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 2 depicts the scope of the Bank's oversight and supervision role in this area.

Section 2.1 covers CCPs. CCPs are subject to both prudential supervision and oversight. While there is no CCP established in Belgium, under EMIR, as of 2021 the Bank will take part in five 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 adequate for covering such risks (i.e. PFMIs). In the EU framework, these principles have been transposed into EU legislation (EMIR and CSDR).

The (I)CSDs established in Belgium have different scopes 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 as the sole competent supervisory authority[1] for Euroclear Bank and Euroclear Belgium, and is, as overseer, also considered as 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 of 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. In line with PFMI Responsibility E (Cooperation with other authorities), the Eurosystem has set up the T2S Cooperative Arrangement to ensure that all authorities with a legitimate interest in the smooth functioning of T2S are involved, including the overseers and market authorities of CSDs that have signed the T2S Framework Agreement, in coordination with the ECB and ESMA. The authorities assess both the general organisation of T2S as a critical infrastructure (i.e. technical platform, legal basis, governance structure and comprehensive risk

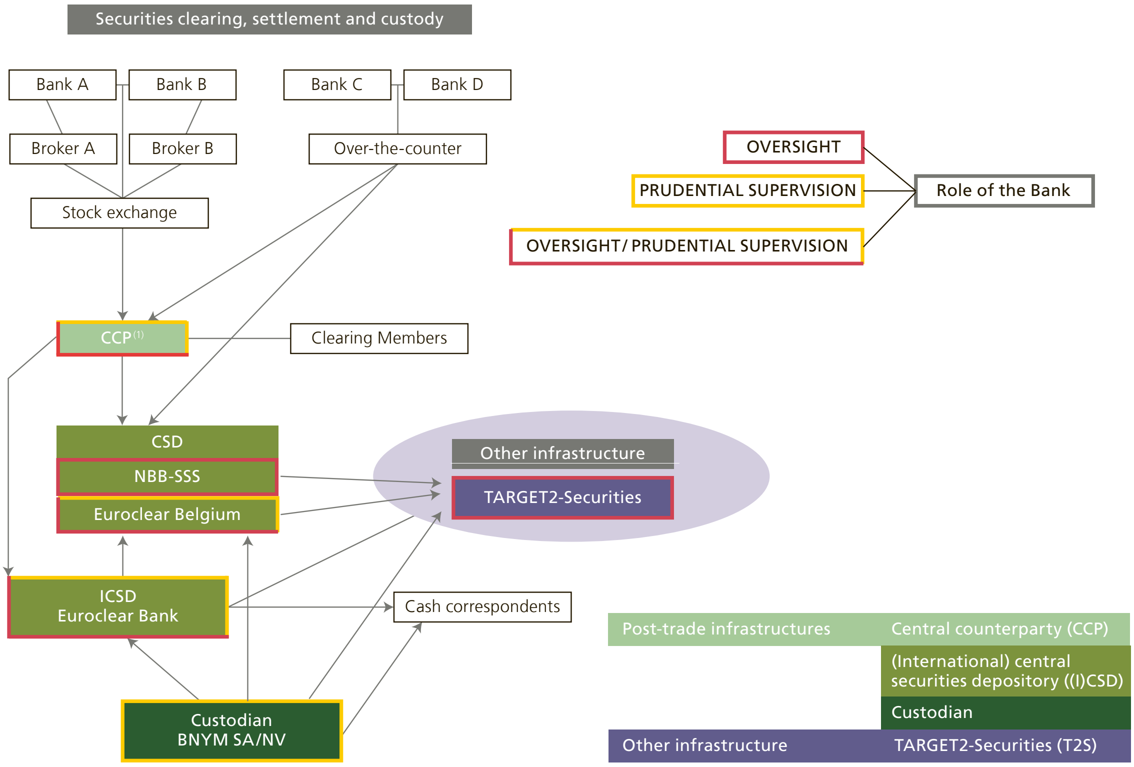
1 For the following aspects, the Bank consults the FSMA, which retains its competence as market authority: rules on conflicts of interest, record-keeping, requirements concerning participation, transparency, procedures for communicating with participants and other market infrastructures, the protection 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.

management framework), as well as the services it provides against an applicable subset of the PFMIs. The Bank is involved in this cooperative oversight of T2S.

Finally, section 2.3 covers institutions whose single business line is the provision of custody 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 2

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

There are no CCPs located in Belgium but some foreign CCPs are used by Belgian financial institutions for clearing, or use Belgian FMIs for settlement (see chart 2), and therefore the Bank closely follows up developments regarding CCPs.

In November 2020, the Financial Stability Board (FSB) further elaborated its CCP resolution guidance with the publication of the Guidance on Financial Resources to Support CCP Resolution and on the Treatment of CCP Equity in Resolution.[1]

1 Available at
https://www.fsb.org/2020/11/guidance-on-financial-resources-to-support-ccp-resolution-and-on-the-treatment-of-ccp-equity-in-resolution/.

The FSB, CPMI and IOSCO engaged to conduct further work on CCP financial resources through their respective committees and to consider the need for a policy on the use, composition and amount of financial resources in recovery and resolution to further strengthen the resilience and improve the resolvability of CCPs in default and non-default loss scenarios.

In August 2020, the FSB published a questionnaire on Continuity of Access to FMIs for firms in resolution[1] to streamline information collection and support resolution planning, which should enhance the ability of the administrator of a resolved bank to adequately manage its resolution that typically requires access to FMIs (for instance, to sell securities, transactions need to go through a CCP for clearing and a CSD for settlement – see chart 2 for an overview of the role of FMIs).

