



EUROPEAN CENTRAL BANK

EUROSYSTEM



**T2S OnLine**  
QUARTERLY REVIEW  
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EDITORIAL

INSIGHT

BAYLE'S VIEW

INTRODUCING THE  
UDFS TEAM

T2S IS OnLine FOR YOU



Jean-Michel Godeffroy

## EDITORIAL

There are two very important activities for the T2S project in 2011.

Firstly, there is the finalisation of the contractual agreements with the central securities depositories (CSDs) and central banks. Over the last months, thanks to the hard work and cooperation between the T2S Team and the CSDs, we are now almost there. By the end of May, we will be ready to send the Framework Agreement to the European Securities and Markets Authority and to the T2S Advisory Group for feedback. This is to ensure that there are no unintended regulatory obstacles that prevent CSDs from signing the Agreement and that market participants – which often have back-to-back contracts with their CSDs – are comfortable with the terms and conditions. Once the feedback from regulators and market participants has been taken on board, a final version of the Framework Agreement will be submitted to the Governing Council for approval in July. Signing ceremonies are then planned for later this year, in November, which will mark a major milestone in the project.

Secondly, and of no less importance, there is the completion of the User Detailed Functional Specifications (UDFS). As with the Framework Agreement, a vast amount of resources from the T2S team, as well as from the CSDs and market participants, have been dedicated to this deliverable over the past 12 months. [The UDFS is the most comprehensive description yet of the services that T2S will provide to users. It also implements the User Requirements Document \(URD\).](#)

If delivering T2S were to be compared to crossing a river, the URD would be the first stepping stone to be used, followed by the General Functional Specifications. With each step, the river would get deeper and the stepping stones taller and sturdier. The UDFS would be the tallest and sturdiest of them all, being situated right in the middle of the deepest part of the river. After the UDFS had been passed, the river would become shallower, with only the smaller stepping stones of the Business Process Description document and the User Handbook left.

Given that the first version of the UDFS was made available for market consultation at the end of March, it will be of no surprise that this spring issue of T2S Online is devoted entirely to the UDFS. [Indeed, I would like to draw your attention to the fact that the consultation process will last until the end of May.](#) Although there were some dedicated workshops with market participants during the drafting stage, it is especially important that the market as a whole has an opportunity to participate, so I cannot emphasise enough that you should take the time to read this document and to forward us your comments.

Admittedly, with more pages than Tolstoy's War and Peace, it is not exactly ideal bedtime reading. But since it describes all of the interactions between T2S and the CSDs and their market participants, a high-quality UDFS will be a key factor in a CSD's decision on how best to reshape its system.

Why should you comment? Well, if you do not, you risk that someone else may decide as to whether "your" reshaping option is possible from a technical point of view. [In addition, you need to check that T2S will actually provide the full range of services that](#)

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you expect, and that you can adapt your own IT systems in the way that you want. For more details on the market consultation, I would encourage you to read [Bayle's View](#) later in this issue.

Lastly, I would like to point out that the first version of the UDFS was completed in accordance with the timetable specified in the T2S project plan. [We are now past the halfway point in the project and remain well on track to “go live” in September 2014.](#)

I sincerely hope you enjoy this issue.

Jean-Michel Godeffroy  
Chairman of the T2S Programme Board



## INSIGHT

### COMMUNICATION STANDARDS IN T2S

#### **T2S and ISO 20022: a logical alliance**

At an early stage in the T2S project, the Eurosystem adopted the ISO 20022 standard in its related communication. The standard is a new frame of reference used by the financial services industry with a view to regularising messages across the industry, be it in relation to payments, settlement instructions or corporate actions, to name but a few categories. In a nutshell, this framework covers three sets of issues: first, business processes and concepts; second, logical messages or message models; and, finally, syntax. It is important to note that the framework is syntax-independent: while XML is the most widely used language under ISO 20022, the standard also allows the use of other languages. An improvement on competitive standards, this framework is expected to permit maximum flexibility when it comes to adapting communication standards so that they keep up with the rapid pace of development in the financial world.

