T2S and regulatory framework are shaping a new post-trade world

"SEIZING THE OPPORTUNITY"!

Edition 2012

Deloitte.

ABBL

Association des Banques et Banquiers, Luxembourg
The Luxembourg Bankers' Association
Luxemburger Bankenvereinigung

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Content

Foreword

Four years ago, the ABBL and Deloitte published a white paper on the impact of the future Target 2 Securities (T2S) platform in Luxembourg. At that time, T2S was not well-known and this paper was amongst the very first to introduce what is now probably considered as the most important project affecting the post-trade activities of the securities transaction business in Europe.

Today, T2S is still a project under development. Together with an ambitious regulatory agenda including but not limited to MiFID 2, MiFIR, EMIR, CSD, Securities Law and UCITS V, T2S will reshape the structure and inner workings of the complete value chain, from trade execution to post-trade functions.

The combination of the new regulatory and infrastructure frameworks will only really impact the trade and post-trade value chain during 2015, which is when the first T2S related regulations and directives will come into force.

In the context of this fast evolving landscape, the value chain's stakeholders are currently beginning to identify their strategic options and define their future organisation as well as their business and operational models. In a nutshell, they need to ask themselves: what will my securities business look like in 2015 and beyond?

Whilst our first white paper explained the main principles of T2S and their impacts, this document focuses more on the different business scenarios and options currently available to financial institutions operating in the EU.

The first part of our paper provides a global overview of the major changes and drivers that currently impact the trade and post-trade value chain. Secondly, we highlight the latest updates and next steps in the T2S project. The third part of our paper reviews the different business perspectives and options that are emerging or that may present themselves to the concerned actors by 2015. Finally, we focus on the opportunities and challenges from a Luxembourg perspective.

The views and opinions presented in this paper are based, amongst others, on various interviews conducted with senior representatives of the post-trade value chain, including market infrastructure providers, asset managers, custodians and asset administrators to name but a few. Their contribution has been exceptional and we would like to thank them all for their honesty and transparency in sharing their views on T2S with us.

Executive summary

The European post-trade environment will be different by 2015. The boundaries will move;, barriers will be removed; roles and responsibilities of the different stakeholders of the value chain will be harmonised; asset safekeeping will be re-organised and some business processes will be streamlined whilst other operations will remain specific to the domestic market. The current and future transformation of the post-trade value chain is a direct consequence of a number of new directives and regulations as well as new market infrastructures.

T2S is one of the catalysts of this transformation which aims to foster improved integration, harmonisation and risk management throughout the post-trade value chain.

It is a daunting challenge for financial institutions to interpret each element of these various regulatory and market changes into the individual business impacts on their organisation and how best to assess their future to ensure a strategic and successful business model.

Throughout this paper, we have adopted the view of the trade and post-trade stakeholders and analysed specific and generic impacts of the following regulatory changes - MiFiD 2, EMIR, CSD and UCITS as well as market changes relating to T2S.

Today the majority of securities market participants are aware of and understand the concept and objectives of T2S. Nevertheless, few of them have a clear view or understanding of what their business models will / may look like in a post T2S environment. They need to consider key questions including what are the actual impacts of T2S and the new directives / regulations on our operations and organisations? What are the available strategic options and how can we minimise transposition costs whilst re-engineering new business services?

2015 may seem a long way in the future but due to the inherent complexity of T2S, organisations need to start planning their transposition now. Some European CSDs and global custodians have already begun to define their future strategic orientations in relation to this new securities market environment.

Their business models must reconsider and restructure their securities services offering around three main concepts:

- Access to the European domestic markets via one global hub and the creation of a pan European CSD / Custodian platform
- Optimise collateral and liquidity management via the consolidation of assets under the regional securities hub
- Support their clients with dedicated local expertise (local custody) to cover the specifics of domestic asset servicing including corporate actions and tax issues

In the short term, securities market participants will have to evaluate these different options, taking into consideration organisational, operational and financial aspects.

The key challenge consists of translating a batch of regulatory requirements into successful business opportunities and strategic business models

Most financial institutions know about T2S; few of them know what their business models will look like in a post T2S environment

Savings will not necessarily come from lower settlements fees; market players must consider the complete value chain when assessing potential T2S related savings

> The post T2S environment will generate more competition and ultimately reduce the number of market players

T2S's main objective is to propose a cost efficient cross-border settlement process in Europe. However, given the required investment to transpose T2S, it may nevertheless be some time before actual savings will materialise. Organisations will need draft a detailed and efficient business case which takes into account other issues and not just the single aim of reducing the cost of cross-border settlement fees. Potential savings resulting from better organisation of the asset deposits, management of collateral, and asset servicing support must be integrated into any financial evaluations.

At a time when margins are continually under pressure, and integration and harmonisation processes more prevalent, we may anticipate a CSD consolidation with fewer local custodians dominating in the post-T2S environment. Moreover, the re-structuring of business initiated by T2S will also lead CSDs and custodians to move up the value chain and compete against each on standard services such as settlement and asset servicing. This may lead to some interesting quandaries as these custodians are often the main clients and/or board members of these CSDs.

> Luxembourg must reinforce the collaboration of its infrastructures and provide a clear integrated solution for asset servicing and collateral management

T2S is a key opportunity for Luxembourg to shape the future of its financial sector. With experience and expertise of more than 25 years in asset administration and servicing at cross-border level, the Luxembourg financial centre cannot afford to be left out of the new T2S landscape.

The Luxembourg financial market place can rely on solid and robust trade/ post-trade infrastructures which includes two markets, two CSDs, a leading ICSD and a large number of custodian and depositary banks.

> The key challenge consists in the country's capacity to make best use of its post-trade infrastructures

Whilst investment funds will be eligible in T2S, the Luxembourg fund asset administration and transfer agent model will continue to provide its distinctive added value and recognised expertise to the fund distribution in Europe. Indeed, T2S, in its initial release, will not impact all areas of fund distribution. Nevertheless, the Luxembourg fund infrastructure will have to must closely monitor T2S as it evolves to ensure it becomes the main European cross-border securities settlement platform.

In parallel to Luxembourg's efforts to attract new financial products via an attractive and proactive legal and regulatory framework, a key challenge resides in the market place's capacity to feed its post-trade infrastructures with business volumes and maintain a strong back office administration business at Luxembourg.

> Major stakeholders are shaping new strategic visions for their post-trade business. It is now up to Luxembourg to decide how it wishes to contribute to the design of this new world

Today, several initiatives are being undertaken in Luxembourg at all different levels of the value chain including order routing, clearing, collateral management and asset administration. More integration, consistency amongst these projects and improved communication on the added value of the Luxembourg post-trade environment and its cross-border expertise will be required to position the country in the strategic planning of the main global custodians on both the sell-side and buy-side, as well as the securities markets providers.

The new post-trade landscape will provide new business opportunities for those who can seize them including but not limited to:

- Efficient management of collateral and liquidity which will be the holy grail of financial institutions in the future
- Access to cross-border and local expertise related to asset servicing
- Consolidation of assets in one central hub
- Outsourcing of business operations to a global custodian / CSD

At a time when stakeholders of the European securities markets and regulators are shaping new strategic visions of the post-trade landscape, it is now up to Luxembourg to decide how it wishes to contribute to the design of this new environment, to position its expertise within the new framework and seize new business opportunities for its financial industry.

Business and regulatory transformations of the post trade environment history

Introduction

Although operationally the industry has proven to be resilient in the context of the last financial crisis, the landscape of the European securities markets is today facing major transformations driven by the set-up of a new regulatory regime designed by the G20 and its affiliates that will directly impact market infrastructures.

The transformations focus on a better integration and interoperability at European level across the national securities trading and post-trading infrastructures, coupled with an enhanced management of the risks inherent to the securities transactions to provide for a level playing field for firms providing investment services. Most of these transformations will come into force as from 2015.

In the current context, it is a daunting challenge for financial institutions to foresee the future impacts of these market and regulatory evolutions on their operations and organisations take the right strategic orientations and translate them into actions toward a new business model.

Today, few institutions have a clear picture of how the markets will look like in 2015. While the regulators have started market consultations on key reforms like EMIR, CSD, MiFID 2, etc., most of the technical standards related to these reforms are still under development. On the other hand, European CSDs still mull over the re-shaping of their current business model in view of the new T2S platform.

While there are still some questions about the detailed specifications of the future post-trading environment, the plans of the future ‘house’ are now specific enough to allow for the transformation phase which is clearly in development at some institutions.

In the coming months and in order to meet the 2015 deadline, the different stakeholders will have to consider and/or confirm their different business options in the context of the new regulatory and infrastructure framework.

Before considering these options, we review the main characteristics of this new framework from the point of view of the trading and post-trading value chain.

Regulatory framework

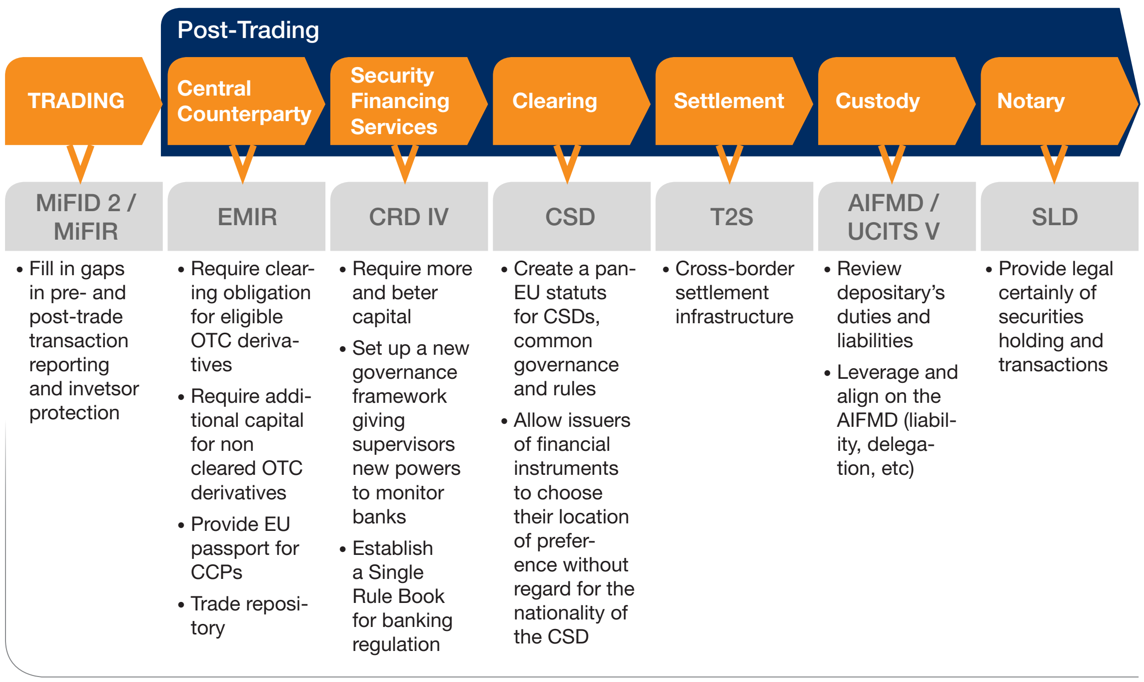
Although often referred to as the plumbing of the financial markets, post-trading activities are crucial in providing vital linkages to guarantee a smooth and safe execution of a financial transaction along the different steps of the value chain.

Different directives and regulations are addressing the building blocks of the trading and post-trading value chain, hopefully providing at the end a comprehensive and well-integrated regulated framework.

As such, this objective is not easy to address and the main challenge both for the regulators and regulated entities consists of translating each separate regulation/directive into a meaningful transversal regulated business flow.

Below we review some of the key directives and regulations impacting the trade and post-trade environment.

Facilities (MTF) and Systematic Internaliser (SI). The text extends the rules regarding pre- and post-trade transparency from listed shares to all instruments (where feasible in terms of regulation). It also seeks to bring Over-the-Counter (OTC) derivatives on platforms to complement the EMIR (European Market Infrastructure Regulation) and forces interoperability among trading platforms and post-trade infrastructures



MiFID 2 / MiFIR: A directive and a regulation to strengthen trading practices

What?

Following the MiFID review process 2010-2011, the EU Commission released two texts for approval by the EU Council and the European Parliament: a regulation (MiFIR) and a directive (MiFID 2).

- The regulation (MiFIR) addresses -among others- the aspects linked to the trading of orders. It also introduces the concept of Organised Trading Facilities (OTF) in addition to the already defined Regulated Market (RM), Multilateral Trading
- The Directive amends, among others, specific requirements regarding the provision of investment services, deals with organisational and conduct of business requirements for investment firms and organisational requirements for trading venues

When?

