2. Securities clearing, settlement and custody

FMIs and financial institutions that provide securities clearing, settlement and custody services are considered part of the post-trade securities landscape. Systems that clear trades conducted on a stock exchange or concluded between counterparties on the OTC market, as well as the systems that settle the obligations of the buyer and seller of a trade, are subject to oversight. In the EU, institutions that operate these systems are subject to EMIR and CSDR supervision. Chart 3 depicts the scope of the Bank's oversight and supervision role in this area.

Section 2.1 covers CCPs, the systemic relevance of which has grown after EMIR made central clearing for standardised OTC derivatives mandatory. CCPs are subject to both prudential supervision and oversight. While there is no CCP established in Belgium, under EMIR, the Bank takes part in seven CCP colleges when the CCP is settling in a Belgian CSD or due to the size of Belgian clearing members' contribution to the mutual CCP default fund which is available to the CCP to cover the default of a clearing member.

(I)CSDs, responsible for the last stage in the post-trade chain, are dealt with in section 2.2. Of the three (I)CSDs that Belgium hosts, only Euroclear Bank has banking status and falls under the prudential authority of the SSM. However, being an LSI, it remains under the direct prudential supervision of the Bank.

As the risk profile of an FMI is fundamentally different from a universal deposit-taking bank, prudential requirements for banks (Capital Requirements Directive / Capital Requirements Regulation, etc.) do not always adequately cover the specific operational and financial risks involved. Other internationally agreed standards for CCPs and (I)CSDs are more suited for covering such risks (i.e. PFMIs). In the EU framework, these principles have been transposed into EU legislation (EMIR and CSDR).

(I)CSDs established in Belgium have a different scope in terms of activities. While Euroclear Bank provides services in a wide range of securities, securities eligible in Euroclear Belgium are primarily Belgian equities. Under the CSDR, the Bank has been assigned by Belgian law as the sole competent supervisory authority[1] for Euroclear Bank and Euroclear Belgium, and, as overseer, is also considered as the relevant authority in the CSDR. The NBB-SSS, which is subject to oversight only, holds and settles public sector debt including securities issued by the Belgian federal government and by regional or local governments, as well as private sector debt issued by corporates, credit institutions or other entities.

Daily settlement operations in Euroclear Belgium and NBB-SSS are outsourced to TARGET2-Securities (T2S), as in the case of other CSDs in Europe. T2S is not a CSD, but as it provides settlement services to many euro area and some non-euro area CSDs, it is essential that it enables member CSDs to comply with the regulations applicable to them. T2S is overseen by the Eurosystem. Furthermore, in line with PFMI Responsibility E (Cooperation with other authorities), the Eurosystem has set up the T2S Cooperative Arrangement, coordinated by the ECB and ESMA, to ensure that all authorities with a legitimate interest in the smooth functioning of T2S are involved, including the overseers, supervisors, and market authorities of

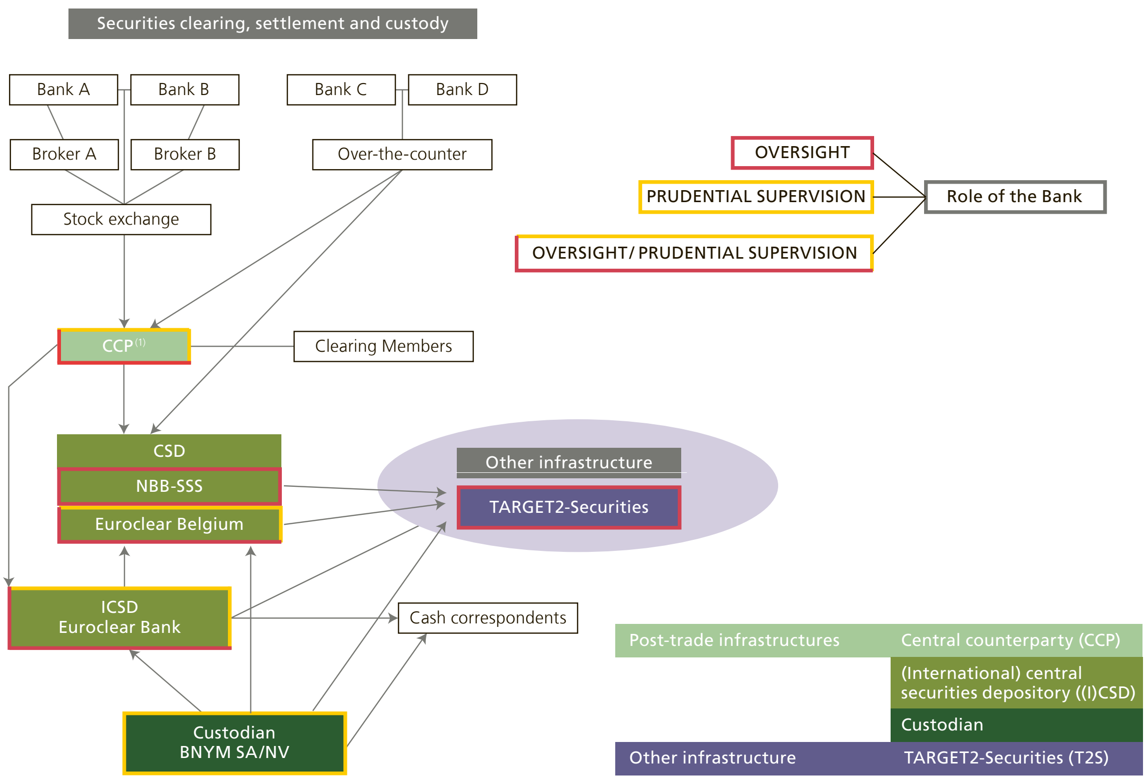
1 For the aspects mentioned in the footnote on page [25], the Bank consults the FSMA, which retains its competence as market authority.

CSDs that have signed the T2S Framework Agreement. Oversight assessments of T2S cover both the general organisation of T2S as a critical infrastructure (i.e. technical platform, legal basis, governance structure and comprehensive risk management framework), as well as the services it provides and are conducted against an applicable sub-set of PFMIs. The Bank is involved in the Eurosystem oversight of T2S and the T2S Cooperative Arrangement.

Finally, section 2.3 covers institutions whose single business line is the provision of custodian services (i.e. providing securities safekeeping, settlement and investor services to their clients) with a focus on BNYM SA/NV which is a global custodian established in Belgium with links to multiple (I)CSDs allowing its clients to hold securities issued in markets worldwide.

Chart 3

Scope of the Bank's oversight and prudential supervision role in the post-trade securities landscape



1 LCH.Clearnet Ltd (UK), ICE Clear Europe (UK), LCH.Clearnet SA (FR), Eurex Clearing AG (DE), EuroCCP (NL), Keler CCP (HU), CC&G (IT).