The CCP's ability to handle a clearing member's default is essential from a prudential risk perspective. So, its ability to re-establish a balanced book by auctioning the positions of the defaulter to surviving clearing members is key. In June 2020, CPMI and IOSCO published a final paper with considerations on what constitutes a successful auction. The industry is being asked to make further progress on effective auction practices for OTC derivatives positions.

In the EU, EMIR, which sets out the obligations for market participants' clearing derivatives[2] besides the requirements for CCPs and their supervision, has been amended by the EMIR 2.2 Regulation that entered into force on 1 January 2020. EMIR 2.2 improves consistency of supervisory arrangements for CCPs established in the EU and enhances the EU's ability to recognise and supervise systemically important third-country CCPs[3]. While the primary role of the EU CCP's national competent authority is maintained, a wider mandatory consultation of ESMA on regulatory compliance, and an enhanced role for the CCP supervisory college is set. Central banks that issue EU currencies are also being given a bigger input. EMIR 2.2 also includes the possibility to require – via a Delegated Act – the relocation to the EU of so-called "substantially systemically important" activities of third-country CCPs.

The technical legislation for executing EMIR 2.2 is being further elaborated[4]. In December, a delegated act related to the composition, functioning and management of CCP supervisory colleges was published. In October, ESMA issued a market consultation paper making proposals to determine in what cases the national CCP competent authority has to consult the CCP college.

In December, ESMA also issued a time-limited recognition, until mid-2022, of the UK CCPs LCH Ltd, ICE Clear Europe Ltd and LME Clear Ltd[5] preventing these CCPs from losing their authorisation as a Union CCP overnight and allowing EU clearing members to retain access to them during the post-Brexit transition period.

In January 2021, the EU Regulation on CCP recovery and resolution was published[6]. 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. CCPs will have to draw up or adapt their recovery plans as required.

1 Available at https://www.fsb.org/2020/08/fsb-continuity-of-access-to-fmis-for-firms-in-resolution-streamlined-information-collection-to-support-resolution-planning/.

2 Most notably a clearing obligation applies, covering standardised interest rate swap contracts in the most relevant currencies, and index-linked credit default swaps.

3 In September, the Commission adopted delegated acts on when a third-country CCP is considered systemically important and on the comparable compliance regime, allowing a CCP to comply with EMIR requirements by complying with the regulations and requirements of its home country if ESMA assesses them as satisfactory, were published. See https://ec.europa.eu/info/law/derivatives-emir-regulation-eu-no-648-2012/amending-and-supplementary-acts/implementing-and-delegated-acts_en.

4 An overview of EMIR implementing and delegated acts is available at https://ec.europa.eu/info/law/derivatives-emir-regulation-eu-no-648-2012/amending-and-supplementary-acts/implementing-and-delegated-acts_en.

5 Available at https://www.esma.europa.eu/press-news/esma-news/esma-recognise-three-uk-ccps-1-january-2021.

6 Regulation (EU) 2021/23 of the European Parliament and of the Council of 16 December 2020 on a framework for the recovery and resolution of central counterparties and amending Regulations (EU) No. 1095/2010, (EU) No. 648/2012, (EU) No. 600/2014, (EU) No. 806/2014 and (EU) 2015/2365 and Directives 2002/47/EC, 2004/25/EC, 2007/36/EC, 2014/59/EU and (EU) 2017/1132, available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2021:022:TOC.

Member States will designate a national CCP resolution authority to resolve a CCP if necessary, which will establish a CCP resolution college to advise on resolution plans and CCP resolvability assessments.

Prudential and oversight approach

In July 2020, ESMA published the results of its third supervisory stress test for EU CCPs[1]. 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. While the stress test's scenarios were prepared before, they were generally found to be of comparable severity with the stress events at the start of the COVID crisis. The test also included a concentration stress test which showed that, for most asset classes, there is indeed concentration in one or two CCPs, and that the ensuing simulated market impact (i.e. the liquidation cost) for equity and commodity trades was not always sufficiently covered by margin add-ons. Despite this finding, ESMA found the system to be resilient on the whole.

1 Available at https://www.esma.europa.eu/press-news/esma-news/esma%E2%80 %99s-third-eu-wide-ccp-stress-test-finds-system-resilient-shocks.

Table 2

EU CCP supervisory colleges with the Bank's participation

CCP [1]	Main clearing services and relevance for Belgium	Direct Belgian clearing members [2]	EMIR criteria for the Bank's participation in the CCP's supervisory college		The Bank participates in the Crisis Management Group
			Supervisor of Belgian clearing members contributing – on a country-by-country basis – most to the CCP default fund	CCP settles in a Belgian (I)CSD [3]	
Eurex Clearing AG (DE)	Listed interest derivatives/repos	4 ■ Belfius Bank; ■ MeDirect Bank; ■ BNP Paribas Fortis; ■ KBC Bank	✗	✓ (EB)	✓
LCH SA (FR)	Euronext cash and derivatives trades (including Euronext Brussels) / repos	8 ■ Axa Bank Belgium ■ Banque Degroof Petercam; ■ Belfius Bank; ■ BNP Paribas Fortis; ■ Delen Private Bank; ■ KBC Bank ■ Leleux Associated Brokers; ■ Van De Put & Co Private Bankers	✗	✓ (EB, EBE, NBB-SSS)	✓
CC&G (IT)	National CCP of Italy	none	✗	✓ (EB)	✗
Euro CCP (NL)	Main European stocks	none	✗	✓ (EB)	✗
Keler CCP (HU)	National CCP of Hungary	1 ■ KBC Securities Hungarian branch	✓	✗	✗

Source: NBB.

