EUROPEAN CENTRAL BANK

EUROSYSTEM

Remaining barriers to integration in securities post-trade services – issues and recommendations

Advisory Group on Market Infrastructures for Securities and Collateral

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Contents

Executive summary

In recent years, the integration of EU capital markets has become a key priority for policymakers and stakeholders across the EU. This shared vision is underscored by major contributions such as the Draghi[1], Letta[2] and Noyer[3] reports, as well as the European Commission's flagship initiatives, specifically the capital markets union and the savings and investments union. These aim to create a truly unified and efficient capital market across Europe to foster greater cross-border investment and economic growth. Against this backdrop, this report focuses on the critical role of the securities post-trade infrastructure – an important element in achieving a pan-European vision of an integrated savings and investments union.

Building on the ongoing work of the Advisory Group on Market Infrastructures for Securities and Collateral (the AMI-SeCo)[4] and a dedicated survey it conducted with all its stakeholders completed in 2024,[5] this document highlights remaining barriers to market integration in EU post-trade services. In terms of geographical scope, the primary focus of this report is the European Union, however many of the issues raised are equally relevant to interaction between EU actors and entities established in non-EU jurisdictions.

The barriers and issues are categorised into four general areas, namely fundamental legal barriers, barriers in the buyer-to-seller relationship, barriers in the issuer-to-investor relationship and transversal issues. For each barrier, a recommendation is made for follow-up action and the addressee (entity to act) is indicated. Prioritisation is based on two factors: (i) the impact on post-trade integration, and (ii) the estimated time and effort required to address the issue.

Overall, this report finds that many of the barriers highlighted in the 2001 and 2003 Giovannini reports[6] and in the 2017 report by the European Post Trade Forum (EPTF)[7] remain unaddressed, in part or in full, despite the significant progress in EU post-trade integration of the past two decades. These barriers include fundamental legal constraints stemming from differences in national securities legislation and

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1 Draghi, M., *Draghi report – The future of European competitiveness*, European Commission, September 2024.

2 Letta, E., *Much more than a market – Speed, security, solidarity – Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens*, April 2024.

3 Noyer, C., *Developing European capital markets to finance the future – Proposals for a Savings and Investments Union*, April 2024.

4 The AMI-SeCo (which combines the former *T2S Advisory Group* and the *Contact Group on Euro Securities Infrastructures*) is the advisory body through which the Eurosystem aims to support and catalyse post-trade market integration by creating market standards and monitoring their compliance, as well as by publishing reports providing input to the EU lawmakers on matters pertinent to post-trade integration. This body is comprised of market participants in the EEA, Switzerland and the United Kingdom. Views and reports by the AMI-SeCo do not necessarily represent the views of the European Central Bank. See the AMI-SeCo mandate for more information.

5 Advisory Group on Market Infrastructures for Securities and Collateral, *AMI-SeCo survey on remaining barriers to securities post-trade integration in Europe*, ECB, 17 November 2023.

6 Giovannini Group, Report: Cross-Border Clearing and Settlement Arrangements in the European Union, November 2001, and Giovannini Group, Report: EU clearing and settlement arrangements, April 2003.

7 European Post Trade Forum, EPTF Report – 15 May 2017, 27 July 2017.

corporate law, obstructions arising from asset servicing practices and rules (corporate events, registration, shareholder identification) and difficulties relating to tax processes.

Given that these areas are already covered by past reports, no new findings are given in the current report, which simply confirms that those barriers still exist and provides an up-to-date status quo with renewed recommendations. However, other issues are identified that have persisted over time, primarily owing to inertia legacy practices and to a lack of awareness. This is particularly true for settlement, although it had been anticipated that many of these issues would have been resolved with the launch of T2S settlement platform in 2015 and in the wake of other developments in this area.

In line with previous reports, this report finds that barriers related to tax processing, corporate events processing and legal/regulatory issues have the greatest impact on post-trade integration. These will require harmonisation efforts, especially in the domain of national law. While barriers to free choice and seamless settlement are significant in terms of impact, they may be easier and quicker to address given that, for the most part, they call for enforcement or clarification of existing frameworks rather than legislative harmonisation.

This report was drafted in parallel with work by the industry on the recommendations for preparing the EU for migration to a T+1 standard securities settlement cycle. The AMI-SeCo finds that there are significant synergies between the recommendations put forward by the industry for a seamless transition to T+1 and the broader and longer-term objective of achieving a deeper level of settlement processes integration in the EU. Consequently, for some settlement issues/barriers, the report recommends relying on actions and recommendations already identified by the T+1 Industry Committee and offers potential monitoring and support by the AMI-SeCo beyond the T+1 changeover horizon.

The AMI-SeCo is committed to creating a framework for assessing progress with removal of the identified barriers and, where relevant, to contributing to their actual removal.

See Annex 3 for table of barriers.

1 Introduction

Efforts to put in place a true European single market for capital date back to the creation of the European Economic Community in 1960. While a number of measures have been implemented in the decades since, stakeholder discussions on this vision were catalysed by the European Commission's capital markets union action plans of 2015 and 2020. However, the vision of a single market for capital, i.e. a savings and investments union in Europe or the EU is yet to be achieved. Compared with other regions around the globe, EU capital markets have developed below their potential considering the EU's GDP and population. This has become even more apparent in the past 10-15 years. To facilitate the creation of this single market, investors, buyers, issuers and sellers should have the same level of service, access and costs in a cross-border environment as in a domestic market.

This report by the Eurosystem's Advisory Group on Market Infrastructures for Securities and Collateral (the AMI-SeCo) highlights the remaining barriers to integration in European securities post-trade services. It builds on the outcome and assessment of the AMI-SeCo's dedicated survey[8] among key post-trade stakeholders conducted between November 2023 and February 2024, as well as on the findings of previous industry reports and analysis. This includes the first overarching analysis focusing on European integration of securities post-trade services provided by the 2001 and 2003 Giovannini reports[9] and the systematic review of such barriers undertaken by the European Post Trade Forum (EPTF) in 2017[10]. The annex to the latter report provides a comprehensive description of the post-trade environment, a prerequisite for fully understanding the context and details of the barriers identified by the AMI-SeCo.

This report consolidates the current views and positions of a wide representation of the EU post-trade industry.[11] As highlighted here, the remaining barriers are diverse and their sources range from high-level legal or regulatory complexities to specific market practices.

1.1 Towards a single market

In 2024, public discourse on a capital markets union and a savings and investments union intensified with the publication of high-profile reports by Enrico Letta (former Prime Minister of Italy),[12] the French Ministry of Economy and Finance (coordinated

8 Advisory Group on Market Infrastructures for Securities and Collateral, *AMI-SeCo survey on remaining barriers to securities post-trade integration in Europe*, ECB, 17 November 2023.

9 Giovannini Group, *Report – Cross-Border Clearing and Settlement Arrangements in the European Union*, November 2001, and Giovannini Group, *Report – EU clearing and settlement arrangements*, April 2003.

10 European Post Trade Forum, *EPTF Report – 15 May 2017*, 27 July 2017.

11 Experts from associations (central clearing counterparties, CSDs and custodians) and from individual market entities (CSDs, custodians and clearing houses) were represented in this AMI-SeCo sub-group.

12 Letta, E., *Much more than a market – Speed, security, solidarity – Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens*, April 2024.

by Christian Noyer, former Governor of the Banque de France),[13] and a report commissioned by the European Commission and spearheaded by Mario Draghi (former ECB President and Prime Minister of Italy).[14] All three reports acknowledge that the ongoing fragmentation of securities post-trade services is a barrier to achieving a capital markets union, albeit one of many impediments.

Scaling up the EU capital markets calls for a series of structural measures to incentivise participation by investors in capital markets and this is currently under scrutiny by European public policymakers. These measures range from increasing financial literacy, encouraging EU citizens and businesses to adopt a more risk-taking approach (e.g. equity investment/financing), providing tax incentives, ensuring regulatory simplification and encouraging the development of investment funds, etc. Removing long-standing barriers to integration that affect the organisation and services of market infrastructures would further enhance EU integration and competitiveness.

The obvious comparison in this regard is with the United States, where capital markets are larger and attract more investors, facilitating more investment in firms. The gap between the EU and United States has been persistent and, most importantly, has widened since the global financial crisis in 2008. The reports referred to above describe the challenges for European capital markets, while a 2024 report by the European Capital Markets Institute (ECMI)[15] delves more deeply into the structure of the European financial markets and banking sector.

Creating a true capital markets union and savings and investments union will require efforts by all EU stakeholders and cannot be achieved by just one entity alone. In March 2024, the ECB's Governing Council issued a statement[16] supporting work on building a capital markets union, and in particular the harmonisation of procedures for securities settlement and collateral management through the introduction of a pan-European rulebook, as well as by further developing the existing pan-European market infrastructures operated by the Eurosystem. Addressing remaining barriers to post-trade integration has also been a key theme of the European Commission's savings and investments union-targeted consultation[17] on the integration of EU capital markets that it launched in April 2025. Furthermore, the Eurosystem is set to continue exploring new technologies for issuance, trading and settlement, and potentially the possibility of also leveraging these for integration in the future.[18]

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13 Noyer, C., *Developing European capital markets to finance the future – Proposals for a Savings and Investments Union*, April 2024.

14 Draghi, M., *Draghi report – The future of European competitiveness*, European Commission, September 2024.

15 European Capital Markets Institute, "Staying ahead of the curve – Shaping EU financial sector policy under von der Leyen II", *ECMI, CEPS and ECRI Task Force Report*, 2024.

16 *Strong reasons to support and enhance the Capital Markets Union – Statement by the ECB Governing Council on advancing the Capital Markets Union*, ECB, 7 March 2024.

17 This consultation covered a wide range of areas seen as potential obstacles to a capital markets union. See the news article entitled "The Commission launches a targeted consultation on obstacles to capital markets integration across the EU", published on the European Commission's website on 15 April 2025.

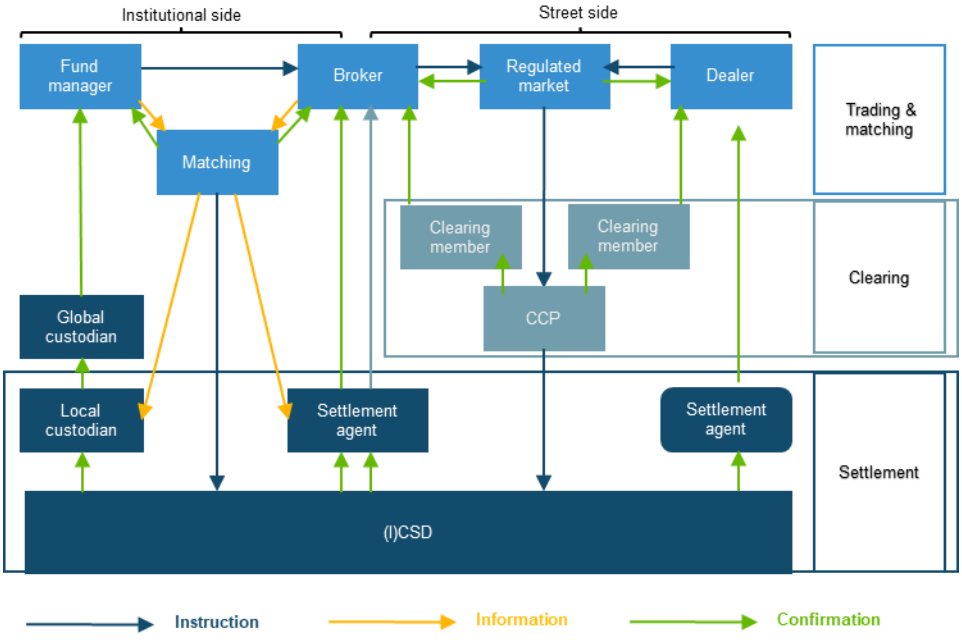
18 See the press release entitled "Eurosystem expands initiative to settle DLT-based transactions in central bank money", published on the ECB's website on 20 February 2025.

1.2 Contribution of post-trade services integration to the capital markets union

The three recent high-profile reports referred to above include a discussion of financial market infrastructures and securities post-trade services. They concur in the view that European post-trade services remain fragmented along national borders, despite various legislative measures and policy initiatives taken. They identify this fragmentation as one of the factors contributing to the significant smaller size of the EU capital markets compared with the United States. They highlight the substantial number of securities market infrastructures in Europe: 41 trading venues (250-300 if multilateral trading facilities are included); 15 CCPs (19 if derivatives and energy clearing counterparties are included); 33 central securities depositories (CSDs) (which operate distinct securities settlement systems, including those operated by national central banks).[19] In comparing this with the consolidated infrastructure of the United States, the reports emphasise the need for convergence and harmonisation of both the regulation and practices of European market infrastructures. The European post-trade environment needs to support the vision of a capital markets union that makes European markets more attractive to investors by allowing them access to all those markets through a single relationship. This, in turn, requires smooth and effortless communication and information flows between different entities within the market. Harmonisation in the post-trade sector should be seen as a necessary, but not sufficient, condition for achieving that vision. As can be seen from Figure 1 below, post-trade covers a particular subset of flows and interactions in the exchange of securities. In addition, achieving the vision of a true savings and investments union and capital markets union requires a strong injection of liquidity, which the post-trade sector cannot generate autonomously. This liquidity would also create the conditions for greater efficiency and scalability across the industry.

[19] ECB sources.

Figure 1
EU value chain for (post-)trade transactions



Source: Oxera Consulting Ltd.
Notes: This figure does not cover all possible value chains or pre-trading processes, such as the issuance layer. Buyers and sellers (represented here by brokers/fund managers) go through a range of intermediaries, including intermediaries in the clearing and settlement chain, which are not shown here.

Fragmentation of EU capital markets, particularly in the post-trade sector, is the result of structural challenges and of jurisdictional fragmentation within the EU. As this report reiterates and confirms, this fragmentation arises, among other things, from securities legislation and corporate law and the features of specific markets and tax procedures, all of which underlie the design and functioning of post-trade services and procedures.

Within the context described above, the purpose of this report is to contribute to discussion of how a capital markets union and a savings and investments union and can be built by providing:

- a status update on outstanding post-trade barriers;
- input to investigation of the underutilisation of T2S.

From a post-trade perspective, what constitutes a true single market can be best described in terms of *visions* for frameworks and processes within the sector. The following key visions have been identified for a capital markets union post-trade environment.

1. Harmonised laws in terms of their impact on cross-border post-trade activities making Europe a simple and safe place for investment with uniform and comprehensive investor rights, irrespective of the holding chain or model employed.

2. Full access for all European investors to all European securities and for all European securities issuers to all European investors, ensuring full rights for both, irrespective of the holding model employed.

3. A European post-trade infrastructure that enables all buyers and sellers of European securities to trade, settle and hold European securities safely and efficiently through a single securities account and to use that account to manage all their securities activities, including collateral management, securities lending and settlement with all other European buyers and sellers of that security.

Key milestones have been achieved in European post-trade integration in the last two decades that have partly paved the way to achieving the above visions. These include the following.

- The launch and development of T2S, including the core T2S harmonisation agenda. This has contributed directly to the removal or reduction of some of the barriers that were identified in the Giovannini reports and 2017 EPTF report, such as: differences in national settlement platforms; differing business hours and calendars; the absence of or differences in intraday settlement finality affecting cross-border transactions; remote or foreign access to settlement systems; and proprietary information technology or communication/messaging standards.

- Progress on compliance with market harmonisation standards, including corporate actions standards (T2S, SCoRE and Market CA standards) and standards for shareholder identification. Although far from completely removing the barriers related to corporate events, compliance with these standards has significantly contributed to aligning practices by creating a path of convergence followed (at different speeds) by most European market players.

The introduction of EU regulatory measures, and in particular the Central Securities Depositories Regulation (CSDR)[20] (but also some of the other measures mentioned in the previous section). This has directly dismantled barriers arising from settlement cycles differences, settlement finality issues, non-discriminative access to foreign infrastructures, high-level protection of collateral arrangements, differing authorisation and conduct of business requirements for CSDs; and limitations on the freedom of issuance. In some cases, however, frictions remain due to differing national implementations or interpretations.

Nevertheless, despite significant improvements, **key sources of fragmentation remain and continue to impede better integration by market forces in the securities post-trade domain.** These factors have prevented previous market-led integration and consolidation efforts, such as implementation of the market standards and recommendations set out in the reports referred to earlier. The

[20] Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 (OJ L 257, 28.8.2014, p. 1).

outstanding barriers are identified and presented in the following sections of this report.

1.3 Shortening of the standard securities settlement cycle

At the time of drafting of this report, several efficiency-enhancing initiatives relevant to post-trade services were underway. The most significant (and impactful) is related to the shortening of the standard securities settlement cycle from two business days after the trade date (T+2) to one business day (T+1). The project to implement T+1 across Europe (the EU, but also coordinating with the United Kingdom and Switzerland) by 11 October 2027 will require major efforts to increase efficiency if the challenges of reducing the time between trade and settlement are to be met. It is important to note that the focus of this report is not on T+1 but on the longer-term objective of full post-trade integration. Some of the barriers considered here are, however, also relevant for the discussions on T+1. Accordingly, some of the recommendations made in this report rely on the T+1 Industry Committee proposals, in the expectation that the industry will implement those proposals. The AMI-SeCo will monitor progress in this area and stands ready to support stakeholders during this transition.

2 Methodology and structure

With a focus on post-trade, this report leverages the extensive analysis, monitoring and harmonisation work already done by the industry, regulators and the Eurosystem. In this context, the AMI-SeCo has analysed, discussed and agreed on the barriers explicitly described here. This was undertaken by a dedicated group of experts encompassing a wide range of market infrastructures and post-trade activities and through outreach to specific associations and market participants.

2.1 Scope

The current report aims to contribute to the discussions and vision of a capital markets union and savings and investments union from **a securities market post-trade integration perspective.** Post-trade is a significant part of ensuring that European capital markets function smoothly, making integration in this area highly relevant for that vision. Although (pre)trading is not covered explicitly in this report, certain aspects interact with post-trade processes and affect downstream post-trade activities. For instance, issuance and trading practices can have a direct impact. Where barriers are dependent on the interaction between these areas, this report also highlights the specific (pre)trading-level activities concerned.

2.2 Analytical approach

To effectively capture the dynamics of post-trade barriers and their impact on financial flows, the analysis begins by differentiating between the investor/issuer and buyer/seller[21] relationships. Each process, along with its corresponding barrier, is positioned where its impact is most evident. Overarching these relationships are the frameworks within the European legal environment, which exert a significant influence over post-trade activities. Additionally, some processes and barriers are "transversal", meaning that they impact multiple areas and do not align neatly with any single relationship or legal framework. The primary objective of this analysis is to identify barriers that disrupt flows in each of these processes. In addition, practical suggestions and recommendations are given in this report that are addressed to the applicable entities within the landscape. Thus, to fully capture the interdependencies in the post-trade sector, the barriers are described in this report as they relate to:

(i) legal and fiscal frameworks;

(ii) processes in the issuer and investor relationship;

[21] The buyer-seller relationship, where applicable, extends beyond the standard securities trade scenario given that it corresponds to the securities receiver-giver relationship in a collateral/securities lending transaction.

(iii) processes in the buyer and seller relationship;

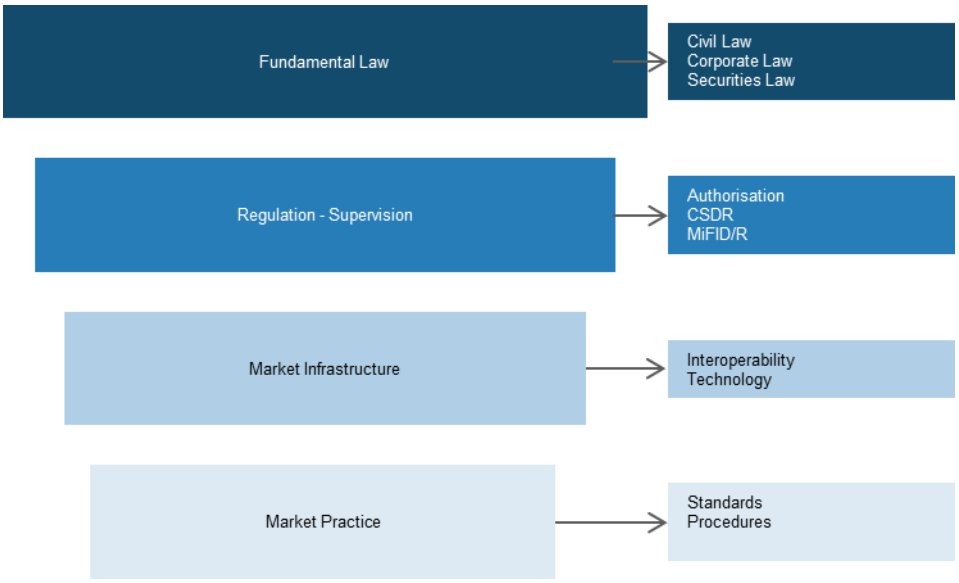
(iv) activities that apply transversally across multiple operational processes.

Due to the involvement of a chain of post-trade actors in any securities transaction (see Figure 1 above), these barriers may stem from a variety of sources, each having a different impact. As part of the analysis, the AMI-SeCo has also identified four areas where concrete barriers can be traced back to: **legal and fundamental law** that sets the frameworks governing the financial sector; **regulatory and/or supervisory** measures targeted at specific entities or actions; the current landscape of **financial market infrastructures**; and **market practices** underlying the day-to-day operations of different market players in this landscape.

As shown in Figure 2 below, these barriers can be listed hierarchically based on their impact and encompassing both direct and indirect consequences. While legal barriers are the most influential, they may be less immediately visible and often require more consideration before introducing change, as evidenced by past attempts at harmonisation. Similarly, regulatory and/or supervisory barriers, which are often targeted at certain financial instruments or markets, have a broad impact. There are then the barriers stemming from choices made by market infrastructures on the creation of connections and on harmonisation beyond national borders. Lastly, some barriers persist due to the lack of harmonised operational procedures and communication methods that are fundamental to the smooth flow of transactions and affect daily information flows between actors in the post-trade sector, making barriers at this level particularly visible.

Figure 2

Sources of post-trade barriers to EU market integration



Note: The right-hand boxes provide non-exhaustive examples of the frameworks and processes that underlie the high-level sources

Due to the wide scope of the sources of barriers, the impact and priority levels may vary, depending on which level they stem from. Consequently, it is challenging to

provide a quantitative measurement of the impact. Given that one of the main goals of this report is to provide recommendations on how these barriers can be removed, the impact analysis in this report is complemented by a measure of the difficulty in implementing the recommendations made. The assessment of priority attempts to capture two dimensions: the general **impact** of the barrier on further market integration and the **difficulty** in resolving the barrier. To this end, the following categories have been identified.[22]

High impact/difficulty

- Barriers stemming from national and/or EU-level frameworks governing the operations of the post-trade sector, implying consequences for the entire transactions chain. These barriers lead to significant differences between domestic and cross-border activity and require complex adaptation by post-trade actors for them to fulfil their obligations as service providers.
- The difficulty in removing these barriers is high given that it requires larger-scale initiatives in terms of either legislation, industry investment, compliance and/or coordination across the sector and borders.

Medium impact/difficulty

- Barriers to variation of, say, specific policies. These are, however, not as detrimental for cross-border securities holdings and transactions. This includes barriers in core post-trade flows due to legacy practices that lead to additional operational burdens.
- The difficulty in removing these barriers is medium given that it requires medium-scale initiatives in terms of either legislation, industry investment, compliance and/or coordination across the sector and borders.

Low impact/difficulty

- Barriers relating to inefficient practices in peripheral post-trade flows, leading to increased complexity or processing time, albeit with a low impact on the overall integration of securities markets.
- The difficulty in removing these barriers is low given that it requires smaller-scale initiatives in terms of industry investment, compliance and/or coordination across the sector and borders.

Each barrier identified is placed in one of the above categories and, correspondingly, each is accompanied by both short-term (immediate) and long-term recommendations, as applicable.

Assessing priorities based on these two dimensions (impact and difficulty) allows for comparison, not only between specific barriers but also across the high-level sections (I-IV) set out above. For instance, while fundamental legal barriers have a

[22] The categories partly build on those established in the AMI-SeCo's 2022 *Impact analysis report on non-compliance with T2S harmonisation standards* but have been amended to better capture the higher-level barriers.

high impact on integration and are thus a high priority for removal, experience shows that harmonising legal frameworks is challenging. The same level of difficulty applies to some barriers within the buyer-seller and issuer-investor relationships area, given that their removal often involves coordination between a wide range of actors.

Including a categorisation of difficulty provides additional clarity on how quickly a barrier could potentially be resolved. For example, barriers categorised as low difficulty are expected to be removed relatively quickly, which in turn raises their priority given that they could be considered “quick wins” and, in aggregate, have a significant impact on post-trade integration.

Figure 3

Impact and removal difficulty levels for EU post-trade barriers

	Impact of barrier	Difficulty of removal	Example
High	Significant differences between domestic and cross-border activity, requiring complex adaptation by post-trade actors to fulfil their obligations as service providers.	Requires larger scale initiatives in terms of either legislation, industry investment, compliance and/or coordination across the sector and borders.	BARRIER 3: Corporate law barriers to harmonised processing of corporate events
Medium	Impacting core post-trade flows. Not as detrimental for cross-border securities holdings and transactions.	Requires medium-scale initiatives in terms of either legislation, industry investment, compliance and/or coordination across the sector and borders.	BARRIER 13: Remaining challenges for shareholder identification
Low	Impact on peripheral post-trade flows, leading to increased complexity or processing time, albeit with a low impact on the overall integration of securities markets.	Requires smaller scale initiatives in terms of industry investment, compliance and/or coordination across the sector and borders.	BARRIER 37: Inconsistent use of transaction type in messaging

Note: The examples given here are barriers for which both the impact and difficulty of removal are in the same category.

2.3 Structure

The practical measures and recommendations outlined here are based on a clear vision of what an integrated post-trade system in Europe would potentially look like. This vision is established for the high-level areas specified in the Introduction above (Section 1.2 of this report), as well as for the concrete specific barriers identified within each section, indicating the ideal states for the procedures concerned.

The structure of this report reflects this logical order of activities in the securities post-trade processing value chain. Accordingly, Section 3 identifies barriers stemming from fundamental legal frameworks and Section 4 covers processes in the issuer and investor relationship (including issuance and custody and asset servicing). Section 5 looks at activities in the buyer/seller relationship (i.e. clearing and settlement), while Section 6 examines transversal issues (messaging and data,

collateral management, regulatory reporting and know-your-customer procedures). Section 7 reflects on the potential impact of new technologies.

3 Barriers in the legal frameworks

The EU consists of 27 national jurisdictions and legal regimes. While core aspects of regulation of financial services and of financial infrastructures have been broadly harmonised through targeted EU legislation (e.g. the Markets in Financial Instruments Directive (MiFID)[23], the European Market Infrastructure Regulation (EMIR)[24] and the CSDR), the fundamental legal frameworks that derive from national civil and property law governing (defining) securities and corporates have remained largely unchanged. In cross-border securities transactions, this can result in legal uncertainty. Although some issues can be worked around or mitigated by cross-border service providers, other issues, notably as regards the rights of relevant actors, remain significant. Additionally, some European regulations such as the CSDR explicitly refer to national law. Consequently, differences in these laws, and uncertainties on how they apply on a cross-border basis, have operational implications for post-trade players active on several markets. These uncertainties were already covered in the 2003 Giovannini report and the 2017 EPTF report. The latest dedicated and systematic analysis of these issues was conducted by the European Commission's Legal Certainty Group in its 2008 report.[25]

In a true capital markets union, the investor's place of residence vis-à-vis the issuer (especially if both are located within the EU) should not affect the basic rights and obligations of either party. Cross-border securities investment should enjoy the same level of legal certainty as domestic investment. Achieving this would increase the attractiveness of Europe as a simple and safe place for investment.

BARRIER 1: Differences in definitions and ownership rights to book-entry and intermediated securities

Legal – Fundamental law

Ideal state

Building on the recommendations made in the Giovannini reports and the 2017 EPTF report and elaborated on by the Legal Certainty Group, the EU has a common framework for ownership rights attaching to book-entry securities. This framework contains common rules on the rights and obligations of securities account providers. It also includes harmonised definitions of bondholder and shareholder, while ensuring equal treatment of investors irrespective of the location of the issuers,

[23] Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (recast) (OJ L 173, 12.6.2014, p. 349).

[24] Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories (OJ L 201, 27.7.2012, p. 1).

[25] *Second Advice of the Legal Certainty Group − Solutions to Legal Barriers related to Post-Trading within the EU*, European Commission, August 2008.

account providers or investors.[26] This EU framework is, to the greatest extent possible, compatible with relevant global initiatives in this area in order, for example, to facilitate investment in the EU by global investors.

Description of the barrier[27]

Member State securities and corporate laws differ in how they define rights in/attaching to book-entry securities and what the legal effects of holding or transacting a security are. Due to the lack of harmonisation, or at least of a comprehensive and general conflict of laws framework, this results in increasing complexities and, potentially, legal risk for some cross-border securities transactions.

- The rights of securities owners may not be recognised under national laws if certain national idiosyncratic rules on holding chains/account service providers are not followed. For example, if an investor uses an account provider established in a Member State other than that in which the security was issued, the investor's rights may be different/restricted as compared with those of investors using an account provider established in the same Member State the security was issued in.

- Securities account providers may be subject to different requirements that are aimed at protecting the interests of securities holders. These include variations in asset segregation rules, the effects and consequences of segregation, requirements for ensuring the integrity of an issue and different allocation of roles between account providers and holders with respect to the exercise of rights stemming from securities.