2.1 CCPs

Changes in regulatory framework

As there are no CCPs located in Belgium, some foreign CCPs are also used by Belgian financial institutions for clearing and use Belgian FMIs for settlement (see chart 3), and therefore the Bank closely follows up developments regarding CCPs. The main changes in the regulatory framework are summarised below.

The Financial Stability Board's 2015 workplan[1] to strengthen CCP resilience and recovery, and ultimately CCP resolution has been implemented with the exception of a last piece related to resolution.

To complete the 2017 FSB guidance on CCP Resolution[2], the FSB consulted the market at the end of 2018 on two further aspects, the availability of financial resources for CCP resolution and the treatment of CCP equity in resolution. The consultation together with input from CCP crisis management groups, i.e. the groups of authorities that will cooperate and share information during a CCP crisis and that are involved in the CCP resolution planning, are expected to lead to additional guidance by the end of 2020[3].

The FSB has also started work on the practical arrangements for the continuity of access of banks in resolution to a CCP or another FMI they are member of. This will allow the administrator of a resolved bank to adequately manage its resolution that typically requires access to FMIs[4].

The CCP's ability to adequately handle a clearing member's default is essential from a prudential risk perspective. For OTC derivatives positions, the CCP re-establishes a balanced book by auctioning the positions of the defaulter to surviving clearing members. The adequacy of resources and the auction process attracted more attention in the wake of the NasdaqClearing clearing member default in September 2018. In June 2020, CPMI and IOSCO published a final paper on central counterparty default management auctions, a key element to handle a CCP participant's default. The report considers what constitutes a successful auction. The industry is being asked to make further progress on effective practices, including operational, auction governance and participation aspects[5].

In the EU, EMIR, which sets out the obligations for market participants clearing derivatives[6] besides the requirements for CCPs and their supervision, has been amended.

A first adaptation by the "EMIR Refit" Regulation[7] entered into force on 17 June 2019. It mainly simplifies the derivatives reporting and clearing obligation requirements, but also requires CCPs to provide information on their initial margin models, including simulation tools, to their clearing members. Further, the European Commission now has the power to suspend the clearing obligation for selected derivatives contracts, for instance where markets become disrupted.

A second amendment by the EMIR 2.2 Regulation[8] entered into force on 1 January 2020. It improves consistency of supervisory arrangements for CCPs established in the EU and enhances the EU's ability to monitor, identify and mitigate third-country CCP risks. While the primary role of the EU CCP's national competent authority is maintained, the supervision of CCPs is becoming more harmonised, via wider mandatory consultation of ESMA, and an enhanced role for the CCP supervisory college. Central banks responsible for EU currencies are also being given a bigger input. Furthermore, anticipating Brexit, the Regulation strengthens the third-country CCP authorisation and supervisory regime. It installs a direct ESMA supervision regime for systemic third-country CCPs, and even includes the possibility to require – via a Delegated Act – the relocation to the EU of so-called "substantially systemically important CCP" activities. Under EMIR 2.2, ESMA acts as a direct supervisor of third-country CCPs. In January 2020, the ESMA CCP Supervisory Committee started to operate. The Committee was established as part of the reform of the EMIR 2.2 review. In its "third-country CCP composition", it prepares ESMA decisions vis-à-vis third-country

1 Available at: http://www.fsb.org/2015/09/2015-ccp-workplan/.

2 Available at http://www.fsb.org/2017/07/guidance-on-central-counterparty-resolution-and-resolution-planning-2/

3 See on this the FSB's 2019 Resolution report, available at https://www.fsb.org/2019/11/2019-resolution-report-mind-the-gap/.

4 See https://www.fsb.org/2019/08/industry-workshop-on-continuity-of-access-to-fmis-for-firms-in-resolution/

5 Available at https://www.bis.org/cpmi/publ/d192.htm

6 Most notably a clearing obligation applies, covering standardised interest rate swap contracts in the most relevant currencies, and index-linked credit default swaps. See further at https://www.esma.europa.eu/regulation/post-trading/otc-derivatives-and-clearing-obligation.

7 Regulation (EU) 2019/834 of 20 May 2019, available at https://eur-lex.europa.eu/eli/reg/2019/834/oj

8 Regulation (EU) 2019/2099 of 23 October 2019, available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R2099

CCPs. The technical legislation for executing EMIR 2.2 is being further elaborated. In November 2019, ESMA published its technical advice on third-country CCP tiering, setting out what indicators ESMA has to consider to determine that a CCP is a so-called "Tier-2" CCP, i.e. systemically important for the financial stability of the EU or of one of its Member States. Also, it published technical advice on comparable compliance, that allows a Tier 2 third-country CCP to comply with EMIR requirements by complying with the regulations and requirements of its home country, if ESMA assesses them as satisfactory [1].

In December, ESMA also extended its recognition of the UK CCPs LCH Ltd, ICE Clear Europe Ltd and LME Clear Ltd for one year after a potential no-deal Brexit. This will prevent these CCPs from losing their authorisation as a Union CCP overnight [2]. This means that EU clearing members will retain access to these UK CCPs during the post-Brexit transition period.

In January 2020, the European Commission, Parliament and Council started so-called "trialogues" to negotiate the final text of the proposed Regulation on CCP recovery and resolution. It sets out a framework for the recovery of a CCP, and the rules to ensure in resolution, the continuity of a CCP's critical functions. It thereby avoids – via a loss allocation to the CCP's clearing members, clients and shareholders – the use of taxpayers' money to restructure and resolve the CCP. A final agreement is expected in 2020.

Prudential and oversight approach

In April 2019, ESMA published the framework of its third supervisory stress test for EU CCPs. The test focuses on both the counterparty credit risks and the liquidity risks that CCPs would face as a result of multiple clearing member defaults and simultaneous market price shocks [3].

There is currently no CCP established in Belgium. However, CCPs are relevant for Belgian markets and clearing members, and settle in Belgian CSDs. The Bank continues to participate in seven EU CCP supervisory colleges as it meets at least one of the participation criteria [4]. Relevant CCPs include LCH Ltd in London that clears interest rate swaps, Eurex Clearing AG in Frankfurt that clears euro-denominated repos and LCH SA in Paris that clears the Euronext Brussels markets and euro repos. In addition, according to the same participation criteria, the Bank can take part in the third-country CCP supervisory college to be set up under EMIR 2.2, and where information will be shared on third-country CCPs [5]. For volume data on these three CCPs, see also Annex 3.

Supervisory priorities in 2020

Priorities for the ongoing supervision of EU CCPs are set by the national competent authorities, taking into account the college members' demands.

Based on the FSB guidance, more national competent authorities are establishing cross-border crisis management groups for CCP resolution and plans for CCP resolution. In parallel, CCPs are enhancing their recovery rules that stipulate how to allocate default and non-default losses to stakeholders, including shareholders, clearing members and clients. Another ongoing priority is CCP operational risk management, and in particular the cyber risks faced.

