Assessment of Clearstream Banking S.A.

June 2025

Contents

Executive Summary

Clearstream Banking S.A. (CBL) has applied for an overseas clearing and settlement facility licence (CSFL) to operate a clearing and settlement (CS) facility in Australia. CBL serves an important function for Australian financial markets in providing a channel through which overseas investors can access Australian dollar (AUD) denominated securities. The Reserve Bank of Australia (RBA) has classified CBL as an important securities settlement facility (SSF) in Australia. CBL holds in custody and provides securities settlement for 5–10 per cent of the AUD-denominated debt securities market and a smaller share of the equity securities market. It provides access for its participants to the Australian securities markets through links that it operates to ASX Settlement and Austraclear, and has 14 Australian participants.

Overseas CS facility licensees must be subject to requirements and supervision in their home country that are equivalent to those in Australia. This report presents a summary of the RBA's equivalence assessment. It comprises three parts: the equivalence of the home regulatory framework to the Australian regulatory framework; the equivalence of the home regulators' oversight arrangements; and the RBA's assessments of CBL against the *Financial Stability Standards for Securities Settlement Facilities* (SSF Standards) and with regard to the obligation to do all things necessary to reduce systemic risk. The equivalence assessment draws on information provided by CBL, including its rules and procedures and 2024 narrative disclosure against the CPMI-IOSCO Principles for Financial Market Infrastructures (PFMI), as well as information provided by the home regulators.

The RBA has no material findings in relation to the home regulatory framework and oversight arrangements. The RBA's review of these elements draws on a report by the International Monetary Fund (IMF) along with material provided by the home regulators and CBL.

The focus of the RBA's assessment of CBL against the SSF Standards has been CBL's securities settlement processes as they apply to AUD-denominated securities.

Regulatory priorities – The RBA has identified two areas in which it expects CBL to conduct further work to ensure that it fully observes the SSF Standards, should a licence be granted. The first finding relates to CBL's engagement with Australian stakeholders. The second finding relates to CBL's arrangements for settlement of AUD-denominated securities.

The finding on stakeholder engagement arises from the Council of Financial Regulators' (CFR) Regulatory Influence Framework, which outlines Australian regulators' expectations for cross-border CS facilities.[1] CBL will be subject to the foundational requirements of this framework.

The finding on CBL's arrangements for settlement of AUD-denominated securities highlights the RBA's expectations if CBL were to increase in importance in Australia. One of the RBA's expectations is that if CBL becomes systemically important in this market, either by increasing its share of custody and settlement for AUD-denominated securities or its interconnectedness with other parts of the Australian financial system, CBL will be expected to hold an Exchange Settlement Account (ESA) to manage its

1 Ensuring Appropriate Influence for Australian Regulators over Cross-border Clearing and Settlement Facilities

liquidity risk.[2] The RBA has classified CBL as an important SSF in Australia but does not expect that CBL will be systemically important to the Australian financial system in the near term.

Areas of supervisory focus – The RBA sets areas of supervisory focus where it identifies matters that warrant closer supervision, such as where significant change is planned or has occurred, or areas where the RBA intends to conduct more detailed analysis. The RBA has identified cyber risk as an area of supervisory focus. The RBA will continue to engage with CBL on this matter.

2 Exchange Settlement Account Policy

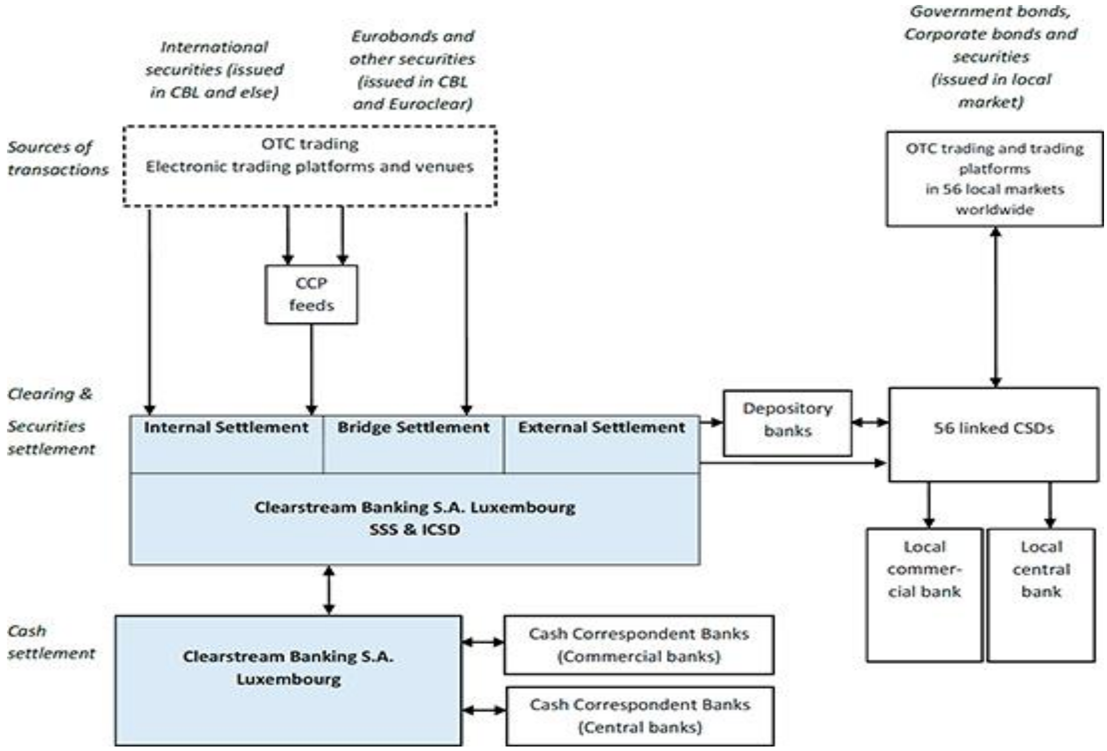
Background and relevance to the Australian financial system

CBL operates an international central securities depository (ICSD) and securities settlement system (SSS). It provides custody and settlement services for securities markets in 59 jurisdictions, including Australia.

CBL is incorporated in Luxembourg and subject to European Union Regulation No 909/2014, also known as the Central Securities Depositories Regulation (CSDR). It is regulated by the Commission de Surveillance du Secteur Financier (CSSF) and overseen by the Central Bank of Luxembourg (Banque centrale du Luxembourg (BCL)). Its services are categorised as: (i) core services of a central securities depository (CSD); (ii) non-banking-type ancillary services; and (iii) banking-type ancillary services. These services are outlined below.

CBL's business is highly connected to the global financial system through links with other CSDs, its wide range of participants that are domiciled in more than 100 jurisdictions and through the use of commercial banks as custodians (depository banks), settlement agents and cash correspondent banks as evidenced in Figure 1. Its customer base is largely international and includes credit institutions, central banks, CSDs, government and supranational institutions, non-bank financial institutions, broker-dealers, trading venues and central counterparties.