MiFID 2 is expected to be transposed into national laws in 2015.

The timetable for MiFIR is less clear, since by default a regulation is applicable 20 days after publication in the Official Journal of the EU, although it would make sense to have both texts in force at the same time.

Links?

MiFID 2 and MiFIR are related to the EMIR regulation mainly concerning the scope of OTC derivatives and interoperability.

MiFID 2 also relates to UCITS V in the classification of complex versus non-complex UCITS.

EMIR: New market organisation for OTC derivatives

What?

Following the G20 commitment to implement strong measures to "improve transparency, better risk management and regulatory oversight of the OTC Derivatives market", EMIR entered into force on August 16, 2012, but will concretely deploy its effect next summer at the earliest. EMIR will introduce:

- A clearing obligation for eligible OTC derivatives with measures to reduce counterparty credit risk and operational risk for bilaterally cleared OTC derivatives
- Common rules and new requirements for central counterparties (CCPs)
- The concept of trade repositories and reporting obligation for OTC derivatives

When?

Although EMIR entered into force on 16 August 2012, its obligations will have no effect in practice for several months, as it requires the implementation of technical standards.

ESMA, tasked to produce these standards, must submit them to the European Commission for approval by 30 September 2012. In an optimistic scenario, the EU Commission approval of the draft technical standards is currently expected by the end of December 2012. As from January 2013, a period of minimum 6 months is expected to manage the eligibly of the derivatives with the CCP. The trade reporting obligations are also foreseen to be effective as from July 2013.

Links?

Besides EMIR, which focuses on the post-trade handling of OTC contracts, other aspects of OTC regulation also need to be simultaneously addressed, notably for the trading/negotiation side by MiFID 2 and the Market Abuse Directive.

Other texts also intervene in the debate, among them the Securities Law Directive, the Central Securities Depositaries Regulation, and of course the EU version of the Basel III Accord (CRD IV) because of the impact on CCPs' and banks' risk model and collateral management.

The recent consultation paper regarding the future framework of UCITS VI is also addressing the question of derivatives contracts, collateral requirements and their utilisation by UCITS instruments.

SLD: A legal framework for securities

What?

The Commission Services are cautiously preparing a draft directive on legal certainty of securities holding and transactions (Securities Law Directive – SLD). The Directive is expected to address three issues:

- The legal framework of holding securities, covering aspects belonging to the sphere of substantive law as well as conflict-of-laws
- The legal framework governing the exercise of investor rights flowing from securities through a "chain" of intermediaries, in particular in cross-border situations
- The submission of any activity of safekeeping and administration of securities under an appropriate supervisory regime

When?

The Securities Law Directive is expected for release by the fourth quarter of 2012.

Links?

Other texts also intervene in the debate, among them the Central Securities Depositaries Regulation.

CSD Regulation: A pan- European framework for the central depository

What?

The aim of this draft regulation is to create a pan-EU status for CSDs, common governance rules and allow issuers of financial instruments to choose their location of preference without regard for the nationality of the CSD. The main objectives of the proposal are to:

- Increase the safety of settlements, in particular for cross-border transactions, by ensuring that buyers and sellers receive their securities and money on time and without risks
- Increase the efficiency of settlements, in particular for cross-border transactions, by introducing a true internal market for the operations of national CSDs
- Increase the safety of CSDs by applying high prudential requirements in line with international standards
- Introduce free choice of issuer CSD across the EU for all instruments and service passport for CSDs

The main measures will involve:

- A settlement period of maximum T+2 (trade date + 2 days) will also apply to all transferable securities that are admitted on regulated markets, MTFs or OTFs as of 1 January 2015
- Measures to prevent and to address settlement fail (e.g. mandatory and harmonised buy-in rules)
- An obligation of dematerialisation for most securities
- CSDs will need to be authorised and will be supervised by the competent local authority. Authorised CSDs will be able to offer their services throughout Europe without the need for further authorisation (pass-porting)
- A user committee that will advise the board of the CSD and that will be independent from the management of the CSD will be established (no risk committee)
- Issuers shall have free access to the CSD of their choice to issue securities

In addition, because of the systemic infrastructure role of CSDs, the regulation plans to introduce strict limitations as to the type of non-pure CSD activities that are performed, from which banking activities will be excluded. Under specific circumstances and after a complex procedures, CSDs may benefit from a derogation that would allow them to have a banking licence or otherwise they would have to decommission their IT and legal structure.

When?

The CSD regulation is expected to be available and implemented in June 2015 (in line with the launch of T2S).

Links?

The regulation must be seen in a context that is fundamentally changing, as a result of the review of the MiFID for the trading layer and both EMIR (Clearing and derivatives) T2S (the European Central Bank's central Settlement project).

Some actors, among the CSDs, are concerned that the regulation could run counter to the spirit or the tacit understanding between the ECB and CSDs, of the ECB's T2S project, which fosters harmonization and integration of the European markets in a way that CSDs are looking for opportunities to reshape their business with value-added services and to compete for cross-border market shares.

While on the other hand, the European commission argues that the two initiatives are complementary. The regulation harmonises legal aspects of securities settlement and the rules for CSDs at European level, allowing T2S, which harmonises operational aspects of securities settlement, to achieve its goals more effectively.

AIFMD / UCITS V / UCITS VI: Define the future roles and responsibilities of the depositary bank

What?

Specifically from a Luxembourg perspective, we have to take into account the changes brought by the AIFMD and the forthcoming UCITS V in the context of this document. These legislations will most likely influence the post-trade value chain for the fund industry, as they are clearly proposing the first definition as to the roles, liabilities, and delegation of the depositary function.

- Role of depositaries. Safe-kept assets shall not be re-used by the depositary without prior consent of the fund
- Liability. The depositary is generally always liable for any loss of the fund's assets that arise as a result of the depositary's failure to perform its obligations and has to return financial instruments of the identical type or the corresponding cash amount without undue delay
- Delegation. Only safe-keeping of assets may be delegated to 3rd parties if objective reasons can be demonstrated. Sub-delegation is possible and the depositary shall perform due diligence and review on an on-going basis)
- Reporting and documentation. The major change for many depositaries will be the requirement to record and report on securities not directly held on its systems. However, the depositary is not obliged to perform all reporting functions itself, but its responsibility extends to being in a position to validate reporting from other sources.

When?

As from July 2013, AIFMD will be transposed into national law. UCITS V and UCITS VI are being defined and under consultation and will be implemented in the following years.

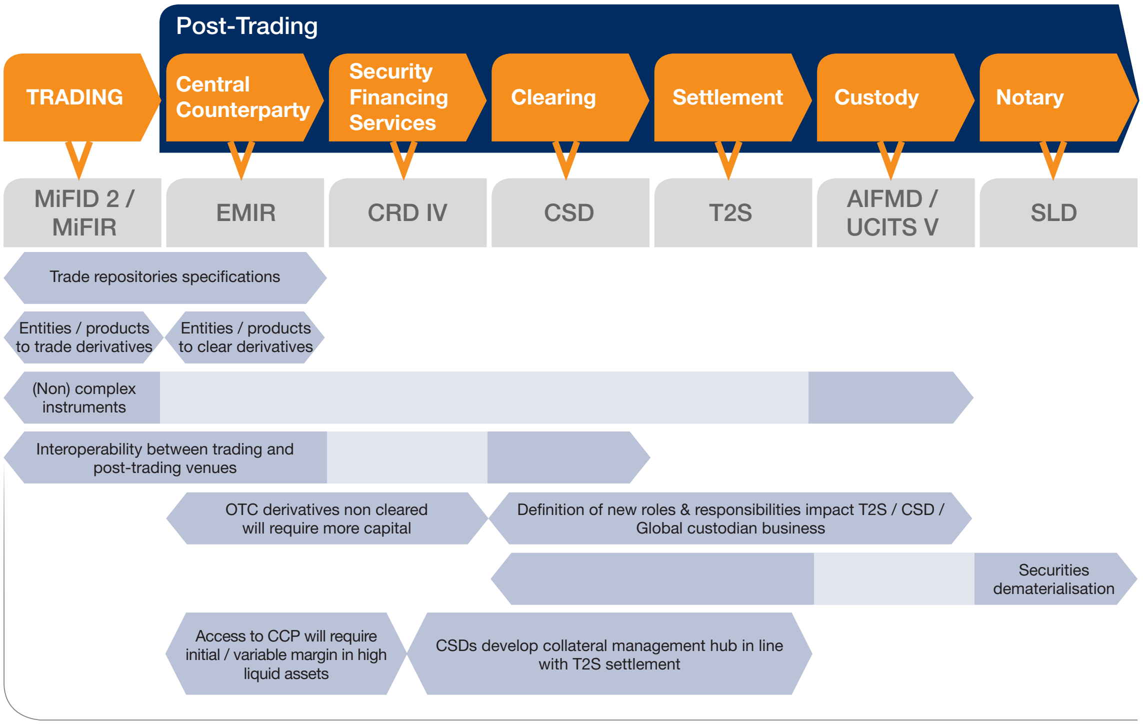
Links?

UCITS VI will further address the fund industry's exposure to the OTC derivatives that, in the future, will be subject to central clearing (EMIR).

The potential classification of UCITS as complex versus non-complex instruments has certain links with the MiFID2 / MiFIR.

The CSD-R may allow some CSDs to run activities similar to fund depositaries; this will mostly depend on the extent of the banking licence offered to CSDs.

Linking the regulatory dots together



The different directives and regulations impacting the trade and post-trade value chain are inter-related, as they are covering the same scope, and therefore often require a transversal reading and understanding of the business impacts. Thus, among others:

- EMIR and MiFID2 /MiFIR are closely related regarding the definition of the entities and products to be traded and cleared
- EMIR and CRD IV are related regarding the capital requirements for non-cleared derivatives
- CSD and the T2S project are related regarding the legal and operational definition of the future settlements requirements
- EMIR and UCITS VI are related regarding the OTC derivatives and hedging for the UCI

Market Infrastructure

Today, the clearing and settlement infrastructures in Europe are essentially composed and organised around the national central securities depositary (CSD) with a primary focus on the local securities business. The lack of global standards, the coexistence of different market practices, the barriers to enter the market as well as inconsistent fiscal, legal and regulatory framework are among the main inefficiencies of the European model.

These result in a highly fragmented and expensive infrastructure. The European cross-border custodian fees can be 2 to 3 times more expensive than domestic ones while a cross-border transaction in Europe can be 2 to 6 times more expensive than a domestic one.

As we have seen above, a new regulatory framework aims to define a common level playing field as to the organisation of the European financial services and trade and post-trading functions.

This framework will have direct impacts on the organisations and operations of the trading and post-trading infrastructures and on their stakeholders, including custodians, asset managers, investment banks, etc. On the other hand, these market players are also leveraging on the future legal framework to re-shape their business models and propose a new range of services.

The transformations related to the trade and post-trade environment in Europe are essentially orientated around the following dimensions:

Cross-border market integration

Several initiatives and projects have already started or attempted to work on a better integration between European domestic markets.

The *Euroclear Settlement of Euronext Securities (ESES)* project was among the first to integrate several domestic markets (France, Belgium, Netherlands) under a common securities services platform. The ultimate objective of Euroclear to create a single platform around its CSD network is today limited to the ESES solution which will leverage from the future T2S platform.

Link Up Markets launched on 30 March 2009. Link Up Markets, at the initiative of Clearstream, established a common infrastructure allowing for streamlined interoperability between ten CSDs (Clearstream Banking Frankfurt, Iberclear, SIX, VP, Helex, Strate, etc.) introducing efficient cross-border processing capabilities. The solution enables CSD customers to significantly reduce the cost gap between settling and safekeeping domestic and foreign securities.

Target 2 Securities is a central technical platform for securities settlement in Euro Central Bank (ECB) money. T2S is owned and operated by the ECB / Eurosystem. The project launched in 2007 and is expected to start its operations as from 2015, facilitating the integration, consolidation and harmonisation of the European post-trade market infrastructures. More details about the T2S project are provided in the next chapter.

Integration along the trade and post trade value chain

In recent years, several initiatives have reinforced the integration between the trade and post-trade functions of the securities value chain.

Deutsche Börse Group was a precursor of the so-called vertical model where the trade (Deutsche Börse) and post-trade services (Clearstream for clearing and settlement and Eurex for central counterparty) are included within the same group, although these activities are performed by independent legal entities.

London Stock Exchange (LSE) Group, a long-time opponent of the "silo", has also integrated new trade and post-trade services for its client with, on the trading front, the acquisition of Turquoise (multi trading facilities) and the Italian Stock Exchange, and bundled the post-trade layer with the Italian trading platform Monte Titoli to cover the post-trade (CSD) functions. It is worth noting that the Italian CSD will be one of the first to operate on the T2S platform. The group is also currently taking a strategic position in the central counterparty business with the announcement of the acquisition of a major stake in LCH. Clearnet.

