EUROPEAN CENTRAL BANK

EUROSYSTEM

ECB-PUBLIC

Applicability of CPMI-IOSCO Principles for financial market infrastructures to TARGET2-Securities

In June 2013 the Governing Council of the ECB adopted[1] the CPMI-IOSCO Principles for financial market infrastructures (PFMI)[2] as the standards for Eurosystem oversight of all types of FMIs in the euro area under Eurosystem responsibility.

Owing to the specific nature of TARGET2-Securities (T2S)[3], only a subset of the Principles set out in the PFMI and related Key Considerations (KCs) are deemed directly applicable to T2S. To address two different oversight motivations, i.e. (1) the need for T2S to comply with principles of a general nature, which underpin the provision of all T2S services, and (2) the need for T2S to facilitate the compliance of financial market infrastructures (FMIs) using T2S services with the respective principles, two categories that determine the applicability of individual principles to T2S were established:

- **Category 1** includes principles (and KCs) of a general nature which underpin the provision of T2S services. The compliance of T2S with these principles is essential to establish a baseline for the safe and efficient provision of T2S services in line with the Eurosystem responsibilities. Examples of this would be the need for T2S to rely on a sound legal basis and governance that takes into account the Eurosystem legal framework, and transparent, objective and risk-based criteria for participation which permit fair and open access.
- **Category 2** includes principles (and KCs) with which T2S compliance is needed to facilitate the compliance with the PFMI of FMIs using T2S. The observance of these principles by T2S is justified insofar as T2S is a facilitator of key services to FMIs, which they in turn provide to their participants. Those services are typically assessed against the PFMI by the overseers of the providing FMIs, because they normally relate to activities not legally attributed to T2S but to the FMIs using T2S services. An example of this would be the compliance with the Principle 8 (settlement finality), for which T2S can only provide the technical means to achieve real-time gross settlement, but it is under the legal remit of the CSDs using T2S to modify their rules accordingly.

[1] https://www.ecb.europa.eu/press/govcdec/otherdec/2013/html/gc130621.en.html

[2] CPMI-IOSCO Principles for Financial Market Infrastructures (April 2012). https://www.bis.org/cpmi/publ/d101a.pdf

[3] T2S does not directly fall under the definition of financial market infrastructure as defined in the CPMI-IOSCO report, i.e. a “multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions”. However, the Eurosystem decided to apply the PFMI to T2S as these principles refer to functions technically performed by T2S, i.e. settlement and recording of securities transactions.

Application of principles and key considerations of the CPMI IOSCO PFMI to T2S		
X Fully applicable, **(X)** Partly applicable, **n/a** not applicable to T2S When applicable: Category 1: Principles (and KCs) of a general nature; Category 2: Principles (and KCs) with which T2S compliance is needed to facilitate the further compliance of FMIs using T2S with the respective principles.		
Principles	**Applicable**	**Category(ies)**[4]
1. Legal basis	X	1,2
2. Governance	(X)	1
3. Framework for the comprehensive management of risks	(X)	1
4. Credit risk	(X)	2
5. Collateral	(X)	2
6. Margin	n/a	n/a
7. Liquidity risk	(X)	2
8. Settlement finality	X	2
9. Money settlements	(X)	2
10. Physical deliveries	n/a	n/a
11. Central securities depositories	X	2
12. Exchange-of-value settlement systems	X	2
13. Participant-default rules and procedures	X	1,2
14. Segregation and portability	n/a	n/a
15. General business risk	(X)	1
16. Custody and investment risks	n/a	n/a
17. Operational risk	X	1,2
18. Access and participation requirements	X	1
19. Tiered participation arrangements	n/a	n/a
20. FMI links	(X)	2
21. Efficiency and effectiveness	X	1,2
22. Communication procedures and standards	X	1,2
23. Disclosure of rules, key procedures, and market data	X	1
24. Disclosure of market data by trade repositories	n/a	n/a

[4] When the item is in brackets, this means that the Principle/Key Consideration is applicable to T2S in a limited way.