Figure 1. Role of CBL as Settlement System in Global Markets



Source: Luxembourg: Financial Sector Assessment Program, 2017, International Monetary Fund. IMF Country Report No. 17/260

Core services

CBL's core services include those to support securities issuance, maintenance of accounts and securities settlement.

Securities issuance

CBL offers securities issuance services for a range of asset classes where the securities are issued and held primarily in, or via interoperable links with, other CSDs. The form of securities that CBL provides issuance services for include, but are not limited to, Eurobonds/International Securities in bearer or registered form. Securities in bearer global form can be issued in either classic global note (CGN) form or new global note (NGN) form where European Central Bank (ECB) collateral eligibility is required. Securities in registered global form can be issued in either CGN form or via the New Safekeeping Structure (NSS) where ECB collateral eligibility is necessary. Finally, securities in definitive bearer form can also be accommodated. The initial recording of international securities is performed jointly with Euroclear Bank SA/NV (EB). CBL's notary services include the allocation and management of security codes (CBL is the National Numbering Agency for international and Luxembourg-domiciled ISINs and other identifiers such as CFI and FISN), and the primary settlement, distribution and maintenance of new issues via book-entry systems.

Account maintenance

CBL offers three types of securities accounts with different levels of segregation to its participants and their clients: (i) participant's own accounts; and (ii) two types of segregated accounts. The latter provide segregation for each of a participant's clients (individual) or contain assets of several of a participant's clients with no further segregation between clients (omnibus). CBL's account services include opening and ongoing maintenance along with compliance reviews, checks and authorisations, archiving and closing. The accounts are used to hold and settle securities issued directly by CBL or by other CSDs, but made eligible for settlement in CBL. Securities balances are reconciled on a daily basis against individual settlement movements and with other depositories or CSDs' records. CBL supports the processing of corporate actions, including tax, general meetings and information services.

Securities settlement

CBL provides securities settlement services across a wide range of markets and asset classes. In Australia, these securities include fixed income securities such as Australian Government bonds (AGBs), semi-government bonds, covered bonds and asset-backed securities, equities and depository instruments. These securities are listed on the CBL website.

CBL offers three different methods by which transactions in these securities can be settled. These are referred to as internal, Bridge and external settlements. Internal settlements occur in CBL's systems for two counterparties that have accounts at CBL. Bridge settlements are transactions between a participant in CBL and a participant in EB, with settlement occurring in CBL's and EB's systems. External settlements take place between a CBL participant and a participant in another securities settlement system which is linked to the local market.

CBL's settlement processes for AUD securities are outlined in the next section of this report.

CBL also offers a range of services integral to settlement, such as instruction routing and matching, trade verification and confirmation of executed trades.

Additional Services

To complement and enhance its core services, CBL provides a range of banking and non-banking type ancillary services such as cash management, cash financing services, securities financing, collateral management services and services specific to investment funds.

The accounts that CBL provides for its customers have a cash component in addition to the securities components described above. Cash management services are provided to participants for all currencies accepted by CBL. These multi-currency cash accounts are used to fund settlements, collect cash proceeds for securities held by customers and record cash movements for actions such as deposits, withdrawals or foreign exchange (FX) transactions.

For the purpose of settlement of transactions against payment, CBL uses a network of cash correspondent banks (CCBs), mostly in commercial bank money. For some currencies, it holds CCB accounts with central banks for various purposes – BCL for EUR and the Central Bank of Iceland (Seðlabanki Íslands (CBI)), for Icelandic Króna and the Bank of England for GBP among others. For every settlement currency, the appointed cash correspondent handles the external payment and receipt of funds between the domestic banking system and CBL.

CBL also offers cash financing (credit) services to participants, allowing them to generate additional liquidity needed for intraday settlement from collateral they have in their CBL accounts.

CBL complements the credit services with securities financing services, by intermediating securities lending between its participants. These services enable the seller to prevent settlement failures if the seller does not have the required security at the time of settlement, but expects to receive it later. At the same time, the lenders earn additional income by lending securities from their portfolios. Finally, CBL may provide participants with a single access point and standardised processes for the management of investment funds, e.g. order routing, execution and custody, fund distribution support, fee collection and processing as well as related reporting and data services.[3]

Connection to the Australian financial system

CBL serves an important function for Australian financial markets in providing a channel through which overseas investors access AUD-denominated securities. Its connection to Australia and requirement to be licensed as a CS facility is established through its provision of custody and settlement services for AUD-denominated securities through links that it operates to ASX Settlement and Austraclear.

The provision of these services enables participants in Australian securities markets to transact with a wide range of counterparties, having confidence that settlement of the obligations will occur. As CBL provides a channel through which foreign investors can access many markets around the world, it operates its settlement system for almost 24 hours per day, 5 days per week, except on 1 January and 25 December.

While CBL's services in AUD-denominated securities amount to a small share of its global operations (1 per cent) it amounts to a material share of the Australian securities markets.

The RBA estimates that CBL holds in custody and provides securities settlement for approximately 10 per cent of the AUD-denominated debt securities market and a smaller share of the equity securities market. These securities include AGBs and other securities that are used in the implementation of monetary policy. In order to provide access for its participants to AUD-denominated securities issued

3 The range of services offered to Australian participants is available on the CBL website.

into the Australia market, CBL operates links to ASX Settlement and Austraclear. CBL provides its services to wholesale participants including 14 Australian firms which in turn may provide services to clients. The use of CBL services by Australian firms through CBL's direct participants amplify its links to the Australian financial system.

The RBA's assessment is that CBL is not currently systemically important, based on its existing market share for AUD-denominated securities and connections to the Australian financial system. If CBL increased its share of custody and settlement for AUD-denominated securities or increased its interconnectedness with other parts of the Australian financial system, it could become systemically important and subject to additional requirements on CS facilities as stated in the CFR's Regulatory Influence Framework.

CBL also provides issuance, custody and settlement services for foreign currency securities to wholesale Australian participants. The RBA currently does not consider the provision of these services to Australian firms to warrant the need for an Australian CS facility licence. These foreign currency securities services generally do not directly affect the safe functioning of custody or settlement arrangements of AUD-denominated securities. Australian firms source these services for foreign currency securities from a number of providers.

The focus of the RBA's assessment has been CBL's securities settlement processes as they apply to AUD-denominated securities. The settlement arrangements for AUD-denominated securities can be complex, particularly when it involves a link between CBL and the domestic SSFs. Settlement of these transactions generates risks for participants including operational and credit risks resulting from the use of intermediaries in the settlement process such as commercial banks.

CBL's AUD-denominated securities settlement arrangements

This chapter describes CBL's settlement services for AUD-denominated securities, including those provided via indirect links to Australian SSFs, and Australian participants' activity.

