2025 CSD links Report

ECSDA

Summary

Central Securities Depository (CSD) links continue to represent the most secure and market-driven means of enabling cross-border post-trade access, effectively channelling savings into investments across Europe and globally. These links uphold the highest standards of asset protection and offer full legal certainty regarding securities ownership and transfers.

In Europe's currently fragmented legal environment, Securities Settlement Systems must process transactions in compliance with local laws, which vary from one Member State to another. In such a fragmented landscape—marked by differing legal systems, asset protection, tax frameworks, and currencies—the ability of CSDs to innovate and deliver value-added services, such as CSD links, is critical to supporting the EU's efforts to advance the integration of its capital markets.

CSD links are a vital tool, enabling investors to access securities originally issued in other markets through a single entry point via the CSD of their choice. They represent only one of the possible ways of accessing markets, although highly acclaimed by market stakeholders caring for a.o. a high level of legal certainty and risk management. However, establishing and maintaining a CSD link involves significant tasks, inherent complexities, and substantial costs.

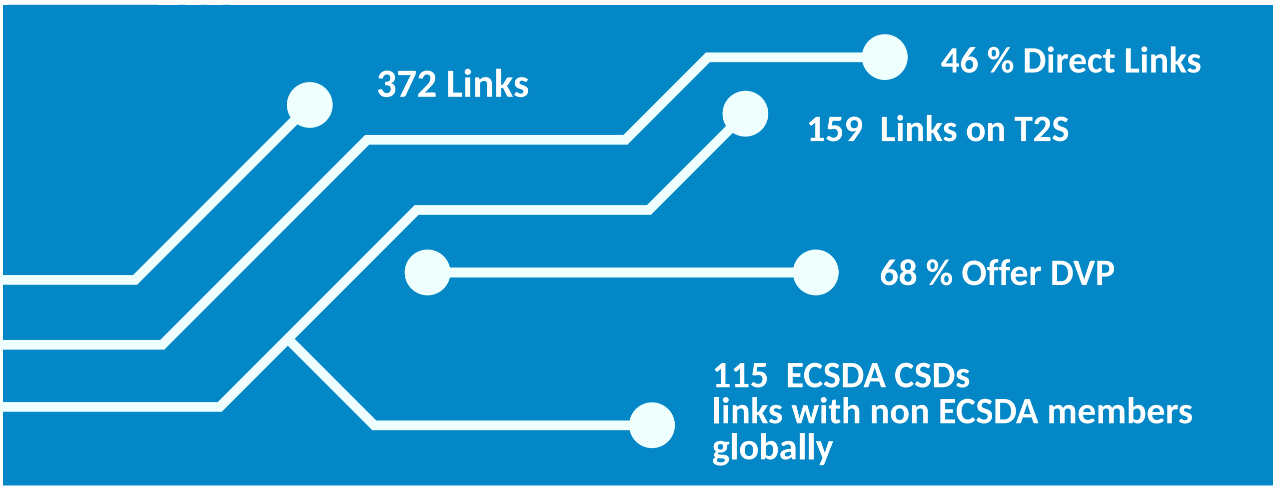
In line with the needs of the SIU, ECSDA Members agreed on a <u>joint vision to ensure that all European securities are rendered accessible from a single CSD account.</u> The industry is progressing with the implementation of that vision.

However, to support the full coverage of all EU markets by CSD links, it is essential to:

1. **Stimulate the 'supply' (attractive issuances) and 'demand' (investors' appetite),** to purchase European securities) supporting the European market liquidity and structural reforms;
2. **Decrease the European legal fragmentation** by harmonisation, where progress is possible, resolving legal conflicts and divergences that hinder CSD links or the creation of cross-border platforms;
3. **Increase the volumes of cross-border transactions** benefiting from the high level of safety and certainty of CSD links, including by: a) **Simplifying and decreasing the costs** of the establishment and maintenance of links, b). **Facilitate the establishment of relayed links** where a CSD is relying on the links of other CSDs for enabling access to other markets at a lower expense; c). **Ensuring that market actors effectively use the established links** and enable access to other EU markets for the retail investors.

This paper will explain:

1. **Challenges of enhancing the post-trade connectivity for the SIU,**
2. **Requirements to open and operate a link,**
3. **Benefits that links provide to their users and the alternatives to cross-border link settlement,**
4. **Recent evolution we witness from the data collected,**
5. **Key policy recommendations to support the efficient market interlinkage.**



A recent update of ECSDA members' links data reveals that in 2025:

- Europe has the densest network of CSD links in the World: beginning of 2025, ECSDA CSDs counted **372 links**.
- We see a preference towards direct and relayed links over recent years: **46% are direct links**, **36,58% – relayed** and, **17,2% – indirect**.
- **68% of links offer DVP capability**, with FOP widely used for collateral and portfolio transfers or challenges to access the currency on the link.
- As there are costs attached to the maintenance of a link, the frequency of link usage is essential to justify it: **61% of activity is daily, 34% weekly or monthly, and 5% occasionally**. The links that are no longer active become "dormant" and, in principle, can be reactivated based on demand.
- **21 members maintain 159 links** leveraging the T2S platform, with mostly daily operational usage. Although limited cross-border volumes remain to be addressed.
- The international connectivity of EU CSDs is most intense with their neighbouring countries in the geographical Europe (the UK, Switzerland, the EEA and CSDs from other neighbouring States which are also part of ECSDA). In addition, **ECSDA Members connect the 'geographical Europe' globally through 115 links.**

The high number of CSD links globally, the sophistication of their service offering, as well as the level of legal certainty, joined by the respect of the rule of law, have positioned Europe as a global hub for post-trade operations.

To support the constantly growing need for financing of the European economies and market diversification, in line with the European strategic autonomy agenda, it is essential to continue reinforcing (and not undermining) the European infrastructure position by carefully balancing actions that inject more volume and limit costs.

01

Why updating the CSD Links Matrix now?

This report is published to support the ongoing discussions around strengthening the European capital markets. By providing all relevant stakeholders with the updated data and an overview of the CSD links, it seeks to contribute to the reflections on the post-trade-related chapter of the European Capital Markets Union (CMU) and the Savings and Investment Union (SIU).

To recall, the SIU aims to provide better financial opportunities for EU citizens, while enhancing its financial system's capability to connect savings with productive investments. To realise the objectives of the SIU, the role of the institutions, such as CSDs and their participants in connecting issuers with investors, is of crucial importance.

Obviously, the European financial flows do not stop at the borders of the Union, and are particularly intense with some of its neighbours, such as the UK, Switzerland, EEA countries and other States having a member representative within ECSDA. For that reason, the Report looks at the region as a whole, covering the links of all ECSDA Members.

CSD Links, along with the capability to manage securities issues by non-domestic issuers in compliance with different corporate laws (passporting) and to support multi-listing, are essential instruments of capital market integration, connecting issuers and investors of all European jurisdictions between them and with other markets nearby and globally, enabling seamless cross-border investment.

The essential function of CSD links in enabling access to European markets is supported by a comprehensive risk management framework, making them the most secure way of processing the post-trade side of financial transaction flows, while ensuring the highest standards of asset protection and maintaining legal certainty regarding ownership and securities transfers despite the fragmented legal environment.

On the other hand, this regulatory environment also generates costs, which opens up **opportunities for simplification while preserving the same level of safety.**

Furthermore, a year ago, and more recently, responding to the SIU consultation, ECSDA appealed again for **actions that address the root causes of European fragmentation**.

