

SETTLEMENT DAY IN T2S FOR SETTLEMENT IN NON-EURO

1. Background

The use of a single schedule for the T2S settlement day is established by the T2S User Requirements Document (URD). It is one of the first and key harmonisation agreements within the T2S governance arrangements.

The T2S Advisory Group (AG)¹ agreed, from the first stages of the T2S project, that the full compliance of T2S markets with the standard on the T2S schedule for a settlement day is a prerequisite for an efficient cross-CSD settlement in T2S in order to ensure efficient processes for market participants. Its implementation should provide assurance on the removal of Giovannini barrier 7 on *operating hours, settlement deadlines and opening days*², at least in the T2S markets. The target date for each T2S market to achieve full compliance with the T2S standard³ is its migration date to T2S.

The AG took note that the European Securities Market Authority (ESMA) proposals for the Central Securities Depositories Regulation (CSDR) implementing technical standards published on 28 September 2015, include the legal requirement that linked CSDs (in an interoperable link arrangement) *shall agree on equivalent standards concerning reconciliation, opening hours for the processing of the settlement and of the corporate actions and cut-off times*⁴.

In the context of new currencies joining T2S, a question arises as to whether the compliance criteria of the T2S standard need to be further clarified, as there could be diverging interpretations regarding the compliance of the operational model of non-Euro NCBs (e.g. Danish NCB) with the standard while this should be clear with a common understanding.

¹ Since March 2017, the AG has been replaced by the Advisory Group on Market Infrastructures for Securities and Collateral – AMI-SeCo.

² For further information, see http://ec.europa.eu/internal_market/financial-markets/docs/clearing/second_giovannini_report_en.pdf.

³ For the full text of the standard, see Annex I

⁴ See Annex II of the Final Report on the draft technical standards under the CSDR <https://www.esma.europa.eu/search/site/CSD%20requirements>

Upon bilateral discussions of the ECB team with the Danish NCB in relation to the planned schedule of its new RTGS system, the issue emerged in the T2S Harmonisation Steering Group (HSG) during its meeting on 8 and 9 November 2016. The HSG members were of the view that such a strategic discussion would benefit from the guidance of the Market Infrastructure Board (MIB).⁵

The MIB discussed the issue during the February and April 2017 meetings and provided guidance to the HSG based on the proposed options by the ECB team and as described in this note. The HSG is presenting herein the two options to the AMI-SeCo and invites its members to endorse a clarification on the T2S harmonisation standard.

2. Overview of a Settlement Day in T2S for non-euro NCBs

This section presents the settlement day for non-euro NCBs from the perspectives of (i) the T2S scope defining documents and (ii) the T2S harmonisation standard.

2.1 Settlement day in the T2S scope defining documents

The T2S scope defining documents, e.g. T2S User Requirements Document (URD), the T2S User Detailed Functional Specifications (UDFS) establish that there is a single (non-currency-specific) schedule for the settlement day in T2S.

As per the URD and UDFS, a NCB can request to the T2S operator “*to change the event scheduling deadlines of the settlement day independently for a T2S settlement currency in exceptional circumstances or contingency situations*”⁶.

Therefore, the T2S scope defining documents exclude, at least under normal business conditions, the diversions from the T2S schedule of the settlement day based on the settlement currency.

2.2 T2S harmonisation standard

In addition to the T2S scope defining documents, the T2S harmonisation standard on the Settlement day and calendar per se does not differentiate per currency (i.e. it is currency agnostic):

“T2S STANDARD: T2S markets should be fully compliant with the T2S schedule for the settlement day and calendar, available on the T2S website.”

⁵ The HSG members did not challenge the NCBs’ prerogative in using diverging timelines in contingency situation when there is a need for market intervention in the context of monetary policy. The focus of the HSG discussion was limited to the standard operating hours of T2S connected RTGS.

⁶ Refer to URD T2S.03.303

Furthermore, the standard compliance criteria (see annex) clarify that full compliance is only achieved if *all other T2S daytime operating hours and cut-off times are respected (delivery-versus-payment (DVP) cut-off, etc.) and if the CSDs' securities accounts and NCBs' dedicated cash accounts in T2S are available for bookings throughout the whole T2S timetable (credits, debits, realignment, etc.).*

3. Potential operational model of non-euro NCBs

Based on the above conditions, it is not possible in T2S to define currency-specific schedules of the settlement day on a permanent basis. However, a non-euro NCB might consider adopting an operational model which might be deemed as not fully compliant to the T2S harmonisation standard on the settlement day.

