



EUROPEAN CENTRAL BANK

EUROSYSTEM

# Revised assessment methodology for payment systems

June 2018



# Contents

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>General introduction</b>  | <b>3</b>  |
| <b>2</b> | <b>Use of this assessment methodology</b>  | <b>5</b>  |
| <b>3</b> | <b>Assessment questions for payment systems</b>  | <b>7</b>  |
|          | Article 3 Legal soundness / Principle 1 Legal basis  | 7         |
|          | Article 4 Governance / Principle 2 Governance  | 12        |
|          | Article 5 Framework for the comprehensive management of risks /<br>Principle 3 Framework for the comprehensive management of risks   | 23        |
|          | Article 6 Credit Risk / Principle 4 Credit risk  | 28        |
|          | Article 7 Collateral / Principle 5 Collateral  | 32        |
|          | Article 8 Liquidity risk / Principle 7 Liquidity risk  | 37        |
|          | Article 9 Final settlement / Principle 8 Settlement finality   | 51        |
|          | Article 10 Money settlements / Principle 9 Money settlements   | 54        |
|          | Article 11 Payment versus Payment/ PFMI 12 Exchange-of-value<br>settlement systems   | 57        |
|          | Article 12 Participant-default rules and procedures/ PFMI 13<br>Participant-default rules and procedures                             | 58        |
|          | Article 13 General business risk /PFMI 15 General business risk  | 63        |
|          | Article 14 Custody and investment risk / Principle 16 Custody and<br>investment risk   | 66        |
|          | Article 15 Operational risk / Principle 17 Operational risk  | 69        |
|          | Article 16 Access and participation criteria / Principle 18 Access and<br>participation requirements                                 | 80        |
|          | Article 17 Tiered participation arrangements / Principle 19 Tiered<br>participation arrangements                                     | 83        |
|          | Article 18 Efficiency and effectiveness / Principle 21 Efficiency and<br>effectiveness   | 86        |
|          | Article 19 Communication procedures and standards / Principle 22<br>Communication procedures and standards                           | 88        |
|          | Article 20 Disclosure of rules, key procedures and market data /<br>Principle 23 Disclosure of rules, key procedures and market data | 90        |
| <b>4</b> | <b>Assessment questions for links between retail payment systems</b>   | <b>93</b> |

# 1 General introduction

In June 2013 the Governing Council adopted the Principles for financial market infrastructures (PFMIs) developed by the Committee on Payments and Market Infrastructures (CPMI) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) as a basis for the conduct of Eurosystem oversight in relation to all types of financial market infrastructures (FMIs). For payment systems, the PFMIs are implemented through the ECB Regulation on oversight requirements for systemically important payment systems (SIPS) (the SIPS Regulation) and the revised oversight framework for retail payment systems (RPSs).

The SIPS Regulation applies to and is binding on all payment systems which meet the criteria laid down in Article 1(3) of the SIPS Regulation, i.e. both large-value payment systems (LVPSs) and RPSs of systemic importance, operated both by central banks and private operators. Payment systems that do not meet the criteria set out in Article 1(3) will not be considered to be of systemic importance and the SIPS Regulation will not apply to these systems. However, these systems nevertheless play a role, to various degrees, with respect to both the safety and efficiency of the financial system and citizens' confidence in the euro. While non-systemically important LVPSs have to respect the PFMIs in their entirety, non-systemically important RPSs must comply with a sub-set of PFMIs and key considerations (KCs), as set out in the revised oversight framework for RPSs (principle of proportionality).

The Eurosystem has developed an assessment methodology for payment systems. This methodology aims at ensuring a consistent and harmonised application of the SIPS Regulation, and the PFMIs, in the conduct of oversight assessments by the Eurosystem. The assessment methodology serves to promote full observance of the requirements laid down in the SIPS Regulation/PFMIs by helping assessors to identify non-compliance and/or issues of concern that should be addressed. The answers to the questions will serve as key input for the actual oversight assessment; the assessment itself should always use the requirements, either in the SIPS Regulation or the PFMIs, as a reference.

The Eurosystem assessment methodology takes the CPMI-IOSCO assessment methodology as a basis (i.e. the PFMIs and KCs applicable to payment systems) and complements it with questions from the previously used "Terms of Reference for the oversight assessment of euro systemically and prominently important payment systems against the Core Principles", thereby establishing one single framework for SIPS and non-SIPS. The methodology also covers the "Oversight expectations for links between retail payment systems" (November 2012). The updated version of the assessment methodology set out in the current document covers the requirements introduced by the Revised SIPS Regulation which entered into force in December

2017<sup>1</sup> and additionally references the Eurosystem's Cyber Resilience Oversight Expectations (CROE), which are based on the "CPMI-IOSCO Guidance on cyber resilience for financial market infrastructures" (June 2016). The CROE contain expectations for SIPS and non-SIPS which have differing maturity levels applicable to different types of systems.

---

<sup>1</sup> As the requirements in the revised SIPS Regulation apply only to SIPS, and no amendments have been made to the PFMIs, the requirements for non-SIPS have not been changed.

## 2 Use of this assessment methodology

The CPMI-IOSCO general instructions and practices for conducting an assessment against the PFMI are valid for all assessments of payment systems conducted by the Eurosystem, regardless of the classification of the payment system. Guidance on definition of scope, fact finding, the structure of assessment report etc. is contained in the CPMI-IOSCO report entitled “Principles for financial market infrastructures: Disclosure framework and Assessment methodology” (December 2012).

As concerns the assessment rating of compliance with the **SIPS** Regulation, the following assessment rating will be used:

|                          |   |
|--------------------------|---|
| <b>Compliant</b>         | The SIPS complies with all provisions of the article.   |
| <b>Broadly compliant</b> | The assessment has identified an infringement of one or more provision(s) of the article which the SIPS operator shall address and follow-up on in a defined timeline.  |
| <b>Partly compliant</b>  | The assessment has identified an infringement of one or more provision(s) of the article which could become serious if not addressed promptly. The SIPS operator shall accord a high priority to addressing these issues.   |
| <b>Not compliant</b>     | The assessment has identified a serious infringement of one or more provisions of the article which warrant(s) immediate action. Therefore, the SIPS operator shall accord the highest priority to addressing these issues. |

As far as **non-SIPS** are concerned, the following assessment rating of observance of the CPMI-IOSCO PFMI will be used:

|                         |  |
|-------------------------|--|
| <b>Observed</b>         | The FMI observes the principle. Any identified gaps and shortcomings are not issues of concern and are minor, manageable and of a nature that the FMI could consider taking them up in the normal course of its business.    |
| <b>Broadly observed</b> | The FMI broadly observes the principle. The assessment has identified one or more issues of concern that the FMI should address and follow up on in a defined timeline.  |
| <b>Partly observed</b>  | The FMI partly observes the principle. The assessment has identified one or more issues of concern that could become serious if not addressed promptly. The FMI should accord a high priority to addressing these issues.    |
| <b>Not observed</b>     | The FMI does not observe the principle. The assessment has identified one or more serious issues of concern that warrant immediate action. Therefore, the FMI should accord the highest priority to addressing these issues. |

For reasons of efficiency and comparability with the CPMI-IOSCO methodology (where ratings are assigned at the level of each principle), compliance ratings under the SIPS Regulation are assigned at the level of an article. However, an infringement

of the SIPS Regulation is always identified in relation to a specific *provision* of the Regulation (e.g. a specific paragraph of an article) and not to an article as a whole.

In case of 'broadly', 'partly' and 'not compliant' ratings, the competent authority, following the process described in Article 22 of the Regulation, shall inform the SIPS operator of the nature of the non-compliance. In these cases the competent authority may impose *corrective measures*<sup>2</sup>. With regards to the imposition of a sanction, and in accordance with Article 23 of the Regulation, the ECB will apply Regulation (EC) No 2157/1999 of the European Central Bank of 23 September 1999 on the powers of the European Central Bank to impose sanctions<sup>3</sup>. Corrective measures may be imposed independent of or in parallel with sanctions, as their useful effect is different.

This document consists of two parts: the first part contains questions for the assessment of payment systems (all categories) and the second part contains the questions for the assessment of links between RPSs. The questions for non-SIPS can be found in the right-hand column and these are based on the CPMI-IOSCO methodology, including the numbering. However, the sequence of the assessment questions in this document follows the order of the articles of the SIPS Regulation. The questions for SIPS, which can be found in the left-hand column, have been drafted in such a way that they reflect the text and the requirements of the SIPS Regulation. Overseers will use the questions in the left-hand column if the payment system being assessed is classified as a SIPS and the relevant questions from the right-hand column when assessing a payment system that is not a SIPS.

Competent authorities, i.e. Eurosystem central banks with primary oversight responsibilities for one or more payment systems, are expected to regularly assess compliance of these systems with the SIPS Regulation requirements and/or the PFMI, whichever is applicable.

---

<sup>2</sup> Corrective measures will be imposed on the SIPS operator in accordance with Decision (EU) 2017/2098 of the European Central Bank of 3 November 2017 on procedural aspects concerning the imposition of corrective measures for non-compliance with Regulation (EU) No 795/2014 (ECB/2017/33).

<sup>3</sup> In determining whether to impose a sanction and in determining the appropriate sanction, the ECB must be guided by the principle of proportionality and must take into consideration, the circumstances of the specific case (e.g. good faith, the degree of openness of the SIPS operator in the interpretation and fulfilment of the obligation arising from an ECB regulation, degree of diligence and cooperation, evidence wilful deceit; the seriousness of the effects of the infringement; repetition, frequency or duration of the infringement; profits by reason of the infringement; economic size of undertaking; prior sanctions imposed by other authorities on the same undertaking and based on the same facts). See Regulation (EC) No 2157/1999 of the European Central Bank of 23 September 1999 on the powers of the European Central Bank to impose sanctions, as amended by Regulation (EU) 2017/2095 of the European Central Bank of 3 November 2017.

The sanctions take the form of fines/periodic payments and have an upper limit of €500,000 in the case of fines or €10,000/day of infringement (up to six months), in the case of periodic payments. The methodology to be followed by the ECB in calculating the amount of sanctions to be imposed by the ECB on a SIPS operator for infringements of the SIPS Regulation is contained in Decision (EU) 2017/2097 of the European Central Bank of 3 November 2017.

# 3 Assessment questions for payment systems

## Article 3

### Legal soundness / Principle 1 Legal basis

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Article 3(1)

A SIPS operator shall assess whether the applicable law in all relevant legal systems provides a high degree of certainty for and supports each material aspect of the activities of its SIPS.

#### PFMI 1 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.

#### Material aspects and relevant jurisdictions

3.1.1: What are the material aspects of the SIPS's activities that require a high degree of certainty (for example, rights and interests in financial instruments; settlement finality; netting; interoperability; arrangements for PvP; collateral arrangements; and default procedures)?

Q.1.1.1: What are the material aspects of the FMI's activities that require a high degree of legal certainty (for example, rights and interests in financial instruments; settlement finality; netting; interoperability; arrangements for PvP; collateral arrangements; and default procedures)?

3.1.2: What are the relevant legal systems for each material aspect of the SIPS's activities?

Q.1.1.2: What are the relevant jurisdictions for each material aspect of the FMI's activities?

3.1.3: Is there any specific legislation in the legal system governing the SIPS that relates to payments (please list) and/or is there any national legislation that relates to the electronic processing of payments?(please explain)

Q.1.1.3: Is there any specific national legislation in the jurisdiction governing the system that relates to payments (please list) and/or is there any specific national legislation that relates to the electronic processing of payments?(please explain)

3.1.4: What legal system and legal framework governs the establishment and activities of the system operator itself?

Q.1.1.4: What jurisdiction and legal framework governs the establishment and activities of the system operator itself?

#### Legal basis for each material aspect

3.1.5: How does the SIPS operator ensure that the applicable law, rules, procedures and contracts for the operation of a SIPS (its legal basis) provide a high degree of legal certainty for each material aspect of the SIPS's activities in all relevant legal systems?

Q.1.1.5: How does the FMI ensure that its legal basis (that is, the legal framework and the FMI's rules, procedures and contracts) provides a high degree of legal certainty for each material aspect of the FMI's activities in all relevant jurisdictions?

3.1.6: How does the operator of a SIPS that has a netting arrangement ensure that its legal basis supports the enforceability of that arrangement? d) For an FMI that has a netting arrangement, how does the FMI ensure that its legal basis supports the enforceability of that arrangement?

3.1.7: How is it ensured that the SIPS's legal basis supports the finality of transactions (moment of entry into the system, moment of irrevocability), including those of an insolvent participant? Does the legal basis for the external settlement mechanisms the SIPS uses also support this finality? e) Where settlement finality occurs in an FMI, how does the FMI ensure that its legal basis supports the finality of transactions, including those of an insolvent participant? Does the legal basis for the external settlement mechanisms the FMI uses, such as funds transfer or securities transfer systems, also support this finality?

#### **Article 3(2)**

A SIPS operator shall establish SIPS rules and procedures and enter into contracts, which are clear and consistent with the applicable law in all relevant legal systems.

#### **PFMI 1 KC 2**

An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.

3.2.1: How has the SIPS operator demonstrated that the SIPS's rules, procedures and contracts are clear and understandable?

Q.1.2.1: How has the FMI demonstrated that its rules, procedures and contracts are clear and understandable?

3.2.2: How does the SIPS operator ensure that the SIPS's rules, procedures and contracts are consistent with the applicable law in all relevant legal systems (for example, through legal opinions or analyses)? Have any inconsistencies been identified and remedied? Are the SIPS's rules, procedures and contracts reviewed or assessed by external authorities or entities?

Q.1.2.2: How does the FMI ensure that its rules, procedures and contracts are consistent with relevant laws and regulations (for example, through legal opinions or analyses)? Have any inconsistencies been identified and remedied? Are the FMI's rules, procedures and contracts reviewed or assessed by external authorities or entities?

3.2.3: Do the SIPS's rules, procedures and contracts have to be approved before coming into effect? If so, by whom and how?

Q.1.2.3: Do the FMI's rules, procedures and contracts have to be approved before coming into effect? If so, by whom and how?

3.2.4: Which specific and legally binding rules (and procedures)/ contracts/terms and conditions govern the SIPS? Broadly speaking, what areas do they cover?

Q.1.2.4: Which specific and legally binding rules (and procedures)/ contracts/terms and conditions govern the system? Broadly speaking, what areas do they cover?

#### **Article 3(3)**

A SIPS operator shall be able to specify the applicable law, rules, procedures and contracts for the operation of a SIPS to the competent authority, participants, and, where relevant, participants' customers, in a clear and understandable way.

#### **PFMI 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.

3.3.1: How does the SIPS operator specify the legal basis for the SIPS's activities to relevant authorities, participants and, where relevant, participants' customers?

Q.1.3.1: How does the FMI articulate the legal basis for its activities to relevant authorities, participants and, where relevant, participants' customers?



#### Article 3(4)

A SIPS operator shall take measures to ensure that its rules, procedures, and contracts are enforceable in all relevant legal systems, and that the actions it takes under such rules, procedures and contracts will not be voided, reversed, or subject to stays.

#### PFMI 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.

#### Enforceability of rules, procedures and contracts

3.4.1: What are the measures the SIPS operator has taken to ensure that the SIPS's rules, procedures and contracts related to the SIPS's operations are enforceable in all relevant legal systems (for example, through legal opinions and analyses)?

Q.1.4.1: How does the FMI achieve a high level of confidence that the rules, procedures and contracts related to its operations are enforceable in all relevant jurisdictions identified in key consideration 1 (for example, through legal opinions and analyses)?

3.4.2: If the SIPS's rules allows for foreign participation, has the Settlement Finality Directive (Directive 98/26/EC, the SFD) or, in the case of participants from non-EEA countries, a piece of legislation similar to the SFD been fully implemented in the legal system(s) of these participants or has a legal review process of the legal system(s) governing these participants identified any issues related to the aspects covered by the SFD (in particular related to irrevocability, finality, and/or enforceability of collateral in the case of insolvency of a foreign participant)? (If so, please explain.)

Q. 1.4.2: Has the Settlement Finality Directive (SFD) been fully implemented in the jurisdiction which governs the system or has a legal review process identified any issues related to the implementation of the SFD in the law governing the system? (please explain)

3.4.3: What are the measures the SIPS operator has taken to ensure that its actions taken under the SIPS's rules, procedures and contracts will not be voided, reversed or subject to stays? Are there any circumstances in which a SIPS operator's actions under its rules, procedures or contracts could be voided, reversed or subject to stays? If so, what are those circumstances?

Q. 1.4.3: Has the system been designated under the SFD? If so, when and by whom?

3.4.4: Has a court in any relevant legal system ever held any of the SIPS operator's actions taken under its rules, procedures and contracts to be unenforceable? If so, please explain.

Q. 1.4.4: If the system allows for foreign participation, has the SFD or, in the case of participants from non-EEA countries, a piece of legislation similar to the SFD been fully implemented in the jurisdiction(s) of these participants or has a legal review process of the jurisdiction(s) governing these participants identified any issues related to the aspects covered by the SFD (in particular related to irrevocability, finality, enforceability of collateral in case of insolvency of a foreign participant)? (please explain)

#### Degree of certainty for rules and procedures

Q.1.4.5: How does the FMI achieve a high degree of certainty that its rules, procedures and contracts will not be voided, reversed or subject to stays? Are there any circumstances in which an FMI's actions under its rules, procedures or contracts could be voided, reversed or subject to stays? If so, what are those circumstances?

Q.1.4.6: Has a court in any relevant jurisdiction ever held any of the FMI's relevant activities or arrangements under its rules and procedures to be unenforceable?

#### Article 3(5)

A SIPS operator conducting business in more than one legal system shall identify and mitigate the risks arising from any potential conflict of laws.

#### PFMI 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.

3.5.1: Is the SIPS operator conducting business in more than one legal systems? If so, (i) has the SIPS operator identified any risks arising from conflict of laws, and how; and (ii) which are the specific measures the SIPS operator has taken to mitigate legal risks arising from potential conflict of laws?

Q. 1.5.1: Which are the specific legal arrangements, if any, that apply in case of access of foreign participants (i.e. participants from other EU, EEA, non-EU/non-EEA countries) to contain legal risks?

Q.1.5.2: If the FMI is conducting business in multiple jurisdictions, how does the FMI identify and analyse any potential conflict-of-laws issues?

When uncertainty exists regarding the enforceability of an FMI's choice of law in relevant jurisdictions, has the FMI obtained an independent legal analysis of potential conflict-of-laws issues? What potential conflict-of-laws issues has the FMI identified and analysed? How has the FMI addressed any potential conflict-of-laws issues?

**Article 3(6)**

**No PFMI KC**

A SIPS operator shall use its best efforts to ensure the SIPS's designation under Directive 98/26/EC.

3.6.1: Has the SFD been fully implemented in the legal system which governs the SIPS or has a legal review process identified any issues related to the implementation of the SFD in the law governing the SIPS? (If so, please explain these issues.)

3.6.2: Has the system been designated under the SFD? If so, when and by whom? If not, why not?

# Article 4

## Governance / Principle 2 Governance

SIPS

Non SIPS LVPS

PIRPS (KC 2, 7)

ORPS (KC 2)

### Article 4(1)

A SIPS operator shall have documented objectives which place a high priority on the safety and efficiency of the SIPS. The objectives shall explicitly support financial stability and other relevant public interest considerations, in particular open and efficient financial markets.

### PFMI 2 KC 1

An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.

4.1.1: Has the SIPS operator's documented its objectives? Are they clearly identified? How does the SIPS operator assess its performance in meeting its objectives?

Q.2.1.1: What are the FMI's objectives, and are they clearly identified? How does the FMI assess its performance in meeting its objectives?

4.1.2: Do business plans for the attainment of objectives exist? Are projected financial results attained? For example, is there a check by controlling or audit?

Q.2.1.2: Do business plans exist? Are projected financial results attained? For example, is there a check by controlling or audit?

4.1.3: How do the SIPS operator's objectives place a high priority on safety and efficiency of the SIPS?

Q.2.1.3: How do the FMI's objectives place a high priority on safety and efficiency? How do the FMI's objectives explicitly support financial stability and other relevant public interest considerations?

4.1.4: How do the SIPS operator's objectives explicitly support financial stability and the other relevant public interest considerations, in particular open and efficient financial markets?

#### Article 4(2)

A SIPS operator shall have effective and documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements shall be made available to the competent authority, owners and participants. The SIPS operator shall make abridged versions thereof available to the public.

#### PFMI 2 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.

#### Governance arrangements

4.2.1: What are the governance arrangements (ownership of the SIPS and decision making procedures) under which the SIPS's board of directors (or equivalent) and management operate? What are the lines of responsibility and accountability within the organisation of the SIPS operator? How and where are these arrangements documented? How does the SIPS operator ensure that these arrangements are effective?

Q.2.2.1: What are the governance arrangements under which the FMI's board of directors (or equivalent) and management operate? What are the lines of responsibility and accountability within the FMI? How and where are these arrangements documented? How does the operator ensure that these arrangements are effective?

4.2.2: Are the ownership, board and management structure of the SIPS, the process via which board members are appointed, the basic organisational structure, the general principles of risk management and the internal control system, and the basic decision-making procedures made transparent to the public in an easily understandable way (via a website, brochures, letters, information on demand)?

Q.2.2.2: Are the ownership, board and management structure of the system, the process via which board members are appointed, the basic organisational structure, the general principles of risk management and the internal control system, and the basic decision-making procedures made transparent to the public in an easily understandable way (via a website, brochures, letters, information on demand)?

4.2.3: How do governance arrangements address any possible or perceived conflicts of interest? To what extent do governance arrangements allow for a separation of the SIPS operator and oversight functions?

Q.2.2.3: For central bank-operated systems, how do governance arrangements address any possible or perceived conflicts of interest? To what extent do governance arrangements allow for a separation of the operator and oversight functions?

4.2.4: How does the SIPS operator ensure accountability of the management to owners, participants and other relevant stakeholders? Towards which entity does the management of the SIPS operator have to justify/ explain the performance of the SIPS, the compliance with the internal rules and with the external regulatory framework, major decisions and actions, and the adequacy of new developments (e.g. reports to the board of the institution or/and to shareholders)?

Q.2.2.4: How does the FMI provide accountability to owners, participants and other relevant stakeholders?

4.2.5: How is the effectiveness and enforceability of controls on management ensured (independence of audit, of oversight – for systems managed by central banks – adequacy of reporting, existence of “non-executive independent” members of the board)?

Q.2.2.5: How is the effectiveness and enforceability of controls on management ensured (independence of audit, of oversight – for systems managed by central banks – adequacy of reporting, existence of “non-executive independent” members of the board)? Are risk management and audit functions in place that are independent of those responsible for the day-to-day operations and that concern themselves with, for example, legal, financial, operational security risks?

4.2.6: Are risk management and audit functions in place that are independent of those responsible for the day-to-day operations and that concern themselves with, for example, legal, financial, operational security risks?

#### **Disclosure of governance arrangements**

Q.2.2.6: How are the governance arrangements disclosed to owners, relevant authorities, participants and, at a more general level, the public?

4.2.7: How are the governance arrangements disclosed to the competent authority, owners, participants and, at a more general level, the public? Do abridged versions of the governance arrangements exist? How regularly is the disclosed information on the system and its operations updated?