We welcome the recent progress on the withholding tax, some aspects of insolvency law, the proposal on the 28th regime in the company law and others, which are positive steps towards making the EU more attractive to foreign and cross-border investors. These advancements need to be pursued by addressing more politically challenging root causes of the European fragmentation.

We also called for measures supportive of European capital markets' growth by incentivising supply and demand to stimulate cross-border investments and **encouraging collaboration across the entire intermediary chain**, creating an effective road for investments to flow.

1.1. What is a CSD Link?

As per the CSDR (Regulation (EU) 909/2014), *'CSD link' means an arrangement between CSDs whereby one CSD becomes a participant in the securities settlement system of another CSD in order to facilitate the transfer of securities from the participants of the latter CSD to the participants of the former CSD or an arrangement whereby a CSD accesses another CSD indirectly via an intermediary.*

A direct CSD link is established when one CSD (so-called 'Investor CSD') opens an account in another CSD (so-called the 'Issuer CSD') to enable its participants to access and hold securities issued in such CSD.

The Issuer CSD is originally chosen by the issuer to issue its securities and hold them at the highest level. In the terminology of the CSD Regulation, we speak about the Requesting (the link) CSD – for Investor CSD, and the Receiving (the link) CSD – for the Issuer CSD.

When a direct link is not possible or justified to be established based on a business-case analysis, a CSD can opt for a relayed (using another CSD) or an indirect (with an intermediary bank) link.

This report focuses on links from the perspective of an Investor CSD (outbound links) and includes information on the types, scope and frequency of use of the links. It reflects the use of cross-border settlement by market participants and, to some extent, might indicate the depth of cross-border investment in the EU, particularly if the data from the CSDs is combined with the data on cross-border internalised settlement and volumes of global custodians accessing the local markets directly.

From its members, ECSDA collected the information about their (outbound) links to the other ECSDA Members from the 'geographical Europe' as well as to the non-ECSDA Member CSDs globally. A visual matrix of CSD links among ECSDA members is available on the ECSDA website.

1.2. What is the rationale and the challenges for the establishment of a CSD link?

CSDs generally respond to market needs and are ready to support further interconnection. However, creating and maintaining links requires balancing potential volumes with significant set-up and operational costs.

One of the biggest budget lines for the establishment of a CSD link is the legal analysis. The cross-border settlement by default involves several jurisdictions, which raises issues relating to the choice of law and conflict of laws that complicate the analysis of legal risks. The costs of establishing and maintaining a link are heavily influenced by the legal fragmentation in the EU.

Although CSDs make efforts to standardise processes where possible and relevant, local legal, tax, and other differences often require specific arrangements to ensure compliance with local requirements. These may include the need for a tax agent to support asset holding and servicing across the link, the maintenance of procedures and staff to manage local corporate law obligations and specificities, the acquisition of a specific tax status with associated compliance obligations, foreign currency settlement solutions, and other special measures.

Actual or expected volumes and revenues often do not offset the costs, which can lead to the decision not to open a link or to close an existing one, due to an insufficient business case and the need to allocate resources to other mandatory projects. However, as this report will show, solutions are being found to rationalise the network and enhance connectivity in line with market needs, for example, through "hubs" or relayed links and, when feasible and in the interest of the clients, maintaining links "dormant" (i.e. for which the legal analysis has been perfromed, although, due to an absence of use, they had to be temporary de-activated and can be re-activated, when necessary).

The efforts to harmonise Member State laws, particularly the insolvency and tax laws, are essential to reducing legal ambiguity and conflicts that hinder CSD links and encourage further interconnection.

02

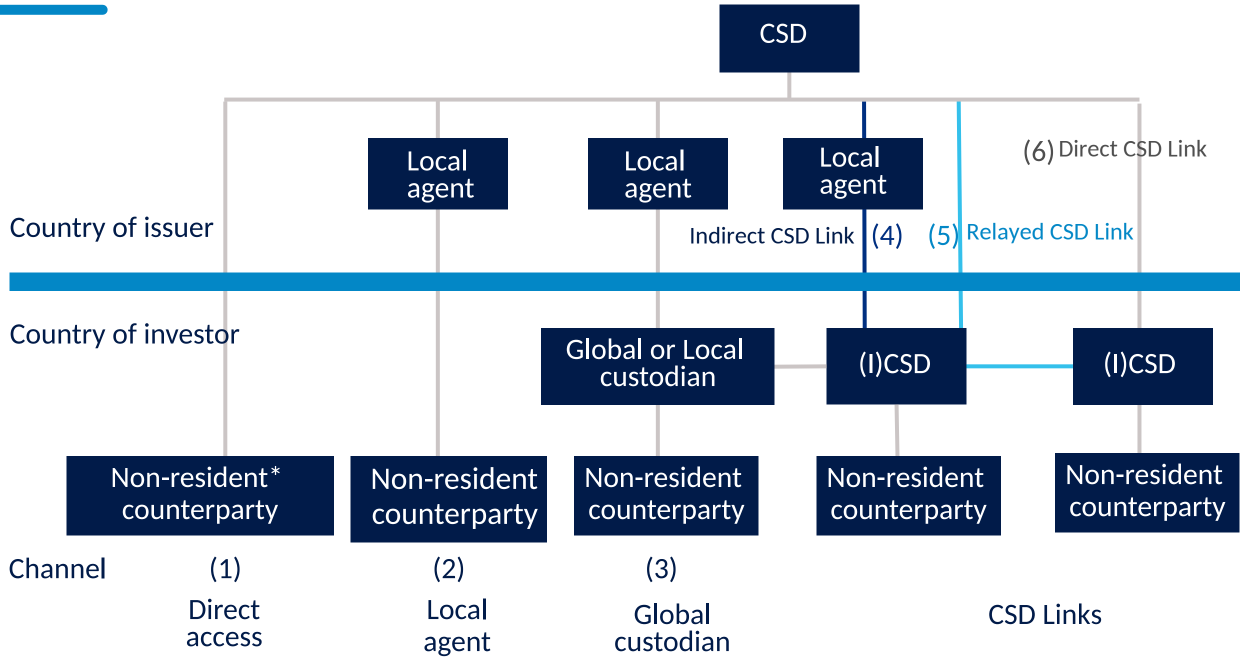
How do CSD links fit into the current SIU debate and contribute to its further development?

Achieving the SIU objectives — of fostering further cross-border investments through an optimal level of interconnection among financial market infrastructures — requires a thorough understanding of:

- different ways for settling cross-border securities on a cross-border basis,
- key factors driving greater connectivity,
- practical use and benefits of links for market participants,
- legal requirements applicable to CSD links.

Chapter 3 below will complete this explanation by providing the analysis of the current degree of market interconnection and will allow to consider the relevance of the possible additional CSD links for enhancing the market liquidity.

2.1. What are the alternative ways of holding and settling foreign securities?



Source: BIS[1] and ECSDA * The Counterparty in all the boxes is a non-resident in the Country of the issuer

Different alternative channels are available for the settlement of foreign securities. In some cases, the different channels can be available simultaneously and the deciding party can choose the most optimal channel, based on a range of criteria, including costs, risk, special arrangements, broadness of services (ex., provision of tax services or securities lending and borrowing, ForEx or other services) or markets covered and others.