NYSE Euronext Group has confirmed its intention to stop using LCH. Clearnet for clearing services related to its derivatives products. NYSE Euronext was probably looking to leverage from Eurex in anticipation of the, now aborted, merger with Deutsche Börse. But this was among the arguments used by the Commission to reject the merger because it would have created a near-monopoly in the European financial derivatives landscape. Today, NYSE Euronext is still defining its future (cash market) clearing strategy but they intend to have a clearing platform and a fully self-sufficient Central Counterparty for derivatives products by 2013, in the end thus also taking the road of the "silo" approach.

The new 'Inter-operable' solutions

On the one hand, the legacy market players tend to reinforce their offerings via better-integrated and consolidated trade and post-trade solutions for specific products like derivatives instruments. On the other hand, actors like SIX Group or Euro CCP (a subsidiary fully owned by US DTCC) provide interoperable solutions that are open to different trading and post-trading venues. Indeed, the interoperability model provides trading firms and venues with the ability to select the clearing platform and services of their choice within their single market place.

SIX and Euro CCP have successfully delivered interoperability models to some Trading Facilities like BATS, Chi-X, Turquoise, Burgundy and NASDAQ OMX. The concept is in line with the regulators' objective to set up a true pan-European open and interoperable market, although it works mostly for a few actively traded instruments across the EU. Nevertheless, some barriers like long negotiations with the different local authorities, huge and costly systems and architecture development and higher risk requirements for interoperating different CCPs may prevent that this objective is achieved in the short term. In the end, the process is still more about how to technically link different platforms rather than about how to integrate them into one harmonised standard.

A trade and post-trade environment under construction

The architects (major financial institutions) of the new landscape are already building on and trying to shape the different regulatory blocks connecting the dots among the various projects, thus creating their preferred environment or framework by type of instruments or services with the end goal of solving the equation of integrated trading, post-trading and collateral management.

As we have seen, the perspectives for changes are huge within the next two years, both from a regulatory as well as a market infrastructure point of view. Thus, even if some details specifications of the plumbing of the house are still missing, the walls of the future post-trade house are clearly designed.

The market choice will thus be comparable to deciding, when building a new house, whether to choose a turnkey solution or decide on a solution tailored to your needs in line with the regulations. This image today applies to the different stakeholders of the trade and post-trade value chain, i.e. asset managers, depositary banks, market infrastructures, etc.

This means that those who are not necessarily keen to go for a turnkey solution need to start to evaluate the different options available and the potential strategic business models. This is what we will present in the following chapters with an initial focus on where we stand and the first outcomes of the T2S project and the business perspectives that may present themselves to the post-trade stakeholders by 2015.

Target 2 Securities: where are we? Where are we going?

T2S today

Why T2S?

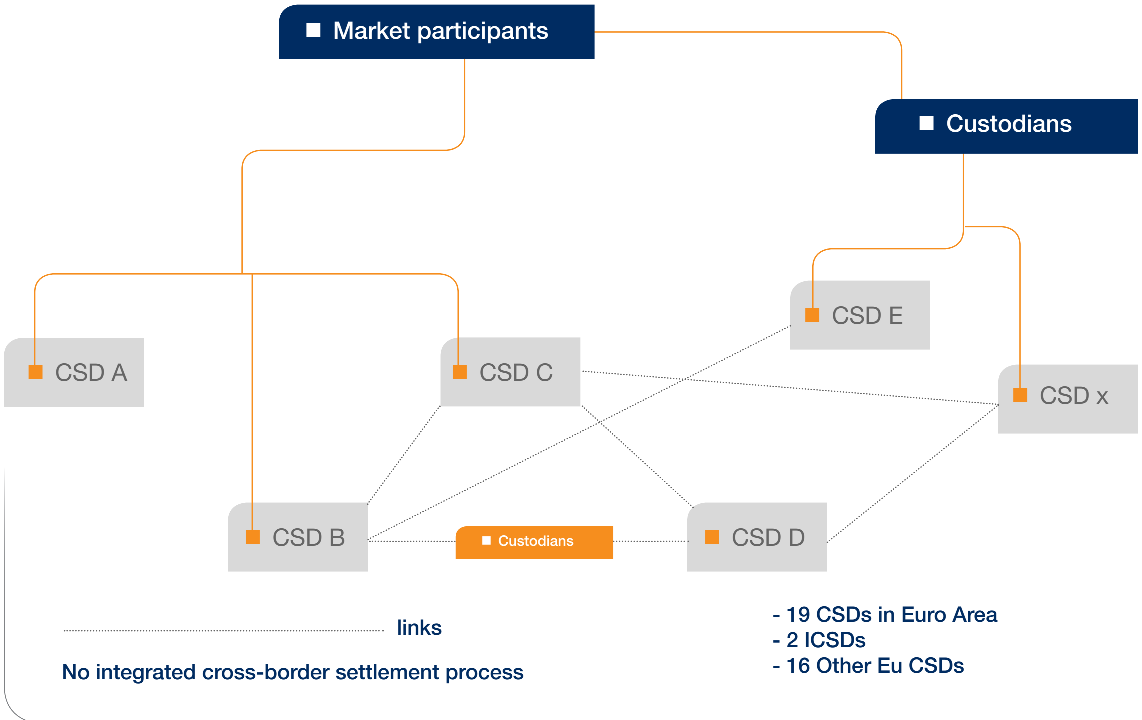
While often described as the plumbing of the securities market, the post-trade infrastructures are nevertheless paramount activities provided by Central Securities Depositaries (CSD) and/or Central Counterparties (CCP) to ensure the efficiency, risk mitigation and the safety of the clearing and settlement of securities transactions. Yet until the 2006 European Central Bank (ECB) decision, it was fragmented along the lines of Member State borders.

As a reminder, after the trade, which is the agreement on the quantity against a price, the clearing consists of the matching of the buyer and seller obligations resulting from a trade organised either on a regulated or OTC market. Today, in some instances, and even more so with EMIR, the clearing is performed by a CCP that acts as a buyer to every seller and a seller to every buyer in a transaction, stepping in to complete a trade if one party defaults; a process called novation. Then, once the terms of the trade have been agreed and the clearing layer has confirmed that the operation can be done, the settlement operation will ensure the irrevocable delivery of the financial instrument in a transaction against its payment (usually cash).

The process is highly efficient at Member State level, but highly inefficient across borders. However, it is now nearly ten years since the weaknesses of the EU market have been identified. These weaknesses are basically that the market is too fragmented and non-integrated and lacking operational, legal and fiscal harmonisation compared to the big unified market that is the US.

Because of this dire state of play, the ECB decided to initiate the T2S project, as it had already done for Target 2 Cash (T2C) This decision gained momentum following the financial crisis, which fired up the debate on the importance of relying on strong and resilient post-trade infrastructures, notably to support OTC markets and, in particular, to reduce counterparty risks for credit derivatives instruments.

Today, the T2S project represents the biggest and most challenging project for the European settlement infrastructure and all actors have to get in line with the ECB requirements to make it a success.



Source: ECB, ABBL

T2S in a nutshell

T2S is a settlement platform, which performs the delivery versus payment in central bank money for domestic and cross-border securities transactions, provided they are held in book entry form and have an ISIN code.

T2S has a multicurrency dimension, enabling the interested non-Eurozone national central banks to connect to T2S with their currencies.

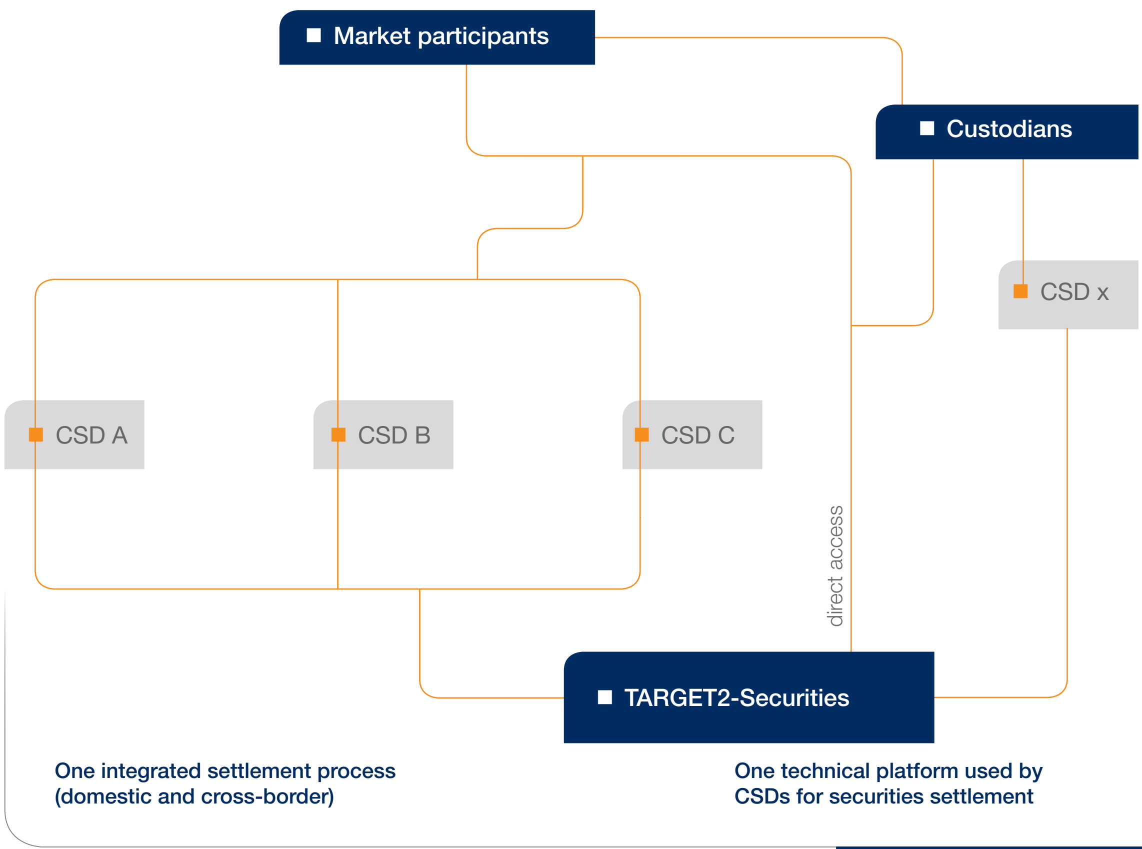
The Eurosystem would fully own and operate the T2S platform to service the CSDs on a cost-recovery basis. CSDs which have signed the framework agreement with T2S commit to outsource the settlement of their domestic and cross-border transactions to the T2S facility.

The CSDs will be the only parties involved in a contractual relation with the Eurosystem and will remain responsible for the legal and business relations with their clients (issuers and investors).

T2S focuses on the settlement of the transactions. CSDs will continue to maintain their customers' accounts and to perform all activities connected to the rest of the post-trading value chain, i.e. custody, asset servicing, corporate actions processing and tax and regulatory reporting.

However, as securities holdings are registerd on a "T2S account" and cash balances are held in a "T2 account", any movement of securities will be passed against the securities account in T2S. This also applies to corporate actions against securities for which the proceeds are settled via the CSD on T2S on the basis of a set of static data available both on the CSD's systems as well as in the Eurosystem's T2S platform.

T2S will provide other functionalities to the market participants like the direct connectivity, i.e. the possibility for banks with large settlement volumes to have a direct technical network connection to the platform (under the rules and procedures defined by their CSD), auto collateralisation mechanisms and a wide range of liquidity management services.



Source: ECB, ABBL

T2S objectives

T2S has the following 4 key objectives:

Settlement cost reduction

- Reduce the cost of cross-border settlement. The objective is to be below the current lowest domestic settlement fee in total transparency. Cost of capital will decrease for issuers, as European securities markets will become more liquid and more attractive. It is assumed that reduction in the post-trade fees may be transferred up to the issuers
- Increased competition among post-trading stakeholders should lead to better pricing as investors may connect from their preferred CSD and still benefit from the T2S Framework

Harmonisation /Standardisation

- Facilitate harmonisation of the Europe post-trading environment
- Reduce the complexity and associated operational costs and risks by harmonising market rules and practices for settlement and settlement related corporate events

Efficient Settlement

- Efficient securities transfers among CSDs to lower competition barriers in trading and securities finance
- Delivery versus payment in central bank money on a real-time gross basis to eliminate the potential counterparty risk

Liquidity / collateral management

- Increased efficiency of collateral management thanks to the intraday transfer of collateral in securities among CSDs. Highly efficient auto-collateralisation and automated substitution functionalities to minimise the need for cash balances and to facilitate a high degree of settlement efficiency
- Optimisation of liquidity via a wide range of liquidity management services: reserve liquidity for specific uses, monitor credit limits provided to clients, have cash flow forecasts, implement predefined or standard liquidity transfers, perform automatic end-of-day sweeps, etc.