Q.2.2.7: Are the objectives and major decisions regarding the system timely communicated (e.g. through reports, statistical analysis, etc.) to participants, owners, operators, overseers, and any risk management and audit functions that are independent of those responsible for the day-to-day operations?

4.2.8: Are the objectives and major decisions regarding the SIPS timely communicated (e.g. through reports, statistical analysis, etc.) to the competent authority, participants, owners, and any risk management and audit functions that are independent of those responsible for the day-to-day operations?

Q.2.2.8: Are the objectives and major decisions regarding the system released through appropriate channels depending on the concerned stakeholder (participants, owners, overseers)?

4.2.9: Are the objectives and major decisions regarding the SIPS released through appropriate channels depending on the concerned stakeholder (the competent authority, participants, owners)?

#### **Article 4(3)**

The Board's roles and responsibilities shall be clearly defined. The Board's roles and responsibilities shall include all of the following:

- (a) establishing clear strategic aims for the SIPS;
- (b) establishing documented procedures for the SIPS' functioning, including procedures to identify, address and manage conflicts of interest of its members;
- (c) with the exception of Eurosystem SIPS, ensuring the effective selection, monitoring, and, where appropriate, removal of members of Management;
- (d) with the exception of Eurosystem SIPS, establishing appropriate compensation policies, consistent with best practices and based on long-term achievements.

#### **PFMI 2 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.

#### **Roles and responsibilities of the board**

4.3.1: What are the roles and responsibilities of the SIPS operator's Board (or equivalent)? Where are they defined?

4.3.2: What are the Board's procedures for its functioning, including procedures to identify, address and manage member's conflicts of interest? How are these procedures documented, and to whom are they disclosed? How frequently are they reviewed?

4.3.3: List the committees that have been established to facilitate the functioning of the Board. What are the roles, responsibilities and composition of such committees?

4.3.4: How is the effective selection, monitoring, and, where appropriate, removal of members of Management ensured?

4.3.5: How are appropriate compensation policies established, consistent with best practices and based on long-term achievements?

Q.2.3.1: What are the roles and responsibilities of the FMI's board of directors (or equivalent), and are they clearly specified?

Q.2.3.2: What are the board's procedures for its functioning, including procedures to identify, address and manage member conflicts of interest? How are these procedures documented, and to whom are they disclosed? How frequently are they reviewed?

Q.2.3.3: Describe the board committees that have been established to facilitate the functioning of the board. What are the roles, responsibilities and composition of such committees?

**Article 4(4)**

Except for Eurosystem SIPS, the Board shall review both its overall performance and the performance of its individual Board members at least annually.

**PFMI 2 KC 3**

The board should review both its overall performance and the performance of its individual board members regularly.

**Review of performance**

4.4.1: What are the procedures established to review the performance of the Board as a whole and the performance of the individual Board members? What is the regular frequency of review? Do reporting arrangements exist that assess the actions of senior management against the strategic objectives?

Q.2.3.4: What are the procedures established to review the performance of the board as a whole and the performance of the individual board members?

**Article 4(5)**

The Board's composition shall ensure integrity and, except for Eurosystem SIPS, an appropriate mix of technical skills, knowledge and experience both of SIPS and of the financial market in general, allowing the Board to fulfil its roles and responsibilities. The composition shall also take into account the allocation of competencies in accordance with national law. Except for Eurosystem SIPS, and if permitted by national law, the Board shall include non-executive board members, including at least one independent director.

**PFMI 2 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).

4.5.1: How does the SIPS operator define the appropriate mix of technical skills, knowledge and experience both of the SIPS and of the financial market in general? Does the Board composition ensure such appropriate mix? How?

Q.2.4.1: To what extent does the FMI's board have the appropriate skills and incentives to fulfil its multiple roles? How does the FMI ensure that this is the case?

4.5.2: How is integrity ensured in the Board's composition?

Q.2.4.2: What incentives does the FMI provide to board members so that it can attract and retain members of the board with appropriate skills? How do these incentives reflect the long-term achievement of the FMI's objectives?

4.5.3: Does the Board's composition take into account the allocation of competencies in accordance with national law? If so, how?

Q.2.4.3: Does the board include non-executive or independent board members? If so, how many?

4.5.4: What incentives does the SIPS operator provide so that it can attract and retain Board members with the appropriate mix of skills? How do these incentives reflect the long-term achievement of the SIPS objectives?

Q.2.4.4: If the board includes independent board members, how does the FMI define an independent board member? Does the FMI disclose which board member(s) it regards as independent?



4.5.5: Does national law permit the inclusion of non-executive board members? How does national law or the SIPS operator define an independent board member?

4.5.6: Does the Board include non-executive members, including at least one independent director? If so, how many?

**Article 4(6)**

Management's role, responsibilities and reporting lines shall be clearly defined. The composition shall ensure integrity and an appropriate mix of technical skills, knowledge and experience both of SIPS and of the financial market in general, allowing Management to fulfil its responsibilities for the operation and risk management of the SIPS operator. Management's responsibilities shall include, under Board direction, ensuring all of the following:

- (a) that the SIPS operator's activities are consistent with its objectives, strategy and risk tolerance;
- (b) that internal controls and related procedures are appropriately designed, executed and overseen in order to promote the SIPS operator's objectives;
- (c) that internal controls and related procedures are subject to regular review and testing by well-trained and sufficiently staffed risk-management and internal-audit functions;
- (d) active involvement in the risk-control process;
- (e) that sufficient resources are allocated to the SIPS's risk-management framework.

**PFMI 2 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.

**Roles and responsibilities of management**

4.6.1: What are the roles and responsibilities of Management? Where and how are they specified?

4.6.2: How are Management's roles and objectives set and evaluated?

Q.2.5.1: What are the roles and responsibilities of management, and are they clearly specified?

Q.2.5.2: How are the roles and objectives of management set and evaluated?

4.6.3: What internal controls and related procedures are in place to ensure that Management's roles and responsibilities are consistent with the SIPS's objectives, strategies and risk tolerance and appropriately designed, executed and overseen in order to promote the SIPS operator's objectives?

4.6.4: Are the SIPS's governance arrangements subject to regular review and testing? What is the frequency? How many staff members carry out the risk-management and internal audit functions? Describe their formal qualifications, experience and continual training? Is an independent auditor entitled to perform internal audits?

4.6.5: Is the Management actively involved in the risk-control process (please explain)?

4.6.6: What resources are allocated to the SIPS's risk management framework?

4.6.7: How does the SIPS operator define the appropriate mix of technical skills, knowledge and experience both of the SIPS and of the financial market in general? Does the Management composition ensure such a mix? How?

4.6.8: What is the process to remove Management if necessary?

Q.2.5.3: Are the governance arrangements (as described in responses to key considerations 2.2, 2.3) subject to an audit process in order to ensure that they are properly and effectively applied? Is an independent auditor entitled to perform that audit?

#### Experience, skills and integrity

Q.2.5.4: To what extent does the FMI's management have the appropriate experience, mix of skills and the integrity necessary for the operation and risk management of the FMI? How does the FMI ensure that this is the case?

Q.2.5.5: What is the process to remove management if necessary?

#### Article 4(7)

The Board shall establish and oversee a documented risk-management framework, which shall:

- (a) include the SIPS operator's risk-tolerance policy;
- (b) assign responsibilities and accountability for risk decisions;
- (c) address decision making in crises and emergencies;
- (d) address internal control functions.

The Board shall ensure that there are three clear and effective lines of defence (operations, risk management and internal audit), which are separate from each other and have sufficient authority, independence, resources and access to the Board.

#### PFMI 2 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.

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.

#### **Risk management framework**

4.7.1: Has a risk management framework been established by the Board? What does it consist of? Where is it documented?

Q.2.6.1: What is the risk management framework that has been established by the board? How is it documented?

4.7.2: How does this risk management framework address the SIPS operator's risk tolerance policy, assign responsibilities and accountability for risk decisions (such as limits on risk exposures), decision-making in crises and emergencies, and internal control functions?

Q.2.6.2: How does this framework address the FMI's risk tolerance policy, assign responsibilities and accountability for risk decisions (such as limits on risk exposures), and address decision-making in crises and emergencies?

4.7.3: What is the process for determining, endorsing and reviewing the risk management framework?

Q.2.6.3: What is the process for determining, endorsing and reviewing the risk management framework?

#### **Authority and independence of risk management and audit functions**

4.7.4: What are the roles, responsibilities, authority and reporting lines of the risk management and audit functions?

Q.2.6.4: What are the roles, responsibilities, authority, reporting lines and resources of the risk management and audit functions?

4.7.5: Is the Board involved in the adoption and use of risk management models? How? Are these models and the related methodologies validated by the SIPS operator? How? How regularly?

Q.2.6.5: How does the board ensure that there is adequate governance surrounding the adoption and use of risk management models? How are these models and the related methodologies validated?

4.7.6: Has the Board ensured the existence of three clear and effective lines of defence (operations, risk management and internal audit) that are separate from each other? If so, how has this been achieved?

4.7.14: Does each of the three lines of defence have sufficient authority, independence, resources and access to the Board? If so, how has this been achieved?

**Art 4.7a**

The Board's approval shall be required for decisions that have a significant impact on the SIPS's risk profile and for the key risk documents governing the SIPS's operations. As a minimum, the Board shall approve and annually review the comprehensive risk management framework referred to in Article 5(1), the operational risk framework and the associated business continuity plan referred to in Articles 15(1) and 15(5) respectively, the recovery and orderly wind-down plan and the capital plan referred to in Articles 5(4) and 13(6) respectively, the frameworks on credit and liquidity risk referred to in Articles 6(1) and 8(1) respectively, the collateral framework that governs the management of risks referred to in Article 7, the SIPS's investment strategy referred to in Article 14(4), and the cyber resilience framework referred to in Article 15(4a).

**No PFMI KC**

4.7a.1: Is the Board's approval required for all decisions that have a significant impact on the SIPS's risk profile and for key risk documents governing the SIPS's operations?

4.7a.2: Are the SIPS operator's comprehensive risk management framework, operational risk framework, associated business continuity plan, recovery and orderly wind-down plan, capital plan, credit and liquidity risk frameworks, collateral framework, SIPS's investment strategy and cyber resilience framework approved by the Board? How often are these documents reviewed?

**Article 4(8)**

The Board shall ensure that major decisions affecting the SIPS's technical and functional setup, rules and overall strategy, in particular, with regard to choice of a clearing and settlement arrangement, operating structure, scope of products cleared or settled, and use of technology and procedures, appropriately reflect the legitimate interests of the SIPS's relevant stakeholders. The relevant stakeholders and, where appropriate, the public shall be consulted reasonably in advance on such decisions.

**PFMI 2 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.

**Identification and consideration of stakeholder interests**

4.8.1: How does the SIPS operator identify and take account of the interests of the SIPS' stakeholders concerning major decisions affecting the SIPS's technical and functional setup, rules and overall strategy, in particular, with regard to choice of a clearing and settlement arrangement, operating structure, scope of products cleared or settled, and use of technology and procedures?

4.8.2: How does the Board consider the relevant stakeholders' views on these decisions? For example, are stakeholders involved in the risk management function; included on participants' committees, such as a default management group; or asked for their views through a public consultation? How are conflicts of interest between stakeholders and the SIPS operator identified, and how are they addressed?

4.8.3: Is there a specific dispute resolution procedure to be used by participants? If not, how are disputes handled? If yes, has it been used already?

4.8.4: Is there a specific dispute resolution procedure to be used by non-participants (e.g. applicants, former participants) for disputes related to the access/exit criteria? If not, how are disputes handled? If yes, has it been used already?

4.8.5: Is there a dispute resolution procedure in place for potential disputes between the SIPS owner(s) and the SIPS operator?

4.8.6: How are the participants associated? For what type of decisions do consultations take place?

4.8.7: What types of consultation arrangements exist? For example, do formal or informal consultation arrangements exist?

4.8.8: Is the range of participants consulted sufficiently wide to ensure that all participants are fairly represented? Do discussions with participant groups take place?

Q.2.7.1: How does the FMI identify and take account of the interests of the FMI's participants and other relevant stakeholders in its decision-making in relation to its design, rules, overall strategy and major decisions?

Q.2.7.2: How does the board consider the views of direct and indirect participants and other relevant stakeholders on these decisions; for example, are participants included on the risk management committee, on participant committees such as a default management group or through a public consultation? How are conflicts of interest between stakeholders and the FMI identified, and how are they addressed?

Q.2.7.3: Is there a specific dispute resolution procedure to be used by participants for disputes related to the implementation of procedures or other issues? If not, how are disputes handled? If yes, has it been used already?

Q.2.7.4: Is there a specific dispute resolution procedure to be used by non-participants (e.g. applicants, former participants) for disputes related to the access/exit criteria? If not, how are disputes handled? If yes, has it been used already?

Q.2.7.5: Is there a dispute resolution procedure in place for potential disputes between the owner and the operator of the system?

Q.2.7.6: How are the participants and other interested parties associated? For what type of issues do consultations take place?

Q.2.7.7: What type of consultation arrangement exists? For example, do formal or informal consultation arrangements exist?

Q.2.7.8: Is the range of participants consulted sufficiently wide to ensure that all participants are fairly represented? Do discussions with participant groups take place?

4.8.9: Do the majority of participants usually accept decisions which are agreed by the participant representatives consulted thereupon?

Q.2.2.9: Do the majority of participants usually accept decisions which are agreed by the participant representatives?

4.8.10: Has the SIPS operator ensured that the SIPS complies with the Regulation? If not, have plans been developed by the SIPS owner/ SIPS operator to address issues/problems identified within a reasonable time frame?

Q 2.7.10: Does the system comply – at least broadly – with the other relevant PFMIIs? If not, have plans been developed by the system owner/operator to address issues/problems identified within a reasonable time frame?

## Article 5

### Framework for the comprehensive management of risks / Principle 3 Framework for the comprehensive management of risks

✔ SIPS

✔ Non SIPS LVPS

✔ PIRPS (KC 1)

✔ ORPS (KC 1)

#### Article 5(1)

A SIPS operator shall establish and maintain a sound risk-management framework to comprehensively identify, measure, monitor and manage the range of risks that arise in or are borne by the SIPS. It shall review the risk-management framework at least annually. The risk-management framework shall:

- (a) include the SIPS operator's risk-tolerance policy and appropriate risk management tools;
- (b) assign responsibility and accountability for risk decisions;
- (c) address decision-making in emergency situations relating to a SIPS, including developments in financial markets potentially having an adverse effect on market liquidity and the stability of the financial system in any Member State whose currency is the euro where the SIPS operator or one of the participants are established.

#### PFMI 3 KC 1

An FMI should have risk-management 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.

#### Risks that arise in or are borne by the FMI

5.1.1: What types of risk arise in or are borne by the SIPS?

Q.3.1.1: What types of risk arise in or are borne by the FMI?

5.1.2: What are the SIPS operator's established policies, procedures and controls to comprehensively identify, measure, monitor and manage the risks that arise in or are borne by the SIPS?

Q.3.1.2: What are the FMI's policies, procedures and controls to help identify, measure, monitor and manage the risks that arise in or are borne by the FMI?

5.1.3: What risk management systems are used by the SIPS operator to comprehensively identify, measure, monitor and manage its range of risks?

Q.3.1.3: What risk management systems are used by the FMI to help identify, measure, monitor and manage its range of risks?

5.1.4: How do these systems provide the capacity to aggregate exposures across the SIPS and, where appropriate, other relevant parties, such as the SIPS' participants and their customers?

Q.3.1.4: How do these systems provide the capacity to aggregate exposures across the FMI and, where appropriate, other relevant parties, such as the FMI's participants and their customers?

#### **Risk management policies, procedures and systems**

5.1.5: What is the process for developing, approving and maintaining risk-tolerance policies and appropriate risk management procedures and systems?

Q.3.1.5: What is the process for developing, approving and maintaining risk management policies, procedures and systems?

5.1.6: How does the SIPS operator assess the effectiveness of the risk-tolerance policies and risk management procedures and systems?

Q.3.1.6: How does the FMI assess the effectiveness of risk management policies, procedures and systems?

5.1.7: How does the risk management framework address decision-making in emergency situations relating to a SIPS, including developments in financial markets potentially having an adverse effect on market liquidity and the stability of the financial system in any Member State whose currency is the euro where the SIPS operator or one of the participants are established?

Q.3.1.7: How frequently are the risk management policies, procedures and systems reviewed and updated by the FMI? How do these reviews take into account fluctuation in risk intensity, changing environments and market practices?

5.1.8: Are the risk-tolerance policies and risk management procedures and systems reviewed and updated by the SIPS at least annually? How do these reviews take into account fluctuation in risk intensity, changing environments and market practices?

#### **Article 5(2)**

A SIPS operator shall provide incentives to participants and, where relevant, their customers to manage and limit the risks they pose to and bear from the SIPS. With regard to participants, such incentives shall include an effective, proportionate and dissuasive financial penalties regime or loss-sharing arrangements, or both.

#### **PFMI 3 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.

5.2.1: What information does the SIPS operator provide to its participants and, where relevant, their customers to enable them to manage and limit the risks they pose to and bear from the SIPS?

Q.3.2.1: What information does the FMI provide to its participants and, where relevant, their customers to enable them to manage and contain the risks they pose to the FMI?



5.2.2: What incentives does the SIPS operator provide for participants and, where relevant, their customers to monitor and manage and limit the risks they pose to and bear from the SIPS? Do they include an effective, proportionate and dissuasive financial penalties regime or loss-sharing arrangements, or both?

Q.3.2.2: What incentives does the FMI provide for participants and, where relevant, their customers to monitor and manage the risks they pose to the FMI?

5.2.3: How does the SIPS operator design its policies and systems so that they are effective and proportionate in allowing their participants and, where relevant, their customers to manage and limit their risks, and dissuasive with regards to avoiding risk management/risk limitation?

Q.3.2.3: How does the FMI design its policies and systems so that they are effective in allowing their participants and, where relevant, their customers to manage and contain their risks?

#### **Article 5(3)**

A SIPS operator shall review the material risks the SIPS bears from and poses to other entities, including, *inter alia*, FMIs, settlement banks, liquidity providers and service providers, as a result of interdependencies at least annually. The SIPS operator shall develop risk-management tools that are robust and proportionate to the identified level of risk.

#### **PFMI 3 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.

#### **Material risks**

5.3.1: How does the SIPS operator identify the material risks that it bears from and poses to other entities, *inter alia*, FMIs, settlement banks, liquidity providers and service providers, as a result of interdependencies? What material risks has the SIPS operator identified?

Q.3.3.1: How does the FMI identify the material risks that it bears from and poses to other entities as a result of interdependencies? What material risks has the FMI identified?

5.3.2: How are these risks measured and monitored? Does the SIPS operator review these risks at least annually?

Q.3.3.2: How are these risks measured and monitored? How frequently does the FMI review these risks?

#### **Risk management tools**

5.3.3: What risk management tools are used by the SIPS operator to address the risks arising from interdependencies with other entities?

Q.3.3.3: What risk management tools are used by the FMI to address the risks arising from interdependencies with other entities?

5.3.4: How does the SIPS operator assess the robustness, proportionality and effectiveness of these risk management tools? How does the SIPS operator review the risk management tools it uses to address these risks? How frequently is this review conducted?

Q.3.3.4: How does the FMI assess the effectiveness of these risk management tools? How does the FMI review the risk management tools it uses to address these risks? How frequently is this review conducted?

#### **Article 5(4)**

A SIPS operator shall define the SIPS's critical operations and services. The SIPS operator shall identify specific scenarios that may prevent it from being able to provide these critical operations and services as a going concern and shall assess the effectiveness of all options for recovery and, with the exception of Eurosystem SIPS, an orderly wind-down. It shall review the SIPS's critical operations and services at least annually. Based on this assessment, a SIPS operator shall prepare a plan for the SIPS's recovery and, except for Eurosystem SIPS, an orderly wind-down. The recovery and orderly wind-down plan shall contain, inter alia, a substantive summary of the key recovery and orderly wind-down strategies, a restatement of the SIPS's critical operations and services, and a description of the measures needed to implement the key strategies. A SIPS operator shall, where applicable, provide relevant authorities with the information needed for purposes of resolution planning.

#### **PFMI 3 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.

#### **Scenarios that may prevent an FMI from providing critical operations and services**

5.4.1: What are the SIPS's critical operations and services defined by the SIPS operator?

Q.3.4.1: How does the FMI identify scenarios that may potentially prevent the FMI from providing its critical operations and services? What scenarios have been identified as a result of these processes?

5.4.2: How does the SIPS operator identify specific scenarios that may potentially prevent it from providing its critical operations and services? What scenarios have been identified as a result of these processes? Are the critical operations and services reviewed and updated at least annually?

Q.3.4.2: How do these scenarios take into account both independent and related risks to which the FMI is exposed?

#### **Recovery or orderly wind-down plans**

5.4.3: How do these scenarios take into account both independent and related risks to which the SIPS is exposed? What are the significant assumptions made to identify relevant scenarios? Are the scenarios tested? How many scenarios have been identified? In which categories (macro-prudential/micro-prudential/idiosyncratic)?

Q.3.4.3: What plans does the FMI have for its recovery or orderly wind-down?

5.4.4: Which triggers have been identified to address recovery?

Q.3.4.4: How do the FMI's key recovery or orderly wind-down strategies enable the FMI to continue to provide critical operations and services?

5.4.5: What plans does the SIPS operator have for its recovery? How have recovery tools been identified? What is the list of tools identified by the SIPS operator? How do they address the risks that could possibly cause recovery situation for the SIPS?

Q.3.4.5: How are the plans for the FMI's recovery and orderly wind-down reviewed and updated? How frequently are the plans reviewed and updated?

5.4.6: How do the SIPS operator's key recovery and orderly wind-down strategies enable the SIPS to continue to provide critical operations and services? Does the plan include, inter alia, a substantive summary of the key recovery and orderly wind-down strategies, a restatement of the SIPS's critical operations and services, and a description of the measures needed to implement the key strategies?

5.4.7: What are the decision-making bodies involved in invoking a recovery scenario? What is the escalation process?

5.4.8: How are the plans for the SIPS' recovery reviewed and updated? How are monitoring and reporting organised?

5.4.9: Are the participants to the SIPS involved in the recovery planning?

## Article 6

### Credit Risk / Principle 4 Credit risk

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Article 6(1)

A SIPS operator shall establish a robust framework to measure, monitor and manage its credit exposures to its participants and credit exposures among participants arising from the SIPS payment, clearing, and settlement processes.

#### PFMI 4 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.

6.1.1: What is the SIPS' framework for managing credit exposures, including current and potential future exposures, to its participants and arising from its payment, clearing and settlement processes?

Q.4.1.1: What is the payment system's framework for managing credit exposures, including current and potential future exposures, to its participants and arising from its payment, clearing and settlement processes?

6.1.2: How frequently is the framework reviewed to reflect the changing environment, market practices and new products?

Q.4.1.2: How frequently is the framework reviewed to reflect the changing environment, market practices and new products?

6.1.3: What are the incentives provided for in the rules and procedures of the SIPS for the management and containment of credit risk? For example, are incentives provided by means of on-going monitoring and analysis of the credit and liquidity risks participants pose to the system, limits on exposures, by pre-funding or collateralisation of obligations?

