

AMI-SeCo Harmonisation Steering Group (HSG)

AMI-SeCo/AMI-Pay Joint Meeting

Agenda Item 3

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T2S ON TARGET2 CLOSING DAYS

The T2S harmonisation mid-year update following the T2S Migration Wave 4 highlighted that in 2017 eleven out of the eighteen already migrated CSDs in ten T2S markets were closed on three T2S opening days when T2 is closed, namely Good Friday, Easter Monday and 1 May (in the meantime, 2 markets have announced that as of 2018 they will be fully aligned with the T2S calendar and 2 other are discussing solutions with their market participants). This practice is not in line with the T2S harmonisation standard 5 on the calendar and the T2S scope defining documents (e.g. T2S User Requirements, T2S UDFS) which require participating CSDs to align their calendars with the T2S calendar. The issue triggered a discussion in the AMI-SeCo Harmonisation Steering Group (HSG) and its sub-structures, where a set of options have been considered for tackling it¹. In this regard, this note first presents the situation of the T2S markets with regard to the T2S standard and the requirements of the T2S scope defining documents before considering the impact on the T2S community. It then presents possible options to address the issue (including the consequences and pros and cons) as well as the outcome of the discussion in the HSG.

¹ In the meantime the CSG (in their meeting on 10 October) also had an exchange of views on the topic. Members of the CSG took the view that the choice for opening a CSD on RTGS closing days should be driven by business case considerations. The discussions on the issue have been also closely followed by the MIB.

1. Stipulations in the T2S standard and scope defining documents

1.1 The T2S standard on the calendar

The T2S community established the T2S harmonisation standards in order to foster financial integration in general, and smooth cross-border settlement in particular. The T2S Advisory Group (AG) agreed, from the first stages of the T2S project, on a single T2S calendar applicable to all T2S markets. In addition, the AG agreed that the T2S calendar should encompass but not be restricted by the TARGET 2 calendar. This means that the T2S should remain open on three calendar days when T2 is closed, i.e. Good Friday, Easter Monday and 1 May. There are four key considerations that the AG took into account in agreeing into the T2S calendar:

First, the key objective of the T2S standard is to contribute to the removal of Giovannini barrier 7 on *operating hours, settlement deadlines and opening days*² in the T2S markets (and indirectly in the EU).

Second, the T2S stakeholders argued that due to the increasingly interconnected European and global financial market, there are business needs which require securities settlement availability independently of Euro cash settlement availability. A typical example is the need to move securities or collateral in the Euro area (via Free of Payment transactions) in order to use the delivered assets in a collateral pool to support operations in a non-Euro area.

Third, the multicurrency potentiality of T2S, calls for a T2S calendar which does not impose restrictions on non-Euro RTGS and CSD operations in T2S. A concrete case is the Danish kroner migration to T2S as of 2018 and the fact that 1 May is a normal business day for the Danish RTGS.

Fourth, T2S has been designed from the outset as open to all securities that are fungible from a settlement perspective, independent of where they are issued. A typical example is Eurobonds which are issued in non-T2S CSDs. Attracting the Eurobond settlement activity in T2S operations while at the same

²“Differences in the operating hours of national systems complicate cross-border settlement, if at least one of the systems concerned does not operate real-time settlement or frequent batches. In such Settlement periods should be harmonised across the EU so as to reduce the need for costly funding arrangements in cross-system transactions. Remote access to a system located in another Member State is both legally and technically possible. However, practical impediments often remove it as an option for investors circumstances, differences in operating hours can result in the incompatibility of deadlines for matching and delivery in the different systems. This type of problem is aggravated when there are different deadlines for the matching or delivery of same instrument within a settlement system, depending on where it was traded. In addition, inconsistency between the deadlines/opening hours of payment systems and deadlines/opening hours of securities settlement systems can cause problems in the use of links. Cash and stock movements are usually separate and subject to their own messages in cross-system transfers. Also, a particular cost arises where differences in operating hours result in the need to pre-position stock in one system to ensure that it is transferred to another on time. Although European settlement systems are required to conform to the operating hours of TARGET, sufficient differences remain in the hours and deadlines to impede efficient cross-border clearing and settlement. If cross-border activity is to be facilitated, these national differences will need to give way to harmonised opening hours and settlement deadlines for the EU as

time restricting their settlement day availability was deemed as counterproductive by the T2S stakeholders in the AG.

The T2S harmonisation standard on the calendar establishes that:

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

One can note, however, that the starting point of the Giovannini barrier 7 is on the alignment of the opening days of the Securities Settlement Systems (SSSs) with the ones of the relevant RTGS³: but the scope of the T2S standard goes beyond (and the Giovannini report in 2001 had obviously not foreseen a system like T2S) and includes other previously mentioned considerations (e.g. cross-border mobility of collateral, international securities settlement).