Country / Actors Participation

30 June 2012 was the deadline for European CSDs to indicate whether or not they would sign the T2S Framework Agreement.

The Framework Agreement is the contract that governs the legal relationship between the Eurosystem and each CSD participating in T2S, the future IT platform of the Eurosystem for the settlement of securities transactions in central bank money.

Today, the following entities have signed the Agreement and committed to participate in the T2S project:

Autria	EUR	Oesterreichische Kontrollbank Aktiengesellschaft
Belgium	EUR	National Bank of Belgium Securities Settlement System (NBB-SSS)
		Euroclear Belgium
Cyprus	EUR	Cyprus Stock Exchange
Denmark	DKK	VP Securities A/S
Estonia	EUR	AS Eesti Väärtpaberikeskus
Finlande	EUR	Euroclear Finland Oy
France	EUR	Euroclear France
Germany	EUR	Clearstream Banking AG
Greece	EUR	Bank of Greece Securities Settlement System (BOGS)
Hungary	HUF	Központi Elszámolóház és Értéktár Zrt. - KELER
Italia	EUR	Monte Titoli S.p.A.
Lithuania	LTL	Lietuvos centrinis vertybini_popieri_depozitoriumas
Luxembourg	EUR	VP LUX S.à r.l.
		LUXCSD SA
Malta	EUR	Malta Stock Exchange
Portugal	EUR	Interbolsa Interbolsa - Sociedade Gestora de Sistemas de Liquidação e de Sistemas Centralizados de Valores Mobiliários, S.A.
Romania	RON	Depozitarul Central S.A.
Slovakia	EUR	Centrálny depozitár cenn_ch papierov SR, a.s.
Slovenia	EUR	KDD - Centralna Klirin_ko depotna dru_ba, d.d.
Spain	EUR	Iberclear - BME Group
Switzerland	-	SIX SIS Ltd.
The Nederlands	EUR	Euroclear Nederland

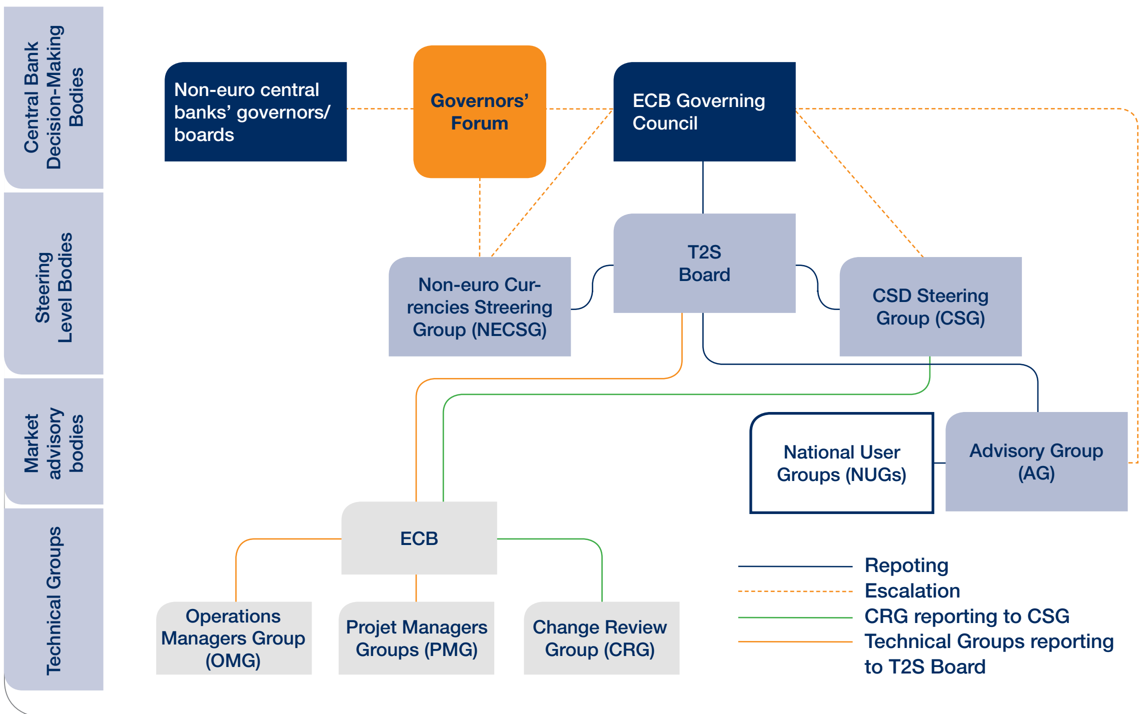
23 CSDs will participate in T2S out of a total of 30 EU CSDs, including almost all CSDs based in the euro area as well as six CSDs based outside the euro area.

The number of participating CSDs should bring the critical mass to kick off the operations and flow the platform with transactions volumes to sustain the proposed pricing. Nevertheless, some important actors have decided at this stage not to outsource their activities to T2S.

Additional participants (central banks as well as CSDs) may still join T2S at a later stage, at their convenience. However, they will no longer benefit from the waiver of entry fee as well as a position within the T2S governance.

T2S Governance Structure

As from the signature of the Framework Agreement, a new T2S governance structure has been put in place:



Source: ECB

- The Bank of England and the GBP currency will not join the platform; this also implies the absence of Euroclear UK and Ireland as participating CSDs
- Swedish CSDs (Euroclear Sweden) as well as the Greek CSD Helex have also not signed the framework agreement
- The Swiss franc and the Norwegian krone will not be part of the T2S platform either

CSDs that have not signed the Framework Agreement and non-euro area central banks that have not signed the Currency Participation Agreement (CPA) will no longer participate in the formal T2S governance in the deployment and live phases.

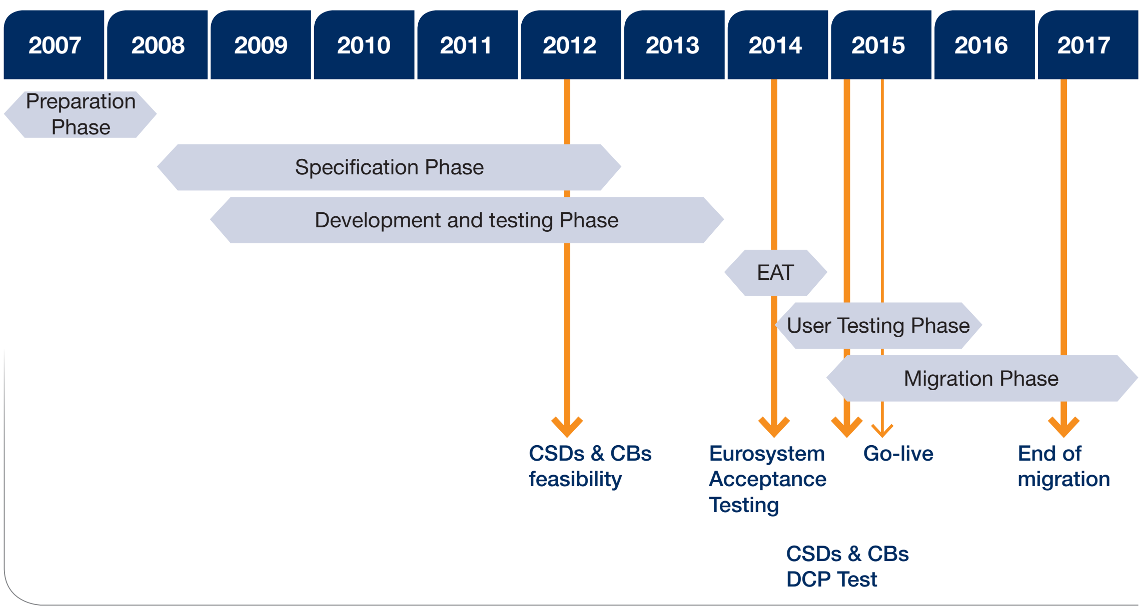
One can consider that there are 3 central organs in the governance structure of the T2S platform below the final decision holder at the Governing Council level.

- The *T2S Board* is a streamlined management body in charge of developing proposals to the Governing Council on key T2S strategic issues. The Board is responsible for the day-to-day management of the project as well as for the relations with market stakeholders and the 4Central Banks (the Banque de France, Banca d'Italia, Bundesbank and the Banco d'Espana)
- The *CSD Steering Group (CSG)* is responsible for articulating and coordinating the views of Participating CSDs within the T2S Governance. The CSG can give its advice and make resolutions on any issue related to T2S and in particular on issues related to the FA and its schedules, issues of major interest for T2S (pricing, risk, etc.) and the prioritisation of change requests. A few bank representatives have an observer status, including Luxembourg which has one representative
- The *T2S Advisory Group (AG)* provides advice to the Eurosystem on T2S-related issues, to ensure that T2S is developed and implemented according to market needs. The AG is supported by four sub-groups: the Harmonisation Steering Group (HSG), the Sub-group on Message Standardisation, the Sub-group on corporate actions and the Task Force on adaptation to cross-CSD settlement in T2S
- The *T2S steering* level is supported by technical groups, among which one per participating countries
- The *National User Groups (NUGs)* form the link between the T2S Advisory Group and the various national markets. The NUGs were created for two reasons: to help the ECB gather expertise on the functioning of national markets and, in the development phase, to steer the market toward the new structure

T2S tomorrow

Next steps / Timeline

The following key milestones have been achieved and are planned by the T2S project:



So far, the different User Specifications are frozen and the User Detailed Functional Specifications and Business process documents have been published. This step was necessary, as otherwise T2S would have been a moving on target with ever increasing expectations, while its live date would probably have been delayed exponentially as well.

In 2012, every participating CSD and Central Bank is required to undertake a detailed assessment to ensure that it is feasible to adapt their IT systems and processes to T2S. As part of their feasibility assessment, CSDs and NCBs will identify their approach to the adaptation of their IT systems as well as impacts on processes and potential changes to their service offering. For this step, the role of the NUGs may be central in the success of each MS's access to T2S.

This is an important milestone for the market players, as this will provide key information on the future services provided by the CSDs and how they will re-shape their business in line with the new T2S environment. Based on this information, participating CSDs and other global and local custodians will be able to either start or confirm the definition of their future business models.

With technical and legal material definitively agreed on, the year 2013 should allow T2S and the other stakeholders (CSD, custodian) to start the different projects and system adaptations in line with their defined strategic orientations. As from 2014, the Eurosystem will start its testing phase and user testing will start as from mid-2014.

A new go-live date has been scheduled for June 2015. Unless unexpected changes occur, Monte Titoli, the national Greek CSD and the Romanian central depositary will form the first 3 waves of CSDs to migrate. Details of the following waves have not yet been specified. Migration is expected to end in 2017 for all markets and all eligible instruments.