The synergies between T2S and ISO 20022 are obvious. T2S, as the future pan-European platform for securities settlement, will offer a state-of-the-art settlement engine for delivery-versus-payment instructions in central bank money. Aside from its variety of actors, the services T2S provides will also be wide-ranging, extending from settlement and reconciliation to, for example, cash management for interaction with real-time gross settlement (RTGS) systems, the management of securities transactions for reporting purposes, account management and reference data. On the one hand, given its broad reach, T2S provides a business case for ISO 20022 and could therefore be considered a driver of standardisation in the European market. On the other hand, [ISO 20022 is the perfect solution for T2S, as the standard applies to all business areas falling within the scope of T2S, as well as end-to-end transactions, thus enhancing straight-through processing and market efficiency.](#)

It is expected that by the start of T2S operations in 2014, most of the financial community will have adopted ISO 20022, with the T2S community at the forefront of communication standards.

#### **The story so far**

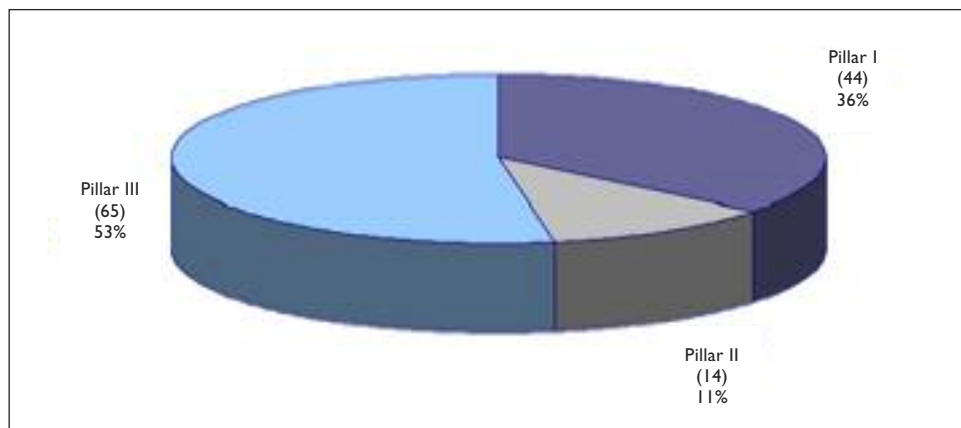
In 2008 work began on the message requirements described in the User Requirements Document: T2S requirements were reviewed to determine if existing ISO messages left any gaps that would need to be filled. This review was conducted jointly by the European Central Bank, the four national central banks comprising the 4CB team and SWIFT Standards.<sup>1</sup> [Essential support was provided by the message experts found among the future users of T2S, who met under the auspices of the Sub-group on message standardisation \(SGMS\), chaired by Paolo Carabelli.](#) Having these experts on board from the start was of key importance, given that they are usually among those called upon to sit on the committees of the International Organization for Standardization (ISO) that

<sup>1</sup> As the ISO 20022 registration authority, SWIFT is the guardian of the ISO 20022 Financial Repository, acting on behalf of the International Organization for Standardization. In addition, SWIFT plays an important role in smoothing the transition between ISO 15022 (the current standards) and the ISO 20022 standard. SWIFT was requested by its community to develop ISO 20022 messages equivalent to ISO 15022, to allow “newcomers” to adopt ISO 20022 directly. It is in its capacity as an independent standards expert that SWIFT is involved in the T2S project.

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are responsible for examining the compliance of messages with ISO standards. The experts were able to provide support throughout the review, evaluating the compliance of existing messages, as well as the most efficient ways in which to develop new messages. Indeed, at an early stage, three categories (or “pillars”) of messages were identified as being necessary for T2S.