1 Under European rules, EU CCP supervisory college participation is reassessed annually on the basis of the criteria set out in Article 18 EMIR. The NBB participates in the colleges based either on its capacity of supervisor of a CSD that the CCP settles in, or as supervisor of clearing members of the CCP that contribute – on a country-by-country basis – most to the default fund.

2 A Belgian bank not mentioned in the table may clear in a CCP but as an indirect clearing member, this is, as the client of a clearing member that could be a foreign entity of the group it belongs to.

3 EB: Euroclear Bank ICSD, EBE: Euroclear Belgium CSD, NBB-SSS.

Post-Brexit, the Bank continues to be involved in five EU CCP supervisory colleges (see table 2) including in Eurex Clearing AG in Frankfurt that clears euro-denominated repos and LCH SA in Paris that clears the Euronext Brussels markets and euro repos. The Bank is also expected to take part in the third-country CCP supervisory college to be set up under EMIR 2.2, and where information will be shared on these CCPs.

Supervisory priorities in 2021

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

The Regulation on CCP recovery and resolution requires Member States to set up national CCP resolution authorities that will develop plans in case of CCP resolution events and establish resolution colleges. 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. In addition, a continuing priority, common with other FMIs, is CCP operational risk management, and in particular cyber risks.

Finally, new services, 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, the conditions under which a college can escalate a file to ESMA for steering have been eased, and a college majority is now able to include specific guidance in its opinion, besides merely providing a positive or negative vote.

2.2 (I)CSDs

Changes in regulatory framework

According to CSDR Article 75, by 18 September 2019, the European Commission should have reviewed and prepared a general report on CSDR, for submission to the European Parliament and Council, together with any appropriate proposals for revising the regulation. However, due to the lengthy implementation of CSDR (most CSDR requirements started to enter into force only from mid-2017, and settlement discipline will not come into force before 1 February 2022) and the re-authorisation processes which are still ongoing in some countries, it was considered premature to launch a review of CSDR at that time. However, in the course of 2020, and notwithstanding the fact that not all CSDs have obtained their CSDR licence yet, the European Commission has decided to launch a targeted review of CSDR, for which a public consultation took place until February 2021. The European Commission is expected to report to the European Parliament and Council by the end of the first quarter.

Finally, the entry into force of the CSDR settlement discipline regime has been further postponed to 1 February 2022[1]. This postponement is due to the impact of the COVID-19 pandemic on the implementation of regulatory projects and IT deliveries by CSDs and a wide range of market participants and follows a request from the European Commission.

Following the publication of the PFMIs, CPMI and IOSCO agreed to monitor their implementation in members' jurisdictions. An assessment has been performed in late 2019 and early 2020 to examine the consistency of implementation of the PFMIs by FMIs concerning the Business Continuity Planning (BCP) practices (Principle 17 (Operational risk), and more specifically the Key Considerations related to Business Continuity). Globally, it is

1 https://www.esma.europa.eu/press-news/esma-news/esma-proposes-further-postpone-csdr-settlement-discipline.

concluded in the report that the practices are consistent with the expectations regarding business continuity planning laid out in Principle 17 of the PFMI in many aspects. It should be mentioned that FMIs' BCPs include a pandemic scenario. The BCPs are reviewed at least annually and are regularly tested, though some improvements have been identified.

The Digital Operational Resilience Act (DORA, see box 13) and Regulation on Markets in Crypto Assets (MiCA, see thematic article) are also relevant for CSDs.

Prudential and oversight approach

During 2020, the Bank monitored closely the impact of the COVID-19 pandemic on the (I)CSDs' robustness and performance.

Market volatility in March led to significantly higher settlement volumes and fail rates, which returned to normal after this temporary peak as illustrated in box 1.

The interconnection of different market infrastructures is a necessity for the exchange of financial flows. Such interconnectivity creates also potential contagion risks in the event of a problem at one of the nodes of the chain, impacting other FMIs. Hence, cyber resilience continues to be a top priority for the Bank in its oversight activity with Belgian (I)CSDs. In particular, the implementation of the SWIFT Customer Security Programme (CSP) framework continued to be monitored in 2020.

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.

Data integrity is becoming an important topic among the FMIs, because many threats can jeopardise it, be it malware (e.g. a ransomware, which encrypts the data), or an operational incident where some data are modified unintendedly. However, the potential impact on the financial ecosystem could be significant because of the spread of inaccurate data throughout the chains between FMIs and financial institutions. Belgian CSDs are therefore working on "extreme but plausible scenarios" [1] to improve their business resilience, to recover as quickly as possible, should such an incident occur.

As Euroclear Belgium and Euroclear Bank received their initial CSDR authorisation in 2019, the Bank has prepared the first annual review and evaluation (under CSDR Art. 22) in 2020. For Euroclear Belgium, the Bank consulted the FSMA, the Eurosystem as relevant authority under the CSDR and the competent authorities of the Euroclear Group. The Bank finalised Euroclear Belgium's first review and evaluation in February 2021. The assessment was coordinated with the reviews that the French and Dutch competent authorities did on Euroclear France and Euroclear Nederland respectively, as the operations, governance and rulebooks of the three CSDs – together the ESES CSDs – are aligned to a considerable extent.