Table 1: Deviations between T2S Settlement currencies RTGSs and T2S opening days

Day	TARGET2 Status	KRONOS II (DKK RTGS) status	T2S Status	Reasons for T2S being open
Good Friday	Closed	Closed	Open	Facilitating FOP settlement (e.g. cross-border collateral and international securities settlement) in line with the expectations of the T2S community and accommodation of opening days of potential new currencies
Easter Monday	Closed	Closed	Open	
1 May	Closed	Open	Open	Facilitating FOP and, as of 2018 Danish kroner DVP settlement (as per URD), in line with the expectations of the T2S community

This implies that a CSD of the euro area which is open on all T2 opening days but closed on Good Friday, Easter Monday and 1 May (i.e. T2 closing days) would be not compliant with the T2S standard. This is currently the case of 8 T2S markets⁴ and 9 CSDs. In this regard it should be noted that in the context of

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

³ This is reflected accordingly in the ECSDA’s response to the Giovannini report, that establishes ten standards in order to remove barrier 7 intended to align the opening days of the SSSs with the ones of the relevant RTGS. For further information see: http://ecsd.eu/wp-content/uploads/2014/07/2004_04_First_ECSDA_response_to_2nd_Giovannini_Report.pdf

⁴ T2S markets non-compliant with the T2S standard include BE (Euroclear Belgium), FR, GR, HU, IT, MT, NL, PT, and SK. The Belgium (NBB-SSS) market and RO markets have announced that as of 2018 they will be fully aligned with the T2S calendar and a status change to blue (fully-compliant) is expected to be endorsed by AMI-SeCo in its meeting in December 2017.

the usual T2S harmonisation implementation monitoring activities all of the non-compliant T2S markets reported that they would be fully compliant with the T2S standard. All the non-compliance cases however emerged once these markets entered into T2S operations.

1.2 Stipulations in the T2S scope defining documents

As per the T2S scope defining documents (e.g. T2S User Requirements, T2S UDFS), the T2S Principle 16 establishes that “T2S participating CSDs shall adopt the T2S calendar” and that “a CSD which closes due to a national holiday needs to provide a minimum level of service (e.g. to allow the realignment of settlement carried out in other CSDs)”

Furthermore, the scope-defining documents establish that T2S is a multi-currency settlement platform where transactions against payment in central bank money (CeBM) are only eligible for settlement in T2S according to the opening days of the RTGS for that currency. For settlement in euro CeBM, the calendar is the same as that for TARGET2 (T2), which is currently followed by all euro area markets (*UR-T2S.20.020*). The T2S User Requirements consider the potential inclusion of currencies other than euro and the accommodation of relevant opening days for these currencies (*UR-T2S.03.320*). This originally translated into the current extensive service availability of T2S that is only closed three days per year excluding weekends (i.e. on 25, 26 December and 1 January) in view of new currencies potentially joining T2S. When one currency is not available for cash settlement in T2S (i.e. closing day for this currency only), securities transactions *“can nevertheless be settled”* (*UDFS v2.3 - 1.4.1 T2S calendar*) in T2S either as transactions free of payment (FOP) or through transactions against payment denominated in other T2S Settlement currency (*UR-T2S.03.305*). Furthermore, the UDFS specifically mention that *“The settlement of FOP transactions is possible, for example, on TARGET2 closing days”* (*UDFS v2.3 - 1.4.1 T2S calendar*).

In summary, the operational model of those CSDs in T2S remaining closed on T2S opening days is deemed to be against the stipulations on the T2S scope defining documents and more concretely against the T2S Principle No 16, provided that no settlement services (not even realignment) are offered by CSDs during T2S opening days.

2. Impact on the T2S community

2.1 Operational and functional impact

From an operational perspective, settlement of FOP transactions or in the future DvP transactions in other T2S Settlement currencies is not possible in the books of non-compliant CSDs. This might have a negative impact on the cross-border settlement efficiency in T2S, as realignment instructions cannot be settled on those days⁵. As previously mentioned this might also have an impact on international securities and collateral management, as cross-border mobility in T2S is restricted on that period. Nevertheless, current estimations do not prove a strong demand for FOP collateral-related settlement on those days.