Although direct access (1), as well as relayed (5) and direct CSD links (6), offer the highest level of safety and frequently the possibility of settling securities in Central Bank Money (CeBM), the risk argument may not be the only sufficiently appealing to the parties deciding on the channel to use for settlement. In the case of institutional investors, they may decide on the channel to be used themselves (incl. considering the regulation such as AIFMD, UCITS, Eurosystem Guidelines or other), and for retail investors, most frequently, their local or global custodian bank will make this choice based on their network (3).

In the case of the global custodians, they frequently use their own branches locally, when these are available, and could play the role of settlement internalisers for the cross-border transactions.

Based on the recent ESMA TRV Risk Monitor, settlement internalisers "have consistently been processing significantly higher transaction numbers and values compared to CSDs. This is especially the case in high-turnover instruments like equities and ETFs."[2]

Except for the CSDs with a banking licence, the limited range of CSD services allowed by the CSDR, challenges related to the settlement in foreign currencies or a tax agent role, lead to the fact that the links of local CSDs may not be as frequently used as, notably, the connections offered by global custodians.

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[1] *Although this overview was developed decencies ago, it continues to be relevant in outlining the different channels of accessing foreign securities. See BIS, Cross-Border Securities Settlements, March 1995, https://www.bis.org/cpmi/publ/d12.pdf*
[2] *ESMA Trends, Risk and Vulnerabilities Risk Monitor No. 2, 2025, p. 26, at https://www.esma.europa.eu/sites/default/files/2025-09/ESMA50-1949966494-3846_TRV_2_2025.pdf.*

2.2. Key factors driving the greater connectivity between CSDs

Liquidity and market demand are the main drivers for the setting up of new links.

Within the SIU policy debate, some argue that greater liquidity could be achieved if links were more numerous. Although greater interconnectivity does not necessarily lead to greater liquidity. Without further stimulation of the financial 'supply' and 'demand', it may result in further fragmentation of liquidity pools and additional costs.

As we understand that it is the current European Commission's priority to increase cross-border settlement and enhance CSD interconnectivity, we need to highlight that taking actions in other areas than the post-trade is essential. Notably, actions should be taken to support the scalability of EU SMEs and their interest in European (dual) listing, making these companies more visible and attractive to regional European and international investors. Additionally, policy-makers should provide further incentives to encourage cross-border intra-European investments and stimulate demand.

On the post-trade side, **Issuer CSDs have an intrinsic motivation to stimulate the inflow of foreign cross-border investments to their market and to ensure support for dual-listings.** Therefore, CSDs in individual markets frequently approach Investor CSDs (EU and non-EU) from the neighbouring States and/or having the biggest number of investors, as well as the alternative providers, most frequently global custodians, to establish international connectivity supporting the investment inflow. And it is the individual decision of these providers on whether to establish a link or access for custodians and become a participant in this Issuer CSD.

In case of **Investor CSDs,** they generally decide to request the link (or to follow the informal demand of the Issuer CSD) based on their assessment of the potential flow of transactions from participants, business and other priorities (system upgrade or IT readiness for other projects or regulatory compliance), available risk mitigation and documentation (such as legal assessment), complexities (ex., eventual need to appoint a tax agent, need to accommodate the local asset servicing or currencies), as well as the cost for the establishment and maintenance.

In line with the CSDs' deep engagement to support the SIU project, EU ECSDA Members agreed on a <u>joint industry vision to ensure that all European securities are accessible through links from a single account at a CSD.</u>

The CSD industry will be making progress in implementing this vision in the coming years.

Several European Investor CSDs already have extensive coverage of the European Union. More CSDs are making further progress to ensure broader EU coverage. Some ECSDA Members are gradually playing the role of regional hubs (working on M&As, creation of joint cross-border platforms, working on passporting to be able to accommodate non-domestic EU issuers' demands and working on finetuning their link network) or working on closer regional cooperation.

Challenges in the implementation of this vision

While greater interconnection is, in principle, to be welcomed, it should (1) be accompanied by a careful assessment of opportunities for simplification and cost efficiency, and (2) be leveraged by the participants of the Investor CSD through an effective use.

Firstly, in the current fragmented scenario, the cost of creating an infrastructure in which all CSDs are connected, regardless of actual settlement volumes, shall not be underestimated, given the uncertain outcome in terms of liquidity increase. Further simplification and reduction of burdens to reduce the cost of establishment and maintenance of links is possible. (See section 2.4 on Legal Requirements).

Secondly, when a CSD establishes the connectivity, we frequently see that its participants do not use the full range of services and links available to them, for their specific reasons. We frequently see that in countries with the CSDs having a significant number of links, the retail investors still do not have the possibility to access the full range of securities issued in the markets with which the CSD links exist and functions efficiently (privileging the US over medium-sized or smaller EU markets).

As the objective of the SIU is to channel retail savings to European capital markets, we also need to develop a holistic vision on the connectivity and incentives starting from the retail investor perspective.

So that the SIU project is successful, it needs to be adhered to by all actors of the European capital markets. It is, therefore, essential that further understanding of the reasons why CSD participants do not yet leverage a.o. the CSD links to the full extent, and how to stimulate this use further needs to be acquired before proposing measures for enhancing the post-trade side of the SIU.

"So that the SIU project is successful, it needs to be adhered to by all actors of the European capital markets. It is essential to understand why CSD participants do not leverage all CSDs' capabilities, including numerous links."

2.3. The practical uses and benefits of a CSD link for the market stakeholders?

CSDs links expand the reach of investors and issuers by supporting them with the following:

Cross-border Settlement

Investors in one country can access and settle securities issued abroad without friction, allowing them to find new opportunities and further diversify their portfolios. Thanks to a CSD link, a larger investor base is available to the issuers in a highly secure, regulated environment.

Liquidity pooling

CSD links enable investors and financial institutions to allocate liquidity more efficiently across borders, as collateral (bonds, equities) can be mobilised across CSDs in a highly secure and regulated environment.

Reduced fragmentation

By establishing the links, CSDs undertake the management of the complexity related to the connectivity and different standards of another market, which helps create a more integrated market.

For Central banks, CSD links enable:

Collateral availability for credit operations

Central banks provide credit to commercial banks in exchange for eligible collateral (e.g. repos, refinancing operations). **CSD (direct and relayed) links allow banks to use collateral issued in another country without moving securities physically, making monetary policy operations more efficient.**

Liquidity distribution across the currency area

In the euro area, cross-border use of collateral via CSD links ensures that liquidity injected by the **ECB flows across countries**, rather than remaining confined to national borders. This prevents fragmentation in monetary policy transmission.

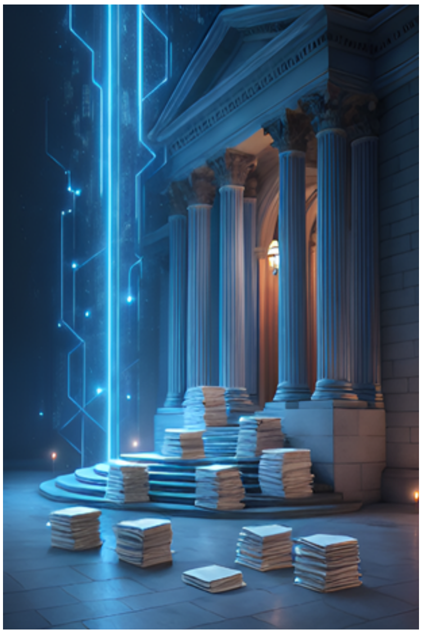
Reduction of "home bias"

CSD links help to overcome operational hurdles that would otherwise limit the use of foreign securities as collateral, leading to a preference for domestic assets. This improves collateral diversification and financial stability.

