

TARGET2-Securities: Review of current model and future prospects

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Executive Summary

This paper looks to provide an overview of the development and objectives of the TARGET2-Securities (T2S) project in Europe and to assess its effectiveness with regards to the enhancement of settlement efficiency, harmonisation and cost reduction in post-trade processes, along with fostering cross-border investments within the European Union.

In the early 2000s, the European post-trading landscape was marked by fragmentation, with a lack of harmonisation across national securities markets, leading to inefficiencies, financial risks, and high costs. The 2001 Giovannini report identified 15 barriers to cross-border settlement and called for harmonisation to overcome these challenges.

T2S became operational in June 2015, representing a significant milestone in harmonising European securities markets. It uses an integrated settlement model, whereby securities and cash accounts are located on the T2S platform, ensuring delivery-versus-payment (DvP) settlement. T2S primarily offers services to CSDs and central banks, with a focus on account maintenance and settlement, leaving custody and asset servicing functions to CSDs, which maintain their relationships with intermediaries, issuers, and investors.

When examining **the extent to which the original T2S objectives have been achieved**, the analysis shows that:

- T2S has significantly contributed to the harmonisation of market practices with the introduction of standardisation in deadlines, messaging, and operational processes. Further benefits have been observed in technology maintenance and development, resource management, training and BCP expertise across operational teams.
- T2S has also improved cash balance management; however, challenges persist in collateral and securities financing. Benefits have been observed through balance sheet netting on Dedicated Cash Accounts (DCAs), although network fragmentation and limited support from domestic Financial Market Infrastructures (FMIs) hinder capital efficiencies.
- T2S has made a significant contribution to mitigating settlement risk. Nevertheless, the fact that the T2S design has aged over 15 years raises concerns on whether its legacy architecture would be able to keep pace with evolving market dynamics. For instance, the potential move to T+1 settlement within the EU will likely highlight the need for more harmonisation and the importance of the role that T2S should play in that evolution.
- T2S has effectively facilitated cross-border investment in situations where foreign investors have access to an issuer CSD, either directly or through an intermediary that is not part of T2S. On the other hand, for cross-border investment whereby a foreign investor has access to an issuer CSD through another T2S CSD, volumes are still very low. One of the reasons for this is that, since the intermediary (investor) CSDs are also on T2S, they are highly vulnerable to any lack of harmonisation in corporate events and taxation processing.

As a **way forward**, we believe that several areas within the scope of T2S remain to be fully addressed or developed in order to make progress:

➤ **Strategic proposals**

- Reshaping of CSDs

CSDs should look to identify what are the necessary changes to their platforms to enhance operational processing and reduce redundant processes that cause additional expenses, thus ultimately increasing efficiency and saving money.

- Enhancing T2S functionality

The streamlined design of T2S implies that CSDs need to manage various functions, particularly focusing on improving corporate action processes like market claims and transformations. Rather than each CSD managing these independently, there could be benefits in integrating common features within T2S.

- Number of CSDs and currencies within T2S

There is still potential for further expansion to include additional CSDs and markets within the T2S network.

Despite the ECB's efforts to incorporate other currencies, T2S currently supports only Euro and DKK, excluding other major global currencies. Introducing additional currencies could prove beneficial for the enhancement of cross-border settlement.

- The role of T2S with regards to the Capital Markets Union (CMU) plan

It is worth considering whether T2S has a role to play in the broader context of CMU, that would expand its scope beyond the area of settlement for securities transactions.

We encourage the ECB AMI-SeCo to further explore whether the platform could expand its remit to support the greater integration of the EU ecosystem, notably in regard to securities law convergence and tax. We note that in the EU there is still not a common definition of shareholder nor a harmonised procedure for processing withholding tax.

➤ **Tactical recommendations**

- In the event of an EU move to a T+1 settlement cycle, T2S functionality will need a comprehensive review to ensure compatibility, along with encouraging wide industry adoption.
- Further adoption of the Investor CSD model by European CSDs, CCPs and Exchanges may improve cross-border settlement, reducing costs, risks and complexity by pooling assets across markets. This could impact intermediary services but could lead to greater efficiencies and expanded services.
- T2S should aim to set a standard for the functionalities it offers, encouraging non-T2S markets to adopt similar features.
- While ECMS is a positive development for collateral, it has limitations. Further action is needed, particularly from public authorities, to address barriers to an efficient use of collateral.
- The ECB should reinforce control measures and infrastructure recovery processes. Meetings of the Crisis Communication Group should be regularly called in the event of any arising T2S outages, especially when impacts are significant and widespread across the participants community, to allow for regular updates and transparent disclosure around recovery activities.