- Pillar I pertains to messages that already exist under the ISO 20022 standard and largely fulfil T2S requirements, although some messages may require a few adjustments to ensure that all the information needed by T2S is covered. These adjustments will be carried out on the basis of maintenance requests submitted to ISO.
- Pillar II relates to as-yet-undeveloped messages that could be of use to the wider financial community – i.e. not solely to T2S users – and includes, for example, reference data. SWIFT will take the lead in developing these messages, which will then be registered with ISO.
- Pillar III concerns not-yet-existing messages that are of relevance principally to the T2S community. Responsibility for their development has been entrusted to the 4CB team, with consultancy support provided by SWIFT Standards.



**Figure 1**

T2S messages: distribution across pillars as of UDFS 1.2 ((number of messages), as a percentage of total)

At the time this article was published, the User Detailed Functional Specifications (UDFS) version 1.0 already contained 104 messages; this is 85% of the total number of messages that will constitute Chapter 3 of the final UDFS to be released in October. By way of comparison, the ISO 20022 catalogue contains 287 messages. Moreover, the messages contained in UDFS 1.0 are those relating to the core activities in the area of T2S communication, including settlement instructions, statuses and allegements, as well essential reports.

### **Market review of UDFS 1.0: make sure you have your say!**

As illustrated above, the UDFS 1.0 represents a fairly comprehensive and stable picture of the final catalogue of messages to be used by T2S. It is “comprehensive” in that it already contains 85% of the total number of messages in chapter 3 and maintains a focus on essential functionalities. It can be seen as “stable” because, thanks to the regular review that will be conducted by the SGMS of the structure and content of the messages, we are confident that few changes will need to be made to the messages between the preliminary and final versions.

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However, the UDFS contains additional information supplementing the ISO 20022 catalogue, namely how the messages should be applied in practice in the broad range of T2S-specific cases. Moreover, while experts from the SGMS have been involved in examining the messages from the outset, their focus on message standards may be enhanced by the insights provided by other experts participating in the market review.

The previous versions of the UDFS received much attention, as exemplified in the impressive total of 515 comments received in relation to version 0.3. This figure is testament to the commitment of the T2S community. However, reviewers have focused on Chapter 1, to which 70% of comments referred, while only 20% of comments concerned Chapter 3. While we feel that this partly reflects the general level of confidence in the work performed, we would like Chapter 3 to be given the attention it deserves in view of the fact that the messages it contains are those that users will ultimately employ on a daily basis.

It is in the best interests of T2S users that the message documentation is formulated in such a way as to facilitate the implementation of, and adaptation to, T2S. **By providing your contribution to the market review promptly, you will help us greatly in ensuring the stability to which we alluded earlier in this article and which is critical to the further development of the platform and, in particular, the testing thereof.**

Some may think it better to wait for version 1.2 of the UDFS before examining Chapter 3, but we would disagree with this strategy for several reasons. First, the messages that will be added to version 1.2, although important, are not among the most essential. Second, the window for the September review is very short and will only allow time for comments on new additions, not on the UDFS 1.0, for which the consultation period ends on 27 May 2011.

We look forward to hearing from you.

If you would like to find out more about any of the topics covered in this article, you may wish to consult:

- the website of the T2S sub-group on message standardisation at <http://www.ecb.europa.eu/paym/t2s/governance/ag/html/substand/index.en.html>
- the website for the ISO 20022 at [www.iso20022.org](http://www.iso20022.org)



Stephanie Duverger, T2S Programme Office

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In this round-table interview, we speak to the people behind the T2S User Detailed Functional Specifications (UDFS): Valérie Fasquelle and Thierry Beley from the Banque de France, Sabine Lehner-Zeiff from the Deutsche Bundesbank, Massimiliano Renzetti from the Banca d'Italia and Mayte Arráez from the Banco de España. Among the issues they address are their experiences in preparing the UDFS, its importance for the T2S project and what they expect to come out of the market consultation. Please also see “Introducing the UDFS team”

***1. The publication of the UDFS is said to be a major milestone in the T2S project. But why is it so important at this stage of the project and for whom?***

**Sabine Lehner-Zeiff:**

The UDFS provides future T2S users with comprehensive information, on the basis of which they will be able to design and build their application-to-application interface. As these design and implementation processes will take time, it was very important that we were able to deliver the UDFS on time, not only from the perspective of the T2S users but also our own.