Crisis management & financial stability

During periods of distress (e.g. euro crisis, pandemic), the ability to quickly mobilise high-quality collateral across borders via CSD links is critical for the **effectiveness of central bank interventions.**

2.4. Legal Requirements



The legal framework for EU CSD links is defined at both the global and local levels. The PFMIs (applicable internationally), the CSDR (applicable in the EU), as well as the Central Bank Guidelines contain requirements for establishing and maintaining links.

The EU CSDR, in particular, sets out a more detailed and binding regulatory regime, which is, in principle, aimed at facilitating the creation of new links, given the risk-based regulatory set-up, for example, for the authorisation process. However, CSDs are obligated to run a very comprehensive risk assessment to set up and maintain links.[3]

The Annexe of this report includes a simplified example of a checklist containing different steps that a CSD needs to undertake for the establishment and maintenance of a link. This example shows the complexity of the process and its key cost drivers.

Key legal requirements under the CSDR include:

◆ Link establishment and authorisation

An Investor CSD seeking to become a participant in another (Issuer) CSD must submit a request to the NCA of the Issuer CSD (in case of involvement of significant risks or interoperable link) and notify its own NCA.

For the links not involving significant risk or interoperable, the supervisory approval process requires only a notification of the NCA(s).

In both cases, such requests can only be rejected by the Issuer CSD on systemic risk grounds[4].

Any resulting link must be governed by a formal contractual arrangement that specifies, among other things, an unambiguous choice of law that governs each aspect of the link's operations.

◆ Risk Management

According to the CSDR, "*before establishing a CSD link and on an ongoing basis once the CSD link is established, all CSDs concerned shall identify, assess, monitor and manage all potential sources of risk for themselves and for their participants arising from the CSD link and take appropriate measures to mitigate them.*" Accordingly, CSDs are required to identify and manage the risks associated with each link, including operational, custody, and legal risks.

The CSDR Level 2[5] provides for a detailed list of conditions for the adequate protection of linked CSDs and their participants. This includes ensuring that adequate reconciliation, monitoring, and mitigation processes are in place. For indirect links, this extends to the intermediary itself, which must be subject to appropriate due diligence and controls, given the additional risks resulting from the use of indirect links[6].

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[3] See Regulation 909/2014 on improving securities settlement in the European Union and on central securities depositories, Article 48.
[4] Regulation 909/2014 on improving securities settlement in the European Union and on central securities depositories, Recitals 32 and 58, and Articles 19(5) and 48.
[5] Commission Delegate Regulation 392/2017 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on authorisation, supervisory and operational requirements for central securities depositories, art. 84-87.
[6] Commission Delegate Regulation 392/2017 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on authorisation, supervisory and operational requirements for central securities depositories, art. 85.

Settlement model and finality

EU-based CSDs are expected to support Delivery versus Payment (DvP) settlement unless operationally unfeasible and impractical. In the case of interoperable links, CSDs must adopt harmonised definitions for transfer order entry, irrevocability, and finality. As mandated by the CSDR, all interoperable links within the EU have been DvP-enabled since 19 September 2019.

Guidelines for the eligibility for Central Bank credit operations

Beyond the CSDR, the NCBs have additional guidelines for the eligibility of the SSS operator (CSD) links to support the management of collateral, such as the Eurosystem's Guidelines[7]. In the case of the Eurosystem, the guidelines refer to the fulfilment of the CSDR requirements by the linked CSDs.

Notably, only direct and relayed links (excluding indirect links involving a non-CSD intermediary, which lead to additional risks) should be used.

Recently, to benefit from the harmonised settlement procedures in T2S and its auto-collateralisation functionality, the Eurosystem decided that the participating Central Banks should receive marketable assets and non-marketable debt instruments backed by eligible collateral only into accounts in T2S SSSs. To become eligible, the CSD (SSS operator) in the euro area should rely on T2S services for the operation of the System. More details are provided in the Guidelines.

In application of these requirements, EU CSDs developed internal procedures and relevant documentation.

Simplification and burden reduction

Going forward, **we recommend decreasing duplications and pursuing simplification of some requirements in the CSDR and RTS 392/2017**. For example, as noted in the ECSDA's response to ESMA's "Simplification and burden reduction" initiative, Article 69.2(a), requires the requesting CSD to gather information about critical service providers and review the governance of the other CSD or market infrastructure. As these checks are already the responsibility of the receiving (EU) CSD and its NCA, it appears to us as a duplication for the requesting CSD to do it for the links with other EU CSDs.

ECSDA is helping CSDs to decrease the burden

ECSDA is also pursuing initiatives further supporting standardisation and cost-efficiency of the establishment and maintenance of links.

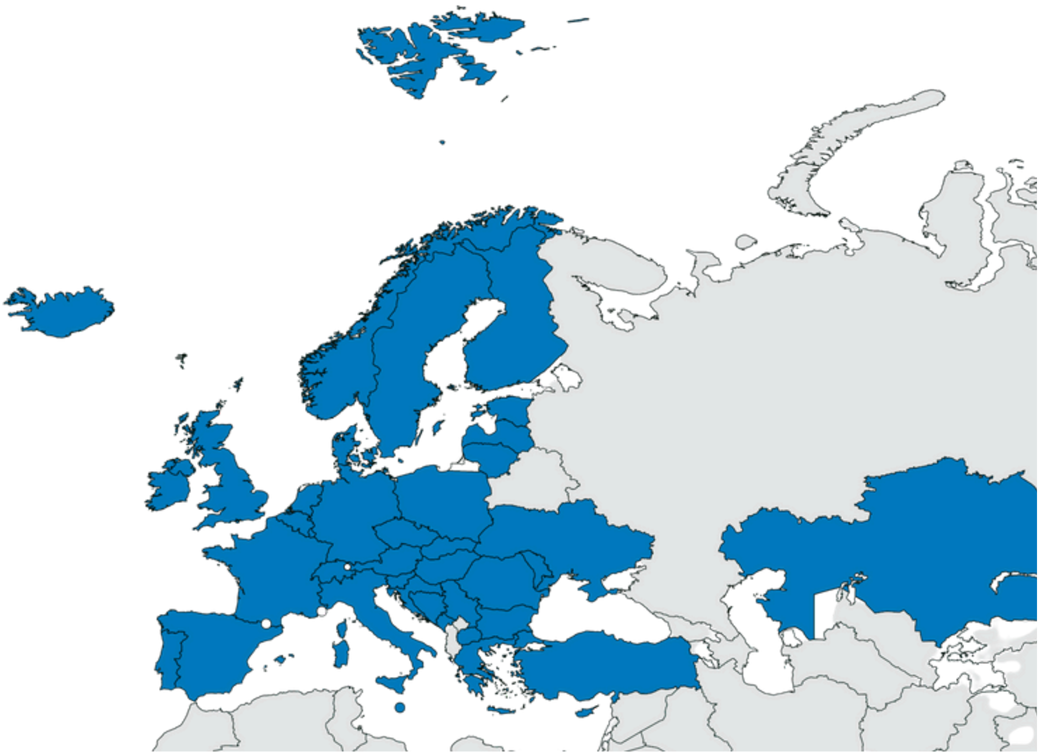
Notably, in application of the CSDR requirements, the Association and its Members developed a due diligence questionnaire which facilitates the collection of information for the assessment of the established links by the European CSDs in line with the CSDR.

