Chapter 17
T2S: Creating a New Post-trade Landscape

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Today, although being highly efficient in national markets, the European settlement infrastructure provides a complex, highly fragmented picture, which is characterised by national specificities and barriers. This prevents competition and efficient cross-border settlement at reasonable costs and also comes with operational risks. Target2-Securities (T2S) sets out to provide an infrastructure which will remove those handicaps. But once the infrastructure is in production starting in 2015, T2S is supposed to act as a game changer which will initiate a sustainable transformation of the whole post-trade securities servicing industry.

At the end of the 1990s the creation of a single EU market had top priority on the European political agenda. The financial service industry was expected to play an important role in order to achieve the free movement of goods, services and capital. At that point in time, several initiatives have been initiated around trading, clearing and settlement that aimed at analysing the current status in the European countries and at evaluating appropriate measures to achieve the overarching goal of a single EU market.

Amongst the various initiatives the work of the Giovannini Group had put the spot on the clearing and settlement layer with a focus on the specific deficiencies around cross-border clearing and settlement. The group issued its first report[1] in 2001 in which 15 main barriers have been identified for causing the existing problems. The barriers mainly stem from national market practices, regulatory requirements, tax procedures and legal uncertainty. Accordingly, both the public and the private sectors had initiated activities to remove the barriers that cause the fragmentation of securities settlement, which takes place along national borders and in more than 30 different systems within the EU. In order to cope with the different conditions on a legal, fiscal,

[1] The Giovannini Group "Cross-Border Clearing and Settlement Arrangements in the European Union," November 2002

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operational and technical level, market participants have to involve a significant number of intermediaries such as agents and custodians. The 2001 Giovannini report revealed that a common cross-border equity transaction would require the involvement of at least 11 intermediaries (compared with only 5 for an equivalent domestic transaction) and a minimum of 14 instructions per trade between parties. This causes not only tremendous costs for the securities service industry but also operational risks. In addition, you may add to the bill opportunity costs that result from cross-border activities not taking place due to complexity and costs. In essence, the situation is not compatible at all with the requirements of a single financial market and below the standards achieved in CeBM settlement.

In their second report,[2] the group presented a strategy for removing the identified 15 barriers. From the perspective of integration, the priority barriers are those imposing restrictions on the choice of settlement location activities. Removing these barriers will enable investors to choose the location for their post-trading activities and thus trigger a market-led integration of clearing and settlement arrangements across the EU. A significant increase in cross-border securities trade is to be expected but unacceptable levels of operational and legal risk will still persist, if other barriers remain in place.

In June 2008, the ECONOMIC and FINANCIAL AFFAIRS Council (ECOFIN) provided its conclusions on clearing and settlement,[3] which clearly encouraged the European Central Bank (ECB) to provide as soon as possible to interested CSDs an offer for T2S. ECOFIN also emphasized the need to trim down the projected end-to-end costs and to achieve a reliable business case for T2S. Based on the ECOFIN conclusions, the positive experience made by the introduction of TARGET2 (the real-time gross settlement system for EUR cash payments in central bank money, operated by ECB), the substantial support received from several market consultations, and considering the potential efficiency increase that could derive from holding both securities and CeBM accounts in an integrated technical environment, still in 2008 the Eurosystem decided to develop T2S for providing security settlement services to CSDs. The benefits associated with the integration of the European securities infrastructure were expected to outweigh the challenges of T2S.

Main benefits: T2S will provide the technical infrastructure required by a single market and currency, enabling participating CSDs to offer DvP (deliver vs. payment) settlement of securities transactions in CeBM one technical platform, with harmonised operating times and deadlines, operational rules and communication messages under a common legal framework. This ultimately means that domestic settlement in Europe becomes harmonised. Furthermore, in terms of cost, risk and technical processing cross-border settlement becomes identical to domestic settlement. The harmonisation of standards and market practice will reduce complexity in the post-trade layer of the European securities markets and thus make

[2]The Giovannini Group “Second Report on EU Clearing and Settlement Arrangements,” April 2003.

