

Overview of CSD links in Europe

Executive Summary

- A **"CSD link"** is an arrangement allowing a central securities depository to give its clients access to securities maintained in another CSD, without requiring its clients to be direct participants in the other CSD. Links are thus an important means to facilitate cross-border securities transactions and they contribute to market integration.
- European CSDs operate a dense network of links. Only 4 out of the 41 CSDs covered by the ECSDA links mapping exercise have no links at all with other CSDs. 3 other CSDs only maintain "inbound links" allowing foreign CSDs to access their local market. The remaining **34 CSDs have both inbound and outbound links.**
- If we set aside the three CSDs which maintain an unusually high number of links (Euroclear Bank, Clearstream Banking Luxembourg and SIX SIS), **the average European CSD had just under 7 links as investor CSD as at end 2014.** The number is even higher for CSDs established in the EU (8.4 links on average per CSD).
- **The majority of CSD links (over 40%) are direct links** whereby the CSD is a direct participant in another CSD. Indirect links (via a sub-custodian) and relayed links (via a middle CSD) each account for just under 30% of the total number of links.
- **More than 2/3 of CSD links allow for settlement on a delivery versus payment basis**, meaning that not only securities but also cash transfers are possible through the link. The vast majority of links allow for the transfer of both equities and debt instruments.
- **More than half of all CSD links are actively used by market participants, i.e. they are used on a daily basis.** Around 40% of the remaining links are used on a weekly or monthly basis, and just over 5% have never been used.

- As at end 2014, there was no striking difference between the number of links maintained by CSDs participating in the TARGET2-Securities project of the Eurosystem and the number of links maintained by non-participating CSDs established in the EU. **It will be interesting to see whether the number of CSD links increases substantially among participating CSDs after T2S is fully implemented in 2017.**
- As regards the operating hours of links, **the typical delay observed in the processing of securities transfers via a CSD link is less than 3 hours** compared with the same transfer being processed directly at the issuer CSD, outside of any link arrangement. Direct CSD links typically display shorter delays, with the vast majority of the longer delays resulting from indirect or relayed links.

1. Background

On 17 June 2014, the Eurosystem Contact Group on euro securities infrastructures (COGESI) invited ECSDA to prepare an overview table on CSD links and their operating hours¹. Such an overview is considered helpful to monitor the extension of CSD operating hours, as recommended by the report "[Euro repo market: improvements for collateral and liquidity management](#)" published by the Eurosystem on 7 July 2014.

As a result, ECSDA started to work on a harmonised template and methodology to collect information on links maintained by ECSDA members with other CSDs, including operating hours. This mapping of CSD links is based on a framework developed jointly with the ERC in 2008, but it has been expanded to include some additional details in order to ensure consistency in the information provided while taking recent developments into account (for example by flagging T2S participating CSDs and including references to the definitions of links included in the CSD Regulation). In addition, the current exercise covers a much broader sample of markets.

Due to the changes in scope and methodology, comparisons with links data provided in previous years is difficult. That said, this paper occasionally refers to data collected in the previous years, when possible and meaningful.

2. Definitions and acronyms

The mapping of CSD links distinguishes the following types of links, consistent with the definitions contained in the CSD Regulation²:

Direct link	A CSD A (called the "investor CSD") has as an account in CSD B (called the "issuer CSD").
Direct link (operated)	A CSD A (called the "investor CSD") has as an account in CSD B (called the "issuer CSD"), and the management of the account is outsourced to a third party (typically a reputable custodian bank acting as "operator").
Indirect link	A CSD A has account with an intermediary (called "sub-custodian") which holds securities on behalf of CSD A at CSD B. The intermediary is a direct participant in CSD B. CSD A is not.
Relayed link	A CSD A has account with a CSD C (called "the middle CSD") which holds securities on behalf of CSD A at CSD B. CSD C is a direct participant in CSD B. CSD A is not.