Internal settlement

Internal settlement involves two participants in CBL, both of which have securities and cash accounts with CBL. Settlement occurs in CBL's systems by simultaneous book-entry debits and credits in the participants' respective securities and cash accounts. Transactions are settled on a gross and obligation-by-obligation basis with the transfer of securities dependent on the transfer of funds from the buyer to the seller (delivery versus payment, or DvP, model 1).[4] Internal securities settlement can take place in an almost 24-hour window between 6am Australian Eastern standard time to 5:35am the following day, although it is optional for participants to be able to settle transactions after 1:05am.[5] The settlement window during which it is obligatory for participants to be able to settle their obligations covers the Australian business day.[6]

4 This a delivery versus payment (DvP) model 1 as defined by the CPMI.

5 Times differ in Australian standard time. CBL defines its operating times in central European time (CET), with the settlement day running from 9pm European time on the day preceding the settlement date (SD-1) through until 8:35pm on the settlement date, with optional settlement after 4:05pm.

6 See Figure 2 below for details. The settlement window for transfers of securities between participants free of payment is 21:30 SD-1 through to 20:35 SD. The window for mandatory settlements is longer for some currencies (ARS, CAD, GBP, MXN, PEN and USD).

As CBL's internal settlement takes place in commercial bank money, it generates credit exposures between CBL, its participants and other firms. One of these exposures is the deposit of cash by participants in their CBL account.

Participants must have cash in their CBL account for settlement to take place. In order to meet this requirement, some participants hold overnight deposits at CBL. Minimising the need for participants to prefund their accounts overnight would reduce these credit exposures to CBL. CBL reinvests these deposits predominantly in high-quality liquid assets and in central bank accounts, although some investments do generate credit exposures. If CBL obtains a CSFL, it will be eligible to apply for an ESA with the RBA in which it could hold funds and thereby lower the investment risk associated with its AUD investments by avoiding exposures to commercial banks.

In order to facilitate settlement, CBL offers facilities through which participants can borrow either the securities or the cash they require to complete the process. This provision of credit and securities lending by CBL generates credit exposures for CBL to its participants. These credit exposures are collateralised such that there is little residual credit risk exposure for CBL.

External settlement

External settlement of securities transactions involves one counterparty that is a CBL participant and one counterparty that is not a CBL participant. These are often cross-border transactions, between the foreign CBL participant and a domestic counterparty. The settlement of these transactions is made possible through arrangements whereby CBL establishes a link with another SSF. CBL has 90 link arrangements in place with SSFs serving 59 domestic markets (plus the international market).

In Australia, CBL operates links with Austraclear and ASX Settlement to facilitate the settlement of transactions in AUD-denominated debt and equity securities, respectively.[7] The final and irrevocable settlement of transactions that utilise a link takes place in the SSF with which CBL has its link. For transactions between CBL participants and Australian participants in either Austraclear or ASX Settlement, settlement occurs in the Australian SSF. These SSFs use central bank money in their securities settlement processes. Nevertheless, CBL's participants bear credit exposures to CBL in this cross-border settlement process when they prefund the cash leg of such settlement in AUD. CBL is exposed to the commercial counterparties it utilises in the external settlement process.

These commercial counterparties are contracted by CBL to act as its custodians, settlement agents and cash correspondent banks. CBL's custodian and settlement agent for its Austraclear link is BNP Paribas SA (BNPP).[8] BNPP is a direct participant in Austraclear and holds an ESA. As custodian for Austraclear-registered debt securities held by CBL participants, BNPP settles transactions in Austraclear on behalf of CBL, recording CBL's ownership on its books. In some of its link arrangements, CBL operates direct links with a domestic SSF, thereby removing one of the intermediaries in the settlement chain.

Another intermediary in the external settlement arrangements is CBL's AUD cash correspondent bank (CCB). The CCB is used by CBL to receive funds from its customers for their purchases of securities over the link and for CBL to pay its customers the funds they are due to receive from their securities sales, coupon and maturity payments over the link. CBL's Australian CCB's are Australia and New Zealand Banking Group Limited (ANZ) and JPMorgan N.A., Sydney Branch (JPM).[9]

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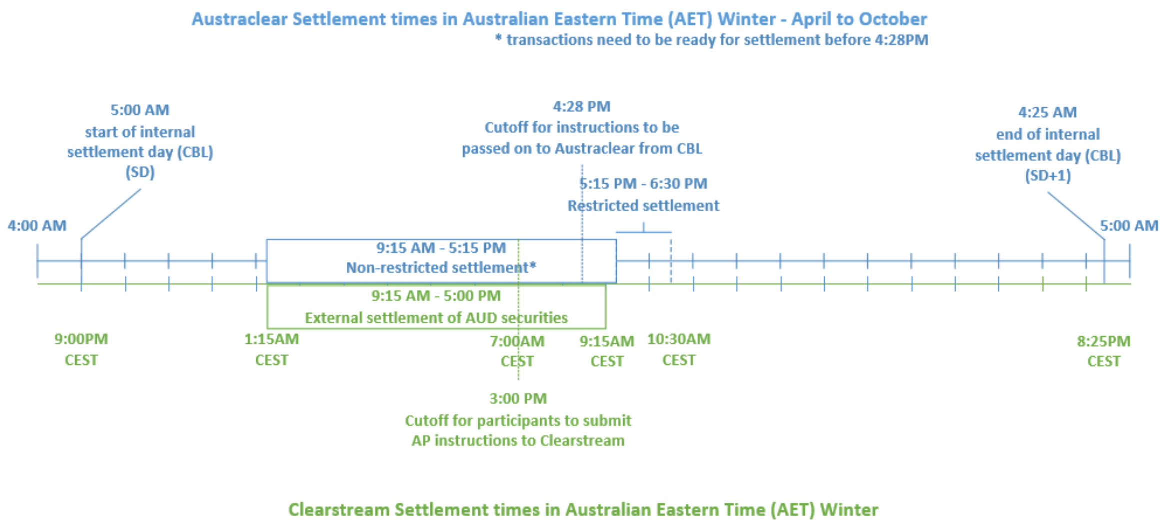
7 Full list of financial instruments settled is available on the CBL website.