Pricing structure

Since the beginning of the project, the question of the T2S pricing has been addressed and scrutinized frequently by the market participants. Indeed, one of the key objectives of the T2S project is to reduce the securities settlement fees in Europe, in particular for cross-border transactions. This is expected immediately thanks to the economies of scale resulting from consolidating settlement volumes from many CSDs platforms onto a single T2S platform, and increasingly through indirect economies due to the need to harmonise systems and regulations to comply with or pass through the gate of T2S. The following principles underpin the pricing structure of T2S:

- Full cost recovery: T2S is being developed for the benefit of all participants and of Europe in general and there will be no extra profit margin. The Eurosystem is committed to recovering the full development and running costs of T2S through the fees charged to CSDs
- High level of transparency and simplicity, also in line with the Code of Conduct for Clearing and Settlement
- Equal prices for all CSDs and no discounts for participants taking larger volumes in T2S
- Stability of pricing policy and fee structure

Based on the current estimate of the T2S costs and the expected settlement volumes, in November 2010 the Governing Council of the ECB decided that the delivery-versus-payment fee in T2S will be set at 15 cent per instruction (one leg). The price is applicable based on the following conditions:

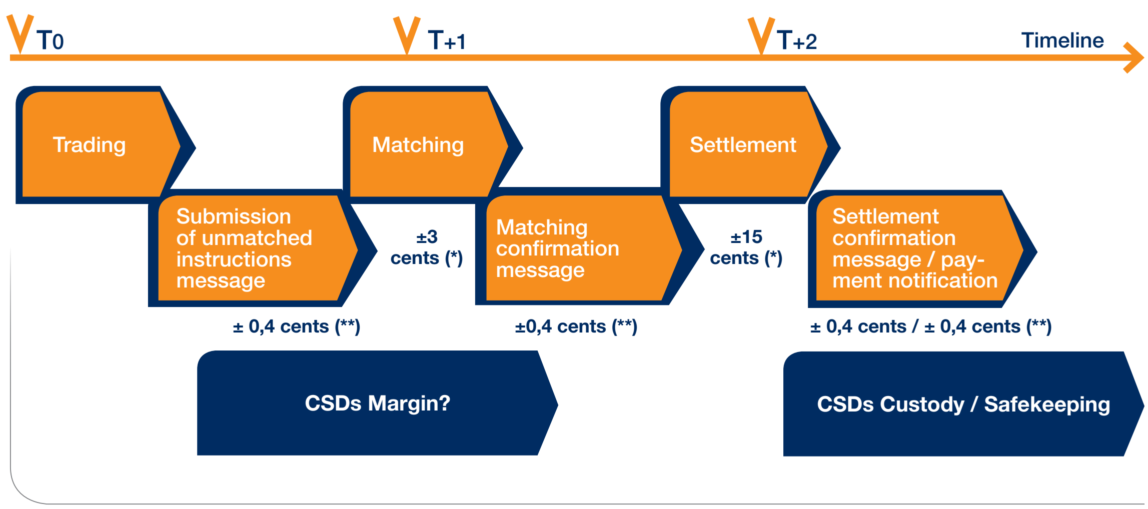
- Non-euro currencies add at least 20% to the euro settlement volume
- The securities settlement volume in the EU is not more than 10% lower than the volumes projected by the T2S Programme Office, which in turn are based on market advice
- Tax authorities confirm that the Eurosystem will not be charged VAT for T2S services

There are many unknowns regarding future developments, especially in terms of settlement volumes. This phenomenon may stem from two sources: one is that the assumption made for the survey, and notably the growth in transaction envisaged, has been until today contradicted by the financial crisis and its consequences (less trading); the second concern may come from the EMIR requirement to clear "the maximum number of transactions" with forced clearing in EMIR and its reinforcement in MIFID II. Volumes may fall drastically for the settlement layer (experience has shown that of the introduction of clearing in Nordic markets led to a fall of 70% of volume).

In any case, T2S remains confident that positive effects are significantly stronger than the downside risks and emphasises its objective to further lower settlement fees beyond 2018. Furthermore, the major sources of improvements may come from the harmonisation required by T2S rather than from pure cost reductions (similar communication protocol, termination of various national requirements, etc.). An additional element may help in controlling fees: since the ECB has committed itself to a price that was widely announced, clients of CSDs are probably in a better position to negotiate fees.

Nevertheless, in order to provide assurance to market participants as to T2S prices after 2018, the Governing Council has also made a commitment not to increase the T2S fees by more than 10% per year between 2019 and the end of the cost recovery period, i.e. September 2022.

This pricing decision remains consistent with the principle of full cost recovery, while also coinciding with the objective that T2S has always pursued, namely to achieve a settlement fee that is lower than any current domestic fee. The post-trade value chain in terms of T2S fees can be represented as follows:



(*) per instruction - Two instructions per transaction will be charged
(**) per business item in a report

There are, however, several open questions regarding the pricing. One question is somehow preliminary to the T2S live phase: the cost of adaptation to the new platform. The cost is high for the ECB, it may be high for CSDs and probably too high for some. Then, even on a cost recovery basis, CSDs will have to adapt their fee schedule to take into account the running costs of the new structure, after which they may define additional services and their pricing (settlement fee lowered but increased fees for safe keeping).

The T2S project strongly encourages the CSDs to reshape their business and leverage from the new environment to develop new services, generate new revenues and, to some extent, compensate the T2S costs and loss of revenue impacts, if they still want to serve their market. Practically speaking, running a CSD in countries where the number of instruments is limited or trading not active may lead to the need to forge alliances, or close business, which would be detrimental to the respective market.

Regulatory authorities will thus have to walk a fine line between the regulation of CSDs and the impacts of T2S, unless they actively want to change the paradigm under which markets and Member State are working today.

Who is impacted by T2S?

Issuers & corporate
- No direct impact
- T2S working group on beneficial shareholder transparency
- Choice of issuing CSD (CSD regulation)

Final Investor
- Ultimate payer of these new costs ?
- Can we expect a global cheaper cost for cross border business ?

Trade, Brokers, Asset Managers, Invest. Bank
- No obvious impacts
- May need to re-assess the consolidation opportunity via fewer actors to leverage from collateral, liquidity efficiencies

Trading venues
- Impact on vertical model (trade and post trade integrated in one silo) structures
- Unbundling of services
- Less and less OTC traded volumes in favor of trade and post trade on 'regulated' market infrastructure and STP transactions

CSDs
- Outsource settlement to T2S
- Need to re-shape existing business into new services
- Framework agreement with T2S

Custodian
- Local custodians are highly impacted mainly on settlement aspects. They will focus on specific local custody aspect
- Global custodians review local custodian network. Act as a direct T2S participant

CCP
- Leverage from CSD environment and participants
- Concentration of collateral management
- T+2 settlement

Central Banks
- 4 main EU Central Banks manage the system
- Enhanced usage of central bank funds - more involved in settlement cycle

ICSDs
- EU zone operations of ICSDs are replaced by T2S (central bank money)
- Propose alternative for settlement in commercial bank money

The T2S project will impact directly or indirectly most of the trade and post-trade stakeholders of the value chain:

- The CSDs are the main actors impacted, with a shift of their settlement activities to the new platform. They will maintain their participants' accounts and perform activities like specific local settlement transactions, asset servicing, corporate actions processing and tax and regulatory reporting. Most of them will have to fundamentally review their business model. We could expect, after the T2S go-live date, a new consolidation wave among EU CSDs. National CSDs, depending on their shareholder structure, will be faced with a choice between concentrating on the pure CSD activities between the rock of CSD-Regulation and the hard place of T2S, and thus a narrower scope, lower profit and probably in the end be the gate to a larger player in a given market. The other alternative would be to act more and more as a European or global regional hub, providing to clients direct access to other European (or non-European) CSDs, together with custody and securities financing services. We may anticipate that the winning CSDs of tomorrow will have to act more and more as European or International CSDs and attract more clients by providing similar services than the global custodians, but then having to abide by the legal consequences.
- The custodians are also directly impacted by the new T2S platform.
  - o In theory, under T2S, one may bypass the local custodian to settle securities on a local market. We may therefore expect a review of the local custodian network, i.e. from one local custodian per country to a more consolidated network organised for the EU region and/or products. Nevertheless, as long as the legal, tax and custody framework will remain fragmented within Europe, the local expertise provided by custodians on these aspects remains crucial for the CSDs and other global custodians.
  - o Global custodians are also revisiting their models and tend to move toward more consolidation and set up a global hub centre providing a European and international foothold for their clients. The global custodians active in Europe consider setting up a direct connection with T2S to settle their transactions. The overlap between the global custodian services and 're-shaped' CSDs services will be more and more obvious in the future and may involve new relationships between CSDs and global custodians. The role of the future CSD regulation will be particularly relevant in defining the roles and responsibilities in this domain. It is likely that one of their objectives will be to offer global collateral management tools to their clients on top of or because of the combination of CSDs/T2S access and access to ECB/NCB moneys.
- Trading venues are not directly impacted by T2S. Nevertheless, they need to figure out how the CSDs to which they are connected will be positioned in the new T2S landscape. It will be interesting to see, in practice, if the non-participation of Euroclear U.K and the GBP in T2S will affect the London market versus Frankfurt or Paris. As described above, the London Stock Exchange Group may rely on its own CSD 'Monte Titoli' to leverage from the T2S environment. The standardisation and harmonisation on the post-trade side could also benefit the trading side by facilitating increased high frequency and automated trading.
- National Central Banks. With the future T2S settlements made exclusively in central bank money, the operations of the European central banks will be impacted by the new T2S. The NCBs will play an enhanced key role in the securities business value chain. Like the CSDs, the NCBs will be directly connected to T2S to operate the cash (central bank money) accounts. The efficiency of liquidity and collateral management appears to be one of the major challenges in the financial industry for the coming years. As for the securities side, we may see parallel trends in the consolidation of cash and collateral on a few hubs or centres with a concentration of the cash and collateral aspects on a few European central banks.

- CCPs. At first glance, CCPs are not directly impacted by T2S, but much more by the future EMIR regulation. But once again, when considering the global picture, there are several indirect impacts. It is expected that EMIR / Dodd Franck will require much more collateral from market participants in the future. This collateral currently lies with the main CSDs, ICSDs and major custodians. In a T2S world, the challenge will be for these actors to attract more and more securities and therefore collateral under their organisation. This should enable their clients to meet the new regulatory requirements with consolidated and efficient collateral management tools. On the other hand, CCPs may impact the settlement function, since they may, on a net basis, reduce the number of transactions going through CSDs and T2S.
- Traders, investment banks, asset managers. For these actors T2S may be experienced just like Spring separating Winter and Summer: a gradual change of climate but leading to a completely different environment. Much will depend on what and how back office providers will pass on the bottom line impact of the new T2S environment to the front and middle office actors. Moreover, we can legitimately question to which extent (in the medium term), the savings in settlement fees, expected as a result of T2S, will overcome the expected additional costs inherent to the new regulatory and reporting requirements impacting the post-trade value chain. On top of these pricing considerations, we may expect, as explained above, that for these actors a primary impact will reside in defining the best models to efficiently operate the asset portfolio, liquidity and collateral requirements.
- Issuers and corporates are not directly impacted by T2S. A T2S task force group focuses on the possibility of harmonised market practices in disclosing shareholder information in the different T2S relevant jurisdictions. They may be impacted by the CSD-R and may experience the side effects of T2S if some CSDs were to scale back their operations.
- The end investor. They would probably be in the same position as investment banks or asset managers, subject to a gradual change to a new environment. The main objective of T2S is to reduce the cross-border settlement costs and should ultimately benefit the end investors. Will this really be the case?

Target 2 Securities: the market's views and questions

Since its "technical" launch four years ago, the T2S project and the post-trade infrastructure in general have generated intense debates, interrogations and questions within the financial services industry. There is still some room for discussion until 2015 and the debates are far from over.

Bearing in mind that the trade and post-trade value chain is the key focus of this document and based on the feedback by industry stakeholders, in this section we will highlight first results of discussions, outcomes and orientations related to the current and expected transformation of the clearing and settlement infrastructure.

Will T2S really provide cost reductions for the post trade services?

In 2006, the ECB decided to launch the T2S project following several studies that concluded that cross-border transactions in Europe were more expensive than domestic ones.

T2S aims to provide cheaper cross-border settlement fees and the resulting economies of scale should also enable the platform to be competitive in comparison to current domestic fees. It is hoped that such competitiveness will strongly impact current cross-border fees. T2S is also expected to be a strong catalyst for post-trade harmonisation across Europe. Once economies of scale have materialised, and providing that T2S remains efficient, it is likely that most traded European securities will be settled in T2S in the future. Markets will then have the opportunity to improve efficiency, integration and competition therefore benefitting from back office streamlining.

Nevertheless, the benefits of T2S should be further qualified. T2S will generate, in both the short and medium term, major investment and transformation costs, such as T+2 harmonisation and ISO20022 communication standards. It is likely that these costs will not lead to immediate cost and pricing reductions once T2S is introduced but that the investment will be recouped at a later stage. It is also important to remember that T2S will only manage a part of the post-trading services, that of settlement. In addition to the new T2S framework, the CSDs / global custodians will have to develop and maintain infrastructures to support:

- Settlement of local / specific securities
- Settlement of non-participating currencies e.g GBP and CHF
- Access to other regions e.g. Asia, U.S, etc.
- Custody, corporate actions, legal and local tax services

As is the case for settlements, the asset servicing and processing of corporate actions is highly fragmented within Europe with strong local market specifics and differences. The actors of the post-trade value chain will have to maintain and rely on local actors and experts to support them in the management of such local specificities which implies excess costs compared to the domestic context.

Hence T2S undoubtedly represents a key opportunity to streamline the management of corporate actions across Europe and several working groups have been established to work in this area.

The harmonisation of asset services i.e. those services aimed at managing all obligations and rights associated with securities in safekeeping, is a must to achieve the expected substantial benefits in the post-trade value chain. However the industry will need significant harmonisation within the legal framework, tax regimes and market practices before long-term benefits can materialise. The ECB and regulators still have a significant amount of work ahead of them to meet this objective in the coming years.