- Key definitions, such as the definitions of bondholders and shareholders, differ across jurisdictions. This prevents harmonised implementation of existing and future EU acts, as in the case of the Shareholder Rights Directive (SRD I and SRD II)[28] which aims to ensure that end-investors receive relevant information and can participate in corporate events regardless of their location. While the underlying problem remains, the effects of this issue may be mitigated by existing EU and national frameworks protecting investor rights and the tailored services offered by global and local custodians. Further discussion of some of the impacts of these differences can be found in the section of this report relating to shareholder identification under Barrier 13.

Priority

Impact: **High**; Difficulty: **High**

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[26] Including, but not limited to: the legal effects of acquisition and disposition; the minimum content of the acquired position in terms of the rights of its holder; effectiveness and reversal; protection of the acquirer; priority issues; the integrity of the number of securities; instructions; and the possibility of attachments.

[27] More details on the nature of the issues caused by this barrier (including concrete examples) can be found in the *Second Advice of the European Commission's Legal Certainty Group*, the findings of which remain fully relevant today.

[28] Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement (OJ L 132, 20.5.2017, p. 1).

Legal uncertainty and different operational processes and workarounds make cross-border issuance and transactions, as well as the holding of securities within the EU, more complex than in a domestic context.[29] This may explain why cross-border equity issuance remains practically non-existent. The EU's debt market is currently segmented into an "international" market and national markets, the former known as the Eurobond market. This "international" structure of the Eurobond market addresses some of the above issues by applying, as a workaround, certain national laws – often from non-EU jurisdictions – and relying on global notes, i.e. debt securities in global registered form, as well as on national segments (i.e. national sovereign and corporate debt markets consisting of debt securities issued in the respective national CSDs). Although some markets still function well as a result of such workarounds, it is not sustainable in the long run or for certain assets classes.

Recommendation (what actions by whom)

To achieve the ideal state, harmonisation is required of, among other things:

- the rules on the rights and obligations of securities account providers;
- definitions of bondholder/shareholder and, accordingly, the equal treatment of investors irrespective of the location of the issuers, account providers or investors;
- the legal effects of acquisition and disposal of securities held in a securities account located in the EU; the minimum content of the acquired position in terms of the rights of its holder; effectiveness and reversal; protection of the acquirer; priority issues; the integrity of the number of securities; instructions; and the possibility of attachments.

Legal harmonisation can only be achieved through EU and national legislation. Whether this vision is achieved, through targeted EU acts (e.g. an EU securities law directive, an amended and expanded SRD, etc.) or by introducing the proposed optional 28th (EU) legal regime[30] for securities, is the responsibility and at the discretion of the EU at political level (the European Commission, European Parliament and Member States).

- Before any measures are taken, the AMI-SeCo recommends a new, targeted analysis of legal frameworks across jurisdictions, similar to that conducted by the European Commission's Legal Certainty Group in 2008. This analysis should provide an overview of the 27 regimes and cover any changes that may have occurred in relevant national legal regimes since 2008.

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[29] The *Second Advice of the European Commission's Legal Certainty Group* summarises the legal barrier as follows: "*In practice, securities are acquired by crediting and disposed of by debiting a securities account. However, the legal underpinnings of this market reality differ considerably between jurisdictions. As the entire world of dealings in securities held through securities accounts is based on book-entries, even a slight uncertainty regarding their legal effects could, under exceptional circumstances, affect the reliability of the entire process of clearing and settlement.*"

[30] For further details, see European Parliament, *Identification of hurdles that companies, especially innovative start-ups, face in the EU justifying the need for a 28th Regime*, July 2025.

- The above analysis should be focused on the differences **between** Member States and their implications for cross-border activity.

BARRIER 2: Lack of harmonisation of national insolvency frameworks applied to intermediaries and intermediated securities

Legal – Fundamental law

Ideal state

A clear and harmonised pan-EU framework for insolvency procedures, including key definitions on end-investors, that facilitates a common and efficient insolvency procedure for assets held across borders.

Description of the barrier

The insolvency of an intermediary could have a major impact on an end-investor, both through the risk of a loss of assets (e.g. if client assets are treated as forming part of the insolvency estate) and as a result of any delay in the release of the assets by the insolvency practitioner. While investors and intermediaries planning to invest in securities from a particular country, or to use an intermediary located in a particular country, typically conduct a review of any insolvency-related risks, this is complex for securities issued in the EU and to intermediaries located in the EU because of the diversity of national insolvency rules and frameworks. This may be because the rules themselves are unclear, resulting in unpredictable applications, but also because of uncertainties regarding the nature of end-investors' rights to intermediated book-entry securities held across borders, which add to the risk in the event of the failure or insolvency of an intermediary.

As the 2017 EPTF report points out (EPTF Barrier 9), several EU acts try to enhance the protection granted to client assets in the event of an intermediary's failure or insolvency by requiring segregation of client assets along the custody chain. While segregation improves transparency and discipline, and thereby plays a key role in identifying that the relevant securities are client assets and not proprietary assets, it does not necessarily solve all insolvency-related problems. Issues remain regarding, among other things, insolvency rules, delays in releasing client assets and residual risks associated with specific features of company law, whereby client assets may be treated as the property of an intermediary in insolvency proceedings.

Priority

Impact: **High**; Difficulty: **High**

Recommendation (what actions by whom)

Even if the risk of the insolvency of an intermediary and of associated problems may be low, the potential impact of these issues is high. The problems involved in gathering reliable information on insolvency-related risk in all 27 Member States are a major obstacle to accessing European markets.

- As a first step, the AMI-SeCo recommends that EU public authorities provide a repository with information on the applicability of insolvency rules and procedures in all EU Member States with respect to the insolvency of an intermediary. Such a repository would be of benefit to all parties accessing EU capital markets and to other relevant stakeholders.

See the recommendations in this report for Barrier 1.

BARRIER 3: Corporate law barriers to harmonised processing of corporate events

Legal – Fundamental law

Ideal state

Investors are not discriminated against in exercising the rights enshrined in their securities depending on the holding model they use. All intermediaries provide corporate events services irrespective of their location or that of the issuer or investor.

Description of the barrier

Closely related to the barriers described above, Member State corporate laws differ as to the holding pattern they recognise for the processing of corporate events.[31] This results in investors being discriminated against as to whether they can or cannot exercise the rights stemming from corporate events depending on their location and the location of the account providers through which they hold the securities. This is a key barrier that the SRDs attempted to remove; its focus was, however, limited both in terms of instruments covered – it only relates to equities and not debt instruments (although some markets have increased the in-scope securities to include debt instruments) – and in terms of the types of corporate events – it largely targets participation and voting in general meetings. The impact of this Directive is described in greater depth in the general section of this report on Custody and asset servicing. Industry standards for shareholder identification have been created and are promoted and monitored by the AMI-SeCo, but such European market standards cannot correct underlying differences in national laws.

Priority

Impact: **High**; Difficulty: **High**

Idiosyncratic national legal requirements that prevent issuers, CSDs and other stakeholders from implementing/adhering to European corporate event standards have a direct impact on the ability of investors to invest freely and seamlessly across borders.

[31] Corporate events are actions initiated by an issuer of a security that has an impact on holders of that security. These include corporate actions (e.g. cash/securities distributions, reorganisation etc.), general meetings and shareholder identification. In this report, the term “corporate events” may be used to refer specifically to corporate actions or more broadly to the overall category of corporate events.

Recommendation (what actions by whom)

See the recommendations in this report for Barrier 1.

BARRIER 4: Securities and corporate law barriers to free choice of location of issuance and restrictions on the form and location of securities

Legal – Fundamental law

Ideal state

National securities and corporate laws (and other legislation relevant to the issuance and location of securities) do not impose idiosyncratic requirements on CSDs and issuers, nor prevent the free choice of location and of issuer-CSD for the issuance of securities (including equities).

Description of the barrier

The lack of harmonisation of national securities and corporate laws creates barriers to the freedom of issuance established in the provisions of the CSDR and prevents domestic issuers from using a foreign CSD for issuance, whether explicitly or implicitly. For example, idiosyncratic national requirements may be imposed as regards the services that the issuer-CSD must provide to the issuer (e.g. how general shareholder or bondholder meetings are to be processed) or additional compliance actions the issuer-CSD needs to perform vis-à-vis national authorities (e.g. reporting). It is also common for national securities laws to only permit dematerialised security issuance for securities that are constituted under national law in the domestic CSD. This forces issuers using foreign CSDs to resort to the creation and maintenance of global or definitive notes, given that national legal frameworks often make no provision for dematerialised issuance in a foreign CSD. Despite the high expectations and the objectives stated in its pre-amble/recitals, the CSDR has not removed these barriers. This is primarily due to the fact that the relevant provisions do not override existing national corporate and securities laws.

Priority

Impact: **High**; Difficulty: **High**

This barrier creates additional risks and costs, and also contributes to the limited scale of cross-border issuance (and hence cross-border holding) of securities in the EU. In addition, it severely limits competition between CSDs and prevents the formation of a more efficient CSD landscape in the EU.

Recommendation (what actions by whom)

- The provisions of Article 49 of the CSDR on free choice of issuance location should be supported by increased harmonisation and by convergence of the interpretation to be given to the concept of applicable corporate law in respect of that article.

- A relatively quick measure would be for the European Securities and Markets Authority (ESMA) to amend its list of relevant provisions of national corporate or similar laws[32] so that they are more precise and consistent. Furthermore, Member States could provide more transparency in their reporting of the relevant parts that are applicable to CSDs. Member States should provide an analysis – in English – of the provisions of their domestic corporate law that are relevant to Article 49 of the CSRD.

- A common definition of applicable corporate law should be developed in respect of Article 49 of the CSDR that would relate solely to the provisions necessary for the passporting procedure to work smoothly and for the rights of investors and issuers to be actionable. This definition should thus be limited in scope to the business to be conducted by the foreign CSD (notary and central maintenance service) and not extend to legal requirements as to the organisation of CSDs and their participants, given that this is covered by the laws governing the foreign CSD itself.[33]

BARRIER 5: Fragmented legal environment and its consequences on passporting

Legal – Fundamental law

Ideal state

Legal and regulatory procedures are harmonised, ensuring that market players across borders have a single and standardised framework for their operations. Requirements for internationally active actors are easy to interpret and facilitate a common understanding of the laws governing the entire scope of their operations.

Description of the barrier

Connected with the previous barrier, different understandings and practices with respect to the relevant CSDR articles and corporate laws create additional hurdles for foreign CSD issuance.[34] The absence of a common understanding of the concept of "corporate or similar law under which securities are constituted" prevents optimal implementation of the CSDR framework for the management of foreign securities. Furthermore, a lack of clarity in the legal requirements themselves, e.g. those to be complied with by a CSD to provide notary and central maintenance services for foreign securities, makes CSDR passporting assessment especially time-consuming and expensive. The ESMA list of relevant national corporate or similar laws provides

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[32] European Securities and Markets Authority, *Article 49(1) of CSDR – Key relevant provisions of national corporate or similar law,* 17 February 2025.

[33] Such legal abundances experienced by CSDs include rules on registration systems, holding patterns, settlement structures and more general organisational aspects.

[34] Article 49(1) of the CSDR states: "*An issuer shall have the right to arrange for its securities admitted to trading on regulated markets or MTFs or traded on trading venues to be recorded in any CSD established in any Member State, subject to compliance by that CSD with conditions referred to in Article 23.*
Without prejudice to the issuer's right referred to in the first subparagraph, the corporate or similar law of the Member State under which the securities are constituted shall continue to apply.
Member States shall ensure that a list of key relevant provisions of their law, as referred to in the second subparagraph, is compiled. Competent authorities shall communicate that list to ESMA by 18 December 2014. ESMA shall publish the list by 18 January 2015."

a good overview of the heterogenous understanding of these laws in terms of provisions, scope and format.[35] The excessive range of the different legal requirements creates barriers to the services provided for foreign securities. Additionally, the quantity of legal documentation a CSD has to navigate through is not in proportion to those parts that are actually relevant for the purpose of passporting. CSDs encounter these issues primarily at the onset of the passporting process on receipt of the request (misalignment between laws governing the CSD and those governing domestic securities) and in subsequent servicing assets held cross-border (local tax regulations and processes).

The list of key provisions in Member States' corporate laws is currently compiled in a way that does not help stakeholders to identify the relevant requirements and is not conducive to removing the related barriers. In practice, most national competent authorities simply provide article numbers for their national laws or text references in the local language. While this might be perceived as being compliant with the letter of the CSDR, they are certainly not commensurate with its spirit and objectives. Indeed, market players, including national competent authorities (NCAs), report that the task of analysing the compliance of all CSD systems with all the legal requirements for the host Member States suffers from a lack of harmonisation.[36] Lastly, there are aspects of the legal documentation that may be beyond what is considered corporate law as referred to in the CSDR, forcing CSDs to comply, for example, with organisational requirements that were not intended to be included in the EU regulation.

- In some jurisdictions (Croatia and Bulgaria), corporate law is embedded in securities law and law on financial sectors, which makes assessment of the ESMA key provisions for notary and central maintenance services by a foreign CSD difficult. As a result, many CSDs have not applied for passports in these countries.

- The ESMA list has greatly improved the structure of the reporting of national laws relevant for Article 49 of the CSDR. Some Member States refer, however, to entire sets of laws in this list, making it a cumbersome exercise for CSDs to navigate through them.

- Some of the legal documentation reported by the Member States are only available in the local language, even though it was specified in the ESMA list that the text had to be in English (although not necessarily an official translation). This makes assessment of compliance particularly time-consuming and costly.

Priority

Impact: **High**; Difficulty: **High**

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35 European Securities and Markets Authority, *Article 49(1) of CSDR – Key relevant provisions of national corporate or similar law*, 17 February 2025.

36 European Securities and Markets Authority, *Report – Provision of cross-border services by CSDs and handling of applications under Article 23 of CSDR from 2020 to 2022*, 31 January 2024.

The impact of this barrier is that market players are discouraged from providing cross-border services unless the business case justifies the costs and complexities faced. CSDs may choose not to ask for passports in countries where they perceive uncertainty and are burdened by legal frameworks that are not always applicable to them. This, in turn, may undermine connectivity between markets in the EU.

Recommendation (what actions by whom)

See the recommendations in this report for Barrier 4.

4 Barriers in the issuer and investor relationship

In simple terms, the vision for the issuer and investor relationship is that every European issuer of securities has access, i.e. can be connected through a custody chain, to every European investor, and vice versa. In an efficient post-trade environment, such connections are timely and automated, without any ambiguities in terms of the rights of actors involved in the chain. Consequently, for this vision to come true, issuers, investors, brokers, CSDs and other intermediaries must build communication lines between each other to ensure interoperability across the different layers.

It is important to highlight the existing dependencies relating to ensuring a safe legal environment for these operations, as discussed in the previous section, and which are, in practice, a pre-condition for establishing a capital markets union. The varying laws governing issuance, intermediated securities and CSDs need to be aligned to facilitate seamless issuance, trading and holding across borders in the EU. This is especially necessary in the absence of a common securities law. Realising the vision therefore also requires safe, sound and efficient procedures in the buyer and seller relationship, such those for clearing and settlement which are discussed in Section 5 of this report.

4.1 Issuance

Issuance is the process of initial creation and distribution of a security by the issuer through a series of intermediaries (issuer-CSD, issuer agent, primary or syndicate dealers and investors' custodians). The process of issuance involves a complex set of steps consisting of pre-trade, trade and post-trade phases. The choices made during the issuance process – such as the key features of the securities, their representation, the exchange of reference/static data and the distribution process – affect post-trade procedures not only in primary market transactions but also throughout the entire life cycle of the security, including asset servicing, secondary market transactions and collateral management. Issuance processes, especially pre-issuance, across the 27 EU jurisdictions vary significantly and exhibit high levels of inefficiency in general.[37] In the post-trade domain, diverging issuance practices lead to the following issues:

- lack of a single, trusted "golden source" for security reference and corporate events data, hindering efficient regulatory reporting and processing of corporate events (also discussed in this report under Barrier 8);

[37] For more details, see Debt Issuance Market Contact Group, Advisory report on debt issuance and distribution in the European Union, ECB, December 2021.

- frictions in exchanging standardised machine-readable data to ensure efficient and timely settlement of primary market transactions;
- use of market conventions that cause frictions or media breaks in post-trade processing.

Some of these issues stem from the lack of a common data model for representing securities reference and transactional data. This is examined in greater detail in this report in the section on Messaging and data. Adopting a common data model could potentially resolve most of the barriers listed in this section.

BARRIER 6: Absence of a standardised/common data model and the transmission of machine-readable reference and transaction data in the issuance process

Market practice

Ideal state

The industry (issuers, issuer agents, syndicate members, primary dealers, CSDs and custodians) has adopted and uses a single data dictionary and machine-readable data representation starting from the preparation of terms sheets and other pre-issuance documentation and throughout the issuance process. In particular, the issuer-CSD has access to all the data from issuers necessary to make new securities available for trading on European markets.

This information is always available and accessible to all relevant parties for subsequent corporate events management. The section of this report on Messaging and data highlights the broader vision for efficient and integrated data exchange in post-trade and associated processes that ensures straight-through processing (STP).

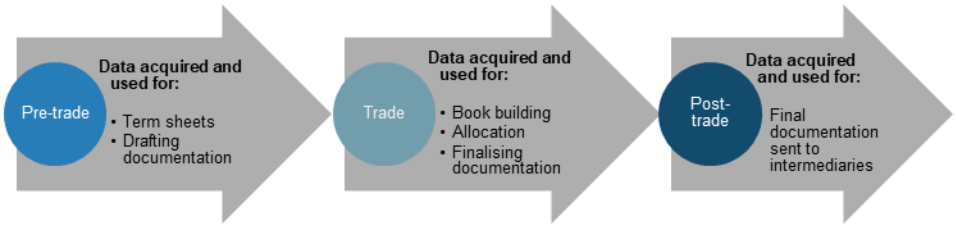
Description of the barrier

According to the preliminary analysis by the ECB's Debt Issuance Market Contact Group (DIMCG),[38] there are three areas (Figure 4) in which efficient management of data is particularly important in the issuance process: (i) the processing and exchange of data on term sheets/final terms; (ii) the generation and exchange of data in the book building and allocation processes; and (iii) the finalisation of standard issuance documents, including the sharing of reference data and the injection of transactional data (primary market settlement instructions) into the post-trade ecosystem.

The management of data in these areas has a significant impact on operations further down the chain, particularly for post-trade entities. The lack of a common data model makes this subsequent transmission of information slow and inefficient.

[38] Debt Issuance Market Contact Group, *Advisory report on debt issuance and distribution in the European Union*, ECB, December 2021.

Figure 4
Overview of data exchange in the EU debt issuance process



Source: Debt Issuance Market Contact Group, Advisory report on debt issuance and distribution in the European Union, ECB, December 2021

Similar issues may also stem from manual steps and reconciliation processes conducted between the issuer, legal advisers and investment banks. These manual touchpoints, often involving paper-based documentation and varying national requirements, are particularly cumbersome in cross-border transactions. Addressing these pre-CSD bottlenecks is crucial for realising the full potential of efficient cross-border issuance. Increased standardisation of processes and machine-readable terms and conditions of securities would significantly streamline the process.

Priority

Impact: **High**; Difficulty: **High**

The lack of a common data dictionary hinders the integration, efficiency and speed of securities issuance processes. It also creates inefficiencies in the post-trade processes of secondary markets and asset servicing.

Recommendation (what actions by whom)

- All relevant stakeholders (issuers, issuer agents, syndicate members, primary dealers, CSDs and custodians) in the value chain should adopt existing market standards, such as the ICMA Bond Data Taxonomy (BDT), as a common language.[39] They should provide reference or other data in machine-readable format to issuer-CSDs. See Barrier 34 in this report for a description of these standards. This adoption should extend to any future standards and agreements that are developed.
- International CSDs and the International Capital Market Association (ICMA) should continue to work on initiatives for a common issuance and processing taxonomy based on the BDT with the aim of extending usage to Eurobonds.

[39] Further details can be found on the ICMA Bond Data Taxonomy Working Group webpage.

BARRIER 7: Lack of convergence in the use of market conventions

Market practice

Ideal state

For EUR-denominated debt securities, there is convergence of the conventions for day count, business day, calendar and rounding used by issuers for debt securities. Legacy conventions that result in corporate events processing barriers are eliminated and do not limit the freedom for issuers to choose the economic characteristics of their securities.

Description of the barrier

Market conventions are standard approaches to describe certain key economic characteristics of debt securities and are decided in the issuance process by the issuer. In most cases, the DIMCG was able to identify the most prevalent or most popular conventions used by stakeholders for the following:

- The day count (how coupon payments should be calculated). The DIMCG identified the six most used day-count conventions as defined by the International Securities Market Advisory Group (ISMAG).[40]
- The business day (the day on which corporate events should be executed if they fall on a weekend or a bank holiday). The DIMCG identified a set of conventions compliant with the SCoRE CA standards.[41] Further convergence should be encouraged in order to limit diverging practices and ensure consistent post-trade processing.
- The calendar (days that are considered to be business days for the settlement of primary market transactions and the corporate events proceeds of a security). The DIMCG identified the TARGET/T2S calendar.
- Rounding (how amounts to be exchanged in corporate events processes should be rounded). The DIMCG identified the European CA standards rounding rules.[42]
- The rules on the minimum settlement unit (MSU) and the settlement unit multiple (SUM) in issuance documentation or in trading venue (admission) rules. These should converge across securities and be governed by a default standard. Deviations from these rules should be allowed only when justified by the economic needs of the issuer or the prospective investors.[43] Adoption of earlier proposals, such as those of the ECB's Corporate Actions Sub-group

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40 Euroclear Bank and Clearstream International, *International Securities Operational Market Practice Book*, 2012.

41 Advisory Group on Market Infrastructures for Securities and Collateral, *Corporate Actions – Single Collateral Management Rulebook for Europe*, ECB, December 2023.

42 Also aligned with SCoRE CA standard 4. .

43 Under the Prospectus Regulation (EU 2017/1129), certain exemptions from the prospectus requirements are granted based on the minimum settlement unit (MSU) for a given security and these may act as an incentive for issuers to set the MSU higher than the threshold (for exemption) of €100,000 in settlement systems.

(CASG) which provided clear guidance on MSU/SUM in T2S, would significantly improve the processing of CAs.[44]

Although these market conventions are already an agreed set of rules (i.e. standards), the issue is with their current use; despite a gradual convergence over the last two decades, too many options are permitted within each convention, often without any apparent economic or legal need or justification. This also applies to European issuers in European EUR-denominated transactions. In addition, in some cases, different definitions of the same convention persist across stakeholders. The fewer options available, the lower the degree of complexity and the easier it would be for stakeholders to process and automate transactions, not only in trading but also in the post-trading phase. Furthermore, some of the legacy conventions are impossible to uphold in today's post-trade processes in an efficient and unambiguous manner

Priority

Impact: **Medium**; Difficulty: **Low**

Use of diverging legacy conventions causes unnecessary processing complexity and inconsistency in processing corporate events without providing issuers with any real flexibility as regards the economic features of their securities.

Recommendation (what actions by whom)

- Reiterating the recommendation made by the DIMCG, the AMI-SeCo calls on issuers of debt instruments in euro to converge further on the use of the options offered by each of the most widespread market conventions.
- At the time of issuance, trading venues and CSDs should encourage issuers to use standards-compliant market conventions, including those in line with the SCoRE standards, and discourage the use of non-compliant conventions.
- The ICMA/international standard-setting bodies should continue to work on best practices with respect to market conventions.
- Issuers should no longer use legacy conventions (such as national calendars for business days in undertaking euro operations).

4.2 Custody and asset servicing

Custody and asset servicing comprise all activities by post-trade service providers aimed at ensuring that investors receive full information and comprehensive services

[44] The CASG proposes that security maintaining entities on T2S apply the following practice for the set-up of MSUs and SUMs: This attribute shall define the minimum quantity or nominal of the security for settlement.
• For equities: MSU = SUM = 1.
• For debt instruments: MSU = SUM.
• For fund shares/units: MSU = SUM = 1 or 0.x.
The MSU and SUM must be equal, irrespective of the number of decimal places the units are able to settle in.

during the lifetime of their assets. This is crucial for investors to be able to exercise their rights and fully meet their obligations.

Custody and asset servicing consist of the following main domains:

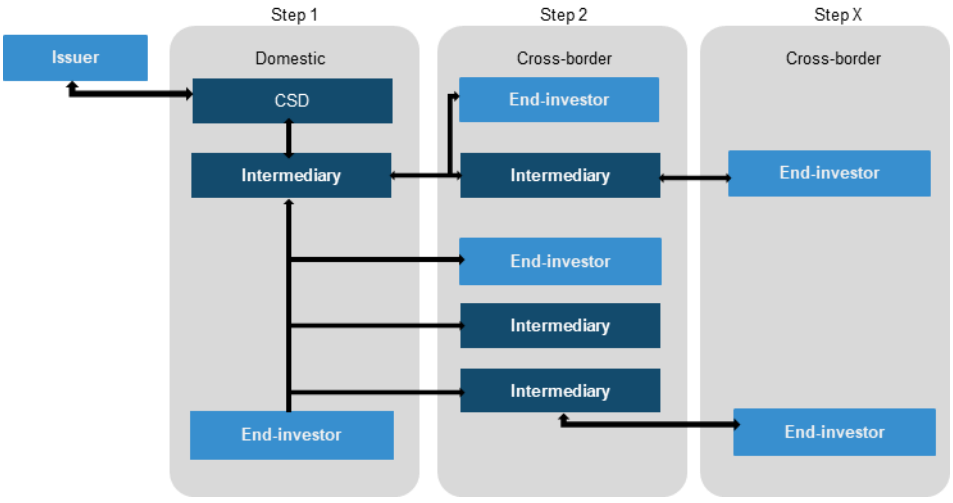
- corporate actions[45];
- general meetings;
- shareholder identification;
- registration;
- tax processing.

These activities are common to the sector in that they require the transmission and processing of time-critical and structured reference (static) and transactional data between the issuer, intermediaries and the end-investor. **The cornerstone of this exchange of information is consistent and high-quality ("golden source") reference data on the asset being serviced.**

The information flows originating from an issuer typically go through various different players, all of which apply their own specific logic to the data and information processing before it finally reaches the investor (and vice versa). This is especially true in a cross-border environment where securities are often held through a (longer) chain of intermediaries, creating more distance between the issuers and end-investors.

Figure 5

Entities involved in typical EU cross-border holdings



Source: .European Post Trade Group, Shareholder Identification and Registration, December 2015.

Although the 2017 EPTF report indicated significant progress with harmonisation efforts, with all relevant stakeholders agreeing to market standards and the T2S CA

[45] In general, there is a distinction made between corporate actions and the broader term "corporate events", which includes among other things, general meetings and shareholder identification.

standards, more recent monitoring conducted by the AMI-SeCo Corporate Events Group (CEG) in 2024 has shown that many entities still do not comply with these standards.[46] The 2017 EPTF report also addressed issues, such as fragmentation in shareholder identification, that may stem from inconsistent local implementations of Shareholders' Rights Directive (II) (SRD II)[47] and variations in ownership registration practices (EPTF Barrier 5). A recent study by the European Commission to assess the application of SRD I[48] and II sets out the challenges in the distribution of information remaining after implementation of those Directives and points to potential room for improvements in shareholder identification.[49] The evidence-based conclusions on the persisting issues reached by that study are also confirmed by the concrete barriers identified in the current report.

The 2024 CEG compliance report revealed that compliance with the various standards was limited. Specifically, only eight out of 40 markets met the market CA standards, 15 out of 28 markets adhered to the T2S CA standards and ten out of 31 markets complied with the market standards for shareholder identification.

With regard to custody and asset servicing, another significant barrier to cross-border activity is the differing tax procedures between countries (EPTF Barrier 12). These procedures relate primarily to withholding tax and to tax reporting processes in general (Barriers 14-15 in this report). Important harmonisation efforts, such as the FASTER Directive,[50] aim to address some of these issues; however, market players still report many challenges in this area.

BARRIER 8: Lack of a standardised ("golden") source of information for securities reference data

Market practice

Ideal state

European issuers decide on the terms, rights and structures of their securities. As regards the distribution of information, issuers provide the necessary core data in a standardised manner so that this information is communicated to all relevant parties, including all parties in the custody chain, in a timely, efficient and reliable manner. All parties, from the issuer to the end-investor, have access to the same reliable and trustworthy information so that they can take the necessary actions in a timely manner.

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46 See Advisory Group on Market Infrastructures for Securities and Collateral, *Corporate Events Compliance Report – 2024 Monitoring Exercise*, ECB, December 2024.

47 Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement (OJ L 132, 20.5.2017, p. 1).

48 Directive 2007/36/EC of the European Parliament and of the Council of 11 July 2007 on the exercise of certain rights of shareholders in listed companies (OJ L 132, 20.5.2017, pp. 1).

49 *Study on the application of the shareholder rights directives – Final report*, European Commission, January 2025. This study delves more deeply into the application by each EU market of SRD I and the amendments introduced by SRD II and provides evidence by employing a variety of methods.

50 Council Directive (EU) 2025/50 of 10 December 2024 on faster and safer relief of excess withholding taxes (OJ L, 2025/50, 10.1.2025, p. 1).

Description of barrier

The lack of a single, trusted and fully verified source of definitive information on features (reference data) that affect the life cycle of a security is an overarching barrier in asset servicing. The issue relates both to reference data fixed at the time of issuance of a security, such as the interest rate and payment dates for a bond, and to reference data that is fixed during the life cycle of a security, such as a dividend and dividend payment for an equity.

