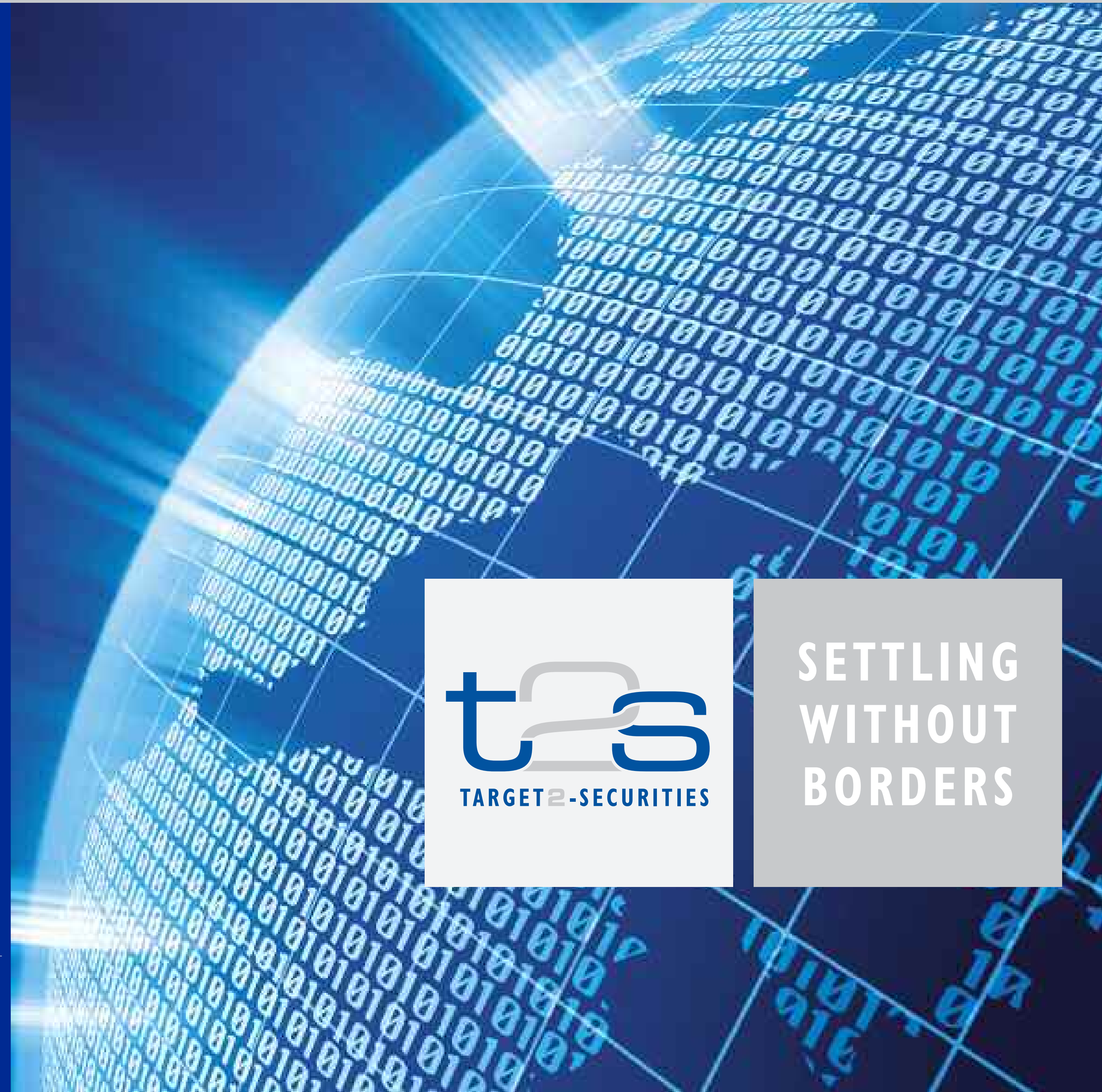
EUROPEAN CENTRAL BANK

EUROSYSTEM



TARGET2-SECURITIES

SETTLING WITHOUT BORDERS

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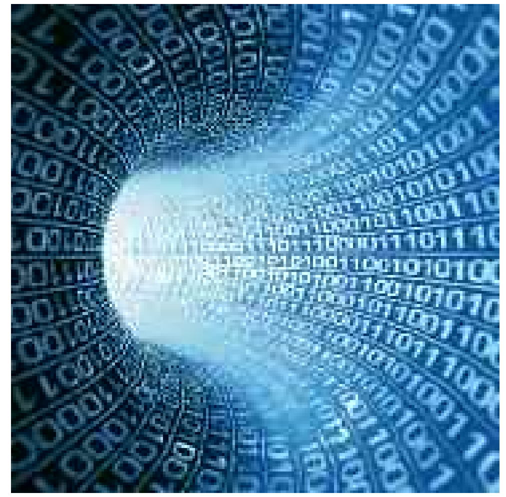