8 CBL uses BNP Paribas Nominees Pty Ltd Limited as custodian for CHESS-registered securities.

9 See the Market Link Guide for Australia on the CBL website for details.

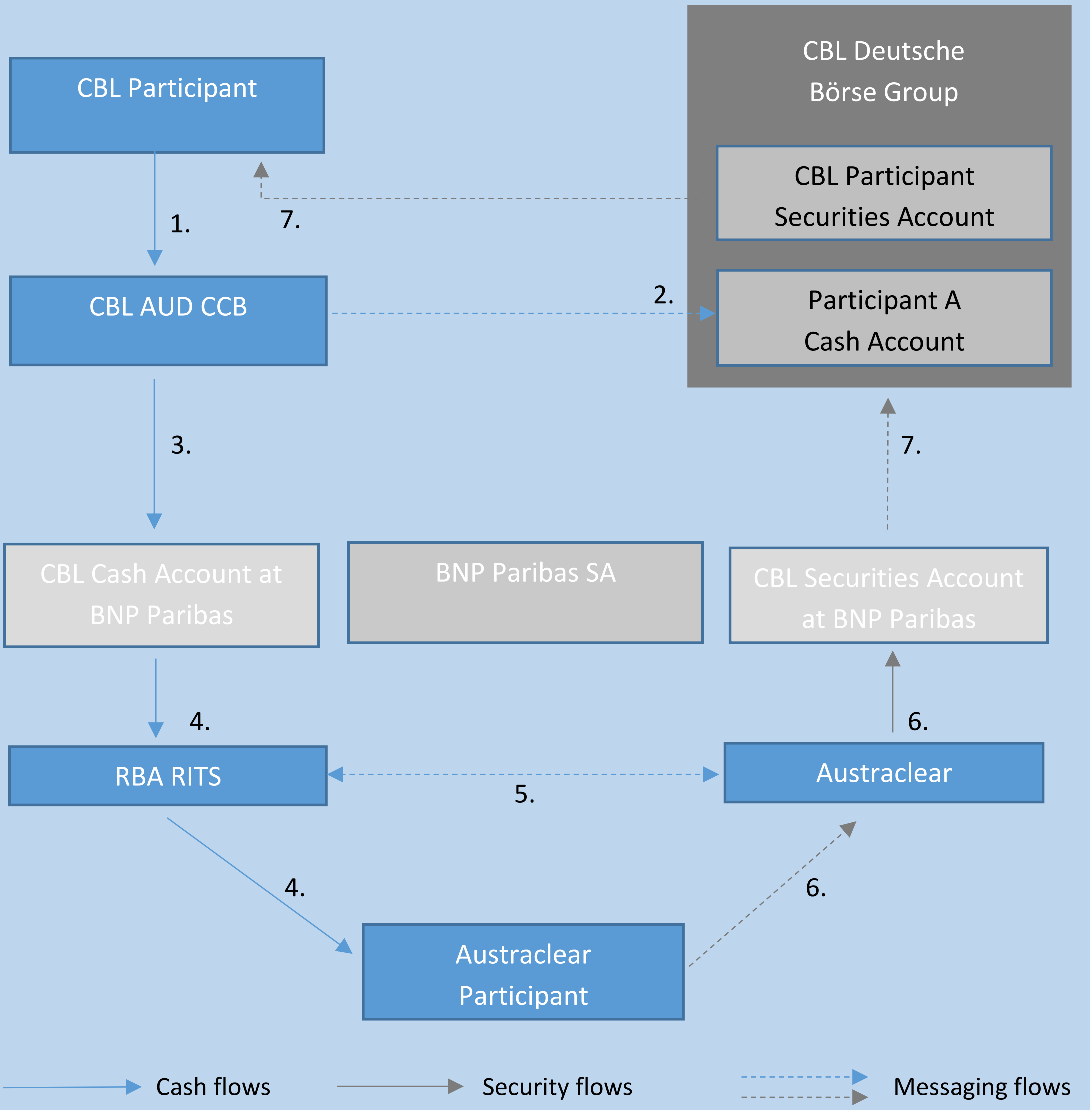
One of the constraints on securities settlements that involve two financial market infrastructures (FMIs) is that both systems must be operating at the same time. The overlap in operating hours between CBL's systems and those of Austraclear covers a large proportion of the Australian business day (Figure 2). However, the overlap is shorter than both Austraclear's and CBL's operating hours for transactions that do not go across this link. For debt products settled via Austraclear, securities settlement instructions must be delivered to CBL by its participants by 3pm Australian time with settlement processing over the link taking place up until 5:00pm. CBL may pass on instructions to Austraclear until 4:28pm with settlement in Austraclear continuing until 5:15pm. The window for settling transactions in AUD-denominated securities is outside of normal business hours for CBL participants based in Europe and North America.[10]

Figure 2. Settlement times for Austraclear and CBL (AET)



[10] Full settlement times schedule is available on the CBL website.

Box A: Purchase of AGBs by a CBL participant from an Austraclear participant



1. CBL participant funds its account with CBL by paying cash to a CCB.
2. CBL credits CBL participant's cash account in its own books
3. CBL participant instructs CBL it wants to buy an AGB. To fund the cash settlement in Austraclear, CBL blocks funds on CBL participant's cash account and instructs the CCB to pre-fund CBL's account at BNPP on behalf of CBL participant
4. Settlement occurs when BNPP pays the securities seller (Austraclear participant) across its ESA in the Reserve Bank Information and Transfer System (RITS)
5. The RITS payment results in the simultaneous transfer of the securities in Austraclear to BNPP's securities account in Austraclear
6. BNPP informs CBL that settlement has occurred and updates CBL's cash and securities records in BNPP
7. CBL informs CBL participant that settlement has occurred and updates CBL participant's cash and securities accounts at CBL

Bridge settlement

The Bridge is the name given to the interoperable link arrangement between CBL and EB. Bridge settlement is a type of external settlement that differs from others in that securities settlement can take place between CBL and EB. Settlement of Bridge transactions takes place in securities and cash accounts that both ICSDs hold for each other and use to credit and debit securities and cash to the other ICSD. For the security to be available for Bridge settlement, the security must be eligible in both systems and subject to Australia's public offer test (hence subject to a tax withholding for income paid to foreign residents).[11]

Given its importance to the safety and efficiency of both ICSDs, the operation of the Bridge is supervised by both ICSDs' regulatory authorities. CBL and EB have joint risk management principles and contingency procedures that cover the operation of the Bridge. The credit exposures the two ICSDs generate against each other are guaranteed by a consortium of international banks.

Settlement of transactions across the Bridge can introduce additional operational complexity where those transactions include instruments held in custody across links with domestic CSDs. This is due to the increased number of links between CS facilities, custodians and settlement agents involved in such transactions and the reconciliation of positions across these links. For example, for transactions in AGBs between counterparties in each ICSD, after the ICSDs have reconciled positions between each other, their holdings of AGBs will be adjusted via transactions between CBL and EB's custodians' securities accounts in the domestic CSD.

Corporate Structure

CBL is a wholly owned subsidiary of Deutsche Börse AG (DBAG) through the holding company Clearstream Holding AG. CBL outsources several of its business and support functions to other group entities. The other group entities that provide support to CBL are Clearstream Services S.A., Clearstream International S.A. and other DBAG entities.[12]

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[11] It applies to the Australian-issued debt securities that fulfil Australia's public offer test (specified in the *Income Tax Assessment Act 1936*) and hence qualify for withholding tax exemption.

[12] More information on corporate structure is available on the CBL website.

Regulatory Priorities

This section summarises the RBA’s two regulatory priorities and area of supervisory focus for CBL.

Regulatory Priorities

The RBA sets regulatory priorities based on the findings of its assessment of CBL against the SSF Standards. These priorities reflect the RBA’s expectations regarding actions that should be taken by CBL to enhance observance of the SSF Standards and promote stability in the Australian financial system. Based on an initial assessment of CBL’s settlement arrangements, the RBA has set regulatory priorities for CBL’s AUD-denominated securities settlement arrangements and governance.