[3]2872nd ECONOMIC and FINANCIAL AFFAIRS Council meeting, Luxembourg, 3 June 2008; http://www.eu2008.si/en/News_and_Documents/Council_Conclusions/June/0206_ECOFIN.pdf.

securities settlement safer and more efficient while increasing competition and business opportunities. Also, it is expected that T2S will act as a catalyst for further harmonisation. Users of the new T2S platform will be able to settle securities in multiple CSDs from a single cash account in CeBM, and to move securities more easily and quickly across borders to where they are needed for collateralisation (and other) purposes. As a result, the market expects liquidity and collateral savings to be among the main benefits generated by T2S. Several market-driven studies aimed to quantify these benefits. According to a PWC study[4] banks will be able to reduce their Tier 1 capital needs by EUR33bn which is about 11 % of the total capital requirement of €295 billion projected for the Eurozone. A further study commissioned and conducted by Oliver Wyman[5] projected significant capital, funding and operating cost savings by delayering and consolidating their securities and cash holdings. The estimated annual benefits of three case studies range between €30 million and €70 million.

But before enjoying the benefits, the post-trade industry is now facing the largest infrastructure project this industry has ever seen. The market participants will have to assess the T2S impact on their business models which goes beyond pure adaptation efforts. T2S will initiate a reshaping which may range from simple adaptations of service levels up to a comprehensive business model transformation—depending on the participants' current position and their appetite for an extension of their existing service portfolio. In addition, the industry will have to swallow the estimated development costs of about EUR 1 billion and the project risks associated with such a long-term large-scale infrastructure project with multiple stakeholders.

From 30 CSDs that initially have shown interest in becoming T2S participant by signing the T2S Memorandum of Understanding in 2009 and 2010, thus far, 24 European CSDs (thereof 19 CSDs based in the Euro area and 5 from non-Euro-currency countries) out of 21 European markets have entered into the contractual agreement with the Eurosystem and will outsource their securities accounts to T2S for settlement purposes. The participating CSDs account for almost 100 % of Euro volumes currently settling in the Euro zone (Fig. 17.1).

On the cash side, 19 central banks will open dedicated cash accounts in Euro for their participants in T2S, so that settlement of securities against CeBM can take place in an integrated manner. The coverage of T2S may further grow in future, as other European central banks (and possibly currencies) and CSDs may decide to join the platform.

Nevertheless, an integrated platform for securities settlement as such will not deliver a fully integrated market on its own. Surrounding activities of EU authorities and the industry will contribute to increase the level of harmonisation in order to maximise the efficiency of cross-border settlement in T2S. Hence, it will ensure market access and equal conditions for all participants.

[4] PricewaterhouseCoopers "The 300-billion-euro Question—Survey on the Benefits of Target2-Securities," August 2013.

[5] Oliver Wyman "The T2S Opportunity—Unlocking the hidden benefits of Target2-Securities," September 2014.

CSD	Market Share
CBF	38,73 %
Iberclear	17,90 %
Euroclear France	15,43 %
Monte Titoli	13,28 %
Euroclear Finland	3,91 %
Euroclear NEGICEF	3,38 %
VP Securities	2,35 %
Euroclear Belgium	1,21 %
OeKB	0,79 %
Keler Hungary	0,69 %
Interbolsa	0,62 %
CSD of Romania	0,61 %
NBB-SSS	0,35 %
SIX SIS	0,33 %
BOGS	0,10 %
CSD Slovakia	0,09 %
Lithuania CSD	0,06 %
KDD Slovenia	0,06 %
EVK – Estonia	0,05 %
Cyprus Stock Exchange	0,03 %
Malta Stock Exchange	0,01 %
VPLux	0,00 %
LuxCSD S.A.	0,00 %
BNY Mellon CSD	0,00 %
Latvian CSD	0,00 %

Fig. 17.1 Overview of participating CSDs and their market share. Source figures (2013): http://sdw.ecb.europa.eu