1 See https://www.esma.europa.eu/press-news/esma-news/esma-advises-ec-supervisory-regime-third-country-ccps.

2 The ESMA decision, based on the also extended equivalence decision of the Commission, is available at https://www.esma.europa.eu/press-news/esma-news/esma-extends-recognition-decisions-3-uk-ccps-in-event-no-deal-brexit.

3 The ESMA press release on the third EU wide CCP stress test can be found at https://www.esma.europa.eu/press-news/esma-news/esma-launches-third-eu-wide-ccp-stress-test.

4 The NBB participates in the CCP supervisory colleges of Eurex Clearing AG (DE), LCH SA (FR), CC&G (IT), Euro CCP (NL), Keler CCP (HU) and LCH Ltd (UK) and ICE Clear Europe (UK).

5 This supervisory college will be quite relevant post-Brexit, to obtain information on the London based CCPs LCH Ltd and ICE Clear Europe.

Finally, new services or products or significant risk model changes implemented by an EU CCP have to be approved by its national competent authority, taking into account the opinion of the CCP's supervisory college. Under the new EMIR 2.2 rules[1], the advisory powers of the college will expand. It is becoming easier for the college to escalate a file to ESMA for binding negotiation, and a college majority is now able to include specific guidance in its opinion, besides merely providing a positive or negative vote. Also, ESMA will provide a binding opinion to the CCP's national competent authority in a selected number of cases.

2.2 (I)CSDs

Changes in regulatory framework

The Law of 30 July 2018[2] put an end to the Belgian status of settlement institution as of 2020. This Belgian status has been replaced by the EU-wide status of central securities depository (CSD) pursuant to the CSD Regulation (CSDR)[3]. Therefore, Euroclear Belgium and Euroclear Bank needed to obtain their CSDR licence by the end of 2019 at the latest (see next section).

At the same time, the status of an institution assimilated to a settlement institution has been split into two new statuses. The first one is the status of institution providing support to Belgian CSDs. This status applies to Euroclear SA/NV (ESA), the parent company above the Euroclear (I)CSDs which provides services to these (I)CSDs (see Annex 2 for the organisation chart of the Euroclear group). The second new status is that of custodian bank, which applies to The Bank of New York Mellon SA/NV.

1 End March 2020, ESMA published draft regulatory technical standards for CCP colleges. See https://www.esma.europa.eu/press-news/esma-news/esma-publishes-draft-regulatory-technical-standards-ccp-colleges.

2 *Wet houdende diverse financiële bepalingen/Loi portant des dispositions financières diverses.*

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

BOX 2

Summary of regulatory statuses of Belgian entities involved in the post-trade landscape

The Belgian institutions that are involved in the clearing, settlement and custody domain can have various regulatory statuses: CSD, institution providing support to Belgian CSDs, credit institution, financial holding or custodian bank. Institutions can combine several statuses. In addition to these statuses, they can be classified as systemically important institution, other systemically important institution (O-SII) or critical infrastructure.text

Name	Regulatory status(es)	Main applicable frameworks relevant for the Bank's oversight and supervision*
Euroclear SA/NV [1]	■ Institution providing support to Belgian CSDs ■ Financial holding	■ CPMI-IOSCO PFMI ■ Banking regulation
Euroclear Belgium [1]	■ CSD	■ CPMI-IOSCO PFMI ■ CSDR
Euroclear Bank [1, 2, 3]	■ CSD ■ Credit institution	■ CPM-IOSCO PFMI ■ CSDR ■ Banking regulation
NBB-SSS [3]	■ CSD (no licence, as part of the central bank)	■ CPMI-IOSCO PFMI ■ CSDR (selected articles)
The Bank of New York Mellon SA/NV [1, 2, 3]	■ Credit institution ■ Custodian bank	■ CSDR (reporting settlement internalisers) ■ Banking regulation

Source: NBB.
1 Systemic financial institution (Art. 36/3 Organic Law).
2 Other systemically important institution (O-SII) (Royal Decrees of 27 November 2015 and 18 December 2015).
3 Critical infrastructure (Law of 1 July 2011).
* A more elaborate list can be found in Annex 1 of this Report.

Systemic financial institutions' strategy and risk profiles are monitored closely (e.g. *ex-ante* non-objection requirement for strategic decisions). Institutions designated as O-SIIs have to keep higher capital buffers. The Bank is closely cooperating with critical infrastructures in the financial sector in order to strengthen their operational resilience.

ESMA has provided further guidance regarding CSDR Art. 23 on passporting and on the settlement discipline regime, the entry into force of which has been postponed to 1 February 2022[1]. ESMA continues also to update its Questions & Answers on the CSDR[2].

The Shareholder Rights Directive II (Directive (EU) 2017/828, hereafter SRD II) – some provisions of which entered into force in June 2019, while others entered into force as of September 2020 – aims to encourage

1 https://www.esma.europa.eu/sites/default/files/library/esma70-156-3490_final_report_-_csdr_rts_on_settlement_discipline_-_postponement_until_1_february_2022.pdf
2 https://www.esma.europa.eu/file/21616/download?token=d8_lWUxK.

long-term shareholder engagement and stimulate good corporate governance. It includes requirements regarding remuneration in listed companies, related party transactions, transparency for institutional investors and asset managers, proxy advisors and identification of shareholders. It is this latter part where CSDs are involved. The goal of these provisions is to create a framework which allows issuers of listed companies in the EU to identify and communicate directly with their shareholders. Intermediaries (custodians and CSDs) must communicate information regarding shareholder identity including contact details and number of shares held without delay to the issuer. In addition, the intermediary should transmit through the chain, as soon as possible, from the issuer to the shareholder the information which the issuer is required to provide to the shareholder, to enable shareholders to exercise their rights (such as voting rights). Intermediaries also have to pass on to the issuer the instructions received from the shareholders related to the exercise of their shareholder rights. If there is a chain of intermediaries, this information has to pass through the chain all the way from the issuer to the intermediary who has a direct relationship with the ultimate shareholder and then back to the issuer. Intermediaries can charge fees for these services, but they have to be disclosed. They also must be non-discriminatory and proportionate in relation to the actual costs incurred for delivering the services.

Prudential and oversight approach

Considering that the Belgian status of settlement institution would cease to exist (see previous section), the Bank has focused on the applications for authorisation under the CSDR of Euroclear Belgium and Euroclear Bank.

Euroclear Belgium was authorised under the CSDR on 24 April 2019. Besides consulting the Eurosystem (as relevant authority as defined in the CSDR) and the Belgian Financial Services and Markets Authority (FSMA), the Bank coordinated its compliance assessment with the authorities of Euroclear France and Euroclear Nederland, which use the same platform as Euroclear Belgium.

Euroclear Bank was authorised by the Bank under the CSDR on 3 December 2019 to provide core services as a CSD and to provide banking-type ancillary services. In addition, the interoperable link with Clearstream Banking SA (called the "Bridge") was authorised by the Bank. Besides consulting the FSMA for specific items[1], the Bank also consulted the central banks issuing the relevant EU currencies (at the moment of consultation, these were EUR, GBP and DKK for Euroclear Bank) for the CSD licence as required by the CSDR. In addition to those, the Luxembourg Commission de Surveillance du Secteur Financier (CSSF) was consulted regarding the Bridge. For the licence to provide banking-type ancillary services, the Bank had to consult 22 authorities from the EU.