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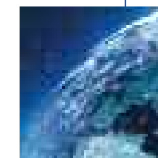
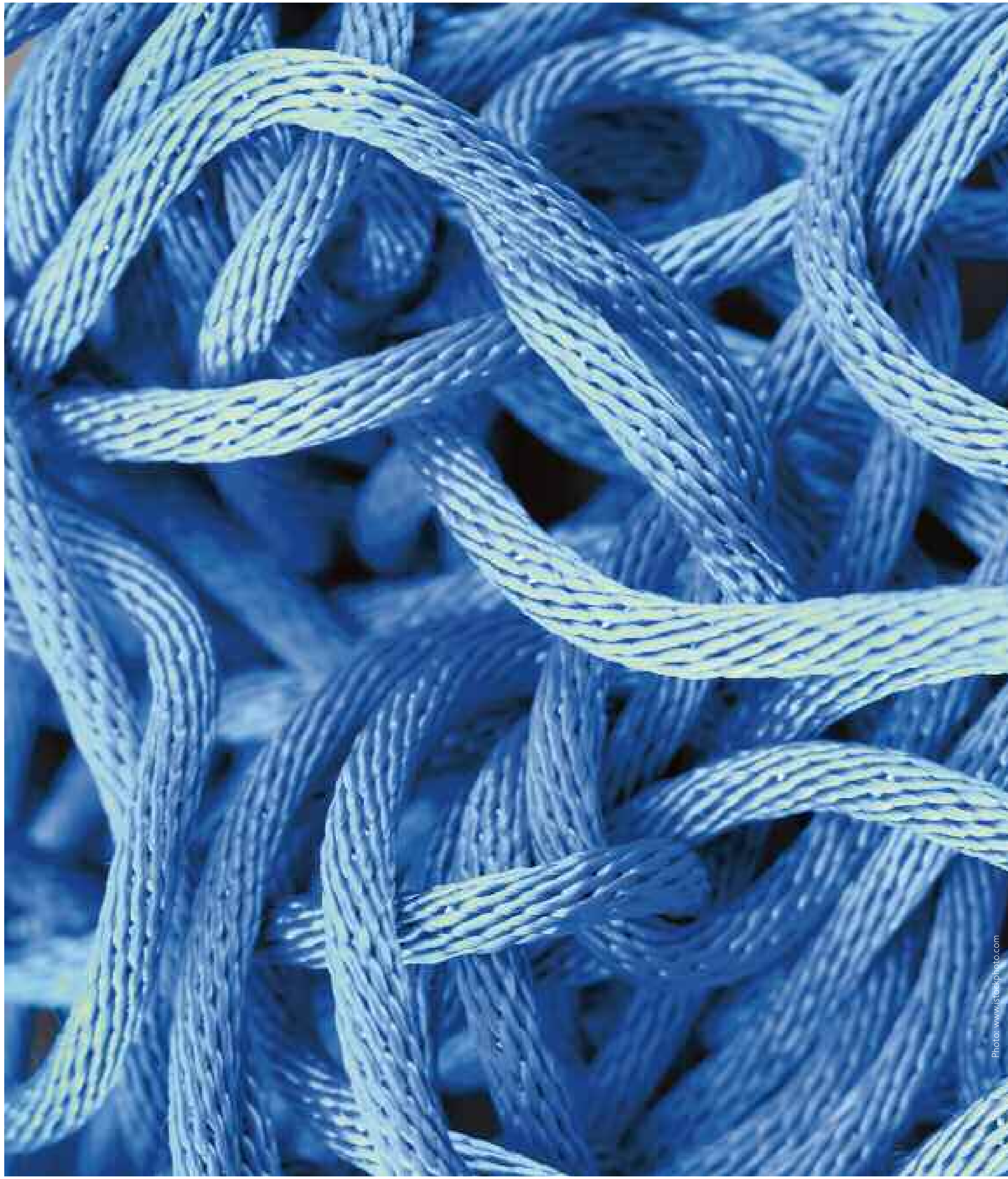
INTRODUCTION



TARGET2-Securities (T2S) is one of the most ambitious projects that the Eurosystem has embarked upon, potentially leading to a transformational change in Europe's financial markets. T2S will provide harmonised delivery-versus-payment (DvP) settlement in central bank money in a variety of currencies for almost all heavily traded securities circulating in Europe. It will therefore be a major step forward in creating a single market in securities, removing many of the Giovannini barriers to cross-border clearing and settlement, as well as acting as a catalyst for further harmonisation in post-trading services. T2S will make cross-border settlement identical – in terms of cost, risk and technical processing – to domestic settlement. Owned by the Eurosystem, operated on a cost-recovery basis and designed for the benefit of the users, T2S aims to be a state-of-the-art securities settlement platform. Furthermore, by leveraging the potentially substantial economies of scale, T2S will eventually become one of the most cost-efficient securities settlement services in the world.

One of the main factors which will determine the success of T2S is achieving "critical mass". Since it is largely a fixed-cost business, the higher the number of settlement transactions, the lower the price for all users. By October 2009, 28 central securities depositories (CSDs) located in 26 European countries had signed a memorandum of understanding with the Eurosystem. This includes not only all the CSDs in the euro area but also seven CSDs in EU countries outside the euro area – Denmark, Estonia, Latvia, Lithuania, Romania, Sweden and the United Kingdom – and three CSDs in countries outside the EU – Iceland, Norway and Switzerland. Furthermore, several central banks from outside the euro area have signalled their interest in allowing their national currency to be settled in T2S as well. T2S is therefore well on track to achieving a very high transaction volume. It shows the strong support for T2S among market participants in a large number of countries across the EU and even outside it.

This brochure aims to provide readers with a broad overview of T2S. First, it highlights the drawbacks in Europe's current post-trading environment, which is still highly fragmented along national lines despite the introduction of the euro over ten years ago. Second, it explains what T2S is, with a focus on some of its core features, in particular, the horizontal integration of the securities settlement stage of the post-trading value chain across the whole of Europe and the generalisation to a new higher level of the "integrated model" of securities settlement, in which securities and cash accounts are maintained on the same IT platform. Third, the brochure describes how Europe will benefit from T2S not only in terms of the significantly reduced costs of settlement, but also by fostering greater competition in the post-trading industry and reducing the cost of capital for firms, thereby stimulating more economic growth.