¹ The official COGESI meeting summary is available at: http://www.ecb.europa.eu/paym/groups/pdf/cogesi/20140617_summary.pdf??6c5afae6331c8567a436bc62a4329f4a

² 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

Individual CSDs are subsequently referred to by using a 2-letter country code or short name, as follows:

Country	Short name / Acronym	Full name
AT	OeKB	Oesterreichische Kontrollbank AG
BA RS	Central Registry RS	Central Registry of Securities JSC Banja Luka
BA	RVP	Registry of Securities
BE	BNY Mellon CSD	BNY Mellon CSD
BE	EB	Euroclear Bank
BE	EBE	Euroclear Belgium
BG	CDAD	Central Depository AD
CH	SIX SIS	SIX SIS Ltd
CY	CSE	Cyprus Stock Exchange
CZ	CSD Prague	Central Securities Depository Prague
DE	CBF	Clearstream Banking AG
DK	VP	VP Securities
EE	ECSD	Estonian CSD
ES	Iberclear	Iberclear
FI	EFI	Euroclear Finland
FR	EF	Euroclear France
GR	ATHEXCSD	Hellenic Central Securities Depository SA
HR	SKDD	Central Depository & Clearing Company Inc.
HU	KELER	KELER Ltd.
IS	ISD	Icelandic Securities Depository
IT	Monte Titoli	Monte Titoli
LT	CSDL	Central Securities Depository of Lithuania
LU	CBL	Clearstream International
LU	LuxCSD	LuxCSD SA
LV	LCD	Latvian Central Depository
ME	CDA	Central Depository Agency of Montenegro
MK	CSD AD Skopje	Central Securities Depository AD Skopje
MT	MSE	Malta Stock Exchange
NL	ENL	Euroclear Nederland
NO	VPS	The Norwegian Central Securities Depository
PL	KDPW	The Central Securities Depository of Poland
PT	Interbolsa	Interbolsa
RO	DC	Depozitarul Central
RS	CR HoV	Central Securities Depository and Clearing House
RU	NSD	National Settlement Depository
SE	ESE	Euroclear Sweden
SI	KDD	Central Securities Clearing Corporation
SK	CDCP SR	Central Securities Depository of the Slovak Republic
TR	MKK	Central Securities Depository of Turkey
UA	NDU	National Depository of Ukraine
UK	EUI	Euroclear UK & Ireland

3. Overview of CSD links in Europe

- **An ever more dense network of links**

The ECSDA mapping of CSD links carried out in the second half of 2014 covers all **41 ECSDA members**³, including 30 EU CSDs and 2 CSD from the European Economic Area (VPS and ISD). The overview is thus more complete than that provided by the joint ECSDA-ERC table of 2008 (which included just 19 CSDs). Out of those 41 CSDs, only 7 (BA, BA RS, IS⁴, ME, MK, RS, SI) have no link at all as investor CSDs. Three of these, however, have "inbound" links as issuer CSDs (BA RS, RS, SI).

The mapping displays a total of 379 "outbound" links whereby a CSD holds - or can potentially hold - securities on behalf of its participants at another CSD, whether or not the issuer CSD is located in Europe. This means that, taking into account all CSDs covered by the mapping except the two ICSDs and SIX SIS⁵, **the average European CSD had 6.8 links as investor CSD as at end 2014**. The number rises to 8.4 links when restricting the sample further to CSDs established in the EU.

- **Direct versus indirect CSD links**

Over 40% of all CSD links maintained by ECSDA members are direct links whereby the CSD is a direct participant in another CSD. Slightly more than 1/5 of these direct links are managed by an account operator (operated links). Data collected in 2013 showed similar results, with an increase in the number of direct links relative to indirect links since 2008.

Indirect links (via a sub-custodian) and relayed links (via a middle CSD) each account for just under 30% of the total number of links. Inside the EU, the share of relayed links is slightly higher as compared to indirect links, with exactly one third of links involving a middle CSD.

- **FoP versus DvP links**

A CSD link that allows for "delivery versus payment" (DvP) means that participants in the investor CSD A can settle instructions in securities held at issuer CSD B against cash thanks to a credit or debit made in their cash account at the central bank (or, in the few cases where the investor CSD A has a banking license, a debit or credit in their commercial bank account at CSD A).

³ Non-ECSDA members, including non-European CSDs and CSDs operated by national central banks, have not participated in the survey but links from ECSDA members (as investor CSDs) to these CSDs (as issuer CSDs) are included.

⁴ Since the Icelandic banking crisis in autumn 2008, foreign exchange transactions have been subject to capital controls which do not allow ISD to have any links to other CSDs.

⁵ EB, CBL and SIX SIS are active in global markets and maintain together over 120 links as investor CSDs.