For Euroclear Bank, the CSDR review and evaluation will be conducted in the course of 2021. The Bank will consult the FSMA, the Eurosystem and the competent authorities of the Euroclear Group. The outcome of the review and evaluation will in addition be shared with the competent authorities of the countries for which Euroclear Bank is important (see box 2).

1 CPMI-IOSCO Guidance on cyber resilience for financial market infrastructures, June 2016.

BOX 2

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, BoE, BoJ and ECB as observer). The Reserve Bank of Australia is in the process of joining this cooperation	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 (and equities as of 2021) 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 and communication arrangement 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 relevant authority as well. The Eurosystem is also relevant authority for Euroclear Bank, which settles in euro as well.

In addition to the FSMA and the relevant authorities, the competent authorities from countries where Euroclear has a CSD will be involved in the annual review and evaluation process of Euroclear Belgium and Euroclear Bank. The outcome report will be shared with the authorities identified based on the conditions listed in CSDR Article 55(4).

As the CSDR has changed the interactions between the authorities of the Euroclear (I)CSDs, the MoU between the Euroclear Group overseers and market supervisors is being reviewed.

BOX 3

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 2020, Euroclear Bank had 1 641 participants located worldwide. Its participant base consists mainly of non-domestic participants, including almost 100 central banks, 27 CCPs and CSDs, as well as credit institutions, broker-dealers and investment banks.

Apart from its notary function for international bonds (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. Euroclear Bank is connected to more than 50 foreign CSDs as investor ICSD in domestic markets.

Euroclear Bank intends to join TARGET2-Securities (T2S) as a participating (I)CSD. Offering central bank money settlement in euro to participants that are allowed to open a central bank account in TARGET2 (T2) lowers risks that are inherent to commercial bank money settlement. In addition to following up on this project, the Bank will continue to encourage Euroclear Bank to open cash accounts with non-euro central banks in order to further eliminate its credit exposure on commercial banks.

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 [1] which can be different from the denomination currency [2].

At the end of 2020, the value of securities deposits held on Euroclear Bank's books on behalf of its participants amounted to € 15.3 trillion equivalent (up from € 14.8 trillion in 2019). After EUR (49 %), USD is the main denomination currency (28 %), followed by GBP (11 %). 5 % of securities deposits are in international bonds, for which issuers can choose the currency or country of issue.

Regarding settlement turnover, the number of transactions settled in Euroclear Bank in 2020 came to 128.8 million (up from 116.3 million in 2019). In value terms, this represents € 575.9 trillion (up from € 544.6 trillion in 2019). 61 % of settlement turnover, free of payment and against payment transactions, was denominated in EUR, after USD (17 %) and GBP (10 %). In terms of settlement turnover per security type, compared to securities deposits, international debt accounts for 245 % while the bulk is composed of other types of securities such as domestic debt and, to a lesser extent, equities or exchange-traded funds.

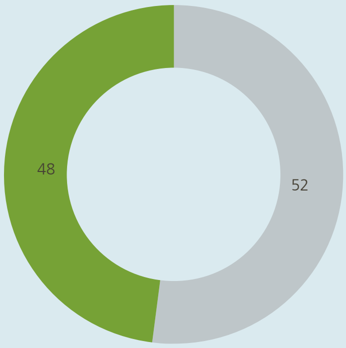
The interconnectivity of Euroclear Bank with other FMIs is a critical component in the Euroclear Group strategy to establish a common pool of collateral assets in which Euroclear Group entities provide

1 A settlement currency is a currency in which cash settlement can take place.
2 A denomination currency is the currency in which the security is denominated. This currency is used as a unit of account for the nominal value of this security, but it is not necessarily used to settle the cash leg of transactions.

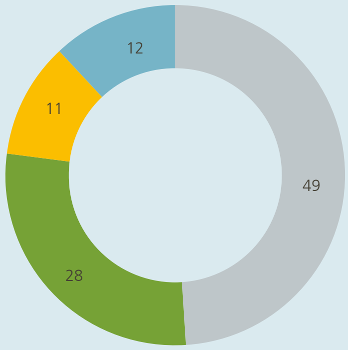
collateral management services as a triparty agent taking over the collateral management tasks (including collateral selection, valuation and substitution) from its participants during the lifecycle of the transaction concluded between two participants. At the end of 2020, at group level, the average daily value of triparty collateral managed by the Euroclear (I)CSDs reached € 1.5 trillion equivalent (up from € 1.3 trillion in 2019).

Composition of securities deposits and turnover in percentage, end of year 2020

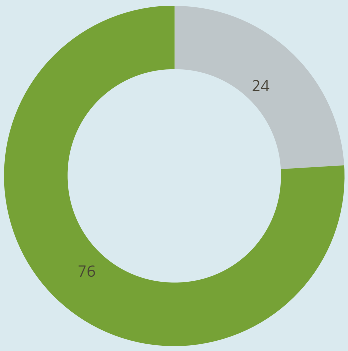
Securities deposits in value-
Breakdown by security type



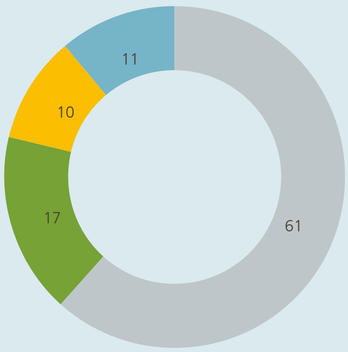
Securities deposits in value-
Breakdown by currency



Settlement turnover in value-
Breakdown by security type



Settlement turnover in value-
Breakdown by currency



International debt (incl. eurobonds)
Other securities (incl. domestic debt, equities and funds)

EUR GBP
USD Other

Source: Euroclear.