In the particular case of the Danish NCB, the cash sweep from the T2S DCAs in Kroner to the Danish RTGS is planned at 16:30 CET (i.e. the time of the optional cash sweep⁷ in T2S), instead of 17:45 CET (i.e. the time of the automatic cash sweep⁸ in T2S). In other words, the Danish NCB will withdraw the liquidity from the T2S dedicated cash accounts (DCAs) in its local currency (i.e. Kroner) earlier than the stipulated automatic cash sweep in T2S.

It is important to note here that after the T2S DVP cut-off at 16:00 CET, the very few non-standard settlement instructions against payment that are still eligible for intraday settlement in T2S are bilaterally agreed treasury management operations (BATM) and central bank operations (CBO). According to the Danish NCB, these operations will not be instructed by relevant T2S stakeholders in the Danish market after the optional cash sweep (i.e. 16:30 CET). The table below presents a comparison of the planned availability of the T2S EUR and DKK DCAs.

Table 1: Comparison of the planned availability of the T2S EUR and DKK DCAs

T2S Cut-off's	T2S (EUR) DCAs	T2S (DKK) DCAs
16:00 CET DVP cut-off	Available for settlement of CBO and BATM	Available for BATM and CBO
16:30 CET Optional Cash Sweep		Balances decrease to zero to enable settlement batch towards private investors at the CSD in D+1.
17:45 CET Mandatory Cash Sweep	Balances decrease to zero	

⁷ The "optional cash sweep" in T2S is an optional automatic process transferring each balance deviating from zero to a pre-defined RTGS account.

⁸ The "automated cash sweep" in T2S is a mandatory automatic process transferring each balance deviating from zero at the end of a settlement day to a pre-defined RTGS account.

Thus, the above mentioned operational model is based on a T2S standard functionality (i.e. the automated cash sweep) available only at the Real-Time settlement closure period⁹.

The planned Danish operational model is based on the schedule of the new Danish RTGS system (i.e. KRONOS II), in which the change of business day to D+1 takes place earlier than in T2 and T2S (17:30 CET in KRONOS II vs. 18:45 CET in T2 and in T2S) according to monetary policy implementation requirements in Danish Kroner.

The reason for this timing is that settlement of private investors balances will remain in the Danish CSD (i.e. VP). Thus, the Danish CSD needs to run a settlement batch against payment in D+1 before settlement begins in D+1 in T2S in order to make securities available at the start of the night-time settlement in T2S. As a consequence, the Danmarks Nationalbank has to open its monetary policy day (D+1) in its RTGS at 17:30 CET instead of 18:45 CET (Eurosystem/T2/T2S). Nevertheless, this difference is only on the schedules of both DKK and EUR RTGSs and does not affect the single schedule for a settlement day in T2S.

3.1 T2S harmonisation standard

The above presented operational model by Danmarks Nationalbank would translate into a slightly different schedule for settlement against payment in its national currency compared to the common schedule of the settlement day in T2S.

This might be deemed as being in conflict with the T2S standard on the settlement day and calendar (i.e. "Red" status) that stipulates, as part of the compliance criteria, that *"the CSDs' securities accounts (and NCBs' dedicated cash accounts) in T2S are available for bookings throughout the whole T2S timetable (credits, debits, realignment, etc.) and that all other T2S daytime (operating hours) and cut-off times are respected (delivery-versus-payment (DVP) cut-off, etc.)"*.

3.2 Provisions in the T2S Currency Participation agreement (T2S CPA)

In deciding whether the proposed Danish RTGS operational model is compatible with the policy interest of the (non-Euro) NCB to ensure the integrity of their national currency, the stipulations of the T2S CPA are relevant (see Annex).

The CAP states that, *"T2S is designed and operated so that the Connected NCBs will exercise full control in real time over the Dedicated Cash Accounts in their respective currency in T2S"* as well as that "...⁽⁴⁾

⁹ The Real-Time settlement closure in T2S is a period preceding the End of day period and starts with the DVP cut-off at 16:00 CET and ends with the FOP cut-off at 18:00 CET. It also includes other processes as the automatic reimbursement of collateralisation provided by CBs (16:30 CET) and the withdrawal of all liquidity from T2S to the relevant RTGSs via the automated cash sweeps (16:30 CET and 17:45 CET) .