2 out of 3 CSD links allow for settlement on a delivery versus payment (DvP) basis. This proportion is broadly the same whether we look at all ECSDA members or only at the subset of CSDs operating in the EU. This means in turn that 1/3 of all the links are only available for free of payment (FoP) securities transfers. These transfers can, for instance, be used by market participants to post collateral (e.g. in relation to CCP clearing, securities lending and borrowing transactions, repos, and central bank monetary policy operations). In some cases however, where the CSD processes an FoP instruction through a link with another CSD, market participants might arrange for the corresponding "cash leg" of the settlement instruction to be processed outside of the central bank and the CSD, for example by using a commercial bank as cash settlement agent in order to make the payment (e.g. if they wish to settle the securities against cash in a foreign currency).

- **T2S versus non-T2S links**

Looking only at the subset of CSDs that will participate in T2S, the average number of links established is 8.2 links, i.e. slightly lower than the EU average (excluding the ICSDs and SIX SIS in both cases). It will be interesting to see whether the number of CSD links increases substantially among participating CSDs after T2S is fully implemented in 2017. Out of the total 379 CSD links reported in the mapping:

- 114 links are links between T2S-participating CSDs;
- 85 links are "out/in" links from non-T2S participating CSDs into T2S CSDs;
- 85 links are "in/out" links from T2S CSDs into non-T2S participating CSDs;
- 95 links are entirely outside T2S.

While the share of DvP versus FoP links is broadly the same among T2S participating CSDs and non-T2S participating EU CSDs, it is interesting to note that many CSD links between T2S CSDs are relayed links, sometimes making use of a non-T2S CSD (e.g. EB and CBL). The share of relayed links for T2S CSDs is around 10 percentage points higher than for other CSDs.

- **Eligible instruments**

On average, more than 2 out of 3 links are used to process both equities and debt instruments. The remaining links are used for transferring solely equities (20%) or debt instruments (10%). Links restricted to debt instruments are in most cases due to the fact that the issuer CSDs themselves only accept debt instruments for settlement (the central bank CSDs in six countries).

- **Market demand and the use of CSD links**

More than 50% of CSD links are actively used by market participants, i.e. they are used on a daily basis. Around 40% of the links are used less frequently, i.e. on a weekly or monthly basis, and just over 5% have never been used so far. That said, many CSDs are able to offer their participants access to a much wider range of markets, if there is demand. This is in particular the case when a CSD maintains

an account with one of the ICSDs or with a CSD that maintains many links as investor CSD. In such cases, relayed links can be “activated” fairly quickly. In order to give a representative picture, the ECSDA mapping excludes such “potential” relayed links that have not yet been actively used.

4. Cut-off times of CSD links

The mapping of CSD links compiled by ECSDA also includes information on the operating hours or “cut-off times” of each CSD link. By “link cut-off time” we mean the deadline for participants in the investor CSD to input their instruction in the system of the investor CSD in order to settle on that same day in the issuer CSD. In the case of DvP links in central bank money, the relevant cut-off time of the investor CSD can be compared to the cut-off time of the national central bank of the issuer CSD to get an indication for the “delay” in processing the instruction through the link. For links in commercial bank money, the comparison is less relevant and thus not included in the overview.

While the 2013 links table had showed a substantial decrease in the average delays from CSD links between 2008 and 2013, the findings of the present mapping are hardly comparable to those figures, given the changes in methodology and scope. A few interesting conclusions are however possible. Importantly, the 2014 data shows that **the typical delay in the processing of DvP links is less than 3 hours or just above 2 hours if we only look at the CSDs that predominantly maintain direct DvP links**. There are only a few exceptions where delays are longer and some rare cases where instructions have to be input already on the day before settlement takes place. **The vast majority of these longer delays result from indirect (or relayed) links and the few links that do not allow for same day settlement are all indirect.**

Annex: Methodology

The below instructions were circulated to all CSDs having participated in the ECSDA links mapping exercise:

1. Please provide information on all CSD links that your CSD has established as investor CSD with the issuer CSDs from the list ("outbound links").
2. Please also add information on links with non-European CSDs.
3. If a link is used for both FoP and DvP instructions, please indicate the applicable cut-off times separately.
4. You can add more lines where appropriate (e.g. if multiple accounts are used to manage different asset types, if different cut-off times apply when instructions are CCP-cleared or not, etc.).
5. In addition to providing information on outbound links, please indicate the cut-off times that apply to settlement in domestic instruments, i.e. settlement as "issuer CSD" (irrespective of any links). These include the cut-off times for DvP and FoP instructions, as well as the cut-off time set by your national central bank.