AUD-denominated securities settlement

AUD-denominated securities settlement. CBL should improve the safety and efficiency of its settlement arrangements for AUD-denominated debt securities as its settlement service for AUD-denominated securities and Australian participation grow.

SSF Standards 8 (Money settlements), 9 (Central Securities Depositories), 10 (Exchange-of-value Settlement Systems), 17 (FMI Links).

The RBA’s assessment is that CBL’s current settlement arrangements for AUD-denominated securities are adequate given its share of the market. If the service grows, the operational and financial risk exposures of participants in their use of CBL’s services for AUD-denominated securities settlement are likely to grow. These greater risks could pose a larger threat to the stability of the Australian financial system. As a result, the RBA expects CBL to make enhancements to its current settlement arrangements for AUD-denominated securities in order to control the associated risks.

The risks arising from CBL’s AUD-denominated securities settlement arrangements include operational, credit, principal and transit risks associated with the intermediaries, including commercial entities. AUD-denominated securities settlements that occur over the links to the Australian SSFs and those over the Bridge tend to have greater complexity than those settled internally on CBL’s books.

One way in which CBL could mitigate some risks is to apply for and make use of an ESA. The RBA does not require CBL to hold an ESA at this stage as CBL is not systemically important. However, as a licensed SSF, CBL would become eligible to apply for an ESA, which it could use in a number of ways such as:

- investing participants’ funds to reduce its unsecured overnight exposures to its CCBs
- as an addition or alternative to its current CCB arrangements (with ANZ and JPM) to remove credit risks and enhance the resilience of AUD flows

CBL could also reduce risks resulting from its use of intermediaries through others measures such as:

- becoming a direct participant in Austraclear, removing a sub-custodian (BNPP)
- becoming its own cash settlement agent and using an ESA to make payments via RITS to Austraclear participants, removing its cash settlement agent (BNPP).
- extending operating hours subject to feasibility and participant needs.

In line with the enhancements to its settlement service, CBL may need to upgrade its support model for Australian-related activity as it becomes more important.

Governance

> **Stakeholder engagement.** CBL should ensure that Australian participants are appropriately considered in governance arrangements.
>
> SSF Standard 2 (Governance), SSF Standard 17 (FMI Links)

CBL does not invite participants from each market it serves to participate in its User Groups, which have a fairly limited membership. While it maintains relationships with the local CSDs and/or sub-custodians, this arrangement is not part of a formal engagement process. As a result, CBL does not have a channel for gathering information about issues in the Australian securities markets it services. In order to address this issue, CBL should provide a more formal channel for consultation and stakeholder engagement with its Australian participants.

Areas of Supervisory Focus

Areas of supervisory focus describe matters that the RBA currently considers to be an important part of its supervision of CBL. This may be due to changes underway at CBL, updates to regulatory standards, or in response to developments in the external risk environment.

Cyber risk management

> **Cyber risk management.** The RBA will monitor CBL's ongoing work to enhance its cyber risk management.
>
> SSF Standard 14 (Operational risk)

Due to the continuously evolving cyber threat landscape, the RBA will maintain a supervisory focus on CBL's cyber resilience, including its response to new threats. This is consistent with the RBA's supervisory approach to other licensed entities with regard to cyber risk.

CBL has an information security framework in place to manage the risks it faces from cyber-attacks and intrusions, protect information against unauthorized access or disclosure and ensure data accuracy and integrity. The framework consists of a strategy and policies, supplemented by procedures and standards, as well as controls specifically related to intrusions and other physical security risks.

Sufficient Equivalence Assessment

CBL is a Luxembourg-based SSF that has applied for an overseas CSFL to operate its settlement services in Australia. Overseas licensees must be subject to requirements and supervision in their home country which are considered sufficiently equivalent to those in Australia.

The RBA's equivalence assessment comprises three parts, which are covered in more detail below:[13]

- the overseas regulatory framework reflects international principles and has a high degree of overlap with the SSF Standards
- the overseas regulators' oversight includes ongoing assessments against stability-related principles, regular communication with CBL, provision of information by CBL and enforcement capabilities
- an assessment by the RBA of CBL against the SSF Standards

Overseas Regulatory Framework

The RBA's assessment regarding how the home regulatory framework aligns with international principles (the PFMI) and the SSF Standards draws on reports by the IMF and CPMI-IOSCO, and material provided by the home regulators and CBL.

The IMF report was published in August 2017 under the Financial Sector Advisory Program (FSAP).[14] It included a compliance assessment of the oversight framework of CBL's home regulators against the five responsibilities for regulators of FMIs outlined in the PFMI. The report concluded that the system of prudential oversight functioned well, subject to a few observations.

The CPMI-IOSCO report presents the conclusions drawn from a Level 2 assessment of whether, and to what degree, the legal, regulatory and oversight framework for FMIs in the EU for systemically important payment systems and CSDs/SSSs are complete and consistent with the PFMI. For CSDs/SSSs that provide banking-type ancillary services, such as CBL, the report concluded that the regulatory and oversight framework is consistent with 16 Principles, broadly consistent with four and not consistent with one of the Principles.

The RBA's assessment is the minor gaps identified in Principle 9 (Money settlements), Principle 11 (Central securities depositories, Principle 15 (General business risk) and Principle 16 (Custody and investment risks) are unlikely to give rise to financial stability risks in Australia. The finding that Principle 10 (Physical deliveries) has not been completely and consistently implemented is not relevant to CBL's AUD-denominated securities settlement services.

The RBA has concluded that the home regulatory framework applicable to CBL reflects international standards and has a high degree of overlap with the SSF Standards. The areas where the SSF Standards

[13] For more information, see: [Assessing the Sufficient Equivalence of an Overseas Regulatory Regime]().

[14] See: Luxembourg: Financial Sector Assessment Program, 2017, International Monetary Fund. IMF Country Report No. 17/260.

set additional expectations above PFMI requirements were either considered observed by CBL or led the RBA to setting the Regulatory Priorities outlined above.

Home regulators' supervision and oversight

The RBA's review of the home regulators' oversight arrangements draws on publicly available material including the 2017 IMF FSAP report and guidelines from the home regulators, along with material provided by the home regulators and CBL.

CBL is regulated by the CSSF and overseen by the BCL. As the operator of an SSS, CBL is subject to oversight by BCL under the 2009 law on payment services. BCL applies the PFMI to CBL. CBL was authorised under the CSDR by the CSSF in April 2021. This authorisation covered its CSD services, banking-type ancillary services and the interoperable link with EB (the Bridge). The CSSF considers the PFMI in its prudential supervision of CBL but has not formally adopted the PFMI. As a licensed credit institution in Luxembourg, CBL is subject to prudential banking supervision by the CSSF and liquidity supervision by BCL and CSSF. Under EU Banking Regulation, CBL is an "other systemically important institution".[15]

The CSSF must undertake an annual review and evaluation of CBL's compliance against the CSDR. The review and evaluation includes consultation with BCL and the Eurosystem. The CSSF may take a risk-based approach in order to prioritise its supervisory efforts in areas where it considers the risks to financial stability are greatest. Findings and actions from the assessments are set and followed up by the home regulators.