From a volumetric perspective, current transaction volumes during these days are low and therefore this may suggest a low impact. It is important to note, however, that while volumes may be low transactions might be important from other perspectives; e.g. financial stability in case of crisis. Subject to the volumetric assessment part of the AMI-SeCo Impact of non-compliance analysis⁶ and the future evolution of settlement volumes in T2S, preliminary assessments show a drastic drop of the FOP volume on the euro closing days even considering that eleven CSDs were closed (i.e. the FOP volume decreased significantly also in the open CSDs). As depicted on the table below, on those days there were decreases in the total FOP volume⁷ up to 96% compared to the average daily FOP volume in April. However, there are still circa. 30.000 FOP transactions involved in these three dates. In addition, it is as yet unclear what the nominal value of these transactions is and the potential systemic importance thereof.

Table 2: FOP daily average volumes vs. FOP volumes on T2 closing days.

Period	% of FOP Daily average
April 2017 (daily average)	100%
Good Friday	6.6%
Easter Monday	3.9%
1 May	13.0%

Source: T2S daily reports

⁵ Realignment instructions are created by T2S but they cannot settle due to the relevant restrictions in place, i.e. case 2. The settlement of these instructions can happen only once the restrictions are removed, i.e. end of the holiday.

⁶ Expected to be endorsed by AMI-SeCo in its meeting in December 2017.

⁷ Individual (CSD-specific) T2S transaction volumes cannot be used by the ECB without the specific consent of each of the CSDs. The preliminary volumetric assessment is therefore based on T2S overall volumes in relative terms.

In order to comply with the standard, non-compliant T2S markets have to bear the extra cost of extending the number of opening days as stipulated by the T2S harmonisation agreements. Thus, the limited volumes raise the question on the business case for opening during those days. As per the functional impact, there is a priori none, as the CSDs with no services available during those days are blocked via T2S standard functionalities.

2.2 Financial integration impact

Non-compliant T2S markets jeopardise the objectives of the T2S standard for a truly integrated market in Europe. Mobilisation of securities or collateral in the Euro area (via Free of Payment transactions) is not possible during the closing days so securities cannot be posted as collateral, which negatively affects global liquidity and collateral pools for CSD participants. The availability of international securities settlement (e.g. Eurobonds) is restricted, making T2S less attractive for its settlement.

3. Possible options to address the issue

In order to address the issue, three possible options have been identified. These options are further assessed in annex 1 including for each, a description of the envisaged consequences, pros and cons.

- (i) **Maintaining the standard and not changing the T2S or T2 calendars:** this option assumes that the initial reasoning for establishing the standard on the T2S operational day remains fully valid. In order to comply with the standard, CSDs in T2S have to remain open on all T2S opening days including closing days of the respective RTGS, at least with minimum service levels (e.g. realignment). This ensures that cross-border settlement is not restricted on currency closing days, in line with the T2S harmonisation agreements in place and the expectations of the T2S community.
- (ii) **Maintaining the standard but adapting the RTGSs or the T2S calendars:** this option offers three theoretical alternatives:

Alternative A – Decreasing the number of opening days of T2S and closing T2S on Good Friday, Easter Monday and 1 May: the deviating T2 closing days (Good Friday, Easter Monday and 1 May) would become T2S closing days as well, with possible implications on the Danish Kroner opening days calendar (1 May is a Kroner business day). . This sub-option assumes that the initial reasoning for setting the standard on the T2S operational day is no longer fully valid and economic reasons (cost and short-term business case considerations) should more strongly be taken into account. Its implementation would likely be challenging due to the required governance approval process for any change to the Kroner calendar.

Alternative B – Decreasing the number of opening days of T2S and closing T2S on Good Friday and Easter Monday but remaining open on 1 May: Good Friday and Easter Monday would become T2S closing days, as closing days of all T2S settlement currencies but T2S should remain open on 1 May as Kroner business day. This sub-option – similarly to Alternative A – assumes that the initial reasoning for setting the standard on the T2S operational day is no longer fully valid and economic reasons (cost and short-term business case considerations) should more strongly be taken into account to the extent that changes to the T2S settlement currency calendars are not required.

Alternative C – Increasing the number of opening days of T2: the deviating T2 closing days (Good Friday, Easter Monday and 1 May) would become T2 opening days. This sub-option assumes that increasing the number of business days in Euro would create the required business case for not compliant CSDs to remain open in all T2S opening days. This sub-option would have ramifications well beyond the T2S community and securities settlement and would raise the need to involve a wide range of stakeholders active in global financial markets. Its implementation would likely be challenging due to the required governance approval process for any change to the Euro calendar and the cost of establishing additional currency days.