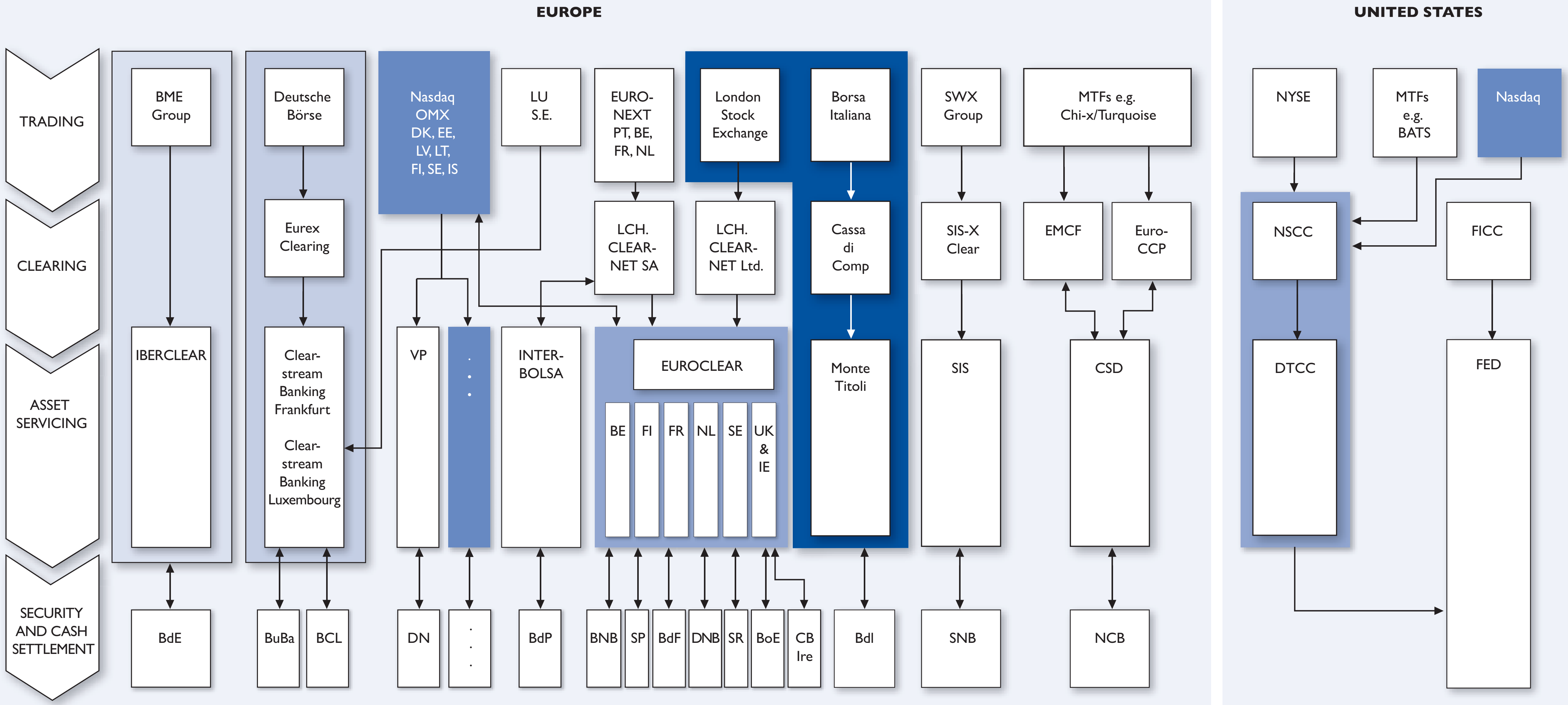


EUROPE'S CURRENT POST-TRADING LANDSCAPE

Historically, financial market infrastructures in Europe were created to meet the requirements of national financial markets. In many cases, there were only one or two dominant players at each stage of the value chain: typically one stock exchange for trading, possibly one central counterparty (CCP) for clearing and at least one CSD for settlement. Furthermore, each national infrastructure was primarily designed to manage securities that were denominated in the national currency. Today, despite the introduction of the euro, which has created a common currency for 16 countries in the EU, the provision of post-trading services – clearing and settlement – remains fragmented along national lines. There were 19 CSDs operating in the euro area in 2009, and almost 40 CSDs in the whole EU (some are shown in Figure 1). This contrasts starkly with the situation in the United States, which has a highly centralised clearing and settlement infrastructure, with the Depository Trust and Clearing Corporation (DTCC) responsible for the clearing and settlement of all corporate bonds and equities and the Federal Reserve System handling securities issued by the US government, federal agencies and government-sponsored enterprises.