1 Rules on conflicts of interest, record-keeping, requirements concerning participation, transparency, procedures for communicating with participants and other market infrastructures, the protection of the assets of participants and their clients, freedom to issue securities via any CSD authorised in the EU, and access between a CSD and another market infrastructure.

BOX 3

Cooperation between the Bank and other authorities with regard to Euroclear

The Bank cooperates with domestic and foreign authorities in the framework of the oversight and supervision of Euroclear entities established in Belgium, i.e. Euroclear SA, Euroclear Bank and Euroclear Belgium. The table below provides the list of authorities and the rationale for having a cooperation arrangement with them.

Cooperation	Rationale for cooperation
National cooperation	
FSMA	Market authority responsibilities regarding (I)CSDs in Belgium
International cooperation	
Euroclear SA/NV	
Euroclear Group overseers and market supervisors (BE: NBB, FSMA; FI: Bank of Finland, Finanssivalvonta; FR: Banque de France (BdF), Autorité des marchés financiers (AMF); NL: De Nederlandsche Bank (DNB), Autoriteit Financiële Markten (AFM); SE: Riksbank, Finansinspektionen; UK: Bank of England, Financial Conduct Authority)	Multilateral cooperation with regard to shared services provided by the parent holding company of the Euroclear Group (I)CSDs (Euroclear SA), as service provider to the Euroclear Group entities
Euroclear Bank	
Central banks of issue of major currencies in Euroclear Bank (Federal Reserve System, Bank of England, Bank of Japan and ECB as observer)	Multilateral oversight cooperation with the relevant central banks of issue of the major currencies settled in Euroclear Bank
ECB	Bilateral oversight cooperation on specific aspects of Euroclear Bank relevant for euro area financial stability
Bank of England	Bilateral oversight cooperation on specific aspects of Euroclear Bank relevant for Bank of England
Bank of Japan	Bilateral oversight cooperation on specific aspects of Euroclear Bank relevant for Bank of Japan
Central Bank of Ireland	Bilateral oversight cooperation with regard to the settlement of Irish bonds in Euroclear Bank
Hong Kong Monetary Authority	Bilateral oversight cooperation focusing on the links between Euroclear Bank and Hong Kong market infrastructures
Banque Centrale de Luxembourg (BCL) / Commission de Surveillance du Secteur Financier (CSSF)	Cooperation on the oversight and supervision of the ICSDs Euroclear Bank and Clearstream Banking Luxembourg, under Responsibility E of the PFMIs
Securities Exchange Commission (SEC)	Bilateral cooperation focusing on US-related activities within Euroclear Bank
ESES	
ESES overseers and market supervisors (BE: NBB, FSMA; FR: BdF, AMF; NL: DNB, AFM)	Multilateral cooperation covering the CSDs of Euroclear France, Euroclear Nederland and Euroclear Belgium sharing a common rulebook.

Source: NBB.

In the framework of the CSDR, the Bank, as competent authority, also needs to involve other relevant authorities in the authorisation and supervision of (I)CSDs established in Belgium. The CSDR identifies as "relevant authorities", i.e. authorities responsible for oversight, central banks in the EU in whose books cash is settled and central banks in the EU issuing the most relevant currencies in which settlement takes place. In the case of Euroclear Bank and Euroclear Belgium, the Bank also acts as relevant authority in its role as overseer of securities settlement systems. As Euroclear Belgium settles euros in central bank money, the Eurosystem (represented by the Bank) is considered as a relevant authority as well. For Euroclear Bank, this also included Bank of England and Danmarks Nationalbank at the moment of authorisation. For this category of relevant authority (central banks in the EU issuing the most relevant currencies in which settlement takes place), the parameters to assign relevant authorities are defined by the CSDR RTS. As some of these parameters require a calculation of data on an aggregate basis, ESMA collects, via the competent authorities, data across all CSDs in the EEA. ESMA publicly discloses the list of relevant authorities[1].

In addition, the Bank has to involve other authorities for the authorisation to provide banking-type ancillary services. These include (i) the relevant authorities (as defined in the previous paragraph), (ii) the competent authorities in the Member State (MS) where the CSD has established interoperable links with another CSD, (iii) the competent authorities in the host MS where the activities of the CSD are of substantial importance for the functioning of the securities markets and the protection of investors, and (iv) the competent authorities responsible for the supervision of the participants of the CSD established in the three MS with the largest settlement values in the CSD's securities settlement system.

Given the need to use consistent data aggregated at EU level for calculating the respective indicators, ESMA issued guidelines on the data collection, processing and aggregation process to determine (i) the most relevant currencies in which settlement takes place[2] and (ii) the substantial importance of a CSD for a host MS[3].

1 https://www.esma.europa.eu/sites/default/files/library/esma70-151-887_csdr_list_of_relevant_ authorities_ art_12.pdf.
2 https://www.esma.europa.eu/sites/default/files/library/esma70-708036281-66_csdr_guidelines _on_relevant_currencies_0.pdf.
3 https://www.esma.europa.eu/sites/default/files/library/esma70-708036281-67_csdr _guidelines _on_substantial_importance_of_a_ csd_0.pdf.

Consultation in the context of the CSDR	Rationale for consultation
National consultation	
Euroclear Bank / Euroclear Belgium	
CSD services	
FSMA	The Bank seeks the FSMA's advice for aspects that fall under the latter's perimeter of competence for CSDs. This covers rules on conflicts of interest, record-keeping, the requirements concerning participation, transparency, procedures for communicating with participants and other market infrastructures, the protection of the assets of participants and their clients, freedom to issue securities via any CSD authorised in the EU, and access between a CSD and another market infrastructure [1]
International consultation	
Euroclear Bank	
CSD services	*Central bank of issue of the most relevant currencies in which settlement takes place [2].*
Eurosystem, Bank of England, Danmarks Nationalbank	Calculation methodology [3]: ■ the relative share of each EU currency in the total value of the settlement by a CSD of against-payment settlement instructions, provided that such share exceeds 1 %; or ■ the relative share of against-payment settlement instructions settled by a CSD in a EU currency compared to the total value of A/P settlement instructions settled in that currency across all CSDs in the EU, provided that such share exceeds 10 %
Banking-type ancillary services	*The following authorities are involved in the authorisation of the CSD [4]*
Eurosystem, Bank of England, Danmarks Nationalbank	■ Relevant authorities
Commission de Surveillance du Secteur Financier (CSSF)	■ Competent authority for the CSDR in the MS where the CSD has established interoperable links with another CSD
Competent authorities from twenty MS in the EU	■ Competent authorities in the host MS where the activities of the CSD are of substantial importance for the functioning of the securities markets and the protection of investors [5] Calculation methodology: the aggregated market value of financial instruments issued by issuers from the host MS that are initially recorded or centrally maintained in the CSD represents at least 15 % of the total value of financial instruments issued by all issuers from the host MS that are initially recorded or centrally maintained in all CSDs established in the EU [6] ■ Competent authorities responsible for the supervision of the participants of the CSD established in the three MS with the largest settlement values in the CSD's securities settlement system on an aggregated basis
Euroclear Belgium	
CSD filing	
Eurosystem	Eurosystem (as represented by the Bank) as central bank in the Union in which books cash is settled and issuing the most relevant currency in which settlement takes place

Source: NBB.