The delivery responsibility of T2S has been given to four central banks (Deutsche Bundesbank, Banque de France, Banca d'Italia and Banco d'Espagna) which have been tasked to create a single platform to which all CSDs would outsource their settlement and accounting activities. This platform, T2S, will then be operated by the Eurosystem/ECB. T2S unites the securities part and the cash part of a settlement vs. payment (DvP) instruction onto one single platform in CeBM. Besides harmonisation of securities settlement processes, T2S is also tearing down the difference between settlement of a domestic and a cross-border transaction. As a result, the process of settling a (e.g.) French security between two (e.g.) French parties becomes exactly the same as settlement of the very same security between a (e.g.) German and an (e.g.) Italian party. All Euro-currency markets are in terms of securities settlement treated like one domestic market (Fig. 17.2).

Each CSD has signed the Framework Agreement with the ECB, which regulates the outsourcing of the handling of instructions (settlements) and balances (accounts) to T2S. The "golden source" for instructions and balances is kept in T2S, while the CSDs remain legally responsible for the data. In turn, the CSDs are holding the "golden source" for all client and securities (e.g. ISIN) related reference data and provide a copy of the relevant data to T2S. Services such as corporate actions/asset services, lending and borrowing, collateral management as well as connectivity from and to T2S remain under the full control and responsibility of the CSDs.

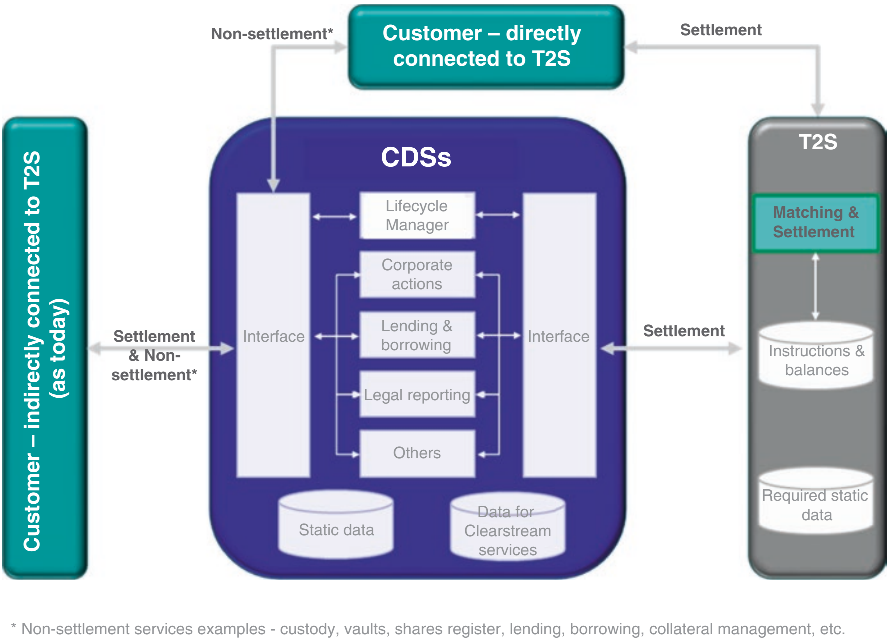

Fig. 17.2 Overview of activities outsourced to T2S (Clearstream Banking Frankfurt, April 2011)

Due to the fact that T2S is accommodating both accounts, securities and cash, the T2S parties (i.e. all who are holding accounts in T2S) can use a single cash account (the "dedicated cash account", DCA), and link it to several securities accounts ("SAC"). As a result, all cash proceeds out of all securities transactions conducted in T2S in CeBM as well as all income proceeds will be netted on a single CeBM account on T2S, the DCA. In turn, each DCA has to be linked to a real-time gross-settlement (RTGS) account held with a national central bank (NCB), since funding of the DCA occurs solely via the linked RTGS account. Hence, DCAs are "owned" by the NCBs, while the SACs are "owned" by the CSDs.