- AFME members would support greater discipline and tighter operational procedures in some process areas. We suggest reviewing the 60-day timeframe for matched instructions on T2S, to align with the European Commission's FASTER initiative.

➤ Other considerations

▪ Monitoring of systemic risk

The complexity of T2S and its consolidated structure can pose systemic risks. Key industry players like CSDs, CCPs, major banks, and settlement agents handling large transaction volumes require special attention to prevent downstream contagion.

▪ Increased cost-saving efficiency with the inclusion of new markets

T2S bears high fixed costs which are passed on to users per transaction, with the full cost amortisation not expected until 2029. Integrating European markets outside of T2S could reduce costs in the medium term by sharing development, operation and security resources. The inclusion of new markets would enhance harmonisation, potentially easing capital movement and reducing barriers to cross-border payments and securities trading.

▪ Improvement for the T2S change and release management processes

T2S change requests undergo complex approval processes, often taking considerable time. There is also limited opportunity for observers' input in decision-making processes, which suggests the need for increased transparency and communication.

Users should receive regular updates on change request status and prompt notifications of decisions with clear reasons and instructions.

▪ Harmonisation of Corporate Events

Corporate actions on stocks and flows have distinct processing methods within T2S. Improving T2S capabilities for cross-CSD processing of corporate events is necessary. Standardising corporate action processes will increase operational efficiency, whilst reducing costs and mitigating errors.

▪ T2S interoperability with DLT technologies and DLT-generated securities

A potential integration of T2S with DLT-based systems would require careful coordination and consideration. Some of the possible scenarios for how T2S could interoperate with DLT systems could imply establishing bridge solutions that connect the T2S platform with DLT-based securities systems. or the adoption of common tokenisation standards. Collaboration among stakeholders will be essential to address regulatory alignment, standards, legal requirements, and data privacy.

1. Introduction

T2S (TARGET2-Securities) is a single pan-European technical platform which allows for the settlement of securities transactions in central bank money, in real-time, for the same cost, and following the same harmonised procedures, even on settlement transactions involving different CSDs.

Upon its introduction in 2015, it was expected that the platform would improve levels of efficiency and harmonisation of post trade processes, reduce costs and risks, and ultimately represent a significant step forward in the promotion of cross-border investment within the European Union. The development of T2S, along with its central harmonisation agenda, have played a crucial role in eliminating several obstacles outlined in the Giovannini and EPTF reports.

Notably, the AMI-SeCo and its substructures have been a leading figure in achieving harmonisation goals. Progress has been made in adhering to market harmonisation standards, including corporate action norms such as T2S CA, CAJWG, and SCoRE, as well as standards related to shareholder identification. Although not completely eliminating corporate event challenges, it has greatly improved the alignment of practices. This progress has paved the way for convergence, albeit at varying speeds, among most markets regarding these practices.

In February 2022, the T2S Market Infrastructure Board (MIB) decided to launch a task force and entrust it with exploring potential changes and enhancements to T2S, so the platform could continue delivering core benefits to the European ecosystem over a time span of five to ten years.

In September 2023, the task force published a report outlining the conclusions from its analysis, whilst laying out a set of proposed measures and a high-level roadmap. These proposals aimed to simplify the design of T2S and improve performance and operational resilience. Some of the key ideas put forward included:

- Removal of redundant business validations
- Reduction of processing times
- Optimisation of partial settlement processing
- Reduction of key errors and incidents

As outlined in the MBI task force report, a strategic review of T2S would enable the identification of existing complexities in the T2S architecture, whilst ensuring that T2S remains fit for purpose in the longer term. This paper provides an assessment by AFME members, as banks and CSD participants that communicate directly and indirectly with T2S, on the extent to which T2S has been successful in achieving its initial objectives, and sets out our view on potential ways forward.

2. T2S History and Model

In the early 2000s the post-trading landscape in Europe was characterised by a high degree of segmentation by national securities markets in post trade processes, and by a large number of intermediaries servicing individual national markets. This fragmentation of the securities settlement markets in Europe complicated the running of post-trading processes on cross-border securities transactions and led to increased financial risk and high fees.