(iii) Changing the standard: this option takes account of the initial reasoning for setting the standard on the T2S operational day as well as business case concerns to the extent that it accommodates the operational model of those CSDs that wish to stay closed when T2 is closed according to their business needs, provided that the removal of Giovannini barrier 7 is not jeopardised. This would be achieved via a change of the T2S standard on the calendar and its compliance criteria that allow CSDs adopting the described operational model, potentially in the direction of requiring CSDs to open at least on the opening days of the relevant currency. It would thus introduce “optional” operational days and would not be a pan-European solution. The potential exact rewording of the standard is to be further investigated and shall be defined only in case that initial guidance by the T2S community expresses interest for Option 3.

4. Outcome of the HSG discussion

During discussions within the HSG several of the non-compliant CSDs indicated that they decided to close on these days due to the lack of business case for handling only FOP transactions on these days (as T2 is not open, euro DvP settlement is not possible). It was also noted that in 2017 there have been no major complaints by market participants about the lack of a coordinated approach by CSDs on these

days.⁸ Several of the non-compliant CSDs indicated that opening T2 and making euro DvP settlement possible on these days would significantly improve their business case for opening. Furthermore, some of them noted that opening on such days would have wider repercussions (from operational, business and social aspects) on their participants and possibly even the clients of the participants. The HSG discussed the potential options and agreed that Option 2-a is not preferable, as 1 May is a currency day for Danish Kroner (a T2S settlement currency as of end 2018) and T2S has to accommodate the currency opening days. Option 3 was also proposed to be discarded as it is not in the spirit of pan-European harmonisation and would imply having different calendars among T2S markets. Hence, the HSG proposes to consider only the following three options:

1) Maintaining the T2S standard and not changing the T2S or T2 calendars;

2-b) Closing T2S on Good Friday and Easter Monday but keeping it open on 1 May (which is a business day for the Danish Market and a settlement date for the Danish Kroner)

2-c) Opening T2 on the three days, making possible euro DvP settlement in T2S on those days.

On option 1 it was noted that choosing it would likely maintain the status quo and non-compliance by several CSDs. On option 2-b some stakeholders perceived it as potentially a practical solution in the short term but lacking a longer term perspective (i.e. general trends at the global level point towards payment and settlement services being made available for longer hours to their users in some cases even 7/24/365). With regards to option 2-c several market stakeholders have argued that – while acknowledging the wide ramifications this would involve – the Eurosystem could start analysing the costs, benefits and impact of possibly keeping T2 open on these days.

The HSG also noted that the potential primary source of demand for FOP transactions on these three days may be collateral management and asked the HSG Collateral Management Harmonisation Task Force (CMH-TF) to carry-out a survey on the demand to mobilise collateral around markets at a global level on these days (see the summary of the outcome of the survey in Annex 2). The findings of the survey do not provide evidence of a strong demand for FOP settlement from a collateral management point of view. It is noted that at this juncture the market activity is generally low on these days. In light of this, based on today's volumes there seems to be no clear business case for FOP settlement on these days from a collateral management perspective. However, with a view to the increasing globalisation of collateral management this conclusion might change in the coming years.

Some HSG members highlighted that the current global trends and the Eurosystem's own initiatives (such as TIPS) point towards potentially more demanding liquidity management environment in the future. In

⁸ However, in the Dutch market several market participants demanded more clarity on how cross-CSD services in T2S were processed on these days.

such an environment a demand for core settlement infrastructures to be open on more days or longer hours might manifest. Finally, it was also highlighted that the cost / benefit analysis on the T2 and T2S calendar may also be influenced by the Eurosystem's work on T2-T2S consolidation.

5. Summary

The T2S harmonisation standard on the calendar is one of the key harmonisation agreements, providing assurance on the removal of Giovannini barrier 7 on *operating hours, settlement deadlines and opening days* in the T2S markets.

To date, 8 T2S markets with 9 CSDs closing on T2S opening days (when T2 is closed) are deemed as being non-compliant with the T2S standard (AMI-SeCo view) and against the related stipulations in the T2S scope defining documents establishing that CSDs have to comply fully with the T2S calendar.

Non-compliant CSDs may jeopardise objectives of the T2S standard as facilitating cross-border settlement in euro closing days. This is especially relevant to ensure securities and collateral mobility and availability of collateral pools and international securities settlement (e.g. Eurobonds settlement). Nevertheless, at this juncture there is no strong demand for collateral-related FOP settlement on those days.

Three options were initially identified in order to tackle the issue: (1) Maintaining the standard and not changing the T2S or T2 calendars, (2) Maintaining the standard but adapting the RTGSs or the T2S calendars (with 3 alternatives) and (3) Changing the standard. Each of the options has specific benefits and drawbacks and merits its own assessment. The HSG and the ECB team believe that the “à-la-carte” approach of option 3 is not in line with the spirit of the T2S harmonisation agenda and therefore not desirable. In view of the pros & cons analysis, the HSG proposes to narrow down the options and hence suggest to AMI-SeCo / AMI-Pay to consider only option 1 and alternatives b and c of option 2. The HSG preferable options are depicted on the table below including, for each, an assessment against the original objectives of the T2S standard as well as a summary of the HSG considerations.