A comparison of today's situation with the one at the time once T2S is implemented shows the following main differences:

- Today, CSDs act as a quasi-monopoly. All domestic settlement and new issuance are centralised with the CSD. T2S will force CSDs into competition. Settlement services are no longer a differentiator. Issuers are no longer bound to use their home market CSDs. As a consequence competition will increase and the differentiation will focus on value-added services.
- Today, each market has its own settlement day schedule with individual (market) deadlines. T2S implements one harmonised settlement day schedule with a common deadline for all market players.
- Today, national barriers only allow few cross-border settlements in CeBM; settlement between customers of different CSDs is mainly processed on a free-of-payment

basis. T2S, in turn, negates this difference: settlement of a domestic transaction will be exactly the same as a settlement for a cross-border transaction.

- Today, CSDs operate their own settlement infrastructure, while T2S is the single-settlement infrastructure to which all participating CSDs outsource their settlement activities.
- Today, market participants maintain proprietary links to CSDs using Swift ISO15022 or CSD-defined standards in their communication. With T2S most CSDs will maintain this access path in order to shield their community for major adaptation costs. In addition, market participants will have the opportunity to connect and instruct directly to T2S. This option requires participants to use the new ISO20022 messaging standards, developed due to T2S and supposed to become the new standard for the securities business, and to maintain a dedicated network with a network service provider.
- CeBM is currently limited to the home central bank services. Connection between the CSD and the NCB is not standardised and cash and securities are not booked at the same time in the same system. In T2S accounts for both cash and securities are held on the same platform, allowing immediate settlement finality (real-time transfer of ownership).

Furthermore, T2S can be considered as an enabler for further harmonisation. Besides areas closely related to settlement such as messaging standards or the settlement schedule where we see harmonisation, there is also pressure on areas which are not directly impacted by T2S. Asset service remains under the full control of the CSDs. However, there are related transactions in the asset service area which will be processed in the T2S system. In order to allow a smooth cross-border settlement common rules on corporate action procedures have been agreed. As a consequence, markets are now adjusting to the standard. For example, the German market is now going to apply the record date, which is the date as of which holdings are entitled to take part in the event. Expectation is that this will lead to a significant reduction in market claims with harmonised processes. The ECB is monitoring the compliance to the agreed standards as one of the access criteria CSDs will have to meet in order to be allowed to migrate their settlement process to T2S. There are also asset services resulting in cash payment (e.g. income payments, redemptions) which will be booked in T2S. Going forward, all securities-related and -initiated cash proceeds shall be booked in CeBM to the DCA in T2S, rather than the current praxis to credit these to the RTGS accounts with the respective NCBs.

Another act of harmonisation which seems to be unrelated to T2S is the reduction of the settlement period (i.e. the time between trade execution and the settlement of the trade) to 2 days ("T+2"). In late 2014, almost all market moved from T+3 to T+2, thus reducing the exposure by 1 day. Those who have not done so are scheduled to do this prior to their migration onto T2S. One benefit lies within the treatment of corporate actions. Rights issues and deadlines can be harmonised as all settlements and entitlements are following the same settlement period.

CSDs will enter into competition in areas where they currently enjoy a monopolistic advantage: settlement, asset services and issuance of new securities. T2S enables CSDs to settle foreign securities in the same way as they currently settle their domestic securities—at the same ECB T2S tariff! T2S allows CSDs to act as a single point of access to all T2S markets. However, as services for securities settlement are harmonised, CSDs can no longer easily distinguish their services from each other. Focus will be put on collateral services, asset services and new issuance.

For the first time, there will also be competition amongst the NCBs for CeBM services. DCAs have to be opened via the NCBs, whereby a DCA can be opened with any NCB; it does not have to be the one where the related RTGS account is held. We will see situations where a DCA opened with one NCB will be linked to the RTGS account opened with another NCB. The function of RTGS account will be "reduced" to a funding account, since all relevant cash transactions in T2S will be booked in the respective DCA. As a result, service offering from different NCBs may vary.