The 2001 Giovannini report identified 15 barriers to cross-border settlement and highlighted significant inefficiencies towards achieving a fully integrated finance market in Europe. In order to overcome these barriers, the report called for a harmonisation of technical standards and market practices and for addressing the different regulations applied by the various Member States.

In order to foster integration and tackle the existing fragmentation of post-trade processes, and to address the slow progress on the removal of most of these barriers, the European public authorities envisaged the implementation of two complementary initiatives:

- CSDR – The publication of the Central Securities Depositories Regulation in 2014 introduced a common regulatory framework for post-trading processes in Europe, along with the harmonisation of CSDs' functioning and settlement cycles, which had been vastly defined at national level across the EU Member States. CSDR was a key element in the creation of the regulatory pre-conditions for T2S.
- T2S – The T2S project was a key element for the consecution of the European Central Bank's (ECB) goal for defining and implementing the EU's monetary policy, and for promoting the smooth operation of payments systems.

The European Central Bank launched the T2S project in July 2008. The ECB assigned the development of the platform to four central banks (4CBs): Deutsche Bundesbank, Banque de France, Banca d'Italia and Banco de España.

The initiative was driven from the European authorities' ambition to encourage the consolidation of European post-trading infrastructures in order to foster deeper market integration and increased levels of cross-border investments, by reducing costs and inefficiencies in a secure environment. T2S first went live in June 2015, representing a significant milestone in the harmonisation of European securities markets.

T2S uses an integrated settlement model, whereby the securities and cash accounts used for settlement are located on the T2S platform, and the platform ensures delivery-versus-payment (DvP) settlement, by effecting simultaneous bookings on the securities accounts (provided by central securities depositories) and on the central bank money cash accounts (provided by central banks).

As a technical platform, T2S provides services to the central securities depositories (CSDs) and central banks that use the platform. T2S does not have a direct contractual relationship with the holders of the securities and cash accounts on the T2S platform, namely, CSD participants and banks. The scope of the T2S technical services is largely limited to account maintenance and settlement. T2S provides few technical services with relation to custody and asset servicing functions of CSDs, that also maintain their relationships with intermediaries, issuers and investors.

3. What were the objectives of T2S?

The objectives of T2S can be broadly categorised into five key areas: reducing cross-border settlement costs; increasing harmonisation and standardisation of in-scope markets; generating capital efficiencies through pooling of assets; reducing settlement risk by facilitating greater access to central bank money settlement and leveraging new technology; and ultimately facilitating increased levels of cross-border investment.

3.1 Reducing cross-border settlement costs

The introduction of T2S allowed for a simplified technical architecture for market infrastructures, assuming reduced internal costs for operating a single technical platform rather than multiple different ones. For intermediaries, the introduction of a single 'connection point' to access several CSDs also represented an opportunity for cost efficiency. This also allows participants to streamline their internal processes into a single flow, instead of maintaining a different process flow per infrastructure.

These technical efficiencies were coupled with the application of uniform settlement fees across all CSDs, aiming to increase competition and encourage the development of added-value CSD services.

The ECB's T2S 2007 Economic Feasibility Report¹ stated that T2S, being owned and managed by a public entity, would purely act on a cost-recovery basis, thus maximising the benefits linked to the provision of large economies of scale yet avoiding the inherent risks of an alternative privately-managed platform that could be oriented to maximising profits.

Moreover, the Eurosystem considered that by having a large number of CSDs outsourcing their processing traffic to T2S, the latter would be able to deliver lower transaction fees than the ones being offered by non-T2S CSDs.

3.2 Increasing harmonisation

The architects of the T2S project recognised that building up a single technical platform would prove insufficient, since there was also a need to harmonise the way in which the technical platform would be operated. The T2S community, the ECB and the EU public authorities shared the view that T2S should look to pursue a number of harmonisation activities as a way for the creation of a single market for settlement services in the EU.

Works coordinated by the T2S team, with the assistance of the Harmonisation Steering Group (HSG), sought to identify and prioritise a number of post trade harmonisation issues that were relevant to T2S and the actors whose action was required to resolve those issues. Some notable examples of these T2S harmonisation activities include works for the compliance with T2S ISO 20022 messages, the agreement on a single list of T2S matching fields, ancillary services, or the formulation of standards to harmonise CSDs' interaction with T2S with regards to corporate actions.

3.3 Enhancing capital efficiency

Overall, T2S aimed to enhance capital efficiency by providing a more harmonised, efficient, and cost-effective infrastructure for settling securities transactions across the Eurozone. This, in turn, would contribute to a more stable and integrated financial system in Europe.