Key considerations	General criteria for applicability	Applicability to T2S
Principle 1: Legal basis	This Principle is fully applicable T2S.	X
KC 1. The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.		1,2
KC 2. An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.		1
KC 3. An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.		1
KC 4. An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.		1
KC 5. An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.		2
Principe 2: Governance	This Principle is partly applicable to T2S. As T2S is owned and operated by the Eurosystem the application of Principle 2 to T2S reflects central-bank operated FMI exceptions.	(X)
KC 1. An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support		1

financial stability and other relevant public interest considerations.		
KC 2. An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.		1
KC 3. The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.	In the CPMI-IOSCO Application of the Principles for financial market infrastructures to central bank FMIs, it is mentioned that: "where an FMI is operated as an internal function of the central bank, Principle 2, Key Considerations 3 and 4 on governance are not intended to constrain the composition of the central bank's governing body or that body's roles and responsibilities;". The equivalent of the board of directors is for T2S the Governing Council of the ECB. Taking into account the abovementioned aspects KC 3 is applicable to T2S in a limited way.	(1)
KC 4. The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).	In the CPMI-IOSCO Application of the Principles for financial market infrastructures to central bank FMIs, it is mentioned that: "where an FMI is operated as an internal function of the central bank, Principle 2, Key Consideration 3 and 4 on governance are not intended to constrain the composition of the central bank's governing body or that body's roles and	n/a

	responsibilities". The equivalent of the board of directors is for T2S the Governing Council of the ECB. Taking into account central bank exemptions and Eurosystem specific considerations, KC 4 is considered not applicable to T2S.	
KC 5. The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.		1
KC 6. The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.		1
KC 7. The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.		1
Principle 3: Framework for the comprehensive management of risks	This Principle is partly applicable to T2S as KC4 is not applicable to a central bank-owned FMI.	(X)
KC1. An FMI should have risk-management		1

policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.		
KC 2. An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.		1
KC 3. An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.		1
KC 4. An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.	While a resolution/wind-down is not a realistic option for a central bank owned FMI, a recovery plan for example in case of continued losses or other risks materialising may well be required and useful in particular because T2S is operated under a full cost recovery rule set by the Governing Council. As a consequence all costs shall be offset by revenues generated by participants' fees. As stated in the CPMI-IOSCO PFMI and in the assessment methodology, Principle 3 (and its questions) should be understood in a broader sense, taking into account the interdependencies with other Principles, in this case with Principle 15 (KC 3) which is applicable to T2S in a limited	(1)

	manner. As per Principle 15, there is a wide range of measures that can be used for recovery (e.g. revising business strategies, including cost or fee structures, or restructuring services provided) and these might also be relevant in the case of T2S in view of the full cost recovery rule.	
Principle 4: Credit Risk	This Principle is partly applicable to T2S as KCs 4, 5 & 6 do not refer to services provided by T2S. It is to be noted that T2S does not assume credit risks vis-à-vis the user CSDs or NCBs, but simply carries out DvP settlement between accounts in the SSS and RTGS operated by them. Consequently, this Principle cannot be assessed under Category 1. Regarding Category 2, CSDs do not assume credit risks vis-à-vis their participants, as no “banking type” activity is performed in T2S under the profile of a CSD (although this does not exclude that CSDs may provide banking type services using a different profile of participation). In this sense, T2S does not support the user CSDs in the compliance with this Principle. NCBs grant intraday credit to their participants through the auto-collateralisation mechanism in T2S, based on the same list of eligible assets used in Eurosystem monetary policy operations, and	(X)

	subject to the same valuation and risk control rules, as set out in Annex IIIa of the TARGET2 Guideline. Accordingly, the focus is on the T2S auto-collateralisation service and on the efficiency and safety of those services where T2S supports participating CBs in managing the relevant risks.	
KC 1. An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.	This KC is only relevant to the extent that T2S technically supports the monitoring and management of such risks by the participating CBs by providing cash and collateral management services.	2
KC 2. An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.	This KC is only relevant to the extent that T2S technically supports the monitoring and management of such risks by the participating CBs by providing cash and collateral management services.	2
KC 3. A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure	This KC is only relevant to the extent that T2S technically supports the monitoring and management of such risks by the participating CBs by providing cash and collateral management services.	(2)

in the system.		
KC 4. A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.	This KC is not applicable as it does not relate to T2S services	n/a
KC 5. A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the	This KC is not applicable as it does not relate to T2S services	n/a

CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participant increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.		
KC 6. In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.	This KC is not applicable as it does not relate to T2S services	n/a
KC 7. An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual	In the case of T2S, such "explicit rules and procedures" shall address inter alia how uncovered credit	n/a

or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.	losses will be allocated. As it is out of the control of the T2S Operation function how the allocation of credit losses are done within the Eurosystem, compliance with the general Eurosystem credit loss allocation rules should be considered as compliance with this KC.	
Principle 5: Collateral	This Principle is partly applicable to T2S. It is acknowledged that T2S will only accept collateral to provide credit in auto-collateralisation operations. In this case, credit will be provided under the same conditions as intraday credit in TARGET2 and on behalf of the respective NCB. Thus, compliance with the collateral policies of the Eurosystem or the relevant Central Banks of issue should lead to the observance of this Principle in the case of T2S.	(X)
KC 1. An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.	These KCs are not applicable as they do not relate to T2S services	n/a
KC 2. An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.		n/a
KC 3. In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that		n/a

are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.		
KC 4. An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.		n/a
KC 5. An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.	This KC is only relevant to the extent where T2S technically supports managing of collateral by the participating CBs.	2
KC 6. An FMI should use a collateral management system that is well-designed and operationally flexible.	This KC is only relevant to the extent where T2S technically supports managing of collateral by the participating CBs.	2
Principle 6: Margin	This KC is not applicable as it relates to services not provided by T2S.	n/a
Principle 7: Liquidity risk	This Principle is partly applicable to T2S as KCs 3-7 and 9 do not relate to T2S services. It is to be noted that T2S does not assume liquidity risks vis-à-vis the user CSDs or NCBs, but simply carries out DvP settlement between accounts in the SSS and RTGS operated by them. However, it might be relevant to look at this Principle from the perspective of the risks affecting the overall liquidity of T2S. Under Category 2, this Principle is applicable to the extent that T2S supports users in monitoring and managing of liquidity risks.	(X)

KC 1. An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.	The responsibility to have in place a liquidity management framework regarding securities operations lies first and foremost with each individual CSD. T2S, by means of its liquidity management and monitoring functionalities facilitates the compliance with these requirements. In addition, T2S provides key functionalities aiming at ensuring an efficient use of liquidity e.g. technical netting, optimisation algorithms or to address the liquidity needs e.g. auto-collateralisation. It is accordingly also a responsibility of T2S to ensure it has a framework in place that allows monitoring the use and the effectiveness of its liquidity management/optimisation features and taking actions by e.g. improving the existing functionalities/services or by developing new ones in order to facilitate using liquidity in the system in an efficient way.	2
KC 2. An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.		2
KC 3. A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations	This KC is not applicable as it does not relate to T2S services.	n/a

with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.		
KC 4. A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.	This KC is not applicable as it does not relate to T2S services.	n/a
KC 5. For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly	This KC is not applicable as it does not relate to T2S services.	n/a

marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.		
KC 6. An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.	This KC is not applicable as it does not relate to T2S services.	n/a
KC 7. An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that	This KC is not applicable as it does not relate to T2S services.	n/a

it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.		
KC 8. An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.	This KC is applicable to the extent that T2S supports managing liquidity risks by providing central bank accounts to settle securities transactions.	2
KC 9. An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers,		n/a

and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.		
KC 10. An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.	This KC is applicable to the extent that T2S supports the implementation of the necessary procedures to manage the default of a participant on the technical side. Accordingly, the last part regarding the replenishing of resources would not be applicable.	(2)
Principle 8: Settlement finality		X
KC 1. An FMI's rules and procedures should clearly define the point at which settlement is final.	This Principle is applicable to T2S. T2S is a shared technical environment which facilitates cross-system settlement. The rules which apply to the settlement instructions processed in T2S correspond to those established by the respective system operators of the SSS and payment systems integrated in T2S, i.e. the participating CSDs and CBs, and the laws applicable to the transfer of securities and cash are those of the jurisdictions where the	2
KC 2. An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.		2
KC 3. An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.		2