Although there have been some successful mergers between European CSDs in the past – and there may be more in the future – this process of consolidation by merger has proceeded more slowly than had been anticipated when the euro was introduced. Merger and acquisition is unlikely to deliver an integrated market infrastructure for the whole of Europe because of the difficulties in reconciling the different business models that have emerged in the last ten years. In some countries, there has been a merger of the stock exchange, CCP and CSD, as in Germany, where Deutsche Boerse, Eurex Clearing and Clearstream Banking Frankfurt belong to the same group. The infrastructures in Spain and Italy have also adopted this business model. Another business model involves mergers at the same level of infrastructure across different countries. The most prominent example of this is Euroclear, which has created a single settlement engine for Belgium, France and the Netherlands, so a user needs an account at only one of the CSDs to access securities in the other CSDs. There have also been mergers at the stock exchange level, such as Euronext, which covers Belgium, France, the Netherlands and Portugal. The co-existence of these different business models, with their conflicting interests, is likely to hinder the integration of clearing and settlement across the whole of Europe. In parallel, nine CSDs in Austria, Cyprus, Denmark, Germany, Greece, Norway, Spain, Switzerland and South

Figure 1 Fragmented European landscape and comparison with the United States



Note: The shaded boxes indicate groups of companies resulting from mergers and acquisitions.

Africa have embarked on a joint venture called "Link Up Markets", which was launched in March 2009. Unlike Euroclear, Link Up Markets does not aim to create a single system but rather to facilitate the exchange of messages between CSDs.

Despite these initiatives, the costs and risks of cross-border securities transactions within the European post-trading environment remain unnecessarily high (see page 23 for further details). Cross-border transactions within the single European market remain more than ten times as expensive for investors than domestic transactions and are far more expensive than in the United States, where trades are settled centrally in the DTCC and the Federal Reserve System. The high cost of cross-border transactions is caused by lack of harmonisation across countries on a legal, fiscal and technical level, which subsequently requires some form of intermediation, either through the establishment of links or more commonly through the use of custodians. The 2001 Giovaninni report showed that a typical cross-border equity transaction would require the involvement of as many as 11 intermediaries (compared with only 5 for an equivalent domestic transaction) and a minimum of 14 instructions between parties. Such a high level of intermediation always comes at a cost.

This situation is not aligned with the needs of a single currency, while the obstacles to the cross-border provision of post-trading services conflict with the objective of a single and competitive European market for financial services. The Lisbon strategy[1] has recognised the need to overcome these obstacles and several important initiatives have been undertaken by the European Union. The gap in the trading area is being forcefully addressed, in particular by the Markets in Financial Instruments Directive (MiFID), which is stimulating competition between trading platforms, whether traditional stock exchanges or new multilateral trading facilities. In the post-trading sector, two measures are being implemented in order to achieve progress. First, a great deal of work is underway to harmonise practices, legislation, regulation and tax with a view to removing the "Giovannini barriers". Second, all exchanges, central counterparties and CSDs have agreed to comply with the voluntary "Code of Conduct for Clearing and Settlement" in order to stimulate fair and open competition. The Code of Conduct includes granting access rights to other service providers (e.g. so that any CCP or CSD is able to clear and settle trades on any stock exchange, whether it is located in the same country as the stock exchange or not) and seeks to ensure that clients are offered appropriate and transparent prices for unbundled services in order to put an end to cross-subsidies and the locking-in of clients.

However, in order to crystallise the gains from harmonisation and to provide support for competition between service providers in the securities industry, it must be technically possible for market participants to be able to access securities located in any country. This is where T2S comes in, providing the missing piece of the post-trading puzzle. T2S will foster the required transformation of intermediation between issuers and investors by stimulating the development by financial market participants of a competitive and efficient European market.

[1] The aim of the Lisbon strategy, launched in March 2000 by the EU's Heads of State or Government, was to make Europe "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion".

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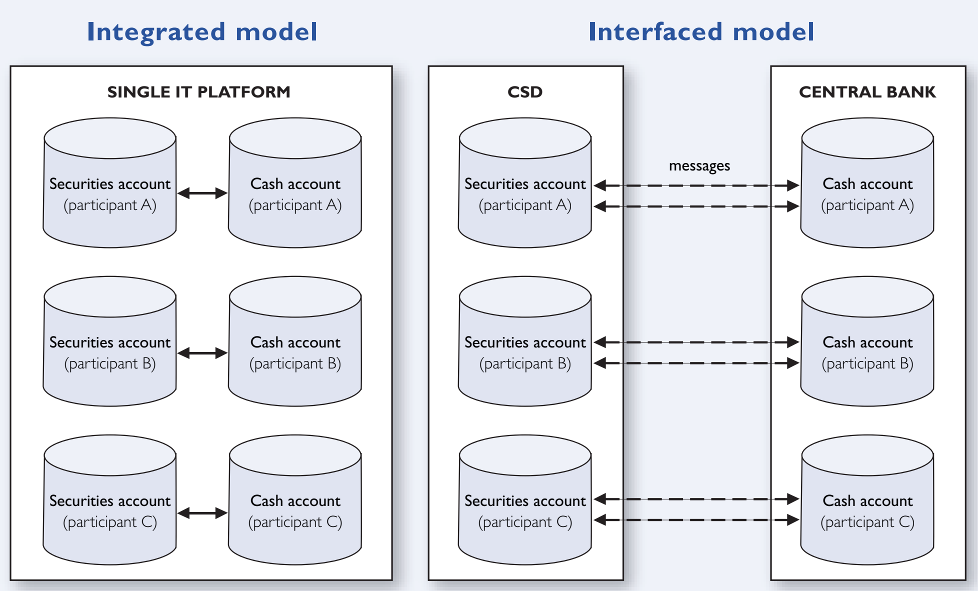
WHAT IS T2S, AND HOW WILL IT WORK?