The expected benefits from T2S included savings related to a more efficient use of collateral and enhanced liquidity derived from the use of a single settlement process. One of the key benefits of T2S was the ability for participants to use one National Central Bank (NCB) cash account, thus ultimately benefitting from the

¹ <https://www.ecb.europa.eu/pub/pdf/other/t2seconomicfeasibility0703en.pdf>

netting of cash flows and the consolidation of a single collateral pool for all settlement across all the CSDs on T2S.

Pooling cash and securities utilised as collateral across various markets enables the reduction of buffers required to handle settlement spikes and secure credit lines. This process frees up collateral for participants to put to other uses. For example, the released collateral can be used to bolster the liquidity buffer necessary for complying with the liquidity coverage ratio (LCR) as per Basel III. Alternatively, it can be taken off the balance sheet, leading to decreased funding costs and reducing capital requirements arising from excess collateral.

3.4 Reducing settlement risk

The conception of T2S as a platform, and its role on reducing settlement risk, was sustained on four key pillars:

- Settlement of cash and securities in central bank money, thus enhancing financial resilience and significantly reducing systemic risks.
- Usage of an integrated model for settlement that would be owned and managed by the ECB, thus regulated by high operational standards and without the need to outsource the operation of central bank money to a private sector entity. These standards were developed alongside the adoption of delivery-versus-payment (DvP) procedures, in line with the recommendations of CPMI-IOSCO Principles.
- State-of-the-art settlement capabilities (e.g., nighttime and daytime, hold and release, settlement optimisation, partial settlement, etc.).
- By being a single platform, T2S would reduce the settlement frictions caused by the use of multiple platforms.

3.5 Facilitating cross-border investment

For investors, T2S sought to reduce the complexity of cross-border settlement, simplifying it to the level of domestic settlement, and thus encouraging investors to access markets outside of their own domestic market.

It is important to differentiate the two core types of cross-border investors, that will be further discussed on this paper:

- A foreign investor, or a foreign trading party (including CCP), accessing an issuer CSD either directly, or through an intermediary that is *not* a CSD on T2S. For this type of cross-border investment, the settlement of individual transactions will normally take place as internal settlement on the books of the issuer CSD.
- A foreign investor, or a foreign trading party (including CCP), accessing an issuer CSD through another CSD that is a CSD on T2S. For this type of cross-border investment, the settlement of individual transactions will normally take place as cross-CSD settlement on T2S.

4. To what extent have they been achieved?

4.1 Reducing cross-border settlement costs

The T2S infrastructure provides three core functionalities: (i) maintenance of securities accounts, (ii) maintenance of cash accounts, and (iii) settlement.

When looking at the potential sources of cost savings set out in 3.1., it is important to differentiate between 'pure' settlement costs (i.e., the underlying costs of settling a transaction) and 'broader' settlement costs (i.e., operating processes which are not directly involved although have synergies with the settlement process). By operating a single infrastructure, T2S has partially delivered in the reduction of 'pure' settlement costs; however, 'broader' settlement costs have not decreased due to a number of factors: lack of harmonisation of corporate actions and tax procedures, changes to CSD pricing fee schedules and costs associated with infrastructure enhancement (e.g., functionality to enable partial settlement).

- Simplifying infrastructure

To maximise the benefits of streamlining functions around a T2S core single infrastructure, CSDs operating at national level should have conducted an internal review in their processes in order to eliminate redundancies. We understand that CSDs have not taken all the opportunities to reshape their internal systems, and to achieve savings on their internal costs, which leads to the production of duplicative functions (e.g., matching at CSD level, additional messaging, etc.). Ultimately, this means that the specific costs of T2S have been accounted for, in addition to the underlying costs of each CSD.

Following a mandate from the French public authorities, a committee of experts chaired by Christian Noyer published a report² early in 2024 outlining a set of proposals for the development of the Capital Markets Union. We agree with some of the considerations in the report which note that, despite its many contributions on the settlement and delivery of securities transactions, T2S has not led to the full integration of core functionalities, but rather represented additional infrastructure "layer", with many core functionalities still being run by the CSDs.

Securities accounts records in T2S represent the golden source, and would take prevalence in case of any discrepancies with records at securities accounts held at the CSDs. Maintaining securities accounts in multiple systems outside of T2S creates operational complexities and higher costs for intermediaries.