To illustrate its importance, let's take the analogy of a house under construction: the predecessors of the UDFS – the General Functional Specifications and the General Technical Specifications [GFS and GTS respectively] – can be compared to the construction plans for the house plus its foundations. The UDFS, on the other hand, corresponds to a detailed description of how to access the house and make use of its facilities. There are parts which explain what the “house” looks like and others outlining how best to “live in this house” and use its equipment. Without these details, it would be impossible for future users to prepare for the transfer to the new premises and to understand how to make optimum use of all it has to offer.

**Thierry Beley:**

The UDFS can be seen as a bridge between the internal architecture of the T2S platform and the user's view of the system. From the perspective of T2S actors, the UDFS makes it possible for them to bring their business applications in line with what is actually expected by the T2S application-to-application interface. From a functional design perspective, the UDFS presents an opportunity for those behind the T2S project to make sure that the design will allow users to fulfil all their business needs. In this respect, comments and questions from users will certainly prove to be invaluable to the 4CB functional teams.

***2. Since June 2010 the Eurosystem has held four workshops on the UDFS, in order to ensure early involvement of T2S actors in the project. It was envisaged that this would be beneficial for both the Eurosystem and market participants. Could you elaborate on this?***

**Sabine Lehner-Zeiff:**

On the one hand, the feedback provided at this early stage gave us an insight into users' expectations as regards how best to present information in a user-friendly and customer-oriented way, the level of detail required, what format the document should take, etc. On the other hand, the feedback improved and enriched each part of the documentation, allowing us to align it with users' needs. Finally, it helped us to anticipate,

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as far as possible, any comments and questions on the content. As regards the market participants, I assume they appreciate having received such detailed information at this early stage, as well as the opportunity to discuss and familiarise themselves with the content and style of the UDFS – so as to avoid any surprises later.

### **Mayte Arráez:**

As soon as work began on the UDFS, the 4CB teams organised workshops in order to create a platform on which to consult with market actors, so as to better understand their needs. The workshops have played a very important role in establishing an open and multilateral discussion on the details of the functional design not yet explained in the GFS. Learning about market players' expectations of the UDFS document has been a worthwhile experience. *Additionally, the process has allowed market players to assess the usefulness of the UDFS in helping them to adapt their systems to T2S requirements.*

***3. The UDFS has been submitted to the market for a two-month consultation, lasting until 27 May 2011. What do you expect from this consultation and the market participants? How could the National User Groups [NUGs] help to make the consultation worthwhile? Which other stakeholders are you expecting or encouraging to be active?***

### **Valérie Fasquelle:**

With the publication of the UDFS – as with that of the GFS previously – market participants have an opportunity to check that the main principles underlying T2S and the major functionalities offered by the platform provide sufficient support for their business as future T2S users.

The UDFS aims to provide future T2S users with the information necessary for them to design the interface to the T2S platform of their respective information systems. It includes the most detailed description yet of T2S services and an exhaustive description of the messages employed to support the use of these services.

Against this background, *there are two main things that I hope will come out of this consultation: first, a confirmation of the completeness of the services provided and, second, reassurance that the UDFS provides adequate support for future T2S users at this preparatory stage of the project.*

In this context, I expect the NUGs to encourage exchanges between the different stakeholders of their respective countries, ideally in such a way as to harmonise the positions of these stakeholders prior to the provision of their feedback during the consultation period.