The impact of this lack of definitive information on a security and on events in its life cycle is especially large for intermediaries and end-investors that hold securities at different places and across borders. As the custody chain grows longer, each actor may use timings and information formats that vary, making the processes involved highly dependent on the specific practices of national markets and of individual intermediaries. Different suppliers of financial data to the European markets also have their own variations in how CA-related information is reported and distributed. **Data sourcing is reported to amount to over half of the processing costs for CAs in the post-trade securities industry**, making the issue of diverging information sources central to harmonisation of the processes concerned.[51]

In the absence of a centralised data source, market players perceive the data supplied by different providers, such as information provided by numbering agencies, CSDs, trading venues and data vendors, as having varying degrees of authority. Market practices under which particular sources are viewed as more “authoritative” may vary, creating further fragmentation along local procedures or owing to operational legacies.

A closely related challenge is the lack of a single data dictionary and data model in the securities value chain, i.e. for issuance, secondary market trading and post-trading (Barrier 35 in this report).

Priority

Impact: **High**; Difficulty: **High**

The impact of the lack of a trusted single source of information can be observed primarily in two ways:

- the transmission of information content between actors varies, leading to inefficient and time-consuming communication flows and placing unnecessary pressure on keeping up with deadlines for, say, shareholder participation;
- the varying sources of the same data points, which may lead to (perceived or real) unreliable and inconsistent information.

Market stakeholders have often resolved these issues in a firm-specific way, by trying to identify the cheapest and more reliable sources for their own processing.

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[51] International Security Services Association, *Corporate Action Data Sourcing – The Case for a Standardized, Automated Single Source Model*, February 2023.

Recommendation (what actions by whom)

There is a need for a "golden operational record", i.e. clear and uniform rules on a single centralised source for securities reference data for any given security that is widely accessible to issuers, intermediaries and investors. Provision of complete and accurate information on corporate events by the issuer (or its agent) is critical to the efficient and effective functioning of the entire corporate events process for the entire custody chain. Enshrining, in a future regulatory initiative, a requirement for an issuer or its agent to provide complete corporate events data[52] to the issuer-CSD in a standardised electronic form would address a critical barrier to straight-through processing of corporate events.

- Issuers/issuer agents should provide all necessary reference data to the issuer-CSD in machine-readable format, ensuring trust and reliability in the data (see also Barrier 6 in this report). European public authorities should examine the potential offered by the European Single Access Point (ESAP), or a similar initiative, to act as a central, pan-European open-access repository for standardised securities reference data, including corporate events data, for European securities.
- Issuer-CSDs should provide/be the "golden" source.
- EU lawmakers should review current EU legislation to ensure that it supports the provision by issuers or their agents of all necessary reference data in a standardised manner.
- In their various roles with respect to the operation of European capital markets, public authorities, at both the European and the Member State level, should encourage and facilitate the provision by issuers or their agents of reference data in a standardised manner.

Corporate actions

The main challenges to a harmonised corporate actions (CA) process in the EU are **diverging local practices, including as regards announcements, deadlines and messaging, and the lack of a centralised "golden" source of information on securities.** Combined, these create hurdles for efficient management of CAs, by making straight-through processing (STP) more difficult, especially for cross-border ownership of securities and securities financing transactions. Additionally, CAs entail a relatively high degree of manual processing, often with varying requirements such as signed physical documents or certificates. Full compliance with existing market standards on corporate actions (T2S, SCoRE and market CA standards) would greatly improve the situation. However, as the detailed annual compliance reports by the CEG show, the compliance rates for existing standards are far from optimal

[52] The SCoRE Corporate Actions Rulebook sets out a common minimum set of data which the issuer-CSD must provide to its participants. This minimum set of data could also form the basis for a minimum set of common data per event to be provided to the issuer-CSD by the issuer (or its agent).

across AMI-SeCo markets.[53] The current compliance issues apart, there is room for further clarification and, where relevant, extension of existing market standards to eliminate the barriers identified in this section. To this end, the AMI-SeCo has mandated the CEG to work towards the vision of a single rulebook for corporate events by 2027.

Another important aspect to consider is that management of specific types of CAs is dependent on the legal framework, which may create barriers to a harmonised operational procedure even if there are functionalities allowing for this. One example is the dependency of national tax frameworks on the CA procedures applied, especially as regards market claims and withholding tax (the latter is discussed in Section 4.2.6 below). Monitoring by the CEG shows that differences in the management of, for example, market claims in some markets stem from the domestic laws in place, those laws often implemented in response to abuse of tax benefits, as in the case of the cum/ex scheme uncovered in several European countries.[54]

BARRIER 9: Differences in announcements and information exchange on corporate actions

Market practice

Ideal state

Asset servicing-related communication between market players is conducted using a standardised form of messaging relying on a standard data model. The vision is to leverage the ISO 20022 standard and data dictionary to ensure that developments in technology or regulation can be uniformly and flexibly implemented across markets and entities.

Description of barrier

Going beyond issues connected with the lack of a centralised source of the "truth", CA information is transmitted to and by CSDs/intermediaries in highly varying formats, and often as non-structured information. For instance, information is provided in free text fields in ISO 15022/ISO 20022 messages or via proprietary communication channels and formats (e.g. by fax or email), or has to be extracted from non-electronic/non-machine-readable sources by intermediaries (e.g. national gazettes used to announce CAs in local language).

Priority

Impact: **High**; Difficulty: **High**

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53 Advisory Group on Market Infrastructures for Securities and Collateral, *Corporate Events Compliance Report – 2024 Monitoring Exercise*, ECB, December 2024.

54 The scheme involved actors deliberately trading securities between themselves using the "cum" and "ex" period logic either to get tax reclaim rights more than once on the same security or to get such rights when not eligible. See the document entitled "The Cum-ex files - information document", published on the European Parliament's website.

This leads to significant challenges for efficient and timely processing and passing on of data. It also results in different treatments of the same CAs and of the options applied, depending on the market, as well as in difficulties in achieving straight-through processing for CAs. This barrier is amplified by the lack of the single, "golden" data source and centralised distribution of data discussed under Barrier 8 above. Removing this barrier is key to harmonising post-trade-related CA procedures and would provide a good foundation for resolving peripheral issues arising in the same context.

Recommendation (what actions by whom)

- **Full compliance** by issuers or their agents, and by all parties in the custody chain with the agreed sets of standards would mitigate this issue to a great extent.
- All parties, including issuers or their agents, and all parties in the custody chain should comply with the recommendations set out in the AMI-SeCo report on a roadmap for the adoption of the ISO 20022 data dictionary and of ISO 20022 messaging.[55] Agreeing on the use of the ISO 20022 data dictionary for corporate events is the optimal long-term solution to this problem (see also the section on Messaging and data in this report). Adopting ISO 20022 messaging for CAs will be a key step towards standardisation of messaging and communication.
- Issuers and intermediaries should support AMI-SeCo work on a single rulebook for corporate events which would further clarify and help in reinforcing common rules.

BARRIER 10: Differences in sequence of key dates and processing of corporate actions

Market practice

Ideal state

The European market standards for CA processing are designed to serve as best practice. They provide issuers with a powerful set of tools for processing CAs, while ensuring that all investors can participate in a CA and can benefit from the transparency and risk mitigation that result from the use of common pan-European standards. All CAs on European securities are processed (announcement and settlement of proceeds, elective events, market claims, transformation and buyer protection) in line with the European standards, including the standards relating to the sequence of key dates (announcement, ex-date, record date, payment date).

Description of barrier

[55] See *Baseline findings and action points of the AMI-SeCo Task Force on ISO 20022 migration strategy (ISO 20022 migration TF) – Presentation to AMI-SeCo*, ECB, 4 December 2024.

As set out in the AMI-SeCo CEG report,[56] there are significant gaps in compliance with European standards for CA processing across Europe. In many European countries, specific national processes still prevail, either because of real or perceived national legal requirements or owing to legacy practices followed by issuers, infrastructures or other intermediaries. Key examples include: using a divergent order of key dates (announcement/notification, record date and payment date); the payment of coupons or dividends outside securities settlement systems; manual, non-compliant handling of (or failure to handle) CAs on flows (such as market claims); diverging rounding rules; and the use by issuers of business day conventions that cannot be processed in post-trade infrastructures.

The underlying causes for divergent and national-specific CA processing are diverse. However, one of the key reasons is differences in national fiscal rules and practices.

Priority

Impact: **High**; Difficulty: **High**

The processing of CAs is the mechanism enabling investors in a security to exercise many of the most important rights associated with that investment. Any inability to participate in a CA is a major disincentive for investing in a particular security. Complex and divergent CA processes are an obstacle to participation and create operational risk for all parties in the custody chain. Investors and intermediaries holding securities from multiple European countries have to manage these divergences and risks. Accordingly, the differing CA processes in Europe are a significant barrier to cross-border investment in European securities.

Recommendation (what actions by whom)

- The AMI-SeCo CEG should continue its work on consolidating all CA standards into the Single Rulebook, potentially agreeing on additional standards or setting out clearer and more detailed requirements in relation to existing standards (e.g. on market claim processing). The AMI-SeCo CEG should continue to produce its annual reports on compliance with the European corporate events standards.

- Harmonisation of the definitions and procedures in national tax law would create less ambiguity for post-trade management of CAs across borders, especially as regards market claims, without necessarily creating a riskier environment in terms of tax abuse.[57] This is discussed in greater depth in the section on withholding tax processing below.

- European public authorities, at both the European and national levels, should support initiatives to improve levels of compliance. Obstacles to compliance that

[56] Advisory Group on Market Infrastructures for Securities and Collateral, *Corporate Events Compliance Report – 2024 Monitoring Exercise*, ECB, December 2024.

[57] The *AMI-SeCo observations on the FASTER Directive* propose a set of amendments suggesting, among other things, that the record date principle be leveraged for tax related processes thereby ensuring alignment with how corporate actions are managed.

derive from specific features of national law should be tackled by targeted legislative change.

BARRIER 11: Non-harmonised frameworks for general meetings

Regulatory – Supervision
Market practice

Ideal state

All investors in European securities are able fully to exercise the governance rights attaching to their securities using common, harmonised, pan-European operational procedures. Specifically, all investors who have a position as from the record date for a general meeting are able to exercise in full their rights in relation to that meeting, no matter where the investor is located and irrespective of the custody chain or of the location of the intermediaries through which the securities are held.

Description of the barrier

The right of investors to participate and vote in general meetings are prejudiced by highly fragmented and divergent national procedures and requirements. To some extent, barriers for general meetings are linked to those relating to shareholder identification given that identification processes are commonly used to determine the eligibility of investors to participate in general meetings (see Barrier 13 in this report). A recent study commissioned by the European Commission and evaluating the application of the SRD provides a good overview of the improvements that have taken place with respect to domestic participation at general meetings.[58] Moreover, it also contains proposals for follow-up actions in areas where improvements have been limited, for instance as regards the participation and rights of investors with cross-border holdings.

Since the publication of the first Giovannini report in 2001, harmonisation efforts have taken the form of industry initiatives, such as the Market Standards for General Meetings (MSGMs)[59] which aims to provide guidance on the best operational processes. The implementation of SRD II, which itself seeks to standardise general meeting agendas and voting information, provided further impetus for the development of market standards. However, there is not as of yet a fully finalised version of the MSGM standards, nor is there any systematic monitoring of the situation across European markets.

The general meetings procedure in a post-trade harmonisation context can generally be split into four parts.

(i) **Country-specific procedures** on the structure of general meetings with regard to voting rules, such as the voting types[60] and the operational need to block positions under some circumstances when

[58] European Commission, *Study on the application of the shareholder rights directives – Final report*, January 2025.

[59] SRD II Industry Steering Group, *Private sector response to the Giovannini reports – Barrier 3: Corporate actions. Market standards for general meetings*, European Banking Federation, May 2020.

[60] Mechanisms for voting, for instance, proxy voting, electronic/postal voting, polls, etc.

instructing a vote. For instance, ESMA observed a wide dispersion on calculations of ex-dates for general meeting-related matters across markets.[61] Although ESMA reports that the record date is now more commonly understood, challenges remain, especially as regards how the timing (calculations) relates to proof of share ownership in different markets.[62]

(ii) Announcements of coming meetings and results. The usage of different formats for announcing general meetings, ranging from ISO 20022 messages in some markets to physical documents in others, makes it difficult to create an STP environment with streamlined communication tools on a cross-CSD/border basis. The procedures on announcing the results of a general meeting also lack harmonisation across markets.[63]

(iii) **Requirements on physical presence in general meetings.** According to an AMI-SeCo survey on barriers to digitalisation in securities post-trade services,[64] physical presence is still required in many jurisdictions. Additionally, electronic voting is rarely used in those countries where it is allowed owing to the absence of market practice and rules on (proxy) voting. This is an obvious disadvantage for any non-domestic investor given that participation is often accompanied by additional costs, making cross-border voting a challenge. Increased use of hybrid meetings needs to be accompanied by procedures that enable participating (online) shareholders to exercise their rights effectively, for example those relating to voting, deciding on agenda items, putting forward questions and receiving answers to such questions.

(iv) **Requirements on physical documentation** is relevant to the processing of CAs in general. However, such requirements work as a significant barrier to participation and voting at general meetings. The AMI-SeCo survey on barriers to digitalisation referred to above states that the distribution of physical documentation is still required in some markets. In combination with the requirement for wet ink signatures and powers of attorney in original, the formalities for attending a general meeting are time-consuming and inefficient. Even if streamlined general meetings processing was to be the norm in Europe, requirements for physical documentation or wet ink signatures in any step of the process would act as an additional

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61 See European Securities and Markets Authority, *Report on shareholder identification and communication systems*, 5 April 2017, which states: "*As opposed to economic rights, it seems that the definition and the implications of the ex-date for voting rights purposes applicable on the relevant trading venue are not always commonly understood and communicated in the same way, showing a relatively low degree of harmonisation across the EEA*."

62 Also reported on p. 79 of the 2025 European Commission *Study on the Application of the Shareholder Rights Directives*.

63 ibid.

64 AMI-SeCo, *Survey on barriers to digitalisation in securities post-trade services – summary of outcome*, ECB, November 2021.

hurdle for participation, especially for non-domestic investors who are required to follow differing local rules in each market.

According to the evidence gathered in the European Commission study on the application of the SRDs, there has been relatively little progress in the **cross-border** context as regards the following issues.

- Participating and voting in general meetings where foreign investors depend on a chain of intermediaries.[65] Furthermore, only about 35% of survey respondents indicated that information on general meetings (meeting notices) was well-timed in the cross-border context (compared with 65% in a domestic context). In a cross-border environment, these issues have resulted in new actors emerging, such as proxy-voters and third parties offering solutions for meetings and voting advice.

- Unequal treatment of domestic and cross-border shareholders in terms of fees. As reported by issuers in some of the larger Member States, "new" fees are being charged by intermediaries to provide information-sharing/voting services, these fees not having existed before the SRDs were implemented.[66] It is important to note that this does not relate to fees that are non-discriminatory, transparent and proportional. The report also highlights, in particular, the lack of transparency across Member States, including different practices observed in Germany and France – the two largest equity markets in Europe (with a combined share of about half of total equity issuance). In general, there are significant differences in the application of fees across markets.[67]

- Physical presence of investors or their agents is required to attend and vote in general meetings in the Czech Republic, Germany, Italy, Lithuania, Hungary and Slovakia.[68]

- Physical documentation with wet ink signatures is required in communication between issuers and investors (or their agents) for attendance at general meetings in the Czech Republic, Germany, Italy, Cyprus, Lithuania, Hungary, Poland, Slovenia and Slovakia.

- Additionally, with regard to the European Commission study on the application of the SRDs, one third-party services company reported that the following markets still require physical powers of attorney for participation (voting): Bulgaria, Cyprus, Latvia, Lithuania, Hungary, Austria, Portugal, Romania, Slovenia, Slovakia and Sweden. It should be noted that in some of these markets, the requirements stem from the issuers themselves and not from any general market rule.

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65 European Commission, *Study on the Application of the Shareholder Rights Directives – Final report*, January 2025. See p. 77 and the cases to be found in the section entitled "Obstacles to participation in general meetings – 2: Length and complexity of chains of intermediaries (also cross-border)".

66 ibid. See p. 149 for the specific types of new fees.

67 ibid. See p. 117 for a comparison of fees.

68 2021 AMI-SeCo *Survey on barriers to digitalisation in securities post-trade services – summary of outcome*, p.15.

Priority

Impact: **Medium**; Difficulty: **High**

The importance of ensuring that shareholders and bondholders are able to exercise their rights in the context of cross-border investment is key to promoting the capital markets union. Any ambiguities in the definitions, processing and outcomes in the post-trade context of general meetings across markets that are such as to disincentivise participation should be removed. Initiatives such as the SRD II regulatory framework and market-based initiatives, such as the ECB MSGMs, point to harmonisation of the management of general meetings being a priority. The European Commission study on the application of the SRDs highlights the fact that improvement in the cross-border context has been limited and that additional measures may need to be considered.

Other key takeaways from that study include, for instance, the fact that the record date should be set sufficiently early to ensure that all record-date holders can vote.[69] Another important requirement is that the record date should be before the deadline for the last intermediary so that end-investors are able to vote based on their actual record-date positions and not their anticipated positions (which might lead to rejected votes). A further takeaway is that removing physical powers of attorney for proxies has increased turnout at general meetings and eliminated barriers to delegated voting, which can be particularly beneficial in a cross-border context.

Recommendation (what actions by whom)

- The AMI-SeCo should review, and subsequently endorse, the MSGM standards, involving all stakeholder groups in this process and leveraging the expertise present in the AMI-SeCo CEG. These standards should form part of the Single Rulebook that is being drafted by the CEG, and compliance with these standards should be monitored as part of the CEG's annual corporate events compliance monitoring exercise.
- Harmonisation of key rules and requirements related to general meetings could, if necessary, be subject to a review of EU regulation in this area (e.g. SRD II) by EU lawmakers to avoid further country-specific interpretations and particularities, notably in terms of the scope of the relevant directives, key dates and proof of shares (entitlement) procedures.

BARRIER 12: National frameworks for registration of securities ownership

Regulatory – Supervision
Market practice

Ideal state

[69] The European Commission *Study on the Application of the Shareholder Rights Directives* states: "*The challenge is to get a balance between not having it so long before the meeting that there are many who can vote but are not shareholders anymore (having sold their shares in the meantime) and having it so close to the meeting that the relevant administration (e.g., reconciling of the position) cannot occur. This is especially relevant in cross-border situations.*"

Harmonised transfer of ownership procedures in the EU for registered securities, without national idiosyncratic registration-related requirements interfering with settlement procedures, account structures or any other common post-trade services. This ensures the legal certainty of a trade and ownership across the EU, as well as serving as a guide toward more harmonised subsequent post-trade operations. That environment leverages the shareholder identification procedures that already exist.

Description of the barrier

For registered securities, there is a process after every securities transaction whereby the new holder of the security [70] is registered as the owner by the registrar, or by the entity maintaining the register. In many cases, that registration process is necessary for new holders to benefit fully from their ownership rights, such as the right to vote in general meetings and to receive dividend and interest payments. The registration process also provides a way for issuers to maintain control of their investor base. In 2016, the European Central Securities Depositories Association (ECSDA) collected information on the legal frameworks governing registration of ownership in domestic commercial or securities law across the EU, showing the variations that exist across Member States.[71]

As noted by the EPTF in its 2017 report (Barrier 5), the registration process is often efficient in the domestic market, but unclear in the context of cross-border transactions. According to the most recent AMI-SeCo T2S harmonisation report,[72] there has been little progress with harmonisation of both registration and shareholder transparency as compared with the other standards. EU-wide attempts to resolve the shareholder identification (Barrier 13 below) and transparency issues have taken the form of regulation, specifically the provisions of SRD II. However, there is a gap in a common legislative approach to the registration process given that these rules have followed the historical evolution of national securities laws and are also tied to the barriers identified in other parts of this report. In many jurisdictions, the rules and requirements relating to registration were drawn up at a time when securities existed, and were exchanged, in physical form. With regard to more recent regulation, ESMA[73] points out that uncertainties in the common implementation of the SRDs mean that the complexities in the cross-border environment persist.[74]

The consequences of a fragmented legal environment for registration can be observed mainly in asset servicing. For instance, this is felt not only in dealing with securities life-cycle events requiring shareholder identification but also in the context of settlement. The barriers to a harmonised registration procedure can generally be split into three main differences across markets.

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70 The registration procedure is more central in equity ownership given that it usually entails more interaction between the issuer and investor compared with bond ownership.

71 European Central Securities Depositories Association, *The registration of securities holders*, 19 July 2016, p. 10.

72 Advisory Group on Market Infrastructures for Securities and Collateral, *14th T2S Harmonisation Progress Report – Harmonisation of European securities settlement*, ECB, February 2024.

73 European Securities and Markets Authority, *Report – Implementation of SRD2 provisions on proxy advisors and the investment chain*, 27 July 2023.

74 This Directive is discussed in greater depth in this report in the sections covering general meetings and shareholder identification.

(i) **The definition of registration and what registration entails vary widely across EU jurisdictions.** Besides the possibility for issuers to identify their share/bond holders, registration provides certain essential rights to the shareholder that are protected by law. In combination with the different account and holding structures at CSDs (**direct, indirect, nominee**), the legal basis is different across markets given that they are regulated in national commercial and securities law. The end-investor's rights are generally protected under these laws, even where the owner in the registrar is an intermediary or nominee. Given that ownership rights (and the regulation of disputes) differ, cross-border transactions may be impeded. ECSDA fact-finding has also highlighted the fact that registration is not mandatory in all jurisdictions.

(ii) **Settlement and registration may be integrated or separated depending on the market.** Securities are increasingly immobilised or dematerialised and are most commonly recorded on the CSD's books on behalf of the issuer. However, settlement of securities and the register itself are not necessarily "linked". There is variation in how settlement is reflected in the register. In some markets, this is done instantly, whereas in others the register is maintained separately (i.e. not by the CSD or aligned in time with settlement). According to the ECSDA report, CSDs serve as the registrars in around half of European markets, but are involved only partially or not at all in the other half. These fundamental differences in the operations for registration and settlement create unclear lines of responsibility given that one or the other framework may be taken for granted domestically, but not on a cross-border basis. This is not to mention the risks of misalignment between the register and the settlement system, calling for additional operations in dealing with further services, such as the management of CAs and voting procedures.

(iii) **Registration data are not standardised across markets.** There are various issues related to the actual operational practices involved, such as the formats used and information provided in the registers. ECSDA indicated that, apart from the owner's name and securities balance which are common to all markets, any other element included in the registration information is specific to just a subset of markets. Regardless of which actor is responsible for the register, cross-border transactions result in an additional operational burden owing to the differing information required for timely registration. In addition, cross-border holdings are generally held through a (longer) chain of intermediaries, which, of itself, makes registration of the (end-)investor difficult.

Priority

Impact: **Medium**; Difficulty: **High**

The legal and operational differences across Member States described above have a negative impact on cross-border transactions, especially as regards the legal implications of registration and the impact of registration on other processes (settlement, creating links and other domains of asset servicing). These differences result in requirements for intermediaries and end-investors to manage specific national processes and thus contribute to the fragmentation of European markets. The complexity of registration processes and any gap in time between settlement and registration create risk for intermediaries and end-investors.

Recommendation (what actions by whom)

Market and technological developments, such as book-entry settlement at CSDs and the creation of an efficient pan-European system for shareholder identification, open the door to updating and harmonising existing registration processes. The legal form of registered securities will continue to exist and there will continue to be a need for a re-registration process at the point of settlement. The re-registration process should take place simultaneously with the settlement process so that there is no gap in time between the two. It should also be based on information that is contained either in a standard securities settlement instruction or in the static data of the relevant securities account at the issuer-CSD. From the perspective of intermediaries and end-investors, this would ensure that the settlement process for registered securities would be the same as the settlement process for securities issued in any other legal form.

- Member States with registered securities should ensure that national requirements relating to registration allow for the registration process to be integrated into the standard settlement process at the CSD so that a purchaser has the full rights associated with ownership of the securities from the point of settlement.
- Member States, as well as national markets and market infrastructures, should ensure that the processes relating to registered securities in their respective countries are fully compliant with the T2S Harmonisation Standards.
- European legislators should enlarge the scope of the SRD II shareholder identification process so that it covers all types of registered securities deposited at a CSD.
- The AMI-SeCo will investigate and work on potential proposals for a common pan-European framework that manages any additional rights that may be associated with registered shares, such as bonus rights and double voting rights.
- The European Commission should consider introducing pan-European legislation (i) requiring the re-registration process for registered securities to be integrated into a standardised pan-European settlement process; and (ii)

creating, based on recommendations by the AMI-SeCo, a common pan-European framework to manage any additional rights that may be associated with registered shares, such as bonus rights and double voting rights.

BARRIER 13: Remaining challenges for shareholder identification

Market practice

Ideal state

An effective and efficient pan-European shareholder identification system covering all European securities deposited at European CSDs and based on common operational processes with a seamless and efficient communication flow based on standardised messaging.

Description of barrier

The issues relating to general meetings and registration described above are closely related to this barrier given that shareholder identification is, or can be, used to support both services. To alleviate differences and remove major barriers related to such identification, particularly in the cross-border context, the EU legislator laid down common requirements in the reviewed SRD II. This Directive establishes uniform processing requirements for intermediaries (CSDs, issuer agents and custodians) requiring them to identify shareholders for issuers and giving shareholders the possibility of being fully informed of relevant information.

However, according to the European Commission study on the application of the SRDs,[75] more than half of respondents stated that intermediaries do not keep to deadlines and that the length of the chain of intermediaries affects the speed and efficiency of the shareholder identification process.

To facilitate uniform implementation of SRD II, the industry agreed a set of market standards for processing shareholder identification requests. However, according to the AMI-SeCo 2024 Corporate Events Compliance report, only ten out of 31 markets comply with those standards. Accordingly, the remaining barriers related to shareholder identification can be grouped as follows.

(i) **There is no common definition of the term "shareholder" in the EU.** The rules introduced by SRD II on, among other things, shareholder identification do not provide a common definition of the term, something that almost all of the participants in the ESMA survey reported as being a hurdle for alignment of processes throughout the custody chain. Related to this is the optional implementation of the 0.5% threshold for identifying shareholders. According to surveys done for the European Commission study on the application of the SRDs, this threshold may lead to investors holding a total that exceeds that threshold but through different intermediaries and

[75] European Commission, *Study on the Application of the Shareholder Rights Directives – Final report*, January 2025. This study delves more deeply into application of the SRDs to each EU market and provides evidence employing a variety of methods.

therefore not being identified and subsequently not being able to exercise their rights. Additionally, the varying implementations of this threshold create complexities across Member States.

(ii) **The scope of securities covered by SRD II is limited, potentially making it difficult to identify whether a security is covered by the shareholder identification process set out in the Directive.** SRD II does not cover debt instruments, despite these representing a much larger portion of capital markets by value than equities. SRD II encompasses heavily traded equities but not all equities, and the exact criteria for determining whether a security falls within the shareholder identification process may depend on the national transposition of SRD II. Diverging national transpositions as regards these topics create inconsistencies which make it difficult, for example, to verify a disclosure request on a cross-border basis, resulting in the process being significantly more time-consuming than for requests relating to domestic securities.

The lack of full compliance with the SRD II requirements and with industry shareholder identification standards, as well as technical difficulties and formatting differences across markets due to non-standardised practices. As noted by the AMI-SeCo in its regular Corporate Events Compliance Reports[76] and by the EPTF in the annex to its detailed analysis of the European post-trade landscape,[77] these differences make the information flows between issuers and intermediaries inefficient and dependent on specific market practice, as confirmed in the ESMA report on SRD II. Like most other areas where non-standardised technical or messaging-related procedures are involved, this creates additional layers in a cross-border context. Furthermore, common, harmonised implementation of SRD II is hindered by the lack of a "golden" source of information for corporate events, as discussed in this report in the section on Barrier 8[78] and, more generally, in the section discussing the transversal topic of Messaging and data in relation to information transmission.

Priority

Impact: **Medium**; Difficulty: **Medium**

The introduction of the SRD II shareholder identification process has been important in improving the operation of such identification procedures across markets and in facilitating a common framework. This, in turn, has led to an increased number of shareholder identification requests overall, although the level has varied across

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76 Advisory Group on Market Infrastructures for Securities and Collateral, *Corporate Events Compliance Report – 2024 Monitoring Exercise*, ECB, December 2024.

77 For a discussion of shareholder identification market practices, see Annex 3, Section 3.6.3.6, of the 2017 EPTF Report

78 According to the 2023 ESMA report on the Implementation of SRD2 provisions on proxy advisors and the investment chain, many respondents explicitly indicated a desire for issuers to implement such a record, making it especially useful for shareholder identification but also for other corporate events.

markets.[79] As described above, there are outstanding challenges to full realisation of the benefits of the shareholder identification process under SRD II. An efficient and effective shareholder identification process is key to enabling issuers to identify their shareholders and to protecting the rights of securities owners, as governed by law. This process should be fully effective in a cross-border environment.

Recommendation (what actions by whom)

- As recommended by the AMI-SeCo in the 2023 Corporate Events Compliance Report,[80] EU lawmakers should extend SRD II requirements in both granularity and scope by, among other things (i) harmonising the definitions of share and bond holder, at least in the context of SRD II; and (ii) extending the requirements to all securities issued in EU CSDs. The SRD II shareholder identification process should be implemented as the standard for shareholder identification processes across all European securities deposited in CSDs. This would be the necessary final push to achieve common practices across European markets.

- As identified in the annual AMI-SeCo Corporate Events Compliance Reports, there is a need for greater compliance with the market standards by all categories of stakeholder. The AMI-SeCo will continue to monitor compliance with the industry standards and discuss potential initiatives to improve the level of compliance.