Q.4.1.3: What are the incentives provided for in the rules and procedures of the system for the management and containment of credit risk? For example, are incentives provided by means of on-going monitoring and analysis of the credit and liquidity risks participants pose to the system, limits on exposures, by pre-funding or collateralisation of obligations?

#### Article 6(2)

A SIPS operator shall identify all sources of credit risk. The measurement and monitoring of credit exposures shall take place throughout the day, using timely information and appropriate risk-management tools.

#### PFMI 4 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.

6.2.1: How does the SIPS operator identify sources of credit risk? What are the sources of credit risk that the SIPS operator has identified?

Q.4.2.1: How does the payment system identify sources of credit risk? What are the sources of credit risk that the payment system has identified?

6.2.2: How does the SIPS operator measure and monitor credit exposures? How frequently does and how frequently can the SIPS operator recalculate these exposures? How timely is the information?

Q.4.2.2: How does the payment system measure and monitor credit exposures? How frequently does and how frequently can the payment system recalculate these exposures? How timely is the information?

6.2.3: What tools does the SIPS operator use to control identified sources of credit risk (for example, offering an RTGS, limiting net debits or intraday credit, establishing concentration limits, or marking positions to market on a daily or intraday basis)? How does the SIPS operator measure the effectiveness of these tools?

Q.4.2.3.a: What tools does the payment system use to control identified sources of credit risk (for example, offering an RTGS or DvP settlement mechanism, limiting net debits or intraday credit, establishing concentration limits, or marking positions to market on a daily or intraday basis)? How does the payment system measure the effectiveness of these tools?

6.2.4: If the SIPS is a deferred net settlement system (DNS), do the SIPS's rules and procedures allow for an unwinding of payments in the event of a participant failure leading to a recalculation of settlement obligations?

Q.4.2.3.b: If the payment system is a DNS system, do the rules and procedure of the system allow for an unwinding of payments in the event of a participant failure leading to a recalculation of settlement obligations?

#### **Art 6.2a**

A SIPS operator operating a DNS system shall ensure that

(a) financial obligations are established no later than the moment when a transfer order is included in the calculation of the net settlement positions accessible to each participant; and

(b) sufficient resources are held to cover the resulting credit exposures in accordance with paragraphs 3 and 4 at the latest at the moment referred to in point (a).

#### **No PFMI KC**

6.2a.1: If the SIPS is a DNS system, how does the SIPS operator ensure that financial obligations are established no later than the moment when a transfer order is included in the calculation of the net settlement positions accessible to each participant?

6.2.a.2: Does the SIPS operator hold, or ensure that participants hold, sufficient resources to fully cover the resulting credit exposures? What is the composition of the resources used to cover these exposures? How does the SIPS operator ensure that sufficient resources are available at the moment when the transfer order is included in the calculation of the net settlement positions accessible to each participant?

#### **Article 6(3)**

A SIPS operator, including one operating a DNS with a settlement guarantee, that in the course of SIPS operations incurs credit exposure vis-à-vis its participants, shall cover its credit exposure to each participant using collateral, guarantee funds, equity (after deduction of the amount dedicated to cover general business risk) and or other equivalent financial resources.

#### **PFMI 4 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).[...]

#### Coverage of exposures to each participant

6.3.1: How does the SIPS cover its current and, where they exist, potential future exposures to each participant? What is the composition of the SIPS' financial resources used to cover these exposures? How accessible are these financial resources?

Q.4.3.1: How does the payment system cover its current and, where they exist, potential future exposures to each participant? What is the composition of the payment system's financial resources used to cover these exposures? How accessible are these financial resources?

6.3.2: To what extent do these financial resources cover the SIPS' current and potential future exposures fully with a high degree of confidence? How frequently does the SIPS operator evaluate the sufficiency of these financial resources?

Q.4.3.2: To what extent do these financial resources cover the payment system's current and potential future exposures fully with a high degree of confidence? How frequently does the payment system evaluate the sufficiency of these financial resources?

#### Article 6(4)

A SIPS operator, including one operating a DNS with no settlement guarantee, but in which participants face credit exposures arising from the SIPS payment, clearing and settlement processes, shall have in place rules or contractual arrangements with these participants. The rules or contractual arrangements shall ensure that the participants will provide sufficient resources, as referred to in paragraph 3, to cover credit exposures resulting from the SIPS payment, clearing and settlement processes in relation to the two participants which, together with their affiliates, have the largest aggregate credit exposure.

#### PFMI 4 KC 3

[...] 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 in the system.

#### For DNS payment systems in which there is no settlement guarantee

6.4.1: If the SIPS is a DNS system in which there is no settlement guarantee, do its participants face credit exposures arising from the payment, clearing and settlement processes? If there are credit exposures in the SIPS, how does the SIPS operator monitor and measure these exposures?

Q.4.3.3: If the payment system is a DNS system in which there is no settlement guarantee, do its participants face credit exposures arising from the payment, clearing and settlement processes? If there are credit exposures in the system, how does the system monitor and measure these exposures?

6.4.2: If the SIPS is a DNS system in which there is no settlement guarantee and has credit exposures among its participants, to what extent does the SIPS' financial resources cover, at a minimum, the default of the two participants and their affiliates that would create the largest aggregate credit exposure in the SIPS?

Q.4.3.4: If the payment system is a DNS system in which there is no settlement guarantee and has credit exposures among its participants, to what extent does the payment system's financial resources cover, at a minimum, the default of the two participants and their affiliates that would create the largest aggregate credit exposure in the system?

#### **Article 6(5)**

A SIPS operator shall establish rules and procedures to address losses directly resulting from defaults by one or more participants on their obligations to the SIPS. These rules and procedures shall address the allocation of potentially uncovered losses, including the repayment of any funds a SIPS operator may borrow from liquidity providers. They shall include the SIPS operator's rules and procedures concerning the replenishment of any financial resources used by the SIPS during a stress event, to the level laid down in paragraphs 3 and 4.

#### **PFMI 4 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 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.

6.5.1: What are the responsibilities of the SIPS operator, settlement agent and the participants for the management and the containment of credit risk?

#### **Allocation of responsibilities**

Q.4.7.0: What are the responsibilities of the system operator, settlement agent and the participants for the management and the containment of credit risk?

6.5.2: How do the SIPS operator's rules and procedures address any losses the SIPS may face as a result of any individual or combined default among its participants with respect to any of their obligations to the SIPS? How do the SIPS operator's rules and procedures address the allocation of uncovered losses and in what order, including the repayment of any funds a SIPS may borrow from liquidity providers?

#### **Allocation of credit losses**

Q.4.7.1: How do the payment system's rules and procedures explicitly address any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the payment system? How do the payment system's rules and procedures address the allocation of uncovered credit losses and in what order, including the repayment of any funds a payment system may borrow from liquidity providers?

6.5.3: What are the SIPS operator's rules and procedures on the replenishment of the financial resources that are exhausted during a stress event?

#### **Replenishment of financial resources**

Q.4.7.2: What are the payment system's rules and procedures on the replenishment of the financial resources that are exhausted during a stress event?

## Article 7

### Collateral / Principle 5 Collateral

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Article 7(1)

A SIPS operator shall only accept the following assets as collateral: (a) cash; and (b) assets with low credit, liquidity and market risks, i.e. assets for which the SIPS operator can demonstrate to the competent authority based on an adequate internal assessment that they meet all of the following conditions:

- (i) they have been issued by an issuer with low credit risk;
- (ii) they are freely transferable without any legal constraint or third party claims;
- (iii) they are denominated in a currency the risk of which is managed by the SIPS operator;
- (iv) they have reliable price data published on a regular basis;
- (v) they are not otherwise subject to significant wrong-way risk;
- (vi) they are not issued by the participant providing the collateral or an entity that is part of the same group as that participant, except in the case of a covered bond and only where the assets in the cover pool are appropriately segregated within a robust legal framework and satisfy the requirements set out in points (i) to (vi).

In performing the internal assessment of points (i) to (vii), the SIPS operator shall define, document and apply an objective methodology.

7.1.1: Has the SIPS operator defined and documented an objective methodology for the internal assessment of its acceptance of assets as collateral?

#### PFMI 5 KC 1

An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.

Q.5.1.1: How does the FMI determine whether a specific asset can be accepted as collateral, including collateral that will be accepted on an exceptional basis? How does the FMI determine what qualifies as an exceptional basis? How frequently does the FMI adjust these determinations? How frequently does the FMI accept collateral on an exceptional basis, and does it place limits on its acceptance of such collateral?



7.1.2: How does the SIPS operator apply the methodology to determine whether a specific asset can be accepted as collateral, including collateral that will be accepted on an exceptional basis? Are all conditions to be met? How does the SIPS operator determine what qualifies as an exceptional basis? How frequently does the SIPS operator adjust these determinations? How frequently does the SIPS operator accept collateral on an exceptional basis, and does it place limits on its acceptance of such collateral? How does the SIPS operator determine what qualifies as issuer with low credit risk, transferability without legal constraint or third party claims, reliable price data published on a regular basis, lack of significant wrong-way risk and close links?

7.1.3: How does the SIPS operator monitor the collateral that is posted so that the collateral meets the applicable acceptance criteria?

7.1.4: How does the SIPS operator identify and mitigate possible specific wrong-way risk – for example, by limiting the collateral it accepts (including collateral concentration limits)?

7.1.5: To what extent is the SIPS operator authorised to exercise discretion in valuing assets when market prices do not represent their true value?

7.1.6: In which currency are they denominated? Do they have reliable price data published on regular basis?

Q.5.1.2: How does the FMI monitor the collateral that is posted so that the collateral meets the applicable acceptance criteria?

Q.5.1.3: How does the FMI identify and mitigate possible specific wrong-way risk – for example, by limiting the collateral it accepts (including collateral concentration limits)?

#### **Article 7(2)**

A SIPS operator shall establish and implement policies and procedures to monitor the credit quality, market liquidity and price volatility of each asset accepted as collateral. A SIPS operator shall monitor on a regular basis, and at least annually, the adequacy of its valuation policies and procedures. Such review shall also be carried out whenever a material change occurs that affects the SIPS's risk exposure. A SIPS operator shall mark-to-market its collateral at least on a daily basis.

#### **PFMI 5 KC 2**

An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.

### Valuation practices

7.2.1: Has the SIPS operator established and implemented policies and procedures to monitor the credit quality, market liquidity and price volatility of each asset accepted as collateral?

Q.5.2.1: How frequently does the FMI mark its collateral to market, and does it do so at least daily?

7.2.2: How frequently does the SIPS operator mark its collateral to market, and does it do so at least daily?

Q.5.2.2: To what extent is the FMI authorised to exercise discretion in valuing assets when market prices do not represent their true value?

7.2.3: How does the SIPS operator determine haircuts?

Q.5.2.3: In which currency are they denominated? Do they have reliable price data published on regular basis?

### Haircutting practices

7.2.4: How does the SIPS operator test the adequacy of its valuation policies and procedures, including with respect to the potential decline in the assets' value in stressed market conditions involving the liquidation of collateral? How frequently does the SIPS operator complete this test? Does it do so at least annually?

Q.5.2.4: How does the FMI determine haircuts?

Q.5.2.5: How does the FMI test the sufficiency of haircuts and validate its haircut procedures, including with respect to the potential decline in the assets' value in stressed market conditions involving the liquidation of collateral? How frequently does the FMI complete this test?

### Article 7(3)

A SIPS operator shall establish stable and conservative haircuts and shall test them at least annually and take into account stressed market conditions. Haircut procedures shall be validated by personnel other than those who created and applied the haircut procedures at least annually.

### PFMI 5 KC 3

In order to reduce the need for pro-cyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.

7.3.1: Does the SIPS operator establish stable and conservative haircuts and test them at least annually? How does the SIPS operator determine stressed market conditions? How does the SIPS operator identify and evaluate the potential pro-cyclicality of its haircut calibrations? How does the SIPS operator consider reducing the need for pro-cyclical adjustments – for example, by incorporating situations of extreme but plausible stress market conditions during the calibration of haircuts? Are these haircuts evaluated by a third party, at least annually?

Q.5.3.1: How does the FMI identify and evaluate the potential pro-cyclicality of its haircut calibrations? How does the FMI consider reducing the need for pro-cyclical adjustments – for example, by incorporating situations of extreme but plausible stress market conditions during the calibration of haircuts? Are these haircuts evaluated by a third party?

**Article 7(4)**

A SIPS operator shall take measures to avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.

**PFMI 5 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.

7.4.1: What are the SIPS operator's measures for identifying and avoiding concentrated holdings of certain assets in order to limit potential adverse price effects at liquidation? What factors (for example, adverse price effects or market conditions) are considered when taking these measures?

Q.5.4.1: What are the FMI's policies for identifying and avoiding concentrated holdings of certain assets in order to limit potential adverse price effects at liquidation? What factors (for example, adverse price effects or market conditions) are considered when determining these policies?

7.4.2: How does the SIPS operator review and evaluate concentration measures to determine their adequacy? How frequently does the SIPS operator review and evaluate these measures?

Q.5.4.2: How does the FMI review and evaluate concentration policies and practices to determine their adequacy? How frequently does the FMI review and evaluate these policies and practices?

**Article 7(5)**

A SIPS operator that accepts cross-border collateral shall identify and mitigate the risks associated with its use and ensure that the cross-border collateral can be used in a timely manner.

**PFMI 5 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.

7.5.1: Does the SIPS accept cross-border collateral? What are the legal, operational, market and other risks that the SIPS faces by accepting cross-border collateral? How does the SIPS operator mitigate these risks?

Q.5.5.1: Does the FMI accept cross-border collateral? What are the legal, operational, market and other risks that the FMI faces by accepting cross-border collateral? How does the FMI mitigate these risks?

7.5.2: How does the SIPS operator ensure that cross-border collateral can be used in a timely manner?

Q.5.5.2: How does the FMI ensure that cross-border collateral can be used in a timely manner?

**Article 7(6)**

A SIPS operator shall use an effective and operationally flexible collateral management system.

**PFMI 5 KC 6**

An FMI should use a collateral management system that is well-designed and operationally flexible.

**Collateral management system design**

7.6.1: What are the primary features of the SIPS operator's collateral management system?

Q.5.6.1: What are the primary features of the FMI's collateral management system?

7.6.2: How and to what extent does the SIPS operator track the reuse of collateral and its rights to the collateral provided?

Q.5.6.2: How and to what extent does the FMI track the reuse of collateral and its rights to the collateral provided?

7.6.3: How and to what extent does the SIPS' collateral management system accommodate changes in the on-going monitoring and management of collateral?

7.6.4: To what extent is the collateral management system staffed to ensure smooth operations even during times of market stress?

#### **Operational flexibility**

Q.5.6.3: How and to what extent does the FMI's collateral management system accommodate changes in the on-going monitoring and management of collateral?

Q.5.6.4: To what extent is the collateral management system staffed to ensure smooth operations even during times of market stress?

#### **Article 7(7)**

Paragraph 1 shall not apply to Eurosystem SIPS.

## Article 8

### Liquidity risk / Principle 7 Liquidity risk

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Art 8.1

A SIPS operator shall establish a comprehensive framework to manage liquidity risks posed by the SIPS's participants, settlement banks, nostro agents, custodian banks, liquidity providers and other relevant entities. The SIPS operator shall provide the participants with adequate tools to effectively manage their liquidity and shall monitor and facilitate the smooth flow of liquidity in the system.

#### PFMI 7 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.

8.1.1: What is the SIPS operator's framework for managing its liquidity risks, in all relevant currencies, from the SIPS participants, settlement banks, nostro agents, custodian banks, liquidity providers and other relevant entities?

Q.7.1.1: What is the FMI's framework for managing its liquidity risks, in all relevant currencies, from its participants, settlement banks, nostro agents, custodian banks, liquidity providers and other entities?

8.1.2: What are the nature and size of the SIPS' liquidity needs, and the associated sources of liquidity risks, that arise in the SIPS in all relevant currencies?

Q.7.1.2: What are the nature and size of the FMI's liquidity needs, and the associated sources of liquidity risks, that arise in the FMI in all relevant currencies?

8.1.3: How does the SIPS operator take into account the potential aggregate liquidity risk presented by an individual entity and its affiliates that may play multiples roles with respect to the SIPS?

Q.7.1.3: How does the FMI take into account the potential aggregate liquidity risk presented by an individual entity and its affiliates that may play multiples roles with respect to the FMI?

8.1.4: What are the incentives provided for in the rules and procedures of the SIPS for the management and containment of liquidity risk? For example, are incentives provided by means of the pricing structure (including possibly contractual penalties), for example to reinforce throughput guidelines or to discourage borrowers of intraday liquidity from the central banks from failing to repay by the end of the SIPS' operating day?

8.1.5: What tools has the SIPS operator provided to participants to allow them to effectively manage their liquidity? How does the SIPS operator ensure that the tools provided to participants are adequate? What is the usage of these tools by the participants? How does the SIPS operator monitor and facilitate the smooth flow of liquidity in the system?

**Article 8(2)**

A SIPS operator shall put in place operational and analytical tools, which enable it to identify, measure and monitor settlement and funding flows, including the use of intraday liquidity, on an on-going and timely basis.

**PFMI 7 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.

8.2.1: What operational and analytical tools does the SIPS operator have to identify, measure and monitor settlement and funding flows?

Q.7.2.1: What operational and analytical tools does the FMI have to identify, measure and monitor settlement and funding flows?

8.2.2: How does the SIPS operator use those tools to identify, measure and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity?

Q.7.2.2: How does the FMI use those tools to identify, measure and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity?

**Art 8.2a**

A SIPS operator operating a DNS system shall ensure that

- (a) financial obligations are established no later than the moment at which a transfer order is included in the calculation of the net settlement positions accessible to each participant; and
- (b) sufficient liquid resources are held in accordance with paragraphs 3 to 6 at the latest at the moment referred to in point (a).

**No PFMI KC**

8.2a.1: If the SIPS is a DNS system, how does the SIPS operator ensure that financial obligations are established no later than the moment at which a transfer order is included in the calculation of the net settlement positions accessible to each participant?

8.2.a.2: Does the SIPS operator hold, or ensure that participants hold, sufficient liquid resources to fully cover the resulting exposures? What is the composition of the resources used to cover these exposures? How does the SIPS operator ensure that sufficient liquid resources are available at the moment the transfer order is included in the calculation of the net settlement positions accessible to each participant?

**Article 8(3)**

A SIPS operator shall hold, or ensure that participants hold, sufficient liquid resources at all times as from the moment financial obligations are established, in all currencies in which it operates, to effect same-day settlement of payment obligations in a wide range of potential stress scenarios. Where appropriate, this shall include intraday or multiday settlement. The stress scenarios shall include: (a) the default, under extreme but plausible market conditions, of the participant which, together with its affiliates, has the largest aggregate financial obligation; and (b) other scenarios in accordance with paragraph 11.

**PFMI 7 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 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.

8.3.1: How does the SIPS operator determine the amount of liquid resources in all relevant currencies to effect same day settlement and, where appropriate, intraday or multiday settlement of payment obligations? What potential stress scenarios (including, but not limited to, the default of the participant and its affiliates that would generate the largest aggregate financial obligation in extreme but plausible market conditions) does the SIPS operator use to make this determination?

Q.7.3.1: How does the payment system determine the amount of liquid resources in all relevant currencies to effect same-day settlement and, where appropriate, intraday or multiday settlement of payment obligations? What potential stress scenarios (including, but not limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions) does the payment system use to make this determination?

8.3.2: What is the estimated size of the liquidity shortfall in each currency that the SIPS operator or the SIPS participants would need to cover?

Q.7.3.2: What is the estimated size of the liquidity shortfall in each currency that the payment system would need to cover?

#### Article 8(4)

A SIPS operator settling one-sided payments in euro shall hold, or ensure that participants hold, sufficient liquid resources, in accordance with paragraph 3, to effect timely settlement of financial obligations in the event of a default of the participant which, together with its affiliates, has the largest aggregate financial obligation as determined by paragraph 3(a) in any of the following ways:

- (a) in cash with the Eurosystem; or
- (b) in eligible collateral as defined in the collateral framework of the Eurosystem laid down in Guideline (EU) 2015/510 of the European Central Bank (ECB/2014/60) (\*<sup>4</sup>) and Guideline ECB/2014/31 of the European Central Bank (\*\*<sup>5</sup>) provided that the SIPS operator can demonstrate that such collateral is readily available and convertible into cash on a same-day basis using prearranged and highly reliable funding arrangements, including in stressed market conditions.

#### PFMI 7 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 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.

#### Size and composition of qualifying liquid resources

8.4.1: What is the size and composition of the SIPS' qualifying liquid resources in each currency that is held by the SIPS operator? In what manner and within what time frame can these liquid resources be made available to the SIPS operator?

Q.7.5.1: What is the size and composition of the FMI's qualifying liquid resources in each currency that is held by the FMI? In what manner and within what time frame can these liquid resources be made available to the FMI?

#### Availability and coverage of qualifying liquid resources

8.4.2: What prearranged funding arrangements has the SIPS operator established to convert its readily available collateral and investments into cash on a same-day basis? How has the SIPS operator established that these arrangements would be highly reliable in extreme but plausible market conditions? Has the SIPS operator identified any potential barriers to accessing its liquid resources?

Q.7.5.2: What prearranged funding arrangements has the FMI established to convert its readily available collateral and investments into cash? How has the FMI established that these arrangements would be highly reliable in extreme but plausible market conditions? Has the FMI identified any potential barriers to accessing its liquid resources?

8.4.3: If the SIPS operator has access to routine credit at the central bank of issue, what is the

Q.7.5.3: If the FMI has access to routine credit at the central bank of issue, what is the FMI's

<sup>4</sup> (\*)Guideline (EU) 2015/510 of the European Central Bank of 19 December 2014 on the implementation of the Eurosystem monetary policy framework (ECB/2014/60) (OJ L 91, 2.4.2015, p. 3).

<sup>5</sup> (\*\*) Guideline ECB/2014/31 of the European Central Bank of 9 July 2014 on additional temporary measures relating to Eurosystem refinancing operations and eligibility of collateral and amending Guideline ECB/2007/9 (OJ L 240, 13.8.2014, p. 28).'



SIPS's relevant borrowing capacity for meeting its minimum liquid resource requirement in that currency?

relevant borrowing capacity for meeting its minimum liquid resource requirement in that currency?

8.4.4: To what extent do the size and the availability of the SIPS' qualifying liquid resources cover its identified minimum liquidity resource requirement in each currency to effect settlement of financial obligations on time?

Q.7.5.4: To what extent does the size and the availability of the FMI's qualifying liquid resources cover its identified minimum liquidity resource requirement in each currency to effect settlement of payment obligations on time?

#### **Article 8(5)**

A SIPS operator settling one-sided payments in euro shall hold, or ensure that participants hold, additional liquid resources, in accordance with paragraph 3(b), in the ways referred to in paragraph 4 or with a creditworthy commercial bank in one or more of the following instruments:

- (a) committed lines of credit;
- (b) committed foreign exchange swaps;
- (c) committed repos;
- (d) assets meeting the requirements of Article 7(1), which are held by a custodian;
- (e) investments.

All of these instruments must allow cash to be available within a time frame that allows the completion of same-day settlement. In particular, the SIPS operator must be able to demonstrate that non-cash instruments are readily available and convertible into cash on a same-day basis using prearranged and highly reliable funding arrangements, including in stressed market conditions.

