

### **3. Central securities depositories (CSDs)**

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#### **3.1 Functions of a CSD**

The primary function of a central securities depository (CSD) is to record all the securities making up an issue that it accepts for transactions in an individual issue account.

It is the issuer that, at the time of the issue, applies through its lead manager for acceptance of the securities issue at the central securities depository. To be accepted, whether it is immobilised or dematerialised, the financial instrument must meet the acceptance rules laid down by the central securities depository. In broad outline, these rules ensure that the issuer is legally constituted, that the issue is authorised under the law and the articles of association of the issuer, and that the securities in the issue are fungible (all units have identical features, for example the same nominal value, right to dividends, income and/or interest, etc.). If physical securities certificates are issued the printing rules ensure that they are not perforated, torn, mutilated, defective or otherwise damaged.

Some central securities depositories only accept certain types of financial instruments for custody, such as equity or debt instruments. This is why there may be several central securities depositories in the same country. Similarly, some types of instruments, such as hedge fund units, are simply not accepted by central securities depositories.

For Eurobonds, it is possible to have several international central securities depositories for the same securities issue, which is why the services of common depositories are used. The securities certificates are physically held with these financial institutions, but in the name of the international central securities depositories.

In some countries, the central securities depository acts as the national numbering agency for the securities issued. This is the case with Euroclear France, for example, which offers this service for Dutch and French securities. In Switzerland, SIX SIS does not assume this function, which is performed by SIX Telekurs, an associated company of the SIX Group.

The second important function of a central securities depository is to open securities accounts in the name of its participants. Note that each central securities depository is free to define its own accounts structure. For example, the central securities depository may offer its participants the option of opening several accounts and sub-accounts to comply with each participant's own internal organisation (on and off exchange transactions, for example), of segregating the positions held by different types of customer (by tax status, for example) or of accounting separately for securities positions originating from different transactions (lent versus borrowed positions, for example). Whatever the structure adopted, the central securities depository's responsibility is to check that the total amount of each issue held is equal to the sum of the securities recorded in the accounts of its participants.

The third important function of a central securities depository is to ensure that the transfer of financial instruments only occurs by transfer between participants' accounts. To illustrate this principle, suppose that the investor Dupont sold 100 ABC shares through its DEPOT depository bank. The transaction was concluded on the market via the CIT bank, which is the depository bank of the investor Weber and which acted on the market on behalf of this customer. In the interests of simplicity, we will assume that the DEPOT and CIT depository banks are both participants of the central securities depository of the ABC share. The delivery of 100 shares by the DEPOT depository bank to the CIT depository bank is entered in the form of book entries in the accounts of both participants at the central securities depository, which debits the account of the DEPOT depository bank and credits the account of the CIT depository bank with 100 ABC shares.

For registered securities which require beneficial owners to be recorded in a register, the central securities depository is also responsible for obtaining all the necessary information from the participants concerned and transmitting it to the issuer for approval before registering the securities' ownership transfer resulting from a transaction. For example, Euroclear France offers issuers of registered securities the option of being kept continuously informed of any change affecting their shareholding structure. The exchange of information occurs in the following stages: After the transaction, the participant sends information concerning the buyer/seller to Euroclear France via a *bordereau de référence nominative* (BRN, beneficial ownership notice). Euroclear France receives the BRN, performs checks and sends it to the issuer. The issuer accepts or rejects the BRN and updates its register of shareholders, if it accepts. It then returns the accepted or rejected BRN to Euroclear France which then informs the participants of the acceptance or rejection of the BRN. In some countries, the central securities depository offers issuers of registered securities the option of outsourcing the administration of the register. This applies to Euroclear Belgium, for example.

Given that the central securities depository has all the information about the position held by each participant in an issue, it initiates the corporate action event processing chain. Its fourth function is therefore to allow beneficial owners to obtain or exercise the rights attached to financial instruments. In this context, it plays the role of intermediary between investors and issuers. For example, during an income payment, it is the central securities depository of the securities class concerned that is responsible for collecting the amount due from the issuer and crediting the participants accounts with the amounts due to their customers (beneficial owners).

To facilitate the settlement process and increase settlement efficiency, some central securities depositories offer financing services such as securities borrowing and lending, collateral management for repurchase operations (repos) via the central bank, etc.