- European public authorities, at both the European and national levels, should support initiatives to increase levels of compliance. Obstacles to compliance that derive from specific features of national law should be tackled by targeted legislative change.

Withholding tax processing

The problems relating to differing tax procedures in the post-trade environment have been well documented, and their negative impact on cross-border investment and in promoting the Single Market has been acknowledged by both industry and authorities. These issues often lead to situations in which investors are taxed at a rate higher than is necessary under existing double taxation treaties.[81] This creates

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79 While allowing for cross-country variations, increases of this kind that fall within the scope of the SRDs have been limited in Denmark, Italy and Sweden, according to the European Commission Study on the Application of the Shareholder Rights Directives.

80 Advisory Group on Market Infrastructures for Securities and Collateral, *Corporate Events Compliance Report – 2023 Monitoring Exercise*, ECB, December 2023.

81 To manage the tax liabilities arising with a cross-border investment, many Member States have signed double taxation treaties to avoid a scenario in which the investor pays tax on dividends/interest received both in the country of residence of the investor and in the country in which the company/issuer is located (the source country). In practice, due to the WHT processing barriers presented in this section, such agreements are characterised by demanding and resource-intensive procedures.

a significant disincentive to cross-border investment.[82] The EPTF report on *the European post-trade landscape* provides a comprehensive overview of the issues arising from differing withholding tax (WHT) arrangements, procedures, rules and laws across Member States.[83] In addition, the AMI-SeCo has repeatedly highlighted key pain points and made recommendations to the European Commission and Member States with regard to WHT processing.[84]

As part of the 2020 capital markets union action plan,[85] the European Commission introduced a proposal for a directive (the FASTER Directive[86]) to make WHT procedures safer and faster across the EU. The Directive is expected to be applied by Member States in their national legislation by end of 2028 and would alleviate some of the issues listed below. However, the scope of the FASTER Directive is limited and contains several options for Member States that could mean that harmonisation is not achieved.[87]

BARRIER 14: Differences in tax reporting/information exchange in WHT processes

Regulatory – Supervision
Market practice

Ideal state

For both domestic and cross-border investments, there is a single, common framework for tax reporting procedures, with a common data model for machine-readable data exchange and the same data elements (including a single EU tax identification scheme and standard format certification of residence). Tax reporting and information requirements follows the logic of the custody chain, allowing certified intermediaries to pool tax information for the same category of beneficial owners.

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82 According to a stock-taking exercise by Better Finance:
over 90% of European investors found the WHT reclaim procedure difficult;
around 20% needed more than one year to obtain a WHT refund;
most importantly, more than 30% of the respondents reported that they intend to stop investing in EU foreign shares due to cross-border WHT issues.

83 The tax-related issues were first identified in the Giovannini reports. These were then followed by additional reports by the European Commission's Fiscal Compliance Experts' Group (FISCO) and its Tax Barriers Business Advisory Group (TBAG).

84 The AMI-SeCo has actively contributed to the initiatives taken by the regulatory authorities, most notably providing input to the European Commission's public consultations in 2015, 2017 and 2020.

85 *A Capital Markets Union for people and businesses – new action plan*, European Commission, 24 September 2020.

86 Council Directive (EU) 2025/50 of 10 December 2024 on faster and safer relief of excess withholding taxes (OJ L, 2025/50, 10.1.2025).

87 The AMI-SeCo welcomed the FASTER proposal and communicated its proposals for ensuring harmonised implementation and for maximising the benefits for the Single Market in a letter sent to the European Commission in November 2023.

Description of the barrier

Market stakeholders report a significant divergence in the reporting requirements they face from national tax authorities:

- **Data formats, forms and data elements required for tax processing vary greatly** across Member States. In some Member States there is still an absence of machine-readable means for communicating tax-related information. In several jurisdictions the relevant forms are only available in the local language.
- **There are different rules and approaches for identifying taxpayers.** National tax identification codes lack harmonisation in terms of the standards and issuance.
- **Certification of residence for tax purposes is not harmonised.** Member States issue and require different forms of certification of residence of tax subjects.
- **Tax reporting frameworks are not aligned with the custody chain.** Consequently, intermediaries in the custody chain cannot aggregate and pool tax rate information. Detailed end-beneficiary information must therefore be passed up the chain to the tax agent or the issuer, often through complex or separate processes.
- The misalignment of reporting requirements is transversal (Barrier 42 in this report) and covers not only WHT but also, more broadly, the national frameworks for the taxation of capital gains.

Priority

Impact: **High**; Difficulty: **High**

Diverging reporting requirements and data exchange in WHT processes have a very high operational impact on servicing cross-border holdings of securities. They make asset servicing expensive, which results in lower cross-border holdings within the EU.

Recommendation (what actions by whom)

The proposed FASTER Directive addresses some of these issues and is a good starting point. However, more can be done in this area to increase the impact.

- EU lawmakers should ensure that the FASTER Directive is implemented across all asset classes and without Member State options.
- The FASTER Directive should be accompanied by detailed technical standards on machine-readable data exchange for WHT processing (either through Level 2/3 measures or through industry-supported technical standards) to be adopted by national tax authorities.

BARRIER 15: Barriers stemming from other elements of WHT processing

Regulatory – Supervision
Market practice

Ideal state

Withholding tax procedures are harmonised and efficient, with the processes and requirements aligned across national tax authorities by all Member States. This makes it possible for non-domestic intermediaries to provide tax services and fully eliminates, or significantly limits, differences in the experience of taxpayers as regards their domestic and cross-border investments within the EU. To achieve this, the FASTER Directive is transposed into national legislation in a fully harmonised way that covers all asset classes and is without (significant) Member State options, paving the way for integrated, standardised and efficient post-trade WHT processing in the EU.

Description of the barrier

EU jurisdictions differ from each other not only in terms of the reporting templates used and data elements required but also as regards other aspects of WHT processing.

- The **definition of beneficial owner** for tax purposes is not harmonised across Member States, introducing uncertainty in the cross-border context. This makes the application of WHT requirements (e.g. certification of residence and requests for refunds or relief-at-source) cumbersome and risky for intermediaries, contributing to uncertainty as to whether investors should pay the level of tax due based on their true residence.

- Most Member States **require domestic intermediaries to be used** by investors to process WHT refund claims or other communications with the tax authority. In other words, foreign intermediaries are not allowed to provide these services even if they are willing and able to adopt and follow the local processing rules. This means that international investors investing across several markets often cannot rely on a single tax service provider.

- In some jurisdictions, relief-at-source (i.e. applying at-source tax rates that reflect double taxation treaties) is not supported or allowed for foreign investors.

- **Liability regimes for intermediaries in tax processing are not harmonised** and often not aligned with the sets of information available to each of the intermediaries along the chain given that full details of the tax status of the end-investor and beneficial owner are generally only available to the final intermediary directly serving the end-investor and beneficial owner. The intermediary closest to the issuer or issuer-CSD is, however, held liable for the accuracy of information on the end-investor's tax status but often has little or no knowledge of the true status. Furthermore, in most jurisdictions, self-certification at the bottom of the custody chain (the end-investor) is not allowed.

- For tax settlement (refund) purposes, some markets require the use of a **cash account at a domestic bank in the country in which the tax is to be paid.**

What is more, there are Member States where the processing of tax refunds may take more than six months.

- **The principles and requirements for identifying the beneficial owner of a security (and entitlement to the income stemming from that security) for tax purposes vary widely across Member States.** This often leads to cases where the intermediaries are unable to prove the identity of the (true) beneficial owner and cannot avoid the imposition of a higher tax rate than the tax rate actually due.

- **Withholding tax processing frameworks disregard how corporate actions are processed.** This includes coupon payments, dividends and failures to apply the record date principle on which CA processing is based. In turn, this creates frictions and potential tax-abuse loopholes, such as the infamous “cum-ex” and “cum-cum” abuse schemes. This is also a significant barrier to efficient collateral management and, as a result, deep and efficient financial markets in the EU, given that this often leads to the collateral giver or the collateral taker suffering adverse consequences due to differing WHT frameworks depending on their place of residence.

- **Different rules and operational procedures apply in handling tax realignments** related to dividend claims due to late-settled transactions. This affects the ability of both investors and issuers to report and pay the correct tax amount to authorities.

Priority

Impact: **High**; Difficulty: **High**

Diverging requirements for WHT processing and a lack of competition among service providers based on a level playing field have a high operational impact on servicing cross-border holdings of securities. They make asset servicing at cross-border level expensive and result in lower cross-border holding within the EU.

Recommendation (what actions by whom)

The proposed FASTER Directive addresses some of these issues and provides a good starting point. More must, however, be done in this area if the Directive is to have a greater impact.

- EU lawmakers should ensure that the FASTER Directive is implemented across all asset classes and without Member State options.

- Implementing the AMI-SeCo recommendations on the scope and implementation of FASTER that have already been communicated to the Commission and Council[88] would eliminate most of the above issues.

[88] *The AMI-SeCo’s observations and recommendations on the proposal on Faster and Safer Relief of Excess Withholding Taxes*, ECB, 17 November 2023.

BARRIER 16: Fragmented financial transactions tax frameworks in the EU

Regulatory – Supervision
Market practice

Ideal state

There is standardised financial transactions tax processing, in terms of reporting and collecting entities, and of formatting and reporting requirements, in EU jurisdictions that apply such a tax.

Description of the barrier

There are several diverging frameworks in Member States that apply transaction taxes on securities trades (financial transaction taxes, or FTTs), often as a result of national designs. The persons subject to tax, the scope of transactions and the processes involved are unique to each market. The concrete issues that arise were already highlighted in the 2017 EPTF report (Watchlist Barrier 5) and remain relevant today.

- In some markets, transactions are reported or collected through the domestic CSD (and investor-CSDs/custodians participating in the domestic CSD), while in others they are attached to trading processes and performed by the trading parties (investment firms/brokers).
- In certain frameworks, the tax is applied to all transactions individually, while in others it is applied to the net trading position at the end of the day.
- The parties liable for reporting and paying the tax also differ greatly across jurisdictions. The obligations are most often placed on intermediaries (either in the trading or settlement layer), but there is a lack of clarity as to what is expected of those intermediaries, particularly if they are not resident in the source country that is levying the tax (e.g. domestic investors transacting through a non-domestic intermediary).

In 2013, the European Commission introduced a proposal aimed at creating a common framework for FTTs for EU Member States on a voluntary basis. The key objective of the proposal was to avoid financial transactions or intermediaries relocating to other Member States in order to avoid that tax and to prevent undue tax competition arising among Member States. This initiative would have harmonised the scope and modalities for FTT application across the participating Member States.[89]

In June 2023, the European Commission stated, however, that “the prospects of reaching an agreement” on FTTs in the future were “limited”, adding that there was “little expectation that any proposal would be agreed in the short term”. However, it is not clear whether this also related to FTT processing given that the working document was produced in the context of additional EU revenue potential.[90]

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89 Ten Member States initially indicating their interest in participating: Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia

90 See Section 2.3.3. of the Commission Staff Working Document on amending the decision on the system of own resources of the EU issued on 20 June 2023.

Priority

Impact: **Medium**; Difficulty: **High**

Given that not all Member States apply FTTs, the impact of this barrier, in terms of cross-border integration, is limited.

Recommendation (what actions by whom)

- Member States, potentially supported by the European Commission, are recommended to agree on standardised reporting, processing and collection requirements for FTTs

5 Barriers in the buyer and seller relationship

A fully integrated post-trade environment in Europe would perhaps be most visible in the buyer and seller relationship. A buyer or seller from any European country would be able to reach another seller or buyer in a different European country. They could trade and settle any security located within Europe; this is the vision of a true capital markets union. Reaching this vision requires “upstream” processes in fundamental law and investor and issuer rights to come together, resulting in a smooth and secure exchange of securities. In this future, the borders of the EU would transform from barriers into bridges, fostering an efficient and borderless financial ecosystem.

In practice, such an environment requires interoperable and harmonised systems for market access and post-trade processing. This principle would apply not only to buyers and sellers, but also to relationships involving securities lenders and borrowers, as well as collateral givers and takers.

5.1 Clearing

There are currently 11 central counterparties (CCPs) involved in clearing cash transactions in securities issued in the EU, two of which are established and operated from outside the EU.[91] Six of these CCPs provide services across multiple markets (equities listed on multiple exchanges or trading venues spanning several countries), while the other five provide central clearing only for securities listed and traded in their relevant domestically regulated market.[92] Cash securities clearing relates primarily to equities, given that cash transactions in debt instruments usually take place over-the-counter (OTC) and are not centrally cleared. For the post-trade landscape, another relevant segment is repo markets, where seven of these CCPs provide central clearing.[93] Chart 1 below provides an overview of the clearing market for both repos and equities. Compared with the trading, settlement and asset servicing layers, the central clearing landscape in Europe shows more consolidation and integration, exhibiting a higher level of competition. This is also partly due to the regulatory environment, which fosters access, interoperability and links between CCPs (Figure 6).

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91 European Association of CCP Clearing Houses, *EACH Manifesto – Keys for Efficient and Resilient Capital Markets*, December 2024.

92 LCH SA, Cboe Clear Europe, BME Clearing, Eurex Clearing, Euronext Clearing, CCPA, ATHEXCLEAR, KDPW CCP, KELER CCP established in the EU; LCH Ltd. and SIX x-clear established outside the EU. Of these, LCH SA, LCH Ltd, Cboe Clear Europe, Eurex Clearing, Euronext Clearing and SIX x-clear offer clearing services spanning several countries and trading venues, while the others focus on their respective national markets (instruments listed and traded on their national stock exchanges).

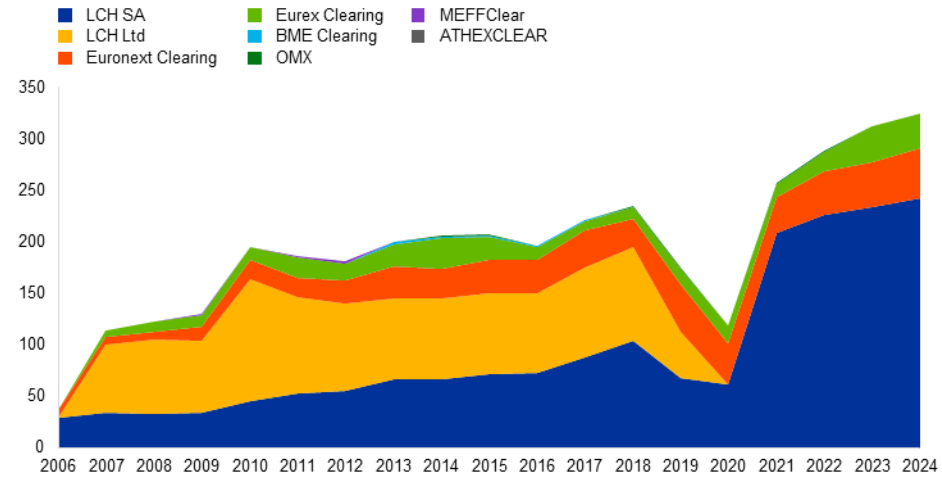
93 Financial derivatives are served by ten EU CCPs and commodity derivatives by six EU CCPs (see the EACH Manifesto), but these segments are not covered in this report.

Chart 1

Repo and equity clearing in Europe

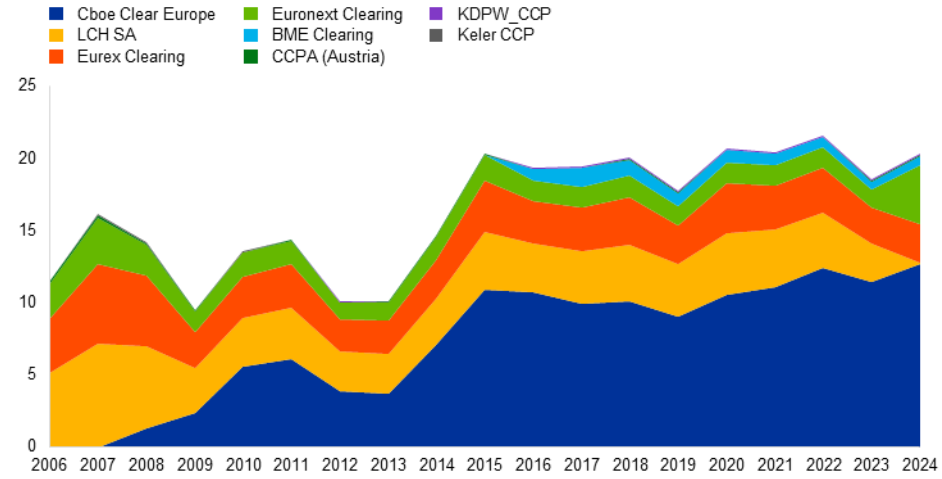
a) Value of cleared repo securities transactions

(EUR trillions)



b) Value of EU cleared equity securities transactions

(EUR trillions)



Source: ECB (SST).

Regulated CCPs in Europe currently operate under a wide variety of business models that accommodate different market strategies. Three general models can be observed in the equities clearing landscape.

- **Vertical:** where a trading venue sends the entire trading flow to a single CCP. This means that all trading members in that exchange need to have a clearing arrangement with the incumbent CCP.

- **Full CCP interoperability:** a model in which two or more CCPs compete on equal footing for trades executed on a trading venue by establishing an interoperability arrangement between each other. CCP interoperability is regulated in EMIR, with a strong focus on risk management. The Regulation

requires CCPs to post margins to each other that cover their reciprocal exposures and spill-over risk effects.

- **Preferred-CCP model:** this is considered to be a middle-ground arrangement whereby a trading venue that uses a particular (primary) CCP opens to additional CCP(s) without an interoperability arrangement. The alternative CCP(s) operate under the preferred-CCP model because it is only when both counterparts of the trade have selected the same additional CCP as their preferred clearing provider that the trading venue sends this trade to the alternative CCP. In any other scenario, the trade is routed to the primary CCP. While members of the traditional CCP do not incur any increased costs as a result of this interoperability, members of the preferred (alternative) CCP need to maintain a back-up arrangement with the incumbent CCP.

Figure 6 below shows the potential outcomes, in terms of the clearing CCP, depending on the interoperability model applied on the trading venue (full or preferred). The example below assumes four CCPs, with one acting as the primary CCP (CCP A) and the other three CCPs being interoperable with each other. Given the 16 possible outcomes in this context (given that each buyer or seller can choose any of the available CCPs), the two interoperability scenarios will result in significantly different clearing outcomes based on the trading parties' choices of CCPs. Applying the full interoperability model, in ten of the 16 outcomes both trading parties get their first-choice CCP, while only 4 in 16 get this in the preferred clearing case, which only occurs when both parties choose the same CCP.

Figure 6

Outcomes of the EU preferred-CCP equities clearing model

Scenario 1: Full interoperability

Buyer	Seller	Clearing CCP
CCP A	CCP A	CCP A
CCP A	CCP B	CCP A
CCP A	CCP C	CCP A
CCP A	CCP D	CCP A
CCP B	CCP A	CCP A
CCP B	CCP B	CCP B
CCP B	CCP C	CCP B | CCP C
CCP B	CCP D	CCP B | CCP D
CCP C	CCP A	CCP A
CCP C	CCP B	CCP C | CCP B
CCP C	CCP C	CCP C
CCP C	CCP D	CCP C | CCP D
CCP D	CCP A	CCP A
CCP D	CCP B	CCP D | CCP B
CCP D	CCP C	CCP D | CCP C
CCP D	CCP D	CCP D

Scenario 2: "Preferred clearing"

Buyer	Seller	Clearing CCP
CCP A	CCP A	CCP A
CCP A	CCP B	CCP A
CCP A	CCP C	CCP A
CCP A	CCP D	CCP A
CCP B	CCP A	CCP A
CCP B	CCP B	CCP B
CCP B	CCP C	CCP A
CCP B	CCP D	CCP A
CCP C	CCP A	CCP A
CCP C	CCP B	CCP A
CCP C	CCP C	CCP C
CCP C	CCP D	CCP A
CCP D	CCP A	CCP A
CCP D	CCP B	CCP A
CCP D	CCP C	CCP A
CCP D	CCP D	CCP D

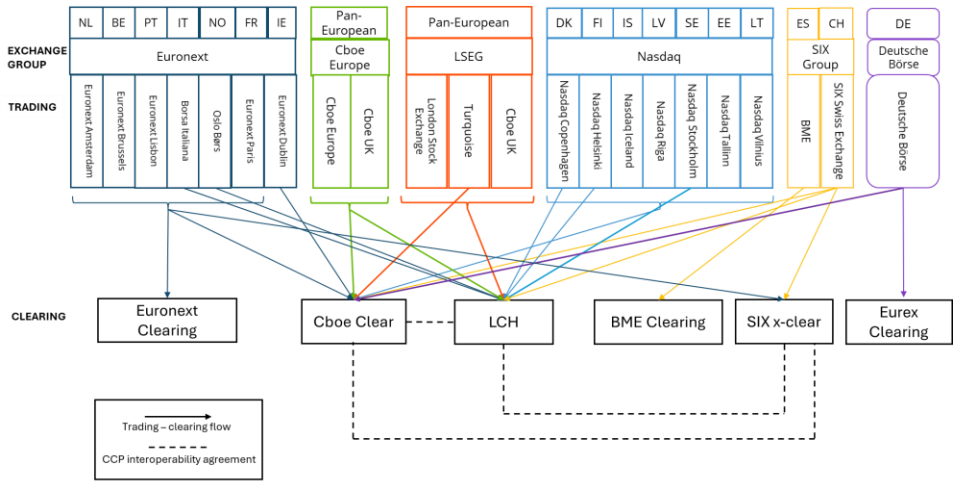
Source: AFME.
Note: CCP A = Primary CCP; CCP B, CCP C, CCP D = Interoperable

CCPs are free to enter into an interoperability agreement and it is the trading venue that decides on the clearing model it wishes to offer to its trading members. Thus,

interoperability is not imposed on CCPs or on exchanges.[94] Preferred access, on the contrary, cannot be refused by the trading venue under the open-access provisions in MiFID and EMIR. In addition, under Article 36 of the Markets in Financial Instruments Regulation (MiFIR),[95] trading venues must grant non-discriminatory access to CCPs. Figure 7 below shows an updated (2024) CCP interoperability status, including connected trading venues and markets.

Figure 7

Overview of central clearing arrangements across major European trading venues and CCPs



Source: AFME.

Preferred or full interoperable access by CCPs is now available in most of Europe's key trading venues.[96] With the full interoperability model, the requirement for an additional risk management framework (cross-CCP margins) adds an additional margin requirement for clearing members. Thus, CCP full interoperability may benefit large clearing members active across several markets given that it may offer them higher netting benefits and the potential for single CCP relationship, offsetting the drawback of additional margin requirements. However, smaller clearing members whose activities focus on one or a few markets may not be able to reap these benefits and might be worse off due to higher margin requirements. While the balance between higher margins and netting benefits may be a primary consideration for clearing members, the decision to support interoperability is also dependent on the considerations of CCPs and trading venues based on their business rationale (e.g. access) to accommodate user requests. The principle of open access to feed the settlement layer should be maintained.

94 On the one hand, EMIR gives a right to CCPs to establish interoperability arrangements on a non-discriminatory basis, and denial can be only based on risk grounds. On the other hand, EMIR recognises the risks arising from interoperability arrangements and sets out a detailed regulatory framework for dealing with them.

95 Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 (OJ L 173, 12.6.2014, p. 84).

96 With the biggest cash equity CCP reporting that 73% of its cleared market volumes are available for clearing through the full interoperability model and only 22% through the preferred clearing model. See the article entitled "Preferred Clearing", published on the Cboe Clear Europe website.

Overall, Europe's clearing landscape has shown resilience and, compared with other areas of post-trading, a higher level of competition and a stronger drive towards consolidation (which are also demonstrated by recent significant changes in the clearing landscape). **For this reason, this report does not identify any concrete barriers to post-trade integration stemming from clearing.**

5.2 Settlement

T2S was created with the aim of making cross-border settlement domestic, i.e. to enable any CSD participant to use a single securities account to settle with any other CSD participants, irrespective of their location. By virtue of a single technical settlement platform, T2S has made a significant impact on harmonising key aspects of securities settlement. The regulatory frameworks (the CSDR and MiFID/R) support this vision by regulating access between European post-trade infrastructures. Sufficient time has lapsed since the full go-live of T2S in 2015-17 and the implementation of regulatory changes to assess whether the above vision of a single domestic settlement area for the EU has been realised.

T2S is not the only settlement platform in scope, given that there are many settlement systems operating through different platforms within the EU. The key to removing barriers to efficient and well-utilised pan-European securities settlement is ensuring that the different entities involved are well connected and that the appropriate networks are established to reach the vision for both T2S and the capital markets union.

In a capital markets union supported by a multitude of European stock exchanges, CCPs and CSDs, encouraging interoperability and seamless cooperation between trade and post-trade stakeholders is key. As upstream processes converge at the settlement layer, efficient netting, clearing and processing need to occur within and across borders as though the underlying infrastructure handling these processes was fully integrated. At the settlement level, reaching a deeper level of integration will require full attention to be paid to elements that would ensure optimal level of linkage between CSDs, and between CSDs and central banks. This optimal linkage would enable a participant in a CSD to use its securities account to settle with a participant in any other CSD. The CSDR regulates the definitions and processes for establishing links and access between CSDs and other market infrastructures in a harmonised way. This framework allows the receiving party to deny access only if it would disrupt the smooth and orderly functioning of financial markets or pose a systemic risk, and not on the grounds of losing market share.

This report does not aim to describe the CSD landscape in the EU beyond those aspects directly relevant to barriers to increased use of cross-CSD settlement and integration.[97]

[97] For a more general description of CSDs and their crucial role in financial markets, see "Central securities depositories in Europe: sound foundations for the capital markets union", *Monthly Report*, Deutsche Bundesbank, March 2025.

In this regard, this report finds that settlement-related barriers have not yet been fully dismantled and that cross-CSD settlement (as a proxy for CSD integration) is still considered to be more difficult, complex and challenging than domestic (intra-CSD) settlement (see Table 1 below). There are several reasons for this. Some relate to the legal barriers identified in this report in Section 3 that are outside of the control of CSDs. Moreover, while interconnection between CSDs and other financial market infrastructures has developed significantly, partly because of the evolving regulatory framework, T2S as a single access point is **currently underutilised**. In this section, specific barriers in the settlement layer are identified. The underlying causes of these barriers are shown to be a combination of higher-level limitations (rules and laws), market practices and other drivers of fragmentation across EU borders.

Table 1

Settlement types

Settlement type	Description
Intra-CSD settlement	Settlement between two securities accounts (SACs) in the same (T2S) CSD.
Cross-CSD settlement	Settlement between two SACs in different (T2S) CSDs.
External-CSD settlement	Settlement between two SACs, one in a T2S CSD and the other in a non-T2S CSD. This type is also referred to as “out-T2S settlement”.
Internalised settlement	The process where settlement occurs within the books of an intermediary other than a CSD.
Cross-border settlement	Any of the above settlement types where the parties are in different jurisdictions.

Note: Parties refers to the principals to the transaction; for example, even two parties from different jurisdictions settling in the same domestic central securities depository (intra-CSD settlement) is a cross-border transaction.

5.2.1 Availability and use of central securities depository links

Cross-CSD settlement and thus the availability of CSD links are key requirements for an integrated post-trade environment given that they help to create interoperability between otherwise siloed post-trade infrastructures. They can facilitate primary market distribution of securities to investors based in other Member States and can support cross-border secondary market transactions. Establishing a link with another CSD is driven by expected trading volumes and demand from participants, as well as by constraints stemming from the particular features of local tax and legislation. To facilitate increased usage and extension of these links, the post-trade environment needs to be supported by legal and regulatory certainty.

Building and maintaining links involves costs, which are heavily influenced by legal and tax differences between jurisdictions. When setting up a link, CSDs need to establish and maintain up-to-date legal opinions and agreements and to perform regular due diligence checks to ensure certainty of settlement and operational efficiency; this is in addition to complying with other requirements of the CSDR applying to links. If local differences persist, the business case for the development of cross-CSD services (including settlement) will continue to be less compelling than for domestic services. Thus, there are several areas that, directly or indirectly, affect decisions to create links. These include the diverging roles of CSDs across markets

with regard to registration (Barrier 12 in this report), differing tax-related frameworks (Section 4.2.6 of this report) and, most importantly, barriers stemming from legal frameworks (Section 3 of this report).

Even though links between CSDs in the EU have become more extensive since the go-live of T2S, this does not necessarily mean that these links are being used to reach securities in other CSDs. This is, to some extent, connected with the lack of harmonisation, but is also driven by business choices and related incentives. A significant portion of cross-border transactions may still occur independently of cross-CSD settlement, for instance through internalised settlement in the books of custodians.[98]

As a sign of the low use of a single CSD relationship, data on direct links[99] show that only three EU CSDs have more than 20% of their total securities held in another CSD, while 17 EU CSDs have less than 10%, as can be seen from Chart 2, panel b) below. These low figures may be a sign of the low level of cross-border investment in the EU, rather than an indication of inefficient use of links.

There is also a disparity between smaller T2S CSDs and larger CSDs as regards investor links. As shown in Chart 2, panel a), there are 16 EU CSDs with four or less direct links where they act as investor-CSDs.[100] While a smaller CSD (as an investor-CSD) can theoretically rely on a single link to another CSD with multiple links to gain relayed access to a large number of issuer-CSDs, in practice, among CSDs with one or two links, the ability to establish broad access appears to be lacking. This is evident from the relatively low share of securities smaller CSDs hold at another CSD – compare panel a) and panel b) in Chart 2. Therefore, despite significant recent progress, Europe's usage of CSD links is still far from perfect. In many settlement scenarios, this restricts the use of a single securities account by CSD participants for their settlement activities in the EU.