T2S will be a single IT platform for settling almost all heavily traded securities in Europe, eliminating any differences between the settlement of domestic and cross-border transactions. It will truly be settlement without borders. T2S will integrate – horizontally across all countries in Europe – the most fundamental part of the securities infrastructure value chain: settlement. Preliminary discussions on T2S between the Eurosystem and the market started in 2006. In the following two years, the Eurosystem in cooperation with market participants produced a first version of the T2S user requirements and an economic impact assessment which showed that the new integrated settlement engine could make a significant contribution to European economic growth and welfare. In July 2008, following the positive feedback received from the market in a public consultation, the Governing Council decided to go ahead with developing T2S.

T2S will be a state-of-the-art settlement engine, providing commoditised and harmonised DvP settlement in central bank money on a real-time gross basis. This will extend the most secure settlement method throughout the whole of Europe. The use of DvP eliminates the risk for a market participant that its securities or cash could be transferred to a counterparty which then defaults before fulfilling its corresponding obligations. The use of "central bank money" – such that the cash is transferred from one counterparty's cash account at a central bank to another counterparty's cash account also at the central bank – eliminates the settlement agent risk. The alternative – settlement in "commercial bank money", in which the transfer of cash takes place between the counterparties' cash accounts held at the same commercial bank (with no changes in the central bank accounts) – entails the risk that the intermediating commercial bank could default. Settling on a real-time gross basis rather than netting further reduces risks arising if a counterparty defaults before a transaction is finally settled. Although most national CSDs already use these best practices for domestic transactions, for cross-border transactions DvP in central bank money is not possible at the moment in such an efficient and safe manner. In view of the recent financial turmoil, risk reduction initiatives such as those provided by T2S for cross-border transactions are highly valued by market participants.

One of the key risk reduction features offered by T2S is a single IT platform to accommodate market participants' dedicated central bank cash accounts and securities accounts in the same place. This is the "integrated model", which facilitates fast, highly efficient, low-risk settlement (Figure 2). It contrasts with the "interfaced model", in which securities accounts are held at the CSD and the cash accounts with the central bank, and settlement requires the sending of messages to and from the CSD and the central bank to confirm the transfer of the securities and the cash. The interfaced model is less satisfactory, as it may involve delays in processing transactions and an increased risk of error, as well as making autocollateralisation less efficient. Although some markets already benefit from the integrated model at a national level, T2S will spread the benefits to the whole euro area and potentially to the rest of Europe. A key difference between the T2S integrated model and previously used integrated models is that T2S will be run by the central bank rather than the CSD. Instead of outsourcing its cash accounts to be managed by the CSD, in the T2S environment the central bank is insourcing the CDSs' securities accounts.

Figure 2 Comparison of the "integrated model" and "interfaced model" for securities settlement



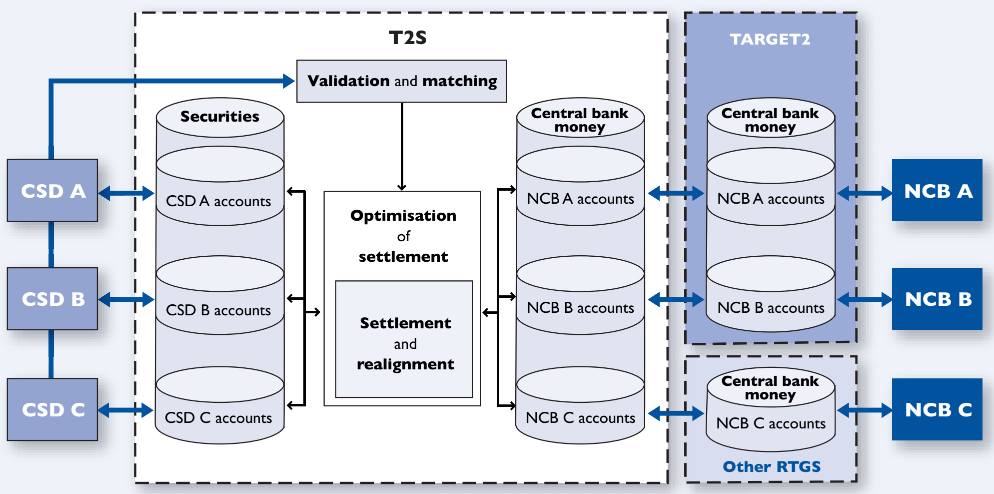
The integrated model envisaged for T2S is further enhanced because it will be developed and operated in conjunction with the Eurosystem's TARGET2 single shared platform for cash payments. The close proximity of T2S and TARGET2 will not only provide synergies by allowing market participants to optimise their collateral and liquidity management, but will also provide T2S with the same very high levels of availability, resilience, recovery time and security that are currently enjoyed by TARGET2. A simplified overview of T2S is shown in Figure 3. T2S (the part of the diagram in the white box) will be a single IT platform accommodating both the market participant's securities accounts, held at either one CSD or at multiple CSDs, and its dedicated central bank cash accounts. The T2S dedicated cash account(s) (which can only be used for the settlement of securities transactions and corporate actions in T2S) will be linked to the market participant's main cash account in TARGET2 or another non-euro central bank RTGS account. All transfers between the two accounts will be done on a real-time basis. T2S will therefore take the integrated model to a new level, not only directly connecting the securities accounts of one CSD with the cash accounts of one NCB, but connecting any securities account at any participating CSD with any cash account at any participating central bank. All changes in the balances of cash and securities accounts, regardless of which CSD or NCB they belong to, can be made in real time. In this way, cross-border settlement will become identical to (and therefore as inexpensive as) domestic settlement.