It is widely recognised that asset servicing is a complex area with important differences in market practices, both across financial instruments and market players. Hence we can legitimately assume that the full harmonisation process of asset servicing will take many years and will probably not occur before 2020. Another key consideration to achieve cost savings throughout the post-trade value chain will depend on the industry's ability to maintain a competitive landscape and its capacity to develop new business models.

Many questions surrounding T2S still remain open and are subject to intense debate including: How will the CSDs pass on the costs of implementing T2S to their customers? Will the CSDs, to compensate for the loss of settlement business, charge more for other activities such as asset servicing? Only time will provide the answers.

In the meantime, market participants will have to adapt to this transition period and define the most appropriate strategic business structure for their businesses. On the one hand, they can leverage from a consolidated T2S platform at European level, whilst, on the other hand, they will have to maintain local expertise to support the asset servicing aspects.

The challenges will reside both for the service providers proposing new innovative models and for the post-trade services' clients, in designing the right business models for their future operations. What is nevertheless certain is that scale will be instrumental to being successful in this redefined business environment.

Will collateral management be the holy grail of the european financial industry? is the end of CCBM2 an issue or an opportunity for the industry?

In our 2008 white paper, we highlighted that one of the key impacts of T2S on the value chain is related to cash and liquidity management. Together with T2S, the CCBM2 project aims to facilitate the optimisation and mobilisation of collateral of Eurosystem credit operations.

Today more than ever, financial institutions need to monitor, on a real time basis, their liquidity and collateral position to meet their capital needs and requirements throughout the post-trade value chain. In the near future, these requirements will be reinforced with the implementation of the CRD IV and the EMIR regulations which will enhance the usage of CCPs to mitigate the counterparty risks related to bilateral transactions and increase the need for additional collateral.

Whilst the ECB decided to discontinue the CCBM2 project in the summer of 2012, T2S remains an important solution for banks to optimise their collateral management. Indeed, collateral is usually held within (I)CSDs and/or global custodians. The new T2S platform will eliminate the need to hold multiple buffers of collateral across various CSDs and provide significant savings for market participants at a time when demand for collateral is ever increasing.

The end or indefinite postponement of CCBM2 creates a huge opportunity for global or regional entities to develop a similar tool to manage and mobilise collateral. Being a CSD or having a CSD licence may be a decisive tool in this respect.

The discontinuation of the CCBM2 project and the potential for securities financing services represents new and increased business opportunities for the CSDs and global custodians. In the context of T2S, these actors, or at least those most advanced in terms of innovative business models, have the opportunity to propose to their clients' business solutions consolidating assets and pooling collateral across various places into one central hub. The ability to consolidate collateral will enable sell-side firms to reduce operational risks and costs resulting from asset and liquidity fragmentation.

EU regulations and post-trade infrastructures: are they all moving in the same direction?

As mentioned previously, T2S is being deployed in parallel to other major regulatory changes affecting trade and post-trade valuations.

A pre-requisite for T2S implementation is a harmonised settlement cycle in Europe. The CSD regulation proposes that trades should be settled within two days of a trade being executed (T+2) and introduces more stringent rules and financial penalties for trades which fail to settle on time. Today, only Germany provides a T+2 settlement cycle and therefore the CSD regulation will represent an important milestone towards harmonised settlement cycles for T2S and the European market in general.

However, the CSD regulation includes other topics that may lead to more intense debate within the financial industry. One issue with the current proposal made by the European Commission and the European Parliament relates to the level of service that the CSDs will be authorised to provide.

Today, the largest CSDs in Europe offer banking services to support the settlement and custody process. These services are primarily used to provide short-term, mostly intraday, liquidity to participants and to facilitate the settlement process

The new regulation requires at least a legal separation of banking services from other CSD services. From the point of view of the CSDs with a banking licence, this will generate significant costs due to the restructuring of their existing business models. Moreover, a legal separation would complicate operational and risk management processes and is likely to introduce significant inefficiencies in relation to the management of intraday credit and collateral for market participants.

As mentioned above, the added value of T2S in the consolidation of collateral and business opportunities related to the securities financing business, especially those which require banking services, and will focus the attention of both custodians and CSDs on generating new business solutions. This, in turn, will bring about more competition, better integration and potentially cost savings for market participants in line with the main objectives of T2S.

One aspect of T2S and the CSD regulation will be the structuring of the business model for the CSDs and indirectly the custodians, which may present some dilemma. Indeed, some CSDs will face a real challenge, because outsourcing settlement will mean losing a key functionality of their current business and revenues. Forcing those CSDs who are "climbing up the value chain" to deliver new services or to compete with other CSDs may lead to increased risk taking – a possible "unintended consequence" of T2S that would be forbidden under the CSD regulation.

Whilst T2S and the CSD regulation intend to and will foster more competition between CSDs, realistically only a few CSDs will be able to take on these new challenges. We may quickly see, in the medium term, a European post-trade world organised around a near T2S monopoly with a limited number of 'European CSDs' directly competing or partnering with global custodians.

What will the custody business look like in a T2S environment?

The future of the European custody business has been a widely debated topic in view of the future T2S environment. Unlike in the United States or within US financial institutions, the custody business is often not so well perceived in Europe compared to the more visible front-end business.

On the one hand, we anticipate that financial institutions will take the opportunity of T2S to review their European network of sub-custodians as they may not necessary wish to use a local custodian to access the local CSD. On the other hand, the remaining local asset servicing requirements and the lack of harmonised market practices will still require the support of the custodian close to the local markets.

One of the biggest challenges for custodians will be coping with the significant burden of cost driven by new infrastructure investment and implementation of the new regulatory framework. We can expect that each global and sub-custodian will carefully analyse which of their potential operations could be consolidated, and where economies of scale can be realised around global or regional hubs. To some extent, some asset servicing services could also be consolidated around regional pools of expertise, but local expertise will still be required to deal with local issues and provide tailored client services.

Most custodians operating in Europe are already reviewing or will certainly review their current business models to develop new services, new operating models and probably new pricing to remain competitive in the changing environment.

Do I already have to worry about a project with an expected go-live date in 2015?

As with any new project or regulation, it takes a little while to understand its importance. Today, the results of our interviews and discussions show that whilst the importance of T2S is now well, or at least better, understood, there are still many questions surrounding its long-term impact.

As we have seen, the new environment is not easy to conceptualise and the future business orientation is not as straightforward as it may seem. A vast number of direct and indirect regulatory and market factors will impact the post-trade value chain. 2015 may seem a long way off but due to the inherent complexity of the environment, it is now time to start getting prepared.

The early bird catches the worm! The main CSDs and global custodians operating in Europe have today started to focus on their future strategic orientation in relation to the 2015 environment. They will help shape the regulatory future and are actively working on their preferred client solutions.

Financial institutions should now be seeking to get to grips with the implications of T2S and the new post-trade value chain for their infrastructures. What are the different future options for my current business? What are the impacts of T2S on my organisation and its operations? What are the costs and savings related to these options? Which activities can be consolidated and where do I need to maintain local expertise? Businesses must start answering these questions now to ensure they remain competitive having restructured their business models accordingly.

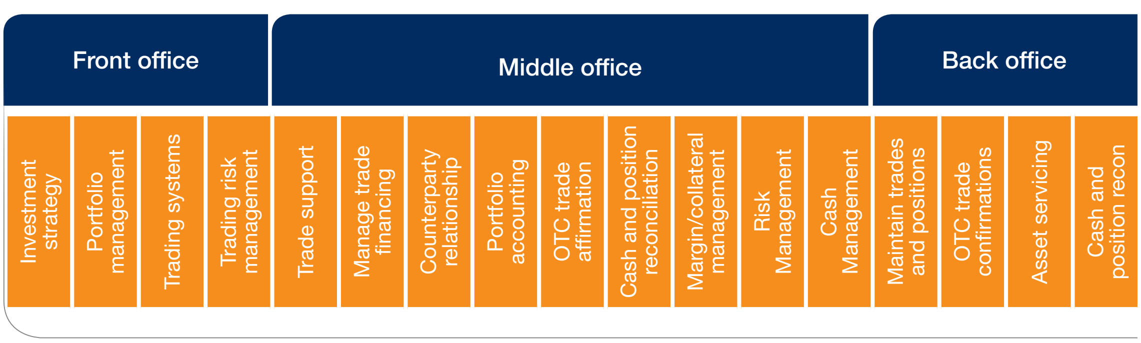
> All the building blocks are available to shape one's vision of the future. The fact that technical details are not yet available should not be an excuse to delay decisions. Using the analogy of building the house: once you have the land, the architectural plans and authorisation to build, go ahead!

In the next chapter, we will highlight the different impacts and business models being proposed to financial institutions in the context of the future post-trading services and T2S environment.

New post-trade models: impacts and future options?

Main impacts along the financial institutions value chain

In this section, we review the main impacts of the future market infrastructure and regulatory framework on the value chain (front, middle and back office environment) of financial institution.



Issuing of securities

To take a high level view, securities are currently issued either via an (I)CSD, or via a custodian bank. This structure is possible because of the divergent nature of products traded (OTC or not) and of the interests of the issuing entity (cost).

The current split between these actors could change in the future, for two reasons: first, instruments in T2S are likely to be considered as eligible for collateral for CCPs (or at least have preferential treatment) and second, cost of operations may be lower.

One major impact for UCITS is that although they are now not issued via a CSD, it may be the case in the future that this becomes one of the chosen routes. This may, by the way, ease their trading on exchanges or other platforms.

At this stage, it appears likely that the combined impacts of the EMIR, MIFID/MIFIR in their reporting aspects and collateral requirements will create incentives to attribute ISIN codes to instruments that are for the moment unheard of, which, as a consequence, will make them CSD eligible, and thus reinforce the case for T2S.

Aggregation of orders

Most observers agree that in the next few years there will be an increased importance of collateral and liquidity management. With this in mind, the centralisation of dealing rooms in a few centres is already well on its way, but it would be facilitated even further with T2S and the MiFIR, as it will introduce a single point of contact for financial institutions with an (I)CSD instead of more or less one sub-custodian and cash correspondent per Member State.

Logic dictates that concentration and centralisation at group level of trading activities makes even more sense if it is accompanied by a concentration of middle and back offices. This leads to more harmonisation and standardisation.

Distribution of financial instruments

One consequence, if T2S delivers all its promises in an environment where EMIR, MIFID and MIFIR are in place, will probably be that distribution or trading in otherwise different classes of instruments will converge, both in practical/operational terms and cost-wise.

Collateral Requirement & Treasury Management

Thanks to improved collateral management and increased concentration in back office operations, treasurers will be able to mobilise, more easily than today, the consolidated liquidity, securities positions and cash funds available. One should not forget that collateral under T2S will be on flow and not on stock, which may impact downwards the level of required collateral but, at the same time, it will call for the use of more sophisticated tools to manage it.

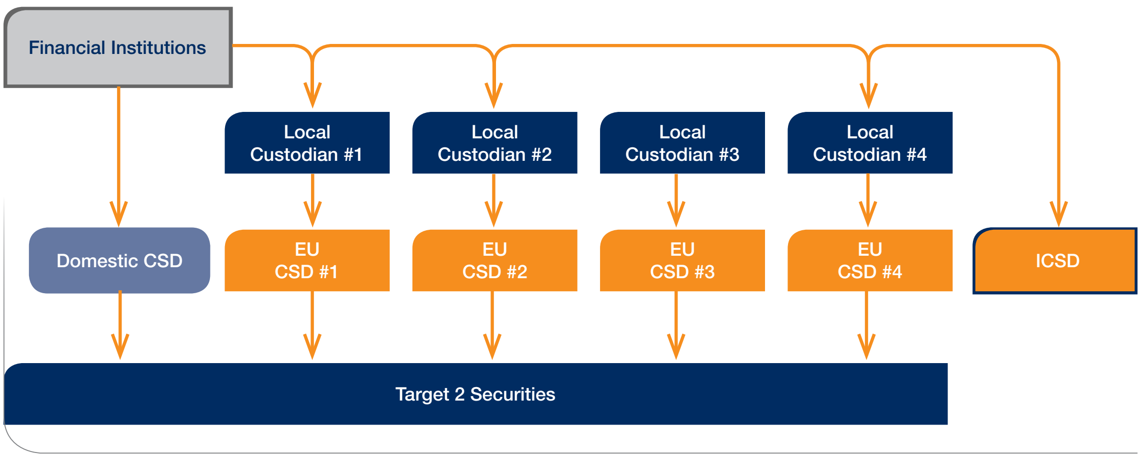
Back Office Concentration

The trend for the concentration of back office activities is already taking place today. Some subsidiaries or branches of large European banking groups have already reorganised and concentrated their back office functions in one or two centres within the EU. This will further develop, as a probable consequence of the implementation of a banking union. T2S will enable this move.