Although CSDs operated by members of the ESCB are exempt from the authorisation and supervision requirements of the CSDR[1], certain prudential requirements of the CSDR do, however, apply to them. In the scope of the new regime for granting eligibility to securities settlement systems (SSSs) and links for their use in Eurosystem credit operations, which is based on the compliance of the CSD with the CSDR requirements, the NBB in its role as overseer of the SSS, has conducted a review and evaluation of the NBB-SSS against the CSDR requirements which are relevant from a user perspective and consulted the Eurosystem in this context.

Since June 2020, the NBB-SSS offers DVP settlement in foreign currencies for trades as well as for corporate actions in a fully automated way. In this way, the NBB-SSS supports the settlement of the cash leg in a foreign currency relating to securities denominated in foreign currencies registered in the NBB-SSS. This project implemented an oversight recommendation to avoid settlement risk for securities denominated in foreign currencies.

Given that the daily settlement operations of Euroclear Belgium and NBB-SSS are outsourced to T2S, the Bank is involved in the cooperative oversight of T2S[2].

Because of COVID-19, high market volatility led to progressively higher settlement volumes in T2S, starting from the last week of February 2020 and reaching a historic peak on 16 March 2020 with 1 215 008 transactions settled.

Supervisory priorities in 2021

As required by the CSDR, the Bank as competent authority will perform an annual review and evaluation of the Belgian (I)CSDs that have a CSDR licence. During this review, the Bank will assess whether the (I)CSDs still comply with the requirements laid down in the CSDR. The review will focus on any changes that may have happened with regard to the (I)CSD under review since the last review has been performed. As mentioned above, the Bank will duly consult other authorities and / or inform them of the outcome of the review as required by the CSDR.

Although the NBB-SSS, as a CSD operated by a central bank, is not subject to this CSDR review, the Bank as overseer will perform a targeted review to maintain assurance on NBB-SSS compliance with the provisions of the CSDR that are relevant from a "user perspective"[3].

Since the establishment of Euroclear SA / NV as a financial holding above the (I)CSDs of the Euroclear group[4], the authorities of the Euroclear (I)CSDs set up a cooperation, chaired by the Bank, in line with Responsibility E of the PFMIs to foster efficient and effective communication and consultation in order to support each other in fulfilling the respective mandates with respect to the local Euroclear (I)CSDs. As the current MoU[5] is based on the PFMIs, the authorities of the Euroclear Group (I)CSDs are reviewing it to take into account the new CSDR context.

CSDs' operational resilience will remain a priority in 2021, with cyber resilience as a key focus area. As the pandemic has shown, non-IT aspects are important for operational resilience as well.

The CSDR settlement discipline regime (which was originally due to enter into force in September 2020, and then February 2021) is expected to come into effect on 1 February 2022. The penalty mechanism (developed by T2S) will provide T2S CSDs daily with the penalties to collect and distribute per participant. The preparations for installing the bilateral penalties between participants are ongoing.

1 Under Article 1(4) of the CSDR.

2 The Eurosystem oversees T2S under the lead of the ECB. In line with responsibility E of the PFMI (cooperation with other authorities), the Eurosystem has set up the T2S Cooperative Arrangement to ensure that all authorities with a legitimate interest in the smooth functioning of T2S are involved, including the supervisors and market authorities of the CSDs that have signed the T2S Framework Agreement, in coordination with the ECB and ESMA.

3 The NBB-SSS is eligible for monetary policy operations by the Eurosystem. This means that the Eurosystem accepts securities as collateral in the NBB-SSS. As the Eurosystem is thus a user of the NBB-SSS, it needs assurance that the NBB-SSS is safe to use.

4 See Annex 2 for the organisation chart of the Euroclear group.

5 https://www.nbb.be/doc/cp/eng/aboutcbfa/mou/pdf/mou_2009-10-05_supervisionofeuroclear.pdf.

BOX 4

Brexit: Impact on post-trade intrastructures

As of 1 January 2021, the first Brexit transition period[1] has ended. As the UK is no longer part of the single market, UK institutions could no longer provide services on the continent based on their EU "passport". Similarly, EU institutions would have lost access to the UK if no measures had been taken.

CSDs

In order to continue to provide notary and/or central maintenance services in relation to financial instruments constituted under UK law to either issuers or CSD participants established in the UK, EU (I)CSDs have to obtain UK CSDR recognition. While the recognition is pending, EU (I)CSD that have notified the Bank of England before the end of the first transition period of their intention to continue to provide services in the UK, could continue to provide those services during the subsequent "transitional regime"; i.e. until the UK Treasury makes an equivalence decision for the jurisdiction in which the (I)CSD is established. Following such an equivalence decision, the (I)CSD must submit an application for recognition to the Bank of England within six months in order to continue to provide CSD services in the UK. As securities under UK law have been issued in Euroclear Bank and Euroclear Belgium and these (I)CSDs have UK participants, they have notified the Bank of England (along with other (I)CSDs from the Euroclear group and others).[2] The NBB-SSS, where securities under UK law have been issued, has not notified the Bank of England, as it no longer has UK participants.