1 In accordance with the Protocol between the Bank and the FSMA on their cooperation in the framework of the supervision of CSDs and assimilated institutions.

2 CSDR Art. 12(1)(b).

3 Art. 2(1)(a) of the Commission Delegated Regulation (EU) 2017/392.

4 CSDR Art. 55(4).

5 Art. 24 of Regulation (EU) No 909/2014 (CSDR).

6 Art. 5(1)(a) of the Commission Delegated Regulation (EU) 2017/389.

The CSDR transposed the PFMIs into EU law and introduced some new requirements for (I)CSDs in some areas. For example, (I)CSDs providing banking-type ancillary services need to have sufficient qualifying liquid resources to withstand the default of the two participants to which they have the largest exposures (the PFMIs require enough resources to withstand the default of the largest one). With regard to credit risk management, the CSDR prescribes more explicitly what kind of securities can be accepted as collateral and introduces a hierarchy to use very liquid securities of high quality first. While high-quality collateral significantly reduces the residual credit risk an (I)CSD is faced with, extreme market shocks could reduce the value of the collateral beyond the prediction of valuation models that determine the "haircut" on the collateral value. Residual credit losses could also occur in the event of default of a cash correspondent where cash is (temporarily) held in an unsecured way. (I)CSDs need to have plans that specify how potentially uncovered credit losses are allocated. Potential losses can typically be allocated to two types of stakeholders: the shareholders and the participants. The shareholders are the ones that benefit when profits are made. Should the (I)CSD be confronted with major losses, shareholders could recapitalise the (I)CSD, but there is generally no upfront commitment to do so. The rules of the system could also allocate (part of) such losses to the participants (as is customary for CCPs) who are the ones that benefit from the services that the (I)CSD provides (including the provision of credit facilities). When designing a loss-sharing mechanism with participants, certain aspects need to be considered carefully. Decision-takers in (I)CSDs need to have the right incentives in order to prevent shareholders from always keeping the profits in favourable times but distribute losses to the participants in adverse situations. Another aspect to consider is the fact that other (critical) FMIs may be participants in an (I)CSD. Pushing losses onto them may therefore worsen the potential systemic impact.

As soon as Euroclear Belgium and Euroclear Bank were authorised, a formal process started to obtain non-objections from the authorities of host Member States where they have set up a branch or under whose law they currently issue, or intend to issue, securities, as required in CSDR Article 23.

BOX 4

International dimension of Euroclear Bank

By the very nature of its business model, Euroclear Bank is internationally oriented. This international dimension is reflected in several areas such as participants, currencies and linked securities markets. At the end of 2019, Euroclear Bank had 1 657 participants located worldwide. Its participant base consists mainly of non-domestic participants, including 92 central banks, 27 CCPs and CSDs, as well as credit institutions, broker-dealers and investment banks.

Apart from its notary function for international bonds, notably Eurobonds, which it mainly shares with Clearstream Banking Luxembourg, Euroclear Bank aims to provide its participants with a single gateway to access many foreign securities markets (i.e. Euroclear Bank has a link with foreign CSDs which act as notary for securities issued in the local market). When (I)CSDs offer their participants access to foreign securities markets, they are considered as investor (I)CSDs, whereas the foreign (I)CSDs are referred to as issuer (I)CSDs. As of 2020, Euroclear Bank is connected to more than 50 foreign CSDs as investor ICSD in these domestic markets.

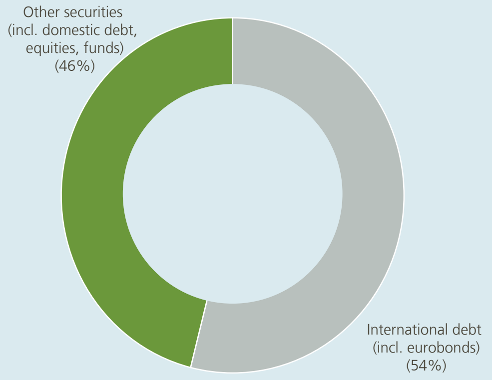
To provide services in international bonds and a wide range of foreign securities, about 100 different currencies are eligible in the system operated by Euroclear Bank. Securities can be settled against payment in a Euroclear settlement currency which can be different from the denomination currency. Denomination currencies are used as units of account for securities balances but not necessarily for payment transactions.

At the end of 2019, the value of securities deposits held on Euroclear Bank's books on behalf of its participants amounted to € 14.8 trillion equivalent (up from € 13.5 trillion in 2018). After EUR (47 %), USD is the main denomination currency (30 %), followed by GBP (11 %). 54 % of securities deposits are in international bonds, such as Eurobonds, for which issuers can choose the currency or country of issue.

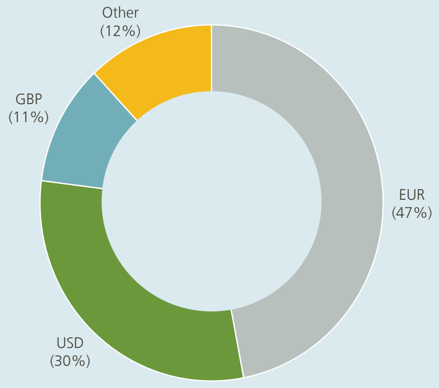
Regarding settlement turnover, the number of transactions settled in 2019 in Euroclear Bank amounted to 116.3 million (up from 107.0 million in 2018). In value terms, this represents € 544.6 trillion (up from € 525.7 trillion in 2018). 61 % of settlement turnover, free of payment and against payment transactions, was denominated in EUR, after USD (18 %) and GBP (9 %). In terms of settlement turnover per security type, compared to securities deposits, international debt accounts for 25 % while the bulk is composed of other types of securities such as domestic debt and, to a lesser extent, equities or exchange-traded funds.

The interconnectivity of Euroclear Bank with other FMIs is a critical component in the Euroclear Group strategy to establish a common pool of collateral assets in which Euroclear Group entities provide collateral management services as a tri-party agent taking over the collateral management tasks (including collateral selection, valuation and substitution) from its participants during the lifecycle of the transaction concluded between two participants. At the end of 2019, at group level, the average daily value of triparty collateral managed by the Euroclear (I)CSDs had reached € 1.3 trillion equivalent (up from € 1.2 trillion in 2018).