### **3.2 Differences between CSDs and ICSDs**

In practice, it is usual to make a distinction between a central securities depository (CSD) and an international central securities depository (ICSD). The differences between the two types of depository lie mainly in the customer base and domicile of the issuers of securities accepted for deposit. CSDs usually operate on a national level and ICSDs on an international level.

The original business purpose of ICSDs were settlement and custody services for internationally traded Eurobonds. This is the case with Euroclear Bank (EOC) and Clearstream Banking SA, Luxembourg (CBL), formerly Cedel.

## Custodian activities

Euroclear is a Group of companies which includes an international central securities depository (ICSD), Euroclear Bank, and the national central securities depositories of seven European countries. These are Euroclear Belgium, Euroclear Finland, Euroclear France, Euroclear Netherlands, Euroclear Sweden and Euroclear UK & Ireland. The group offers its services for about 50 percent of the national European debt in circulation and 60 percent of European market capitalisation. It is therefore a very important player in Europe.

Euroclear was set up to meet the needs of participants in the Eurobond market. It was founded in December 1968 by the Brussels office of the Morgan Guaranty Trust Company of New York. In 1972, Euroclear System was sold to Euroclear Clearance System Public Limited Company (ECSplc), a company owned by more than 120 international banks, brokers/dealers and other financial institutions. Morgan Guaranty however remained responsible for managing all the operational aspects of the system. In 1986, ECSplc licensed the Euroclear system to a cooperative society, Euroclear Clearance System Société Coopérative, formed to allow all users to participate as owners. Over 2000 customers therefore acquired a share of the company. In 2000, Euroclear Bank was set up in Belgium. All the operational and banking responsibilities for the system were transferred to this new entity, which was subject to the supervision of the Belgian central bank (*Banque Nationale de Belgique*, BNB) and of the Belgian Banking, Finance and Insurance Commission (*Commission Bancaire, Financière et des Assurances*, CBFA). It also holds an international banking licence. In 2001, Euroclear Bank merged with SICOVAM, the French central securities depository. It signed agreements with the Dutch (NECIGEF) and Belgian (CIK) central securities depositories. In 2002, the Euroclear Group merged with CRESTCo, the central securities depository for the UK and Irish securities markets. In 2005, the Group formed a new entity, Euroclear SA/NV, which owns Euroclear France, Euroclear Bank, Euroclear Netherlands and CRESTCo. In 2006, CIK, the Belgian CSD, became a member company of the Group and was renamed Euroclear Belgium. In 2008, Euroclear acquired the central securities depositories of Sweden and Finland.

Clearstream was created in 2000 by the merger of Cedel and Deutsche Börse Clearing AG (formerly Deutscher Kassenverein AG), a Deutsche Börse Group company. Cedel was formed in 1970 by over 90 banks to compete with Euroclear in the business of international central securities depository for Eurobonds. In 2002, Deutsche Börse acquired the remaining 50 percent of Clearstream Banking SA. Clearstream thus became a wholly-owned subsidiary of the Deutsche Börse Group.

Nowadays, the services of these ICSDs have extended and include a broad range of securities, such as debt instruments, equities, investment fund units, and money market instruments in different currencies. CSDs have also extended their services to act as an ICSD, as is the case for SIX SIS, for example.

In the old days, the difference between a CSD and an ICSD was of major importance for depository banks. To settle their transactions, they had to be a participant of the financial instrument's central securities depository or be a customer of a participant of the financial instrument's central securities depository. As it was often difficult for a non-domestic financial institution to be admitted as a participant in a CSD, depository banks were obliged to deal with a wide network of sub-custodians in the countries where their customers were actively trading.

Evolving technology and the creation of linkups and formation of alliances between CSDs, such as the Euroclear Group, means that these days it is not necessary to involve a large network of sub-custodians. The links between different CSDs have contributed significantly to the global integration of financial markets. A participant of a CSD can therefore without difficulty use the services of that CSD to settle its transactions with another CSD that forms part of the CSD network.