### **Massimiliano Renzetti:**

As with the User Requirements Document [URD] drawn up during the user requirements phase, I would like market participants to help us in improving the quality of this important deliverable too. As regards the NUGs, they made a significant contribution to the drafting of the URD, by gathering information on the requirements of actors in their respective markets and passing on the views of their various stakeholders to the T2S Team. This was a great help to the Eurosystem in drawing up a

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consolidated list of requirements and identifying a number of potential areas for further harmonisation. In the same way, I believe NUGs can now play a very important role in this consultation too: they can support their stakeholders in reaping what was sown during the user requirements phase, i.e. in getting the most out of the services offered by T2S, within the context of their market and business practices.

**4. According to the programme plan, this is the only market consultation planned for the UDFS. Therefore – in view of the length of the document, as well as its importance and the limited consultation time available – to which aspects of the UDFS should the market pay special attention during the consultation period?**

### Thierry Beley:

T2S is designed to cover a wide range of functionalities. The functional teams have based their work on the URD, which reflects the high-level requirements of the different T2S users. Therefore, each stakeholder should try to review the UDFS from their own business perspective, in order to identify as soon as possible any gaps between their current practices and the processes described in the UDFS.

### Massimiliano Renzetti:

In a nutshell, the UDFS describes all the services that T2S provides to the diverse categories of T2S actors and gives a detailed description of how each T2S service is to be used. In so doing, the UDFS adopts a neutral approach and does not focus on a specific market or on a given business or technical framework. To this extent, the greatest contribution that each market participant can make at this stage is to read and comment on the UDFS from its own individual perspective, i.e. by focusing in its response on the specific set of T2S services it intends to use and taking into account its particular business and technical environment. I believe this will help us all in verifying whether T2S can offer an adequate service and user-friendly access to each and every T2S actor.

**5. Preparing the UDFS has entailed a considerable amount of coordination. How did you organise the work among yourselves and ensure consistency? What worked well and what was the most difficult aspect?**

### Valérie Fasquelle:

A significant part of the coordination efforts had already been carried out before the start of the production process itself. The production of the UDFS was, for the most part, organised in the same manner and according to the same principles as the GFS, although processes were improved thanks to the experience gained from the different versions of this document. In addition, guidelines were created in order to provide a common framework for all the 4CB teams involved in the drafting, and several prototypes were built to ensure a shared understanding of the content of the document. As regards the overall consistency of the document, several reviews were performed at regular intervals over the course of the drafting process, thereby ensuring – at least this is my hope – the high quality of the documentation submitted to the market for review.

Nevertheless, compiling the UDFS in such a way as to facilitate the preparation of all stakeholders for T2S remained a very intensive and challenging experience, not only for me as Functional Coordinator of the 4CB teams but for all the colleagues involved in

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*this collective task.* This obviously means that coordination was indeed of the utmost importance in ensuring the punctual delivery of the document, as well as its high quality, in a context of high pressure. However, I believe that the key element in such projects remains the effective mobilisation of all contributors.

***6. How would you describe the experience of preparing the UDFS? How would you evaluate the processes that were involved in creating this document on the basis of the early consultation with the market? Would you have done anything differently?***

**Thierry Beley:**

It would not be wise to design a system without seeking to involve its future users and to thus draw benefits from their various experiences. So, even if increasing the number of actors involved in a given workstream necessarily adds to the workload, *the early interaction with the market during the preparation of the UDFS has definitely been of great benefit to the functional teams, as well as the T2S project as a whole.*

**Mayte Arráez:**

A huge amount of work has gone into elaborating and coordinating the content of such an extensive document. At the same time, *the work has also proven to be highly enriching and stimulating, as we tried to make sometimes difficult content more accessible.* Early interaction with the market increased the dynamism of the drafting process, and, as a result, the UDFS document reflects a commonly shared constructive spirit.