AMI-SeCo/AMI-Pay members are invited to take note of the analysis and discuss the pros and cons of the options with a view to identify the AMI-SeCo / AMI-Pay preferable option to tackle the issue.

Table 3: HSG preferable options to address the issue in light of the T2S standard original objectives

HSG preferable options	T2S standard on the calendar key objectives checklist			Additional HSG considerations
	Contributes to removal of Giovannini barrier 7	Facilitates cross-border settlement (e.g. collateral pools, international securities) during currency closing days	Accommodates currency opening days	Summary of HSG considerations
(1) Maintaining the standard	Yes	Yes	Yes	Will likely preserve non-compliance at a number of CSDs
(2-b) Maintaining the standard but closing T2S on Good Friday and Easter Monday	Yes	No, as T2S would be closed	In case of new currencies joining T2S it would be less flexible, as there would be less T2S opening days	Could be considered practical solution over the short term but bears the risk of not being robust over the longer term (“going backwards”)
(2-c) Maintaining the standard but opening T2 on Good Friday, Easter Monday and 1 May	Yes	Yes, as all T2S opening days would become T2S settlement currency days	Yes	Eurosystem and market costs / benefits and wider ramifications would have to be carefully assessed

ANNEX

This annex includes (i) the detailed assessment of the options to tackle the issue, (ii) the CMH-TF feedback on T2/T2S opening days from collateral management perspective and (iii) the relevant references to the T2S scope defining documents and to the Giovannini second report.

1. Detailed assessment of the options

This section presents a detailed assessment of the options presented in section 3, including for each, a description of the envisaged consequences, pros and cons.

Option 1: Maintaining the standard and not changing the T2S or T2 calendars

This option assumes that the initial reasoning for establishing the standard on the T2S operational day remains fully valid. In order to comply with the standard, CSDs in T2S have to remain open on all T2S opening days including closing days of the respective RTGS, at least with minimum service levels (e.g. realignment). This ensures that cross-border settlement is not restricted on currency closing days, in line with the T2S harmonisation agreements in place that T2S markets committed to fulfil and therefore with the expressed expectations of the T2S community.

Table 4: Envisaged consequences, pros and cons of option 1 – Maintaining the standard and calendars

Consequences	<ul style="list-style-type: none"> • Adaptations and clarifications in the T2S harmonisation standard and in the T2S scope defining documents are not required. • Currently, nine non-compliant markets remaining with a red status with a potential increase after migration to T2S of the Final Wave CSDs.
Pros	<ul style="list-style-type: none"> • Domestic and Cross-border settlement in Danish Kroner is not restricted on 1 May. • Supports the principle of global liquidity and collateral pools for CSD participants acting in European and global markets. • Ensures that Eurobonds and other international securities can easily be settled in T2S (from a calendar perspective).
Cons	<ul style="list-style-type: none"> • Risk of a high number of T2S markets non-complying with the standard in the absence of a strong business or harmonisation justification; i.e. the T2 harmonisation standard could be challenged.

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| | <ul style="list-style-type: none">• Operational cost, if non-compliant markets extend the number of opening days of the CSD on RTGS closing days, in case they want to be fully compliant with the standard. |
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Option 2: Maintaining the standard but adapting the RTGS or T2S calendars

Maintaining the standard but adapting the RTGSs or the T2S calendars: this option offers three theoretical alternatives:

Alternative A – Decreasing the number of opening days of T2S and closing T2S on Good Friday, Easter Monday and 1 May: the deviating T2 closing days (Good Friday, Easter Monday and 1 May) would become T2S closing days as well, with possible implications on the Danish Kroner opening days calendar (1 May is a Kroner business day). This sub-option assumes that the initial reasoning for setting the standard on the T2S operational day is no longer fully valid and economic reasons (cost and short-term business case considerations) should more strongly be taken into account. Its implementation would likely be challenging due to the required governance approval process for any change to the Kroner calendar.

Alternative B – Decreasing the number of opening days of T2S and closing T2S on Good Friday and Easter Monday but remaining open on 1 May: Good Friday and Easter Monday would become T2S closing days, as closing days of all T2S settlement currencies but T2S should remain open on 1 May as Kroner business day. This sub-option – similarly to Alternative A – assumes that the initial reasoning for setting the standard on the T2S operational day is no longer fully valid and economic reasons (cost and short-term business case considerations) should more strongly be taken into account to the extent that changes to the T2S settlement currency calendars are not required.