The SIPS operator shall be prepared to demonstrate to the competent authority, based on an adequate internal assessment, that the commercial bank is creditworthy.

#### **PFMI 7 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 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.

#### **Size and composition of qualifying liquid resources**

8.5.1: What is the size and composition of any supplemental liquid resources available to the SIPS?

Q.7.5.1: What is the size and composition of the FMI's qualifying liquid resources in each currency that is held by the FMI? In what manner and within what time frame can these liquid resources be made available to the FMI?

#### **Availability and coverage of qualifying liquid resources**

8.5.2: How and on what basis has the SIPS operator determined that all of these non-cash instruments are likely to be saleable or

Q.7.5.2: What prearranged funding arrangements has the FMI established to convert its readily available collateral and

acceptable as collateral and convertible into cash to obtain the relevant currency in a time frame that would allow same-day settlement to be assured, including in stressed market conditions? Has the SIPS operator identified any potential barriers to accessing its liquid resources? What prearranged and highly reliable funding arrangements does the SIPS operator have in place to ensure that non-cash instruments are readily available and convertible into cash on a same-day basis, including in stressed market conditions?

8.5.3: What proportion of these supplemental assets qualifies as potential collateral at the relevant central bank?

8.5.4: In what circumstances would the SIPS use its supplemental liquid resources in advance of, or in addition to, using its qualifying liquid resources?

8.5.5: To what extent does the size and availability of the SIPS' supplemental liquid resources, in conjunction with its qualifying liquid resources, cover the relevant liquidity needs identified through the SIPS' stress test programme for determining the adequacy of its liquidity resources?

8.5.6: If the additional resources are held at a commercial bank, how has the SIPS assessed the creditworthiness of the commercial bank?

investments into cash? How has the FMI established that these arrangements would be highly reliable in extreme but plausible market conditions? Has the FMI identified any potential barriers to accessing its liquid resources?

Q.7.5.3: If the FMI has access to routine credit at the central bank of issue, what is the FMI's relevant borrowing capacity for meeting its minimum liquid resource requirement in that currency?

Q.7.5.4: To what extent does the size and the availability of the FMI's qualifying liquid resources cover its identified minimum liquidity resource requirement in each currency to effect settlement of payment obligations on time?

**Article 8(6)**

A SIPS operator settling two-sided payments or one-sided payments in currencies other than the euro, shall hold, or ensure that participants hold, sufficient liquid resources, in accordance with paragraph 3, in ways referred to in paragraph 5.

**PFMI 7 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 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.

**Size and composition of qualifying liquid resources**

8.6.1: Does the SIPS use a liquidity provider to meet its minimum required qualifying liquidity resources? Who are the SIPS' liquidity providers? How and on what basis has the SIPS operator determined that each of these liquidity providers has sufficient information to understand and to manage their associated liquidity risk in each relevant currency on an on-going basis, including in stressed conditions?

Q.7.5.1: What is the size and composition of the FMI's qualifying liquid resources in each currency that is held by the FMI? In what manner and within what time frame can these liquid resources be made available to the FMI?

**Availability and coverage of qualifying liquid resources**

8.6.2: How has the SIPS operator determined that each of its liquidity providers has the capacity to perform on its commitment in each relevant currency on an on-going basis?

Q.7.5.2: What prearranged funding arrangements has the FMI established to convert its readily available collateral and investments into cash? How has the FMI established that these arrangements would be highly reliable in extreme but plausible market conditions? Has the FMI identified any potential barriers to accessing its liquid resources?

8.6.3: How does the SIPS operator take into account a liquidity provider's potential access to credit at the central bank of issue?

Q.7.5.3: If the FMI has access to routine credit at the central bank of issue, what is the FMI's relevant borrowing capacity for meeting its minimum liquid resource requirement in that currency?

8.6.4: How does the SIPS operator regularly test the timeliness and reliability of its procedures for accessing its liquid resources at a liquidity provider?

Q.7.5.4: To what extent does the size and the availability of the FMI's qualifying liquid resources cover its identified minimum liquidity resource requirement in each currency to effect settlement of payment obligations on time?

#### **Article 8(7)**

Where a SIPS operator supplements the resources referred to in paragraph 3 with other assets, these assets shall be likely to be marketable or acceptable as collateral (for, e.g., lines of credit, swaps, or repos) on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed under extreme but plausible market conditions. Where a participant supplements the resources referred to in paragraph 3 with other assets, the SIPS operator shall ensure that these other assets meet the requirements set out in the first sentence of this paragraph. Assets shall be presumed to be likely to be marketable or acceptable as collateral if the SIPS operator has taken into account the rules and practices of the relevant central bank on the eligibility of collateral.

#### **PFMI 7 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.

#### **Size and composition of supplemental liquid resources**

8.7.1: Has the SIPS operator complemented the resources referred to in paragraph 3 with other assets, and if so, what is the size and composition of the supplemental resources?

Q.7.6.1: What is the size and composition of any supplemental liquid resources available to the FMI?

#### **Availability of supplemental liquid resources**

8.7.2: How and on what basis has the SIPS operator determined that these assets are likely to be saleable or acceptable as collateral to obtain the relevant currency, even if this cannot be reliably prearranged or guaranteed in extreme market conditions?

Q.7.6.2: How and on what basis has the FMI determined that these assets are likely to be saleable or acceptable as collateral to obtain the relevant currency, even if this cannot be reliably prearranged or guaranteed in extreme market conditions?

8.7.3: What proportion of these supplemental assets qualifies as potential collateral at the relevant central bank?

Q.7.6.3: What proportion of these supplemental assets qualifies as potential collateral at the relevant central bank?

8.7.4: In what circumstances would the SIPS operator use its supplemental liquid resources in advance of, or in addition to, using its qualifying liquid resources?

Q.7.6.4: In what circumstances would the FMI use its supplemental liquid resources in advance of, or in addition to, using its qualifying liquid resources?

8.7.5: To what extent does the size and availability of the SIPS's supplemental liquid resources, in conjunction with its qualifying liquid resources, cover the relevant liquidity needs identified through the SIPS's stress test programme for determining the adequacy of its liquidity resources (see paragraph 9)?

Q.7.6.5: To what extent does the size and availability of the FMI's supplemental liquid resources, in conjunction with its qualifying liquid resources, cover the relevant liquidity needs identified through the FMI's stress test programme for determining the adequacy of its liquidity resources (see key consideration 9)?

#### **Article 8(8)**

A SIPS operator shall not assume that emergency central bank credit will be available.

#### **PFMI 7 KC 6**

#### **Article 8(9)**

A SIPS operator shall carry out due diligence to verify that each provider of the SIPS's liquid resources, as referred to in paragraph 3: (a) has sufficient and up-to-date information to understand and to manage the liquidity risks associated with the provision of cash or assets; and (b) has the capacity to provide cash or assets as required. The SIPS operator shall review its compliance with the due diligence obligation at least annually. Only entities with access to credit from the central bank of issue shall be accepted as liquidity providers. The SIPS operator shall regularly test the SIPS's procedures for accessing its liquid resources.

#### **PFMI 7 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 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.

8.9.1: Does the SIPS operator use a liquidity provider to meet its minimum required qualifying liquidity resources? Who are the SIPS' liquidity providers? How and on what basis has the SIPS operator determined that each of these liquidity providers has sufficient information to understand and to manage their associated liquidity risk in each relevant currency on an ongoing basis, including in stressed conditions?

#### **Use of liquidity providers**

Q.7.7.1: Does the FMI use a liquidity provider to meet its minimum required qualifying liquidity resources? Who are the FMI's liquidity providers? How and on what basis has the FMI determined that each of these liquidity providers has sufficient information to understand and to manage their associated liquidity risk in each relevant currency on an ongoing basis, including in stressed conditions?

8.9.2: How has the SIPS operator determined that each of its liquidity providers has the capacity to perform on its commitment in each relevant currency on an ongoing basis?

#### **Reliability of liquidity providers**

Q.7.7.2: How has the FMI determined that each of its liquidity providers has the capacity to perform on its commitment in each relevant currency on an ongoing basis?

8.9.3: How does the SIPS operator take into account a liquidity provider's potential access to credit at the central bank of issue?

Q.7.7.3: How does the FMI take into account a liquidity provider's potential access to credit at the central bank of issue?

8.9.4: How does the SIPS operator regularly test the timeliness and reliability of its procedures for accessing its liquid resources at a liquidity provider?

Q.7.7.4: How does the FMI regularly test the timeliness and reliability of its procedures for accessing its liquid resources at a liquidity provider?

**Article 8(10)**

A SIPS operator with access to central bank accounts, payment services or securities services shall use these services, where practicable.

**PFMI 7 / 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.

8.10.1: To what extent does the SIPS operator currently have, or is the SIPS operator eligible to obtain, access to accounts, payment services and securities services at each relevant central bank that could be used to conduct its payments and settlements and to manage liquidity risks in each relevant currency?

Q.7.8.1: To what extent does the FMI currently have, or is the FMI eligible to obtain, access to accounts, payment services and securities services at each relevant central bank that could be used to conduct its payments and settlements and to manage liquidity risks in each relevant currency?

8.10.2: To what extent does the SIPS operator use each of these services at each relevant central bank to conduct its payments and settlements and to manage liquidity risks in each relevant currency?

Q.7.8.2: To what extent does the FMI use each of these services at each relevant central bank to conduct its payments and settlements and to manage liquidity risks in each relevant currency?

8.10.3: If the SIPS operator employs services other than those provided by the relevant central banks, to what extent has the SIPS operator analysed the potential to enhance the management of liquidity risk by expanding its use of central bank services?

Q.7.8.3: If the FMI employs services other than those provided by the relevant central banks, to what extent has the FMI analysed the potential to enhance the management of liquidity risk by expanding its use of central bank services?

8.10.4: What, if any, practical or other considerations to expanding its use of relevant central bank services have been identified by the SIPS operator?

Q.7.8.4: What, if any, practical or other considerations to expanding its use of relevant central bank services have been identified by the FMI?

#### **Article 8(11)**

A SIPS operator shall, through rigorous stress testing, determine the amount and regularly test the sufficiency of its liquid resources to satisfy the requirements under paragraphs 3 and 4. In conducting stress testing, the SIPS operator shall consider a wide range of relevant scenarios, including one or more participant defaults on the same day and on two or more subsequent days.

When such scenarios are considered, the design and operation of the SIPS shall be taken into account and all entities that might pose material liquidity risks to the SIPS shall be examined, including settlement banks, nostro agents, custodian banks, liquidity providers and linked FMIs. Where appropriate, the scenarios shall cover a multiday period.

#### **PFMI 7 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 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.

8.11.1: How does the SIPS operator use stress testing to determine the amount and test the sufficiency of its liquid resources in each currency to satisfy the requirements under 8(3) and 8 (4)? How frequently does the SIPS operator stress-test the sufficiency of its liquid resources?

8.11.2: What is the process for reporting on an on-going basis the results of the payment system's liquidity stress tests to appropriate decision-makers at the payment system, for the purpose of supporting their timely evaluation and adjustment of the size and composition of the SIPS' liquidity resources and liquidity risk management framework?

8.11.3: What scenarios are used in the stress tests, and to what extent do they take into account one or more participant defaults on the same day and on two or more subsequent days?

#### **Use of liquidity providers**

Q.7.7.1: Does the FMI use a liquidity provider to meet its minimum required qualifying liquidity resources? Who are the FMI's liquidity providers? How and on what basis has the FMI determined that each of these liquidity providers has sufficient information to understand and to manage their associated liquidity risk in each relevant currency on an ongoing basis, including in stressed conditions?

#### **Reliability of liquidity providers**

Q.7.7.2: How has the FMI determined that each of its liquidity providers has the capacity to perform on its commitment in each relevant currency on an ongoing basis?

Q.7.7.3: How does the FMI take into account a liquidity provider's potential access to credit at the central bank of issue?

8.11.4: To what extent do the scenarios and stress tests take into account the SIPS' particular payment and settlement structure (for example, real-time gross or deferred net; with or without a settlement guarantee), and the liquidity risk that is borne directly by the SIPS, by its participants, or both?

8.11.5: To what extent do the scenarios and stress tests take into account the nature and size of the liquidity needs, and the associated sources of liquidity risks, that arise in the SIPS to settle its payment obligations on time, including the potential that individual entities and their affiliates may play multiples roles with respect to the SIPS? What kind of entity (such as settlement banks, nostro agents, custodian banks, liquidity provider or linked FMI) might pose material liquidity risk to the SIPS? If any, they shall be examined.

8.11.6: How frequently does the SIPS operator assess the effectiveness and appropriateness of stress test assumptions and parameters?

8.11.7: How does the SIPS operator validate its risk management model? How frequently does it perform this validation?

Q.7.7.4: How does the FMI regularly test the timeliness and reliability of its procedures for accessing its liquid resources at a liquidity provider?



**Article 8(12)**

A SIPS operator shall document its reasons for holding, and shall have appropriate governance arrangements relating to, the cash and other assets maintained by it or by participants. It shall establish clear procedures for reporting the results of its stress tests to the Board and shall use these results to evaluate the adequacy of and make adjustments to its liquidity risk-management framework.

**PFMI 7 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, 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.

8.12.1: What are the procedures established by the SIPS operator for:

1. reporting the results of its stress tests to the Board? And
2. using the results of the stress tests used to evaluate the adequacy of and make adjustments to its liquidity management framework

8.12.2: Where and to what extent does the SIPS operator document its supporting rationale for, and its governance arrangements relating to, the amount and form of its total liquid resources?

**Article 8(13)**

A SIPS operator shall establish clear rules and procedures enabling the SIPS to effect same-day and, where appropriate, timely intraday and multiday settlement of financial obligations following the default of one or more of its participants. These rules and procedures shall:

- (a) address unforeseen and potentially uncovered liquidity shortfalls;
- (b) aim to avoid the unwinding, revocation or delay of same-day settlement of financial obligations;
- (c) indicate how to replenish the cash and other assets used by the SIPS during a stress event, to the extent required pursuant to paragraphs 3 to 5.

**PFMI 7 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.

**Same day settlement**

8.13.1: How do the SIPS' rules and procedures enable it to settle payment obligations on time following any individual or combined default among its participants?

Q.7.10.1: How do the FMI's rules and procedures enable it to settle payment obligations on time following any individual or combined default among its participants?

8.13.2: How do the SIPS' rules and procedures address unforeseen and potentially uncovered liquidity shortfalls and avoid unwinding, revoking or delaying the same day settlement of financial obligations?

Q.7.10.2: How do the FMI's rules and procedures address unforeseen and potentially uncovered liquidity shortfalls and avoid unwinding, revoking or delaying the same day settlement of payment obligations?

**Replenishment of liquidity resources**

8.13.3: How do the SIPS' rules and procedures allow for the replenishment of any liquidity resources employed during a stress event?

Q.7.10.3: How do the FMI's rules and procedures allow for the replenishment of any liquidity resources employed during a stress event?

8.13.4: What are the responsibilities of the SIPS operator, the settlement agent and the participants for the management and the containment of liquidity risks?

## Article 9

### Final settlement / Principle 8 Settlement finality

✔ SIPS

✔ Non SIPS LVPS

✔ PIRPS (KC 1,3)

✔ ORPS (KC 1,3)

#### Article 9

A SIPS operator shall establish rules and procedures to enable final settlement to take place no later than the end of the intended settlement date.

#### PFMI 8 KC 1, 2, 3

An FMI's rules and procedures should clearly define the point at which settlement is final.

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.

An FMI should clearly define the point after which unsettled payments, transfer

instructions, or other obligations may not be revoked by a participant.

#### Point of settlement finality

9.1: Is the SIPS designed to complete final settlement on the value date (or same day settlement)? How do the SIPS's rules and procedures ensure that final settlement occurs no later than the end of the intended value date?

Q.8.1.1: At what point is the settlement of a payment, transfer instruction or other obligation final, meaning irrevocable and unconditional? Is the point of settlement finality defined and documented? How and to whom is this information disclosed?

9.2: Has the SIPS ever experienced deferral of final settlement to the next business day that was not contemplated by its rules, procedures or contracts? If so, under what circumstances? If deferral was a result of the SIPS's rules and procedures, what steps have been taken to prevent a similar situation in the future?

Q.8.1.2: How does the FMI's legal framework and rules, including the applicable insolvency law(s), acknowledge the discharge of a payment, transfer instruction or other obligation between the FMI and its participants, or between participants?

Q.8.1.3: How does the FMI demonstrate that there is a high degree of legal certainty that finality will be achieved in all relevant jurisdictions (for example, by obtaining a well-reasoned legal opinion)?

#### **Final settlement on the value date**

Q.8.2.1: Is the FMI designed to complete final settlement on the value date (or same day settlement)? How does the FMI ensure that final settlement occurs no later than the end of the intended value date?

Q.8.2.2: Has the FMI ever experienced deferral of final settlement to the next business day that was not contemplated by its rules, procedures or contracts? If so, under what circumstances? If deferral was a result of the FMI's actions, what steps have been taken to prevent a similar situation in the future?

#### **Regarding the SIPS's rules and procedures:**

9.3: At what point is the settlement of a payment, transfer instruction or other obligation final, meaning irrevocable and unconditional? Is the point of settlement finality defined and documented? How and to whom is this information disclosed?

9.4: How do the SIPS's legal framework and rules, including the applicable insolvency law(s), acknowledge the discharge of a payment, transfer instruction or other obligation between the SIPS and its participants, or between participants?

9.5: How does the SIPS operator demonstrate that there is a high degree of legal certainty that finality will be achieved in all relevant jurisdictions (for example, by obtaining a well-reasoned legal opinion)?

9.6: How do the SIPS's rules define the point at which unsettled payments, transfer instructions or other obligations may not be revoked by a participant? How do the SIPS's rules prohibit the unilateral revocation of accepted and unsettled payments, transfer instructions or obligations after this time?

#### **Intraday or real-time final settlement**

Q.8.2.3: Does the FMI provide intraday or real-time final settlement? If so, how? How are participants informed of the final settlement?

Q.8.2.4: If settlement occurs through multiple-batch processing, what is the frequency of the batches and within what time frame do they operate? What happens if a participant does not have enough funds or securities at the settlement time? Are transactions entered in the next batch? If so, what is the status of those transactions and when would they become final?

Q.8.2.5: If settlement does not occur intraday or in real time, how has the LVPS or SSS considered the introduction of either of these modalities?

Q.8.3.1: How does the FMI define the point at which unsettled payments, transfer instructions or other obligations may not be revoked by a participant? How does the FMI prohibit the unilateral revocation of accepted and unsettled payments, transfer instructions or obligations after this time?

9.7: Under what circumstances can an instruction or obligation accepted by the system for settlement still be revoked (for example, queued obligations)? How can an unsettled payment or transfer instruction be revoked? Who can revoke unsettled payment or transfer instructions?

9.8: Under what conditions do the SIPS's rules allow exceptions and extensions to the revocation deadline?

9.9: Where does the SIPS operator define this information? How and to whom is this information disclosed?

Q.8.3.2: Under what circumstances can an instruction or obligation accepted by the system for settlement still be revoked (for example, queued obligations)? How can an unsettled payment or transfer instruction be revoked? Who can revoke unsettled payment or transfer instructions?

Q.8.3.3: Under what conditions does the FMI allow exceptions and extensions to the revocation deadline?

Q.8.3.4: Where does the FMI define this information? How and to whom is this information disclosed?

## Article 10

### Money settlements / Principle 9 Money settlements

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Article 10(1)

A SIPS operator settling one-sided payments in euro shall ensure that final settlement takes place in central bank money. A SIPS operator settling payments for other SIPS shall endeavour to enable such other SIPS to settle even in emergency situations.

#### PFMI 9 KC 1

An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.

10.1.1: If the SIPS operator settles one-sided payments in euro, how does it ensure that final settlement takes place in central bank money? If the SIPS operator settles payments for other SIPS, what measures does it have in place to enable such other SIPS to settle even in emergency situations? What does the SIPS operator consider to be an emergency situation?

Q.9.1.1: How does the FMI conduct money settlements? If the FMI conducts settlement in multiple currencies, how does the FMI conduct money settlement in each currency?

Q.9.1.2: If the FMI does not settle in central bank money, why is it not used?

#### Article 10(2)

A SIPS operator settling two-sided payments or one-sided payments in currencies other than euro shall ensure that final settlement takes place in central bank money where practicable and available.

10.2.1: If the SIPS operator settles two-sided payments or one-sided payments in currencies other than euro, how does it ensure that settlement takes place in central bank money? How does it determine the situations where it is practicable and available to settle in central bank money?

**Article 10(3)**

If central bank money is not used, a SIPS operator shall ensure that money settlements take place using a settlement asset with little or no credit and liquidity risk.

10.3.1: If central bank money is not used, how does the SIPS operator assess the credit and liquidity risks of the settlement asset used for money settlement?

10.3.2: If the SIPS settles in commercial bank money, how does the SIPS operator select its settlement banks? What are the specific selection criteria the SIPS operator uses?

**PFMI 9 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.

Q.9.2.1: If central bank money is not used, how does the FMI assess the credit and liquidity risks of the settlement asset used for money settlement?

Q.9.2.2: If the FMI settles in commercial bank money, how does the FMI select its settlement banks? What are the specific selection criteria the FMI uses?

**Article 10(4)**

If a settlement takes place in commercial bank money, the SIPS operator shall monitor, manage, and limit credit and liquidity risks arising from the commercial settlement banks. In particular, the SIPS operator shall 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. The SIPS operator shall also monitor and manage the concentration of credit and liquidity exposures to the SIPS's commercial settlement banks.

10.4.1: How does the SIPS operator monitor the settlement banks' adherence to criteria it uses for selection? For example, how does the SIPS operator evaluate the banks' regulation, supervision, creditworthiness, capitalisation, access to liquidity and operational reliability?

10.4.2: How does the SIPS operator monitor, manage and limit its credit and liquidity risks arising from the commercial settlement banks? How does the SIPS operator monitor and manage the concentration of credit and liquidity exposures to these banks?

10.4.3: How does the SIPS operator assess the SIPS' potential losses and liquidity pressures as well as those of the SIPS' participants if there is a failure of its largest settlement bank?

**PFMI 9 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.

Q.9.3.1: How does the FMI monitor the settlement banks' adherence to criteria it uses for selection? For example, how does the FMI evaluate the banks' regulation, supervision, creditworthiness, capitalisation, access to liquidity and operational reliability?

Q.9.3.2: How does the FMI monitor, manage and limit its credit and liquidity risks arising from the commercial settlement banks? How does the FMI monitor and manage the concentration of credit and liquidity exposures to these banks?

Q.9.3.3: How does the FMI assess its potential losses and liquidity pressures as well as those of its participants if there is a failure of its largest settlement bank?

**Article 10(5)**

If a SIPS operator conducts money settlements on its own books, it shall minimise and strictly control its credit and liquidity risks.

10.5.1: If a SIPS operator conducts money settlements on its own books, how does it minimise and strictly control its credit and liquidity risks?

**PFMI 9 KC 4**

If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.

Q.9.4.1: If an FMI conducts money settlements on its own books, how does it minimise and strictly control its credit and liquidity risks?

**Article 10(6)**

If a settlement takes place in commercial bank money, a SIPS operator's legal agreements with any commercial settlement banks shall state clearly:

- (a) when transfers on the books of individual settlement banks are expected to occur;
- (b) that transfers are to be final when effected;
- (c) that funds received shall be transferable as soon as possible, at least by the end of the day.