As the UK is no longer an EU member state, the Bank of England will no longer be consulted as a relevant authority under the EU CSDR in case it would have been assigned as relevant authority[3] for an (I)CSD. This was the case for Euroclear Bank, where the British pound represents 10% and was a most relevant currency. The Bank of England was also consulted as competent authority of Euroclear UK and Ireland, being part of the Euroclear Group (as required by CSDR Art 17.6). The National Bank of Belgium and the Bank of England have cooperation arrangements with regard to the oversight on Euroclear Bank and the oversight/supervision of the relationship between the local UK CSD and Euroclear SA/NV, owner and service provider of the Euroclear Group (I)CSDs. Continued cooperation with supervisory authorities of the UK is essential in order to promote the integrity, stability and efficiency of the entities of the Euroclear Group.

There is no CSD in Ireland (which is still an EU member state). Historically, Irish equities have been settled in the UK CSD Euroclear UK & Ireland, while bonds have been settled in the ICSD Euroclear Bank, which is located in Belgium. The EU has temporarily allowed Euroclear UK & Ireland to continue to settle Irish securities, but as a long-term solution, Irish securities have been migrated to an EU (I)CSD, namely Euroclear Bank, in 2021.

1 This transition period is not to be confused with the transition period the EU has granted for UK CCPs and UK CSDs, the transitional regime the UK has foreseen for EU CSDs, or any other transition period.

2 The full list of (I)CSDs that have notified the Bank of England can be found here: https://www.bankofengland.co.uk/-/media/boe/files/financial-stability/financial-market-infrastructure-supervision/list-of-third-country-csds.pdf?la=en&hash=824459A062CBB16DD1C8A42AD2D99A9DC36E3E31.

3 A "relevant authority" as defined in CSR Art. 12 is:
(a) the authority responsible for the oversight of the securities settlement system operated by the CSD in the Member State whose law applies to that securities settlement system;
(b) the central banks in the Union issuing the most relevant currencies in which settlement takes place;
(c) where relevant, the central bank in the Union in whose books the cash leg of a securities settlement system operated by the CSD is settled.

CCPs

UK CCPs have established a dominant position in clearing some financial instruments, such as euro repo transactions based on Belgian bonds. As illustrated in box 3 of the FMI and Payment Services Report 2019, the Belgian euro repo market was predominantly cleared by the UK CCP LCH Ltd. before it started shifting this business to the French CCP LCH SA, which now clears the bulk of this activity. As not all clearing activities have migrated yet (especially for long-term derivative contracts, such shift cannot occur overnight), the EU has temporarily declared equivalence for UK CCPs in order to allow EU clearing members to continue to clear in the UK CCPs to avoid disruption on 1 January 2021. However, the idea is that eventually EU business is cleared in EU CCPs. Legally, UK, American and Asian clearing members could still clear euro repo transactions in a UK CCP, but if the majority of the volumes are cleared in an EU CCP, these institutions may decide to clear in an EU CCP as well, where they will find more counterparties.

Since the UK is no longer part of the EU, there are no longer EMIR supervisory colleges for UK CCPs. Therefore, the Bank will no longer participate in an EMIR college for LCH Ltd. and ICE Clear Europe Ltd. The Bank of England, as competent authority for UK CCPs, may decide to set up "global" colleges for UK CCPs. The Bank is also expected to take part in the third-country CCP supervisory college to be set up under EMIR 2.2 (see paragraph 2.1).

2.3 Custodians

Changes in regulatory framework

There were no changes in the regulatory framework in 2020.

Prudential approach

BNYM SA is considered as a Significant Institution which implies that BNYM SA falls under the direct supervision of the SSM. The majority of the supervisory work is therefore carried out jointly by the Bank and the ECB within the SSM framework. BNYM SA is also subject to specific monitoring by the Bank as regards the specific requirements applicable to custodian banks.

This year, the ECB announced changes to the organisational structure of its supervisory arm to ensure continued effective and efficient supervision of banks in the euro area and beyond. Bank-specific supervision will be structured in three directorates general according to the business models of supervised banks to create more synergies and allow a better comparison of common risks and challenges: Systemic and International Banks (DG/SIB), Universal and Diversified Institutions (DG/UDI) and Specialised Institutions and Less Significant Institutions (DG/SPL). The supervision of BNYM SA will fall under DG/SIB. Next, a dedicated horizontal supervision in the Directorate General Horizontal Line Supervision (DG/HOL) will be created to strengthen risk expertise in the supervision of banks.

As the European subsidiary of BNY Mellon, a US based global systemic bank, BNYM SA is the custodian of the group for European clients and the European gateway to the euro area markets and payment infrastructures.

BNYM SA settles transactions in wide range of currencies, with EUR, GBP, USD an JPY being the main currencies (see box 5 on international dimension). In this framework, a special focus was given to payments activity over the 2020 supervisory year.

BNYM SA has one subsidiary and several branches within Europe through which it operates in the local markets. At the beginning of 2020, BNYM SA had branches in Luxembourg, Frankfurt, Amsterdam, London, Paris, Dublin and Milan. In order to increase the support to Spanish and Iberian clients and to align with the business strategy of European coverage by BNYM SA as custodian for the European clients, BNYM SA has turned the representative office in Madrid into a branch and has established a branch in Denmark in the course of 2020 after receiving regulatory approval of the ECB and the Bank. The Bank reviewed and authorised the incorporation of these two new branches in conjunction with the ECB as a result of its banking licence and autonomously under the custodian bank status.