T2S also has an impact on all CSD customer segments, i.e. investors, issuers and agent business. For them, there are more options to access the T2S markets. CSD customers, who currently are bound to "their" home CSD, can:

- Continue using an agent bank provider. Then these market players will access T2S markets indirectly and settle in commercial bank money (CoBM), with the respective exposure to the agent bank.
- Concentrate all assets with one CSD, who will then access the other markets and CSDs to enable settlement in CeBM.
- Become a "directly connected participant" (a DCP) at T2S, which allows them to send their instructions directly to T2S while the contractual relationship to a CSD remains unaffected.
- Become an "indirectly connected participant" (an ICP) at T2S, with more than one CSD. Here they would use the respective CSD for a given market (Fig. 17.3).

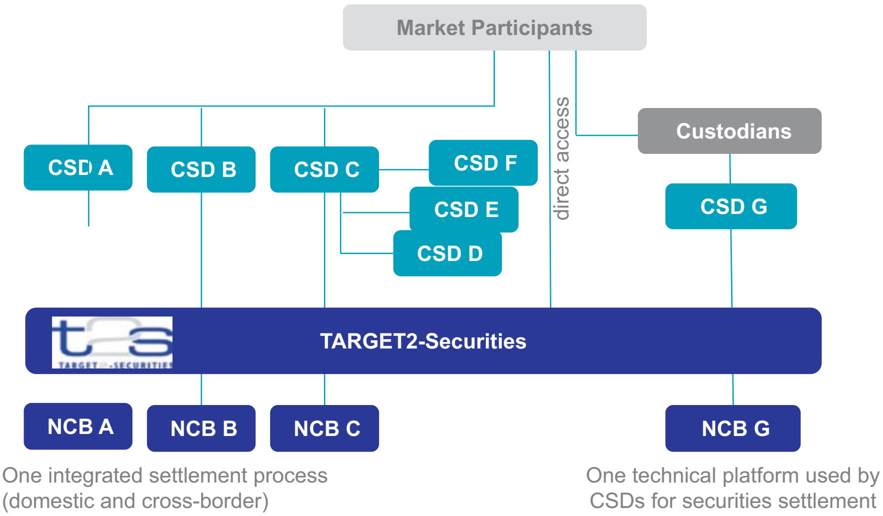

Fig. 17.3 Access possibilities for market participants in T2S

Issuers are currently issuing their securities in the markets where they expect most of the investors to be. As a result, a (e.g.) Spanish issuer addressing mainly Spanish investors is issuing his or her securities in Spain; an international issuer addressing a wide range of investors is more likely issuing his or her securities in international markets, such as the ICSDs. T2S enables issuer to reach his or her target investors through a single window, which is then selected due to superior services rather than proximity to the issuer.

All transactions settling in T2S are subject to the same fee schedule. The ECB is charging the CSDs at a publicly available price schedule, which shall stay unchanged up until at least 2018. There will be the same fee for both domestic and cross-border settlements. The aim of the ECB fee schedule was to set the price at such a rate which allows payback of the investments made over a certain period of time. The CSDs, however, are free in their fee strategy. It remains to be seen how different prices for settlement are going to be once T2S is fully operational, since some CSDs have already announced to only pass on the T2S charges to their customers and not to charge a premium.

This clearly shows that one pillar of the CSDs' revenue generation will disappear over time: the settlement or transaction fee. T2S puts pressure on CSDs as some may not be able to improve the services which remain with the CSDs in the same way as the ones for settlements are harmonised. Cost pressure will increase further and may lead to co-operations or further outsourcing of services between the CSDs. It is also very likely that CSDs may look for new revenue opportunities which will come due to the possibility to offer a single access to all T2S markets or even to move up the value chain and offer services which are today value-added services offered primarily by agent banks (e.g. tax services, proxy voting). With T2S, there will be choice for those entities wishing to access T2S via a CSD; the national monopolies will cease to exist. Although this is obvious for investors, the very same applies to issuers.

The aforementioned analysis conducted by Oliver Wyman revealed that T2S could allow brokers, asset managers and banks to take full advantage of the T2S model and realize savings between EUR 30 and EUR 70 million annually if they take action now to optimize their securities and cash supply chain. The study produces quantitative case studies showing that market players could realize significant capital, funding and operating cost savings by delayering settlement-related exposures, pooling collateral for settlement and tri-party purposes, netting more cash settlements and simplifying their operations (Fig. 17.4).