Another key aspect of T2S is that it will be a service to CSDs, but not a CSD in itself. CSDs which join T2S will be "outsourcing" their settlement processes to T2S, however they will retain all their other functions and relations with their clients. Market participants will need to have a legal relationship with a CSD in order to use T2S and only CSDs will sign contracts with T2S. CSDs will still be responsible for opening and closing securities accounts in T2S, for liability vis-à-vis their clients, and so on. Furthermore, the rest of the post-trading value chain, in particular asset servicing, corporate action processing[2)] and tax and regulatory reporting, which require specific knowledge of national practices and are difficult to commoditise and automate, remains a core function of national CSDs.

Another crucial innovation of T2S is its multi-currency dimension. Originally, the idea was

2) Altough management of corporate action events remains with CSDs and other service providers, T2S will process the resulting settlement of these events.

Figure 3 Integrated model: T2S on TARGET2



for T2S to be restricted on the cash side to the euro and on the securities side to only those held in the euro area CSDs. The ECOFIN Council[3] explicitly asked that T2S should not be limited to the euro area. The large number of non-euro area CSDs that signed a memorandum of understanding with the Eurosystem in July 2009 shows the strong interest of the securities industry in extending T2S beyond the euro area. Reflecting this, several non-euro area national central banks have already confirmed their interest in taking their currency into T2S, and other central banks are still considering whether to do so. Ultimately, T2S may be able to settle almost all securities in Europe, in several – if not all – of the most traded currencies in this part of the world. The choice of currency will not be restricted, unlike the situation today, where most CSDs organise DvP settlement in central bank money with one central bank. The securities in T2S could be settled against any of the currencies in T2S.

[3] On 27 February 2007, the EU Council's committee on Economic and Financial Affairs (ECOFIN) concluded that "T2S should be open to non-euro area CSDs and currencies, subject to agreement between the concerned parties".

The strong support from and collaboration with CSDs and market participants across the whole of Europe has been vital in the success of T2S so far. Through this close collaboration, the market and the Eurosystem have developed the user requirements for what will be one of the most advanced and sophisticated settlement engines in the world. Box 1 lists the general principles on which the user requirements are based.

Being able to start with a completely "clean

Box 1 General principles of T2S

Principle 1:	The Eurosystem shall take on responsibility for developing and operating T2S by assuming full ownership.
Principle 2:	T2S shall be based on the TARGET2 platform and will therefore provide the same levels of availability, resilience, recovery time and security as TARGET2.
Principle 3:	T2S shall not involve the setting-up and operation of a CSD, but instead will serve only as a technical platform for providing settlement services to CSDs.
Principle 4:	The respective CSD users' securities accounts shall remain legally attributed to the CSD.
Principle 5:	The T2S settlement service will allow CSDs to offer their participants at least the same level of settlement functionality and coverage of assets in a harmonised way.
Principle 6:	Securities account balances shall only be changed in T2S.
Principle 7:	T2S shall require participating CSDs to be designated under the Settlement Finality Directive (SFD).
Principle 8:	T2S shall settle exclusively in central bank money.
Principle 9:	The primary focus of T2S shall be settlement services in euro.
Principle 10:	T2S shall be technically capable of settling in currencies other than the euro.
Principle 11:	T2S shall allow users to have direct connectivity to its platform.
Principle 12:	The participation of CSDs in T2S shall not be mandatory.
Principle 13:	All CSDs settling in euro central bank money shall be eligible to participate in T2S.
Principle 14:	All CSDs connecting to T2S shall have equal access conditions.
Principle 15:	All CSDs connecting to T2S shall do so under a harmonised contractual arrangement.
Principle 16:	All CSDs connecting to T2S shall have the same calendar of opening days and harmonised opening and closing times.
Principle 17:	T2S settlement rules and procedures shall be common to all participating CSDs.
Principle 18:	T2S shall operate on a full cost-recovery and not-for-profit basis.
Principle 19:	T2S services shall be compatible with the principles of the European Code of Conduct for Clearing and Settlement.
Principle 20:	T2S shall support the participating CSDs in complying with oversight, regulatory and supervisory requirements.

Box 2 Core functionalities of T2S

Real-time gross settlement in central bank money

The core service provided by T2S is real-time DvP settlement in central bank money for almost all securities circulating in Europe, eliminating any differences between domestic and cross-border settlement. T2S will comply with the highest industry and regulatory standards for instruction management and settlement, ensuring safety, reliability and efficiency, and will operate using harmonised communication protocols.

Optimisation of settlement

T2S will use highly sophisticated optimisation algorithms to achieve exceptionally high levels of settlement efficiency. The algorithms will detect complex "chains" of transactions involving many different participants which can then be settled simultaneously, minimising the risk of settlement blockages, delays and failures. As a part of this, T2S will offer "technical netting", which would enable, for instance, a market participant to purchase a security using funds obtained from the sale of a different security. However, unlike a traditional net settlement system, which would process all transactions in a batch at the end of the day, the technical netting in T2S will occur on a real-time basis for all transactions in the queue. This reproduces the risk-free nature of real-time gross settlement, but with the benefits of lower liquidity needs that result from netting. Settlement efficiency and minimisation of liquidity needs will also be enhanced by the possibility of partial settlement, i.e. if there are insufficient securities, settlement will still take place with what securities are available and the residual outstanding amount will be carried over to the next settlement attempt.