The euro area and the Connected NCBs need to maintain control of their respective currencies in T2S. In particular they need to continue to be able to operate the cash accounts they hold for their Dedicated Cash Account Holders, and to be able to safeguard the integrity of their respective currency (which, for the purposes of the CPA, includes the implementation of monetary policy including all central bank credit operations as well as settlement in Central Bank Money in their currency).” Besides, the T2S CPA recognises the right of the non-Euro NCB to “suspend the settlement in [currency] if so requested by the [NCB];” and also establishes the obligation for non-Euro NCBs “according to its rules applicable to its RTGS Participants, make available, set up and close DCAs of its RTGS Participants in [currency] for all securities-related payment transactions in [currency] in T2S”.

However, these provisions in the T2S CPA do not provide non-euro NCBs with flexibility as regards the T2S schedule for a settlement day. Section 9.1.2 of Schedule 5¹⁰ of the T2S CPA explains that T2S operates on a single harmonised timeframe for centralised settlement procedures in euro and non-euro CeBM.

4. Impact on the T2S community

4.1 Operational and functional impact

In the particular case of the Danish RTGS, the operational impact for T2S market participants settling in Kroner would be limited, if any at all. Even though from a pure theoretical perspective the mentioned operational model would translate into a slightly different schedule for settlement against payment in Kroner in T2S, the real impact on the settlement efficiency in T2S is anticipated as being virtually null. The reason is that such an operational model could only trigger lack of cash in the hypothetical event of instructing BATM and CBO settlement instructions in Kroner after 16:30 CET. The CBO scenario is irrelevant as these operations can only be instructed by the Danish NCB itself. The BATM scenario does not appear to create operational difficulties as this could only be relevant if – in exceptional cases - a security would need to be made available via a Kroner BATM (after 16.30) so that it could be used for a euro BATM thereafter.

Furthermore, T2S market participants with no business in Kroner would not have any impact at all, as the common T2S settlement day is otherwise respected. This also includes T2S market participants instructing free of payment instructions on securities issued in the Danish CSD (i.e. VP), that would not be affected neither; i.e. the single common T2S FOP cut-off at 18:00 CET applies as for securities issued in any other CSD.

¹⁰ Pursuant to Article 2.r of the T2S CPA, the T2S CPA is composed of the Preamble and of Articles 1 to [48] as well as Schedules 1 to [12] OR [13]. The Schedules and the Annexes to the Schedules form part of this Agreement and shall have the same force and effect as if expressly set out in Articles 1 to [48].

Regarding the functional impact on the T2S platform, is a priori very limited, provided that the Danmarks Nationalbank plans to make use of a T2S standard functionality (i.e. the automated cash sweep).

4.2 Financial integration impact

Nevertheless, the discussion towards the potential revision of the harmonisation agreements with regards to the schedule for a settlement day should not focus on a particular case but be raised in a wider T2S and European harmonisation context. This is in anticipation of other currencies joining T2S in the future with potential stronger divergences in their operational schedules, as any current approaches can set a precedent.

During the discussion in the HSG meeting on 8 and 9 November 2016, most HSG members were of the view that there should be a single common schedule of the settlement day in T2S. This is important for removing the Giovannini barrier 7 on *operating hours, settlement deadlines and opening days* to a truly integrated financial market in Europe and not just in the euro area.

Other HSG members questioned the necessity for having, as a standard rule and not just for contingency needs, divergences in the availability of DCAs across T2S based on the availability of the relevant RTGS. This is in particular relevant taking into account recent developments, e.g. on financial innovation and instant payments, indicating a tendency towards 24/7/365 payment system availability.

5. Possible options

In order to address this issue, two possible options were identified:

- (i) Pragmatic approach with minor clarification on the standard compliance criteria
- (ii) Rigid approach with no clarification on the standard compliance criteria

5.1 Option 1: Pragmatic approach with minor clarification on the standard compliance criteria

*This option offers flexibility to Non-Euro NCBs while being compliant with the T2S standard on the schedule for a settlement day. Non-Euro NCBs can accommodate their operational models in T2S with no operational impact on the rest of the T2S community. This is achieved by introducing a slight clarification on the compliance criteria of the T2S harmonisation standard as proposed below (**amendments marked in bold**):*

T2S STANDARD: T2S markets should be fully compliant with the T2S schedule for the settlement day and calendar, available on the T2S website.