- Directly Connected Parties

Regarding the role of Directly Connected Parties (DCPs), the original vision consisted on a single and efficient DCP model, having access to all settlement activity in T2S. That vision has only been partially delivered, with two core challenges still pending resolution:

- Not all CSDs offer DCP services. We consider that any financial intermediaries should be able to become a DCP for all CSDs in T2S.
- There are CSDs that allow DCPs, yet sometimes they end up imposing costly and duplicative processing in their legacy systems. An example of this can be observed in some local markets, where the CSDs will request a copy of each message that gets sent from the DCP to T2S –and vice versa–, with messaging costs always being allocated to the user, which ultimately creates a disincentive for becoming a DCP.

² <https://www.tresor.economie.gouv.fr/Articles/e3283a8f-69de-46c2-9b8a-4b8836394798/files/6b8593b5-ca31-45a3-b61c-11c95cf0fc4b>

- Investor CSD Model

The Investor CSD model was not an explicit objective of T2S, but it was an option enabled by T2S that would allow Investor CSD participants to access securities other than those for which it itself performs the notary function.

The European Issuance Service (EIS) –which is based on the Investor CSD model– represents a success story, meaning that the National Bank of Belgium operates a settlement-delivery system (NBB-SSS) and acts as the one single issuer for European fixed-income securities. However, it must be noted that the EIS is a measure of T2S’ partial success, as it only covers the issuance of supranational ‘vanilla’ bonds with little complexity, where the issuance of other types of securities remains a much complex challenge.

Given the limited uptake of the Investor CSD model, there have been minor benefits relating to cross-border settlement costs reduction, since the large part of cross-border investment activity follows one of the models identified in section 3.5. –A foreign investor accessing an issuer CSD either directly, or through an intermediary that is not a CSD on T2S–. This is due to a lack of harmonisation regarding the non-core settlement services (e.g., tax, and corporate actions) and the fact that local intermediaries are still required. As a result, the regular cross-border settlement costs remain in addition to the infrastructure investments that participants have to pay.

We welcome the increased adoption in recent times by Euronext Clearing, to support the Investor CSD model, and we expect to see other European CCPs to follow suit. We would expect this to impact services provided by intermediaries, however this paves the way for efficiencies and further services to be provided.

4.2 Increasing harmonisation

Overall, T2S has significantly contributed to market practice harmonisation, in particular. However, as the latest T2S Harmonisation Progress Report³ shows, there are still many elements which create complexities, notably in relation to those adjacent processes not directly related to settlement, but creating a lot of synergies, such as corporate actions and tax procedures. We note that the AMI-SeCo SEG work on harmonisation remains ongoing, reflecting that there has been significant progress but there are still outstanding things to address.

T2S introduced standardisation in deadlines, messaging, SSIs, operational and functional processing. Through this, further benefits have been observed in technology maintenance and development, resource management, training and BCP expertise across operational teams.

It is worth mentioning that the industry had already been involved in harmonisation initiatives, such as the project whereby CCP LCH, S.A. became a common clearing infrastructure for the French, Belgian and Dutch markets, or the one launched by Euroclear which resulted in a single platform (ESES) bringing together the same three markets. This has enabled, as an example, French clearing members to easily extend their offering to the other two markets without the need to appoint a settlement agent. With T2S, the ECB has taken such advances to a European level.

Harmonisation has also seen positive results in terms of achieving progress in a more expedient manner. Since IT developments can be done once for all CSDs, (ultimately splitting the costs), the decision to implement new functionalities can be taken more swiftly. Moreover, the fact that some functionalities exist within T2S may be an incentive for non-T2S markets to offer them too.

³ <https://www.ecb.europa.eu/paym/intro/publications/pdf/ecb.targetsechpr230124.de.pdf>

There are, however, differences in how market participants connect to T2S. As we highlighted in our response⁴ to the recent ECB AMI-SeCo SEG Survey on Barriers to Post Trade Integration, lack of harmonisation still persists in the batch cut-off timings of different CSD processes. Moreover, whilst T2S aimed to provide a framework for harmonisation, the reality is that the range of the functionalities being offered (e.g., auto-partial, real-time settlement) has largely differed across CSDs.

4.3 Capital Efficiency

T2S has greatly improved the management of cash balances. However, collateral and securities financing more generally, remains an area of difficulty.

Benefits have also been seen through balance sheet netting on Dedicated Cash Accounts (DCAs), although a fragmented network and lack of support from some domestic FMIs on DCA usage limits the capital efficiencies that have been realised.