98 For a more detailed discussion, see European Securities and Markets Authority, *Report to the European Commission – CSDR Internalised Settlement*, 5 November 2020.

99 In other words, where a (investor) CSD opens a securities account at another (issuer) CSD.

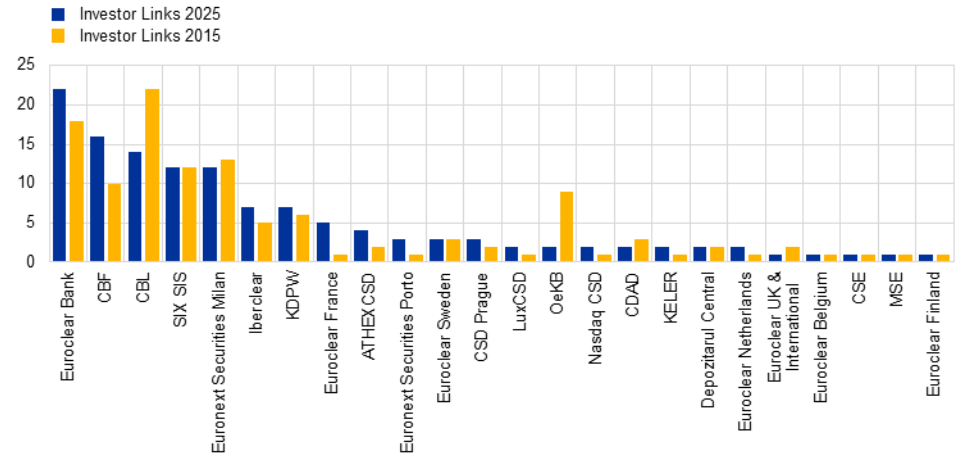
100 All of which with a value for total securities held of less than €1 trillion, as compared with a total value for securities held in EU CSDs of around €65 trillion.

Chart 2

Number of CSD links and securities (share of total) held at another CSD

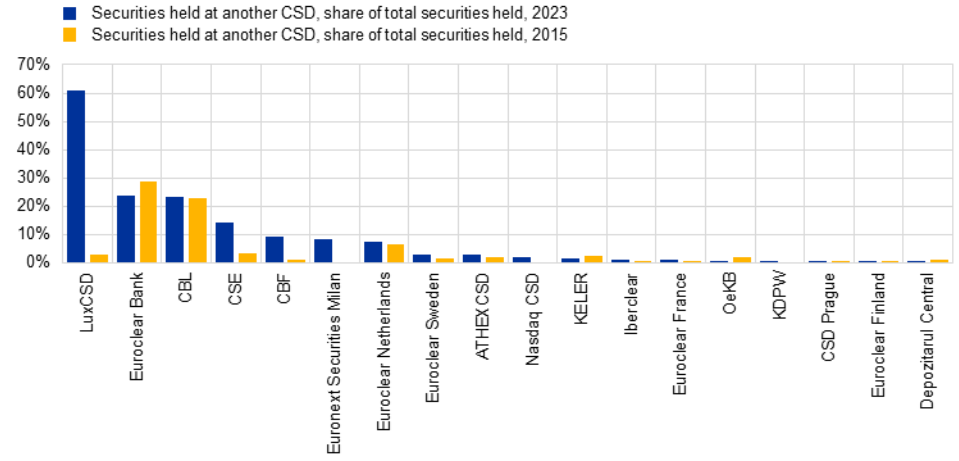
a) Direct investor links –2015 and 2025

(number of direct (operated) investor links per CSD)



b) Securities held at another EU CSD – 2015 and 2023

(percentages)



Average use of investor links	
2015	4.30%
2023	6.48%

Sources: ECSDA, ESMA and ECB (SST).

Remaining barriers to the location of settlement

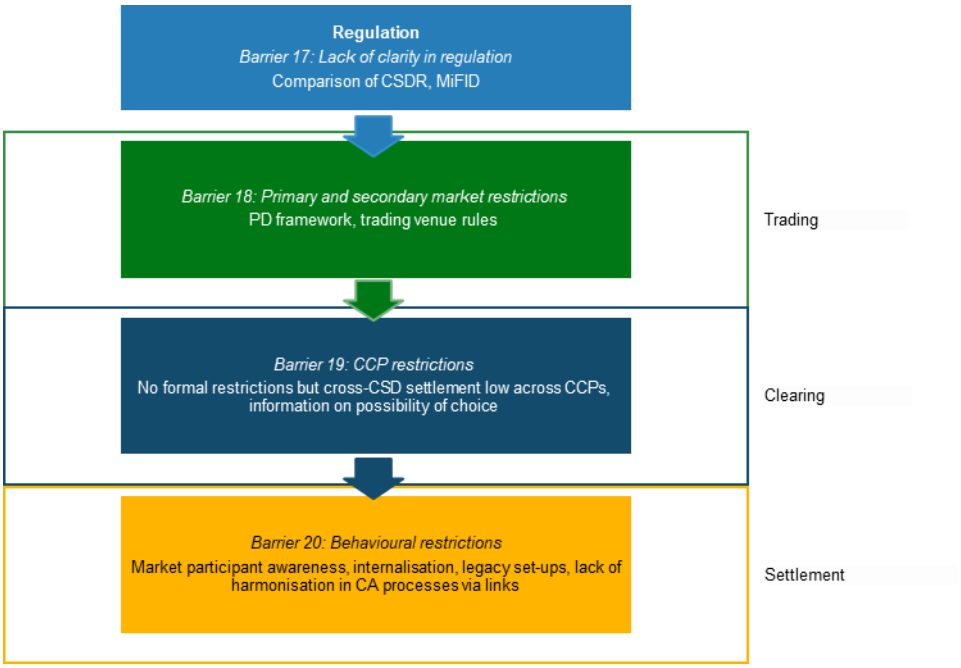
The remaining restrictions on the location of settlement are difficult to reconcile with the T2S vision and the significant investments made by the community in T2S, as well as with broader efforts to achieve better integration. A key element of the T2S vision is that all CSD participants should be able to settle securities transactions regardless of where their securities accounts are located. There are several practical barriers still in place that have prevented the realisation of this vision. These limitations or restrictions on settlement location may originate from any part of the

transaction value chain, from trading to settlement, and may also be reinforced by tax, registration and legal frameworks.

It is important to adopt a holistic view of where such restrictions may originate from, given that their source may be in the legal framework and in the rules and behaviours of trading venues, CCPs, CSDs and, finally, of CSD participants themselves. Chart 4 below shows these different layers and their relationship. In general, if links are available, no stakeholder should restrict the choice of settlement location.

Figure 8

Primary sources of restrictions on EU settlement location



BARRIER 17: Lack of clarity of EU regulatory requirements as regards the choice of settlement location

Regulatory – Supervision

Ideal state

In line with the vision that brought T2S to life, EU regulation enables a securities account owner or the principal to a securities transaction to freely choose their preferred settlement location, provided that the requisite objective, technical prerequisites (e.g. CSD links) are in place. They hold and settle (access) the security from their preferred settlement location.

Description of the barrier

MiFID and the CSDR contain provisions to guarantee that access to infrastructures (trading venues, CCPs and CSDs) within the EU is open and based on objective criteria, without discrimination against non-domestic infrastructures. In practice, infrastructures collaborate closely to ensure connectivity to settlement locations based on market demand and on whether the technical prerequisites for such connectivity are met. Specifically, the current legislative framework focuses on allowing infrastructures to assess the feasibility of establishing, maintaining and complying with connectivity to other infrastructures based on legal and operational requirements. However, it does not explicitly grant securities account owners or principals the right to choose their preferred settlement location when multiple settlement infrastructures are available. See Table 1A in Annex 1 for a comparison of the relevant articles and their provisions.

While MiFID and CSDR provisions support integration, the EU regulatory environment should be clearer as to **who** can decide on the ultimate location of settlement. To cater for cross-CSD settlement, i.e. the scenario in which the parties use different securities settlement systems to settle the same transaction, the guiding principle should be that the principals to a settlement transaction should be in the position to choose the settlement location, provided all necessary technical prerequisites for the trading venue and CCP to connect to alternative settlement locations are fulfilled.

Priority

Impact: **Medium**; Difficulty: **Low**

Lack of clarity as to who has the right to determine the location of settlement when settlement is technically possible at several locations may hinder the use of cross-CSD settlement. Such uncertainties may result in restrictions that reduce competition between intermediaries and prevent consolidation of settlement locations by investors. While this has a medium impact on post-trade integration, bringing clarity to EU requirements would not require significant efforts.

Recommendation (what actions by whom)

- The EU lawmaker is invited to bring clarity to rules related to determination of the ultimate settlement location, taking into consideration the possibility of cross-CSD settlement and the vision that principals to transactions should have the ultimate right to decide where they settle, insofar as this is technically feasible for the infrastructures involved.

BARRIER 18: Primary and secondary markets restricting the location of settlement

Market practice

Ideal state

Primary dealer frameworks and trading venues do not restrict or limit the settlement location. Market participants are able to settle securities transactions traded on primary markets by utilising cross-CSD settlement.

Description of barrier

In **secondary markets**, trading venues may stipulate (limiting) rules on the place of settlement for transactions executed on their platforms. These rules may reflect and stem from restrictions arising from the clearing layer, i.e. where the CCPs clearing their markets allow clearing members to settle (see the discussion below). But the opposite may also be true, i.e. trading venue rules that force CCPs to restrict the place of settlement. Additionally, a lack of information, documentation and varying interpretations of terminology may result in market players being unaware of the possibilities of using CSDs other than those that are domestic for settlement. However, such trading venue rules may be well justified and reflect limitations on the scope of instruments in different settlement locations, or limitations in the scope of eligible instruments in cross-border and cross-CSD links between settlement locations.

Another reported barrier relates to issuers limiting the settlement location of **primary market** transactions. In practice, this relate to national debt management offices requiring primary dealers of government securities to transact through their national CSD. According to a survey[101] conducted by the AMI-SeCo, most Member State debt management office frameworks allow for cross-CSD settlement in primary transactions. However, this was reported as being dependent on links to the domestic CSD. In a few markets, the rules governing these transactions require participation in the domestic CSD, either directly or through a custodian relationship.

Such restrictions are not imposed with the intention of “protecting the national CSD” but are the result of primary dealer frameworks relying on statistics and information services provided by the domestic CSD to the debt management office. Alternatively, this may be a result of legacy operational procedures or purely for convenience. Indeed, the same survey indicated that many of the debt management offices receive ancillary services from the domestic CSD, which either provides technical solutions for monitoring government security auctions and data, or provides services on an ad hoc basis.

These examples were highlighted in a survey conducted by the AMI-SeCo and by further fact-finding by the AMI-SeCo Securities Group (SEG).

- In Spain, primary dealers are required to have an open account at the domestic CSD given that the Spanish debt management office deposits its “references” there.
- In France, the provisions outlined in the charter governing the relationship between primary dealers and the debt management office could be interpreted

[101] During the drafting of this report, a ”fact-finding” survey was conducted for the purpose of examining if debt management offices restrict the settlement location.

by market participants as requiring primary transactions to be settled through the French CSD.

- In Italy, the government Treasury has outsourced primary transaction and auction operations to the electronic platform MTS Italy,[102] which lists the national CSD as the available place of settlement in its regulatory specifications.[103]

- Some trading venues explicitly designate a settlement place,[104] which may (indirectly) discourage clearing members from freely choosing a settlement location.

Priority

Impact: **Medium**; Difficulty: **Low**

Trading venue and primary dealership rules are of key importance for players transacting in these markets given that these rules are a prerequisite for participation.

Recommendation (what actions by whom)

- Sovereign issuers should allow their primary dealers to use cross-CSD settlement if investor-CSD links are established with the issuer-CSD. Any information on the exclusiveness of one settlement location should be removed from debt management office frameworks.

- Trading venues should, where possible, allow and support cross-CSD settlement based on CSD links. They should also use clear language to describe eligible settlement locations and refer to the process for expansion of settlement locations.

BARRIER 19: CCP rules restricting the location of settlement

Market infrastructures

Ideal state

Central counterparties (CCPs) and their clearing members are well aware of the possibility of choosing the settlement location for their cleared transactions and are able to utilise this without any explicit or implicit restrictions.

Description of barrier

CCPs settle positions and margins from their clearing services in cash and repo markets with their clearing members by being CSD participants. Nearly all major

[102] Banca d'Italia, *Agreement between Banca d'Italia and the Dealers admitted to participate in placements, buybacks and exchange offers of government securities*, May 2025.

[103] The regulatory specifications are reported in an Excel file for each MTS market and are available on the MTS Group website.

[104] For example, settlement of transactions executed on the trading venues Xetra® and Börse Frankfurt (the Frankfurt Stock Exchange) takes place through Clearstream Banking AG. See the article on clearing and settlement on the Xetra® website.

European CCPs currently do so by opening securities accounts in CSDs for settling the relevant securities. A survey conducted by the AMI-SeCo indicated that CCPs do not formally restrict free choice of settlement for their clearing members.[105] However, the demand for cross-CSD settlement remains low, for reasons relating to both demand from clearing members and to CCPs' choices. Evidently, cross-CSD settlement is used by the majority of CCPs as an exception to their ordinary operations (see the points made below).

Opening securities accounts requires the maintenance of several accounts across jurisdictions by both the CCP and its clearing members (most of which also have securities accounts at the major CSDs). The limited use of cross-CSD settlement has a high impact on the ability of the market to leverage the functionalities provided by T2S. It is also a key ingredient in facilitating a single clearing and settlement relationship to access all EU securities.

These specific points were highlighted by CCPs in the dedicated fact-finding survey conducted by the AMI-SeCo, which showed that the majority of the responding CCPs see no, or low, usage of cross-CSD settlement.

- The possibility for clearing members to choose their settlement location depends on whether the securities are T2S eligible, the type of instrument (equity, repo or derivative) and the trading venue rules.
- A lack of support for CCP-related functionality provided by CSDs, such as accepting "already matched" instructions from CCPs in the cross-CSD context. CCPs also report that not all international securities identification numbers (ISINs) are eligible for cross-CSD settlement, potentially leading to frictions in the clearing process. If this functionality is not adopted by all CSDs, the CCP may choose to limit settlement to the CSD used by the CCP itself in order to decrease operational risks.

The general barriers to using investor-CSD links in T2S also apply in the CCP context, including fragmented processing of CAs, as discussed in Section 4.2.2**.** The difficulties in holding securities across borders may dampen demand for cross-CSD settlement for clearing members.

Priority

Impact: **Medium**; Difficulty: **Low**

Recommendation (what actions by whom)

- CCPs should, where possible, allow and support cross-CSD settlement based on CSD links.

[105] During the drafting of this report, a "fact-finding" survey was conducted for the purpose of examining if central counterparties restrict the settlement location.

- CSDs should allow cross-CSD settlement for (all) ISINs and provide the same functionality as they do for intra-CSD settlement in order to potentially increase cross-CSD settlement stemming from cleared transactions.

BARRIER 20: Behaviour of market participants restricting the location of settlement

Market practice

Ideal state

Market participants settling securities transactions are aware of the different possibilities for settlement in an interoperable settlement environment, including the ability to choose the settlement location. There are no technical barriers to the use of different settlement possibilities, whether at the level of individual market participants or embodied in market practice.

Description of barrier

Another barrier for cross-CSD settlement may be the behaviour of the users themselves (CSD participants, market stakeholders as investors and holders of securities).

- Awareness of the possibility of, and technical requirements for, cross-CSD settlement seems low in general due to the inertia of legacy practices which were built on the premise that cross-CSD settlement was impossible.
- Many market participants have the place of settlement (PSET) and place of safekeeping (SAFE) for specific ISINs assigned to the issuer-CSD hard-coded into their systems, which prevents them from using cross-CSD settlement in an STP manner. See Barrier 24 in this report for challenges related to the use of PSET.
- The lack of full harmonisation and efficiency of corporate events processes executed through CSD links may also contribute to the preference for holding and transacting securities in their issuer-CSDs.

The above factors may explain why “home market settlement” is still the preferred way of settling securities transactions, even among major market participants. This would also explain why they feel compelled to maintain several CSD relationships and operate several securities accounts, despite the technical ability of transacting through just one or a few.

Priority

Impact: **Medium**; Difficulty: **Low**

The development of cross-CSD settlement depends on the choices of market participants based on the applicable rules, available technology, and business practices and opportunities. Accordingly, it is important to highlight drivers and considerations that may impact these choices.

Recommendation (what actions by whom)

- Market participants (including public authorities) should not require their counterparts to settle in the issuer-CSD and should support the use of cross-CSD, external and cross-border settlement.

BARRIER 21: Charging of investor central securities depositories for internal T2S functions

Market practice

Ideal state

CSDs do not charge each other for no-cost activities in T2S, such as internal T2S realignments.

Description of the barrier

Some CSDs are charging for the realignment instructions automatically generated in T2S, although these are not charged for by the Eurosystem. These practices may disincentivise further usage of cross-CSD settlement in T2S and should, in principle, be removed, especially if no costs are incurred by the CSD that is charging for the realignment. This barrier relates solely to a T2S functionality offered as part of the T2S vision and not CSDs' fee structures. The realignment process in T2S is automatic,[106] which means that it should not require any additional operations from the users' side other than setting up the static information to allow for such instructions. This automation is not true for external-CSD settlement.

Priority

Impact: **Low**; Difficulty: **Low**

While the economic impact may not be as significant as for other barriers, the levying of a charge exclusively on investor-CSDs when that charge is not incurred by the issuer-CSD undermines the vision of T2S and detracts from the promotion of cross-CSD settlement.

Recommendation (what actions by whom)

- The ECB Market Infrastructure Board (MIB) should review and discuss current practices in T2S given that there is need for debate on how a CSD incurs additional costs when settling cross-CSD.

[106] This process ensures that securities issued in one CSD can be settled in another CSD. For more details, see *Target Services – T2S user requirements document*, ECB, 23 September 2024.

BARRIER 22: Use of non-T2S CSDs in CSD link arrangements for EU securities issued in T2S CSDs

Market infrastructure

Ideal state

All cross-CSD settlements with EU securities issued in T2S CSDs, and between participants in T2S CSDs, take place through automated CSD links on the T2S platform.

Description of the barrier

Some CSDs in T2S use pathways for cross-CSD settlement that are outside T2S even if the issuer-CSD for a given EU security is inside T2S. Although this is technically possible, it results in a relatively inefficient process, involving multiple steps that do not benefit from the main contribution of T2S – making cross-CSD settlement as simple and effective as domestic settlement. In a T+1 context, such inefficiencies need to be minimised for smooth transition that does not decrease settlement efficiency. Moreover, resolving this barrier would be in line with the CSD eligibility criteria relating to the requirement for CSDs to make securities available on request (Barrier 23 in this report), which means, in practice, the creation and usage of T2S links.[107] It should be noted that although the upcoming and planned enhancements of T2S cross-CSD functionalities (such as T2S CR 0797[108]) are helpful, the underlying issues can only be fully resolved by harmonised use of T2S.

Priority

Impact: **Medium**; Difficulty: **Low**

This barrier prevents T2S from fulfilling its original vision of making cross-CSD settlement as simple as domestic for EU securities. Using out-T2S CSDs as the technical issuer-CSD makes it difficult to make full use of the built-in functionalities of T2S which are intended to ensure smooth cross-CSD settlement. However, the difficulty of resolving this may be greater from a CSD perspective due to legacy networks.

Recommendation (what actions by whom)

- T2S CSDs should use T2S links for T2S securities transactions between each other.
- The MIB/T2S CSD Steering Group (CSG) should investigate whether mandatory requirements should be imposed by potentially leveraging the implementation guideline for the eligibility criteria for CSDs in T2S.

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[107] Under Criterion 3 of the Eligibility criteria for CSDs in T2S, it is stated that *"In T2S CSDs will be sharing the same settlement platform, so access/interoperability by the investor CSD to the issuer CSD should be less costly/complex than it is today."*

[108] See, for example, the request for a change to T2S to enable investor-CSDs to configure several investor-type security central securities depository links per security at the same point in time rather than individually.

BARRIER 23: Issuer-CSDs delaying or restricting access to securities for investor-CSDs

Market infrastructure

Ideal state

CSDs in T2S make each ISIN for which they are an issuer-CSD (or technical issuer-CSD) available to other participating CSDs on request. Investor-CSDs are able to access the securities of a (technical) issuer-CSD in T2S without undue delay or additional costs.

Description of the barrier

In practice, there are sometimes delays by issuer-CSDs in providing investor-CSDs with access to their issued securities. As the vision of T2S is fundamentally about being able to access all EU securities within the same platform, such delays limit the development of the efficient cross-CSD settlement environment envisaged by T2S.

Priority

Impact: **Medium**; Difficulty: **Low**

Delays in enabling cross-CSD settlement on the issuer-CSDs' part result in the investor-CSD having to build an alternative access path, for example through a local custodian or an out-T2S CSD. This two-step approach is costly and inefficient, requiring duplicate change efforts for CSDs and market participants, and undermines the vision for T2S.

Recommendation (what actions by whom)

- The MIB should ensure, in the migration plan for new T2S markets, compliance, from the migration date, with the requirement for ISINs to be made available.
- The MIB should review and enhance monitoring of compliance by the Eurosystem with the T2S framework access criteria.

BARRIER 24: Non-standard use of place of settlement information in settlement instructions

Market practice

Ideal state

All market participants use the place of settlement information in the pre-settlement processes and in their settlement instructions, with all the required data elements being in accordance with the existing guidance produced by the Securities Market Practice Group (SMPG) and by securities settlement systems.

Description of the barrier

Confusion, operational errors and settlement failures arising from the use of place of settlement information in settlement instructions have been consistently highlighted by market stakeholders. Place of settlement (PSET) has long been a key non-

economic data element of securities settlement instructions. However, the advent of cross-CSD settlement and the emergence of T2S, with increased use of the ISO 20022 standard, have shed light on outdated practices and misunderstandings as to the proper use and interpretation of this data element. Despite the SMPG and T2S offering clear and simple guidance and a standard for how PSET should be used in various domestic and cross-CSD scenarios, it appears that many market participants do not understand, or do not follow, such guidance/standards. This issue is also related to the general barriers in messaging and data that are discussed in this report in the transversal section.

PSET (or the ISO 20022 counterpart)[109] is a matching field in most securities settlement systems, including in T2S. The information given by the instructing party on where the party on the other side has its account is a prerequisite for successful settlement. Yet, in operational processes preceding the issuance of settlement instructions, PSET information is not consistently applied or aligned with the counterparty (with regard to the exchange of SSIs, see Barrier 25 below). Wrong assumptions are often made about where the other party settles. One root cause is the fact that the use of PSET information is hard-coded in internal systems owing to legacy practices dating back to when cross-CSD settlement was not considered possible. Those practices may, for instance, include a rule whereby the PSET must always be that of the issuer-CSD of the ISIN, even if that is not where the specific instruction is supposed to settle. The wrong use of PSET leads to a significant number of matching issues and even settlement fails and also hinders the efficient execution of cross-border and cross-CSD securities transactions.

Impact and priority

Impact: **Medium**; Difficulty: **Low**

Inconsistent use of PSET prevents cross-CSD/cross-border settlement from working as smoothly as domestic settlement. Solving this issue does not require new standards, but does require greater awareness of existing standards and guidance, especially in the cross-CSD settlement context. As highlighted by the T+1 Industry Committee, removing this barrier is important for a smooth transition to a shorter settlement cycle.[110]

Recommendation (what actions by whom)

- In line with the recommendations by the T+1 Industry Committee, market participants should make efforts to increase awareness of the proper use of PSET information. The industry should include this information in pre-settlement matching/confirmation processes in accordance with the existing global guidance. Work to this end is planned through the SMPG and would also allow for the recommendation suggested in this report for Barrier 37.

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[109] The delivering/receiving depository and associated party 1, party 2, etc., data elements.

[110] EU T+1 Industry Committee, *High-Level Road Map*, June 2025

- The AMI-SeCo should support/monitor efforts towards a new standard/market practice requiring market participants to be prepared to accept deviating PSETs and SAFE.
- Further fact-finding and stock-taking with regard to existing practices should be followed up by the AMI-SeCo.

BARRIER 25: Inefficient SSI management and lack of standardisation

Market practice

Ideal state

Market participants update and communicate their standard settlement instructions (SSIs) to all their regular counterparties and customers in a standardised data exchange format consistent with the ISO 20022 data dictionary. This is done either bilaterally or through dedicated centralised platforms offering an SSI repository service.[111] All market participants feed the SSIs received from their counterparties into their systems and subsequently prepare and issue settlement instructions automatically based on that data.

Description of the barrier

The use of SSIs is a key tool for avoiding settlement fails arising from non-matching settlement instructions. SSIs are a set of static data exchanged between parties to wholesale financial transactions to let the counterparty know where (at which CSD/settlement agent/custodian) and with what details (BIC, securities account number, etc.) the party issuing the SSI will settle the transactions. SSIs are exchanged outside settlement systems, either bilaterally or multilaterally through centralised platforms offering that service. While such centralised services further increase efficiency, adopting a single standard would make it easy to communicate SSIs bilaterally. Hosting services could also contribute to greater efficiency if they were to follow the same single standard, thereby ensuring interoperability.

SSI data received from the counterparty need to be fed as static data into internal systems, which subsequently prepare and issue settlement instructions to CSDs, settlement agents or custodians. Efficient use of SSIs is very important, particularly in Europe where a large number of CSDs and markets exist and where most of the ISINs can settle in more than one settlement location. There is, however, evidence that financial market stakeholders in Europe do not properly update, process and integrate SSIs into their settlement processes. The format for exchanging SSI data is not standardised, despite international standards available for that exchange. Even

[111] The Standard for Sharing Standard Settlement Instructions to be adopted by the Financial Markets Standards Board in the United Kingdom at the end of 2026 is a good example of, and a potential candidate for, a commonly adopted SSI data standard.

when SSIs are exchanged, there are examples of these not being used and/or not being kept up to date.[112]

Priority

Impact: **Medium**; Difficulty: **Low**

The use and treatment of SSI data as operationally critical sets of static data are a prerequisite for smooth settlement, especially in the cross-border context. It is highly important that greater awareness and attention is paid to the exchange and maintenance of SSIs in the European securities industry.

Recommendation (what actions by whom)

- The industry, through the T+1 Industry Committee, should adopt a single operational practice, data standard and template for the exchange of SSIs, consistent with the ISO 20022 data dictionary.
- All market participants should conduct a review of their internal processes for capturing, maintaining and using SSIs in automated preparation of settlement instructions in order to ensure that those instructions are driven by the latest SSI received from their counterparty.

If no improvement in adoption levels is observed, the AMI-SeCo should consider imposing requirements on all market participants for the proper handling of standard settlement instructions in line with the above recommendations.

BARRIER 26: Complexities in settlement between T2S and non-T2S central securities depositories

Market infrastructure

Ideal state

CSD participants are not required to perform special procedures to execute transactions between securities accounts in T2S CSDs and securities accounts held at non-T2S CSDs (external-CSD settlement) that are linked to T2S CSDs, or to settlement platforms operated by T2S CSDs outside T2S.

Description of the barrier

At the technical level, the emergence of T2S has made settlement across T2S CSDs easy and efficient. However, settlement between T2S CSDs and non-T2S CSDs is inherently more complex and demanding, and may require additional operational steps or arrangements. T2S is used by 24 out of the 32 CSDs in the EU, which means that seamless settlement in and out of T2S (i.e. between T2S CSDs and non-T2S CSDs) is of key importance for European integration of post-trade services. As

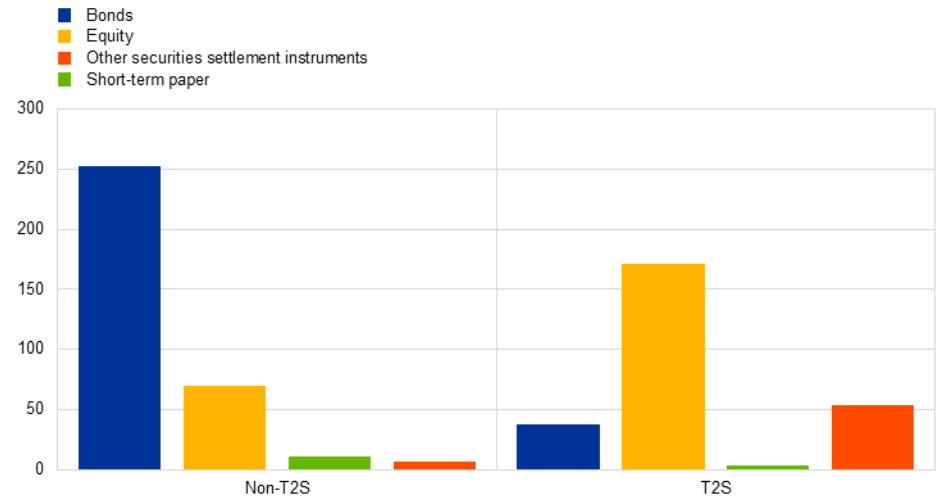
[112] The AFME's 2023 report on *Improving the Settlement Efficiency Landscape in Europe* also highlights the importance of SSIs and estimates that 6% of settlement instructions remain unmatched on the trade day due to mismatches stemming from outdated or ignored SSIs or wrong PSET use.

can be seen from Chart 3 below, a significant proportion of securities transactions occur outside T2S.