This and similar research activities show that there is lot to gain, provided that the industry players stop considering T2S as an IT project,[6] but rather an opportunity to streamline and adapt their T2S operating systems and create new products and services.

T2S will dramatically change the post-trading landscape in Europe. Customers can decide to appoint one CSD to cover all T2S markets, and thus can concentrate their securities with one single provider. This automatically leads to a reduction in

[6] Global Custodian/Deutsche Bank Survey, GC Magazine Fall 2014, p. 66.

		Key elements	Cost & risk impact
1	Delayer settlement-related exposures	– Direct holding of securities at CSD/ infrastructure level – Increase use of central bank money for settlements	– Reduced commercial bank exposure and capital consumption – Reduced operational risk due to less intermediaries / direct CSD holdings
2	Pool settlement collateral	– Consolidate cash and securities holdings, overcoming collateral fragmentation	– Reduced funding & collateral needs – Reduced balance sheet and capital consumption – Reduced fees for settlement lines
3	Net settlements	Optimize netting of payment and settlement flows	– Reduced funding & collateral needs – Reduced balance sheet and capital consumption and market risk – Reduced fees for settlement lines
4	Simplify operations	– Single point(s) of access to a range of markets – Standardized settlement, payment and custody processes/messages	– Reduced operational costs and fees – Reduced operational risks

Fig. 17.4 The four efficiency levers for market participants to optimize post-trade economics (Oliver Wyman, September 2014)

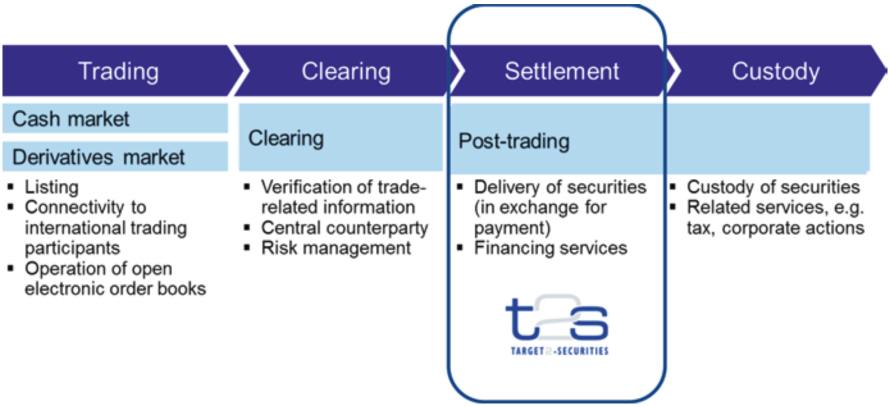

Fig. 17.5 From trading to custody (*source*: Deutsche Börse Group)

the collateral needs. T2S parties can link a single CeBM cash account (DCA) to various securities accounts (SAC), thus achieving a pooling of CeBM liquidity. This should even further reduce the need for collateral.

Besides the changes T2S is stipulating on the post-trading area, it also has impacts on the whole value chain (trading, clearing, settlement). The creation of a settlement platform with harmonised services actually leads to opportunities for trading and clearing. The number of multi-listings is likely to increase. Trading of T2S eligible securities is becoming more attractive, since settlement will be harmonised. Trades executed on a stock exchange in one country can then settle in a CSD of another country. Central counterparties (CCPs) are no longer restricted to have their clearing members holding accounts with the same CSD: T2S is laying the grounds to process cross-CSD settlement instructions initiated by the CCPs for or on behalf of their clearing members, e

ven when they hold the accounts in different CSDs. Last, not least, CSDs can place themselves as settlement location for trades executed on exchanges which are linked to T2S for settlement. Customers can work with their CCP of choice and use the account with their CSD of choice to settle all T2S-eligible securities in CeBM. Organisations which are covering the whole settlement chain are in the position to offer their customers all services out of one hand (Fig. 17.5).