It provides the information necessary for the maintenance and opening of new links on a single webpage, which facilitates the process for Members and decreases the need for additional human intervention.

[7] *For more, see Eurosystem, Guideline of the European Central Bank on the management of collateral in Eurosystem credit operations, 13 August 2024, (ECB/2024/22).*

03 Overview of the current CSD links & their evolution over the recent year

The data included in this report were collected in the first half of 2025. The survey covered all ECSDA members, including 29 CSDs established in the EU and 2 from the European Economic Area (EEA) (in Iceland and Norway).



In 2025, a total of 372 Investor CSD links were reported.

The International CSDs - Clearstream with 67 links and Euroclear with 57 links, as well as SIX SIS with 28 links, stand out.

In total, 28 ECSDA members (or 70%) currently maintain at least one outbound Investor CSD link. As of Q1 2025, out of 40 ECSDA Members, only 12 reported having no active outbound Investor CSD links. However, several of these institutions maintain inbound links from other members.

The analysis of the CSD links data is structured in four sub-sections:

1. **General overview of ECSDA Member-CSDs links,**
2. **Links processing settlement through T2S platform,**
3. **International connections between ECSDA members and non-European CSDs, and**
4. **Evolution of the CSD links over the recent years.**

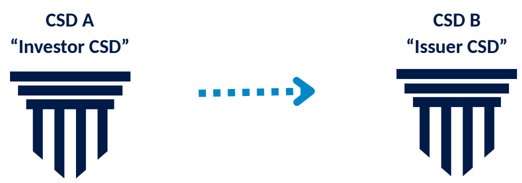
3.1. General overview covering ECSDA's full membership

Different Types of CSD Links

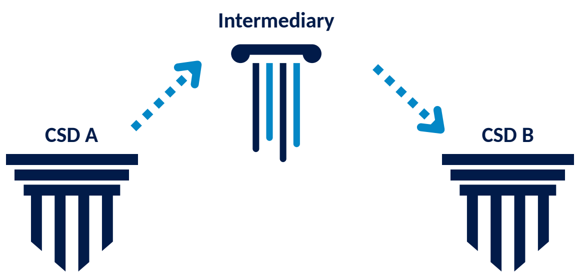
As of 2025, out of the total amount of 372 links between ECSDA members and with the international markets, the regional links between ECSDA members amounted to 256. In the SIU context, we would like to particularly zoom in on these.

The ECSDA overview distinguishes the following main types of CSD links: direct (including direct-operated), relayed, and indirect. A full set of definitions is provided in the Annex.

- **119 links (46.30%) are direct links**, where a CSD holds a securities account in its name directly with another CSD. **These direct links can sometimes be operated by a third party,** typically a bank with expertise in the Issuer CSD's local market. This third-party operator handles instruction and asset servicing duties on behalf of the Investor CSD. These direct-operated links offer the same level of asset protection as standard direct links, **since the securities remain legally registered in the name of the Investor CSD** and are unaffected by any insolvency of the operator. These figures represent a slight increase in the number of direct links compared to 2024, when 116 direct links were recorded, confirming the continued predominance of direct connections within the ECSDA network.



- **Indirect links make up 44 links (17.12%).** Under this model, the Investor CSD relies on a sub-custodian or other intermediary who maintains a direct account at the Issuer CSD and holds securities on the Investor CSD's behalf. The Investor CSD does not have a direct relationship with the Issuer CSD; measures are required to oversee the intermediary, given the additional risks involved[8].



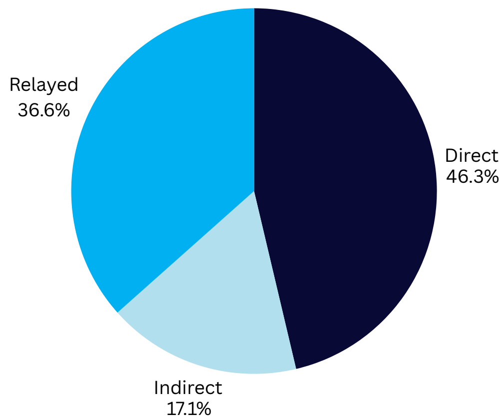
[8] See article 48 of the CSDR and art. 85 of Commission Delegated Regulation 392/2017 with regard to regulatory technical standards on authorisation, supervisory and operational requirements for central securities depositories.

- **Relayed links account for 94 cases (36.58%)**.

These involve a structure including a 'Middle CSD', which maintains the actual account at the Issuer CSD. This model enables faster deployment of new links and reduces operational complexity for the Investor CSD. The Middle CSD is a direct participant in the Issuer CSD, while the Investor CSD has no relation with the Issuer CSD. This figure is slightly lower than in 2024, when 96 relayed links were identified.

Relayed links have become increasingly relevant in recent years, as CSDs seek flexible and scalable access to a wider range of markets without the need to establish a full direct connection while still maintaining the same risk profile. Furthermore, due to the lower risk of CSDs vs other intermediaries, CSDs, Central banks and other institutional investors favor these links versus the indirect ones. The growing use of relayed links reflects the evolving needs of cross-border investors and the increasing demand for adaptable, market-driven access models.

Although not yet fully considered in the CSDR, relayed links are an efficient tool that has existed for many years and help connect the markets when a direct link would be inefficient or unfeasible due to low volume, legal, operational or cost considerations. They offer flexibility and scalability.



Preferences in Link Types

The 2025 CSD link matrix reveals interesting patterns regarding the type of connections maintained across the network. From the Issuer CSD's perspective, there is no dominant preference for one specific link type. A single Issuer CSD may be accessed by different Investor CSDs using direct, relayed, or indirect links, depending largely on the (Investor) CSD's internal arrangements and strategic choices. This confirms that European Issuer CSDs propose an open choice and do not impose structural barriers that would require intermediaries for access.

On the other hand, the data highlight clearer preferences from the Investor CSD perspective. Some CSDs consistently favour one particular link type—whether direct, relayed, or indirect—when connecting to other CSDs. These preferences are often driven by operational considerations, cost structures, balance between the size of the CSD and the anticipated volumes or legacy arrangements.

The link matrix, available on the ECSDA website, provides a detailed mapping of these configurations.

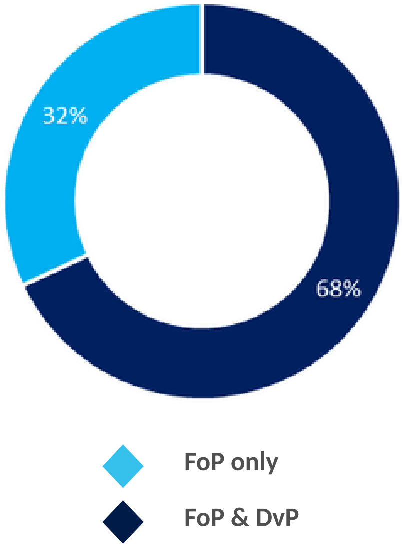
Transfer Types: DVP and FoP

68% of CSD links maintained by ECSDA members in 2025 allow for settlement on a **Delivery versus Payment (DvP)** basis in addition to FOP settlement. A DvP link enables market participants to settle securities transactions against cash within the settlement infrastructure. The cash leg of the transaction is typically settled either in central bank money—via accounts at the relevant National Central Bank (NCB)—or, where applicable, through accounts at the CSD that holds a limited-purpose banking license, referred to (despite the high level of CSD safety) as commercial bank money and requires the application of CSDR Art. 54 (including all relevant banking regulation and additional provisions relevant for limited-purpose banking CSDs, such as on intra-day credit and liquidity).