Chart 3
Non-T2S and T2S settlement in 2024

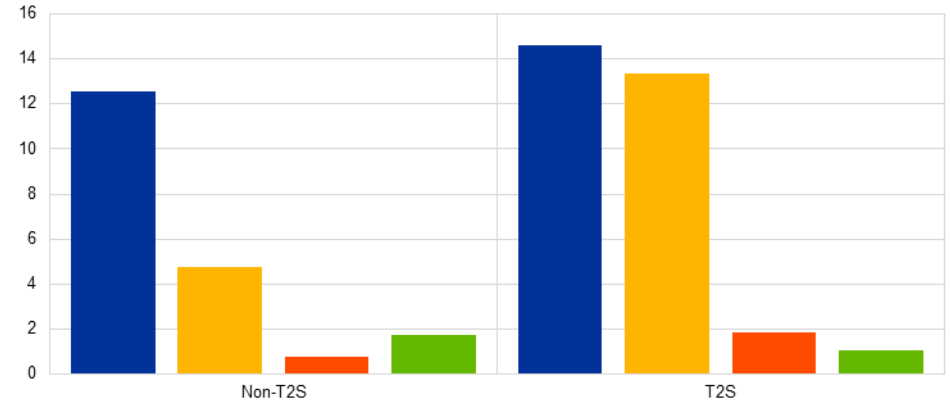
a) Number of transactions – non-T2S vs T2S

(millions of transactions)



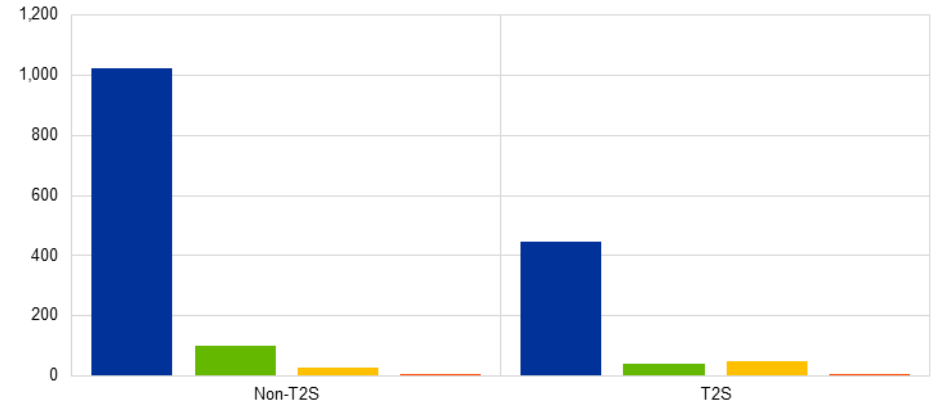
b) Value of issued securities – non-T2S vs T2S

(EUR trillions)



c) Value of securities transactions – non-T2S versus T2S

(EUR trillions)



Source: ECB (SST).
Note: ICSDs issue and settle Eurobonds, which is outside T2S.

Although a significant share of transactions occur within both environments, securities transactions between T2S CSDs and non-T2S CSDs are reported as being more complicated and cumbersome. There are several reasons for this.

- Some T2S functionality may not be available for settlement between T2S CSDs and non-T2S CSDs (e.g. the ability to process “cross-CSD already matched” instructions and partial release/settlement).
- The T2S leg of such transactions needs to use out-CSD settlement and is not within the control of realignment bookings (which are automatic within T2S).
- Non-T2S CSDs have differing cycles and cut-offs, something that is particularly important to highlight in a transition to T+1.

However, upcoming changes are expected to improve certain aspects of interaction between international CSDs and T2S.

- More CSDs are expected to join T2S in the near future, further harmonising procedures and operational processes.
- With the implementation of T2S change request T2S 0797 SYS in June 2025, T2S CSDs are able to configure more than one CSD link for a single ISIN within T2S,[113] thereby also making it possible to add non-T2S CSDs as technical issuers of a security. This functionality is expected to support cross-CSD settlement in T2S of securities issued outside T2S and reduce the complexities resulting from involving external (out-)CSDs in the settlement leg.
- The T2S CR 0798 SYS change request will enhance partial settlement and release in T2S by offering this functionality for external-CSD flows, potentially facilitating smoother settlement.[114] The extension of partial settlement and release to the external-CSD flow is planned for the November 2026 T2S release.

But even with these upcoming changes, it is expected that (I)CSD settlement outside T2S will remain significant and that the challenges for settlement between T2S and external (I)CSD systems set out above will not be completely eliminated by these changes. Resolution may, instead, be dependent on the underlying client’s willingness to transition to central bank money settlement.

Priority

Impact: **Medium**; Difficulty: **Low**

Seamless settlement between T2S CSDs and non-T2S CSDs and settlement platforms is of key importance for ensuring smooth cross-CSD settlement in Europe. This is particularly true as regards the relationship between international CSDs and

[113] See the request for a change to T2S to enable investor central securities depositories to configure several investor-type security central securities depository links per security at the same point in time rather than individually.

[114] See the request for a change to T2S to allow execution for a partial quantity and for a partial settlement.

T2S CSDs given that international CSDs offer and support issuance and settlement of Eurobonds, the biggest debt securities ecosystem in Europe.

Recommendation (what actions by whom)

- To leverage the concrete T+1 proposals on related issues in the settlement recommendations. Those proposals also are covered in the relevant sections in this report.
- The AMI-SeCo should monitor and further discuss potential alignments between T2S CSDs and non-T2S CSDs.

BARRIER 27: Different cut-off times across European FMIs for DvP and FoP settlement

Market infrastructure

Ideal state

The settlement cut-off times set by markets take into consideration the increasingly international nature of securities processing in the EU and the vision of a single EU securities market. In particular, the needs of non-domestic actors (i.e. those outside the country of the issuer) are considered. In practice, this would require markets that currently have earlier cut-offs to align their cut-offs more closely to the cut-offs for T2S and TARGET Services.

Description of the barrier

In a delivery-versus-payment (DvP) environment, the opening hours of the central bank real-time gross settlement (RTGS) system and the operations of the CSDs are highly related. This is because the “money leg” of the trade is settled through the RTGS system, while the “security leg” is through the CSD’s book (or in T2S). The timings between the operations for these two “legs” is often different, at both a domestic level and, more especially, internationally, thereby creating an obvious hurdle for efficient cross-border post-trade procedures. The issues related to settlement cut-off times were already identified as a barrier to integration in the first Giovannini report (see Barrier 7 in that report). T2S has made significant progress in this regard given that the cut-off times have been fully harmonised for all securities settlement systems served by T2S. As a result, the remaining issues and variations relate to non-T2S CSDs and EU non-EUR RTGS systems where the cut-off times range from 13:00 to 17:30 CET.

Table 2
Current CSD and RTGS cut-off times in T2S and other European markets

CET

Market	CSD	RTGS closing	DvP deadline	FoP deadline
Cyprus	CSE/CDCR	18:00*	13:00	13:00
Czech Republic	CSD Prague	16:00	13:00	17:00
	SKD		16:00	17:00
Iceland	Nasdaq CSD	17:30	16:20	18:00
Ireland	Euroclear Bank	18:00	16:30	19:30
Luxembourg	CBL	18:00*	16:00	20:00
Norway	Euronext Securities Oslo	16:35	14:15	14:15
Poland	KDPW	18:00	17:00	18:30
	CRBS		17:30	17:30
Romania	SaFIR	16:00	15:45	16:40
Sweden	Euroclear Sweden	18:00	15:30	17:00
United Kingdom	Euroclear UK & int.	19:00	16:45	19:00
T2/T2S		18:00	16:00	18:00

Notes: *T2 market

The variation in cut-off times combined with batch processing cycles in some markets makes it difficult for market participants to move securities across CSDs and borders, forcing custodians and settlement agents to impose even earlier cut-offs on their buy-side customers. Such challenges may be accentuated by the move to a T+1 standard settlement cycle in the EU by October 2027. Hence this issue is expected to be discussed and investigated further by T+1 governance and existing cut-offs are expected to be subject to a review in most markets in that context. Furthermore, the Eurosystem is preparing to launch an overarching consultation on the future operating hours of TARGET Services.[115]

Priority

Impact: **Low**; Difficulty: **Medium**

Seamless settlement across markets requires market cut-off times that enable securities to be moved from one market or CSD to another. This is especially important for the mobility of collateral given that intraday reallocation of collateral across markets is key to maximising efficiency for actors that operate across several markets.

Recommendation (what actions by whom)

In line with the T+1 recommendations, CSDs with a DvP cut-off before 16:00 CET should extend this cut-off until at least 16:00 CET, corresponding to the DvP cut-off in T2S.

115 "Public consultation on possible extension of T2 operating hours", *MIP News*, ECB, 6 June 2025.

Lack of availability or use of state-of-the-art settlement efficiency tools and functionalities

Market infrastructure
Market practice

The use of state-of-the art tools and functionalities has major potential for increasing settlement efficiency, especially in the cross-border context. To realise the vision of an integrated EU settlement landscape, such tools should be offered by all CSDs and intermediaries and should be used and enabled by all market participants. The following five subsections highlight specific efficiency-enhancing functionalities whose current usage or availability is suboptimal.

BARRIER 28: Partial settlement

Ideal state

Partial settlement is universally accepted and supported by market participants, at least for high-value DvP transactions. A common European market practice is adopted based on existing industry recommendations in this domain. All CSDs in Europe should offer an automated partial settlement functionality.

Description of the barrier

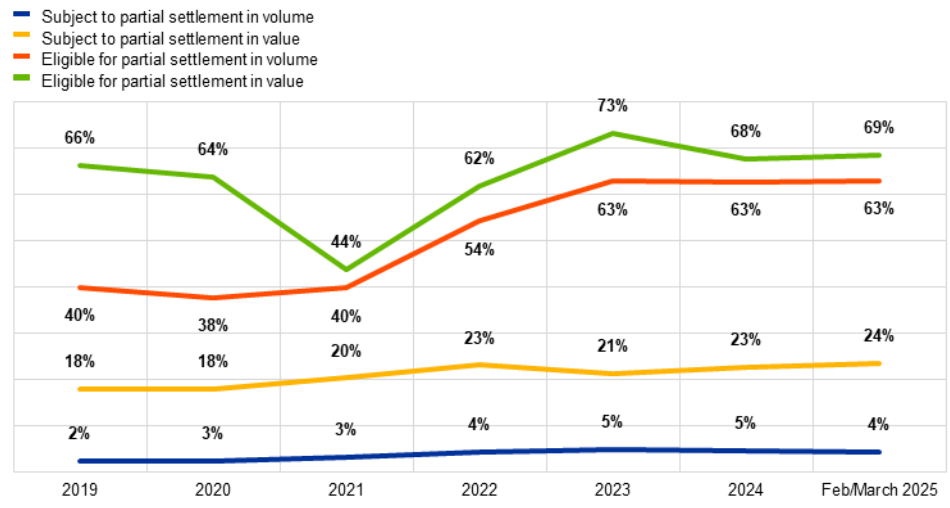
Partial settlement is the functionality for settling only parts of the quantity specified in a settlement instruction should there be insufficient securities to cover the total quantity. This is often based on an automated (auto-partial) functionality embedded by securities settlement systems in the settlement process itself. Although T2S and most non-T2S EU CSDs provide state-of-the-art (automated) partial settlement functionalities, there are still some CSDs that do not. Furthermore, of those CSDs that offer an auto-partial functionality, a large proportion of market participants still do not use or allow partial settlement on their instructions: over 30% (both in terms of volume and value) of the instructions submitted to T2S are not eligible for partial settlement (Chart 4).

There may be legitimate reasons why partial settlement is not accepted by parties for certain types of transactions and activities (e.g. securities lending and collateral mobilisations). However, allowing partial settlement should be the norm, at least for high-value DvP transactions that result from trading.

T2S will enable partial settlement and release for out-T2S transactions (change request CR-0798) from November 2026. This will make it possible for settlement between T2S and non-T2S CSDs to also benefit from this functionality, thereby encouraging further adoption of this efficiency-enhancing feature (see also Barrier 26 in this report).

Chart 4

Partial settlement eligibility and usage in T2S (EU transactions)



Source: T2S CSG Market Settlement Efficiency Workstream.
Notes: Percent of transactions that were "subject to" partial settlement means that they were partially settled while "eligible" implies that they could have been partially settled but were not.

To summarise, despite major industry associations having published recommendations and guidelines for their members on using partial settlement, the adoption of these practices in Europe remains suboptimal and opportunities to improve settlement efficiency further are left unexploited. In this regard, as well as for the upcoming transition to T+1, the ESMA report on the shortening of the settlement cycle referred to previously[116] advocates further promoting such operational procedures.

Priority

Impact: **Medium**; Difficulty: **Medium**

Given the priority assigned to settlement efficiency in European public policy and the upcoming structural changes (T+1), increasing the use of partial settlement is important.

Recommendation (what actions by whom)

The T2S CSG Market Settlement Efficiency workstream as well as key industry associations (the Association for Financial Markets in Europe (AFME)[117] and the ICMA European Repo and Collateral Council (ERCC)[118]) recently produced in-depth analysis of measures to further improve settlement efficiency. ESMA is currently

[116] European Securities and Markets Authority, *Report – ESMA assessment of the shortening of the settlement cycle in the European Union*, 18 November 2024.

[117] Association for Financial Markets in Europe, *Improving the Settlement Efficiency Landscape in Europe*, 31 October 2023.

[118] International Capital Market Association, *Optimising settlement efficiency – A European Repo & Collateral Council discussion paper*, February 2022.

working on updating the CSDR settlement discipline regime by reviewing the key parameters of (minimum) regulatory requirements.

- The T+1 Industry Committee should further encourage the use of partial settlement.
- CSDs and other intermediaries should offer a partial settlement functionality.
- Market participants should use and allow partial settlement.
- When reviewing the CSDR settlement discipline framework, ESMA and the European Commission are invited to investigate whether market participants should be required to allow for partial settlement.

BARRIER 29: Hold and release functionality

Ideal state

All CSDs and intermediaries offer hold and release functionality, including partial release to support partial settlement. All market participants are able to support and use these functionalities.

Description of barrier

The hold and release mechanism is a key tool offered by CSDs that can be used by their participants to manage settlement instructions that are otherwise ready for settlement in an efficient way in the securities settlement system. A settlement instruction can be submitted to the system and put on hold to prevent the related transaction's settlement before the conditions (most often availability of client resources) are verified by the CSD participant. Once the conditions are met by the client, the instruction is released for settlement. The efficiency gains lie in enabling the automation of settlement instructions management by custodians and the early matching of instructions. The greatest efficiency gain is achieved if the CSD offers partial settlement in combination with partial release (releasing only part of the amount of a settlement instruction for settlement and allowing partial settlement of instructions on hold). Today, not all CSDs in the EU offer a hold and release functionality.

Priority

Impact: **Medium**; Difficulty: **Medium**

If a hold and release functionality is not offered by CSDs or not used by CSD participants, settlement efficiency suffers in terms of subsequent matching and execution of settlement instructions.

Recommendation (what actions by whom)

As recommended by the EU T+1 Industry Committee, CSDs, intermediaries and market participants should offer and use a hold and release functionality to ensure

efficient management of settlement instructions. The AMI-SeCo stands ready to contribute to future discussions and to monitor the situation as necessary, potentially during or after T+1 migration.

BARRIER 30: Settlement allegements

Ideal state

All CSDs and intermediaries offer allegements. Where necessary, all CSD participants and their clients systematically rely on this functionality to support exception handling in settlement instructions.

Description of the barrier

Allegements are reports sent to a CSD participant (or its client) containing information on the settlement instruction that has been submitted by their counterpart in a transaction. Sharing information on the counterpart's settlement instruction helps in identifying discrepancies that prevent matching and settlement in a timely manner. Not all CSDs and intermediaries offer allegement messages and not all market participants rely on allegements for exception handling in processing settlement instructions.

Priority

Impact: **Low**; Difficulty: **Low**

Lack of availability or use of allegements prevents quick detection and resolution of technical errors in settlement instructions.

Recommendation (what actions by whom)

As recommended by the EU T+1 Industry Committee, CSDs, intermediaries and market participants should offer and use allegements for efficient exception handling in the management of settlement instructions. The AMI-SeCo stands ready to contribute to future discussions and to monitor the situation as necessary, potentially during or after T+1 migration.

BARRIER 31: "Already matched" instructions

Ideal state

All CSDs and intermediaries offer their clients the ability to submit "already matched" instructions if their counterparts empower them to do so under powers of attorney given to their account service providers.

Description of the barrier

"Already matched" instructions enable settlement based on a single (one-sided) instruction submitted by only one of the parties. This requires a sufficient level of

trust between the parties and a power of attorney to have been given by the relevant party to their account servicing intermediary (CSD or custodian/settlement agent). The most common use case for this type of settlement is between CCPs and their clearing members (or settlement agents of their clearing members) to settle centrally cleared transactions in a highly efficient way. The efficiency derives from obviating the need for matching and eliminating potential technical errors leading to late-matched or unmatched instructions and consequently to potential settlement fails. However, not all CSDs and intermediaries permit this type of settlement and are not open to receiving and processing powers of attorney to facilitate this. Some CSDs allow these types of instructions but only for intra-CSD settlement and not for cross-CSD settlement.

Priority

Impact: **Low**; Difficulty: **Low**

Owing to the operational complexity and challenges involved in matching a very high number of instructions in a limited time frame, CCPs often refuse to use a settlement relationship or settlement route if it does not allow for the processing of “already matched” instructions. Even if a trusted central party that frequently settles with the same set of counterparties (e.g. an issuer for primary market transactions) can operate without the use of “already matched” instructions, the efficiency of such settlement can often be significantly lower.

Recommendation (what actions by whom)

As recommended by the EU T+1 Industry Committee, CSDs, intermediaries and market participants should offer and use “already matched” instructions/powers of attorney to ensure efficient settlement of transactions that occur regularly and in high volumes between two counterparts or between a trusted central party (e.g. a CCP or issuer) and its regular counterparts. The AMI-SeCo stands ready to contribute to future discussions and to monitor the situation as necessary, potentially during or after T+1 migration.

BARRIER 32: Auto-collateralisation

Ideal state

All national central banks (NCBs), payment banks and CSDs offer an auto-collateralisation functionality on a broad range of eligible securities to a broad range of eligible clients/counterparties.

Description of the barrier

Auto-collateralisation is a settlement optimisation functionality offered by state-of-the-art securities settlement systems to automatically provide intraday credit against eligible collateral in the event of insufficient funds for seamless and early settlement. The collateral may take the form of securities being delivered in a settlement instruction (“on flow”) or securities already available on the account of the buyer (“on

stock”). For auto-collateralisation to be available, it is not enough that the CSD or securities settlement system offers that functionality; a central bank or a payment bank must agree to provide the intraday liquidity to their clients. The set of eligible collateral is determined by such liquidity providers. T2S offers auto-collateralisation in a state-of-the-art set-up, yet the use of the functionality is limited by central banks and payment banks, which do so by, for instance, setting credit lines or keeping the set of eligible collateral narrow. In some of the non-T2S EU CSDs this functionality is not technically available.

Priority

Impact: **Low**; Difficulty: **Low**

Auto-collateralisation would increase significantly the intraday liquidity available to participants in securities settlement systems, thereby fostering efficient intraday liquidity management and resolving potential gridlocks resulting from a lack of sufficient funds. A securities settlement system could process higher volumes and values of transactions in a given period of time if auto-collateralisation was widely available.

Recommendation (what actions by whom)

As recommended by the EU T+1 Industry Committee, NCBs, payment banks and CSDs should make auto-collateralisation available to their clients and counterparties on the widest set of collateral possible. CSDs that currently lack the necessary technical functionality should consider providing it. The AMI-SeCo stands ready to contribute to future discussions and to monitor the situation as necessary, potentially during or after T+1 migration.

BARRIER 33: Challenges in accessing central bank money settlement across EU currencies

Market infrastructure

Ideal state

CSDs and their participants have seamless access (subject to objective and reasonable access criteria set by the relevant central banks) to central bank money settlement regardless of the settlement currency.

Description of the barrier

Under the CSDR and its implementing regulatory standards, CSDs should, where applicable (practical), offer their settlement services in a way that ensures that securities are settled against central bank money. However, euro settlement apart (the euro being, by its very nature, an international currency), it is not easy for CSDs to arrange access to central bank money settlement in foreign currencies, even within the EU. In practice, this requires the CSDs or their participants to have direct access to the respective RTGS system as foreign participants. For the euro and Danish krone, T2S offers an integrated platform that is already used by 24 CSDs. The Eurosystem also continues to offer interfaced access to T2 to non-T2S CSDs.

The ECB, on behalf of the European System of Central Banks (ESCB) conducted a fact-finding exercise in 2022 to take stock of requirements across all EU central banks to understand the extent of such limitations.[119] The survey found that all EU central banks allow foreign EU banks or CSDs to join their RTGS system and that they do not impose different rules, technical requirements or any restrictions on non-domestic EU entities wishing to join their RTGS system.[120] Nevertheless, while they do not differ greatly,[121] the RTGS services offered by ESCB central banks are not fully harmonised in practice, e.g. as pointed out above, they differ in cut-off times, fee schedules and other business rules. All (except for some of the Nordic NCBs) confirmed that they have not received any requests from foreign CSDs (or participants of foreign CSDs) to join their RTGS system for the purpose of facilitating securities settlement in central bank money.

Priority

Impact: **Low**; Difficulty: **Low**

A clear policy objective of the CSDR (in line with the global Principles for financial market infrastructures)[122] is to promote settlement of securities transactions against central bank money. Seamless access to central bank money settlement would contribute to further integration of settlement processes within the EU. No major barriers have, however, been detected within the EU, while outside the EU the impact of EU policies is limited.

Recommendation (what actions by whom)

- There should be no idiosyncratic requirements by NCBs for EU CSDs to have access to central bank money settlement.
- The ECB should coordinate discussion within the ESCB.

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[119] The outcome of this exercise was shared with the European Commission (which had requested information from the ESCB on this matter at the time).

[120] Except for one case in which an additional legal opinion is necessary to ascertain whether the RTGS rules can be applied to foreign candidates as per their home-country legal requirements.

[121] The 2022 ECB survey also confirmed that all non-euro area EU RTGS and at least one major international network service provider relied on ISO 15022 messaging (although some non-euro area EU RTGS systems may now have migrated, or be in the process of migrating, to ISO 20022 messaging) and that they use standard messaging to facilitate settlement of the cash leg of DvP transfers in their RTGS systems.

[122] Committee on Payment and Settlement Systems, *Principles for financial market infrastructures*, April 2012

6 Transversal barriers

6.1 Messaging and data

Large amounts of data are exchanged between stakeholders throughout the life cycle of securities. Reference data relevant for a security are created in the issuance process, based on the term sheets and other legal documents, and are subsequently updated at certain corporate events. The creation of transactional data (e.g. instructions, allocations, confirmations, regulatory reporting, etc.) throughout the processing also relies on such reference data.[123]

In an ideal world, there would be a single, accessible and ultimate ("golden")[124] source of reference data for each security that would be used to create transactional data relying on a common, standardised data model enabling machine-readability and straight-through processing. The creation and reporting of reference data should be undertaken just once, using a standard format, and be consistently accessed and used throughout the life cycle of the security. A single data model and messaging standard should be used or, if several messaging protocols co-exist, it should be possible for them to be translated one-to-one into another protocol without any semantical amendments or loss of information, being based on a common data dictionary. This would also include the use of common identifiers (for securities, entities and transactions).

BARRIER 34: Lack of common, consistent, machine-readable data travelling throughout the transaction value chain

Market practice

Ideal state

Financial markets stakeholders (issuers, intermediaries and wholesale investors) use a single data dictionary that is applicable regardless of the form of data exchange, the platforms used and the life-cycle events covered. This data model is used throughout the issuance, trade and post-trade processes.

Description of the barrier

For transactional data, the lack of a common dictionary and the use of diverging data exchange, messaging formats and non-structured free text fields in messages leads to media breaks, results in a need for manual interactions and is prone to errors. This hinders efficiency and speed of processing in issuance (see also Barrier 6 in this report), the execution of corporate events and regulatory reporting. There are

[123] The 2017 EPTF report covered data and messaging in three of the 12 barriers identified: EPTF Barrier 2: Lack of convergence and harmonisation in information messaging standards; EPTF BARRIER 6: Complexity of post-trade reporting structure; and EPTF Barrier 7: Unresolved issues regarding reference data and standardised identifiers.

[124] See Barrier 8 in this report on a "golden" source of information in the context of custody and asset servicing.

two notable initiatives in this area that might reduce this fragmentation and potentially solve many of the issues experienced.

- Introduced in March 2023, the ICMA Bond Data Taxonomy (BDT) is a common language developed by a broad range of global bond market constituents to promote automation and reduce the risk of fragmentation across issuance, trading, settlement and distribution of debt securities. The BDT is technology agnostic and designed for both traditional debt securities and distributed ledger technology (DLT)-based bonds (see Section 7 on DLT in this report). Where relevant, the BDT builds on ISO definitions. To expand the coverage of ISO 20022 in primary markets as well as throughout the life cycle, the ICMA and Swift have been collaborating to facilitate the use of the BDT in ISO 20022 messaging (as well as in other formats, notably XML and JSON).

- To facilitate the trade processing and reporting of derivatives, repos and securities-lending transactions, including a broad range of complex and often operationally cumbersome life-cycle events, the Common Domain Model was developed jointly by the ICMA, the International Swaps and Derivatives Association (ISDA) and the International Securities Lending Association (ISLA). Hosted by the FinTech Open-Source Foundation (FINOS),[125] the Common Domain Model (CDM) provides a machine-readable and machine-executable data and process model (e.g. in Java, or Python) for the trading and life-cycle management of financial products.

Priority

Impact: **High**; Difficulty: **Medium**

This issue results in inefficiencies, errors, settlement fails and more expensive cross-border transactions owing to the lack of a common "language" across stakeholders. As also reiterated in the T+1 recommendations by the industry, ensuring STP is key to a smooth and successful transition to a T+1 standard securities settlement cycle.

Recommendation (what actions by whom)

- Industry stakeholders should, insofar as possible, adopt the existing standards (the BDT, the FINOS CDM and other industry standards).

- The AMI-SeCo should monitor implementation of the standards.

BARRIER 35: Delayed updates to securities static data

Market practice

Ideal state

The data updates required for settlement are done as soon as possible, and investor-CSDs are not at a disadvantage compared with issuer-CSDs as regards updates of static information. A level playing field exists in which there is no

[125] See the article entitled "Enhance interoperability & straight through processing & better regulatory oversight", published on the FINOS website.

noticeable delay in the setting-up of securities information between an issuer and investor-CSD.

Description of the barrier

This barrier relates to the delayed update by issuer or investor-CSDs of securities reference data for new securities, often caused by data integrity requirements, system limitations or other reasons. This results in the prevention of pre-matching of transactions on the primary, “grey” or secondary market for newly issued securities, especially in cross-border scenarios.

In some scenarios, this delay may be motivated by the valid concerns of an issuer-CSD about the need to ensure the integrity of the reference data. Additionally, this could also be due to legal or regulatory requirements for an ISIN to be made available by an investor-CSD (compliance), potential complexities within systems and procedures in the context of CSD links or the use of a common settlement platform (e.g. T2S). In this context, data vendors play a significant role through their updating of market data and the services they offer to data users. In other cases, there may be inefficiencies at the CSDs that result in this behaviour.

- These issues have arisen in the context of the Eurosystem EU Issuance Service, where matching of primary market transactions in some CSDs did not occur initially owing to later update of investor-CSD static data.
- Similarly, some clients of investor-CSDs report not being able to match instructions in a new ISIN, although they were able to do this at the issuer-CSD. In some cases, the problem may lie with the investor-CSDs, given that there are cases where they are not made aware of the new ISIN and thus not be able to set it up for settlement.

Priority

Impact: **Medium**; Difficulty: **Low**

The consequences of this barrier are the following.

- Participants of CSDs are forced to delay sending settlement instructions to CSDs or, even if they are successfully sent, the instructions cannot be immediately matched and confirmed and need further monitoring.
- Investor-CSDs face difficulties in supporting the settlement of primary and other transactions in the initial life cycle of a security. This reduces settlement efficiency and creates operational risk. It may also push settlement activity from night-time settlement to real-time settlement (i.e. later in the settlement day). The potential impact of this will be even larger in a T+1 environment.
- Issuer-CSDs benefit from the highest settlement volumes in the initial days of the life cycle of many securities. As a result, CSD participants may face situations where they must manually re-enter a large number of settlement instructions or must monitor their instructions to ensure they have been matched at the CSDs.

- Investor-CSDs are put at a disadvantage as compared with issuer-CSDs in terms of both the service they offer to their clients and the settlement volumes they can capture. This may undermine the business case for establishing CSD links and create a heavy operational burden for market participants and impacted CSDs.

Recommendation (what actions by whom)

- Securities reference data should be updated in the static data of the issuer-CSDs and the investor-CSDs informed without undue delay as soon as there is certainty of the minimum securities features essential for (pre-)matching settlement instructions.
- Further investigation by the AMI-SeCo, potentially by reaching out to the MIB/T2S Governance/CSG, of current practices and processes for making ISINs available viewed from both the issuer and investor-CSD perspectives.

BARRIER 36: Use of local/proprietary identifiers

Market practice

Ideal state

The global standard identifiers are used in all European markets and across the whole securities value chain to identify entities and transactions. A standard market practice, or regulatory requirements, provide clear rules that also encompass cases where the classification used by two parties to the same transaction differs.

Description of the barrier

National markets rely on local/national identifier codes to identify entities and transactions.

(iii) **Identification of entities:** Global securities markets rely on the Business Identifier Code (BIC) – developed by Swift originally to identify entities connecting to its network – as a globally harmonised identifier for entities. Where the BIC is not available, there is often a fallback to national/proprietary identifiers. However, proprietary entity identifier codes are used in some markets instead of or in parallel with the BIC. AMI-SeCo survey respondents point out that the legal entity identifier (LEI), while mandatory for reporting, is not used uniformly in the post-trade area.