Assessments of CBL against the PFMI are led by BCL with the CSSF contributing to the whole assessment. BCL and the CSSF provide ratings for CBL's compliance with the PFMI, in line with the CPMI-IOSCO methodology. PFMI assessments were completed in 2016 and 2022. Enhancements carried out by CBL in order for it to become compliant with the CSDR in 2021 were reflected in the latest PFMI assessment. With the exception of one finding related to a third data centre, which is in the course of being remediated, findings and recommendations from the 2016 assessment were remediated prior to the 2022 assessment. The frequency of PFMI assessments is not predefined but is based on the risk environment and developments within the firm.

BCL and the CSSF have powers and arrangements to obtain information from CBL. The types of information include those outlined in the PFMI such as statistical and financial data, timely reporting on major incidents and material changes, audit, risk and compliance reports. As prudential regulator, the CSSF also requires CBL to provide a standard set of prudential reports.

Consistent with the RBA's practice, the home regulators have the power to request information that is deemed useful for a supervisory assessment, such as those carried out against the CSDR or PFMI. Information may be obtained in regular meetings or through a request for documents including internal CBL documents such as reports, policies and procedures.

[15] See Article 59-3 and 59-9 of the Law of 5 April 1993 on the financial sector available on the CSSF website.

The home regulators also have the power to request self-assessments, undertake onsite inspections and issue recommendations or instructions. The CSSF has enforcement powers and BCL has the power to impose administrative sanctions or escalate matters to the CSSF or the relevant Minister. [16]

BCL and the CSSF report publicly at a high level on their supervisory activities in their annual reports.[17] In 2020, these activities included assessments of CBL's services for licensing under the CSDR, contingency arrangements put in place to cope with the pandemic and causes of a rise in settlement fails across CSDs in the EU.

CBL's home regulators have specific (focused on CBL) cooperation arrangements in place with other regulators. This includes a Memorandum of Understanding with the RBA and ASIC as well as other Memoranda of Understanding and/or arrangements with the National Bank of Belgium, the Hong Kong Monetary Authority and the Monetary Authority of Singapore. The home regulators, along with the European Banking Authority, are participants in a college of banking supervisors for Clearstream Group, led by German regulators (BaFin and BuBa). The purpose of this college is to exchange information on topics of significance for the group, to share supervisory planning and to reach a common conclusion for the consolidated risk assessment conducted by the group. Areas of focus are chosen every year by different members of the college. CBL representatives are present for a portion of college meetings.

Assessment against the SSF Standards (Observed outcomes)

General Organisation (Standards 1-3)

CBL is part of the Clearstream Group which also includes two other CSDs. It is a separate legal entity wholly owned by DBAG. CBL is dependent on the Clearstream Group and DBAG for some services. CBL has outsourced its IT and operations to Clearstream Services within the Clearstream Group and may receive funding from DBAG.

CBL has assessed and defined the material legal risks arising from its services. It undertakes regular internal and external reviews of the legal risks, including the documentation managing these risks. CBL has set out terms and conditions in Governing Documents that are binding upon CBL and its participants. These documents are governed and interpreted by Luxembourg Law and any disputes arising in relation to them shall be submitted to the courts of Luxembourg. Domestic (Luxembourg Law), foreign (e.g. Australian Law in the Austraclear example) and relevant other third country laws and regulations are generally applicable to link arrangements such as those between CBL and ASX Settlement and Austraclear as explained in the 2022 regulators' PFMI assessment.

CBL's governance arrangements are documented and publicly available. CBL's objectives place a high priority on safety and efficiency and therefore promote financial stability as well as other relevant public interest considerations. CBL has a two-tier board structure, the Supervisory Board which monitors and advises the Executive Board, which carries out day-to-day business. The roles and responsibilities of each board are comprehensive and adequately documented. CBL has established a risk management

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[16] For more information on the BCL oversight refer to Regulation of the "Banque centrale du Luxembourg" 2016/N° 21 of 15 January 2016 concerning the oversight of payments systems, securities settlement systems and payment instruments in Luxembourg. For more information on CSSF oversight see Law of 6 June 2018 on central securities depositories and implementing Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2024/65/EU and Regulation (EU) No 236/2012

[17] See BCL Annual Report 2020 and CSSF Annual Report 2023, available on their respective websites.

framework that includes CBL’s level of risk tolerance and outlines how the risk management and internal control functions have sufficient authority, independence and resources. The interests of participants and major stakeholders are taken into account and major decisions are disclosed to the public.

As part of Deutsche Börse Group (DBG), CBL employs the DBG Group Risk Management Policy. The Executive Board of CBL is responsible for its risk management framework, which includes setting its risk appetite and defining its risk strategy and policies. These policies are reviewed at least annually. Overall risk profiles and material risks, including those to and from participants and other entities, are identified through a framework that defines operational, financial, business and project risks. These risks are recorded, assessed, controlled and managed through the application of policies, procedures, systems and capital requirements. Internal control processes and procedures are in place to ensure that participants and their clients manage risks through reporting, maintaining up-to-date data and periodically reviewing with CBL's Relationship Managers. CBL identifies scenarios that may potentially prevent it from providing its critical operations and services in its Recovery Plan and Restructuring and Wind-down Plans.

Credit, Collateral and Liquidity (Standards 4-6)

CBL identifies the credit risk arising from its securities settlement activities, securities lending activities, treasury investments and the Bridge with EB. CBL has established a robust credit risk framework that is overseen by the Executive Board and implemented by a Credit unit within CBL’s parent group entity. CBL uses a Credit Exposure Monitoring Tool (CEMT) to measure and monitor intraday and overnight credit exposures at the individual account and participant level for most sources of credit risk. The CEMT allows securities settlement-related exposures to be calculated in real-time. Credit risk is mitigated through the: monitoring of aggregate exposures via the CEMT; application of credit limits to individual customers; credit reviews of all counterparties, on at least an annual basis; reviews of the appropriateness of individual customers’ credit limits, on at least an annual basis; appropriate collateralisation and margining policies; and, stress testing. CBL only grants credit lines that remain unconditionally cancellable at any time and uses early warning indicators to detect a possible deterioration in a customer’s creditworthiness. CBL fully collateralises all credit exposures to individual borrowing participants, including accounting for stressed market conditions. CBL's rules allocate credit losses using a waterfall principle, and the recovery plan includes measures to replenish financial resources that are exhausted in a stress event.

CBL's collateral policy requires credit exposures to be secured by high-quality, liquid collateral with minimal market and credit risk. This includes debt and money market instruments issued by governments, certain public authorities, issuers with low credit risk, and securities that are accepted as collateral by the Eurosystem. Collateral that is considered high quality but not highly liquid (i.e. cannot be liquidated within one day, including foreign cash) can be accepted only to the extent that CBL holds sufficient qualifying liquid resources to cover the time to liquidate such collateral. The collateral policy ensures that CBL accepts commonly accepted collateral in the jurisdictions in which it operates, and considers the effect of its collateral policy on the market. CBL uses a fully automated and flexible system to monitor various concentration thresholds and apply haircuts calculated on at least a daily basis. Haircuts are calibrated to take into account stressed market conditions and are benchmarked against market participants and central banks. This is intended to mitigate the potential for procyclical adjustments to haircuts in times of market stress. Additional margins are applied to securities denominated in other currencies to cover foreign exchange risk. Haircut models and procedures, as well as the resulting haircuts, are validated on at least an annual basis through backtesting, stress testing and independent validation.