Autocollateralisation

T2S will provide highly efficient autocollateralisation functionality, extending a service which was previously only available in a few countries to all T2S markets. Autocollateralisation enables a transaction to be settled by automatically triggering the provision of intraday credit from the central bank collateralised either by the security that is being purchased ("collateral-on-flow") or by other securities available in the market participant's securities account ("collateral-on-stock"), with prioritisation given to the use of the former. Furthermore, T2S has automated substitution functionality, so that if a security currently used as collateral for intraday credit with the central bank is required for settlement of another transaction, T2S will automatically find other eligible collateral on the participant's account and release the specific security. This sophisticated autocollateralisation process minimises the need for cash balances and facilitates a high degree of settlement efficiency.

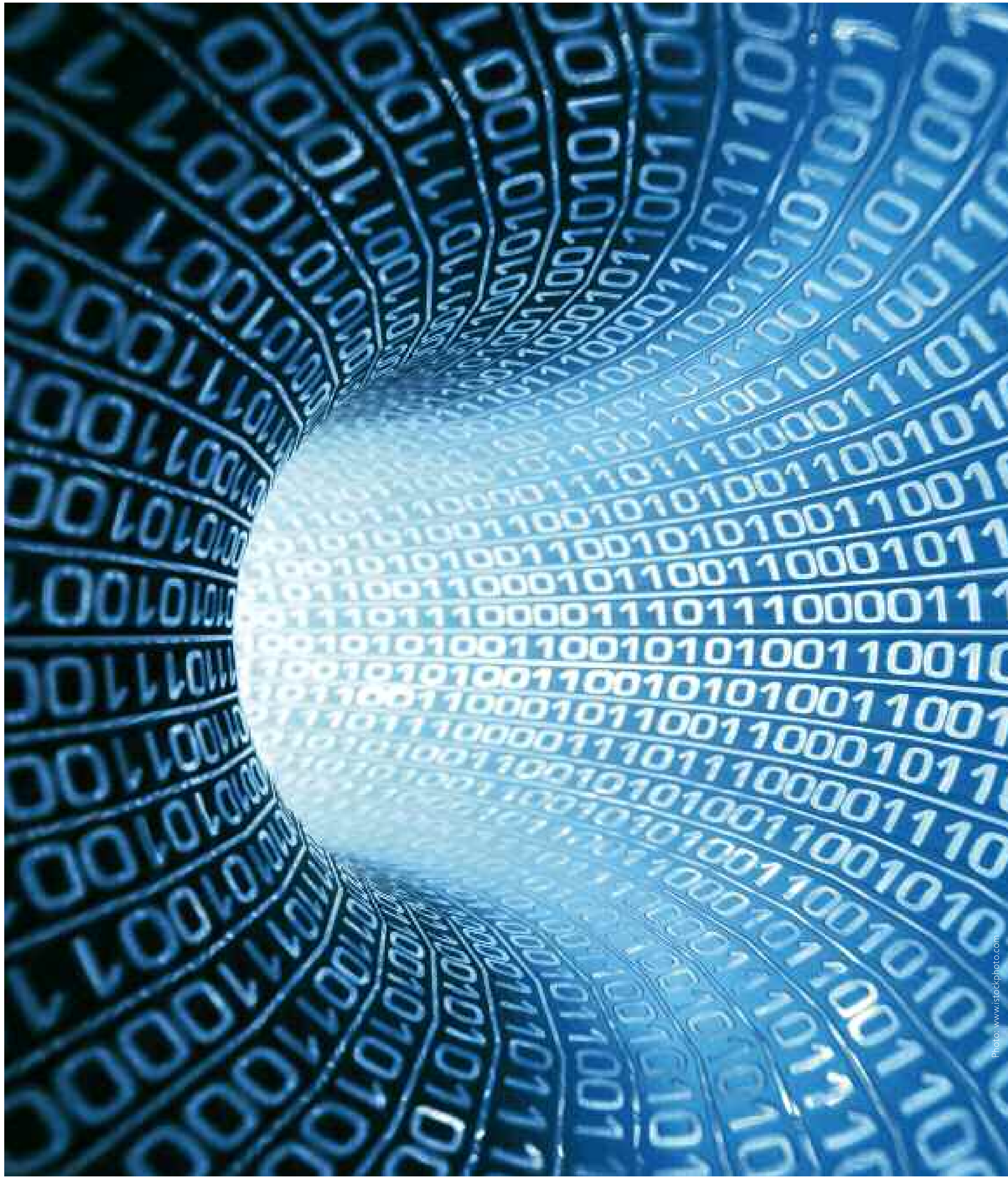
Optimisation of liquidity

There will be a real-time link between a market participant's T2S dedicated cash account(s) and its main RTGS cash account(s) outside T2S at the central bank, enabling banks and their clients to benefit from a wide range of liquidity management services. T2S will allow a highly flexible cash account structure to account for the different needs of market participants (e.g. separate accounts for proprietary or client transactions, or for payments related to corporate actions). There will also be the possibility to reserve liquidity for specific uses, monitor credit limits provided to clients, have cashflow forecasts, implement predefined or standard liquidity transfers, and perform automatic end-of-day sweeps from the dedicated cash account to the main RTGS account, etc.