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### ANOTHER TECHNICAL DOCUMENT OR A KEY BUILDING BLOCK?

Even if you are familiar with T2S you may wonder what the UDFS is. You might even think that it is just another T2S document, but – given its importance and size (more than 1,500 pages, in addition to approximately 10,000 pages of message descriptions) – **it is more appropriate to call the UDFS a building block of the T2S specifications, and therefore of the T2S project.**

This having been said, let us look at the essence of this major document and answer the question why you, or your staff, should read it.

The UDFS describes the T2S services and functionalities for stakeholders who need to design and build the interface between T2S and their own information system. More specifically, it comprises three main chapters.

- Chapter 1 is user-oriented and describes how T2S behaves from the point of view of the market participants. Without going into the detailed description of internal T2S processes, it will mainly give you a general understanding of T2S, and of the main principles behind the exchange of information between T2S and the T2S actors.
- Chapter 2 illustrates the dialogue that is triggered when a particular message is sent from T2S to a T2S actor, and vice versa, and it explains how T2S will behave when messages are sent and received.
- Chapter 3 is the chapter that has thus far received the least attention from the market. However, this chapter explains in detail the set of ISO messages that can be used to communicate with T2S (i.e. to run application-to-application communications with T2S). The chapter is thus extremely important as it details the entire set of messages that can be processed by the T2S system, and explains how each may be used in a particular context. This chapter provides, for each message, essential information on the scope, the schemas and the business context. Most of its components, in particular the schemas, have been discussed and elaborated in collaboration with the market, and we should all pay tribute to the T2S Advisory Group's Sub-Group on Standard Messages (SGMS) – chaired by Paolo Carabelli – which has reviewed them all and accompanied their registration process.

#### **Market consultation – your opinion is important for us**

On 22 March 2011, the T2S Programme Board approved the launching of a public market consultation on UDFS version 1.0. The consultation runs until 27 May 2011. **I would like to take this opportunity to strongly encourage you to take part in this consultation – your opinion matters to us.** T2S will be the new European securities settlement engine as of 2014, and you will most likely have to interact with it. This means that you will have to communicate with the T2S platform, i.e. you will need to speak its language.

As mentioned above, Chapter 3 describes the messages that can be used to communicate with T2S. 104 messages, or 85% of the total set of messages, are defined

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and explained, [see insight](#). This market consultation gives you an opportunity to assess whether these messages fulfil your business requirements. Are there any gaps that will hamper your efficient interaction with T2S and/or is the set of T2S services that you intend to use suitable?

Of course, a clear business strategy is needed before you can answer these questions. Finding the best approach to reshape is a key challenge, as I pointed out in my previous "[Bayle's view](#)". However, the right solution will maximise the benefits for all, lower the costs for securities settlement in Europe and pave the way for new business opportunities in the global financial market. [Use this consultation to reflect upon your business strategy. The T2S vision is becoming reality and it is time for you to ensure that the post-trade environment of tomorrow fits your needs.](#)

The consultation will also allow you to reflect on how harmonisation will impact your business. Increased benefits of harmonisation and standardisation across financial services will be a reality with ISO 20022. The future infrastructure is being prepared.

### **What parts to review?**

I would like to say that market participants have been involved in the preparation of the UDFS through dedicated workshops. We are thus confident that their views have been reflected.

However, as indicated by [Stephanie Duverger](#) in her article, previous reviewers have focused on Chapter 1, which was the subject of 70% of all comments received, while only 20% of the comments concerned Chapter 3 (excluding the message descriptions and schemas, which were scrutinised by the SGMS). I would like to stress that all parts of the UDFS are important and deserve the attention of the market.

[National user groups \(NUGs\) will, as usual, certainly play a major coordination role and help facilitate a successful consultation process, allowing each market to get the most out of the services offered by T2S.](#) The NUGs played a key role in the drafting of the User Requirements Document (URD), and I would like to encourage them to do the same in this context.