Alternative C – Increasing the number of opening days of T2: the deviating T2 closing days (Good Friday, Easter Monday and 1 May) would become T2 opening days. This sub-option assumes that increasing the number of business days in Euro would create the required business case for not compliant CSDs to remain open in all T2S opening days. This sub-option would have ramifications well beyond the T2S community and securities settlement and would raise the need to involve a wide range of stakeholders active in global financial markets. Its implementation would likely be challenging due to the required governance approval process for any change to the Euro calendar and the cost of establishing additional currency days.

Table 5: Envisaged consequences, pros and cons of option 2 – Adapting calendars

Consequences	<i>All Alternatives</i>	<ul style="list-style-type: none"> • A blue status (i.e. full compliant) with the T2S standard on the calendar can be proposed for non-compliant T2S markets provided that the criteria is fully met. • No change to the T2S standard is required. • Changes to the T2S scope defining documents and potentially other T2S legal and operational documents (e.g. T2S FA, T2S MOP) are required. • Adaptation of RTGS or T2S calendars is required.
Pros	<i>Alt. A & B</i>	<ul style="list-style-type: none"> • Reduced operational cost, as the number of T2S opening days is decreased.
	<i>Alternative B</i>	<ul style="list-style-type: none"> • As T2S remains open on 1 May which is a Kroner business day, it avoids potential revision of the Kroner business days calendar. • Supported by the volumetric assessment, as the highest settlement volumes were observed on 1 May compared to the volumes in Easter. This volumetric impact might further increase once Danish Kroner will be settled on the T2S platform in 2018.
	<i>Alternative C</i>	<ul style="list-style-type: none"> • Increased service availability of T2 and euro T2S DvP.
Cons	<i>All Alternatives</i>	<ul style="list-style-type: none"> • Implementation complexity, as any change in the calendars (T2S or RTGS) would need to go through the respective governance approval process.
	<i>Alt. A & B</i>	<ul style="list-style-type: none"> • If the number of opening days of T2S is decreased, cross-border settlement would not be possible on those days with implications (i) on global liquidity and collateral pools for CSD participants acting in European and global markets and (ii) on the availability of Eurobonds and other international securities settlement. • The T2S calendar might need to be revised to accommodate opening days of new currencies in the future (as per T2S URD).
	<i>Alternative A</i>	<ul style="list-style-type: none"> • 1 May is a kroner business day and T2S (as per the T2S URD) has to accommodate the opening days of the T2S settlement currencies (thus 1 May would need to become a kroner closing day and therefore the agreement of the relevant stakeholders in the Danish market is a pre-requisite for implementing the alternative).
	<i>Alternative C</i>	<ul style="list-style-type: none"> • Opening T2 on three additional days would have ramifications well beyond the T2S community and securities settlement and would raise the need to involve a wide range of stakeholders active in global financial markets • Higher operational cost in case the number of T2 days is increased.

Option 3: Changing the standard

This option takes account of the initial reasoning for setting the standard on the T2S operational day as well as business case concerns and accommodates the operational model of those CSDs that wish to stay closed when T2 is closed according to their business needs, provided that the removal of Giovannini barrier 7 is not jeopardised. This would be achieved via a change of the T2S standard on the calendar and its compliance criteria that allow CSDs adopting the described operational model, potentially in the direction of requiring CSDs to open at least on the opening days of the relevant currency. It would thus introduce “optional” operational days. The potential exact rewording of the standard is to be further investigated and shall be defined only in case that initial guidance by the T2S community expresses interest for Option 3.

Table 6: Envisaged consequences, pros and cons of option 3 – Changing the standard

Consequences	<ul style="list-style-type: none"> • Adaptation and clarification in the T2S harmonisation standard. • Adaptation and clarification in the T2S scope defining documents. • A blue status (i.e. full compliant) with the T2S standard on the calendar is proposed for non-compliant T2S markets (provided that the criteria is fully met).
Pros	<ul style="list-style-type: none"> • Removal of Giovannini barrier 7 is not compromised providing the required flexibility to T2S markets based on CSDs business needs. • Straight forward and less costly to implement
Cons	<ul style="list-style-type: none"> • It is not a pan-European solution, as some CSDs may choose to open and others not, generating misalignments in the opening days across T2S markets. • Cross-border settlement of FOP transactions might be restricted during Good Friday, Easter Monday and 1 May (e.g. in open CSDs with direct or relayed links with closed CSDs) with implications on collateral and international business settlement. • Cross-border settlement in Danish Kroner might be restricted on 1 May (e.g. in open CSDs with direct or relayed links with closed CSDs). • Challenge to find the right balance in the rewording of the T2S standard and compliance criteria in order to accommodate the required flexibility with no room for interpretation and avoiding collateral effects. • Such “à-la-carte” approach does not appear to be in line with the overall philosophy of the T2S harmonisation agenda to create a single, harmonised and integrated market. • Risk that other CSDs decide to opt for this solution, which could lead to an even greater number of T2S markets closed on the three days