DvP settlement ensures that cash and securities are exchanged simultaneously, mitigating principal risk and increasing the safety of cross-border post-trade activity. This is why the CSDR Art. 48 suggests that links between CSDs permit DVP, where practical and feasible.

When a CSD offers settlement services that involve the cash leg directly on its books, it must hold a special purpose license for banking-type services defined in the CSDR. These services include the provision of cash accounts, foreign exchange operations, or the pre-financing of corporate actions. CSDs choosing to engage in such banking activities are subject to additional supervisory requirements.

The remaining 32% of links operate on a **Free of Payment (FoP)** basis, which facilitates the transfer of securities without a simultaneous exchange of cash. These types of transfers are frequently used for collateral management—such as in securities lending, repo transactions, or central bank credit operations, as well as in some markets, to support dual-listing. In many cases, the cash leg associated with a FoP instruction is settled outside the CSD infrastructure, typically through commercial bank arrangements, especially when transactions involve foreign currencies or cross-border flows.



Types of asset classes

The majority of links (54%) enable settlement of both equities and debt instruments. When a link does not cover all asset classes, this is generally due to two (sometimes interconnected) factors: (1) the missing asset class entails additional servicing requirements and greater complexity—such as tax treatments and local regulatory obligations—often more significant for equities, and (2) the lack of a viable business case to undertake the additional risk or cost, as investor demand is limited and operating costs are higher for the reasons mentioned above.

For example, around 26% of existing links exclude equities and focus solely on fixed-income instruments. Partly this happens because some of these links are established with the SSSs operated by the National Banks specialised in government bonds and other fixed-income securities.

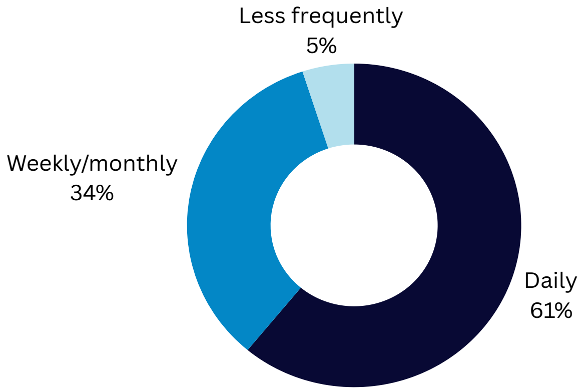
Additionally, this pattern reflects a relatively low demand for cross-border equity investments (at the CSD level). It may have several explanations, including the well-known 'home bias' in equity investing. Notably, the FESE/Oliver Wyman report[9] notes that ***"only roughly 2 % of notional volumes are traded on the regulated markets that are not the stock's primary listing venue."***

[9] https://www.fese.eu/publications/oliver-wyman-report-the-liquidity-matrix-addressing-fragmentation-in-european-equity-markets/

In the case of equities, beyond the above-mentioned low cross-border ‘supply and demand’ visible at the trading level, the limited post-trading volumes of CSD links are closely tied to the fragmentation of legal and tax frameworks, the dispersion of settlement across CSDs and alternative channels such as Settlement Internalisers (SetIns). In the latest TRV Risk Monitor, ESMA notes that “ *(...) SetIn transactions for equities alone were over five times higher than those of CSDs during 2024, with a similar picture for total value settled in equities.*” [10]

Additional issues related to the currency necessary for the DVP settlement or asset servicing may, in some cases, limit the offering of a CSD without a banking licence to a link for equities only as an FoP.

To better understand the cross-border nature of the European post-trade flows, the analysis done at the CSD level needs to be complemented by the analysis of the settlement going through other channels, starting from the end-investor perspective (see section 2.1). It can only be accurate, including the analysis of the volumes of European cross-border flows going through the global custodians and platforms of SetIns.



Market Demand and Frequency of Use

Data from 2025 shows that CSD links remain a vital channel for settlement activity across European markets.

- 61% of all investor links are used on a daily basis by market participants,
- 34% are accessed on a weekly or monthly basis,
- while 5% are used less frequently.

Dormant links

In the ECSDA Links matrix that we have used as the basis for this report, we have purposefully focused on the active CSD links. However, some links that have been active previously but are not solicited by CSD participants at present are put in a “dormant” status. The analysis for the establishment of these links was already performed in the past. Hence, should there be a new sufficient demand, these can be reactivated more easily than creating new links without such a preparatory basis.

[10] ESMA, Trends, Risk and Vulnerabilities Risk Monitor No. 2, 2025, p. 26, at https://www.esma.europa.eu/sites/default/files/2025-09/ESMA50-1949966494-3846_TRV_2_2025.pdf.

3.2.Target 2-Securities (T2S)

The TARGET2-Securities (T2S) initiative, developed by the Eurosystem, was designed to streamline securities settlement across European markets by providing a single technical platform for Delivery versus Payment (DvP) in central bank money.

As of 2025, 21 ECSDA members have established 159 active CSD links, that go via the T2S platform. This reflects a significant expansion since earlier assessments.

These T2S-related links tend to be structurally more homogenous than the broader network. Those links:

- Can be direct links or relayed,
- Support both DvP and FoP settlement types,
- Are used daily, which indicates multiple links per CSD and highly active usage (the figure reflects aggregated daily use across multilateral links and should be interpreted accordingly).

The widespread DvP capability on T2S (in conjunction with T2) aligns with the platform's design as a centralised settlement engine in euro central bank money. The inclusion of FoP support is largely driven by business case demand (e.g. portfolio transfers, exchange of collateral, etc.) and operational needs such as foreign exchange-linked settlement, which remains important even in a centralised euro-based infrastructure.

Despite the number of links established on T2S, usage volumes have not surged uniformly across all members. In fact, except for a few institutions, most ECSDA members have not yet observed a significant increase in settlement volumes on their T2S links. This is primarily linked to the broader issue of low liquidity in the EU capital markets and settlement performed by non-CSDs.

As previously noted, it is important to enhance the understanding of situations where existing CSD links are not used frequently enough and may require additional incentives. These incentives could involve collaboration beyond the settlement space—such as at the trading and/or clearing level or further along the investment chain—to ensure that end-investors can fully benefit from this connectivity and legal certainty.

Some CSDs maintain non-T2S relationships alongside their T2S links, either because settlement continues to occur outside of the T2S environment or because access to non-euro settlement (or use of commercial bank money) remains necessary.

CSDs with banking licenses may continue to offer settlement in other currencies or to maintain proprietary cash account structures (particularly for the participants not having a European central bank account). Therefore, not all connections between T2S participant CSDs are routed through T2S.

It should be noted that the connectivity of a CSD to T2S, in some exceptional recent cases, led to a change in the local account structures at CSD. It resulted in a greater prevalence of omnibus accounts than before, leading to more internalised settlement outside of the Platform.

