee share options plans</td>
<td>439</td>
<td>514</td>
</tr>
<tr>
<td>- pension expenses</td>
<td>1,383</td>
<td>1,072</td>
</tr>
</tbody>
</table>
There are no pension liabilities or commitments for the benefit of former directors of the Bank.

The Bank has not granted loans, advances or credits to members of the administrative, management and supervisory bodies. The Bank has not entered into guaranteed commitments on their behalf.

9.3 **Return on assets**

The Bank has a return on assets as at 31 December 2018 of 1.12 % (2017: 1.37%).

9.4 **Report on post balance sheet date events**

In 2017, the Executive Board of Clearstream International S.A. (“CI”) decided to start a project in 2018 to set up and validate a concept in order to reshape CI by transferring part of its activities (“Other Functions”) and participations to other Clearstream entities and to focus its business on performing a new Trusted Third Party role related to HQLAx and to continue its Collateral Agent function for the ASLplus service. The transfer of CI’s “Other Functions” and participations is envisaged to be completed in the course of 2019. As a consequence, the transfer of the Bank’s participation in REGIS-TR S.A., shall be investigated.

On 1 October 2018, Clearstream International S.A. purchased former SwissCanto Funds Centre Limited, now Clearstream Funds Centre Limited (CFCL). On 1 March 2019, on the effective merger date, CFCL was fully merged with the Bank.

For details on the complaint against the Bank by Castle Creek Arbitrage, LLC, see Note 6.3.10.