CBL has identified the following sources of liquidity risk: maturity mismatch from treasury investments and short-term liquidity needs; non-repayment of treasury investments; financial or operational adverse events on cash correspondent banks and depositories; banking-type ancillary services (e.g. credit facilities, securities lending services); and, payments over the Bridge with EB. CBL's qualifying liquid resources include: cash held at central banks, committed lines of credit, treasury investments and customer collateral. These are supplemented with a number of other liquid resources including cash and uncommitted lines of credit, FX swaps or repo facilities. CBL selects liquidity providers that are reputable and highly rated creditworthy financial institutions with leading market positions and access to the central bank liquidity of their home countries. CBL currently holds accounts at the BCL, BoE and CBI, and has ongoing discussions to open accounts at various other central banks including the RBA.

CBL has a framework to manage liquidity risks, with Treasury performing the day-to-day liquidity risk management, supported by Clearstream Risk Management and ultimately overseen by the Executive Risk Committee and Executive Board. CBL uses an Intraday Liquidity Monitoring tool to identify, measure and monitor intraday liquidity flows for all operations. To manage liquidity risk emanating from CBL's credit facilities, CBL first determines that sufficient qualifying liquid resources are available and monetisable prior to granting credit in a certain currency to a participant. For treasury investments, CBL Treasury has established 'mismatch limits' to limit the liquidity risk arising from term investments for certain currencies where maturity transformation is permitted, including AUD. CBL conducts stress tests to determine the amount of liquid resources required on an ongoing basis in each relevant currency. Stress tests are conducted on a regular basis using a wide range of scenarios that consider historic and hypothetical scenarios as well as idiosyncratic and market-wide impacts. The combination of intraday liquidity generation measures, day-to-day processes and the liquidity contingency funding plan support the settlement of payment obligations and cover possible liquidity gaps following the default of a participant.

Settlement and Depository (Standards 7-10)

CBL's rules define the moment of entry of a transaction to CBL's systems, the point after which unsettled payments, transfer instructions or other obligations may not be unilaterally revoked by a participant and a point at which a settlement is final. These points vary according to whether the transaction will be settled internally, externally or across the Bridge. For transactions that settle externally over a link to another securities settlement facility, CBL publishes guidance on the moment of settlement finality in the market-specific guides on its website. CBL facilitates immediate (real-time) settlement of internal transactions provided that both counterparties fulfil their settlement obligations, and same-day settlement for a significant proportion of transactions settled over the Bridge with EB and via links to other markets (subject to local market deadlines).

CBL conducts the majority of its money settlement with its participants in commercial bank money. Specifically, CBL maintains its participants' cash positions on its own books and indirectly through its accounts opened at its network of cash correspondent banks (CCB) for each currency. For a few currencies, it also maintains accounts at central banks. In the Australian market, CBL uses ANZ and JPM as its AUD CCBs. CBL holds its participants' funds in a diversified portfolio of secured central bank deposits, unsecured commercial bank deposits and other highly liquid instruments.[18] For internal and Bridge instructions, the transfer of the security at the depository occurs alongside a corresponding movement in the participant's cash account at CBL. For external instructions, corresponding in the participant’s cash account at CBL is conditional on the validation of settlement results received from the domestic market. CBL's cash settlement agent for AUD (BNPP) holds an ESA account at RBA, as required by the SSF Standards Guidance. In the longer term and in line with the growth of its AUD business, CBL should investigate options to improve the safety and efficiency of its AUD money settlements, including by making use of an ESA or providing central bank money settlement.

CBL has rules, procedures and controls intended to protect the rights of securities issuers and holders and prevent the unauthorised creation or deletion of securities. CBL also conducts daily reconciliation of all securities issues it maintains. Customers’ securities are maintained in individual or participant omnibus accounts whereby customers retain a beneficial interest (or ‘right in rem’) – an intangible interest in securities held by CBL with the same description. CBL’s rules and procedures enable customers to transfer the title with another CBL customer (internal), an EB customer (Bridge) or in the domestic market (external), through a DvP 1 model. For the AUD market, CBL maintains Austraclear-eligible and ASX-listed CHESS-eligible securities through the sub-custodian (BNPP). Applicable laws ensure that assets under custody are protected from claims by CBL’s creditors. CBL requires adequate segregation between participants’ proprietary assets and their clients’ assets. Overdrafts and debit balances are prohibited in securities accounts. CBL maintains securities in an immobilised form for transfer by book entry.

Risks related to activities other than core CSD services are identified, managed and mitigated in line with the requirements in Standards 3, 4 and 7. Principal risk for internal and Bridge transactions is addressed through the use of a DvP model whereby the cash and securities legs of an internal transaction are settled on a trade-by-trade (gross) basis and conditioned on the final settlement of both legs. For transactions over the Australian link, CBL relies on the rules of Austraclear or ASX settlement with regard to the ultimate exchange of value between BNPP and the Australian counterparty in either of the local SSFs. To mitigate the principal risks, CBL’s participants’ securities and/or cash are pre-positioned to BNPP and final adjustment of their accounts with CBL occurs upon receipt of final settlement confirmation from BNPP.

Participant Default (Standard 11)

The Clearstream Default Management Process (DMP) is publicly disclosed and controlled by the Clearstream Default Management (CDM) unit.[19] The CDM is responsible for coordinating the DMP which is reviewed and tested at least annually and following any substantial changes to CBL’s default rules or procedures or upon request by its competent authority. CBL involves relevant internal and external participants in testing their default procedures, the results of which are used to further develop and improve upon the DMP where necessary. The DMP specifies stakeholder roles, responsibilities and obligations leading up to a potential default, to help the Executive Board's decision on the management of defaults and liquidation of assets. CBL’s DMP includes monitoring participant creditworthiness, implementing preliminary measures, and unwinding participant positions or liquidating their collateral.

[18] See also Standard 13: Custody and Investment Risks.

[19] The Clearstream Default Management process is available on the CBL website.

General Business and Operational (Standards 12-14)

CBL has in place frameworks, including scenario analysis, stress testing, financial reporting and audit processes to identify, monitor and manage its general business risks. The equity funded portion of CBL's high-quality liquid net assets is sized to cover at least six months of current operating expenses, meet potential business losses for operating as a going concern and to achieve an orderly resolution if required. The recovery plan also includes ways to raise additional equity from the parent group or a third party.