In order to ensure consistency when monitoring implementation across T2S markets, it should be clarified that the status “full compliance” with the T2S schedule and calendar is achieved if the following conditions are met by the T2S market/CSD in question.

The T2S market/CSD operational model should ensure that:

- 1) the CSDs’ securities accounts in T2S are available for bookings (credits, debits, realignment, etc.) until the FOP cut-off and NCBs’ dedicated cash accounts in T2S are available for bookings until the last cash sweep of the relevant currency throughout the whole T2S timetable (credits, debits, realignment, etc.);*
- 2) settlement efficiency in T2S is not affected – for example, the T2S market/CSD will participate in the start-of-day processes and in the timely processing of corporate actions in a systematic manner;*
- 3) all other T2S daytime (operating hours) and cut-off times are respected (delivery-versus-payment (DvP) cut-off, etc.);*
- 4) CSDs provide directly connected parties (DCPs) with authorisation for connecting to T2S (where required and subject to the relevant T2S technical requirements).*

The proposed clarification eliminates any potential room for interpretation of the compliance criteria and allows Non-Euro NCBs (e.g. Danmarks Nationalbank) to implement operational models making use of the automated cash sweep for all DCAs in their currencies. In addition, the compliance with the T2S standard is maintained since the automated cash sweep only takes place in T2S after the DVP cut-off and the reimbursement of intraday credit operations.

This would avoid necessary operational adaptations of the Danish NCB/market. As mentioned, it also avoids operational side impacts on the rest of the T2S community.

➤ **Consequences:**

- Clarification in the T2S harmonisation standard compliance criteria.

- **Pros:** offers certain flexibility to new markets/currencies to join T2S and accommodate their schedules in T2S according to their current availability of their RTGS’s and monetary policy implementation in their national currency. At the same time it limits the operational impact on the rest of the T2S community within the boundaries of the common single schedule of the settlement day.

- **Cons:** liquidity on the non-euro currency is withdrawn via the T2S cash sweep at 16:30 CET so settlement against payment of BATM instructions is not possible.

5.2 Option 2: Rigid approach with no clarification on the standard compliance criteria

In this option, non-Euro NCBs making use of the T2S cash sweep at 16:30 CET to totally decrease balances in its currency are deemed as not compliant with the T2S harmonisation standard on the settlement day (i.e. Red status).

This option entails a rigid approach to the T2S relevant operational timelines, by assessing that the operational model of the Danish DCAs does not make them “available throughout the whole T2S timelines”. This approach does not take into account that the Danish or other future similar operational model has virtually null impact on the settlement efficiency in T2S and T2S community, and is based on a T2S standard feature (i.e. the automated cash sweep) scheduled only after the single T2S DVP cut-off.

- **Consequences:**
 - Non-Euro NBCs/markets assigned a “Red” status with regards to compliance with the T2S standard on the settlement day and calendar.
 - The operational model by the Non-Euro NCB (i.e. Danish NCB) may need to be adapted in order to comply with the standard.
- **Pros:** avoids clarification of the T2S harmonisation standard compliance criteria.
- **Cons:** offers less flexibility for new markets/currencies to join T2S and accommodate their schedules in T2S according to the current availability of their RTGS's and monetary policy implementation requirements in their national currency. This approach may also require significant adaptations of the Non-Euro markets (CSD and NCB) joining T2S in order to comply with the standard even though no clear harmonisation benefit has been identified.

6. Conclusion

The common schedule for a settlement day in T2S (with no currency differentiation) is a key T2S harmonisation standard that removes the Giovannini barrier 7 in the T2S markets and contributes to the exclusion of national specificities from the T2S operational blueprint.