	settlement systems are established. The Principle and KCs are applicable to T2S to the extent that T2S facilitates the harmonisation and transparency of settlement finality rules across systems.	
Principle 9: Money settlement	This Principle is partly applicable to T2S. KCs 2-5 are not applicable to T2S because T2S Services only cover settlement in central bank money (CeBM) and not in commercial bank money (CoBM). Furthermore, T2S does not settle in its own books, but in the books of participating CSDs and NCBs.	(X)
KC 1. An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.	This KC is applicable to the extent that T2S supports the compliance of CSDs by offering settlement in central bank money.	2
KC 2. If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.	This KC is not applicable as it does not relate to T2S services.	n/a
KC 3. If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.	This KC is not applicable as it does not relate to T2S services.	n/a

KC 4. If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.	This KC is not applicable as it does not relate to T2S services.	n/a
KC 5. An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.	This KC is not applicable as it does not relate to T2S services.	n/a
Principle 10: Physical deliveries	This KC is not applicable as it does not relate to T2S services.	n/a
Principle 11: Central securities depositories	This Principle is fully applicable to T2S	X
KC 1. A CSD should have appropriate rules, procedures, and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorised creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains.	Even though T2S is not a CSD, segregation rules, procedures, and controls used by a CSD should be technically reflected and ensured in T2S in order to facilitate reconciliations within the CSDs with the final objective of safeguarding the rights of securities issuers and holders in the event of disruptions in the T2S settlement process.	2
KC 2. A CSD should prohibit overdrafts and debit balances in securities accounts.		2
KC 3. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilise or dematerialise securities.	This KC is applicable to the extent that T2S supports settlement in book-entry form.	2
KC 4. A CSD should protect assets against		2

custody risk through appropriate rules and procedures consistent with its legal framework.		
KC 5. A CSD should employ a robust system that ensures segregation between the CSD's own assets and the securities of its participants and segregation among the securities of participants. Where supported by the legal framework, the CSD should also support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings.	Same observation as KC 1 of this Principle.	2
KC 6. A CSD should identify, measure, monitor, and manage its risks from other activities that it may perform; additional tools may be necessary in order to address these risks.	This KC is applicable to the extent that T2S supports other CSD services than the core service of settlement, e.g. corporate actions processing.	2
Principle 12: Exchange-of-value settlement systems	This Principle is fully applicable to T2S.	X
KC 1. An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.		2
Principle 13: Participant-default rules and procedures	This Principle is fully applicable to T2S.	X
KC 1. An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.	Under Category 1, KCs of Principle 13 are applicable to the extent that T2S must have procedures in place to manage a termination of services due to the default of a contracting CSD.	1, 2

KC 2. An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.	Under Category 2, KCs of Principle 13 are applicable to the extent that T2S must support the operational procedures put in place by CSDs and NCBs to manage the default of a participant.	1, 2
KC 3. An FMI should publicly disclose key aspects of its default rules and procedures.		1
KC 4. An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.		1, 2
Principle 14: Segregation and portability–	This KC is not applicable as it does not relate to T2S services.	n/a
Principle 15: General business risk	The partial application of this Principle to T2S reflects the fact that the Eurosystem fully owns and operates T2S (central bank exemptions).	(X)
KC 1. An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.		1
KC 2. An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general	KC 2 is considered not applicable to T2S (central bank exemptions and Eurosystem-specific considerations).	n/a

business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.		
KC 3. An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.	Since T2S is owned and operated by the Eurosystem, KC 3 is only partially applicable for what relates to the need to maintain a viable plan to achieve recovery in view of a full cost recovery rule set by the Governing Council (see also comments under Principle 3 above).	(1)
KC 4. Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.	Not covered by T2S	n/a
KC 5. An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.	Not covered by T2S	n/a
Principle 16: Custody and investment risks	This Principle is not applicable to T2S as it does not relate to T2S services. The relevant aspects regarding custody risk are covered in Principles 11 and 20.	n/a
Principle 17: Operational risk	This Principle is fully applicable to	X