Besides this, the supervisory work of the Bank as part of the SSM Supervisory Team has focused on the readiness of BNYM SA with regards to Brexit and the compatibility of the business model set-up with a post-Brexit environment. As a global custodian, having a strong international dimension, BNYM operates according to a "follow the sun" model which allows to process clients' transactions and related services around the globe in a continuous way. This is mainly achieved by having established BNYM group entities around the globe, working on common platform and multiple intragroup outsourcing arrangements. The autonomy of functioning of foreign banks established in the Eurozone in the post-Brexit context is an important focus point. Further attention points in this matter are the adaptations to the existing activities, importing of new activities previously offered to EU clients by group entities located outside the EU (such as London), adjustments of booking policies as well as adjustments to the bank's local risk management and governance to deal with the new context resulted from Brexit and related supervisory requirements. The core principles on which the NBB/SSM based its assessment can be found in the Operational Brexit Guidance published on the ECB website[1].

A continuous monitoring of the firm resiliency from an IT and operational perspective is part of the supervisory work. Taking into account the several common characteristics between the business model of BNYM SA and that of FMIs, as well as the central part BNYM SA has as a custodian in the functioning of globalised financial markets, they have to build a high resiliency (amongst others by ensuring sufficient and adequate fall-back capabilities between regional operational centres) in order to meet client expectations, to ensure stability in the functioning of markets and to ensure the global coverage. This became even more important in COVID times.

The COVID crisis brought potential new challenges and attention points for (custody) banks on several domains, such as increased risk levels amongst others resulting from higher on-balance sheet exposure and increased transaction levels in the beginning of the crisis, bank's risk monitoring, operational continuity and resiliency due to lockdowns and material increase in the need for remote working capabilities and the use of regional operational centres to ensure global coverage[2]. A continuous monitoring of the impact of the COVID crisis on the different risks as well as the firm's resiliency was set-up, including regular interaction with BNYM SA as well as the US group entity, and complementary reporting. The yearly regulatory risk assessment ("SREP") included a specific focus on the impact of the COVID crisis on the bank's risk profile as well as on the bank's internal control and risk management capabilities to deal with such unexpected events.

1 https://www.bankingsupervision.europa.eu/banking/relocating/shared/pdf/ssm.supervisoryexpectationsbookingmodels_201808.en.pdf.
2 See also Box 7 of the Financial Market Infrastructure Report 2020 for impact of COVID crisis on custodians.

BOX 5

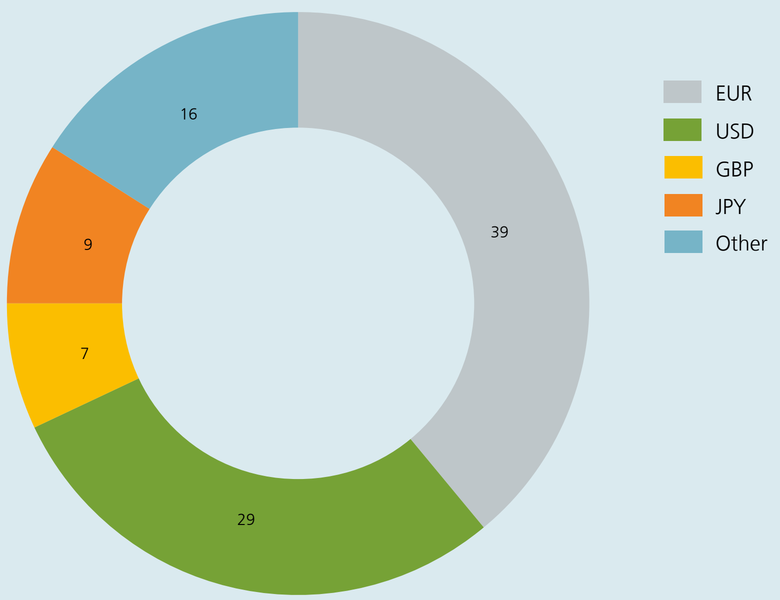
International dimension of The Bank of New York Mellon Group and BNYM SA/NV

The Bank of New York Mellon, a banking group incorporated in the US, is the largest custody bank in the world in terms of assets under custody ($ 41.1 trillion as at December 2020, increased by 11 % compared to last year). It is a global systemically important bank (G-SIB), providing asset and investment management services to institutional customers. The Bank of New York Mellon SA/NV (BNYM SA/NV), the Belgian subsidiary, provides asset services mainly and acts as the groups' custodian for T2S markets and as the global custodian for EU customers. BNYM SA/NV has a non-bank subsidiary in Germany and branches in Luxembourg, the Netherlands, Germany, France, Ireland, Italy, the UK, Denmark and Spain through which it operates in these local markets. BNYM SA/NV qualifies as an 'other systemically important institution' (O-SII) as assessed by the Bank based on the relevant EBA guidelines.

By the end of 2020, BNYM SA/NV served more than 1 100 international, institutional customers on whose behalf it held € 2.9 trillion equivalent assets under custody, denominated in more than 75 different

Assets under custody, per currency

(in %, end of year 2020)



Source: BNY Mellon.

currencies[1]. The increase in the number of customers for the Belgian subsidiary is mainly caused by the migration of customers due to Brexit. The majority of the assets under custody are denominated in EUR (39 %), followed by USD (29 %), JPY (9 %) and GBP (7 %). 51 % of these assets are bonds and 49 % of these assets are shares. In terms of settlement activity[2], BNYM SA/NV processed about 8.4 million transactions worth 32.3 trillion equivalent in 2020 ; the main currencies are USD (53 %), EUR (22 %), GBP (22 %) and DKK (1 %)[3].