4.4 Reducing settlement risk

T2S has contributed considerably to reducing settlement risk. It was built as a state-of-the-art settlement system; however, the platform is now more than 15 years old, and there may be gaps to address in order to face upcoming changes in the external environment.

T2S should be able to adapt to upcoming regulatory developments. In the context of discussions around a potential EU move to T+1 settlement, T2S will likely have to change its daily settlement timetable, which would require the corresponding changes for the platform to be enhanced and to be made more efficient. T2S infrastructure can also play a key part in the future vision of optimising settlement of available inventory in order to have more seamless movement of liquidity and facilitate settlement.

4.5 Facilitating cross-border investment

In regard to the two types of investors described in 3.5, T2S has certainly facilitated cross-border investment where the foreign investor is accessing an issuer CSD either directly, or through an intermediary that is *not* a CSD on T2S.

On the other hand, volumes of cross-border investment whereby a foreign investor is accessing an issuer CSD through a CSD on T2S, are still very low. One of the reasons for this is because intermediary (investor) CSDs are also on T2S, and therefore they are highly vulnerable to any lack of harmonisation in corporate events and taxation processing. However, the European Issuance Service has the potential to positively contribute to cross-border settlement, by enabling EU debt securities to be settled in T2S. This will create a level playing field for all investors trading on EU-issued bonds.

It is important to make a distinction between cross-border settlement and cross-border investment, with the latter not being necessarily dependent on the ability to settle across markets via T2S. We note that cross-border investment in the EU still presents a number of challenges that expand outside of the remit of post trade. The latest AFME KPI report⁵ shows that there is still significant work to be done in order to make progress towards a Capital Markets Union. T2S by itself represents a small element in the creation of the CMU and, despite its favourable contributions, cannot solve on its own many of the problems identified in the report.

⁴ https://www.afme.eu/Portals/0/DispatchFeaturedImages/AFME%20PT%20-%20AMI-SeCo%20SEG%20Survey%20on%20Barriers%20to%20Post%20Trade%20Integration_.pdf

⁵ https://www.afme.eu/Portals/0/DispatchFeaturedImages/AFME_CMU_KPIs2023_11.pdf

5. What actions are needed to make progress?

- It will be key for CSDs to identify what is required to transform and reshape their platforms so they can potentially optimise their operations and reduce expenses, ultimately leading to greater efficiency and cost savings.
- Regarding the design of T2S, its streamlined approach requires CSDs to handle numerous functionalities within their systems. An area that warrants further examination is the enhancement of functionalities related to corporate actions, especially those involving flows, such as market claims and transformations. Instead of each CSD independently managing these processes, there could be advantages in developing common functionalities within T2S.
- In light of recent discussions on a potential EU adoption of T+1 settlement, a comprehensive review of T2S functionality (i.e., matching fields, operating hours, use of partial settlement, etc.) would be required along with encouraging its use by market participants. We note that in the event of an EU move to T+1, T2S will have to process the whole volume of settlement instructions in a compressed timing.
- Today, many CCPs around Europe still operate based on domestic settlement models, which require participants to hold an account at their local CSD, thus not allowing for users to freely choose which Investor CSD to connect to. There are also times when these restrictions to participants' choice are caused by the rules of the Exchanges.

Adoption of the Investor CSD model by other European CSDs, CCPs, and Exchanges, will enable benefits to cross-border settlement, including reduced costs, risks and complexity through pooling of assets across different European markets. We would expect this to impact services provided by intermediaries, yet paving the way for efficiencies and further services to be provided.

- The platform could benefit from continuous expansion by the inclusion of non-T2S CSDs, thus widening the remit of T2S.
- T2S should look to become a role model with regards to the functionalities it provides. To this extent, we would recommend a review of ways to encourage non-T2S markets to adopt the same functionalities.
- ECMS will be a positive development relating to collateral. However, ECMS only covers a limited type of collateral activity. There is a need for more action, in particular from public authorities, to tackle barriers to the efficient use of collateral.
- A mix of the operational complexity of T2S and the consolidated structure of T2/T2S can potentially create bigger systemic risks; therefore, any single failure impacting the platform could pose a risk of downstream contagion across the whole financial environment.

Key industry participants such as CSDs, CCPs, major payments banks and large settlement agents, due to the role they play by handling large transaction volumes, should be given especial consideration. Any issues affecting any of these participants could propagate to other intermediaries, thus potentially creating systemically important risks to the ecosystem.