We firmly believe that as part of the SIU, it is essential to leverage T2S by further enhancing the platform, its resiliency, and ensuring higher volumes, notably by reflecting on ways of increasing the frequency of use by participants and adjusting the connectivity model.

3.3. International connections between ECSDA members & non-European CSDs

In addition to fostering intra-European connectivity, ECSDA members continue to expand their global footprint, establishing and maintaining connections that reach beyond the borders of the EU and EEA. These international CSD links reflect the continuing globalisation of capital markets and the growing demand from European and global investors for diversified cross-border investment opportunities. These connections serve as gateways to access both developed and emerging capital markets, thereby enhancing portfolio diversification.

Out of the total of 372 active European CSD links, 115 links are established with CSDs outside of the ECSDA network. These international connections facilitate the safest investment access to a wide variety of markets, enabling European and global institutions to settle and safekeep securities issued worldwide.

In 2025, 15 ECSDA members report links to non-European markets, spanning all continents, including, among others, the United States, Canada, China, New Zealand, South Africa, the Philippines, Chile, and Australia.

In contrast to intra-EU links, which increasingly benefit from harmonised standards and interpretations under the CSDR (and some also from the T2S platform), extra-European links can raise challenges such as even more divergent legal frameworks, tax regimes, corporate action standards, settlement cycles etc. Establishing and maintaining these links can require substantial legal and operational due diligence, including the negotiation of bilateral agreements, the evaluation of local insolvency laws, defining the moments of finality and the implementation of cross-border asset protection mechanisms. Furthermore, some jurisdictions may impose regulatory restrictions or capital controls.

From a strategic perspective, international links represent a valuable complement to domestic and intra-European connectivity, particularly for CSDs with a strong international client base. These links also play a role in supporting international dual-listings, cross-border fund distribution, and international securities financing transactions.

When they are maintained by the CSDs generally focused on their domestic market, this is often done in collaboration (as a relayed link) with ICSDs and are subject to internationally recognised standards such as the CPMI-IOSCO Principles for Financial Market Infrastructures.

Similar to the intra-European links, the data also point to a pragmatic and demand-driven approach among ECSDA members regarding the establishment of international links. Most CSDs maintain such links where there is sufficient market demand and where the level of risk allows for connecting to the market.

Given the operational and compliance costs involved (including the current geopolitical context), particularly in jurisdictions with a lower level of adherence to the international standards and practices, CSDs focus on deploying new international links in areas where there is clear value for their participants.

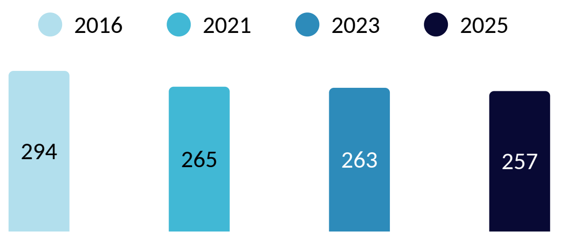
3.4. Evolution of the number and types of CSD links over the recent years

The data used in the report were collected in the first half of 2025, through a comprehensive survey covering all ECSDA members. The Association regularly updates the information in the CSD Matrix, which covers both the intra-European and global links. (In the next exercises, ECSDA may also further focus on the cross-border nature of the services provided by the CSDs to support the EU cross-border issuance, or so-called CSD passporting, based on the CSDR art. 23 and 49.)

Although the links have proven to bring substantial benefits, they can only do so when they are effectively used. Compared to 2023, when 378 total links were recorded (263 within ECSDA and 115 with the other CSDs globally), the overall number of connections has slightly decreased.

In recent years, limited usage has led to the closure of some links, illustrating the importance of maintaining both operational efficiency and market demand to ensure their long-term viability. As the initial legal and other assessments were done and may be reused to a certain extent, should there be a substantial demand, some of these links may be reactivated.

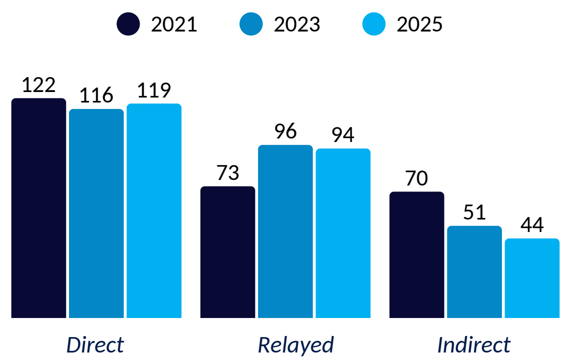
Number of links within ECSDA members



Over the years, we have also observed changes across the various categories, highlighting trends in how CSDs are adjusting their connectivity—balancing risk, costs and benefits for the market while navigating the regulatory framework.

We see a trend of replacing the indirect links with the direct or relayed links. Notably, relayed solutions have increased from 73 in 2021 to 94 in 2025. The number of indirect links has gone down from 70 in 2021 to 44 in 2025, suggesting a gradual shift away from indirect connectivity, considered riskier by the supervisors and the Eurosystem (for the purpose of central bank collateral management policy).

Evolution of types of links within ECSDA members



To conclude the analysis, we noted that the described trends demonstrate the inherent desire of the CSDs to adjust their link network to the constantly evolving market and participants' needs and the SIU objectives.

We noted the creation of additional links, as well as the evolution of some indirect links into direct or relayed ones, with dormant links set aside to be reactivated when demand arises.

Links can serve as high-frequency, operationally critical channels for daily settlement, while also functioning as efficient options for more occasional access awaiting the increase in their use and other actions stimulating the capital markets supply and demand to be taken.

This adaptability shows that CSD remain committed to addressing EU market needs by providing relevant value-added services.

The CSD links are a resilient and scalable component of Europe’s post-trade infrastructure, which requires support in their further use and would benefit from the removal of fragmentation and hurdles, such as tax and currencies, limiting their use.

Looking ahead, as global capital markets continue to evolve and the European SIU project takes shape, the role of CSDs as enablers of international investment is expected to expand further.

Ongoing discussions around regulatory equivalence, data-sharing frameworks, and mutual recognition of post-trade infrastructures may contribute to a more streamlined environment for future development of CSD links.

ECSDA members remain committed to contributing to this evolution, ensuring that their intra-European and international connectivity supports not only investor access and asset safety but also the broader policy objectives of financial stability and market integration.

Conclusion

The 2025 ECSDA report on CSD links confirms the critical role that they play in connecting the issuers and investors across Europe and beyond, enabling cross-border settlement, supporting investor access, and fostering integration across European and international capital markets.

Supporting further consolidation of the European market and the SIU project as much as possible, despite the challenges arising from the fragmentation of the legal and tax framework, as well as limited market demand, CSDs are taking actions to find solutions. In addition to the development of common platforms and M&As, they continue adjusting their link network, participating in the regional cooperation and developing new direct and relayed links.

The CSDR framework makes CSD links the safest arrangements for cross-border settlement. The data collected highlights the breadth and diversity of the link network with varying levels of usage and differing operational models tailored to market demand. The current number and scope of links are taking into account the complexities arising from fragmentation or specificities in a demand for settlement at the CSD level.

While the standardisation undertaken by ECSDA and the broader industry, including within the AMI-SeCo and as driven by T2S and ECMS recently, the level of divergence beyond the post-trade infrastructure remit is still substantial. The fragmentation at the EU Member-State level — whether legal, fiscal, or operational—continues to hinder more fluid and cost-effective cross-border activity.