2. CMH-TF feedback on T2/T2S opening days from collateral management perspective

As a follow-up to its November meeting, the HSG requested the CMH-TF to gather input from the CMH-TF regarding the ongoing discussions about T2S/T2 opening days. The following feedback was provided from a collateral management perspective by CMH-TF members:

Data and information on collateral-related activity around Good Friday and Easter Monday

One TPA took data from Easter 2017 and Easter 2016 to review activity around these days and compared them to average activity that is seen on normal business days. For FOP deliveries into the TPA collateral provider accounts, or the FOP recalls from these accounts, it is observed that Good Friday and Easter Monday are generally very calm days. Activity is only 1/3 compared to normal business days, both in terms of number of transactions and collateral value delivered in or out. This is not just due to the fact that many T2S markets were closed, but activity is similarly small in markets such as ICSDs (Euroclear or Clearstream) that were (and regularly are) open on these days and the US. The one exception from that trend is Japan with no/few changes compared to normal business days.

It has to be considered that some TPAs settle between collateral providers and receivers on Good Friday and Easter Monday, because some TPAs internalise settlement in their systems and do not (have to) settle at the market level (CSD). Therefore, TPA balances do not drop (at least not massively) on such days when the internalised settlement activity remains at normal levels.

The number of collateral shortages did not change compared to normal business days (e.g., to call for additional collateral due to mark-to-market valuations). There was no increased activity compared to regular business days, which could mean that market participants did not face more or less collateral issues than on other days to meet margin calls.

One TPA observed an increase of recourse to collateral on the business day prior to Good Friday. Recourse to collateral dropped down again to normal levels the day after Easter Monday. This observation could mean that market participants seem to build buffers, i.e. hold extra collateral at the TPA to make sure they can meet margin calls, if they have to.

From an overall market liquidity perspective, this behaviour may not be ideal as it takes away liquidity resources and leads to inefficient funding allocations. It could be discussed with market participants to understand how big this effect is and what type of market participants build buffers (it could be smaller/2nd Tier European banks that build up the buffers, whereas the large dealers/banks do not show the same behaviour - the effect on market liquidity would then probably be more limited). It could be confirmed with market participants/banks, if the closing of T2S leads to some funding inefficiencies for smaller banks, in particular European banks, whereas global banks may have other ways to compensate with alternative collateral from global sources.

Observations on the business case from a collateral management point of view

Three different views/observations were made on the need (business case) from a collateral market perspective regarding the T2S opening days (Good Friday, Easter Monday and 1 May):

1. No need for (FOP) Settlements in T2S

Regarding the management of a pool of collateral dedicated to Eurosystem refinancing operations, one central bank and treasurers explained that, there is no specific business case to allow for FOP Settlements in T2S on Good Friday, Easter Monday and 1 May, as T2 is closed and there is no update of credit lines in T2 in any case. Moreover, banks in certain countries are generally closed on Easter Monday and 1 May, so there is no need for settlement in T2S. One bank explained that from a collateral management perspective, there would currently be no need to open T2S when T2 is closed, because T2 is needed for the provision of liquidity. However, in the future there could be requests to have both T2S and T2 open for liquidity/collateral management (e.g., to fund/manage liquidity for instant payments/TIPS settlement or to fulfil collateral/liquidity needs for future 24/7/365 services). One CCP explained that when T2 is closed, the CCP is closed for clearing and settlement as well due to the fact that cash and securities need to be transferred on all different margin types.

2. Need for FOP/DVP Settlements in T2S/T2

An ICSD and CSD explained the need for aligning the opening of T2 to the existing T2S schedule. FoP movements would be needed for securities in the respective settlement systems because mark-to-market evaluation will take place also on Good Friday, Easter Monday and 1 May. In addition, even if CSDs are open, the access to securities held in T2S could be used to collateralise exposures in currencies other than EUR, but the current process for pledging collateral to Eurosystem NCBs is inefficient on these three days (because of the closure of T2): Collateral can be credited / request for debit can be submitted, but resulting impact on customer cash balance at NCB can only be reflected on the next T2 opening day. Opening T2 on the three days in question, result in a possibility of both FoP / DvP settlements and seamless TPA - NCB interaction (for pledges).