- The ECB should ensure the continuous reinforcement of control measures and infrastructure recovery processes. We welcome the establishment of the Crisis Communication Group (CCG) and we would encourage using CCG meetings as a standard procedure to provide participants with more regular updates and transparent disclosure on any outages affecting T2S. There should be a pre-defined and transparent set of objective criteria that, if and when met, will automatically trigger the activation of a CCG meeting.

- There is a need for greater degree of harmonisation in multiple areas (notably, corporate events and tax).
- We acknowledge the ECB's efforts to incorporate other currencies; however, the only currencies supported in T2S are Euro and DKK, whereas other major global currencies are not covered. The ECB should explore other routes for including additional currencies, whose introduction could foster higher levels of cross-border settlement.

We understand that the first step that T2S should undertake is to enable settlement in the domestic currencies of non-EUR markets that have already migrated to T2S (e.g., Hungary, Switzerland). Subsequently, the aim should be that for any new CSD joining T2S, to have the corresponding central bank migrate at the same time. This would further increase the use of multi-currency function with the ability to settle in central bank money, which is widely accepted as being less risky and more efficient.

- AFME members would welcome higher levels of discipline and the implementation of tighter operational procedures in some parts of the process.

We note that all matched instructions will remain in the T2S platform for 60 days from the last modification on any matching field, after which they will be cancelled if not settled. We consider that this timeframe is too long and puts added pressure on the platform. We would recommend for the timeframe to be reviewed following the European Commission's FASTER initiative.

6. The way forward

6.1 Increased cost-saving efficiency with the inclusion of new markets

T2S has a high level of fixed costs, which are ultimately transferred to participant users at an individual transaction basis.

Given that a full T2S cost amortisation is not expected to be completed until 2029, an effective medium-term solution to reduce costs could be for other European markets that currently settle outside of T2S to join the platform.

By the incorporation of other central banks and CSDs to the T2S platform, costs and resources for development, operation and security could be shared amongst more parties, thus providing the opportunity for easier collateral mobilisation and further efficiency gains by leveraging economies of scale.

Sharing a common platform with other central banks would also represent a further step towards fully achieving the benefits of harmonisation, which would be likely translated in freer movement of capital and lower barriers to cross-border payments and securities trading.

It is worth noting, however, that the inclusion of new markets to join the T2S project would be a significant undertaking that would require changes in operating practices at national market level, which would not happen overnight.

6.2 Improvement for the T2S change and release management processes

T2S change requests (CRs) usually consist of complex and lengthy approval processes, requiring a preliminary assessment by the 4CBs, with an evaluation on low/medium/high impact on T2S and a rough estimation on costs. Items are then tabled for discussion on whether the CR goes into the detailed assessment phase, usually taking a considerable amount of time, with CRs often being amended based on costs or operational decisions.

Currently, only certain parties (namely: the ECB, the 4CBs, CSDs and NCBs) are allowed to raise change requests. We would suggest considering to allow market participants to raise CRs as a way of improving the direct engagement with the T2S community, regardless of the existing process for reviewing, evaluating, and approving CRs, which would remain unchanged.

The management process for allocating CRs to a release cycle allows for limited opportunities for industry participants to provide input, as these participants do not have representation in the decision-making process. We would welcome a more agile process, with further disclosure, ensuring to keep visibility and having a centralised communication flow with market participants.

Whilst the Change Request Group meeting minutes are available via the ECB website, market participants should be kept informed of change requests status and progress through more frequent regular updates and progress reports. Decisions on change requests should be promptly notified with a clear disclosure of reasons and any additional instructions or requirements.

Some CSDs and NCBs are very diligent at keeping their participants up to date, however not all CSDs and NCBs are as proactive in involving their clients in the discussion of CRs. This unfortunately can mean that the T2S community may not be as engaged as they could be. If the ECB were to issue more regular and direct communication, this would allow market participants to feel more engaged and to also initiate discussions with their corresponding CSDs or NCBs if that does not happen otherwise. We believe that this would foster more active discussions on the importance of certain CRs thus the ECB could expect more constructive feedback from the T2S community.

Due consideration should be given when assigning prioritisation of CRs, whereby the expected costs incurred should be weighed in against the scope of market participants benefitting from the change request.