In the pragmatic approach, non-Euro NCBs could adopt operational models based on monetary policy requirements in which liquidity in their currency can be withdrawn via the T2S cash sweep at an earlier time (e.g. 16:30 CET for the Danish NCB) than the mandatory T2S one (17:45 CET). In any case this would take place after the single DVP Cut-off (16:00 CET) applicable to all T2S markets. Only non-

standard instructions are technically eligible for settlement against payment during that timeframe (i.e. between the 16:30 CET cash sweep and the BATM cut-off at 17:40 CET): CBOs can only be instructed by NCBs and limitations on BATMs are agreed in the Danish market and unlikely to create operational problems in any case. Accordingly, the impact of the mentioned operational model on (i) the settlement efficiency in T2S and (ii) the T2S community is anticipated as being effectively none.

While from a harmonisation standpoint sticking to the rigid approach (Option 2) would not materialise in any clear operational benefit for the T2S community, the adoption of the pragmatic approach clarifying the compliance criteria of the standard (Option 1) would offer the required additional flexibility to Non-Euro NCBs in their adaptation efforts to T2S within the limits of the common rules and scheduling events of the single schedule for a settlement day in T2S.

In view of the above, the MIB expressed support for option 1 (Pragmatic approach).

Following the MIB guidance the HSG members discussed the issue during its 8-9 June 2017 meeting.

The HSG members agreed to invite the AMI-SeCo to endorse option 1, i.e. the proposed clarification of the compliance criteria of the T2S standard on the settlement day.

ANNEX

1. T2S harmonisation standard

T2S STANDARD: T2S markets should be fully compliant with the T2S schedule for the settlement day and calendar, available on the T2S website.

In order to ensure consistency when monitoring implementation across T2S markets, it should be clarified that the status “full compliance” with the T2S schedule and calendar is achieved if the following conditions are met by the T2S market/CSD in question.

The T2S market/CSD operational model should ensure that:

- 1. the CSDs’ securities accounts (and NCBs’ dedicated cash accounts) in T2S are available for bookings throughout the whole T2S timetable (credits, debits, realignment, etc.);*
- 2. settlement efficiency in T2S is not affected – for example, the T2S market/CSD will participate in the start-of-day processes and in the timely processing of corporate actions in a systematic manner;*
- 3. all other T2S daytime (operating hours) and cut-off times are respected (delivery-versus-payment (DvP) cut-off, etc.);*

CSDs provide directly connected parties (DCPs) with authorisation for connecting to T2S (where required and subject to the relevant T2S technical requirements).

2. URD v 5.05

T2S.03.303 *“Currency-specific changing of daily event scheduling deadlines 14 T2S shall allow the T2S Operator to change the event scheduling deadlines of the settlement day independently for a T2S settlement currency in exceptional circumstances or contingency situations, based on a request by the relevant central bank. The change will be valid for the current settlement day only”.*

3. UDFS v 2.2

1.1.5.3 T2S settlement day management - *“The T2S Operator can manually intervene on the current business day schedule by inserting new events, changing the scheduled time for one or more events, or closing events so that they are not executed. In exceptional situations, it is possible to define certain events to be valid only for specific currencies: for instance, the DVP cut-off could be moved past the normal time for a single currency.”*

4. T2S CPA

Preamble- *“T2S is designed and operated so that the Connected NCBs will exercise full control in real time over the Dedicated Cash Accounts in their respective currency in T2S”*

Preamble *“...(4) The euro area and the Connected NCBs need to maintain control of their respective currencies in T2S. In particular they need to continue to be able to operate the cash accounts they hold for their Dedicated Cash Account Holders, and to be able to safeguard the integrity of their respective currency (which, for the purposes of the CPA, includes the implementation of monetary policy including all central bank credit operations as well as settlement in Central Bank Money in their currency).”*

Article 16 - Obligations of the Eurosystem related to the provision and use of the T2S Services
“..suspend the settlement in [currency] if so requested by the [NCB];”

Article 17 - Obligations of the [NCB] related to the provision and use of the T2S Services

“according to its rules applicable to its RTGS Participants, make available, set up and close DCAs of its RTGS Participants in [currency] for all securities-related payment transactions in [currency] in T2S”.

Schedule 5 - 9.1.2. T2S SD.SUP 012: T2S Settlement Day service component *“T2S operates on a single harmonised timeframe for centralised settlement procedures in euro and non-euro CeBM. This timeframe represents a balance between the user requirements for a pan-European timetable and the constraints and business needs of existing local schedules, and is in accordance with the market’s request for harmonised post-trading practices in the EU.”*