(iv) **Identification of transactions:** Although the Financial Stability Board developed the Unique Transaction Identifier (UTI), a global standard for identifying transactions that is already required for reporting purposes, the use of the UTI in post-trade processes more broadly is still limited. Instead, proprietary local or regional identifiers are used that are either defined by trading venues or CCPs or established through national market practices. Applying the harmonised UTI consistently would increase the transparency and the efficiency of

monitoring the status of securities transactions, including by ensuring faster identification of discrepancies or potential matching problems.[126,127] That transparency could help the European market to smoothly transition to a T+1 standard securities settlement cycle. Consistent application of the UTI would also help in better identification of transaction types (see below) for regulatory reporting and statistical purposes as well as in the implementation of CSDR penalties. The UTI has been successfully deployed in regulatory reporting of repos in European markets.[128] It has not, however, been taken up in other market segments and is not used throughout the whole life cycle of securities transactions. Like other regions, Europe lacks a market practice on how the UTI should be applied consistently and throughout the full value chain of securities transactions, including the post-trade domain.

Priority

Impact: **Low**; Difficulty: **Medium**

The lack of systematic use of global identifiers in the securities value chain is a missed opportunity for increasing STP rates and reducing errors and settlement fails. Using national identifiers complementing the BIC – although efficient at local level – hinders integration of cross-border securities transactions and introduces additional complexity in cross-border use cases. According to market stakeholders, one critical potential consequence of the lack of a global standard on LEIs might be the rejection of non-EU securities as collateral.

Recommendation (what actions by whom)

- Local/national entity identifiers should be phased out by the industry and replaced universally with the BIC.
- The AMI-SeCo should further explore the possibilities of a European market practice for the use of the UTIs to identify securities transactions (building on already existing best practices developed by the ICMA ERCC on regulatory reporting for repos) and of the LEI for identifying legal entities.

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126 The 2023 AFME report on *Improving the Settlement Efficiency Landscape in Europe* states: "*In the post trade space, given the complexity of the custody chain, UTIs would allow intermediaries to be able to track transactions and visualise at which stage of the trade lifecycle discrepancies occur, regardless of the usage of different platforms.*"

127 The 2022 Swift article entitled "Solving the post-trade transparency challenge" estimates that consistent application of the UTI would contribute to a 50% reduction in the number of pre-settlement matching and timing exceptions that require active investigation with a counterparty and a potential 90% reduction in the number of matching or timing fails.

128 In 2022, the ICMA ERCC issued a set of best practice recommendations on using the UTI in reporting repos under the EU Securities Financing Transactions Regulation.

BARRIER 37: Inconsistent use of transaction type in messaging

Market practice

Ideal state

Transaction types are identified and mapped by all market participants with the respective ISO codes in the relevant data fields in settlement and reconciliation messages.

Description of the barrier

Despite ISO standards providing a classification of transactions and the associated codes, information on the types of transactions is not populated consistently in settlement-related messaging. As a result, identifying the transaction types is not consistent across markets.[129] This is despite regulatory efforts, in the context of the CSDR settlement discipline regime (SDR), requiring identification of transaction types in a harmonised way to ensure an efficient calculation of settlement penalties. Correct and consistent identification of transaction types would not only benefit CSDR SDR-related processes, but would also boost the efficiency (STP) of collateral management processes, increase the transparency of settlement activities and facilitate better regulatory reporting (see Barrier 42 in this report) and statistics on transactions.

Priority

Impact: **Low**; Difficulty: **Low**

The absence of consistent use of transaction type codes limits and/or prevents STP and automation in certain post-trade activities and, all other things being equal, results in a higher number of errors. The AMI-SeCo has started work on harmonising the use of transaction types, and it should be noted that the removal of these practical and operational barriers would have a significant positive impact on the efficiency and attractiveness of cross-border transactions.

Recommendation (what actions by whom)

- Market players should instruct transaction types correctly, in accordance with SMPG guidelines.
- CSDs should accept all transaction types in settlement messages.
- The T+1 Industry Committee should monitor and encourage implementation of ISO codes for identifying transaction types.

BARRIER 38: Proprietary, local instruction message formats and requirements

Market practice

[129] Despite the fact that this practice was agreed in the context of the SMPG Book Transfer Market Practice.

Ideal state

There is a single, standard way to populate settlement instructions for intra- or cross-CSD settlement, regardless of the location of the party, the custodian/settlement agent or CSD. This single European market practice is, insofar as possible, consistent with global practices.

Description of the barrier

The ISO 15022 and ISO 20022 standards and associated existing market practices (e.g. the SMPG guidelines) provide guidance on how to populate and represent the key data elements of settlement instructions. Furthermore, standards have been defined in the context of SCoRE, with market players agreeing to harmonised rules. The expectation as regards market standardisation, and especially as regards T2S, was that they would dismantle this barrier completely by harmonising the way in which settlement is instructed (whether domestic or cross-CSD). However, in some local markets (even those using T2S), proprietary standards and usage rules are in place that contain differing rules for instructing cross-CSD settlement. T2S enforces a common message schema and rules for directly connected CSD participants that send their instructions directly to T2S. In contrast, indirectly connected parties send their instructions to their CSD, which then transmits the instructions to T2S, often after making necessary translations and adjustments. Where this is the case, the local rules imposed by the CSD may differ from those of T2S and may contain additional or diverging rules or conditions as regards message formats and data elements.

Barriers related to fragmented message formats and requirements are also covered in the context of specific flows, such as for corporate actions (Section 4.2.2 of this report) and, to some extent, in the settlement section of this report under Barrier 24 and Barrier 25. The consequences of this barrier can be felt in several other areas, e.g. in the context of directly connected CSD participants and indirectly connected parties, as described above, but also in more general communication between actors, especially further down the custody chain. Market participants report that there are standards that have been agreed on in most areas but that they are not followed to the extent necessary.

Priority

Impact: **Medium**; Difficulty: **Low**

Diverging local message formats and requirements mean that market participants that are active on several markets must comply with and adapt to differing rules. For global custodians that act as directly connected participants in T2S, this is not an issue for their outgoing instructions sent to T2S but is an issue when it comes to incoming instructions from their customers. For indirectly connected market participants operating in several markets that do not use a single global custodian as an entry point to these markets, this creates a significant barrier for cross-border and cross-CSD transactions. Additionally, non-compliance with the established standards amplifies these barriers.

Recommendation (what actions by whom)

- Reiterating the recommendations of the EU T+1 Industry Committee, representatives of the SMPG should bring together key market players and identify the specific technical issues for implementing and adopting a golden standard for messaging formats.
- The AMI-SeCo should monitor the adoption of the above standards.

BARRIER 39: Co-existence of ISO 15022 and ISO 20022 messaging standards

Market practice

Ideal state

An integrated post-trade environment and interoperability between market infrastructures exist that are based on common data and messaging standards. There is global agreement on a clear roadmap covering all domains of securities services, with hard deadlines for migration to ISO 20022 and for the phasing-out of ISO 15022.

Description of the barrier

In all the key domains of financial services, European markets face challenges stemming from the parallel use of the older ISO 15022 and the newer ISO 20022 messaging standards. While there is stronger coordination in wholesale payment services and a limited co-existence period has already been agreed at a global level, no global agreement has yet been reached in the securities ecosystem on the phasing-out of ISO 15022 and on a global migration to ISO 20022 (with national migrations and platforms potentially following different implementation schedules). Within securities services, the levels of messaging standardisation achieved through the use of ISO 15022 vary depending on the area concerned (settlement, reconciliation, asset servicing, reporting, etc.). In settlement, other than at the infrastructure level, the use of ISO 15022 is established for parties not using market infrastructures, and the usage guidelines are relatively clear. In asset servicing, the lack of full adoption and the technical challenges of applying decades-old data exchange standards are reflected in the absence of uniform usage practices, limitations on character sets and length, etc. This situation creates a market need for more detailed co-existence rules and co-existence periods in securities services.

From an efficiency and integration standpoint, this situation is suboptimal. The co-existence of the two standards limits the full potential offered by ISO 20022, creating frictions and imposing costs on most stakeholders. It also hinders convergence towards a single data model in the securities value chain given that ISO 15022 is not conducive to maintaining and implementing such a data model. The AMI-SeCo ISO Migration Strategy Task Force (ISO TF) has provided the foundations for a harmonised approach to migrating to ISO 20022, focusing on CAs and triparty

collateral management for European markets.[130] However, achieving the vision on a global level may require Swift to end support for ISO 15022, a standard that dates back as far as 1992.

Priority

Impact: **Medium**; Difficulty: **Medium**

Although necessary, the challenges presented by the co-existence of the two standards and the lack of global coordination on migration to ISO 20022 impose high costs on the securities industry and hinder efficient data exchange, especially in the cross-border and cross-CSD context. Additionally, the co-existence of these standards, without any deadlines for migration, creates uncertainties as to their future use and maintenance.

Recommendation (what actions by whom)

The AMI-SeCo ISO TF is working on a roadmap for AMI-SeCo markets in the context of SCoRE for adoption by the AMI-SeCo.

- Concrete recommendations should be based on the conclusions and suggestions from the AMI-SeCo Task Force on ISO 20022 migration strategy (ISO 20022 migration TF).

These proposals, in combination with the ISO 20022 usage that already exists in the (directly connected CSD participants/infrastructure) settlement layer, should ensure that Europe is able to realise the full potential of the new messaging format.

BARRIER 40: Different implementation and schema used for ISO 20022 messaging

Market infrastructure
Market practice

Ideal state

There are clear principles and usage guidance on ISO 20022 schemas and version management.

Description of the barrier

From a technical perspective, ISO 15022 always operates according to its full "schema", given that the customisation of schemas is not possible. In other words, a party cannot limit the incoming messages to a particular subset of all the message elements, but must be prepared to cope with any input it gets in incoming messages. In contrast, in ISO 20022, customising the message elements, using that standard's more advanced schema definition feature, is not only possible but widely used. The TARGET Services of the Eurosystem and other actors have put message element restrictions in place, resulting in multiple different technical customisations. For some actors in the custody chain, and particularly CSDs, this means that while the two

[130] For an overview of the migration strategy, see AMI-SeCo, *Proposal for AMI-SeCo migration strategy on ISO 20022 messaging for SCoRE – AMI-SeCo meeting*, ECB, 16 June 2023.

standards continue to co-exist, they have to map messages from a more open schema (e.g. that for ISO 15022) into a more customised schema (e.g. ISO 20022), which poses challenges. Furthermore, in the absence of additional market coordination and harmonisation, room for discrepancy between different ISO 20022 schemas will remain, even after ISO 15022 is phased out, given the use of different message variants.

Priority

Impact: **Medium**; Difficulty: **Medium**

A proliferation of significantly different ISO 20022 schemas – such as those that restrict various subsets of data elements or codes – by CSDs and custodians could potentially harm market integration and should be avoided. The benefits of ISO 20022 might be undermined by such potential fragmentations, which might also pose challenges during the co-existence period of ISO 15022 and ISO 20022.

Recommendation (what actions by whom)

It is recommended that the SMPG continues its work on developing principles and usage guidance for ISO 20022 messages. Restrictions on the use of data elements or codes should be commonly agreed and be applied only if they serve market harmonisation objectives or if they are deemed necessary in the business context. One central principle should be to agree on version usage.

6.2 Collateral management

BARRIER 41: Collateral management barriers to market integration

Market infrastructure
Market practice

Collateral and collateral management are important tools for managing risk in a financial system. With respect to many financial market activities, European regulation mandates, or encourages, the use of collateral as a tool to manage counterparty risk.

Collateral givers, takers and managers rely on the post-trade infrastructure to move and allocate securities as collateral. Accordingly, efficiency in European post-trade arrangements is a prerequisite for efficiency in the use of securities collateral, and many of the barriers identified in the issuer/investor and buyer/seller relationships have an impact on collateral management. However, there are also barriers that are specific to this area.

The AMI-SeCo has been working towards the harmonisation of collateral management processes across Europe through the development of the Single

Collateral Management Rulebook for Europe (SCoRE).[131] The goal is to streamline workflows, enhance interoperability and improve the efficiency of collateral mobility across various market infrastructures. This touches on several key areas, including triparty collateral management, billing processes, taxation, bilateral collateral management, margin calls, cut-off times, data harmonisation, collateral sourcing and the handling of non-euro collateral. While market participants should retain full control over their selection of eligible collateral, greater overall convergence of collateral eligibility schedules would potentially increase the efficiency of collateral management across the EU.

In general, in the context of European financial market regulation, there is a need to analyse the degree to which the rules relating to collateral are appropriate, both from the perspective of the category of market participant to which the specific rules apply and from the perspective of efficiency of the use of collateral in the European financial system as a whole.

Since the key issues were identified by the AMI-SeCo in 2017, Europe has seen relatively slow progress with the work of removing barriers in these areas. Major initiatives, such as the implementation of the SCoRE-compliant Eurosystem Collateral Management System (ECMS), are a crucial step in harmonising collateral processes and facilitating further alignment by market players with the agreed standards.[132]

This section provides an overview of the areas that have been identified and the status of their harmonisation across the EU. A detailed description of compliance with SCoRE standards can be found in the most recent progress report for the second half of 2024.[133]

Ideal state

Market participants are able to mobilise collateral quickly and efficiently across Europe using a single set of procedures, without any friction or restrictions on the usage of that collateral during the life cycle of the collateral transaction. In the spirit of the Single Market, the vision for collateral management is the ability for market participants to pool and use a single securities account for all their collateral needs, whether as a collateral giver or as a collateral receiver.

Description of the barrier

Efficient collateral management processes are hindered by many of the barriers identified earlier in this report. Additional challenges arise from differences in

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131 For a description of SCoRE, see Advisory Group on Market Infrastructures for Securities and Collateral, *Collateral Management Harmonisation – Single Collateral Management Rulebook for Europe*, ECB, December 2019.

132 Standards have been agreed in the areas of triparty collateral management, billing processes and corporate actions. See the article entitled "Collateral management harmonisation", published on the ECB's website.

133 Advisory Group on Market Infrastructures for Securities and Collateral, *SCoREBOARD – Ninth Compliance and Progress Report*, ECB, December 2024.

regulatory requirements imposed on collateral givers and takers, as well as from obligations that restrict the pooling of collateral.

The AMI-SeCo's efforts towards collateral management harmonisation aim to create a more integrated and efficient European financial market. By standardising processes across various aspects of collateral management, market participants would benefit from reduced complexity, lower costs and improved risk management. The following ten areas in collateral management have been identified.

1. **Triparty collateral management:** Harmonising triparty collateral management data, workflows and messaging is essential to facilitate interoperable processes which ensure that collateral can move seamlessly across different triparty agents. This involves standardisation towards a single triparty model, ensuring that different systems of triparty agents (TPAs) can communicate effectively, thereby improving the efficiency of collateral transfers and reducing operational risks. It would also reduce the challenges of non-harmonisation for participants in connecting to different TPAs. Within the context of SCoRE, a single triparty model has been defined by TPAs and endorsed by the AMI-SeCo. So far, however, only one TPA is scheduled to implement this model on time.

2. **Corporate actions:** The harmonisation of CA data, workflows and messaging involves strengthening existing standards or introducing new ones, allowing particularly for considerations specific to collateral management. By so doing, the aim is to ensure consistent and efficient handling of CAs, thereby minimising disruptions and the risks associated with collateralised transactions. The AMI-SeCo has defined and endorsed SCoRE standards. At present, most CSDs are scheduled to implement these on time. It is crucial that this continues in order to ensure full compliance.

3. **Taxation processes:** In the context of collateral management, harmonising tax processes entails identifying the parties involved in collateralised transactions. A standardised approach to tax processing could help to mitigate tax-related risks and ensure compliance across different jurisdictions, thereby enhancing the overall efficiency of collateral management. The AMI-SeCo has started to define possible measures, but progress has so far been slow in this area.

4. **Bilateral collateral management:** For bilateral collateral management, and particularly as regards non-cleared OTC derivatives and securities financing, harmonising data (identifiers) and workflows is key. By leveraging existing infrastructures and market platforms, market participants could achieve greater interoperability and efficiency, reducing the complexity and costs associated with managing bilateral collateral arrangements. The AMI-SeCo has started work on defining possible measures. However, as with point 3 above, progress has been slow in this area.

5. **Margin calls:** The interoperability of existing infrastructures and market platforms is also crucial for margin processes. Harmonised margin call procedures would help in ensuring timely and accurate margin adjustments,

thereby reducing counterparty risk and enhancing market stability. In this area, work on defining standards to address the issues identified has not started.

6. **Billing processes:** The harmonisation of billing data, workflows and messaging is crucial for ensuring transparency and consistency across markets. By establishing standardised billing processes, market participants would benefit from clearer communication and reduced discrepancies, leading to more efficient settlement and reconciliation. The AMI-SeCo has defined and endorsed SCoRE standards. At present, most CSDs are scheduled to implement these on time. This is crucial for full and timely compliance.

For the following key areas (7-10), work has not yet started on the harmonisation of rules and standardisation.

7. **Cut-off times:** Establishing minimum requirements for end-of-day cut-off times is necessary to avoid discrepancies in value dates across different markets. Standardised cut-off times would help prevent frictions for market participants active in multiple markets, ensuring smoother cross-border collateral transactions.

8. **Collateral dynamic and static data:** Harmonising data exchanges is vital to ensure that the necessary information and data are available when needed. Standardised market practices for data use would improve transparency and decision-making, supporting more efficient collateral management.

9. **Sourcing of collateral:** Setting minimum requirements for the sourcing and movement of collateral across Europe is essential for maintaining market liquidity and stability. Harmonised practices would help to ensure that collateral is available where needed, reducing potential bottlenecks in the financial system.

10. **Non-euro collateral:** Developing market practices for handling non-euro-denominated collateral, including the related CA processes, is important for supporting cross-border transactions. Standardisation in this area would help to mitigate risks associated with currency fluctuations and ensure smooth processing of CAs.

Priority

Impact: **High**; Difficulty: **High**

Of the ten areas identified by the AMI-SeCo in 2017 as barriers to efficient and effective collateral management, eight remain unaddressed. Progress in implementing agreed standards has been limited to two areas (CAs and billing processes). Standards in one additional area have been defined but progress with implementation has been slow (triparty collateral management). Regulatory developments (including central clearing requirements) have, in the meantime, elevated the importance of effective and efficient collateral management in Europe.

Recommendation (what actions by whom)

- The AMI-SeCo Collateral Management Group (CMG) should define standards to address barriers in the remaining areas and foster their implementation.
- Market infrastructures and market participants should develop concrete plans to implement the standards already endorsed.

6.3 Regulatory reporting

BARRIER 42: Complex and non-harmonised regulatory reporting requirements

Regulatory – Supervision

Ideal state

Reporting processes stemming from EU regulatory requirements are harmonised across markets and actors. There is an efficient, simple and holistic reporting practice that takes into consideration all the requirements established by the regulators. Ideally, post-trade services report only once and in the same way for their domestic and cross-border activities.

Description of the issue

Following the global financial crisis, there was an increase in regulation and reporting requirements, notably for financial market infrastructures and post-trade actors. In the EU, these consisted, among others, of the requirements laid down in EMIR, MiFID/R, the Securities Financing Transactions Regulation (SFTR) and the CSDR, but also of requirements from central banks.[134] Although the 2017 EPTF report had already covered regulatory reporting issues, many of the difficulties remain. Indeed, the complexity has further increased given that related legislative reviews have not led to a simplification but have, instead, increased the already extensive granularity of the requirements. The issues identified can be split into two main categories.

a) Differences in the requirements and mechanisms for transaction level reporting, in terms of the following.

- Reporting of specific data elements, which often overlap across the regulations.[135]
- Reporting to different entities. In the context of EMIR, reporting is to trade repositories. Under MiFID/R, it is to NCAs (and also through intermediaries),

[134] The regulations concerned aim to capture certain specific financial instruments or arrangements, e.g. for trading venue transactions (MiFID/R), derivatives (EMIR), securities financing transactions (SFTR) or settlement fail reporting (CSDR). Central banks usually require reporting on money market transactions. A full list of EU reporting obligations can be found in the Annex 3, Table P, of the 2017 EPTF report.

[135] According to the 2017 EPTF report, EMIR requires up to 85 individual data points, 23 of which are also reportable under MiFID/R. These overlaps arise in particular in respect of derivatives-related transactions given that these are subject to both regulations.

while in the case of securities financing transactions, it is to an SFTR authorised trade repository.

- Reporting by either pushing the data to the regulator (under MiFID/R) or the data being pulled by the regulator (under EMIR and the SFTR).

b) Post-implementation changes in the application of the regulations, specifically regarding the following.

- New procedures or changes to implementation. These are often introduced through Q&As, which lack a more formal framework that would facilitate useful feedback and an understanding of the motivation for the changes.

- Timings of new guidance and clarifications. These often do not consider the time post-trade actors require for their implementation. Given that these initiatives often occur ad hoc, it also results in a challenge for resource planning.

It is obvious how the points listed under A) create complexities and costs for post-trade actors with operations across jurisdictions. They are forced to establish reporting links to many different NCAs and trade repositories, often with overlapping data and relying on non-harmonised mechanisms. These costs are amplified by the implementation of clarifications and new guidelines, such as those listed under B) above. In addition to this, respondents to the AMI-SeCo survey highlight a key pain point in the case of domestic service providers being required to report to local authorities, tying investors to the local CSD.

More recently, ESMA[136] has conducted important work on reducing the reporting burden for market participants by harmonising the MiFID/R requirements with the EMIR requirements and removing overlaps where applicable. In 2022, ESMA also introduced ISO 20022 XML reporting, with a standard for the elements to be reported.[137] The CSDR-related complexities, in terms of reporting, are also discussed in this report under Barrier 37 on the identification of transaction types. Market players report a significant lack of harmonisation in reporting for CSDR penalties, which is undermined by the absence of high-quality, granular, reliable and standardised data. This divergence extends to CSDs within the same group. As discussed in the sections above, there is a need for a common framework for definitions and a centrally provided reference data mechanism.

Priority

Impact: **High**; Difficulty: **Medium**

Mandatory reporting is an important process, both for the industry but also for authorities so that they can identify emerging risks in the financial system and ensure financial stability. The impact of the non-harmonised reporting processes is well

[136] European Securities and Markets Authority, "ESMA contributes to simplification and burden reduction", *ESMA news*, 7 February 2025.

[137] For further information on the reporting standards introduced, see Commission de Surveillance du Secteur Financier, *EMIR Refit reporting standards*.

acknowledged. Initiatives from regulators, such as the European Commission's simplification agenda,[138] signal that this is a highly prioritised barrier to resolve. The EU reporting environment is still fragmented in comparison with other jurisdictions, which may not be as hampered by special national features or where those features may not be as prevalent. Additionally, with progress towards faster settlement and shorter settlement cycles, the need for simpler and more efficient reporting regimes is highly relevant.

Recommendation (what actions by whom)

There is scope to reduce the complexity, without sacrificing completeness, of the data by, among other things, (i) placing greater reliance on central market infrastructures, and/or (ii) regulators deriving certain data elements from central data sources (e.g. the ISIN) rather than requiring all of the data points individually. The European Commission, in close cooperation with the industry, standard-setting bodies and central banks, should work as a catalyst and coordinator to achieve this ambitious transformation in the EU reporting environment.

In the context of the simplification agenda, EU lawmakers and public authorities should consider an ambitious package to resolve the following issues identified.

- The need to ensure that reporting of relevant data elements occurs only once and in the same way for domestic and cross-border activities.[139]
- The need to consolidate reporting destinations and reduce the links required per entity to efficiently report.
- The need for clarification of the mechanisms for reporting and maintenance. This includes, but is not limited to, data standards, reporting methods (push versus pull), management of regulatory changes and clarification of guidelines (such as the implementation period). Introducing a formal, regular maintenance cycle might help in achieving this clarity.
- The need for templates for reporting to be based on the ISO 20022 data dictionary.

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[138] See the article entitled "Simplification and Implementation", published on the European Commission's website.

[139] From the European Commission's *A simpler and faster Europe: Communication on implementation and simplification: "digital by default" and "once-only" principles* (see p.10), February 2025 .

6.4 Know-your-customer and customer due diligence procedures

BARRIER 43: Fragmented KYC and CDD procedures and investor identification requirements

Regulatory – Supervision

Ideal state

The EU has a single European know-your-customer (KYC) and customer-due-diligence (CDD) framework relying on digital procedures and a common set of requirements, including common data elements and documents. With this framework, identification and verification of the same customer at any given point in time takes place only once and not, in parallel, several times by different financial service providers.

Description of the issue

It is widely accepted that KYC and CDD procedures are key to ensuring sound financial markets, investor protection and combating money laundering and financing of terrorism. Nevertheless, they require significant resources on the part of financial service providers (CSDs, banks and other intermediaries) in the securities issuance, settlement and asset servicing context. Although onboarding of customers at financial service providers is not specific to securities transactions, given that customers also use financial services other than those required to transact in or hold securities, the fragmentation across national requirements and the inefficiencies in the process affect securities-related services. Despite recent progress in this domain achieved through the EU regulatory framework,[140] national rules are still not fully harmonised as regards requirements for identifying and onboarding new customers.

When a new security is issued, primary dealers or syndicate members (or other intermediaries further down the chain) often have to onboard customers to accept and collect bids from them and to ensure smooth post-trade processing. For cross-border issuance, this creates significant challenges owing to the fact that jurisdictions differ as to their specific regulatory requirements (data elements, authentication requirements, rules on outsourcing, etc.). Similarly, custodians operating in several jurisdictions face challenges in complying with such requirements, especially if they depend on upstream service providers and if omnibus accounts are used in the holding chain.[141] Efficient KYC processes would also contribute to more harmonised implementation of regulatory sanctions across EU jurisdictions.

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[140] EU lawmakers adopted an overhauled AML/CFT legislative package in June 2024 which will apply more directly in Member States. In addition, a new European authority, the Anti-Money Laundering Authority (AMLA), was created to provide more coordinated policy and supervision in AML/CFT matters.

[141] The International Securities Services Association (ISSA) has compiled a set of best practice recommendations for custodians. See ISSA, *Financial Crime Compliance Principles for Securities Custody and Settlement – Background & overview*, May 2019.

Priority

Impact: **High**; Difficulty: **Medium**

This barrier results in higher costs and lower speed of securities issuance, especially for cross-border transactions.

Recommendation (what actions by whom)

- The European Commission and the Anti-Money Laundering Authority (AMLA) should promote further harmonisation of KYC/CDD requirements (through the EU anti-money laundering/counter-terrorist financing framework), including but not limited to data elements and documentation.
- The AMI-SeCo should review concrete issues and provide recommendations to AMLA, taking into account current regulation.

7 Distributed ledger technology initiatives/interoperable innovation

Major technological advancements, such as the increased use of distributed ledger technology (DLT) in market infrastructure and post-trade processing has the potential to remove many of the operational barriers and pave the way for a more integrated European post-trade market. The recent Eurosystem exploratory work on new technologies for central bank money settlement revealed strong demand from market players and also highlighted the broad use cases for using DLT for wholesale central bank money settlement, including potential efficiency gains.[142] On the regulatory side, such experiments and trials have been supported by the DLT Pilot Regime Regulation (DLTR),[143] an EU initiative to facilitate the adoption of DLT for securities issuance, settlement and asset servicing. A large number of initiatives have recently emerged around the globe covering a wide range of use cases. Due to network effects and regulatory uncertainties, however, few of these initiatives have been able to scale and many have been abandoned or discontinued.

In following up the Eurosystem exploratory work, the ECB's Governing Council decided to step up Eurosystem efforts in this area, applying a two-track approach: first, the establishment of a TARGET Services-linked platform for central bank money settlement of transactions recorded on DLT in the short term (Pontes), and, second, a potential long-term solution (Appia).[144]

It should be pointed out, however, that many of the barriers to European market integration identified here with respect to the current technology could still exist even if DLT was widely implemented across post-trade actors. Consequently, while the adoption of DLT would provide an opportunity to drive momentum for better integration, the adoption of technology itself will not remove most of the barriers presented here.

7.1 Need for a harmonised regulatory landscape for DLT-based market infrastructures

As already indicated in this report, fundamental legal and regulatory barriers to integration have significant and broad impacts on market players and on the post-

142 For information on the use cases tested and on the trials and experiments, see the document entitled "The Eurosystem's exploratory work on new technologies for wholesale central bank money settlement", published on the ECB's website on 1 July 2025.

143 Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a pilot regime for market infrastructures based on distributed ledger technology, and amending Regulations (EU) No 600/2014 and (EU) No 909/2014 and Directive 2014/65/EU (OJ L 151, 2.6.2022, p. 1).

144 See the press release entitled "Eurosystem expands initiative to settle DLT-based transactions in central bank money", published on the ECB's website on 20 February 2025.

trade industry in general. Realising the benefits of DLT and tokenisation in securities markets will be dependent on a harmonised EU regulatory framework.

For DLT-based securities infrastructures, the EU has adopted the DLTR to facilitate the initial stages of innovative securities settlement platforms and to gain more experience both on the market and the regulatory side. In addition to this, in recent years, some Member States have adopted specific laws and regulations to allow and provide legal certainty for the use of digital securities. Examples of these include legal frameworks put in place in Germany (the Electronic Securities Act – eWpG[145]) and Luxembourg (the Blockchain Act[146]). These laws were created to complement existing national securities laws and adopted without regard to harmonisation of key features of digital securities across the EU. The DLTR does not fill this gap, given that its scope is limited to the core trading and settlement infrastructure and does not cover the rights and processes attaching to digital securities and their servicing.