"In addition to numerous other initiatives of EU CSDs in view of the SIU, CSDs are working to deliver full accessibility of all EU securities through a single CSD investor account."

ECSDA reiterates its Members' continued commitment to building and maintaining links where the European market needs justify them. **In addition to numerous other initiatives of EU CSDs in view of the SIU, CSDs are working to deliver full accessibility of all EU securities through a single CSD investor account.** EU CSDs are gradually building the connectivity to all EU markets – big or small - through the CSD links where they are relevant.

Investors looking for a pan-European coverage can find a solution already today and should be able to find it even easier in the future.

While the CSDs take actions, the existence of a link alone is not sufficient to guarantee liquidity or usage. Broader ecosystem collaboration and end-investor incentives remain crucial. Stimulation of the supply and demand is fundamental to improving cross-border volumes and further use of CSD links and T2S.

ECSDA calls for:

- A coherent and pragmatic supervisory approach within the EU, taking into account the need for an end-to-end view starting from a retail investor perspective, ensuring that all actors take relevant SIU actions;
- Exploration and promotion of opportunities for regulatory simplification for CSD links setup and maintenance, as well as actions decreasing the fragmentation would greatly contribute to their establishment;
- Creating incentives to use the available links and other infrastructure more in the future, as well as active engagement across the investment chain to maximise the value of highly regulated and safe CSD infrastructures, would facilitate retail investors' access to investment opportunities across Europe.

Only through such coordinated efforts can the EU achieve its goals of deepening the SIU and CMU, and reinforce the global competitiveness of European financial markets.

Annexe 1 : Simplified example of a checklist containing different steps that a CSD needs to take for the establishment and maintenance of a link

A. Create/enhance the link

1. Identification of a new/enhanced market access need:

Main dimensions to be covered:

- Markets and intermediaries
- Legal status of securities
- Finality of settlement
- Regulatory environment and controls
- Risks for the CSD and/or its clients

2. Detailed market assessment, selection and review process:

- Assessment and approval
- Feedback from internal stakeholders
- New CSD link assessment
- New supplier assessment
- RFP/RFI of the supplier
- Fee negotiation
- Emergency plan
- Formulation and submission of the request for access to CSD(s)
- Storing documents and internal communication

3. Contractual arrangements:

- Legal agreement (varies according to type of link)
- Appendices: List of eligible securities, SLA, Fee schedule, other
- Documentation enforcing national law abroad (e.g. Three Points Declaration)
- Founding and statutory information
- Legal Opinion: A legal opinion is obtained from an external legal counsel appointed by the CSD whenever a new link is established or a new supplier is appointed. Network Management of the CSD liaises with in-house legal counsels who ensure that the legal opinion is in line with CSD's requirements.

4. Documentation and communication:

Contractual issuance and storing:

- Issuance and signature
- Monitoring
- Signature verification
- Storing

Notification to authorities:

- Notification to the relevant NCAs
- Each time there is a change, the relevant NCA may need to be informed (informally)
- Internal communication
- Client communication

5. IT implementation:

- IT development
- Testing: HLTS with supplier/CSD
- Implementation: Technical implementation + Go live

B. Maintaining the link

1. Yearly due diligence visit (for suppliers)

- Planning
- Information gathering
- On-site visit
- Call report and completion of the Due Diligence Visit document

2. Yearly link arrangement review (for CSDs)

- Risk assessment, monitoring
- Planning
- Link arrangement review questionnaire
- Review in accordance with the agenda, and if physical securities are held, vaults are visited, and securities verified
- Call report and completion of review

Annexe 2 : Definitions & Acronyms

The overview of CSD links uses the following terminology, in line with the definitions contained in the CSD Regulation (EU Regulation No 909/2014 on improving securities settlement int he European Union and on central securities depositories):

Direct link	A CSD A (called the “Investor CSD”) has a securities account in CSD B (called the “Issuer CSD”)
Direct (operated) Link	A CSD A (called the "Investor CSD") has a securities account in CSD B (called the "Issuer CSD"), and the daily management of the account is outsourced to a third party, typically a reputable custodian bank called the "operator".
Indirect Link	A CSD A has an account with an intermediary (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.
Investor CSD	A CSD which holds a securities account in the books of another CSD (the “Issuer CSD”) in order to allow its participants to hold securities issued in this other CSD.
Issuer CSD	A CSD that maintains a securities account in its books on behalf of another CSD (the “Investor CSD”).
Relayed Link	A CSD A has a securities account with a CSD C (called "the middle CSD") which holds securities on behalf of CSD A at CSD B (the “Issuer CSD”). CSD C is a direct participant in CSD B. CSD A is not.

1.8 € quadrilion Instructions processed annually

74 € trillion worth assets

About ECSDA

The European Central Securities Depositories Association (ECSDA) brings together 40 Central Securities Depositories (CSDs). The Association comprises Members located both within and outside the EU and EEA, having a deep engagement in Europe.

CSDs (Central Securities Depositories) are regulated market infrastructures that facilitate the issuance, settlement, and servicing of securities within the EU capital markets, connecting companies and investors across the Union.

European CSDs play a crucial role in supporting issuers and investors as they navigate Europe's complex, multi-jurisdictional environment. They process corporate actions on behalf of issuers and for the benefit of entitled investors, ensuring adherence to corporate laws across all 27 EU jurisdictions and beyond.

Collectively, ECSDA members safeguard securities valued at over EUR 74 trillion and process securities deliveries exceeding EUR 1.818 trillion annually. The data collection methodology applied in this report is publicly available on the ECSDA website.

ECSDA members

AT - OeKB CSD (Austria)
BA - CR HoV RS (Bosnia & Hercegovina)
BA - RVP (Bosnia & Hercegovina)
BE - Euroclear Bank (Belgium)
BE - Euroclear Belgium
BG - CD AD (Bulgaria)
CH - SIX SIS Ltd (Switzerland)
CY - Cyprus Stock Exchange (Cyprus)
CZ - CSD Prague (Czech Republic)
DE - Clearstream Europe AG (Germany)
DK - Euronext Securities Copenhagen (Denmark)
ES - Iberclear/BME/SIX (Spain)
FI - Euroclear Finland
FR - Euroclear France
GR - ATHEXCSD (Greece)
HR - SKDD (Croatia)
HU - KELER Ltd (Hungary)
IT - Euronext Securities Milan (Italy)
IS - VBM (Iceland)
KZ - AIX CSD (Kazakhstan)
KZ - KCSD (Kazakhstan)
LV/EE/LT/IS - Nasdaq CSD SE (Latvia)
LU - Clearstream Banking SA (Luxembourg)
LU - LuxCSD (Luxembourg)
MD - DCU (Moldova)
ME - CSD & CC Montenegro
MK - CSD AD Skopje (North Macedonia)
MT - Malta Stock Exchange (Malta)
NL - Euroclear Nederland
NO - Euronext Securities Oslo (Norway)
PL - KDPW (Poland)
PT - Euronext Securities Porto (Portugal)
RO - Depozitarul Central (Romania)
RS - CR HoV (Serbia)
SE - Euroclear Sweden
SI - KDD (Slovenia)
SK - CDCP SR (Slovakia)
TR - MKK (Turkey)
UA - NDU (Ukraine)
UK - Euroclear UK & International

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