CBL manages the protection of its own and its participants' assets through the conduct of due diligence and annual compliance assessments of its depository and cash correspondent banks and other suppliers including CSDs, central banks and market infrastructures. These processes aim to ensure that CBL has prompt access to its own assets. CBL has prompt access to its participants' assets through a requirement that they be segregated from the participants' clients' assets and a legal right (right of pledge) over assets lodged by a participant as collateral. CBL manages its investment activities against credit, market and liquidity risks by (i) only investing in high-quality liquid asset securities that are issued or guaranteed by governments or supranationals, and purchased with a 'buy and hold' strategy, and (ii) only conducting reverse repo transactions with highly reliable, liquid and solvent counterparties against high-quality liquid assets. CBL makes direct investments in debt securities denominated in USD or EUR, while reverse repurchase agreement transactions and interbank placements are conducted in other currencies. Where required, CBL may swap foreign currency cash collateral into USD or EUR for investment purposes.

CBL's operational risk management framework is outlined in its Operational Risk Strategy. It includes systems, policies, procedures and controls to identify, monitor and manage operational risks. The governance arrangements for managing operational risks includes documentation on roles and responsibilities within a three Lines of Defence model. The systems, operational policies, procedures and controls are based on international standards and are reviewed, audited and tested. Major changes to CBL's systems follow change management procedures including quality controls to mitigate associated operational risks.

CBL has defined operational reliability objectives consisting of (i) operational performance objectives for CBL's own service delivery, and (ii) committed service-level targets for CBL's outsourced activities, and has policies in place to achieve those objectives. CBL sets its operating capacity at a level that would cover increases in volume up to 50 per cent greater than average daily activity. Future capacity needs are regularly reviewed. Physical and information security governance frameworks and processes are in place. These address potential vulnerabilities and threats ensuring that information security risks are identified, measured, assessed, managed, monitored and reported.

CBL's business continuity plans and back-up facilities are regularly tested and allow for a recovery of its operations and completion of the settlement process. Home regulators have been closely following CBL's business continuity testing and plans to upgrade its data centres. CBL identifies and manages risks that key counterparties pose to its operations and also manages the risks that its own operations might pose to other FMIs.

Access and Tiering (Standards 15-16)

CBL publicly discloses participation criteria, general terms and conditions and its Customer and Access Acceptance Policy. Direct participation with CBL's settlement system is controlled but access is provided in a non-discriminatory manner. The criteria allow for different entity types and operational capacity, with restrictions on access relating to risk such as the entity's creditworthiness. CBL monitors participants' compliance with the requirements and can suspend or terminate access.

CBL only has contractual relationships with its direct participants for its products and services including settlement and custody services. This limits the risks that CBL is exposed to from the clients of its participants. CBL does not cater for tiered participation as it does not recognise indirect participants. CBL participants must segregate their own activity from that of their clients, and can offer clients segregated or omnibus accounts. CBL has assessed that the remaining material risks from its participants' clients include operational, compliance and credit risks. These are monitored through information gathering in CBL's KYC and Key Participants procedures.

FMI Links (Standard 17)

CBL has established a large number of links to other FMIs. CBL has a framework for identification, monitoring and management of risks related to links. The framework is applied both before CBL enters each FMI link arrangement and during its operation. Governance around the management of risks associated with FMI links includes approval of new or modified FMI link arrangements at Executive Board level following a general assessment of that prospective link, which is reviewed by a Material Change Working Group (MCWG). There is also regular oversight of the FMI link arrangements through the use of Network Relationship Managers and a Network Management Team. Legal risks associated with FMI links are managed through the acquisition of legal opinions on the FMI link arrangements along with contractual arrangements (called Link Agreements) with the local CSDs, sub-custodians and agents. The Link Agreements are supplemented by service-level agreements which outline operational procedures for the functioning of the links. Credit and liquidity risks arising from FMI links are assessed annually. The additional risks (including custody, credit, legal and operational risks) arising from the use of an intermediary (BNPP) to operate CBL's link to Australian SSFs are effectively mitigated. Nevertheless, in line with increasing activity over the Australian link, CBL should investigate ways to further improve the safety and efficiency of these link arrangements as set out in the RBA's regulatory priority for CBL's AUD-denominated securities settlement.

Disclosure and Regulatory Reporting (Standards 18-19)

CBL's rules, policies and procedures are disclosed to current and prospective participants in its Governing Documents.[20] Design of systems and participants' and CBL's rights and obligations are described and training is offered to facilitate participants' understanding of the rules, policies and procedures. CBL meets the CPMI-IOSCO PFMI disclosure requirements, requiring FMIs to publicly disclose how they observe the PFMI.

With regard to Standard 19, ahead of a licence being granted the RBA will establish cooperation arrangements with CBL which will oblige CBL to assist and notify the RBA as reasonably requested with regard to the performance of the RBA's functions.

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20 These include the General Terms and Conditions, Client Handbook, Fee Schedule, Market Link Guides and Disclosure Guides available on the CBL website.

This includes obligations to notify the RBA of certain matters regarding compliance with the SSF Standards and obligations to provide data and information to the RBA including audited accounts, management accounts, risk management reports and various activity, risk and operational data. Other policies and reports may also be requested by the RBA as necessary. CBL is also required to notify the RBA of various incidents and material changes which would be of interest to the RBA.

CBL also undertakes to disclose basic risk and activity data, as required by the RBA from time to time alongside its existing regular reporting.

Abbreviations

AGB	Australian Government bond
ANZ	Australia and New Zealand Banking Group Limited
ARS	Argentine peso
ASX	Australian Securities Exchange Ltd
AUD	Australian dollar
BaFin	Federal Financial Supervisory Authority
BCL	Banque centrale du Luxembourg
BNPP	BNP Paribas SA
BoE	Bank of England
BuBa	Deutsche Bundesbank
CAD	Canadian dollar
CBI	Central Bank of Iceland
CBL	Clearstream Banking S.A.
CCB	Cash correspondent bank
CDM	Clearstream Default Management
CEMT	Credit Exposure Monitoring Tool
CET	Central European time
CFR	Council of Financial Regulators
CPMI	Committee on Payments and Market Infrastructures
CSD	Central securities depository
CSDR	Central Securities Depositories Regulation
CSFL	Clearing and Settlement Facility Licence
CSSF	Commission de Surveillance du Secteur Financier
DBAG	Deutsche Börse AG
DBG	Deutsche Börse Group
DMP	Default Management Process
DvP	Delivery-versus-payment

EB	Euroclear Bank SA/NV
ECB	European Central Bank
ESA	Exchange settlement account
EU	European Union
EUR	European euro
FMI	Financial market infrastructure
FSAP	Financial Sector Advisory Program
FX	Foreign exchange
GBP	UK pound sterling
ICSD	International central securities depository
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
JPM	JPMorgan N.A., Sydney Branch
MCWG	Material Change Working Group
MXN	Mexican peso
PEN	Peruvian sol
PFMI	Principles for Financial Market Infrastructures
RBA	Reserve Bank of Australia
SD	Settlement date
SSF	Securities settlement facility
SSF Standards	Financial Stability Standards for Securities Settlement Facilities
SSS	Security settlement system
USD	United States dollar