### 3.3 Links between (I)CSDs

It may appear that links between CSDs should not pose much of a problem with the current technology. However, this is not the case. In fact, each country, and therefore each CSD, has its own standards for defining a financial instrument. For example, the form by which securities are recognised differs between countries. A debt instrument may be recognised as a nominal value or as a number of units. An asset-backed security (ABS) may be recognised as a nominal value with an amortisation factor or as an amortised value. Similarly, some central securities depositories use International Securities Identification Numbers (ISINs) to identify securities classes. Others work with different reference systems, such as SEDOL, the Stock Exchange Daily Official List of security identifiers that is used in the United Kingdom and Ireland. Integrating the different central securities depositories therefore requires standardisation of the reference data relating to securities and/or the implementation of an algorithm with the ability to translate different standards into a uniform system.

From the technical point of view, other barriers make links between central securities depositories difficult. Each depository bank has its own means of communicating with its participants, such as own file transfer mechanisms, dedicated SWIFT messages, etc.

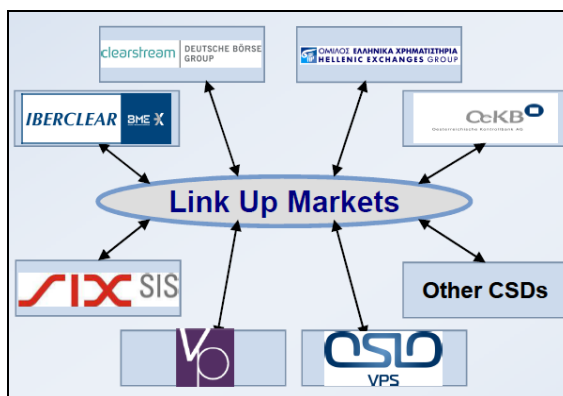
Besides divergent market practices, the rules and regulations governing transactions settlement may also differ between countries. For example, settlement deadlines, settlement priority rules or the possibility of partial transaction settlement may cause difficulties in linking different central securities depositories.

In April 2008, the central securities depositories Clearstream Banking AG, Frankfurt/Main (Germany), Hellenic Exchanges S.A. (Greece), IBERCLEAR (Spain), Oesterreichische Kontrollbank AG (Austria), SIS SegInterSettle AG (now SIX SIS AG) (Switzerland), VP Securities Services (Denmark) and VPS (Norway) created the joint venture **Link Up Markets** to improve efficiency and reduce the costs associated with post-trade services relating to cross-border securities transactions.

Other central securities depositories such as CSE (Cyprus) in September 2008, STRATE (South Africa) in September 2009 and MCDR (Egypt) in March 2010 then became members of the joint venture.

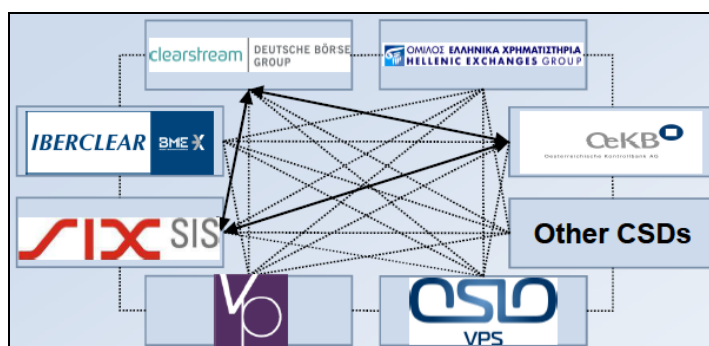
The principle of Link Up Markets is that each CSD involved has direct access to the services of other CSDs by connecting to the Link Up Markets infrastructure, as shown in the diagram below.

## Custodian activities



Source: Link Up Markets, May 2010

This infrastructure has been running since March 2009. Prior to implementation, CSDs had to agree bilaterally to connect to one another, as shown in the diagram below:

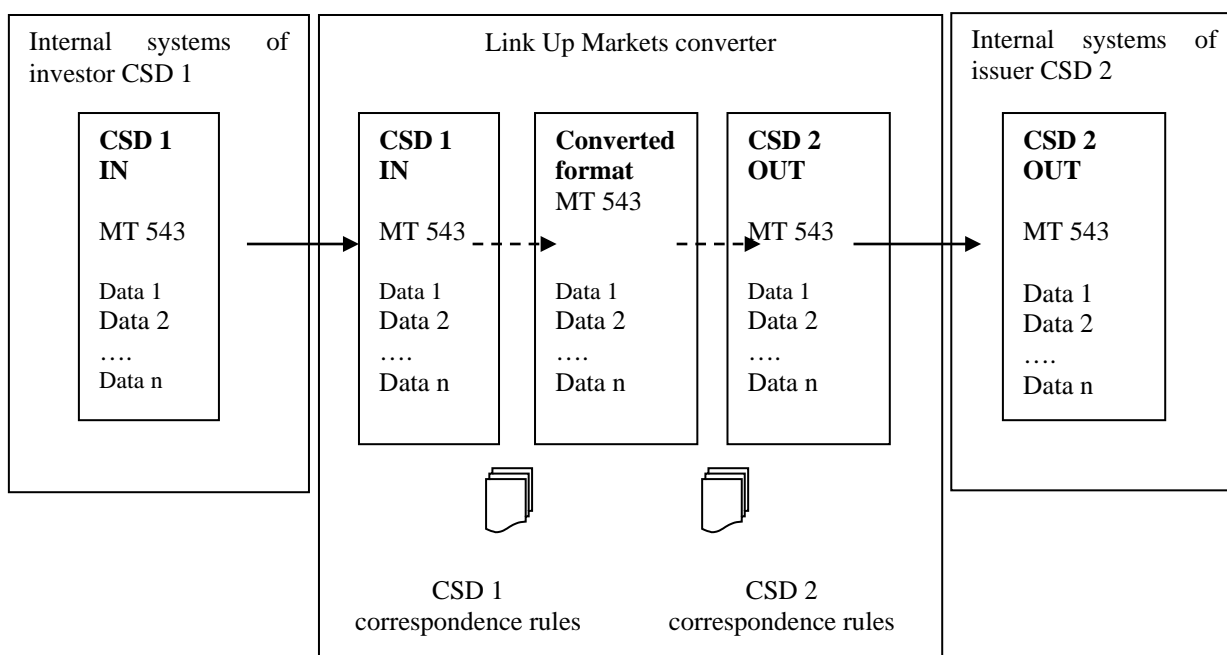


Source: Link Up Markets, May 2010

To get linked up, a CSD had to have an account opened in its name at the other CSD. For the link to become bilateral, each of the CSD involved had to have an account at the other CSD. If it did not, the link was unilateral. To distinguish the role in the link of the central securities depository, participants usually call the CSD that owns the account the investor CSD, and the CSD that opened the account in its system the issuer CSD, regardless of where the securities were deposited.

With Link Up Markets, each CSD has an account opened in its name at all the other CSDs and each CSD accesses the other CSD via a single hub. Link Up Markets serves as converter as shown in the diagram below for a delivery-versus-payment (DvP) instruction transmitted following a transaction.

## Custodian activities



Source: Link Up Markets, May 2010

CSD 1 transmits the instruction via a SWIFT message, using its own format. The message is transmitted to Link Up Markets which converts it into a common format, the 'converted format', which is then transmitted to CSD 2 via a SWIFT message in the format used by CSD 2.

Each CSD is responsible for managing the correspondence rules in relation to its format and the converted format. The converter may also need to add information should this prove necessary.

The advantage for the participants of the CSD involved in the infrastructure is that they can continue to use the same type of communication and message format to settle their transactions with a CSD in which they are not participants. The participants also benefit from a single point of entry for announcements and for processing corporate action events.

The Euroclear Group has also created its own technical link-up infrastructure for the central securities depositories that make up the Group. This infrastructure comprises the Single Settlement Engine, Euroclear Settlement of Euronext-zone Securities and Single Platform Custody.

## Custodian activities

Note that in July 2006, the Governing Council of the European Central Bank (ECB) initiated a study to put in place a single settlement-delivery platform within the eurozone - **Target 2 Securities (T2S)**. This initiative was launched when it was noted that eurozone settlement-delivery infrastructure was very fragmented. At the time of writing this document, there are eighteen settlement-delivery systems in the eurozone, which correspond to the historic national central securities depositories. This fragmentation means that cross-border exchanges between systems governed by different rules and legislations are complex and costly for the participants.

The programme is at present at the functional and technical specification preparation stage. It should lead to the platform being rolled out by 2013. The impact of the introduction of Target 2 Securities is that all securities purchases/sales in euros will be settled on the platform, but the central securities depositories retain responsibility for account keeping and will continue to perform custody functions (corporate action events management in particular).