6.3 Harmonisation of Corporate Events

It is worth noting the conceptual distinction between corporate actions on stocks (i.e., on booked positions) and corporate actions on flows (i.e., pending transactions). Whereas the former are processed by each CSD in a separate way, without major problems despite of the different service levels, corporate actions on flows represent a settlement-related activity for which T2S has not developed any functionality to enable cross-CSD processing in an easy manner.

Despite some progress being made, particularly through the AMI-SeCo work on the development of SCoRE CA standards, future harmonisation developments should consider building up T2S' capabilities for the processing of corporate actions.

The development of standardised corporate actions processes would reduce their complexity and the need for manual intervention. This will ultimately lead to increased operational efficiency, lower operational costs, and fewer errors in processing corporate actions.

6.4 T2S interoperability with DLT technologies and DLT-generated securities

A potential interoperability between T2S and DLT-based systems would require careful consideration and coordination between the existing centralised system and the decentralised DLT infrastructure. While there is no specific integration between T2S and DLT at present, it would worth exploring how interoperability could be achieved in the future.

Some potential scenarios for how T2S could interoperate with DLT systems could imply establishing bridge solutions that connect the T2S platform with DLT-based securities systems. Alternatively, if securities are tokenised on a DLT platform, interoperability could be achieved by adopting common tokenisation standards that allow seamless transfer of tokenised securities between T2S and DLT networks.

It is important to note that achieving interoperability between T2S and DLT securities would require collaboration and coordination among market participants, central securities depositories (CSDs), regulators, and technology providers. Key considerations in this process will include aligning regulatory frameworks, establishing common standards, addressing legal and compliance requirements, and ensuring data privacy and security.

Conclusion

The creation of T2S was largely driven by the complexity and fragmentation of European capital markets. T2S aimed to reduce the barriers to cross-border investment by the provision of an integrated and common technical infrastructure to facilitate the administration of securities accounts and central banks accounts, along with enabling the settlement of securities transactions in central bank money.

With the outsourcing of CSDs' delivery-versus-payment movement of securities to a technical settlement platform run by the European Central Bank, T2S has certainly brought a standardised settlement infrastructure and process to European capital markets.

T2S has been a catalyst to foster the harmonisation of post-trading processes and would have largely contributed towards the integration of capital markets in Europe. It has delivered some clear benefits, such as:

- Further harmonisation of European securities markets, which has resulted in improvements on interoperability and collateral and liquidity efficiencies.
- Reduction of settlement risk, derived from a truly integrated DvP settlement in central bank money.

However, there are a number of areas that are yet to be fully addressed or developed within the context of T2S:

- CSDs should look at ways to identify the required changes to transform their platforms so they can optimise their operations and reduce expenses, ultimately leading to greater efficiency and cost savings.
- In regard to the design of T2S, its streamlined approach requires CSDs to manage various functionalities within their systems. An area that warrants further examination is the enhancement of functions related to corporate actions, especially those involving market claims and transformations. Rather than having CSDs independently managing these processes, there could be benefits in the development of common functionalities within T2S.
- There is still room for further standardisation across different jurisdictions and processes. Achieving greater consistency in areas such as corporate actions, taxation processing, and settlement procedures could enhance operational efficiency and reduce complexities for market participants.
- Whilst T2S has improved cash and collateral management, further measures could be taken to optimise collateral utilisation and promote efficient cash management. This includes wider adoption of Dedicated Cash Accounts and exploring ways to enhance the netting and pooling of collateral across different markets.
- As the regulatory landscape evolves, T2S should remain flexible and adaptable (or even play an important role) to accommodate changes in market structure, settlement cycles (e.g., potential EU adoption of T+1 settlement) and other regulatory requirements.
- Further efforts to simplify cross-border investment processes and reduce barriers, particularly for investors accessing issuer CSDs through other CSDs, could encourage greater cross-border investment and market participation.
- Regularly reviewing and optimising the functionality of T2S to align with market needs, technological advancements and best practices is important to ensure that the platform remains relevant and effective.
- As noted in the beforementioned paper published by the French group of experts, there may be some benefit in initiating discussions on whether T2S should be enabled to perform other functions traditionally offered by CSDs.

In summary, whilst T2S has achieved significant progress in its objectives, there is still work to be done in terms of expanding participation, achieving complete harmonisation and adapting to changing regulatory and market conditions. We are supportive of the AMI-SeCo groups' intention to review and re-start these harmonisation initiatives.

These ongoing efforts jointly developed by public authorities and market participants will contribute to the continued success and evolution of T2S as a pivotal infrastructure for securities settlement within the European Union.



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