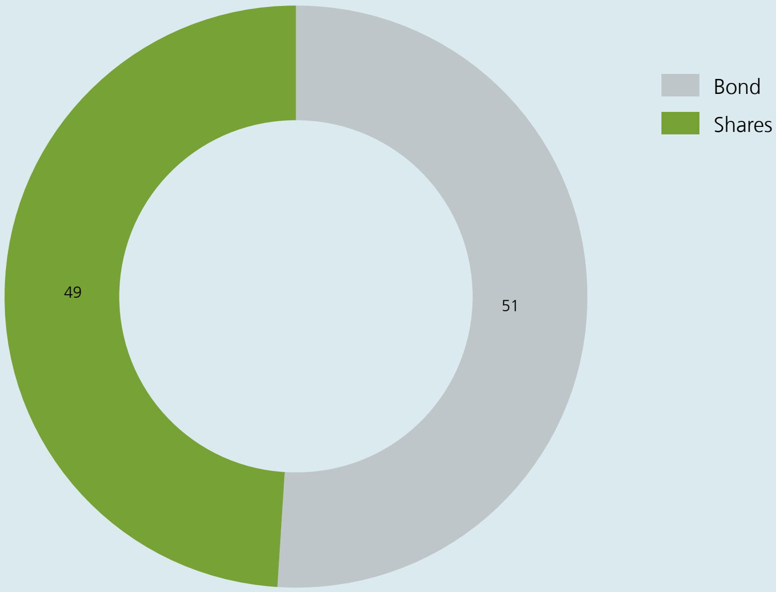
1 Eligible currencies include AED, ARS, AUD, BDT, BGN, BMD, BRL, BWP, CAD, CHF, CLP, CNY, COP, CRC, CZK, DKK, EGP, ETB, EUR, FRF, GBP, GEL, GHS, HKD, HRK, HUF, IDR, ILS, INR, ISK, ITL, JPY, KES, KRW, KWD, KYD, KZT, LKR, MAD, MUR, MXN, MYR, MZN, NGN, NLG, NOK, NZD, OMR, PAB, PEN, PHP, PKR, PLN, PYG, QAR, RON, RSD, RUB, SAR, SEK, SGD, THB, TND, TRY, TWD, TZS, UAH, UGX, USD, UYU, VND, XOF, ZAR, ZMW, ZWL.

2 Value of BNYM SA/NV settlement activity is based on receipt and delivery instructions.

3 Compared to last year, the scope of the data related to transactions has changed, this change also impacts the graph Settlement Value by currency.

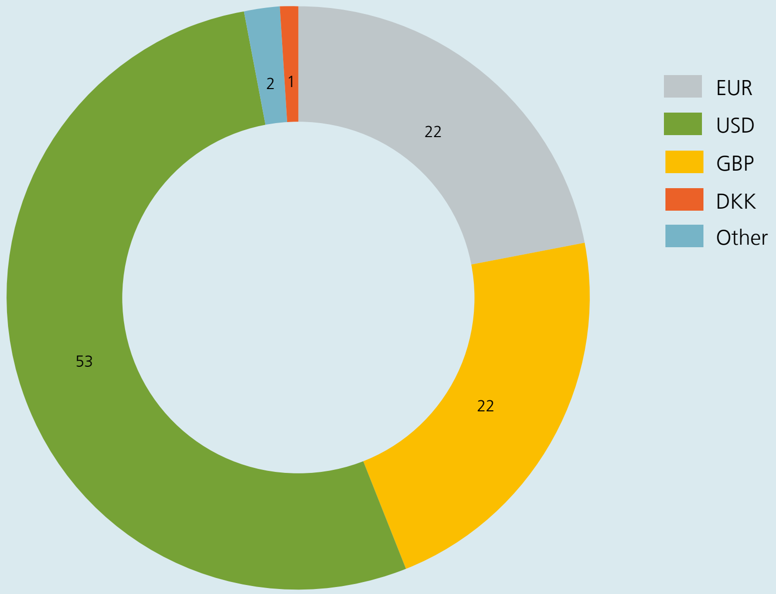
Assets under custody, per security type

(in %, end of year 2020)



Source : BNY Mellon.

Settlement turnover value, per currency
(in %, 2020)



Source: BNY Mellon.

Supervisory priorities in 2021

The supervisory planning for BNYM SA in 2021 will ensure continuity with the tasks performed last year.

With the approval of a permanent trade agreement between the EU and the UK, the supervisory work on Brexit has completely shifted to the follow-up of the so-called "day-2" solutions (the solutions banks have put in place to do business in Europe after 31 December 2020). In particular, onboarded activities, the legal-entity governance and the legal entity resiliency receive added attention.

As part of their business model, custodians are typically exposed to specific levels of intraday risks. In 2021, supervisors will continue to closely follow-up the modelling and management of intraday credit and liquidity risk.

The regulatory stress testing, held every two years, will take place in 2021 after being postponed following the intensified monitoring of the impact of COVID-19 in 2020. Another consequence of the pandemic is that global interest rates seem to enter a "low-for long" period, which requires a closer follow up of the interest risks on the balance sheet of custodians.