10.6.1: Do the SIPS operator's legal agreements with its settlement banks state clearly when transfers occur, that transfers are final when effected, and that funds received are transferable?

10.6.2: Are funds received transferable by the end of the day at the latest? If not, why? Are they transferable intraday? If not, why?

**PFMI 9 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.

Q.9.5.1: Do the FMI's legal agreements with its settlement banks state when transfers occur, that transfers are final when effected, and that funds received are transferable?

Q.9.5.2: Are funds received transferable by the end of the day at the latest? If not, why? Are they transferable intraday? If not, why?



## Article 11 Payment versus Payment/ PFMI 12 Exchange-of-value settlement systems

SIPS

Non SIPS LVPS

PIRPS

ORPS

### Article 11

A SIPS operator using a payment versus payment mechanism shall 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. This rule shall be followed regardless of whether settlement takes place on a gross basis and when finality occurs

### PFMI 12 KC 1

An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligations 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

11.1: How do the SIPS's legal, contractual, technical and risk management frameworks ensure that the final settlement eliminates principal risk? What procedures ensure that the final settlement of one obligation occurs if and only if the final settlement of a linked obligation also occurs?

Q.12.1.1 How do the FMI's legal, contractual, technical and risk management frameworks ensure that the final settlement eliminates principal risk? What procedures ensure that the final settlement of one obligation occurs if and only if the final settlement of a linked obligation also occurs?

11.2: How are the linked obligations settled – on a gross basis (trade by trade) or on a net basis?

Q.12.1.2 How are the linked obligations settled – on a gross basis (trade by trade) or on a net basis?

11.3: Is the finality of settlement of linked obligations simultaneous? If not, what is the timing of finality for both obligations? Is the length of time between the blocking and final settlement of both obligations minimised? Are blocked assets protected from a claim by a third party?

Q.12.1.3 Is the finality of settlement of linked obligations simultaneous? If not, what is the timing of finality for both obligations? Is the length of time between the blocking and final settlement of both obligations minimised? Are blocked assets protected from a claim by a third party?

## Article 12

### Participant-default rules and procedures/ PFMI 13

#### Participant-default rules and procedures

SIPS

Non SIPS LVPS

PIRPS (KC 1,2,3)

ORPS (KC 1,2)

#### Article 12(1)

A SIPS operator shall establish a definition of participant default in the SIPS rules and procedures, which shall include, as a minimum a participant's failure to meet its financial obligations when they fall due, as a result, inter alia, of operational reasons, breach of agreement, or the commencement of insolvency proceedings against such participants. A SIPS operator shall specify which entity shall exercise that discretion. It shall review this definition at least annually.

12.1.1: Do the SIPS' rules and procedures clearly define an event of default (both a financial and an operational default of a participant) and the method for identifying a default? How are these events defined?

#### Article 12(2)

A SIPS operator shall have default rules and procedures that enable it to continue to meet its obligations in the event of a participant default, which address the replenishment of resources following a default. The rules and procedures shall define, as a minimum, all of the following: (a) the actions that a SIPS operator can take when a default occurs; (b) whether taking such actions is automatic or discretionary and the means by which that discretion is exercised; (c) potential changes to a SIPS operator's normal settlement practices to ensure timely settlement; (d) the management of payments at different stages of processing; (e) the probable sequencing of actions; (f) the roles, obligations and responsibilities of the relevant parties, including non-defaulting participants; (g) other mechanisms to be activated to limit the impact of a default.

#### PFMI 13 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.

#### Participant default rules and procedures

12.2.1: How do the SIPS' rules and procedures address the following key aspects of a

Q.13.1.1: Do the FMI' rules and procedures clearly define an event of default (both a financial and an operational default of a

participant default:

- (a) the actions that the SIPS operator can take when a default is declared;
- (b) the extent to which the actions are automatic or discretionary; in the latter case, how discretion is exercised;
- (c) changes to normal settlement practices;
- (d) the management of transactions at different stages of processing;
- (e) the expected treatment of proprietary and customer transactions and accounts;
- (f) the probable sequencing of actions;
- (g) the roles, obligations and responsibilities of the various parties, including non-defaulting participants; and
- (h) the existence of other mechanisms that may be activated to contain the impact of a default

12.2.2: Are there loss-sharing arrangements and/or "defaulter pays" arrangements? If yes, what is the formula used in determining the shares that each participant would bear in case of failure? Are there any documents/publications (e.g. explanatory material) or procedures relevant to the default process? Are these up to date?

12.2.3: How do the SIPS' rules and procedures allow the SIPS operator to promptly use any financial resources that it maintains for covering losses and containing liquidity pressures arising from default, including liquidity facilities?

participant) and the method for identifying a default? How are these events defined?

Q.13.1.2: How do the FMI' rules and procedures address the following key aspects of a participant default:

- (a) the actions that the FMI can take when a default is declared;
- (b) the extent to which the actions are automatic or discretionary;
- (c) changes to normal settlement practices;
- (d) the management of transactions at different stages of processing;
- (e) the expected treatment of proprietary and customer transactions and accounts;
- (f) the probable sequencing of actions;
- (g) the roles, obligations and responsibilities of the various parties, including non-defaulting participants; and
- (h) the existence of other mechanisms that may be activated to contain the impact of a default?

#### Use of financial resources

Q.13.1.3: How do the FMI's rules and procedures allow the FMI to promptly use any financial resources that it maintains for covering losses and containing liquidity pressures arising from default, including liquidity facilities?

12.2.4: How do the SIPS' rules and procedures address the order in which the financial resources can be used?

Q.13.1.4: How do the FMI's rules and procedures address the order in which the financial resources can be used?

12.2.5: How do the SIPS' rules and procedures address the replenishment of resources following a default?

Q.13.1.5: How do the FMI's rules and procedures address the replenishment of resources following a default?

12.2.6: If the SIPS is a DNS system and requires deposits by participants as additional financial resources to form a pool of collateral with a view of enabling the system to complete settlement in adverse circumstances, is it guaranteed that the exposures of the largest net debtor do not exceed the size of the deposits? How are the shares of individual institutions to the pool of collateral determined? Who controls the pool?

12.2.7: If the SIPS is a DNS system and requires the participants to provide securities to form a pool of collateral as financial resources with a view to enabling the SIPS to complete settlement in adverse circumstances, is it guaranteed that the exposures of the largest net debtor and its affiliates do not exceed the value of the securities? How are the shares of individual institutions to the pool of collateral determined? Who controls the pool? Are there any (custodial and control) mechanisms in place to ensure that the collateral will actually be available to complete settlement as planned by the system? Are the securities that make up the pool of collateral revalued frequently (at least daily)?

#### **Article 12(3)**

A SIPS operator shall be prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules. A SIPS operator shall ensure, inter alia, that: (a) it has the operational capacity, including sufficient well-trained personnel, to implement the procedures outlined in paragraph 2 in a timely manner; and (b) the SIPS's rules and procedures address documentation, information and communication needs, and , when more than one FMI or authority is involved, coordination.

#### **PFMI 13 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.

12.3.1: Does the SIPS operator's management have internal plans that clearly delineate the roles and responsibilities for addressing a default? What are these plans?

Q.13.2.1: Does the FMI's management have internal plans that clearly delineate the roles and responsibilities for addressing a default? What are these plans?

12.3.2: What type of communication procedures does the SIPS operator have in order to reach in a timely manner all relevant stakeholders, including regulators, supervisors and overseers?

Q.13.2.2: What type of communication procedures does the FMI have in order to reach in a timely manner all relevant stakeholders, including regulators, supervisors and overseers?

12.3.3: How frequently are the internal plans to address a default reviewed? What is the governance arrangement around these plans?

Q.13.2.3: How frequently are the internal plans to address a default reviewed? What is the governance arrangement around these plans?

12.3.4: How does the SIPS operator make sure that its operational capacity (including the availability of well-trained personnel) allows for the timely implementation of the default rules and procedures?

12.3.5: How does the SIPS operator ensure that the rules and procedures cover the different information aspects, including coordination when more authorities or FMIs are involved?

#### **Article 12(4)**

A SIPS operator shall publicly disclose the key aspects of the rules and procedures outlined in paragraph 2, including, as a minimum, all of the following: (a) the circumstances in which action shall be taken; (b) who shall take those actions; (c) the scope of the actions which shall be taken; (d) the mechanisms to address a SIPS operator's obligations towards non-defaulting participants.

#### **PFMI 13 KC 3**

An FMI should publicly disclose key aspects of its rules and procedures

#### **CPMI IOSCO questions**

12.4.1: How are the key aspects of the SIPS' participant default rules and procedures made publicly available? How do they address:

- (a) the circumstances in which action may be taken;
- (b) who may take those actions;
- (c) the scope of the actions which may be taken, including the treatment of both proprietary and customer positions, funds and assets;
- (d) the mechanisms to address the SIPS's obligations to non-defaulting participants; and
- (e) where direct relationships exist with participants' customers, the mechanisms to help address the defaulting participant's obligations to its customers?

Q.13.3.1: How are the key aspects of the FMI' participant default rules and procedures made publicly available? How do they address:

- (a) the circumstances in which action may be taken;
- (b) who may take those actions;
- (c) the scope of the actions which may be taken, including the treatment of both proprietary and customer positions, funds and assets;
- (d) the mechanisms to address an FMI's obligations to non-defaulting participants; and
- (e) where direct relationships exist with participants' customers, the mechanisms to help address the defaulting participant's obligations to its customers?

**Article 12(5)**

A SIPS operator shall test and review the SIPS rules and procedures outlined in paragraph 2 at least annually or after any material change to the SIPS affecting those rules and procedures. A SIPS operator shall involve SIPS participants and relevant stakeholders in such testing and review.

**PFMI 13 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.

12.5.1: How does the SIPS operator engage with its participants and other relevant stakeholders in the testing and review of its participant default procedures? How frequently does the SIPS operator conduct such tests and reviews? How are these tests results used? To what extent are the results shared with the Board, risk function and relevant authorities?

Q.13.4.1: How does the FMI operator engage with its participants and other relevant stakeholders in the testing and review of its participant default procedures? How frequently does the SIPS operator conduct such tests and reviews? How are these tests results used? To what extent are the results shared with the board, risk committee and relevant authorities?

12.5.2: What range of potential participant default scenarios and procedures do these tests cover? To what extent does the SIPS operator test the implementation of the resolution regime for its participants?

Q13.4.2: What range of potential participant default scenarios and procedures do these tests cover? To what extent does the FMI test the implementation of the resolution regime for its participants?

## Article 13

### General business risk /PFMI 15 General business risk

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Article 13(1)

A SIPS operator shall establish robust management and control systems to identify, monitor and manage general business risks, including losses resulting from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.

#### PFMI 15 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.

13.1.1: How does the SIPS operator identify its general business risks? What general business risks has the SIPS operator identified?

Q.15.1.1: How does the FMI identify its general business risks? What general business risks has the SIPS operator identified?

13.1.2: How does the SIPS operator monitor and manage general business risks on an on-going basis? Does the SIPS operator's business risk assessment consider the potential effects on its cash flow and (in the case of a privately operated SIPS) capital?

Q.15.1.2: How does the FMI monitor and manage general business risks on an on-going basis? Does the FMI's business risk assessment consider the potential effects on its cash flow and (in the case of a privately operated FMI) capital?

#### Article 13(2)

A SIPS operator shall maintain a viable recovery and, except for Eurosystem SIPS, orderly wind-down plan as required under Article 5(4).

#### PFMI 15 KC 333

An FMI should maintain a viable recovery or orderly wind-down plan.

13.2.1: Does the SIPS operator maintain a viable plan to achieve a recovery or orderly wind-down? If so, how does the SIPS operator ensure that the plan is continuously viable (e.g. how often is the plan reviewed and updated)?

Q.15.3.1: Has the FMI developed a plan to achieve a recovery or orderly wind-down? If so, what does this plan take into consideration (for example, the operational, technological and legal requirements for participants to establish and move to an alternative arrangement)?

#### Article 13(3)

A SIPS operator shall determine, based on its general business risk profile and the time required to achieve a recovery and/or orderly wind-down of its critical operations and services, the amount of assets required to implement the plan referred to in paragraph 2. This amount shall be no less than that represented by six months of current operating expenses.

#### PFMI15 KC 3

An FMI 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.

13.3.1: How does the SIPS operator determine whether the amount of liquid net assets funded by equity held by the SIPS operator for the purposes of implementing this plan is sufficient for such purpose? Is this amount at a minimum no less than that represented by six months of the SIPS operator's current operating expenses?

#### Recovery and orderly wind-down plan

Q.15.3.2: What amount of liquid net assets funded by equity is the FMI holding for purposes of implementing this plan? How does the FMI determine whether this amount is sufficient for such implementation? Is this amount at a minimum equal to six months of the FMI's current operating expenses?

#### Article 13(4)

To cover the amount referred to in paragraph 3, a SIPS operator shall hold liquid net assets funded by equity, e.g. common stock, disclosed reserves or other retained earnings, to enable it to continue operations and services as a going concern. These assets shall be in addition to resources held to cover participant defaults or other risks covered under Articles 6 and 8. Equity held under international risk-based capital standards may be included to avoid duplicate capital requirements.

#### PFMI 15 KC 3

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.

13.4.1: What amount of liquid net assets funded by equity is the SIPS operator holding to enable it to continue operations and services as a going concern?

#### Resources

13.4.2: How are the resources designated to cover business risks and losses separated from resources designated to cover participant defaults or other risks covered under the Articles 6 and 8?

Q.15.3.3: How are the resources designated to cover business risks and losses separated from resources designated to cover participant defaults or other risks covered under the financial resources principles?

13.4.3: Does the SIPS operator include equity held under international risk-based capital standards to cover general business risks?

Q.15.3.4: Does the FMI include equity held under international risk-based capital standards to cover general business risks?



**Article 13(5)**

Assets as referred to in paragraph 4 held to cover general business risk shall be of sufficient liquidity and quality to be available in a timely manner, and shall be segregated from the SIPS operator's assets used for daily operations. The SIPS operator shall be able to realise assets held to cover general business risk with little, if any, adverse price effect, to enable it to continue operations and services as a going concern if it incurs general business losses.

**PFMI 15 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.

13.5.1: What is the composition of the SIPS operator's liquid net assets funded by equity? How will the SIPS operator convert these assets in a timely manner into cash with little, if any, adverse price effect, so that it can continue operations as a going concern if it incurs general business losses? How are those assets segregated from the assets used for daily operations?

Q.15.4.1: What is the composition of the FMI's liquid net assets funded by equity? How will the FMI convert these assets as needed into cash at little or no loss of value in adverse market conditions?

13.5.2: How does the SIPS operator regularly assess the quality and liquidity of its liquid net assets funded by equity to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions?

Q.15.4.2: How does the FMI regularly assess the quality and liquidity of its liquid net assets funded by equity to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions?

**Article 13(6)**

A SIPS operator shall establish a viable capital plan for raising additional equity if its equity falls close to or below the amount referred to in paragraph 3.

**PFMI 15 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.

13.6.1: Has the SIPS operator developed a plan to raise additional equity? What are the main features of the SIPS operator's plan to raise additional equity should its equity fall close to or fall below the amount needed?

Q.15.5.1: Has the FMI developed a plan to raise additional equity? What are the main features of the FMI's plan to raise additional equity should its equity fall close to or fall below the amount needed?

Q.15.5.2: How frequently is the plan to raise additional equity reviewed and updated?

Q.15.5.3: What is the role of the FMI's Board (or equivalent) in reviewing and approving the FMI's plan to raise additional equity if needed?

**Article 13(7)**

Paragraphs 3 to 6 shall not apply to Eurosystem SIPS.

## Article 14

### Custody and investment risk / Principle 16 Custody and investment risk

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Article 14(1)

A SIPS operator shall hold its own and participants' assets with supervised and regulated entities (hereinafter the 'custodians'), that have accounting practices, safekeeping procedures and internal controls that fully protect these assets against the risk of loss in the event of a custodian's or sub-custodian's insolvency, negligence, fraud, poor administration or inadequate recordkeeping.

#### PFMI 16 KC 1

An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.

14.1.1: If the SIPS operator uses custodians, how does the SIPS operator select its custodians? What are the specific selection criteria the SIPS operator uses, including supervision and regulation of these entities? How does the SIPS operator monitor the custodians' adherence to these criteria?

Q.16.1.1: If the FMI uses custodians, how does the FMI select its custodians? What are the specific selection criteria the FMI uses, including supervision and regulation of these entities? How does the FMI monitor the custodians' adherence to these criteria?

14.1.2: How does the SIPS operator verify that these entities have robust accounting practices, safekeeping procedures, and internal controls that fully protect its and its participants' assets?

Q.16.1.2: How does the FMI verify that these entities have robust accounting practices, safekeeping procedures, and internal controls that fully protect its and its participants' assets?

#### Article 14(2)

A SIPS operator shall have timely access to its assets and the assets provided by the participants.

#### PFMI 16 KC 2

An FMI should have prompt access to its assets and the assets provided by participants, when required.

14.2.1: How has the SIPS operator established that it has a sound legal basis to support enforcement of its interest or ownership rights in assets held in custody?

Q.16.2.1: How has the FMI established that it has a sound legal basis to support enforcement of its interest or ownership rights in assets held in custody?

14.2.2: How does the SIPS operator ensure that it has prompt access to its assets, including securities that are held with a custodian in another time zone or legal jurisdiction?

Q.16.2.2: How does the FMI ensure that it has prompt access to its assets, including securities that are held with a custodian in another time zone or legal jurisdiction, in the event of participant default?

**Article 14(3)**

A SIPS operator shall evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.

14.3.1: How does the SIPS operator evaluate and understand its exposures to its custodian banks? In managing those exposures, how does it take into account the full scope of its relationship with each custodian bank? For instance, does the SIPS operator use multiple custodians for the safekeeping of its assets to diversify exposure to any single custodian? How does the SIPS operator monitor concentration of risk exposures to its custodian banks?

**PFMI 16 KC 3**

An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.

Q.16.3.1: How does the FMI evaluate and understand its exposures to its custodian banks? In managing those exposures, how does it take into account the full scope of its relationship with each custodian bank? For instance, does the FMI use multiple custodians for the safekeeping of its assets to diversify exposure to any single custodian? How does the FMI monitor concentration of risk exposures to its custodian banks?

**Article 14(4)**

A SIPS operator shall establish its investment strategy, which shall be consistent with its overall risk-management strategy and fully disclosed to the participants. It shall review the investment strategy at least annually.

14.4.1: How does the SIPS operator ensure that its investment strategy is consistent with its overall risk management strategy? How and to whom does the SIPS operator disclose its investment strategy?

14.4.2: How does the SIPS operator ensure on an on-going basis that its investments are secured by, or are claims on, high-quality obligors?

14.4.3: How often does the SIPS Operator review this strategy?

**PFMI 16 KC 4**

An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.

Q.16.4.1: How does the FMI ensure that its investment strategy is consistent with its overall risk management strategy? How and to whom does the FMI disclose its investment strategy?

Q.16.4.2: How does the FMI ensure on an ongoing basis that its investments are secured by, or are claims on, high-quality obligors?

**Article 14(5)**

A SIPS operator's investments under its investment strategy shall be secured by, or be claims on, high-quality obligors. A SIPS operator shall define the criteria for high-quality obligors. Investments shall be in instruments with minimal credit, market and liquidity risks.

**PFMI 16 KC 4**

An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.

14.5.1: How does the SIPS operator consider its overall exposure to an obligor in choosing investments? What investments are subject to limits to avoid concentration of credit risk exposures?

Q.16.4.3: How does the FMI consider its overall exposure to an obligor in choosing investments? What investments are subject to limits to avoid concentration of credit risk exposures?

14.5.2: Does the SIPS operator invest participant assets in the participants' own securities or those of its affiliates? If so, which limits are placed on investment of participant assets in the participants' own securities or those of its affiliates?

Q.16.4.4: Does the FMI invest participant assets in the participants' own securities or those of its affiliates?

14.5.3: How does the SIPS operator ensure that its investments allow for quick liquidation with little, if any, adverse price effect? How does the SIPS operator determine instruments with minimal credit, market and liquidity risks?

Q.16.4.5: How does the FMI ensure that its investments allow for quick liquidation with little, if any, adverse price effect?

**Article 14(6)**

Paragraphs 3 to 5 shall not apply to Eurosystem SIPS.

## Article 15

### Operational risk / Principle 17 Operational risk

✔ SIPS

✔ Non SIPS LVPS

✔ PIRPS (KC 1,3,5)

✔ ORPS (KC 1,3,5)

#### Article 15(1)

A SIPS operator shall establish a robust framework with appropriate systems, policies, procedures and controls to identify, monitor and manage operational risk.

#### PFMI 17 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.

15.1.1: What are the SIPS operator's policies and processes for identifying the plausible sources of operational risks? How do the SIPS operator's processes identify plausible sources of operational risks, whether these risks arise from internal sources (for example, the arrangements of the system itself, including human resources), from the SIPS' participants or from external sources?

Q.17.1.1: What are the FMI's policies and processes for identifying the plausible sources of operational risks? How do the FMI's processes identify plausible sources of operational risks, whether these risks arise from internal sources (for example, the arrangements of the system itself, including human resources), from the FMI's participants or from external sources?

15.1.2: What sources of operational risks has the SIPS operator identified? What single points of failure in its operations has the SIPS operator identified?

Q.17.1.2: What sources of operational risks has the FMI identified? What single points of failure in its operations has the FMI identified?

15.1.3: How does the SIPS operator monitor and manage the identified operational risks? Where are these systems, policies, procedures and controls documented?

Q.17.1.3: How does the FMI monitor and manage the identified operational risks? Where are these systems, policies, procedures and controls documented?

15.1.4: What policies, processes and controls does the SIPS operator employ that are designed to ensure that operational procedures are implemented appropriately? To what extent do the SIPS operator's systems, policies, processes and controls take into consideration relevant international, national and industry-level operational risk management standards?

Q.17.1.4: What policies, processes and controls does the FMI employ that are designed to ensure that operational procedures are implemented appropriately? To what extent do the FMI's systems, policies, processes and controls take into consideration relevant international, national and industry-level operational risk management standards?

15.1.5: Has the SIPS owner/ SIPS operator consulted the participants and any relevant third party with a view to agreeing on specific policies and service levels?