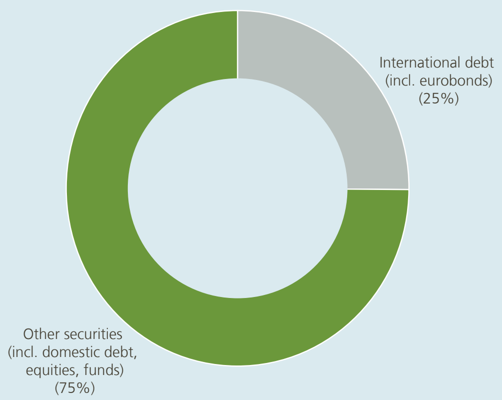
Breakdown by security type
Securities deposits in value (2019,end of year)



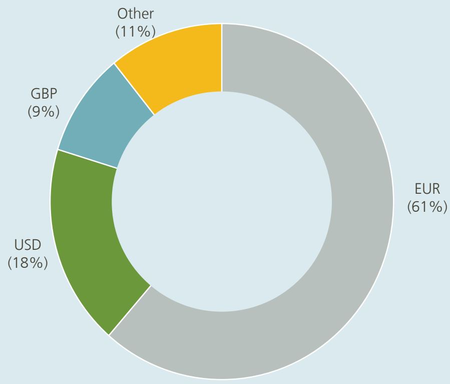
Breakdown by currency
Securities deposits in value (2019,end of year)



Breakdown by security type
Settlement turnover in value (2019, end of year)



Breakdown by currency
Settlement turnover in value (2019, end of year)



Source : Euroclear

The interconnection of the different market infrastructures is a necessity for the exchange of financial flows, but this interconnectivity is also a major risk in the event of a problem at one of the elements of the chain, which could impact other FMIs. Hence, cyber resilience continues to be a top priority for the Bank in its oversight activity with Belgian (I)CSDs. In particular, implementation of the SWIFT Customer Security Programme (CSP) framework continued to be monitored in 2019.

The ESA Cyber Resilience Task Force, which includes central banks and securities regulators of all Euroclear Group entities, and is chaired by the Bank, monitors the progress of the Euroclear Group in the implementation of its cyber security strategy and related projects. The governance of the (I)CSD in the cyber domain, and the interactions with Risk Management (2nd Line of Defence) and Internal Audit (3rd Line of Defence) is also an important point of attention in this context.

Also, in 2019, Euroclear participated in

- the second ESCB Cyber Assessment Survey (assessment of cyber security maturity of FMIs, based on the CPMI IOSCO Cyber Resilience guidance, dated June 2016) which allowed to position Euroclear among peers:
- an anonymous peer-benchmarking exercise for implementation of business continuity planning (BCP) with 37 other peer FMIs, under the coordination of CPMI and IOSCO. The goal was to review the consistency of implementation of the relevant Principles (related to BCP) of the PFMIs.

The Bank contributed to the analysis and evaluation of the two above-mentioned exercises.

In 2019, the oversight team monitored the NBB-SSS's project to offer DVP settlement in foreign currencies for trades as well as for corporate actions in a fully automated way as of Q2 2020. In other words, the NBB-SSS will support the settlement of the cash leg in a foreign currency relating to securities denominated in foreign currencies registered in the NBB-SSS. This eliminates principal risk for participants related to securities denominated in foreign currencies, even though these securities make up only a small fraction of the NBB-SSS's securities depot.

With regard to CSDR settlement discipline, Belgian (I)CSDs' preparations for installing the penalty regime between participants are ongoing. The T2S penalty mechanism will provide CSDs daily with the fines to collect and distribute per participant.

With regard to T2S, a total of 22 CSDs are now connected to the pan-European platform, covering 20 national markets. Since the Danish krone (DKK) connection from 29 October 2018, T2S has become a multi-currency platform, offering the possibility of DVP settlement in another currency than the euro. As part of its regular activities, the T2S Oversight function assesses incident occurrence and monitors changes in statistical indicators and other issues with an impact on the smooth functioning of T2S which may be relevant from an oversight perspective, such as management of operational risks by T2S. These activities are ultimately designed to identify any potential impact on the safety and efficiency of T2S or its compliance with the relevant requirements of the PFMIs. In 2019, the Eurosystem T2S oversight function finalised a comprehensive evaluation of T2S compliance with the PFMIs on which the authorities involved in the T2S Cooperative Arrangement were consulted.

Finally, the Bank is also following up the innovations in the settlement domain such as distributed ledger technology (DLT)[1]. In 2019, there was an initiative by the European Investment Bank (EIB), Euroclear, Banco Santander and EY with regard to an end-to-end blockchain solution for the exchange of information between parties regarding the issuance of European Commercial Paper (ECP)[2]. The issuance and settlement itself would remain on Euroclear Bank's existing system. Crypto assets issued on DLT networks or tokenisation platforms have the potential to disrupt the post-trade areas of the securities industry. However, there are considerable challenges before these innovations can be brought into practice in the post-trade industry. A paper by the International Securities Service Association (ISSA)[3] discusses some of these challenges and outlines recommendations and best practices. Among the challenges a CSD faces when it wants to serve security tokens issued, traded and settled on DLT are legal issues[4].

1 More background information on DLT in the field of FMIs can be found in the Financial Market Infrastructures and Payment Services Report 2017 ("Enabling technologies in financial market infrastructures and payment services innovation: An overseers' perspective on opportunities, risks and policy").

2 "EIB, Euroclear, Banco Santander & EY developing blockchain solution", 19/06/19, available at https://www.euroclear.com/newsandinsights/en/press/2019/2019_mr-11-Euroclear-developing-Blockchain-solution.html

3 "New ISSA industry paper on DLT & Crypto Assets", 14/11/2019, available at https://www.euroclear.com/newsandinsights/en/Format/Whitepapers-Reports/ISSA-Crypto-Assets-paper.html

4 An article by Bart Garré and Sofie Van de Velde discusses this aspect: "Can securities be issued, traded and settled on DLT? Legal considerations from a CSD's perspective", Droit bancaire et financier/Bank- en Financieel Recht, Volume 2019, Nr. 2, available at https://www.jurisquare.be/en/journal/bfr/2019-2/can-securities-be-issued-traded-and-settled-on-dlt-legal-considerations-from-a-csds-perspective/index.html#page/130/search/

The evolution of new technologies such as the virtualisation or the use of cloud computing are also being closely monitored from an operational risk management perspective.

Supervisory priorities in 2020

Once a CSD has been authorised under the CSDR, it is subject to a review and evaluation process by the competent authority of that CSD. As both Euroclear Belgium and Euroclear Bank were licensed in the course of 2019, the review and evaluation process by the Bank started in 2020. As competent authority, it will assess their compliance with the CSDR on a yearly basis.