As reiterated throughout this report, harmonisation to a pan-European framework of national corporate and securities law, as well as national tax and insolvency legislation, is key to a unified securities market. This is especially important for ensuring legal certainty, which impacts the operations of post-trade entities, as discussed in Section 3 of this report. This is equally true for digital securities. If regulation of DLT-based assets and transactions continues to be implemented in the current fragmented legal environment, there is a risk that transactions and holdings across EU jurisdictions will remain more complex than in a domestic context. Consequently, in the absence of EU-level harmonisation efforts, the benefits of this new technology may not translate into deeper and more integrated EU capital markets.

As indicated above, the ECB announced that the Eurosystem will extend its work on central bank money settlement of DLT-based securities, the intention being to launch a longer-term workstream encompassing all key stakeholders to plot the vision for an integrated and harmonised DLT-based ecosystem,

7.2 Vision and recommendation

Beyond the regulatory challenges facing an integrated DLT-based market infrastructure, there is a need for a common vision at a European level. The technical and operational set-up and environment, either through a common DLT platform or through an interconnected network of DLT-platforms, should be based on this common vision. This would minimise the barriers to integration stemming from market practices or from the technical limitations of stakeholders.

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145 See the article entitled "Now also in electronic form: securities: A new law is updating Germany's securities legislation – and its securities supervision", published on the Federal Financial Supervisory Authority's website on 31 August 2021.

146 See the article entitled "Blockchain Law IV: Luxembourg's New Push for Digital Securities", published on the PwC Legal website.

- Any provisions of EU legislation/regulation that prevent the use of DLT and other technologies should be eliminated.

- There is need for general convergence into a single, EU-wide legal and regulatory regime, with a limit on the length of time for which different national frameworks could run in parallel. EU lawmakers might consider including an optional harmonised legal framework for the issuance and transfer of digitally native securities in the “28th legal regime” for EU harmonisation of certain aspects of legislation affecting business growth. This should go beyond core infrastructure and also define how a digitally native security is validly issued and how ownership rights attaching to such securities arise and are evidenced on DLT (i.e. a regime that is robust for different holding models).

The AMI-SeCo stands ready to provide further input on securities and collateral markets to the considerations being addressed by the European Commission and the Eurosystem in relation to the savings and investments union and the Eurosystem work on the long-term vision for an integrated digital securities landscape.

8 AMI-SeCo monitoring

This report is being issued by the AMI-SeCo in the expectation that it will help to facilitate coordinated action by the post-trade industry to achieve a truly integrated European market for post-trade services. The aim is to bolster initiatives to this end being explored by the European Commission, ESMA, the Eurosystem, national authorities and post-trade service providers themselves, in consultation with issuers and investors.

One weakness of previous efforts in this area (such as Giovannini reports and 2017 EPTF report) has been a lack of effective follow-up and monitoring of progress achieved. Consequently, removal of the barriers identified has not materialised to the extent expected. With this in mind, the AMI-SeCo commits to:

- continuing to provide its resources to facilitate tackling concrete barriers where it has been identified as the relevant actor;
- creating a framework for tracking progress in resolving the barriers it has identified, including the definition of solutions and the monitoring of compliance by individual actors.

Annex 1: EU regulation on settlement location

Table 1A

Comparison of relevant EU regulation on settlement location

Article of the provision	Text of the provision	Remark and analysis
MiFID (II), Article 37	2. Member States shall require that **regulated markets in their territory offer all their members or participants the right to designate the system for the settlement of transactions** in financial instruments undertaken on that regulated market, subject to the following conditions: (a) such links and arrangements between the designated settlement system and any other system or facility as are necessary to ensure the efficient and economic settlement of the transaction in question; (b) **agreement by the competent authority responsible for the supervision of the regulated market that technical conditions for settlement of transactions concluded on the regulated market through a settlement system other than that designated by the regulated market are such as to allow the smooth and orderly functioning of financial markets.**	While the first highlighted sentence relates to members of trading venues "designating" a settlement system or location, condition (b) seems to imply that operators of trading venues make this choice
MiFID (II), Article 55	1. Without prejudice to Titles III, IV or V of Regulation (EU) No 648/2012, **Member States shall not prevent regulated markets from entering into appropriate arrangements with a CCP or clearing house and a settlement system of another Member State with a view to providing for the clearing and/or settlement of some or all trades concluded by market participants under their systems**.	The provision seems to imply that trading venues have to enter into an agreement with a settlement system that would allow their participants to settle their trades in that settlement system
CSDR, Article 53	1. **A CCP and a trading venue shall provide transaction feeds on a non-discriminatory and transparent basis to a CSD upon request by the CSD** and may charge a reasonable commercial fee for such transaction feeds to the requesting CSD on a cost-plus basis, unless otherwise agreed by both parties. **A CSD shall provide access to its securities settlement systems on a non-discriminatory and transparent basis to a CCP or a trading venue** and may charge a reasonable commercial fee for such access on a cost-plus basis, unless otherwise agreed by both parties.	The text implies that: (i) A CSD can make a request to CCPs or trading venues for access to their transaction feed for the purpose of settling transactions traded on trading venues or cleared through CCPs, and vice versa (i.e. that CSDs provide access to CCPs and trading venues) (ii) CCPs are like other CSD participants, and objective and fair access for them is already guaranteed under Article 33 CSDR (requirements for participation) (iii) It is not clear what scenario is covered with respect to the CSD asking for access to a transaction feed of a trading venue or CCP given that CSDs themselves are not principals in settling transactions

Annex 2: List of members of the AMI-SeCo Securities Group

Member	Institution
Sara Alonso	ESM
Gabriel Callsen	ICMA - International Capital Market Association
Paolo Carabelli	Euronext Securities Milan
Rebecca Carey	Euroclear ESES
Teresa Castilla	BME Clearing
Pierre Colladon	Societe Generale Securities Services
James Cunningham	BNY Mellon
Neil Foley	Bank of America
Rosen Ivanov	Clearstream B. Luxembourg
Emma Johnson	JP Morgan
Pablo Portugal	Euroclear Bank
Enrica Cremonini	ECSDA - European CSDs Association
Laurent Libiszewski	BNP Paribas
Francisco Béjar Núñez	Iberclear, BME, SIX
Corina Oliveira	Euronext Securities Porto
Janne Palvalin	Nordea
Monika Peters	Deutsche Bundesbank
Michela Rabbia	Intesa Sanpaolo
Florentin Soliva	SIS, SIX
Kristoffer Sonderlev	Euronext Securities Copenhagen
Marianne Sorensen	Danske Bank
Pablo Garcia	AFME - Association for Financial Markets in Europe
Marcello Topa	Citi
Ben Velpen	DACSI - Dutch Advisory Committee Securities Industry
Kathy Waldie	Clearstream B. Frankfurt
Britta Woernle	Deutsche Bank
Observers:	
Igor Jelinski	European Commission
Markus Mayers	European Central Bank

Annex 3: Table of barriers

Table of barriers

Barrier	Short description	Priority		Main actor(s)	Recommendation
		Impact	Difficulty		
Barriers in the legal frameworks					
BARRIER 1: Differences in definitions and ownership rights to book-entry and intermediated securities	Member State securities and corporate laws differ in how they define rights in/attaching to book-entry securities and what the legal effects of holding or transacting a security are.	High	High	EU public authorities/European Commission Member States	New, targeted analysis on legal frameworks across jurisdictions, similar to the European Commission's Legal Certainty Group in 2008. This analysis should give an overview of the 27 regimes and cover changes that may have occurred in national legal regimes since 2008. As a first step, the AMI-SeCo recommends that EU public authorities provide a repository with information on the applicability of insolvency rules and procedures in all EU Member States with respect to the insolvency of an intermediary. Such a repository would be of benefit to all parties accessing EU capital markets, and to other relevant stakeholders.
BARRIER 2: Lack of harmonisation of national insolvency frameworks applied to intermediaries and intermediated securities	The uncertainties regarding the nature of end- investors' rights to intermediated book-entry securities held across borders also contribute to risk in the case of failure or insolvency of an intermediary.				
BARRIER 3: Corporate law barriers to harmonised processing of corporate actions	Differences in Member States' corporate law impact the investors exercising its rights across border.				
BARRIER 4: Securities and corporate law barriers to free choice of location of issuance and restrictions on form and location of securities	The lack of harmonisation of national securities and corporate laws creates barriers to the freedom of issuance established in the provisions of the CSDR and prevents domestic issuers from using a foreign CSD for issuance, whether explicitly or implicitly.	High	High	European Commission Member States	The provisions in CSDR Art. 49 on free choice of location to be strengthened. A common definition of corporate law to be developed in the context of CSDR Art. 49. Member States should provide analysis (instead of article numbers) in English on provisions that are relevant in their corporate laws in relation to CSDR Art. 49.

Barrier	Short description	Priority		Main actor(s)	Recommendation
		Impact	Difficulty		
BARRIER 5: Fragmented legal environment and its consequences on passporting	The absence of a common understanding of the concept of "corporate or similar law under which securities are constituted" prevents the optimal implementation of the CSDR framework for the management of foreign securities.				
Barriers in the issuer and investor relationship					
Issuance					
BARRIER 6: Absence of a standardised/common data model and the transmission of machine-readable reference and transaction data in the issuance process	Lack of adoption of a common data model hinders the integration, efficiency, and speed of securities issuance processes.	High	High	Issuers/Issuer agents ICSDs/ICMA	Issuers and issuer agent to adopt existing market standards such as BDT, CDM, and support the ongoing and consistent work for Eurobonds. Market adoption should extend to future standards and agreements that will potentially be developed. Continue work on initiatives for a common issuance and processing taxonomy based on the BDT, which will help to extend the usage to Eurobonds.
BARRIER 7: Lack of convergence in the use of market conventions	Too many legacy conventions still being used by issuers without apparent economic reasons. The fewer options implemented, the lower the degree of complexity and the easier it would be for stakeholders to process and automate transactions.	Medium	Low	Issuers/Issuer agents ICMA/International standard-setting bodies Issuer CSDs	Issuers of debt instruments in euro to converge further on the use of the options offered by each of the most widespread market conventions (DIMCG). Legacy conventions (such as national calendars for business days in euro operations and conventions which cannot be processed according to industry corporate events standards) should be phased out. ICMA/International standard setting bodies continue work on best practices on definition and use of market conventions. Issuer CSDs to recommend issuers, at time of issuance, to use market conventions which are in-line with SCoRE and can be processed in post-trade.
Custody and asset servicing					

Barrier	Short description	Priority		Main actor(s)	Recommendation
		Impact	Difficulty		
BARRIER 8: Lack of a standardised ("golden") source of information for securities reference data	The lack of a single, trusted and fully verified source of definitive information on features (reference data) that affect the life cycle of a security is an overarching barrier in asset servicing.	High	High	Issuers/Issuer agents Issuer CSDs EU lawmakers Public authorities	Issuers provide all reference data to the issuer CSD. Issuer CSD should provide/be the "golden" source. If necessary, EU lawmakers adopt EU act to support harmonised implementation. Public authorities should encourage and facilitate the provision by issuers or their agents of reference data in a standardised manner.
Corporate actions					
BARRIER 9: Differences in announcement and information exchange on corporate actions	CA information is transmitted to and by CSDs/intermediaries in highly varying formats and often as non-structured information.	High	High	Issuers Intermediaries	Full compliance by issuers and intermediaries with the AMI-SeCo standards. Leveraging on the ongoing work for adopting ISO20022 messaging for CAs in the context of SCoRE. Support AMI-SeCo work towards a single rulebook for corporate actions.
BARRIER 10: Differences in sequence of key dates and processing of corporate actions	As set out in the AMI-SeCo CEG report, there are significant gaps in compliance with European standards for CA processing across Europe.	High	High	AMI-SeCo EU lawmakers/Member States/NCAs	The AMI-SeCo CEG should continue its work on consolidating all CA standards into the Single Rulebook, potentially agreeing on additional standards or setting out clearer and more detailed requirements in relation to existing standards. Obstacles to compliance that derive from specific features of national law should be tackled by targeted legislative change.
BARRIER 11: Non-harmonised frameworks for general meetings	The right of investors to participate and vote in general meetings are prejudiced by highly fragmented and divergent national procedures and requirements. To some extent, barriers for general meetings are linked to those relating to shareholder identification given that identification processes are commonly used to determine the eligibility of investors to participate in general meetings	Medium	High	AMI-SeCo EU lawmakers	AMI-SeCo CEG should review and endorse MSGM standards, involving all stakeholders (and become subject to monitoring) in the context of the Single Rulebook. If necessary, to avoid further country-specific interpretations, EU lawmakers could review EU regulation in this area.

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		Impact	Difficulty		
BARRIER 12: National frameworks for registration of securities ownership	The legal and operational differences in the registration process across Member States have a negative impact on cross-border transactions, especially as regards the legal implications of registration and the impact of registration on other processes (settlement, creating links and other domains of asset servicing).	Medium	High	Member States EU lawmakers AMI-SeCo European Commission	Member States with registered securities should ensure that national requirements relating to registration allow for the registration process to be integrated into the standard settlement process at the CSD and that the processes relating to registered securities are fully compliant with the T2S Harmonisation Standards. The scope of the SRD II should cover all types of registered securities issued in EU CSDs. The AMI-SeCo will investigate and work on potential proposals for a common pan-European framework that manages additional rights that may be associated with registered shares, such as bonus rights, and double voting rights. The European Commission should consider introducing pan-European legislation, supporting the above recommendations.
BARRIER 13: Remaining challenges for shareholder identification	There are outstanding challenges to full realisation of the benefits of the shareholder identification process under SRD II. An efficient and effective shareholder identification process is key to enabling issuers to identify their shareholders and to protecting the rights of securities owners, as governed by law.	Medium	Medium	EU lawmakers All stakeholders AMI-SeCo European Public authorities	EU lawmakers should extend SRD II requirements in both granularity and scope by, among other things (i) harmonising the definitions of share and bond holder, at least in the context of SRD II; and (ii) extending the requirements to all securities issued in EU CSDs. Greater compliance with the market standards by all stakeholders. The AMI-SeCo will continue to monitor compliance with the industry standards and discuss potential initiatives to improve the level of compliance. Support initiatives to increase levels of compliance. Obstacles to compliance that derive from specific features of national law should be tackled by targeted legislative change.
Withholding tax processing					
BARRIER 14: Differences in tax reporting/information exchange in WHT processes	Market stakeholders report a significant divergence in the reporting requirements they face from national	High	High	EU lawmakers Member States	Ensure that FASTER is implemented across all asset classes and without Member State options.

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	tax authorities: forms, data elements, deadlines, rules and procedures on identifying taxpayer, identification codes etc.				FASTER should be accompanied by detailed technical standards on machine-readable data exchange for WHT processing (either through Level 2/3 measures or through industry supported standards).
BARRIER 15: Barriers stemming from other elements of WHT processing	Requirements on using domestic actors (including cash accounts) and other limitations on foreign intermediaries/investors for WHT purposes. Principles on identifying beneficial owner varies across markets.	High	High	EU lawmakers Member States	Ensure that FASTER is implemented across all asset classes and without Member State options. Accept and implement AMI-SeCo recommendations on the scope and implementation of FASTER, already communicated to the Commission and Council.
BARRIER 16: Fragmented financial transactions tax frameworks in the EU	There are several diverging frameworks in Member States that apply transaction taxes on securities trades (financial transaction taxes, or FTTs), often as a result of national designs.	Medium	High	EU lawmakers Member States	Member States, potentially supported by the European Commission, are recommended to agree on standardised reporting, processing and collection requirements for FTTs.
Barriers in the buyer and seller relationship					
Settlement					
BARRIER 17: Lack of clarity of EU regulatory requirements as regards the choice of settlement location	Current legislative framework focuses on allowing infrastructures to assess the feasibility of establishing, maintaining and complying with connectivity to other infrastructures based on legal and operational requirements. However, it does not explicitly grant securities account owners or principals the right to choose their preferred settlement location when multiple settlement infrastructures are available.	Medium	Low	EU lawmakers	Bring clarity to rules related to determination of the ultimate settlement location, taking into consideration the possibility of cross-CSD settlement and the vision that principals to transactions should have the ultimate right to decide where they settle, insofar as this is technically feasible for the infrastructures involved.
BARRIER 18: Primary and secondary markets restricting the location of settlement	Trading venue rules and DMO frameworks restricting choice of settlement location.	Medium	Low	Trading venues Debt management offices (DMOs)	Trading venues should, where possible, allow and support cross-CSD settlement based on CSD links. They should also use clear language to describe eligible settlement locations and refer to the process for expansion of settlement locations. Sovereign issuers should allow their primary dealers to use cross-CSD settlement if investor-CSD links are established with the issuer-CSD. Any information on the exclusiveness of one settlement location should be removed from debt

Barrier	Short description	Priority		Main actor(s)	Recommendation
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					management office frameworks.
BARRIER 19: CCP rules restricting the location of settlement	CCPs are limited in their settlement locations by CSD services or have unclear rules on supported and allowed settlement locations, limiting the clearing members' choice of settlement location and de facto use of cross-CSD settlement.	Medium	Low	CCPs CSDs	CCPs should allow and support cross-CSD settlement where possible. CSDs to allow cross-CSD settlement for (all) ISINs and provide the same functionality as they do for intra-CSD settlement.
BARRIER 20: Behaviour of market participants restricting the location of settlement	Another barrier for cross-CSD settlement may be the behaviour of the users themselves (CSD participants, market stakeholders as investors and holders of securities).	Medium	Low	Market participants	Market participants (including public authorities) should not require their counterparts to settle in the issuer-CSD and should support the use of cross-CSD, external and cross-border settlement.
BARRIER 21: Charging of investor central securities depositories for internal T2S functions	Some CSDs are charging for the realignment instructions automatically generated in T2S, although these are not charged for by the Eurosystem. These practices may disincentivise further usage of cross-CSD settlement in T2S and should, in principle, be removed, especially if no costs are incurred by the CSD that is charging for the realignment.	Low	Low	MIB/T2S governance	The ECB Market Infrastructure Board (MIB) should review and discuss current practices in T2S given that there is need for debate on how a CSD incurs additional costs when settling cross-CSD.
BARRIER 22: Use of non-T2S CSDs in CSD link arrangements for EU securities issued in T2S CSDs	Some CSDs in T2S use pathways for cross-CSD settlement that are outside T2S even if the issuer-CSD for a given EU security is inside T2S.	Medium	Low	T2S CSDs MIB/T2S governance	T2S CSDs should use T2S links for T2S securities transactions between each other. The MIB/T2S CSD Steering Group (CSG) should investigate whether mandatory requirements should be imposed by potentially leveraging the implementation guideline for the eligibility criteria for CSDs in T2S.
BARRIER 23: Issuer CSDs delaying or restricting access to securities for Investor CSDs	In practice, there are sometimes delays by issuer-CSDs in providing investor-CSDs with access to their issued securities.	Medium	Low	MIB T2S CSDs	The MIB should ensure, in the migration plan for new T2S markets, compliance, from the migration date, with the requirement for ISINs to be made available. MIB to review and enhance monitoring of compliance with the T2S

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					Framework access criteria. CSDs in T2S should make each ISIN for which they are an issuer-CSD (or technical issuer-CSD) available to other participating CSDs on request.
BARRIER 24: Non-standard use of place of settlement information in settlement instructions	Confusion, operational errors and settlement failures arising from the use of place of settlement (PSET) information in settlement instructions have been consistently highlighted by market stakeholders.	Medium	Low	EU T+1 Industry Committee AMI-SeCo	Increase awareness on the proper use of PSET information in the cross-CSD settlement context, in line with the recommendations by the T+1 Industry Committee. Support/monitor efforts towards new standard/market practice requiring market participants to be ready to accept deviating PSET and place of safekeeping. AMI-SeCo should conduct fact-finding and stock-take with regard to current market practices.
BARRIER 25: Inefficient SSI management and lack of standardisation	There is evidence that financial market stakeholders in Europe do not properly update, process and integrate SSIs into their settlement processes. The format for exchanging SSI data is not standardised, despite international standards available for that exchange.	Medium	Low	EU T+1 Industry Committee Market participants	The industry, through the T+1 Industry Committee, should adopt a single operational practice, data standard and template for the exchange of SSIs consistent with the ISO20022 data dictionary. Conduct a review of internal processes capturing, maintaining, and using SSIs in automated preparation of settlement instructions in order to ensure that those instructions are driven by the latest SSI received from their counterparty.
BARRIER 26: Complexities in settlement between T2S and non-T2S central securities depositories	Settlement between T2S and non-T2S CSDs is inherently more complex and demanding and may require additional operational steps or arrangements.	Medium	Low	EU T+1 Industry Committee AMI-SeCo	Leverage the concrete T+1 Industry Committee proposals on related issues in the settlement recommendations. The AMI-SeCo should monitor and further discuss potential alignments between T2S CSDs and non-T2S CSDs.
BARRIER 27: Different cut-off times across European FMIs for DvP and FoP settlement	The timings of securities and cash "legs" transactions are often different both domestically and especially internationally, creating an obvious hurdle for efficient cross-border post-trade procedures.	Low	Medium	EU T+1 Industry Committee CSDs NCBs	In line with T+1 recommendations, CSDs with DvP cut-off before 16 CET should extend until at least 16 CET, including non-euro currencies.
(BARRIERS 28 – 32) Lack of availability or use of state-of-the-art settlement efficiency tools and functionalities					

Barrier	Short description	Priority		Main actor(s)	Recommendation
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BARRIER 28: Partial settlement	Despite major industry associations having published recommendations and guidelines for their members on using partial settlement, the adoption of these practices in Europe remains suboptimal and opportunities to improve settlement efficiency further are left unexploited.	Medium	Medium	EU T+1 Industry committee CSDs/Intermediaries Market participants ESMA/European Commission	Further encourage partial settlement. CSDs/Intermediaries should offer automated partial settlement. Market participants should use and allow partial settlement. When reviewing the CSDR settlement discipline framework, ESMA and the European Commission are invited to investigate whether market participants should be required to allow for partial settlement.
BARRIER 29: Hold and release functionality	Today, not all CSDs offer hold and release functionality in the EU. As a result, settlement efficiency suffers in terms of subsequent matching and execution of settlement instructions.	Medium	Medium	EU T+1 Industry Committee CSDs/Intermediaries/Market participants AMI-SeCo	Encourage the use of this functionality. Offer and use hold and release functionality to allow efficient management of settlement instructions. Contribute to ensuing discussions and to monitor the situation as necessary potentially during or after T+1 migration.
BARRIER 30: Settlement allegements	Not all CSDs and intermediaries offer allegement messages and not all market participants rely on allegements for exception handling in processing settlement instructions.	Low	Low	EU T+1 Industry Committee CSDs/intermediaries/market participants AMI-SeCo	Encourage the use of this functionality. Offer and use allegements for efficient exception handling in the management of settlement instructions. Contribute to ensuing discussions and to monitor the situation as necessary potentially during or after T+1 migration.
BARRIER 31: "Already matched" instructions	Not all CSDs and intermediaries permit this type of settlement and are not open to receiving and processing powers of attorney to facilitate this. Some CSDs allow these types of instructions but only for intra-CSD settlement and not for cross-CSD settlement.	Low	Low	EU T+1 Industry Committee CSDs/intermediaries/market participants AMI-SeCo	Encourage the use of this functionality. Offer and use already matched instructions/powers of attorney to ensure efficient settlement of transactions that occur regularly and in high volumes between two counterparts or between a trusted central party (e.g. a CCP or issuer) and its regular counterparts. Contribute to ensuing discussions and to monitor the situation as necessary potentially during or after T+1 migration.
BARRIER 32: Auto-collateralisation	T2S offers auto-collateralisation in a state-of-the-art set-up, yet the use of the functionality is limited by central banks and payment banks, which do so by, for instance, setting credit lines or keeping the set of eligible collateral	Low	Low	EU T+1 Industry Committee NCBs/Payment banks/CSDs AMI-SeCo	Encourage the use of this functionality. Make available auto-collateralisation on the widest set of collateral possible to their clients/counterparties. CSDs, where the technical functionality is not available should consider providing it.

Barrier	Short description	Priority		Main actor(s)	Recommendation
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	narrow. In some of the non-T2S EU CSDs this functionality is not technically available.				Contribute to ensuing discussions and to monitor the situation as necessary potentially during or after T+1 migration.
BARRIER 33: Challenges in accessing central bank money settlement across EU currencies	Apart from the euro (which is by its nature an international currency) it is not easy for CSDs to arrange access to central bank money settlement in foreign currencies even within the EU.	Low	Low	ECB/ESCB	There should be no idiosyncratic requirements by NCBs on EU-CSDs to have access to central bank money settlement. ECB should coordinate discussion within the ESCB.
Transversal barriers					
Messaging and data					
BARRIER 34: Lack of common, consistent, machine-readable data travelling throughout the transaction value chain	Lack of a common dictionary and the use of diverging data exchange, messaging formats and non-structured free text fields in messages leads to media breaks, results in a need for manual interactions and is prone to errors.	High	Medium	Industry AMI-SeCo	Industry stakeholders should, insofar as possible, adopt the existing standards (the BDT, the FINOS CDM and other industry standards). Monitor implementation of the standards.
BARRIER 35: Delayed updates to securities static data	Delayed update by issuer or investor-CSDs of securities reference data for new securities, often caused by data integrity requirements, system limitations or other reasons. This results in the prevention of pre-matching of transactions on the primary, "grey" or secondary market for newly issued securities, especially in cross-border scenarios.	Medium	Low	CSDs AMI-SeCo	Securities reference data should be updated in the static data of the issuer-CSDs and the investor-CSDs informed without undue delay as soon as there is certainty of the minimum securities features essential for (pre-)matching settlement instructions. Further investigation by AMI-SeCo, potentially by reaching out to MIB/T2S Governance/CSG, of current practices.
BARRIER 36: Use of local/proprietary identifiers	National markets rely on local/national identifier codes to identify entities and transactions.	Low	Medium	Industry AMI-SeCo	Local/national entity identifiers should be phased out by the industry and replaced universally with the BIC. Further explore the possibilities of a European market practice for the use of the UTIs to identify securities transactions (building on already existing best practices developed by the ICMA ERCC on regulatory reporting for repos) and of the LEI for identifying legal entities.
BARRIER 37: Inconsistent use of transaction type in messaging	Despite ISO standards providing a classification of transactions and the associated codes, information on the types of transactions is not populated consistently in settlement-related messaging. As a result,	Low	Low	Market players CSDs EU T+1 Industry Committee	Instruct transaction types correctly., in accordance with SMPG guidelines. Accept all transaction types in settlement messages. Monitor and encourage implementation of ISO Codes for identifying transaction types.

Barrier	Short description	Priority		Main actor(s)	Recommendation
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	identifying the transaction types is not consistent across markets.				
BARRIER 38: Proprietary, local instruction message formats and requirements	In some local markets (even those using T2S), proprietary standards and usage rules are in place that contain differing rules for instructing cross-CSD settlement.	Medium	Low	EU T+1 Industry Committee AMI-SeCo	Reiterating the recommendations of the EU T+1 Industry Committee, representatives of the SMPG should bring together key market players and identify the specific technical issues for implementing and adopting a golden standard for messaging formats. Monitor the adoption of the above standard.
BARRIER 39: Co-existence of ISO 15022 and ISO 20022 messaging standards	European markets face challenges stemming from the parallel use of the older ISO15022 and the newer ISO20022 messaging standards.	Medium	Medium	Industry	Concrete recommendations should be based on the conclusions and suggestions from the AMI-SeCo Task Force on ISO 20022 migration strategy (ISO 20022 migration TF).
BARRIER 40: Different implementation and schema used for ISO 20022 messaging	Possibilities to customise ISO 20022 messages and schemas results in multiple different technical customisations which creates "translation" challenges between different formats.	Medium	Medium	SMPG	Further work on principles and usage guidance on ISO 20022 messages, including version usage.
BARRIER 41: Collateral management barriers to market integration	Europe has seen relatively slow progress in removing barriers to a smooth mobilisation of collateral across markets. Ten areas for potential harmonisation has been identified by AMI-SeCo work (only three of the ten are covered by standards).	High	High	AMI-SeCo Industry	The AMI-SeCo Collateral Management Group (CMG) should define standards to address barriers in the remaining areas and foster their implementation. Market infrastructures and market participants should adopt existing SCoRE Standards.
BARRIER 42: Complex and non-harmonised regulatory reporting requirements	Differences and overlaps in the requirements and mechanisms for regulatory reporting creates a burden on the industry. Requirements to report the same data elements in several instances and to several authorities create inefficiencies.	High	Medium	EU lawmakers NCAs	Ensure that reporting of the relevant data elements occur only once and in the same way for domestic and cross-border activities. Consolidate reporting destinations and reduce the links required to efficiently report. Introduce a formal, regular maintenance cycle for reporting obligations (data standards, reporting methods, change management and guidelines). Templates for reporting should be based on ISO 20022 data dictionary.

Barrier	Short description	Priority		Main actor(s)	Recommendation
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BARRIER 43: Fragmented KYC and CDD procedures and investor identification requirements	National requirements and inefficiencies in terms of KYC in the process of onboarding customers. For cross-border issuance and custody, this creates significant challenges owing to the fact that jurisdictions differ as to their specific regulatory requirements (data elements, authentication requirements, rules on outsourcing and accounts etc.).	High	Medium	European Commission/AMLA AMI-SeCo	Promote further harmonisation of KYC/CDD requirements across jurisdictions (through the EU anti-money laundering/counter-terrorist financing framework), including but not limited to, data elements and documentation. The AMI-SeCo should review concrete issues and provide recommendations to AMLA, taking into account current regulation.

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For specific terminology please refer to the ECB glossary (available in English only).

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