Q.17.1.5: Has the system owner/operator consulted the participants and any relevant third party with a view to agreeing on specific policies and service levels?

|   |   |
|---|---|
| <p>15.1.6: Have objectives, policies and procedures related to the security and operational reliability of the system (especially in terms of confidentiality, integrity, authentication, non-repudiation, availability and auditability) been selected according to national, international or industry-wide standards (please indicate which standard)?</p> | <p>Q.17.1.6: Have objectives, policies and procedures related to the security and operational reliability of the system (especially in terms of confidentiality, integrity, authentication, non-repudiation, availability and auditability) been selected according to national, international or industry-wide standards (please indicate which standard)?</p> |
| <p>15.1.7: Do these objectives, policies and procedures apply to the operator and the participants in the SIPS?</p>   | <p>Q.17.1.7: Do these objectives, policies and procedures apply to the operator and the participants in the system?</p>   |
| <p>15.1.8: How is it ensured that the relevant parties (participant, operator, third parties) adhere to the agreed principals and share the security objectives?</p>  | <p>Q.17.1.8: How is it ensured that the relevant parties (participant, operator, third parties) adhere to the agreed principals and share the security objectives?</p>  |
| <p>15.1.9: Security objectives, policies, and procedures are reviewed periodically and updated when appropriate?</p>  | <p>Q.17.1.9: Security objectives, policies, and procedures are reviewed periodically and updated when appropriate?</p>  |
| <p>15.1.10: Are security policies and service levels reviewed in the light of market and technology developments?</p>   | <p>Q.17.1.10: Are security policies and service levels reviewed in the light of market and technology developments?</p>   |
| <p>15.1.11: What are the SIPS operator's human resources policies to hire, train and retain qualified personnel, and how do such policies mitigate the effects of high rates of personnel turnover or key-person risk? How do the SIPS operator's human resources and risk management policies address fraud prevention?</p>                                  | <p>Q.17.1.11: What are the FMI's human resources policies to hire, train and retain qualified personnel, and how do such policies mitigate the effects of high rates of personnel turnover or key-person risk? How do the FMI's human resources and risk management policies address fraud prevention?</p>  |
| <p>15.1.12: How do the SIPS operator's change management and project management policies and processes mitigate the risks that changes and major projects inadvertently affect the smooth functioning of the system?</p>  | <p>Q.17.1.12: How do the FMI's change management and project management policies and processes mitigate the risks that changes and major projects inadvertently affect the smooth functioning of the system?</p>  |
| <p>15.1.13: Are system changes subject to a security review which is independent from the actual system operator?</p>   | <p>Q17.1.13: Are system changes subject to a security review which is independent from the actual system operator?</p>  |

**Article 15(1)a**

A SIPS operator shall review, audit, and test systems, operational policies, procedures and controls periodically and after significant changes.

**PFMI 17 KC 2**

Systems, operational policies, procedures and controls should be reviewed, audited and tested periodically and after significant changes.

15.1a.1: How has the Board defined the key roles and responsibilities for operational risk management?

15.1a.2: Does the Board explicitly review and endorse the SIPS operator's operational risk management framework? How frequently does the Board review and endorse the SIPS operator's operational risk management framework?

15.1a.3: Are the SIPS operator's operational policies, procedures and controls in place for their system reviewed, audited and tested on a regular basis? How frequently does this take place?

15.1a.4: Is the system and its operational policies, procedures and controls reviewed, audited and tested after significant changes?

15.1a.5: Are there admission tests for prospective participants?

15.1a.6: Are there admission tests for indirect participants? Is there any responsibility for the relevant direct participants?

15.1a.7: Are there any IT auditors in the SIPS operator's Internal Audit department?

15.1a.8: To what extent is the SIPS's operational risk management framework subject to external audit?

**Roles, responsibilities and framework**

Q.17.2.1: How has the board of directors defined the key roles and responsibilities for operational risk management?

Q.17.2.2: Does the FMI's board explicitly review and endorse the FMI's operational risk management framework? How frequently does the board review and endorse the FMI's operational risk management framework?

**Review, audit and testing**

Q.17.2.3: How does the FMI review, audit and test its systems, policies, procedures and controls, including its operational risk management arrangements with participants? How frequently does the FMI conduct these reviews, audits and tests with participants?

Q17.2.4: Are there admission tests for prospective participants?

Q17.2.5: Are there admission tests for indirect participants? Is there any responsibility for the relevant direct participants?

Q.17.2.6: Are there any IT auditors in the Internal Audit department?

Q.17.2.7: To what extent, where relevant, is the FMI's operational risk management framework subject to external audit?

**Article 15(2)**

A SIPS operator shall establish service level and operational reliability objectives and policies designed to achieve those objectives. It shall review the objectives and policies at least annually.

**PFMI 17 KC 3**

An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.

15.2.1 What are the SIPS operator's service level and operational reliability objectives, both qualitative and quantitative? Where and how are they documented?

Q.17.3.1 What are the FMI's operational reliability objectives, both qualitative and quantitative? Where and how are they documented?

15.2.2: How do these objectives ensure a high degree of operational reliability?

Q.17.3.2: How do these objectives ensure a high degree of operational reliability?

15.2.3: What are the policies in place that are designed to achieve the SIPS operational reliability objectives to ensure that the SIPS operator takes appropriate action as needed?

Q.17.3.3: What are the policies in place that are designed to achieve the FMI's operational reliability objectives to ensure that the FMI takes appropriate action as needed?

15.2.4: How often does the SIPS operator review these objectives and policies?

Q.17.3.4: Are there arrangements to monitor the operational reliability when the responsibility for information processing has been outsourced?

15.2.5: Are there arrangements to monitor the operational reliability when the responsibility for information processing has been outsourced?

Q17.3.5: Do hardware, software and communication vendors provide maximum response times in case of failure?

15.2.6: Do hardware, software and communication vendors provide maximum response times in case of failure?

Q17.3.6: Has the system operator specified required service levels, alternate routings and contingency arrangements in its contracts with telecommunication providers?

15.2.7: Has the system operator specified required service levels, alternate routings and contingency arrangements in its contracts with telecommunication providers?

Q17.3.7: Are any losses of payment instructions anticipated as a result of technical failures?

15.2.8: Are any losses of payment instructions anticipated as a result of technical failures?

Q17.3.8: Are there arrangements in place to ensure the awareness of participants of operational risks they might incur through participation in the system?

15.2.9: Are there arrangements in place to ensure the awareness of participants of operational risks they might incur through participation in the SIPS?

Q17.3.9: What procedures are applied to make the system operator aware of the availability of the participants' system components during normal business hours?

15.2.10: What procedures are applied to make the SIPS operator aware of the availability of the participants' system components during normal business hours?

Q17.3.10: What is the systems track record in terms of availability?



15.2.11: What is the SIPS' track record in terms of availability?

Q17.3.11: Are all incidents logged, reported, systematically investigated and appropriately followed up?

15.3.12: Are all incidents logged, reported, systematically investigated and appropriately followed up?

Q17.3.12: What were the most severe incidents until now and what measures have been taken to prevent them from reoccurring?

15.3.13: What were the most severe incidents until now and what measures have been taken to prevent them from recurring?

**Article 15(3)**

A SIPS operator shall ensure that a SIPS, at all times, has scalable capacity to handle increases in payment volumes that occur due to stress events, and that it can achieve its service level objectives.

**PFMI 17 KC 4**

An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.

15.3.1: How does the SIPS operator review, audit and test the scalability and adequacy of its capacity to handle, at a minimum, projected stress volumes? How frequently does the SIPS operator conduct these reviews, audits and tests?

Q.17.4.1: How does the FMI review, audit and test the scalability and adequacy of its capacity to handle, at a minimum, projected stress volumes? How frequently does the FMI conduct these reviews, audits and tests?

15.3.2: How are situations where operational capacity is neared or exceeded addressed?

Q.17.4.2: How are situations where operational capacity is neared or exceeded addressed?

**Article 15(4)**

A SIPS operator shall establish comprehensive physical and information security policies that adequately identify, assess and manage all potential vulnerabilities and threats. It shall review the policies at least annually.

**PFMI 17 KC 5**

An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.

15.4.1: What are the SIPS operator's policies and processes, including change management and project management policies and processes, for addressing the plausible sources of physical vulnerabilities and threats on an ongoing basis?

Q.17.5.1: What are the FMI's policies and processes, including change management and project management policies and processes, for addressing the plausible sources of physical vulnerabilities and threats on an ongoing basis?

15.4.2: How often does the SIPS operator review these policies?

Q.17.5.2: Do the FMI's policies, processes, controls and testing appropriately take into consideration relevant international, national and industry-level standards for physical security?

15.4.3: Do the SIPS operator's policies, processes, controls and testing appropriately take into consideration relevant international, national and industry-level standards for physical security?

Q.17.5.3: What are the FMI's policies and processes, including change management and project management policies and processes, for addressing the plausible sources of information security vulnerabilities and threats on an ongoing basis?

15.4.4: What are the SIPS operator's policies and processes, including change management and project management policies and processes, for addressing the plausible sources of information security vulnerabilities and threats on an on-going basis?

Q.17.5.4: Do the FMI's policies, processes, controls and testing appropriately take into consideration relevant international, national and industry-level standards for information security?

15.4.5: Do the SIPS operator's policies, processes, controls and testing appropriately take into consideration relevant international, national and industry-level standards for information security?

Q17.5.5: If applicable, are there arrangements to ensure that all parties involved in the outsourcing of information processing (including sub-contractors) are aware of their security responsibilities?

15.4.6: If applicable, are there arrangements to ensure that all parties involved in the outsourcing of information processing (including sub-contractors) are aware of their security responsibilities?

Q17.5.6: Are the systems subject to regular security assessment and risk analysis using recognised methodologies? If yes, which elements do the security assessment and the risk analysis cover (e.g. identification of threats and their likelihood and impact if they materialise)?

15.4.7: Are the systems subject to regular security assessment and risk analysis using recognised methodologies? If yes, which elements do the security assessment and the risk analysis cover (e.g. identification of threats and their likelihood and impact if they materialise)?

Q17.5.7: How are the security assessment and the risk analysis process structured? Which is the methodology used for risk analysis?

15.4.8: How are the security assessment and the risk analysis process structured? Which is the methodology used for risk analysis?

Q17.5.8: Do the security assessment and the risk analysis take into account market and technology developments in order to be kept up to date?

15.4.9: Do the security assessment and the risk analysis take into account market and technology developments in order to be kept up to date?

Q17.5.9: Is the outcome of the security assessment and the risk analysis regularly reported to the system owner/board and the system overseer?

15.4.10: Is the outcome of the security assessment and the risk analysis regularly reported to the SIPS owner/Board and the SIPS overseer?

**Article 15(4)a**

A SIPS operator shall establish an effective cyber resilience framework with appropriate governance measures in place to manage cyber risk. The SIPS operator shall identify its critical operations and supporting assets, and have appropriate measures in place to protect them from, detect, respond to and recover from cyber attacks. These measures shall be regularly tested. The SIPS operator shall ensure it has a sound level of situational awareness of cyber threats. The SIPS operator shall ensure that there is a process of continuous learning and evolving to enable it to adapt its cyber resilience framework to the dynamic nature of cyber risks, in a timely manner, whenever needed.

**No PFMI KC<sup>6</sup>**

An FMI shall establish an effective cyber resilience framework with appropriate governance measures in place to manage cyber risk. The FMI shall identify its critical operations and supporting assets, and have appropriate measures in place to protect them from, detect, respond to and recover from cyber attacks. These measures shall be regularly tested. The FMI shall ensure it has a sound level of situational awareness of cyber threats. The FMI shall ensure that there is a process of continuous learning and evolving to enable it to adapt its cyber resilience framework to the dynamic nature of cyber risks, in a timely manner, whenever needed.

15.4a.1 Has the SIPS Operator met the applicable expectations contained in the current applicable version of the Cyber Resilience Oversight Expectations (CROE)?

15.4a.1 Has the FMI met the applicable expectations contained in the current applicable version of the Cyber Resilience Oversight Expectations (CROE)?

**Article 15(5)**

A SIPS operator shall establish a business continuity plan that addresses events posing a significant risk of disrupting the SIPS' operations. The plan shall include the use of a secondary site and be designed to ensure that critical information technology systems can resume operations within two hours of those events. The plan shall be designed in such a way that the SIPS is always able to settle all payments due by the end of the business day on which the disruption occurs. The SIPS operator shall test the plan and review it at least annually.

**PFMI 17 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 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

15.5.1: How and to what extent does the SIPS operator's business continuity plan reflect objectives, policies and procedures that allow for the rapid recovery and timely resumption of critical operations following a wide-scale or major disruption?

Q.17.6.1: How and to what extent does the FMI's business continuity plan reflect objectives, policies and procedures that allow for the rapid recovery and timely resumption of critical operations following a wide-scale or major disruption?

15.5.2: How often does the SIPS operator review this plan?

Q17.6.2: Are those objectives in line with the service level agreed with participants?

<sup>6</sup> The CROE is predicated on the CPMI-IOSCO Guidance on cyber resilience for financial market infrastructures published in June 2016 and leverages the existing PFMI to ensure a full and coherent set of expectations.

15.5.3: Are those objectives in line with the service level agreed with participants?

Q.17.6.3: How and to what extent is the FMI's business continuity plan designed to enable critical IT systems to resume operations within two hours following disruptive events, and to enable the FMI to facilitate or complete settlement by the end of the day even in extreme circumstances?

15.5.4: How and to what extent is the SIPS operator's business continuity plan designed to enable critical IT systems to resume operations within two hours following disruptive events, and to enable the SIPS operator to facilitate or complete settlement by the end of the day even in extreme circumstances?

Q.17.6.4: How is the contingency plan designed to ensure that the status of all transactions can be identified in a timely manner, at the time of the disruption; and if there is a possibility of data loss, what are the procedures to deal with such loss (for example, reconciliation with participants or third parties)?

15.5.5: How is the contingency plan designed to ensure that the status of all transactions can be identified in a timely manner, at the time of the disruption; and if there is a possibility of data loss, what are the procedures to deal with such loss (for example, reconciliation with participants or third parties)?

Q.17.6.5: How do the FMI's crisis management procedures address the need for effective communications internally and with key external stakeholders and authorities?

15.5.6: How do the SIPS operator's crisis management procedures address the need for effective communications internally and with key external stakeholders and authorities?

Q.17.6.6: How does the FMI's business continuity plan incorporate the use of a secondary site (including ensuring that the secondary site has sufficient resources, capabilities, functionalities and appropriate staffing arrangements)? To what extent is the secondary site located a sufficient geographic distance from the primary site such that it has a distinct risk profile?

15.5.7: How does the SIPS operator's business continuity plan incorporate the use of a secondary site (including ensuring that the secondary site has sufficient resources, capabilities, functionalities and appropriate staffing arrangements)? To what extent is the secondary site located a sufficient geographic distance from the primary site such that it has a distinct risk profile?

Q.17.6.7: Has the FMI considered alternative arrangements (such as manual, paper-based procedures or other alternatives) to allow the processing of time-critical transactions in extreme circumstances?

15.5.8: Has the SIPS operator considered alternative arrangements (such as manual, paper-based procedures or other alternatives) to allow the processing of time-critical transactions in extreme circumstances?

Q17.6.8: Has the system operator/owner considered whether the participants should have a secondary site and, if so, what are the conclusions?

15.5.9: Has the SIPS operator considered whether the participants should have a secondary site and, if so, what are the conclusions?

Q.17.6.9: How are the FMI's business continuity and contingency arrangements reviewed and tested, including with respect to scenarios related to wide-scale and major disruptions? How frequently are these arrangements reviewed and tested? Have tests shown that the business continuity arrangements work at times of stress?

15.5.10: How are the SIPS operator's business continuity and contingency arrangements reviewed and tested, including with respect to scenarios related to wide-scale and major disruptions? How frequently are these arrangements reviewed and tested? Have tests shown that the business continuity arrangements work at times of stress?

Q17.6.10: Are business continuity objectives, arrangements and procedures (including, for example, hardware and network equipment, staff, data replication, recovery time, testing, residual risks) documented and endorsed by senior level managers? Which scenarios do the planned business continuity arrangements include (e.g. the failure of each of the central components, the failure of participants' components)?

15.5.11: Are business continuity objectives, arrangements and procedures (including, for example, hardware and network equipment, staff, data replication, recovery time, testing, residual risks) documented and endorsed by senior level managers? Which scenarios do the planned business continuity arrangements include (e.g. the failure of each of the central components, the failure of participants' components)?

Q.17.6.11: How does the review and testing of the FMI's business continuity and contingency arrangements involve the FMI's participants, critical service providers and linked FMIs as relevant? How frequently are the FMI's participants, critical service providers and linked FMIs involved in the review and testing?

15.5.12: How does the review and testing of the SIPS operator's business continuity and contingency arrangements involve the SIPS' participants, critical service providers and linked FMIs as relevant? How frequently are the SIPS' participants, critical service providers and linked FMIs involved in the review and testing?

Q.17.6.12: Has the system operator considered the possibility of communicating selected information, relevant to the business continuity arrangements, to participants, in order to enable them to assess the operational risks they incur through their participation in the system? Is the dissemination of such information internally authorised by the system's board of directors? Are participants required to sign a confidentiality agreement with respect to such information?

15.5.13: Has the system operator considered the possibility of communicating selected information, relevant to the business continuity arrangements, to participants, in order to enable them to assess the operational risks they incur through their participation in the system? Is the dissemination of such information internally authorised by the system's board of directors? Are participants required to sign a confidentiality agreement with respect to such information?

Q17.6.13: What measures have been taken to ensure that not all key operational and other staff (e.g. management, IT support), as identified during the BIA or the risk analysis, are simultaneously exposed to the same risk, including at times of shift changeover?

15.5.14: What measures have been taken to ensure that not all key operational and other staff (e.g. management, IT support), as identified during the BIA or the risk analysis, are simultaneously exposed to the same risk, including at times of shift changeover?

**Article 15(6)**

**Article 15(7)**

A SIPS operator shall identify critical participants based, in particular, on payment volumes and values and their potential impact on other participants and the SIPS as a whole, in the event of a significant operational problem experienced by such participants.

A SIPS operator shall identify, monitor, and manage the risks that critical participants, other FMIs, and service and utility providers might pose to the SIPS' operations.

**PFMI 17 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.

15.6/7.1: Does the SIPS operator identify critical participants based on payment volumes and values and their potential impact on other participants as a whole, in the event of a significant operational problem experienced by such participants?

15.6/7.2: What risks has the SIPS operator identified to its operations arising from its critical participants? How and to what extent does the SIPS operator monitor and manage these risks?

15.6/7.3: Do technical access criteria require critical participants, identified as such by the system operator, to have a secondary processing site? Are these critical participants, at a minimum, able to close one business day and reopen the following day on the secondary site?

15.6/7.4: In case that critical participants employ a central (shared) secondary site for use by any participant suffering a serious failure, how do they ensure that the syndicated recovery service provider can actually make the secondary site available in case of a wide-area event?

Q.17.7.0a: Does the system operator identify critical participants based on payment volumes and values and their potential impact on other participants as a whole, in the event of a significant operational problem experienced by such participants?

Q.17.7.0b: What risks has the FMI identified to its operations arising from its critical participants? How and to what extent does the FMI monitor and manage these risks?

Q.17.7.0c: Do technical access criteria require critical participants, identified as such by the system operator, to have a secondary processing site? Are these critical participants, at a minimum, able to close one business day and reopen the following day on the secondary site?

Q.17.7.0d: In case that critical participants employ a central (shared) secondary site for use by any participant suffering a serious failure, how do they ensure that the syndicated recovery service provider can actually make the secondary site available in case of a wide-area event?

|  |  |
|--|--|
| <p>15.6/7.5: What measures has the SIPS operator taken to become aware of and potentially guard against critical participants choosing to concentrate their primary/secondary sites in similar geographical areas?</p>   | <p>Q.17.7.0e: What measures has the system operator taken to become aware of and potentially guard against critical participants choosing to concentrate their primary/secondary sites in similar geographical areas?</p>  |
| <p>15.6/7.6: Do critical participants perform periodic testing of the business continuity arrangements at the secondary site involving all key staff members (in rotation)?</p>  | <p>Q.17.7.0f: Do critical participants perform periodic testing of the business continuity arrangements at the secondary site involving all key staff members (in rotation)?</p>   |
| <p>15.6/7.7: What risks has the SIPS operator identified to its operations arising from other FMIs, and service and utility providers? How and to what extent does the SIPS operator monitor and manage these risks?</p>   | <p>Q.17.7.1: What risks has the FMI identified to its operations arising from other FMIs, and service and utility providers? How and to what extent does the FMI monitor and manage these risks?</p>   |
| <p>15.6/7.8: If the SIPS operator has outsourced services critical to its operations, how and to what extent does the FMI ensure that the operations of a critical service provider meet the same reliability and contingency requirements they would need to meet if they were provided internally?</p> | <p>Q.17.7.2: If the FMI has outsourced services critical to its operations, how and to what extent does the FMI ensure that the operations of a critical service provider meet the same reliability and contingency requirements they would need to meet if they were provided internally?</p> |
| <p>15.6/7.9: How and to what extent does the SIPS operator identify, monitor and mitigate the risks it may pose to another FMI?</p>  | <p>Q.17.7.3: How and to what extent does the FMI identify, monitor and mitigate the risks it may pose to another FMI?</p>  |
| <p>15.6/7.10: To what extent does the SIPS operator coordinate its business continuity arrangements with those of other interdependent FMIs?</p>   | <p>Q.17.7.4: To what extent does the FMI coordinate its business continuity arrangements with those of other interdependent FMIs?</p>  |

## Article 16

### Access and participation criteria / Principle 18 Access and participation requirements

SIPS

Non SIPS LVPS

PIRPS

ORPS (KC 1,3)

#### Article 16(1)

A SIPS operator shall establish and publicly disclose non-discriminatory access and participation criteria to the SIPS's services for direct, and, where relevant, indirect participants and for other FMIs. It shall review the criteria at least annually.

#### PFMI 18 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.

16.1.1: What are the SIPS operator's criteria and requirements for participation (such as operational, financial and legal requirements)? What types of participants are allowed to access the SIPS (banks, non-financial institutions, others – please specify)?

Q.18.1.1: What are the FMI's criteria and requirements for participation (such as operational, financial and legal requirements)? What types of participants are allowed to access the FMI (banks, non-financial institutions, others – please specify)?

16.1.2: How do these criteria and requirements allow for fair, non-discriminatory and open access to the SIPS' services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements?

Q.18.1.2: How do these criteria and requirements allow for fair and open access to the FMI's services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements?

16.1.3: How often does the SIPS Operator review the criteria?



#### **Article 16(2)**

The access and participation criteria referred to in paragraph 1 shall be justified in terms of the safety and efficiency of the SIPS and the markets it serves, and be tailored to and commensurate with the SIPS's specific risks. In compliance with the principle of proportionality, a SIPS operator shall set requirements that restrict access to the minimum possible extent. If a SIPS operator denies access to an applying entity, it shall give reasons in writing, based on a comprehensive risk analysis.

#### **PFMI 18 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.

16.2.1: How are the participation requirements for the SIPS justified in terms of the safety and efficiency of the SIPS and its role in the markets it serves, and tailored to and commensurate with the SIPS' specific risks?

Q.18.2.1: How are the participation requirements for the FMI justified in terms of the safety and efficiency of the FMI and its role in the markets it serves, and tailored to and commensurate with the FMI's specific risks?

16.2.2: Are there participation requirements that are not risk-based but required by law or regulation? If so, what are these requirements?

Q.18.2.2: Are there participation requirements that are not risk-based but required by law or regulation? If so, what are these requirements?

16.2.3: Are all classes of participants subject to the same access criteria? If not, what is the rationale for the different criteria (for example, size or type of activity, additional requirements for participants that act on behalf of third parties, and additional requirements for participants that are non-regulated entities)?

Q.18.2.3: Are all classes of participants subject to the same access criteria? If not, what is the rationale for the different criteria (for example, size or type of activity, additional requirements for participants that act on behalf of third parties, and additional requirements for participants that are non-regulated entities)?

16.2.4: How are the access restrictions and requirements reviewed to ensure that they have the least restrictive access that circumstances permit, consistent with maintaining acceptable risk controls? How frequently is this review conducted?