THE 2015 BUSINESS MODELS

In this section, we review the different options a financial institution may consider in the context of the future European market infrastructure (T2S).

1. The local custodian model



Business Scenario

The financial institution (FI) accesses its local market with a direct connection to its local CSD. Access to the other local European CSDs is done via a network of local custodians established in the different countries the FI wants to do business in. These local custodians provide both the settlement and asset services. An additional link is maintained to access an ICSD and cover (if needed) all non T2S currencies.

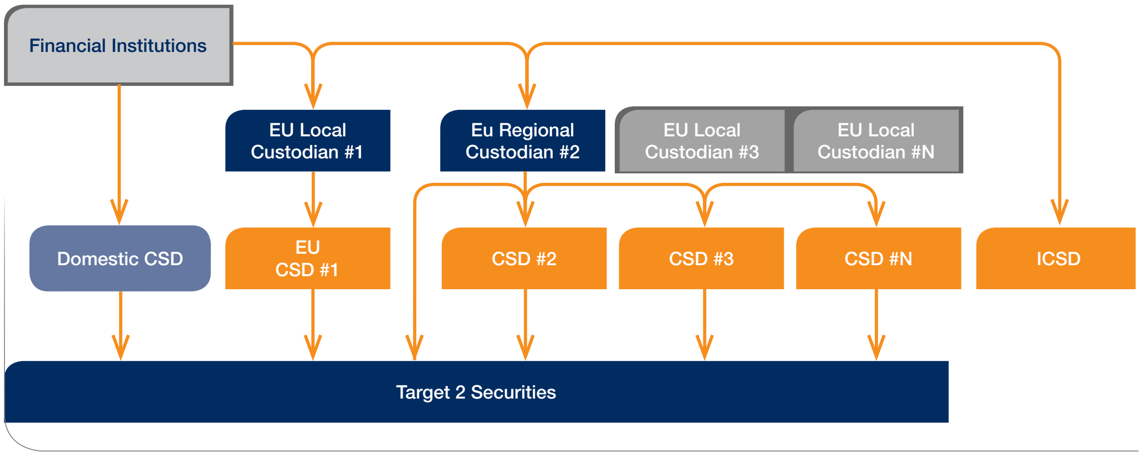
The Pros

- Benefits from no major investment requirement in the transformation of the FI's organisation and system .
- Minimises T2S impacts on the established structures and relationship
- Benefits from reduced cross-border settlement cost

The Cons

- Maintains the same level of cost related to the custodian network
- Does not allow the FI to leverage direct connectivity and does not benefit from enhanced liquidity / collateral management efficiency
- Has no (or limited) economies of scale

2. Regional custodian model



Business Scenario

This scenario is based on the same principles as the first one, but the FI takes T2S as an opportunity to revisit and consolidate its European custody network via one or two key 'regional' custodians. These custodians provide both the links to the CSDs and/or T2S for the settlement side and asset servicing (asset financing / corporate actions, fiscal and tax aspects).

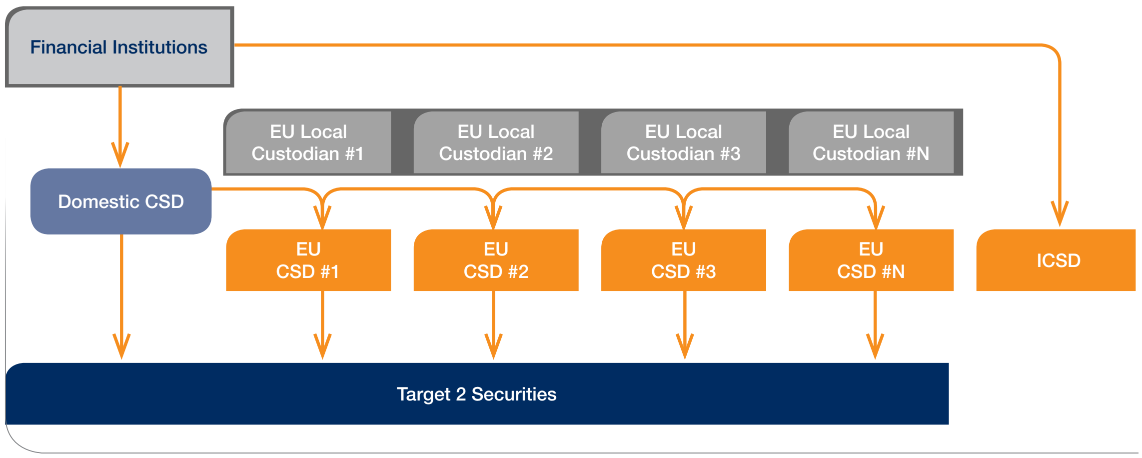
The Pros

- Benefits from no major investment requirement in the transformation of the FI's organisation and system .
- Minimises T2S impacts on the established structures and relationship
- Reduces the fragmentation of the asset portfolio to enhance collateral and cash management

The Cons

- Does not leverage direct connectivity.

3. Connectivity to a single CSD



Business Scenario

The FI uses a single CSD to access the European market and perform settlements. We assume the single CSD can also provide asset servicing support in the various EU markets.

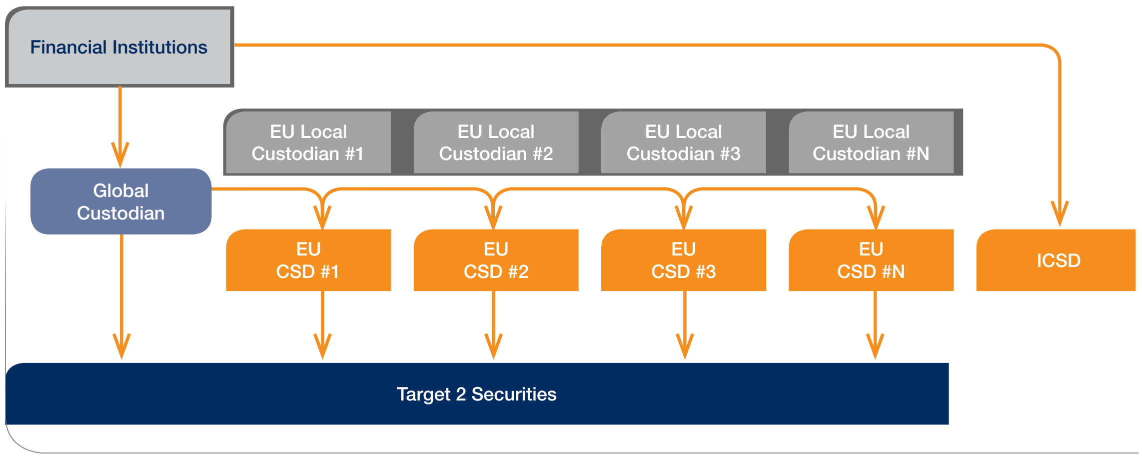
The Pros

- Benefits from reduced cross-border settlement cost
- Reduces local custody fees
- Offers economies of scale by concentrating cash, liquidity and collateral management activities

The Cons

- Depends on CSD's decision to develop new business and implement the appropriate market strategy
- Does not offer close proximity to the settlement engine
- Has no direct access to local custody information (tax / corporate actions)

4. Connectivity to a single global custodian

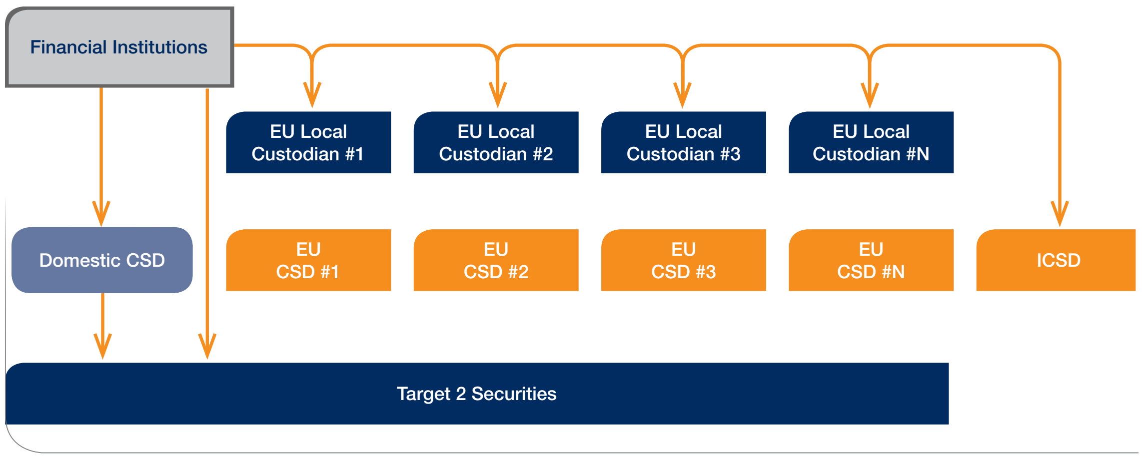


Business Scenario

The FI uses a single global custodian to access the European market and execute settlements. Based on its sub custodian network, the global custodian can also provide asset servicing support in the various EU markets.

The business logic of this scenario is basically the same as the one using one single CSD i.e use of a single point of contact. The global custodian model may benefit from a better integration by using its own sub-custodian network. The global custodian model also covers the provision of additional banking services.

5. Direct Connectivity



Business Scenario

The FI maintains its link with its local CSD (mandatory) and sets up a direct link to T2S to organise its local and EU settlement. The custody services are provided by the FI based on its own (local) custody network.

The Pros

- Provides close proximity to the settlement engine
- Benefits from reduced cross-border settlement cost
- Reduces local custody fees

The Cons

- Requires important investment in infrastructure and large volumes
- Requires to maintain a link with CSD for non-core settlement services

Luxembourg's role in the new post-trade infrastructure

Where do we stand in Luxembourg?

Luxembourg and the post-trade business

People familiar with the clearing and settlement environment know very well that the 'bridge' refers to the dedicated link between Clearstream Banking and Euroclear Bank.

What people do not necessarily know is that the 'bridge' literally refers to the Adolphe bridge in Luxembourg City which links, on the one side, the Banque et Caisse d'Epargne de l'Etat (a Euroclear Depositary) and, on the other side, the Boulevard Royal where the Clearstream Depositaries used to be located. Of course, the securities were not physically crossing the bridge but this image was perfectly reflecting the importance of the Luxembourg financial market place in supporting and linking the two major global ICSDs.

This story also perfectly highlights the fact that Luxembourg has played a key role, since the beginning of the European post-trade infrastructures, to link financial institutions together and provide cross-border services going far beyond its own domestic market. As such, the Adolphe bridge may be considered as part of the foundation of the T2S concept.

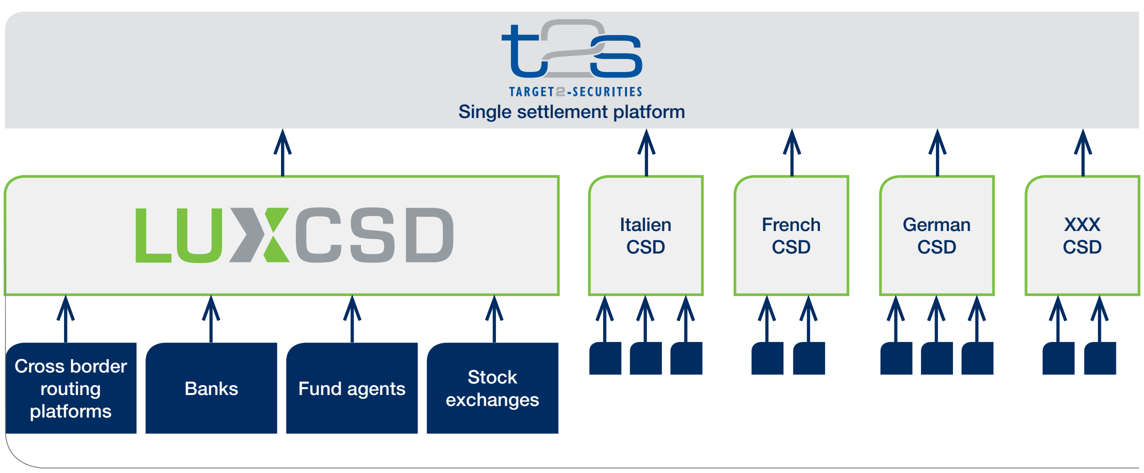
Luxembourg has continually contributed to the development of the new post-trade infrastructure landscape. Three years ago, Luxembourg was one of the few European countries with no local CSD. Today, the country can leverage on two CSDs, LuxCSD and VP Lux, which were among the first CSDs to sign the T2S framework agreement in May 2012.