### **The process from here**

Following the market consultation, comments will be taken into account and a new version 1.2 of the UDFS will be released at the end of October 2011. Version 1.2 will include some additional technical messages not currently available. A new short consultation on these additional messages is therefore scheduled for September 2011. However, in the September consultation, all messages included in this version of the UDFS, i.e. the 104 messages therein, will be considered to be final. This is thus your last chance to ensure that the 104 messages are formulated in a way that facilitates your implementation and adaptation to T2S.

Version 1.2 of the UDFS will be the stable basis that allows directly connected T2S users to design and build their information systems for communicating with T2S. User testing

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will follow in early 2014, before the final launch of the first wave of migration in September 2014.

Let me concluded: the UDFS is not just a matter of technicalities for geeks. It is a major piece of work prepared primarily by the 4CB teams and is crucial for the success of the market's adaptation to the T2S world.



Marc Bayle, T2S Programme Manager and Head of the T2S Programme Office

## INTRODUCING THE UDFS TEAM

Largely inspired by the organisation put in place for TARGET2, the 4CB organisation for functional aspects relies, under the auspices of the 4CB Project Manager in charge of the coordination of the whole project, on two axes:

- the "vertical" axis reflects the activities of a given NCB with regard to the specifications and tests of a set of modules and domains, in line with the distribution of responsibilities among the 4CB;
- the "horizontal" axis refers to the transversal cross-NCB role played by the 4CB Functional Coordinator who is in charge, in its area, of supporting the project management with regard to functional issues, monitoring the progress of work and facilitating the project work between the various project teams.

Within this organisation, Valérie Fasquelle is acting as 4CB Functional Coordinator. She organises and coordinates exchanges between the four Functional Teams that comprise approximately 90 people. Each of the four teams is headed by a National Functional Correspondent, appointed by the respective NCB. These heads are:

- Sabine Lehner-Zeiff from the Deutsche Bundesbank;
- Mayte Arráez from the Banco de España;
- Massimiliano Renzetti from the Banca d'Italia; and
- Thierry Beley from the Banque de France.

This organisation has been in place since the very beginning of the T2S project and guarantees transparency, accountability, effectiveness and consistency of the 4CB contributions, as revealed in the recent delivery of UDFS 1.0.



Valérie Fasquelle  
Banque de France



Sabine Lehner-Zeiff  
Deutsche Bundesbank



Mayte Arráez  
Banco de España



Massimiliano Renzetti  
Banca d'Italia



Thierry Beley  
Banque de France

## T2S IS ONLINE FOR YOU

### **What is T2S OnLine?**

T2S OnLine is a quarterly review that will provide you with first hand information about the T2S programme. It will give you project updates, insights into T2S and details on the current outlook, but one should not forget that behind any project there are people. Therefore, in each issue, T2S OnLine will take you closer to the people of the T2S community. We hope you will find T2S OnLine to be an enjoyable tool for obtaining up-to-date information about T2S.

### **Where can you find T2S OnLine?**

T2S OnLine can, of course, be found online, with the option to print if you would still like to have a hard copy.

### **How can you use T2S OnLine?**

The best way is to read it from top to bottom in order to absorb all of the information on T2S. However, T2S OnLine is designed to allow for a quick read – by simply hovering with the cursor, for example, relevant information will pop up automatically (visit the webpage to see how this works, [www.t2s.eu](http://www.t2s.eu)). For those requiring more specialised information, the Insight section will offer two articles on subjects of particular interest.

### **How can you contribute?**

As with the project itself, we would also welcome your views on T2S OnLine. If you have any comments or if you would like to propose a subject for the Insight section, we would be very happy to hear from you. You can contact us by e-mail at [t2-s@ecb.europa.eu](mailto:t2-s@ecb.europa.eu)



Elin Amundsen and Stefania Secola, T2S Programme Office

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