Q.18.2.4: How are the access restrictions and requirements reviewed to ensure that they have the least restrictive access that circumstances permit, consistent with maintaining acceptable risk controls? How frequently is this review conducted?

16.2.5: How are participation criteria, including restrictions in participation, publicly disclosed?

Q.18.2.5: How are participation criteria, including restrictions in participation, publicly disclosed?

16.2.6: In case of denied access to an applying entity, has the SIPS operator given reasons in writing, based on a comprehensive risk analysis?

**Article 16(3)**

A SIPS operator shall monitor participants' compliance with the SIPS's access and participation criteria on an ongoing basis. It shall establish non-discriminatory procedures to facilitate the suspension and orderly termination of a participant's right of participation where the participant fails to comply with the criteria and shall publicly disclose relevant key aspects of such procedures. It shall review the procedures at least annually.

**PFMI 18 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.

16.3.1: How does the SIPS operator monitor its participants' on-going compliance with the access criteria? How are the SIPS operator's policies designed to ensure that the information it uses to monitor compliance with participation criteria is timely and accurate?

16.3.2: What are the SIPS operator's policies for conducting enhanced surveillance of, or imposing additional controls on, a participant whose risk profile deteriorates?

16.3.3: What are the SIPS operator's procedures for managing the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements?

16.3.4: How are relevant key aspects of the SIPS operator's procedures for managing the suspension and orderly exit of a participant disclosed to the public? How often are they reviewed?

Q.18.3.1: How does the FMI monitor its participants' ongoing compliance with the access criteria? How are the FMI's policies designed to ensure that the information it uses to monitor compliance with participation criteria is timely and accurate?

18.3.2: What are the FMI's policies for conducting enhanced surveillance of, or imposing additional controls on, a participant whose risk profile deteriorates?

Q.18.3.3: What are the FMI's procedures for managing the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements?

Q.18.3.4: How are the FMI's procedures for managing the suspension and orderly exit of a participant disclosed to the public?

## Article 17

### Tiered participation arrangements / Principle 19 Tiered participation arrangements

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Article 17(1)

For the purpose of risk management, a SIPS operator shall ensure that the SIPS's rules, procedures and contractual arrangements allow it to gather information about indirect participation in order to identify, monitor and manage any material risks to the SIPS arising from participation. This information shall, as a minimum, cover the following:

- (a) the activity that direct participants conduct on their own behalf and on behalf of indirect participants in proportion to the activity at system level;
- (b) the number of indirect participants that settle via individual direct participants;
- (c) the volumes or values of payments in the SIPS originating from each indirect participant;
- (d) the volumes or values of payments referred to in point (c) in proportion to those of the direct participant through which the indirect participant accesses the SIPS.

#### PFMI 19 KC 1

An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.

17.1.1: Does the SIPS have any tiered participation arrangements? If so, describe these arrangements.

17.1.2: How does the SIPS's rules, procedures and contractual arrangements allow the SIPS operator to gather information about indirect participation in order to identify, monitor and manage any material risks to the SIPS arising from such tiered participation? Does the information that is collected cover at least the above mentioned elements? How frequently is it updated?

Q.19.1.1: Does the FMI have any tiered participation arrangements? If so, describe these arrangements.

Q.19.1.2: How does the FMI gather basic information about indirect participation? Which information is collected and how frequently is it updated?

17.1.3: How does the SIPS operator evaluate its risks arising from tiered participation arrangements?

Q.19.1.3: How does the FMI evaluate its risks arising from these arrangements?

17.1.4: What material risks to the SIPS arising from tiered participation arrangements has the SIPS operator identified? How has it mitigated these risks?

Q.19.1.4: What material risks to the FMI arising from tiered participation arrangements has the FMI identified? How has it mitigated these risks?

**Article 17(2)**

A SIPS operator shall identify material dependencies between direct and indirect participants that might affect the SIPS, taking into account the information referred to in paragraph 1.

**PFMI 19 KC 2**

An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.

17.2.1: How does the SIPS operator identify material dependencies between direct and indirect participants that might affect the SIPS?

Q.19.2.1: How does the FMI identify material dependencies between direct and indirect participants that might affect the FMI?

**Article 17(3)**

A SIPS operator shall identify indirect participants who pose material risks to the SIPS and the direct participants through which they access the SIPS with a view to managing these risks.

**PFMI 19 KC 3**

An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.

17.3.1: Has the SIPS operator identified:

Q.19.3.1: Has the FMI identified:

(a) the proportion of activity that each direct participant conducts on behalf of indirect participants in relation to the direct participants' capacity,

(a) the proportion of activity that each direct participant conducts on behalf of indirect participants in relation to the direct participants' capacity,

(b) direct participants that act on behalf of a material number of indirect participants,

(b) direct participants that act on behalf of a material number of indirect participants,

(c) indirect participants responsible for a significant proportion of turnover in the system,

(c) indirect participants responsible for a significant proportion of turnover in the system,

(d) indirect participants whose transaction volumes or values are large relative to the capacity of the direct participant through which they access the FMI to manage risks arising from these transactions?

(d) indirect participants whose transaction volumes or values are large relative to the capacity of the direct participant through which they access the FMI to manage risks arising from these transactions?

17.3.2: What risks to the SIPS arise, and how does the SIPS operator manage these risks arising from key indirect participants?

Q.19.3.2: What risks to the FMI arise, and how does the FMI manage these risks arising from key indirect participants?

**Article 17(4)**

A SIPS operator shall review the risks arising from tiered participation arrangements at least annually. It shall take mitigating action when needed to ensure that the risks are properly managed.

**PFMI 19 KC 4**

An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.

17.4.1: What are the SIPS operator policies for reviewing its rules and procedures in order to mitigate risks to the SIPS arising from tiered participation? Is this review conducted yearly?

Q.19.4.1: What are the FMI's policies for reviewing its rules and procedures in order to mitigate risks to the FMI arising from tiered participation? How frequently is this review conducted?

17.4.2: What criteria does the SIPS operator use to determine when mitigating actions are required? How does the SIPS operator monitor and mitigate its risks?

Q.19.4.2: What criteria does the FMI use to determine when mitigating actions are required? How does the FMI monitor and mitigate its risks?

## Article 18

### Efficiency and effectiveness / Principle 21 Efficiency and effectiveness

✔ SIPS

✔ Non SIPS LVPS

✔ PIRPS (KC 1)

✔ ORPS (KC 1)

#### Article 18(1)

A SIPS operator shall have a process to identify and meet the needs of the markets the SIPS serves, in particular, with regard to:

- (a) choice of a clearing and settlement arrangement;
- (b) operating structure;
- (c) scope of products cleared or settled;
- (d) use of technology and procedures.

#### PFMI 21 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.

18.1.1: How does the SIPS operator determine whether its design (including its clearing and settlement arrangement, its operating structure, its delivery systems and technologies, and its individual services and products) is taking into account the needs of its participants and the markets it serves? Are payment services tailored to the specific needs of different participant profiles?

Q.21.1.1: How does the FMI determine whether its design (including its clearing and settlement arrangement, its operating structure, its delivery systems and technologies, and its individual services and products) is taking into account the needs of its participants and the markets it serves?

18.1.2: How does the SIPS operator determine whether it is meeting the requirements and needs of its participants and continues to meet those requirements as they change (for example, through the use of feedback mechanisms)?

Q.21.1.2: How does the FMI determine whether it is meeting the requirements and needs of its participants and other participants and continues to meet those requirements as they change (for example, through the use of feedback mechanisms)?

#### Article 18(2)

A SIPS operator shall 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.

#### PFMI 21 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.

18.2.1: What are the SIPS operator's goals and objectives as far as the effectiveness of its operations is concerned?

Q.21.2.1: What are the FMI's goals and objectives as far as the effectiveness of its operations is concerned?

18.2.2: How does the SIPS operator ensure that it has clearly defined goals and objectives that are measurable and achievable?

Q.21.2.2: How does the FMI ensure that it has clearly defined goals and objectives that are measurable and achievable?

18.2.3: To what extent have the goals and objectives been achieved? What mechanisms does the SIPS operator have to measure and assess this?

Q.21.2.3: To what extent have the goals and objectives been achieved? What mechanisms does the FMI have to measure and assess this?

**Article 18(3)**

A SIPS operator shall have established mechanisms for the regular, at least annual, review of the requirements laid down in paragraphs 1 and 2.

**PFMI 21 KC 3**

An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.

18.3.1: What processes and metrics does the SIPS operator use to evaluate its efficiency and effectiveness?

Q.21.3.1: What processes and metrics does the FMI use to evaluate its efficiency and effectiveness?

18.3.2: How frequently does the SIPS operator evaluate its efficiency and effectiveness?

Q.21.3.2: How frequently does the FMI evaluate its efficiency and effectiveness?

## Article 19

### Communication procedures and standards / Principle 22 Communication procedures and standards

SIPS

Non SIPS LVPS

PIRPS

ORPS

#### Article 19(1)

A SIPS operator shall use or accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement and recording.

#### PFMI 22 KC 1

An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.

19.1.1: Does the SIPS operator use an internationally accepted communications procedure and, if so, which one(s)? If not, how does the SIPS operator accommodate internationally accepted communication procedures?

#### Communication procedures

Q.22.1.1: Does the FMI use an internationally accepted communications procedure and, if so, which one(s)? If not, how does the FMI accommodate internationally accepted communication procedures?

19.1.2: If the SIPS engages in cross-border operations, how do the SIPS's operational procedures, processes and systems use or otherwise accommodate internationally accepted communication procedures for cross-border operations?

Q.22.1.2: If the FMI engages in cross-border operations, how do the FMI's operational procedures, processes and systems use or otherwise accommodate internationally accepted communication procedures for cross-border operations?

19.1.3: Does the SIPS use an internationally accepted communications standard and, if so, which one(s)? If not, how does the SIPS operator accommodate internationally accepted communication standards?

#### Communication standards

Q.22.1.3: Does the FMI use an internationally accepted communications standard and, if so, which one(s)? If not, how does the FMI accommodate internationally accepted communication standards?

19.1.4: If the SIPS engages in cross-border operations, how do the SIPS's operational procedures, processes and systems use or otherwise accommodate internationally accepted communication standards for cross-border operations?

Q.22.1.4: If the FMI engages in cross-border operations, how do the FMI's operational procedures, processes and systems use or otherwise accommodate internationally accepted communication standards for cross-border operations?



19.1.5: If no international standard is used, how does the SIPS operator accommodate systems that translate or convert message format and data from international standards into the domestic equivalent and vice versa?

Q.22.1.5: If no international standard is used, how does the FMI accommodate systems that translate or convert message format and data from international standards into the domestic equivalent and vice versa?

## Article 20

### Disclosure of rules, key procedures and market data / Principle 23 Disclosure of rules, key procedures and market data

✔ SIPS

✔ Non SIPS LVPS

✔ PIRPS (KC 1,2,4)

✔ ORPS (KC 1,2,4)

#### Article 20(1)

A SIPS operator shall adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures shall also be publicly disclosed.

#### PFMI 23 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.

#### Rules and procedures

20.1.1: What documents comprise the SIPS's rules and procedures? How are these documents disclosed to participants?

Q.23.1.1: What documents comprise the FMI's rules and procedures? How are these documents disclosed to participants?

20.1.2: How does the SIPS operator determine that its rules and procedures are clear and comprehensive?

Q.23.1.2: How does the FMI determine that its rules and procedures are clear and comprehensive?

#### Disclosure

20.1.3: What information do the SIPS's rules and procedures contain on the procedures it will follow in non-routine, though foreseeable, events?

Q.23.1.3: What information do the FMI's rules and procedures contain on the procedures it will follow in non-routine, though foreseeable, events?

20.1.4: How and to whom does the SIPS operator disclose the processes it follows for changing its rules and procedures?

Q.23.1.4: How and to whom does the FMI disclose the processes it follows for changing its rules and procedures?

20.1.5: How does the SIPS operator disclose relevant rules and key procedures to the public?

Q.23.1.5: How does the FMI disclose relevant rules and key procedures to the public?

**Article 20(2)**

A SIPS operator shall disclose clear descriptions of the system's design and operations, as well as the SIPS operator's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the SIPS.

**PFMI 23 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.

20.2.1: What documents comprise information about the system's design and operations? How and to whom does the SIPS operator disclose the SIPS' design and operations?

Q.23.2.1: What documents comprise information about the system's design and operations? How and to whom does the FMI disclose the system's design and operations?

20.2.2: How and to whom does the SIPS operator disclose the degree of discretion it can exercise over key decisions that directly affect the operation of the SIPS?

Q.23.2.2: How and to whom does the FMI disclose the degree of discretion it can exercise over key decisions that directly affect the operation of the system?

20.2.3: What information does the SIPS operator provide to its participants about their rights, obligations and risks incurred through participation in the SIPS?

Q.23.2.3: What information does the FMI provide to its participants about their rights, obligations and risks incurred through participation in the FMI?

**Article 20(3)**

A SIPS operator shall provide all necessary and appropriate documentation and training to facilitate participants' understanding of the SIPS' rules and procedures and the risks they face from participating in the SIPS.

**PFMI 23 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.

20.3.1: How does the SIPS operator facilitate its participants' understanding of the SIPS's rules, procedures and the risks associated with participating?

Q.23.3.1: How does the FMI facilitate its participants' understanding of the FMI's rules, procedures and the risks associated with participating?

20.3.2: Is there evidence that the means described above enable participants' understanding of the SIPS's rules, procedures and the risks they face from participating in the SIPS?

Q.23.3.2: Is there evidence that the means described above enable participants' understanding of the FMI's rules, procedures and the risks they face from participating in the FMI?

20.3.3: In the event that the SIPS operator identifies a participant whose behaviour demonstrates a lack of understanding of the SIPS's rules, procedures and the risks of participation, what remedial actions are taken by the SIPS operator?

Q.23.3.3: In the event that the FMI identifies a participant whose behaviour demonstrates a lack of understanding of the FMI's rules, procedures and the risks of participation, what remedial actions are taken by the FMI?

**Article 20(4)**

A SIPS operator shall publicly disclose the SIPS's fees at the level of individual services it offers as well as its discount policies. The SIPS operator shall provide clear descriptions of priced services for comparability purposes.

**PFMI 23 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 priced services for comparability purposes.

20.4.1: Does the SIPS operator publicly disclose its fees at the level of its individual services and policies on any available discounts? How is this information disclosed?

Q.23.4.1: Does the FMI publicly disclose its fees at the level of its individual services and policies on any available discounts? How is this information disclosed?

20.4.2: How does the SIPS operator notify participants and the public, on a timely basis, of changes to services and fees?

Q.23.4.2: How does the FMI notify participants and the public, on a timely basis, of changes to services and fees?

20.4.3: Does the SIPS operator provide a description of its priced services? Do these descriptions allow for comparison across similar FMIs?

Q.23.4.3: Does the FMI provide a description of its priced services? Do these descriptions allow for comparison across similar FMIs?

20.4.4: Does the SIPS operator disclose information on its technology and communication procedures, or any other factors that affect the costs of operating the SIPS?

Q.23.4.4: Does the FMI disclose information on its technology and communication procedures, or any other factors that affect the costs of operating the FMI?

**Article 20(5)**

A SIPS operator shall complete and disclose publicly responses to the CPMI-IOSCO Disclosure framework for financial market infrastructures. It shall update its responses following material changes to the system or its environment, but at least every two years. A SIPS operator shall also, at a minimum, disclose basic data on transaction volumes and values.

**PFMI 23 KC 5**

An FMI should complete regularly and disclose publicly responses to the CPMI-IOSCO disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.

20.5.1: When did the SIPS operator last complete the CPMI-IOSCO Disclosure framework for financial market infrastructures? How frequently is it updated? Is it updated following material changes to the SIPS and its environment and, at a minimum, every two years?

Q.23.5.1: When did the FMI last complete the CPMI-IOSCO Disclosure framework for financial market infrastructures? How frequently is it updated? Is it updated following material changes to the FMI and its environment and, at a minimum, every two years?

20.5.2: What quantitative information does the SIPS operator disclose to the public? How often is this information updated?

Q.23.5.2: What quantitative information does the FMI disclose to the public? How often is this information updated?

20.5.3: What other information does the SIPS operator disclose to the public?

Q.23.5.3: What other information does the FMI disclose to the public?

20.5.4: How does the SIPS operator disclose this information to the public? In which language(s) are the disclosures provided?

Q.23.5.4: How does the FMI disclose this information to the public? In which language(s) are the disclosures provided?

## 4 Assessment questions for links between retail payment systems

|  | Retail SIPS | PIRPS | ORPS |
|--|-------------|-------|------|
| <b>Expectation 1: General</b>  |             |       |      |
| An RPS that establishes a link with one or more other RPSs should identify, monitor and manage link-related risks.   | ✓           | ✓     | ✓    |
| 1.1 An RPS should identify and assess all potential sources of risk arising from a link arrangement before entering into it and on an ongoing basis once the link is established.  | ✓           | ✓     | ✓    |
| 1.1.1 Is there an initial risk-assessment to evaluate the potential sources of risk arising from the linked RPSs and from the link itself prior to the set-up of the link? If yes, how is it conducted?  | ✓           | ✓     | ✓    |
| 1.1.2 Does the initial risk assessment provide a holistic picture of the involved RPS landscape and include sufficient understanding of the entirety of the other RPS's risk management arrangements?  | ✓           | ✓     | ✓    |
| 1.1.3 Is there a mechanism to ensure that a risk-assessment is conducted on a regular basis after the link has already been established?   | ✓           | ✓     | ✓    |
| 1.2 An RPS participating in a link should be able to meet all of its obligations to the linked RPSs and to its participants in a timely manner.  | ✓           | ✓     | ✓    |
| 1.2.1 What are the measures and tools available to an RPS to ensure that it can effectively manage the risks that may arise from linked RPSs and any intermediaries?   | ✓           | ✓     | ✓    |
| 1.2.2 Do these tools respond to legal, financial and operational risks the RPS is exposed to through other entities, as well as those risks it poses to other entities?  | ✓           | ✓     | ✓    |
| 1.2.3 Are there control mechanisms to ensure that an RPS's participation in a link does not compromise its ability to meet its obligations in a timely manner to those participants that are, as well as for those who are not using the link? | ✓           | ✓     | ✓    |
| 1.2.4 Are there business continuity arrangements at hand that would allow for a rapid recovery and resumption of critical activities, or alternative channels for processing cross-system payments?  | ✓           | ✓     | ✓    |
| 1.2.5 Given the interdependencies between and among systems, do the RPSs' crisis management arrangements allow for effective coordination among the affected interdependent entities?  | ✓           | ✓     | ✓    |

|  | Retail<br>SIPS | PIRPS | ORPS |
|--|----------------|-------|------|
| 1.3 An RPS that establishes multiple links should ensure that the risks generated in one link do not spill over and affect the soundness of the other links and RPSs.  | ✓              | ✓     | ✓    |
| 1.3.1 Are risk management methods, procedures and parameters used by the RPSs involved in a link different across systems? If so, are any measures being taken to effectively limit the impact of such differences on the link itself and all other links? | ✓              | ✓     | ✓    |
| 1.3.2 Given that such differences (and their potential consequences, e.g. spillover effects) exist across RPSs, what additional risk management tools are recommended and how would these be implemented?  | ✓              | ✓     | ✓    |
| 1.3.3 How are responsibilities allocated across the linked RPSs to limit such risk exposure arising from differences in risk assessment and management practices? How are the RPSs held accountable for their respective responsibilities?                 | ✓              | ✓     | ✓    |
| 1.4 Link arrangements should be designed in such a way that each RPS is able to continue to observe other applicable oversight principles.   | ✓              | ✓     | ✓    |
| 1.4.1 How is it ensured that links are adequate in terms of design and complexity, and represent the least risk-prone option given the number of jurisdictions involved (e.g. an indirect link may generate higher risk than a direct one)?                | ✓              | ✓     | ✓    |
| 1.4.2 Are the resulting arrangements designed in a way that, even if some additional risks are generated, these risks are adequately mitigated?  | ✓              | ✓     | ✓    |
| <b>Expectation 2: Legal</b>  |                |       |      |
| A link should have a well-founded, clear and transparent legal basis that is enforceable in all relevant jurisdictions, supports its design and provides adequate protection to the RPSs and their participants in the operation of the link.              | ✓              | ✓     | ✓    |
| 2.1 The legal framework (laws, regulations, rules and procedures) applicable to the linked RPSs and to the link itself should provide a high degree of certainty for each aspect of the link functioning in all relevant jurisdictions.                    | ✓              | ✓     | ✓    |
| 2.1.1 Which jurisdictions govern the linked RPSs and the link itself (i.e. what are the jurisdictions under which the rules and procedures are to be interpreted)?   | ✓              | ✓     | ✓    |
| 2.1.2 What relevant laws, regulations, rules and procedures are applicable to the payments processed via the link?   | ✓              | ✓     | ✓    |
| 2.1.3 Which specific and legally binding rules (and procedures)/contracts/terms and conditions govern the link?  | ✓              | ✓     | ✓    |

|  | Retail<br>SIPS | PIRPS | ORPS |
|--|----------------|-------|------|
| Broadly speaking, what areas do they cover?  |                |       |      |
| 2.1.4 How is it ensured that the contractual rules governing the link identify unambiguously the specific jurisdiction and applicable law for any aspect of the information exchange, clearing and settlement processes?   | ✓              | ✓     | ✓    |
| 2.1.5 Which rules and procedures are in place to solve possible disputes between the linked RPSs?  | ✓              | ✓     | ✓    |
| 2.2 The rules, procedures and contracts governing the link should be clear, understandable and consistent with relevant laws and regulations. They should be readily available as appropriate for all parties with a legitimate interest.  | ✓              | ✓     | ✓    |
| 2.2.1 How is it ensured that the rules, procedures and contracts that apply to the link are clear and understandable? Do the rules, procedures and contracts governing the link define the rights and obligations of the linked RPSs and their participants, as well as those of any other intermediary in an indirect or relayed link?  | ✓              | ✓     | ✓    |
| 2.2.2 How do the operators of the linked RPSs ensure that the rules, procedures and contracts are consistent with relevant laws and regulations (for example, through legal opinions or analyses)? Have any inconsistencies been identified and rectified?   | ✓              | ✓     | ✓    |
| 2.2.3 How is it ensured that the legal framework is readily available and clear for all parties with a legitimate interest in the functioning of the link?   | ✓              | ✓     | ✓    |
| 2.2.4 What measures have been taken by the link's operator(s) to ensure a continuous sound legal basis of the link under all relevant jurisdictions?   | ✓              | ✓     | ✓    |
| 2.3 The rules, procedures and contracts governing the link should be complete, valid and enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken under such rules and procedures will not be stayed, voided or reversed.  | ✓              | ✓     | ✓    |
| 2.3.1 How can a high level of confidence be achieved that the rules, procedures and contracts related to the operation of the link are enforceable in all relevant jurisdictions (for example, through legal opinions and analysis), as per point 2.1 above? In particular, in RPSs in which multilateral netting takes place, how has it been ensured that netting and settlement processes do not conflict with those of connected RPSs? | ✓              | ✓     | ✓    |
| 2.3.2 How can a high degree of certainty be achieved that the rules, procedures and contracts will not be voided, reversed or subject to stays? Are there any circumstances in which the rules, procedures or contracts governing a link could be voided,  | ✓              | ✓     | ✓    |