Luxembourg CSDs and T2S

LuxCSD

LuxCSD provides Luxembourg's financial community with issuing and central bank settlement as well as custody services for a wide range of securities including investment funds. The new central securities depository (CSD) was incorporated in July 2010 and is jointly owned by the Banque Centrale du Luxembourg (BCL) and Clearstream International.

Since 2011, LuxCSD provides the Luxembourg financial market infrastructure with a national access point to T2S. It is playing a central role in preparing the local financial institutions for T2S and, simultaneously, in allowing Luxembourg's marketplace to remain competitive as a financial centre once the new European settlement infrastructure is implemented. LuxCSD will leverage from the current Clearstream Banking Frankfurt infrastructure and, more particularly, its numerous links with the other European CSDs as investor CSDs.



VP LUX

VP Lux (fully owned subsidiary of the Danish CSD, VP SECURITIES) was established in 2008 to ease the access of Danish banks and mortgage banks to Eurosystem operations.

The CSD's first services were with Danish banks and mortgage banks when issuing Euro bonds from Luxembourg. These bonds are eligible as collateral in any central bank in the Euro zone. Since spring 2012, VP Lux also facilitates the settlement of investment funds issued or held on accounts with VP Lux – this will, of course, be the case under T2S for eligible funds. The CSD also aims to cooperate with transfer agents in the fund industry with a view to increase fund distribution.

Luxembourg Central Bank

The Luxembourg Central Bank (BCL) is a key player in the T2S project. Not only does it have a key position in the T2S ECB governance structure, but it is among the actors involved in the future operations of the platform as national central bank and co-owner of one of the two Luxembourg CSDs. From a collateral point of view, the Luxembourg Central Bank plays a key role at European level with one of the highest level of collateral outstanding.

The fund industry and T2S

Is the fund industry, and more particularly the Luxembourg fund centre, concerned by the new T2S platform and the new Luxembourg CSDs?

By definition, all securities currently eligible with a (T2S participating) CSD are in the scope of the T2S and will be outsourced for settlement to the new platform. Plain vanilla, alternative, complex, non-complex, electronic traded, etc. All these type of funds currently eligible with European CSDs are therefore subject to T2S.

One should not underestimate the use of CSDs for funds. Indeed, a number of Luxembourg domiciled funds are already eligible in domestic CSDs, primarily Euroclear France and Clearstream Banking Frankfurt.

The new LuxCSD also proposes order routing services (via Vestima +) and centralised facility for the issuance, settlement and custody of investment funds. The settlement services exchange cash in EUR central bank money and LuxCSD-eligible investment fund shares between distributors and the fund settlement agent within LuxCSD.

Unless the fund promoters involved would decide to withdraw their funds from those CSDs, this means that those funds will be settling "de-facto" in T2S when it is implemented (this does not mean that alternative procedures may not be used, but it would mean two channels).

Contrary to markets like France or Germany where the funds are mainly settled via the CSDs, the Luxembourg market is mainly driven by the so-called transfer agent model. Both models have their pros and cons and we may sum up the different views and a common opinion by stating that the best model would consist in a best of both worlds of the TA and CSD models.

The Luxembourg fund industry in general does not foresee major impacts on the current models following the go-live of T2S. While the benefits of T2S are fully recognised by the industry, the current TA model should continue to efficiently support the fund processing value chain. Indeed, a number of elements enable the Luxembourg fund administration services to differentiate themselves within a T2S environment:

- They cover a geographic scope (Europe, USA, Asia, Latin America, etc.) that is broader than the T2S scope
- The activity of fund agents is multi-currency (sometimes for share classes of the same fund)
- The registrar model also brings a greater level of transparency related to the different positions held in the fund. The transparency may be an issue for omnibus accounts held with (I)CSDs, but the issue may be more complex in case of CSDs holding account with other CSDs

- The model also supports details related to the registered holder at the level of the distributor. This facilitates the calculation of the trailer fees in line with the remuneration of the distributors

- The distribution of funds in Europe is subject to authorisation. Certain funds are also subject to restrictions on transferability. These restrictions are managed by the fund administration, but could be more difficult to handle in an integrated environment like T2S

These differentiators may also represent potential issues for T2S when settling the funds in the future. These points have been addressed by EFAMA and the Luxembourg ALFI T2S/LuxCSD committee to the T2S project team. Nevertheless, most of these specific funds items will not be included in the first version of the T2S User Requirements.

So is T2S a non-event for the Luxembourg fund industry? The answer is definitively no. Indeed,

- While settlement of Luxembourg-domiciled funds is not happening via a local CSD, there has been a growing trend to settle funds orders centrally, either via one of the two ICSDs (Euroclear Bank, Clearstream Banking) or another domestic CSD (predominantly Euroclear France and Clearstream Banking Frankfurt). This trend was prompted mainly by banking distributors and custodians (most of them are active participants in the (I)CSDs, which requested the promoters and their agents to support these "alternative" settlement models.

- As we have seen, T2S aims to facilitate an efficient, secure, less risky and less costly cross-border settlement across Europe. The Luxembourg fund industry has the same objective, as the Luxembourg-domiciled funds target essentially cross-border distribution. The Luxembourg fund industry cannot afford to ignore a project that has the same objective.

- The new T2S environment will facilitate the consolidation of securities deposits, as agents will have the opportunity to access the network of European CSDs from one or two CSDs and/or global custodians. Banking groups may consider streamlining their own securities processing and enhance their collateral management by concentrating their securities deposits, including funds in one or two locations via CSD accounts.

- It is risky to start pricing comparison along the trade and post-trade value chain, but from a pure settlement point of view, T2S, thanks to economies of scale, will be able to challenge the settlement fees charged by transfer agents.

- The current transfer agent model is key in supporting the calculation of the trailer fees and distributor remuneration. A review of this remuneration scheme may change the market perspective and provide new alternative models via CSDs for fund distribution.

The way forward for Luxembourg

Over recent decades, the Luxembourg financial industry has successfully demonstrated its ability to be a major player in securities services and especially in investment management and fund administration services.

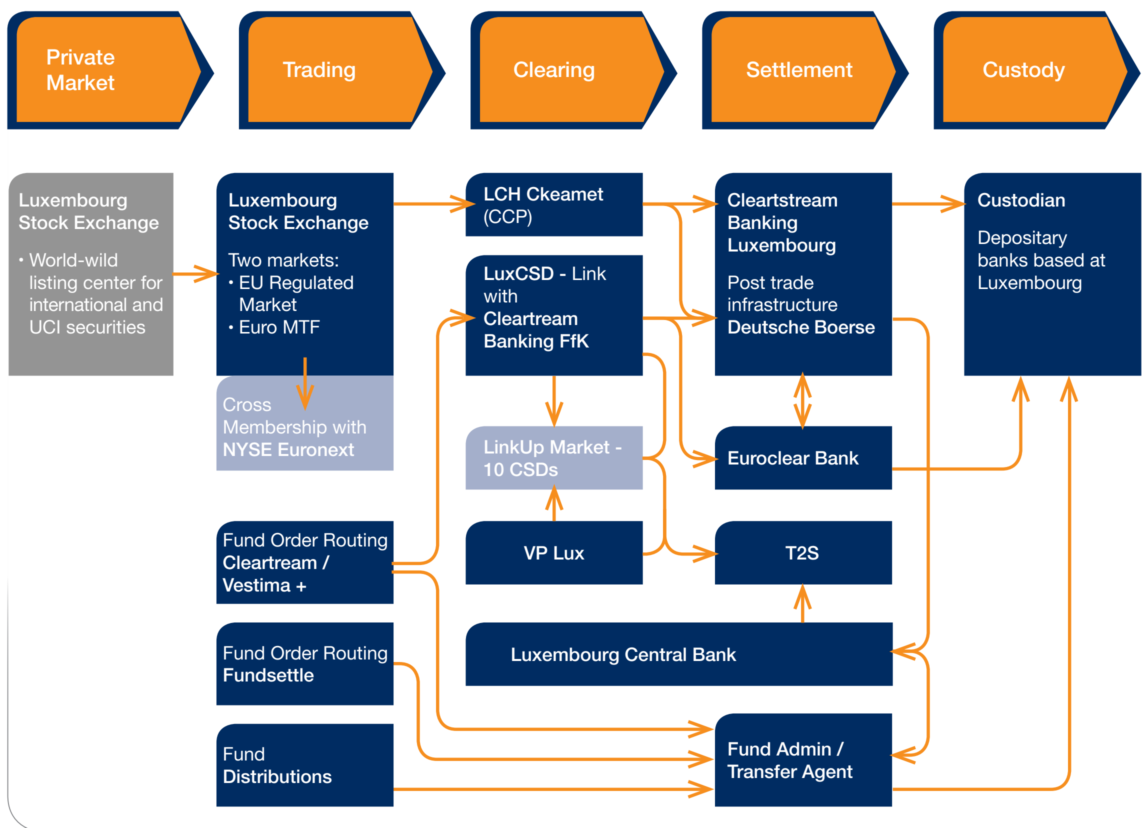
The industry has shown its expertise and its versatility to quickly adapt to regulatory developments. This has facilitated and will probably continue to facilitate, particularly with the recent adoption of the AIFMD, the exceptional growth of structures and products domiciled in Luxembourg.

As we have seen throughout this paper, the securities infrastructure is also dramatically changing and the 2015 landscape will be quite different from the one today. The boundaries will move, barriers will be removed and what was a collection of 27 fragmented domestic markets will start to look like to a more integrated European securities market. Needless to say, we are still a long way from a fully harmonised European market, but the capacity to harmonise asset servicing will be crucial to achieve this objective.

Today, experts of major financial institutions in Frankfurt, London, and Paris are designing the new plumbing of the European trade and post-trade infrastructures. They will develop and propose new business models based on the new T2S perspectives as well as the future regulatory requirements for custodians, CSDs, depositary banks.

What about Luxembourg and its market participants?

As major (I) CSDs, Clearstream Banking, LuxCSD and VP Lux are actively involved in the design of the future post-trade business models. In general, the other stakeholders, including depositary banks, custodians, and fund administrators are aware of and understand the T2S project as well as the post-trade transformations. It is now more than ever time to take a proactive attitude and promote the solutions offered by Luxembourg across its borders. The country and its market have developed all the necessary tools and infrastructure: Now is time to use them and communicate about them.



Source: Deloitte

As the above diagram highlights, the post-trade infrastructure in Luxembourg is far from an empty house and is probably the most distinctive European marketplace with key unique differentiating factors:

- Marketplace with seasoned expertise for cross-border securities distribution and administration
- Back office and asset servicing expertise for more than 25 years
- Expertise and experience with a 360° fund distribution model (primary market – subscription/ redemption), ranging from distributors to transfer agents
- Infrastructure for fund distribution (secondary market), from trades to CSDs
- Direct and indirect links with the major trading venues, central counterparties and settlement platforms (including ICSDs and T2S)
- Proactive and up-to-date with recent European regulations and directives
- A unique opportunity to position a strong collateral consolidation management centre for international group

So what needs to be done and what is the way forward?

All the different stakeholders supporting the Luxembourg post-trade value chain are globally recognised for their experience and expertise in their domains.

Nevertheless, in light of the coming transformations, the main challenge for Luxembourg will consist in demonstrating the added value of the complete value chain and the synergies between the different local actors from issuance to settlement of securities.

At a time when consolidation and the search for greater operational efficiencies are on top of the agenda, it is important that Luxembourg manages to position its infrastructure well in the strategic plans of financial institutions. There was a strong appeal during our interviews to have a strategic approach to better position our infrastructures and their key differentiating features in the European securities market.

It is, indeed, crucial to complement the efforts being undertaken to develop an attractive legal and regulatory environment with a clear value proposition in terms of post-trade infrastructures, asset management, collateral management and administration. Without this synergy, we may end up with beautiful post-trade infrastructure plumbing in Luxembourg but with empty pipes.

The way forward that may be gathered from this document as well as the interviews of the different market participants can be summarized as follows:

- Every financial institution needs to start a strategic review of its future business options in light of the 2015 environment
- These institutions should be supported in their reflections by the marketplace, associations and securities working groups in order to communicate the clear added value and differentiators of our local infrastructures
- The different stakeholders in the value chain should jointly consider in which areas they can work together to bring clear added value to the European securities industry

New business areas, like collateral and liquidity management, securities financing, new reporting obligations and roles of the depositary bank, development of new fund distribution models, are some of future key issues our marketplace can work on together to provide new business opportunities for the local financial industry.

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List of Institutions surveyed

Bank of New York Mellon

Banque Centrale du Luxembourg

BNP Paribas Securities Services

Bourse de Luxembourg

CACEIS

Clearstream Banking / Lux CSD

Citibank

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