Quantitative figures for opening T2 on these days cannot be extrapolated without taking Stock Exchange / Trading platform openings into account: If T2/T2S were open on the three days but Exchanges / Trading platforms remained closed, increase in settlement figures would be expected to remain limited to the part of the OTC business (and customers might not open trading desks for OTC only).

3. Nice to have (but no strong need) for (FOP) Settlements

One bank explained that it's operations will follow the same opening days as T2S (if FoP settlement is offered). The bank's securities financing and collateral management desks see it as a nice to have to

be able to mobilise collateral on (current) T2S closing days, as they could use such collateral for USD triparty. However, there is no willingness to accept additional costs for this (e.g. costs to T2S, CSDs or internal employee costs) as no positive cost/benefit for such is seen at this point in time. Seen from a back office perspective, if T2S is open, there will be trades for settlement at some point in time but it will not be used extensively as the mentioned dates are public holidays.

3. References

a. 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 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;*
- 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).*

b. [The Giovannini Group - Second Report on EU Clearing and Settlement Arrangements](#)

“Removing Barrier 7: Operating hours and settlement deadlines should be harmonised, using TARGET hours as the benchmark. ECSDA should take the lead in this initiative, in close co-ordination with the ESCB. This barrier should be removed within a period of two years from the initiation of this project. Barrier 7 relates to differences in the operating hours of national systems, which can result in the incompatibility of deadlines for matching and delivery in the different systems. EU settlement systems are required to conform to the operating hours of TARGET for those assets eligible for use in ESCB

credit operations, but sufficient differences remain in the opening days,⁹ hours and deadlines to impede efficient cross-border clearing and settlement. The Group believes that opening days, hours and settlement deadlines should be harmonised for the EU as a whole. As a minimum, there should be a common window of hours during the day when all systems are open in order to facilitate cross-border transfers. In addition, where systems operate on the basis of batch processes, the number and frequency of batches should be sufficient to guarantee that securities can be transferred between systems intra-day. First steps towards harmonisation of opening hours have already been taken. The ECB Users Standards (laid down in 1999) require that all SSSs that are used by the Eurosystem for its monetary policy and intraday operations (in practice, all of them with very few exceptions) should have operating days and hours consistent with those of TARGET. Recent work by central banks, system operators and banks to improve the working of the Correspondent Central Banking Model (CCBM) has confirmed opening hours as a factor, which reduces the efficiency of these cross-border transfers. Operators have already agreed that settlement systems could remain open until 18.00 CET for settlement of treasury transactions. However, harmonisation of the closing hours of the systems cannot be sufficient to meet the needs of the market. In particular, there is a need to harmonise the time at which the last transaction to be settled on a given day can be entered into the system. Any initiative to fully harmonise opening hours is the responsibility of the private sector. The European Central Securities Depository Association (ECSDA) should take the lead in this project, but there will be a need for co-ordination with central banks, stock exchanges and users of systems. The project should begin as soon as possible and have established harmonised opening hours for all EU clearing and settlement providers within a period of two years from the initiation of this project.”

c. [T2S URD v 5.05](#)

Principle 16: All CSDs participating in T2S shall have a calendar of opening days with harmonised opening and closing times for settlement business *The participating CSDs shall adopt the T2S calendar. For settlement of euro, this is the same as the TARGET2 calendar. Settlement in other currencies may deviate from the calendar for euro settlement. Delivery versus payment (DvP) settlement via T2S shall not be possible outside these calendars. Within the T2S calendar, a CSD which closes due to a national holiday needs to provide a minimum level of service (e.g. to allow the realignment of*

⁹ There is a harmonised calendar of opening days for TARGET, but this has not led to a complete harmonisation of opening days for the securities settlement systems. In fact, since the ECB standards apply only to monetary policy or intra-day credit operations, SSSs are allowed to be closed during TARGET operating hours if the securities necessary to settle these operations have been pre-deposited with the local central bank – which will ensure settlement of the securities. This arrangement does not, however, cover the settlement of interbank operations.

settlement carried out in other CSDs). The opening and closing times cover daytime and night-time settlement. They are compatible with, though perhaps not identical to, TARGET2 operating hours. T2S provides exact cut-off times within the single T2S operating timetable – different cut-off times might for instance be required for specific operations (DvP notification submission, automatic lending operations, etc.).

Principle 10: T2S shall be technically capable of settling currencies other than the euro *T2S is technically capable of providing settlement not only in euro central bank money but also in non-euro central bank money. T2S handles all currencies in T2S on an equal basis. Currencies other than the euro need to fulfil the eligibility conditions for inclusion in T2S as set out in the T2S Guideline. Non-euro area central banks are expected to adapt to a harmonised, standardised interface.*

d. UDFS v 2.2 [1.4.1 T2S calendar](#)