	T2S.	
KC 1. An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.		1,2
KC 2. An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.		1
KC 3. An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.		1,2
KC 4. An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.		1,2
KC 5. An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.		1,2
KC 6. An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be		1,2

designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.		
KC 7. An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.		1,2
Principle 18: Access and participation requirements	This Principle is fully applicable to T2S.	X
KC 1. An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.		1
KC 2. An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.		1
KC 3. An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.		1
Principle 19: Tiered participation	This Principle is not applicable to	n/a

arrangements	T2S. The Eurosystem provides T2S Services to CSDs but has no contractual relationship with participants in the SSSs operated by CSDs (i.e. CSDs remain exclusively responsible for contractual relations with their customers). In the context of T2S Services, CSDs act as providers of services to such customers and not as an intermediary, in the sense of the relation established between direct and indirect participants of a settlement system referred to in Principle 19. Accordingly, no credit and liquidity risk exposures are transferred from CSD participants to CSDs. More broadly, any material dependencies between CSDs and their participants which may entail operational risks are covered under Principle 17.	
Principle 20: FMI links	This Principle is only partly applicable to T2S as KCs 5 to 9 do not relate to T2S services. This Principle is relevant from a T2S oversight perspective inasmuch as T2S supports the technical establishment and (automated) operation of links between CSDs participating in T2S and to some extent between CSDs in T2S and external CSDs. Additionally, the go-live of T2S has de facto made necessary the harmonisation of certain legal aspects relevant to this Principle, such as the settlement	(X)

	finality rules.	
KC 1. Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.	This KC is only relevant to the extent that T2S supports technically the establishment and operation of links, and has fostered the harmonisation of certain aspects regarding finality.	2
KC 2. A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.	This KC is only relevant to the extent that T2S supports technically the establishment and operation of links, and has fostered the harmonisation of certain aspects regarding finality.	2
KC 3. Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high-quality collateral and be subject to limits.	A holistic approach as regards liquidity risk (i.e. at the level of T2S) is necessary in view of the expected increased cross-border settlement activity and taking into account specific T2S cash settlement arrangements which facilitate direct transfers between participants' DCA. The second part of KC (i.e. referring to credit extensions between CSDs) is not applicable T2S.	(2)
KC 4. Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.	This KC is only relevant to the extent that T2S supports technically the establishment and operation of the link, and has fostered the harmonisation of certain aspects regarding finality.	2
KC 5. An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the	This KC is not applicable as it does not relate to T2S services.	n/a

rights of the investor CSD's participants.		
KC 6. An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.	This KC is not applicable as it does not relate to T2S services (i.e. operated links are not expected in T2S).	n/a
KC 7. Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has three or more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.	This KC is not applicable as it does not relate to T2S services.	n/a
KC 8. Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfil its obligations to its own participants at any time.	This KC is not applicable as it does not relate to T2S services.	n/a
KC 9. A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.	This KC is not applicable as it does not relate to T2S services.	n/a
Principle 21: Efficiency and effectiveness	This Principle is fully applicable to T2S.	X
KC 1. An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.	Under Category 1, KCs of Principle 21 are applicable to the extent that T2S must be efficient and effective in meeting the requirements of its participants and the markets it serves.	1, 2

KC 2. An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.	Under Category 2 KCs of Principle 21 are applicable to the extent that T2S supports the CSDs in being efficient and effective in meeting the requirements of its participants and the markets it serves.	1, 2
KC 3. An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.		1
Principle 22: Communication procedures and standards	This Principle is fully applicable to T2S.	X
KC 1. An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.		1,2
Principle 23: Disclosure of rules, key procedures, and market data	This Principle is fully applicable to T2S.	X
KC 1. An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.		1
KC 2. An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.		1
KC 3. An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.		1
KC 4. An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of		1

priced services for comparability purposes.		
KC 5. An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.		1
Principle 24: Disclosure of market data by trade repositories	This Principle does not relate to T2S services.	n/a