Data item	Description	Response format
Market	Country where the head office of the CSD/SSS is established	<i>Free text: 2-letter country code</i>
Group	Regional institutional grouping to which the country of incorporation of the CSD/SSS belongs	<i>Free text: EA (euro area country), EU (non-euro area country of the European Union), EEA (non-EU country of the European Economic Area), Other for all other European countries</i>
CSD	Abbreviated name of the ECSDA member (I)CSD	<i>Free text</i>
T2S	Has the CSD signed the T2S Framework Agreement?	<i>Pre-filled. Drop down list: Yes or No</i>
Instrument Type	Which instruments are settled through the CSD link? If different cut-off times apply to different instruments, please use one line per type of instrument.	<i>Drop down list: (1) Debt and equities, (2) Debt, (3) Equities, (4) Other</i>
Instrument details	Please use this field if you would like to add details on the instruments settled through the link, in particular where different cut-off times apply. In the row for your own CSD, this column is used to indicate that the row refers to settlement " as issuer CSD ".	<i>Free text</i>
ESCB eligible	Is the link eligible for use in Eurosystem credit operations, i.e. has it been assessed against the Eurosystem user assessment framework?	<i>Drop down list: Yes or No</i>

Data item	Description	Response format
Link Type	<p>Please indicate the type of link arrangement in place.</p> <ul style="list-style-type: none"> - In case of direct links, please distinguish further between cases where the account at the issuer CSD is managed by your CSD directly (direct link) or where a (local) intermediary is used to operate the account (direct link - operated). - Indirect links involve an intermediary acting as subcustodian, i.e. maintaining an account at the issuer CSD on behalf of the investor CSD. - In the case of relayed links, i.e. links via a middle CSD, please only include links that are active, i.e. that have actually been used at least once by one of your participants. 	<p><i>Drop down list: (1) Direct link, (2) Direct link - operated, (3) Indirect link - via a subcustodian, (4) Relayed link - via a middle CSD</i></p>
Name of the intermediary	<p>If possible, please provide the name of the intermediary that is used for the link: this includes the account operator (operated direct link), the sub-custodian in case of an indirect link or the middle CSD in case of a relayed link.</p>	<p><i>Free text</i></p>
Method	<p>Please indicate the settlement method(s) supported by the link arrangement, i.e. if the link allows for Delivery versus Payment (DvP) or only for Free-of-Payment (FoP) settlement.</p>	<p><i>Drop down list: (1) FoP only, (2) DvP and FoP, (3) Other</i></p>
Currency	<p>Please indicate the currency used for settlement through the link. In case of settlement in multiple currencies, please use one line per currency.</p>	<p><i>Free text</i></p>
Use	<p>Please indicate how frequently the CSD link is used for settlement purposes, in terms of daily use. This is mainly to determine whether an established link is actively used or not.</p>	<p><i>Drop down list: (1) Used on a daily basis, (2) Used, but not on a daily basis, (3) Not used</i></p>
<p>Cut-off times (please indicate the cut-off times separately for FoP and DvP instructions)</p>		
NCB cash cut-off	<p>Deadline of the relevant National Central Bank through which the cash leg of the transaction is settled. This is the reference for DvP settlement in CeBM and is expected to be equivalent to the closing time of the NCB's payment system for inter-bank cash transfers. Please indicate the time in Central European Time (CET).</p>	<p><i>Time: hh:mm (CET)</i></p>

Data item	Description	Response format
NCB collateral cut-off	Deadline of the relevant National Central Bank for accepting collateral in the context of monetary policy operations. This deadline is the reference used for FoP instructions. If provided, please indicate the time in Central European Time (CET).	<i>If applicable, Time: hh:mm (CET)</i>
Own cut-off time	Deadline set by the investor CSD for accepting settlement instructions from participants to be processed through the link. Please indicate the applicable cut-off time for DvP instructions in column N and for FoP instructions in column Q. In the case of indirect links, the relevant time should be the deadline published towards own participants for settlement in a given issuer CSD (not the cut-off time of the relevant sub-custodian/middle CSD used). Please indicate the time in Central European Time (CET).	<i>Time: hh:mm (CET)</i>
S-n	Only to be completed in cases where instructions have to be input on the day before settlement takes place, i.e. where the own cut-off time is more than 24 hours before the NCB cut-off time.	<i>Number of days: 1 or 2</i>
Delay from NCB cut-off	Time gap between own cut-off time and the applicable cut-off time of the relevant NCB (DvP or FoP).	<i>Calculated automatically</i>