For Euroclear Belgium, this review and evaluation process is coordinated – like the CSDR authorisation process before – with the FSMA and authorities of Euroclear France and Euroclear Nederland. Focus is put on the CSD's activities and any substantive changes made during the review period. New statistical data reporting on Euroclear Belgium’s business based on CSDR methodology will also be made available as from the review and evaluation process. As foreseen in the CSDR, the Bank will consult other relevant authorities : i.e. the Eurosystem in the case of Euroclear Belgium.

For Euroclear Bank, having been licensed in December 2019, the process will only be initiated by the end of 2020. The review and evaluation itself will be conducted by the Bank [1] in early 2021. The Bank will also further work on loss-sharing arrangements with participants / counterparties as this is a relevant requirement in several frameworks. Other priorities, mainly in the area of banking-type ancillary services provided by Euroclear Bank, are a comprehensive assessment of the risks associated with voluntary end-of-day long cash balances of participants and a review of the methodology, scope and frequency of the liquidity stress tests. Ancillary services such as securities lending will also be analysed against PFMI and CSDR requirements.

In order to avoid credit risks on cash correspondents, the Bank continues to support Euroclear Bank’s efforts to open central bank accounts for foreign currencies where it has not yet done so. The ability to access such central bank accounts – and the conditions theretofore doing so – depend on the policy of local central banks.

As NBB-SSS is being used by the Eurosystem for the mobilisation of collateral in the framework of implementation of monetary policy operations, the Bank will conduct a review and evaluation of NBB-SSS against the CSDR requirements which are relevant from a user perspective and consult the Eurosystem in this context.

For all (I)CSDs established in Belgium, cyber resilience continues to be closely monitored by the Bank, in particular the projects aiming to further strengthen the (I)CSDs’ security position. In this area, the Bank cooperates with the Euroclear Group authorities. The current cooperative framework arrangement between Euroclear Group regulators (overseers / securities regulators) will also be revised to take into account the impact of the CSDR.

1 For the aspects mentioned in the footnote on page [25], the Bank will consult the FSMA.

BOX 5

COVID-19 impact on Belgian (I)CSDs

As the coronavirus crisis erupted, Belgian (I)CSDs activated their BCP arrangements, and initiated a general working from home arrangement for the staff. Some with offices in Asia had already activated such arrangements for these locations at the beginning of the year.

With the coronavirus crisis leading to greater volatility and trading volumes in markets, CCPs and (I)CSDs found themselves dealing with a significant increase in transactions to be processed. As there are strict capacity management requirements for FMIs, the Belgian (I)CSDs absorbed these peak volumes without any problem.

Some of their participants struggled to cope with the combination of higher transaction volumes and working-from-home arrangements for their staff. In some cases, this was due to the fact that some of the back offices were located in a country that abruptly went into lockdown (or back offices had outsourced a significant part of their operations to providers located in such countries) and where the BCP did not cater for such a sudden lockdown. This led to an increased number of transactions that did not settle on the intended settlement date (so-called "failed transactions"). Euroclear Bank exceptionally opened a window for introducing instructions on a Saturday to allow the participants that were affected, to enter instructions for processing in order to reduce the backlog of unmatched/unsettled instructions.

For supervisory and oversight activities on (I)CSDs, physical meetings have been replaced – since the start of the COVID crisis – by virtual interactions, including for international cooperative arrangements.

2.3 Custodians

Changes in regulatory framework

According to Article 9(1) of the CSDR, settlement internalisers have to report to the competent authorities where they are established on a quarterly basis the aggregate volume and value of all securities transactions that they settle outside securities settlement systems (see box 7 in the Financial Market Infrastructures and Payment Services Report 2019 for more information). In 2019, several settlement internalisers in Belgium have started reporting as required by the CSDR.

Prudential approach

As a global custodian, The Bank of New York Mellon (BNY Mellon) operates according to a "follow the sun" model that enables client transactions and related services around the world to be continuously processed, thanks to the global footprint it has established with entities spread around the globe, working on common platforms and multiple intra-group outsourcing arrangements.

In line with this business model, the NBB's supervisory work in the Joint Supervisory Team (JST) in 2019 was mainly focused on assessing compatibility of the structuring of the various streams that are relevant for BNYM SA/NV within the new context and related supervisory requirements resulting from Brexit.

The core principles guiding these assessments can be found in the Operational Brexit Guidance published on the ECB's website[1].

When adjustments to existing streams were required (including expanding the product and service offering of BNYM SA/NV for EU clients), the JST considered the expected changes and assessed the proposed projects from a legal, operational as well as governance vantage point. The impact on the bank's financial ratios, internal control system and risk profile were of course integrated into the supervisory assessments.