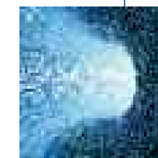
Direct connectivity

With the consent of their CSD, market participants will be able to "connect directly" to T2S, routing their settlement instructions directly to the T2S platform rather than via a CSD. Furthermore, they will be able to query all instruction, settlement and account-related information using a centralised information hub. Direct connectivity will therefore enable market participants with high settlement volumes to rationalise their back-office activity and potentially centralise the handling of securities settlement at a single location for almost all securities circulating in Europe. CSDs continue to maintain the account of their directly connected participant.

slate", unburdened by the requirements of legacy systems, has proved to be an enormous advantage in developing the T2S user requirements. Not only has it enabled users to cherry-pick the best features and functionalities of existing settlement platforms, but it also provided the impetus to harmonise and standardise processes, which would not have happened otherwise. The User Requirements Document (URD), which has been developed over a period of more than two years and is now around 900 pages long, describes the detailed functionality of T2S and covers aspects such as the lifecycle management and matching facilities, the provision and monitoring of liquidity, the autocollateralisation functionality, the settlement optimisation algorithms, and a host of others. Some of the core functionalities are explained in Box 2.



WHAT ARE THE BENEFITS FOR EUROPE?



The most important, and most direct, benefit of T2S will be a significant reduction in cross-border settlement fees, which are still, on average, more than ten times higher than domestic fees. T2S will achieve this result by processing cross-border and domestic transactions in exactly the same way, and therefore at the same cost, replacing today's very complex methods involving processing in at least two CSDs and, most of the time, also in one or several custodian banks. Indeed, settlement is primarily a fixed-cost business, so as transaction volumes increase, the average cost per transaction declines. In fact, the settlement business has all the features of a natural monopoly. In 2008, 346 million delivery instructions were processed by CSDs in the EU, with a total value of €831 trillion. If this volume of transactions were processed by a single settlement platform, rather than being fragmented across the systems of 40 different CSDs, it would be possible to achieve substantial economies of scale, reducing settlement fees to one of the lowest levels in the world. The Eurosystem has already announced its aim of settling standard DvP transactions at a fee below the current lowest domestic settlement fee. Furthermore, in line with the Code of Conduct, T2S will provide a high level of transparency and simplicity in the pricing of its services. Market participants will know exactly what T2S charges them for settling a transaction.

The benefits of T2S are not limited to the reduction in direct processing costs: other benefits will come from facilitating the harmonisation of Europe's post-trading environment. In this respect, T2S will also be a big step towards a single market for financial services, thereby supporting the EU's Lisbon strategy which is aimed at making the EU the most competitive economy in the world. T2S will create a "domestic" market for the settlement of European securities, directly and indirectly removing many of the "Giovannini barriers" to cross-border clearing and settlement. For example, T2S will directly contribute towards the elimination of Giovannini barrier 1, as it will provide a single IT platform with common interfaces and a single messaging protocol (known as ISO20022) covering instructing, matching, settlement, querying and reporting across all connected markets. Furthermore, by introducing a single operational schedule for all connected markets (including a single start-of-day and end-of-day, a common night-time settlement window and a single calendar per T2S-eligible currency), T2S will be instrumental in removing Giovannini barrier 7. Furthermore, by extending a single harmonised settlement model comprising

DvP in central bank money to all domestic and cross-border transactions, T2S will significantly help to remove the remaining technical obstacles to interoperability, connectivity and intraday finality across different markets (Giovannini barriers 2, 4 and 5). Lastly, the lifecycle management and matching functionality in T2S will provide completely harmonised services in the area of settlement instruction management, fully implementing the standards and recommendations already produced in this area.

Beyond its direct impact, T2S will act as an important catalyst for further harmonisation across Europe. Significant progress in this direction has already been made by several T2S subgroups – composed of industry experts – on the harmonisation of instructions management and settlement processes, as well as on the processing of corporate actions on unsettled transactions. As work on implementing T2S progresses, the project is continually pressing for more harmonisation and either tackles this need directly or refers the relevant issue to the European Commission's CESAME2 group, which is responsible for dismantling the Giovaninni barriers.

As a result of reduced settlement costs, increased competition and greater harmonisation, T2S will have a positive impact on European economic growth. The lower fees for settlement – and potentially for other post-trading services – are expected to be passed on to end investors through increased competition between intermediaries. Furthermore, by making it easier and less costly to access cross-border securities, investors will be able to hold, and benefit from, more diversified portfolios, and issuers will benefit from a more diversified investor base. Securities markets will become more liquid and more attractive. Therefore, the cost of capital will decrease for issuers. They will be able to invest more and thus generate more economic growth.

Finally, T2S will have a positive impact on financial stability. The recent financial crisis, which led to an environment of high volatility and sudden increases in trading volumes, highlighted the crucial role that market infrastructures will continue to play in preserving the stability, soundness and safety of the global financial system in the future. T2S will contribute to financial stability in three ways. First, it will drastically reduce or even eliminate the risks that still affect the settlement of cross-border securities transactions. Second, it will help banks to optimise their collateral and liquidity management, which is crucial in times of financial market turbulence.

Third, by fostering greater efficiency and integration of European financial markets, T2S will promote greater diversification and sharing of risk, which will help make the whole system more stable.


Photo: www.istockphoto.com

FURTHER INFORMATION ON T2S

Developments in the T2S project are proceeding at a rapid pace. In particular, there are important discussions ongoing regarding the governance of T2S during the development and operational phases, the contractual relations between the Eurosystem and the participating CSDs and harmonisation initiatives. These developments can be followed by logging on to the T2S website at www.ecb.europa.eu/t2s. The website also provides details of the T2S programme plan, which sets out the main phases and milestones of the project. T2S also publishes a quarterly newsletter, T2S OnLine, which provides an update on the latest decisions by the T2S Programme Board and the ECB's Governing Council, as well as an outlook on the most important future workstreams.