1 https://www.bankingsupervision.europa.eu/banking/relocating/html/index.en.html

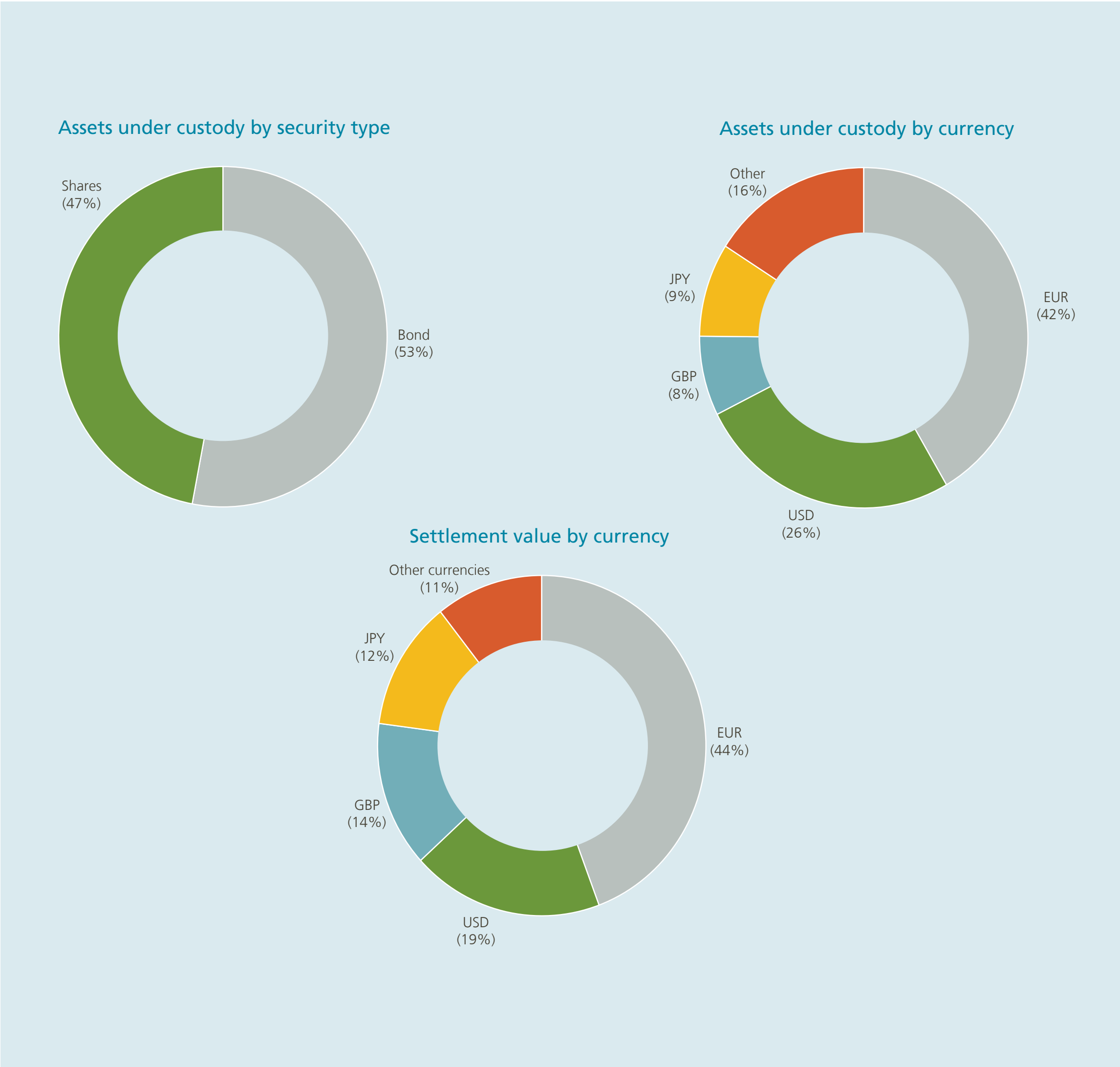
BOX 6

International dimension of The Bank of New York Mellon Group and BNYM SA/NV

BNY Mellon, a banking group incorporated in the US, is one of the largest custodian banks in the world in terms of assets under custody ($ 37.1 trillion as at December 2019, up by 12 % on last year). It is a global systemically important bank (G-SIB), providing asset and investment management services to institutional customers. BNYM SA/NV, the Belgian subsidiary, provides asset services mainly and acts as the BNY Mellon group's custodian for T2S markets and as the custodian for EU customers. BNYM SA/NV has a non-bank subsidiary in Germany and branches in Luxembourg, the Netherlands, Germany, France, Ireland, Italy and the UK, through which it operates in these local markets. BNYM SA/NV qualifies as an other systemically important institution (O-SII), as assessed by the NBB based on the relevant EBA guidelines.

By the end of 2019, BNYM SA/NV served more than 750 international, institutional customers[1] on whose behalf it held € 2.8 trillion equivalent assets under custody, denominated in more than 75 different currencies[2]. The majority of these assets are denominated in euro (42 %), followed by USD (26 %), JPY (9 %) and GBP (8 %). 53 % of these assets are bonds and 47 % of these assets are shares. In terms of settlement activity[3], BNYM SA/NV processed about 13.8 million transactions worth € 37.3 trillion equivalent in 2019. The main currencies are EUR (44 %), USD (19 %), GBP (14 %) and JPY (12 %).

1 Compared to last year, client numbers are now reported at the parent company level.
2 Eligible currencies include AED, ARS, AUD, BDT, BGN, BHD, BMD, BRL, BWP, CAD, CHF, CLP, CNY, COP, CRC, CZK, DKK, EGP, ETB, EUR, FKP, GBP, GEL, GHS, GMD, HKD, HRK, HUF, IDR, ILS, INR, ISK, JPY, KES, KRW, KWD, KYD, KZT, LBP, LKR, MAD, MUR, MXN, MYR, MZN, NAD, NGN, NIO, NOK, NZD, OMR, PAB, PEN, PGK, PHP, PKR, PLN, PYG, QAR, RON, RSD, RUB, SAR, SEK, SGD, THB, TND, TRY, TWD, TZS, UAH, UGX, USD, UYU, VES, VND, XOF, ZAR, ZMW, ZWL.
3 Value of BNYM settlement activity is based on receipt and delivery instructions.



Besides this important stream of supervisory work, the NBB also reviewed and authorised (both in conjunction with the ECB and autonomously under the custodian bank status) important restructuring operations under the group's operating model restructuring initiative launched several years ago. The objective of this multi-year initiative is to simplify the group's structure and to ensure enhanced relationships between the group locations, client contractual framework and client assets under custody in both an ongoing and resolution perspective.

Two operations can be highlighted in 2019 in that regard: the takeover of an Irish group entity by BNYM SA/NV and the closing of BNYM Brussels branch.

Lastly, taking into account the fact that BNYM's business model shares several characteristics with that of FMIs, a continuous focus on the IT and operational resilience of the entity, as well as its recovery and resolution planning, is integrated into the supervisory planning.

Supervisory priorities in 2020

The supervisory planning for BNYM SA/NV in 2020 will ensure continuity with the tasks performed last year.

Readiness for Brexit will continue to be a core aspect of the supervisory work, with focus gradually shifting from so-called "day-1" solutions (the solutions banks have put in place in the period between the ratification/entry into force of the Withdrawal Agreement and the end of the transition period, i.e. February 2020-December 2020) to "day-2" solutions (the solutions banks have put in place to do business in Europe after 31 December 2020).

The firm's resilience will continue to be monitored from an IT and operational perspective. The enhancements made to the technical infrastructure through internal innovation or collaboration with FinTech companies and third-party providers will be closely followed to ensure their compliance with European regulations.

BOX 7

How custodians have been dealing with the coronavirus crisis

The COVID-19 pandemic has resulted in higher on-balance sheet leverage for custodians. Owing to the pandemic-induced market turmoil, investors have decided to keep a larger extent of their funds in cash, possibly by liquidating positions but more generally by not immediately rolling over part of their securities investments at redemption date. Custodians being considered as safe havens by their clients, based on their business model that implies that they do not intensively engage in risk-taking activities for own account, these clients decided accordingly to park more of their cash in their accounts with the custodians.

The extra leverage could create additional credit and liquidity risks challenges for the receiving entities. The additional cash needs to be reinvested in high-quality liquid assets in line with the typical nature of custodians' short-term and liquid liabilities, and without significantly increasing the credit risk profile of the custodian.

The COVID-19 pandemic has also resulted in increased amounts of transactions (securities purchases as well as FX) in the first phase of the crisis. Additional transactions have a positive impact on the fee income which is the major source of revenue for custodians, but other parameters – which evolved sharply due to the pandemic – also impact custodian bank revenues as the evolutions in securities prices or the interest rates. Besides euro area interest rates that have been at historically low levels for some years, other markets, especially the US, have seen significant drops in interest rates.

Custodians are a central part in the functioning of globalised financial markets. To be able to offer services that meet client expectations and ensure stability in the functioning of markets, custodians have to build a high level of resiliency by several means, amongst which fall-back capabilities between regional operational centres. These capabilities, coupled with secured remote working infrastructure proved reliable in the current circumstances, even when used at unprecedented levels.