|   | Retail<br>SIPS | PIRPS | ORPS |
|---|----------------|-------|------|
| reversed or subject to stays? (If so, please specify these circumstances.)  |                |       |      |
| 2.3.3 What are the rules applicable to determine the moments of entry, of irrevocability and of finality of the payments exchanged via the link? How is it ensured that the laws related to finality of settlement are compatible? In case any problem has been identified, how is it dealt with?   | ✓              | ✓     | ✓    |
| 2.3.4 Has the enforceability of rules and procedures of the links ever been challenged in a national and/or foreign court? If enforceability was not confirmed, provide specific information of relevant cases.   | ✓              | ✓     | ✓    |
| 2.3.5 Have legal capacity and/or country opinions ever been sought and/or have legal investigations been made regarding the enforceability of the link's rules and procedures? If yes, have these legal opinions been sought/investigations been made on the basis of specific terms of reference? Which legal issues/risks have been revealed?   | ✓              | ✓     | ✓    |
| 2.4 Linked RPSs should identify and mitigate the risks arising from any potential conflicts of laws across jurisdictions.   | ✓              | ✓     | ✓    |
| 2.4.1 How are potential conflicts of laws issues identified and analysed? In cases of uncertainty regarding the enforceability of a link arrangement's legal basis (i.e. in the relevant jurisdictions), has an independent legal analysis of such issues been obtained? What potential conflicts of laws issues have already been identified and analysed? And how has the legal analysis addressed any of those issues? | ✓              | ✓     | ✓    |
| 2.5 Linked RPSs should comply with the applicable regulatory frameworks.  | ✓              | ✓     | ✓    |
| 2.5.1 Do the Linked RPSs comply with the applicable regulatory frameworks?  | ✓              | ✓     | ✓    |
| <b>Expectation 3: Operational risk</b><br>A RPS should ensure security and operational reliability for payments exchanged via a link, in particular scalability of IT and related resources.  | ✓              | ✓     | ✓    |
| 3.1 The scope of RPS information security policy and requirements should cover the link arrangements..  | ✓              | ✓     | ✓    |
| 3.1.1. Have the operators of the linked RPSs, prior to establishment of a link, assessed the operational risks which could materialise for participants through the use of the link? Is the assessment performed regularly and to whom is it reported?  | ✓              | ✓     | ✓    |
| 3.1.2. Has the information security policy of the link been   | ✓              | ✓     | ✓    |



|  | Retail<br>SIPS | PIRPS | ORPS |
|--|----------------|-------|------|
| approved by the linked RPSs and communicated to all relevant parties?  |                |       |      |
| 3.1.3. Has the assignment of responsibility for the security of the link been jointly decided by the linked RPSs and, in the case of indirect or relayed links, all involved parties? What does it cover (e.g. the development, production, maintenance and usage phases)?   | ✓              | ✓     | ✓    |
| 3.1.4. How is it ensured that the link is adequately designed to manage the confidentiality, integrity, authentication, non-repudiation, availability and auditability of the data exchanged through the link? Have these requirements been defined and implemented according to relevant industry-wide standards (please indicate which standards apply)?                                   | ✓              | ✓     | ✓    |
| 3.1.5. What arrangements have been established to ensure a secure and reliable exchange of payments via the link (including, in the case of outsourcing, of critical functions)?   | ✓              | ✓     | ✓    |
| 3.2 The operational service level of the link should be agreed by the linked RPS and communicated to all relevant parties.   | ✓              | ✓     | ✓    |
| 3.2.1 Has the operational service level of the link been approved by the linked RPSs and communicated to all relevant parties?   | ✓              | ✓     | ✓    |
| 3.3 RPSs should ensure that the risk management arrangements and processing capacity are sufficiently scalable and reliable to operate the link for both the current and projected peak volumes of activity processed over the link.   | ✓              |       |      |
| 3.2.3. How is it ensured that the processing capacity of the link is sufficiently scalable and reliable to operate the link for both the current and projected peak volumes of activity processed over the link? For indirect and relayed links, how have the linked RPSs assessed the operational capacities and security levels of the intermediary (either a participant or a third RPS)? | ✓              |       |      |
| 3.4 The link's functioning should be appropriately tested, monitored and incidents should be logged and followed upon. Linked RPSs and all involved parties should agree on business continuity arrangements of the link.  | ✓              |       |      |
| 3.4.1. Which measures have been identified by the linked RPSs for monitoring the functioning of the link and solving efficiently any operational incidents? How are incidents managed and followed up?   | ✓              | ✓     | ✓    |
| 3.4.2. Has the link been tested prior to "going live" and when any major changes have taken place? Have tests involved all interested parties, including participants of the RPSs? For indirect  | ✓              | ✓     | ✓    |

|   | Retail SIPS | PIRPS | ORPS |
|---|-------------|-------|------|
| and relayed links, have intermediaries (either a participant or a third RPS) been involved?   |             |       |      |
| 3.4.3. Have contact lists and communication procedures for the exchange of information been established which are kept up to date? Have they been established for both normal and abnormal circumstances? For indirect and relayed links, what communication procedures are foreseen with regard to the intermediary? | ✓           | ✓     | ✓    |
| 3.4.4. What are the rules and procedures regarding the business continuity of the link and have these been agreed by the linked RPSs and all relevant parties?  | ✓           | ✓     | ✓    |
| 3.4.5. Are different scenarios considered in the agreed business continuity arrangements? Is the potential impact that an incident in a link may have on payments not exchanged via link (and vice versa) being considered?   | ✓           | ✓     | ✓    |
| 3.4.6. How is it ensured that business continuity arrangements are in line with the information security policy of the link and with the agreed service level?  | ✓           | ✓     | ✓    |
| 3.4.7. Are the business continuity plans of the link revised regularly? Are the business continuity procedures tested with relevant parties (especially in case of indirect and relayed links)?   | ✓           | ✓     | ✓    |
| <b>Expectation 4: Financial risk</b>  |             |       |      |
| Linked RPSs should closely monitor and effectively measure and manage the financial risks arising from the link arrangement.  | ✓           | ✓     | ✓    |
| 4.1 RPSs should have a clear understanding of the impact the link has on each of the financial risks they incur.  | ✓           |       |      |
| 4.1.1. Do the RPSs analyse the credit and liquidity risk impact of a link, keep participants informed and explain to them the additional financial risks derived from the link?   | ✓           |       |      |
| 4.1.2. Do the RPSs monitor the volume and value of payments exchanged via the link? Do RPSs participants rely heavily on incoming liquidity of the linked system in order to carry out other transactions?  | ✓           |       |      |
| 4.2 The system's rules and procedures should enable participants to have a clear understanding of the impact the link has on each of the financial risks they incur.  | ✓           |       |      |
| 4.2.1. Which parties are involved in the settlement process? Which criteria to minimize the related financial risks would be associated with them?  | ✓           |       |      |
| 4.2.2. If an RPS exchanges and settles payments in different  | ✓           |       |      |

|  | Retail SIPS | PIRPS | ORPS |
|--|-------------|-------|------|
| currencies via a link, how are the related risks analysed and what measures are taken to manage and contain them?  |             |       |      |
| 4.3 The assets used for settlement via links should carry little or no credit or liquidity risk.   | ✓           | ✓     | ✓    |
| 4.3.1 What asset is used for the settlement of transactions via the link?  | ✓           | ✓     | ✓    |
| 4.3.2 If commercial bank money is used for settlement, how are the funds used for settlement segregated from the RPS' or any intermediary's own funds? How are these funds protected in the event that the RPS or any intermediary defaults?   | ✓           | ✓     | ✓    |
| 4.4 Payments exchanged via a link should be settled promptly, preferably on an intra-day basis.  | ✓           |       |      |
| 4.4.1 How does settlement take place and how often? Are settlement times in line with the cut-off times for submission of payments in the linked RPS and, if applicable, for the intermediaries involved in the link?  | ✓           |       |      |
| 4.4.2 What is the maximum number of entities that can be involved in the payment chain? Is there a maximum execution time for single payment orders and, if so, does the RPS meet it for payments exchanged via the link?  | ✓           |       |      |
| 4.4.3 How does the link design address possible differences in operational procedures, such as the number of cycles per day, different time zones, cut-off times for the submission of payments or public holidays?  | ✓           |       |      |
| 4.5 The terms of the link agreement should ensure adequate arrangements for managing and containing the risks associated with the inability of one of the RPS's participants to fulfil its obligations promptly, especially in the event that a netting process takes place.           | ✓           | ✓     | ✓    |
| 4.5.1 If one of the linked RPSs or the link itself works on a net basis what tools and measures are in place in case the end of day procedure is delayed or cannot take place?   | ✓           | ✓     | ✓    |
| 4.5.2 If an RPS settling on a net basis has a mechanism such as liquidity pool or a loss sharing agreement, is it clearly described where and to what extent the linked RPS and its participants are included/affected by this mechanism? Is this transparent to the relevant parties? | ✓           | ✓     | ✓    |
| <b>Expectation 5: Access criteria</b>  |             |       |      |
| An RPS should appropriately define the criteria it applies to other RPSs that request the establishment of a link (linkage criteria)   | ✓           | ✓     | ✓    |

|  | Retail<br>SIPS | PIRPS | ORPS |
|--|----------------|-------|------|
| 5.1 Access criteria should be clear, objective and non-discriminatory. They should be publicly disclosed.  | ✓              | ✓     |      |
| 5.1.1 Do any specific procedures apply to the access of another RPS? If so, what are they and where are they laid down?  | ✓              | ✓     |      |
| 5.1.2 In indirect and relayed links, do linked RPSs ensure that the intermediary does not unduly restrict access of any participant to the link?   | ✓              | ✓     |      |
| 5.1.3 Does the RPS apply any criteria regarding the choice of intermediary in an indirect or relayed link with another RPS?  | ✓              | ✓     |      |
| 5.1.4 Is the RPS informed about any required legal or operational relations vis-à-vis its participants and the intermediary in a link? How does the RPS monitor and prevent an intermediary from applying any discriminatory rules which would restrict access to the link for the RPS participants? | ✓              | ✓     |      |
| 5.2 Access criteria should be justified in terms of the safety and efficiency of the system, as well as the broader financial markets.   | ✓              | ✓     |      |
| 5.2.1 Are considerations such as safety and efficiency reflected in the access criteria?   | ✓              | ✓     |      |
| 5.3 Access criteria can be tailored to specific kinds of link (direct, indirect and relayed) on the basis of the risks each kind of such a link poses to the RPS and its participants.   | ✓              | ✓     |      |
| 5.3.1 What types of links (direct, indirect, relayed) are offered/accepted by the RPS? To what extent are the different models of links actually used? What is the status of the linked RPSs (i.e. is there normal participation, special participation or no participation)?                        | ✓              | ✓     |      |
| 5.4 An RPS that refuses to establish a link should provide a written explanation to the applicant.   | ✓              | ✓     | ✓    |
| 5.4.1 Has the establishment of links ever been refused? If so, for what reason and have the applicants concerned been provided with a written explanation?   | ✓              | ✓     | ✓    |
| 5.5 An RPS involved in a link should ensure that price-setting is non-discriminatory and transparent.  | ✓              |       |      |
| 5.5.1 Is price-setting non-discriminatory? Is price-setting transparent?   | ✓              |       |      |
| 5.6 Exit rules and procedures should be defined.   | ✓              | ✓     | ✓    |
| 5.6.1 Have exit rules and procedures been defined? Under what  | ✓              | ✓     | ✓    |

|   | Retail<br>SIPS | PIRPS | ORPS |
|---|----------------|-------|------|
| conditions can a link be shut down?   |                |       |      |
| <b>Expectation 6: Efficiency</b>  |                |       |      |
| A link should meet the requirements of RPS participants and the markets it serves.  | ✓              | ✓     | ✓    |
| 6.1 An RPS should have clearly defined, measurable and achievable goals and objectives concerning the functioning of links, e.g. in the areas of minimum service levels, risk management expectations and business priorities. An RPS should have established mechanisms for the regular review of the efficiency and effectiveness of its links. | ✓              |       |      |
| 6.1.1 Has the Management of the RPS formulated an explicit strategy as regards links with other systems? How have the RPS participants been consulted in order to define this strategy? How is this strategy (and any changes in it) officially communicated to any stakeholders?   | ✓              |       |      |
| 6.2 A link should be designed to meet the current and future needs of its participants and the markets it serves.   | ✓              | ✓     | ✓    |
| 6.2.1 Before establishing a link, how are the business case and the risks associated with the link assessed? Is a cost-benefit analysis carried out, and does it include an assessment of the necessity of a dedicated pricing policy?  | ✓              | ✓     | ✓    |
| 6.2.2 Have any constraints been identified affecting the efficiency of the link?  | ✓              | ✓     | ✓    |
| 6.3 The establishment of links should not put the balance of RPSs at risk in terms of risk management and efficiency.   | ✓              |       |      |
| 6.3.1 What are the arrangements for the governance of the link (decision making process, operational functions and control functions) and the lines of responsibility regarding the performance of the link? Are they sufficiently clear and documented to ensure transparency for the RPS participants and other stakeholders?                   | ✓              |       |      |
| 6.3.2 Which process is in place to establish a new link or to make any change to the existing links? How does the system operator inform the participants about these events?   | ✓              |       |      |
| <b>Expectation 7: Governance</b>  |                |       |      |
| The governance arrangements related to the establishment an operation of the link should be clear and transparent, promote the safety and efficiency of links, and support the objectives of relevant stakeholders and relevant public interest considerations.   | ✓              | ✓     |      |
| 7.1 The management of the RPS involved in a link should formulate a clear strategy on the establishment of links which  | ✓              | ✓     |      |

|   | Retail<br>SIPS | PIRPS | ORPS |
|---|----------------|-------|------|
| should be disclosed to owners, relevant authorities, participants and, at a more general level, other RPSs.   |                |       |      |
| 7.1.1 How have the RPS participants been consulted in order to define this strategy? How is this strategy (and any changes in it) officially communicated to the participants and other stakeholders? Is there a formal process for this?   | ✓              | ✓     |      |
| 7.1.2 How is the RPS made aware that an intermediary has established a link with other RPS? Are intermediaries obliged to notify the establishment of the link to the linked RPS? If so, what is the content of such a notification? Should the RPS approve the indirect link? Which kind of monitoring on the indirect link is the RPS able to perform?  | ✓              | ✓     |      |
| 7.2 An RPS should have objectives that place a high priority on the safety and efficiency (that includes fair and transparent pricing) of the link and explicitly support the public interest.  | ✓              |       |      |
| 7.2.1 Before establishing a link, how are the business case and the risks associated with the link assessed? Has a cost-benefit analysis been carried out?  | ✓              |       |      |
| 7.2.2 Do business plans exist? Are projected financial results attained?  | ✓              |       |      |
| 7.2.3 How are links included in the scope of the control functions of the RPS? Have any constraints been identified affecting the efficiency of the link?   | ✓              |       |      |
| 7.2.4 How are the participant needs and complaints - related to links - collected by the system operator and taken into account when designing or operating the links?  | ✓              |       |      |
| 7.2.5 Is there a pricing policy for the payments channelled via the links? What is the basis for this policy? Is it similar to the policy for payments between participants in the RPS? Is this pricing policy transparent to participants and other stakeholders?  | ✓              |       |      |
| 7.3 Governance arrangements should ensure whether a decision to establish a link appropriately reflects the objectives and interests of the relevant stakeholders and, if so, how.  | ✓              |       |      |
| 7.3.1 What are the arrangements for the governance of the link (decision making process, operational functions and control functions)? Are they sufficiently clear and documented to ensure transparency for the RPS participants and other stakeholders? If relevant, are they made transparent to the public in an easily understandable way (e.g. via website, brochures, letters, information on demand)? | ✓              |       |      |
| 7.3.2 How are the participants and other interested parties (e.g.   | ✓              |       |      |

|  | Retail<br>SIPS | PIRPS | ORPS |
|--|----------------|-------|------|
| audit, oversight) associated? For what type of issues do consultations take place?   |                |       |      |
| 7.3.3 What type of consultation arrangement exists? For example, do formal or informal consultation arrangements exist?  | ✓              |       |      |
| 7.3.4 Is the range of participants consulted sufficiently wide to ensure that all participants are fairly represented? Do discussions with participant groups take place?  | ✓              |       |      |
| 7.3.5 Do the majority of participants usually accept decisions which are agreed by the participant representatives?  | ✓              |       |      |
| 7.3.6 In the case of central bank-owned or jointly-owned links, have the owner and/or operator function and the regulatory function been clearly separated?  | ✓              |       |      |
| 7.3.7 In the case of privately-owned links, have clear and transparent policies been adopted to avoid conflicts of interests of directors who are employed by participants and, for example, who may represent organisations that compete with each other?   | ✓              |       |      |
| 7.3.8 Do written strategic objectives (of relevant stakeholders) and plans to achieve them exist? How is the performance in meeting those objectives assessed?   | ✓              |       |      |
| 7.3.9 Are the objectives and major decisions regarding the system timely communicated (e.g. through reports, statistical analysis, etc.) to participants, owners, operators, overseers, and any risk management and audit functions that are independent of those responsible for the day-to-day operations? | ✓              |       |      |
| 7.3.10 Are the objectives and major decisions regarding the system released through appropriate channels depending on the stakeholders (participants, owners, overseers) concerned?  | ✓              |       |      |
| 7.3.11 Is there a specific dispute resolution procedure to be used by participants for disputes related to the implementation of procedures or other issues? If not, how are disputes handled? If yes, has it been used already?   | ✓              |       |      |
| 7.3.12 Is there a specific dispute resolution procedure to be used by non-participants (e.g. applicants, former participants) for disputes related to the access/exit criteria? If not, how are disputes handled? If yes, has it been used already?  | ✓              |       |      |
| 7.3.13 Is the Management of the link operating structure fully accountable for its performance vis-à-vis the participants and the wider financial community, and are lines of responsibility clearly specified?  | ✓              |       |      |
| 7.3.14 How is it ensured that Management is held accountable for   | ✓              |       |      |

|   | Retail<br>SIPS | PIRPS | ORPS |
|---|----------------|-------|------|
| the performance of the link (e.g. is the work of the Management subject to audit, oversight or reviews by the Board)? To which entity does the link manager/operator have to justify/explain the link's performance, compliance with internal rules and with the external regulatory framework, major decisions and actions, and the adequacy of new developments (e.g. reports to the board of the institution and/or shareholders)?   |                |       |      |
| 7.3.15 Are their clear lines of responsibility and accountability within the organisations of the respective RPSs? How is the effectiveness and enforceability of controls on Management ensured (independence of audit and of oversight; for systems managed by central banks: adequacy of reporting and existence of "non-executive independent" members of the board)? Do reporting arrangements exist that assess the actions of senior management against the strategic objectives identified? | ✓              |       |      |
| 7.3.16 Are there arrangements to ensure accountability vis-à-vis the performance of the system when information processing has been outsourced?   | ✓              |       |      |
| 7.4 An RPS involved in a link should preferably implement formalised mechanisms for sharing relevant information with the relevant stakeholders (owner, operator, participants, overseers and any other relevant stakeholder) and consult them when needed.   | ✓              |       |      |
| 7.4.1 What process is in place for establishing a new link or making changes to existing links? How does the system operator inform participants about these events? Is there a formal notification procedure?  | ✓              |       |      |
| 7.4.2 In the case of an indirect/relayed link, do the operators of the RPSs involved meet to discuss common issues and problems?  | ✓              |       |      |
| 7.4.3 Does the system comply – at least broadly – with the other relevant OELRPS? If not, have plans been developed by the system owner/operator to address issues/problems identified within a reasonable time frame?  | ✓              |       |      |
| <b>Expectation 8: Indirect and relayed links</b>  |                |       |      |
| An RPS that uses an intermediary to operate a link with another RPS should measure, monitor and manage the additional risk (including legal, financial and operational arising from the use of an intermediary).  | ✓              | ✓     | ✓    |
| 8.1 Before the establishment of an indirect or relayed link, an RPS should analyse all the risks related to intermediation in the exchange of payments.   | ✓              | ✓     | ✓    |
| 8.1.1 What type of services are offered through indirect or relayed links?  | ✓              | ✓     | ✓    |



|   | Retail<br>SIPS | PIRPS | ORPS |
|---|----------------|-------|------|
| 8.1.2 What are the criteria followed in the choice of the intermediary in the indirect or relayed link with another RPS?  | ✓              | ✓     | ✓    |
| 8.1.3 Have all types of risks related to intermediation been identified? How are they taken into account in the decision making process? Are linked RPSs involved in the analysis, together with the intermediary that operates the indirect or relayed link? How does the RPS identify possible dependencies from a key intermediary?                                    | ✓              | ✓     | ✓    |
| 8.2 An RPS that uses an intermediary to operate a link with another RPS should measure, monitor and manage the additional legal risks arising from the use of an intermediary.  | ✓              | ✓     | ✓    |
| 8.2.1 How have the additional legal risks posed by the use of an intermediary been analysed and measured? How are they monitored and managed on an ongoing basis?   | ✓              | ✓     | ✓    |
| 8.2.2 How have the potential uncertainties in the applicable laws or conflict of laws in the use of the indirect or relayed link been addressed? How is it ensured that there is coherence among the different legal arrangements governing the indirect and relayed link? Do the involved RPSs operators meet to discuss common legal issues and problems?               | ✓              | ✓     | ✓    |
| 8.3 RPS should identify and mitigate operational risks introduced by the intermediary.  | ✓              | ✓     | ✓    |
| 8.3.1 How have the operational risks posed by the use of an intermediary been analysed and measured? How are they monitored and managed on an ongoing basis? Are these risks addressed in the risk management framework of the RPS?   | ✓              | ✓     | ✓    |
| 8.3.2 Do the operators of the RPSs involved meet with the intermediary to discuss common operational issues and problems? Are the business continuity plans of the linked RPSs and of the intermediary integrated? Do stress tests and simulations involve all interested parties (the linked RPSs and the intermediary)? Are roles and responsibilities clearly defined? | ✓              | ✓     | ✓    |
| 8.4 The RPS involved in an indirect or relayed link should monitor the role and financial soundness of any intermediary.  | ✓              |       |      |
| 8.4.1 Does the intermediary in the link bear any financial risk? If so, does the RPS require the intermediary to comply with any specific requirements? Please give further details.  | ✓              |       |      |
| 8.4.2 How does the linked RPS ensure that the intermediary in the link is able to cope with the financial risks which it bears?   | ✓              |       |      |
| 8.4.3 How is the event of a default of the intermediary taken into account by the risk management framework of the RPS? What are  | ✓              |       |      |

|   | Retail<br>SIPS | PIRPS | ORPS |
|---|----------------|-------|------|
| the communication procedures for such an event?   |                |       |      |
| 8.5 In indirect and relayed links, linked RPSs should ensure that the intermediary does not unduly restrict usage of the link by any participant.   | ✓              | ✓     | ✓    |
| 8.5.1 Is the linked RPS informed about any required legal or operational agreement between its participants and the intermediary of a link? How does linked RPSs monitor and prevent any discriminatory rules which would restrict access to the link for the RPS participants? | ✓              | ✓     | ✓    |
| 8.6 The efficiency and effectiveness of the indirect and relayed links should be periodically assessed and compared with the alternative channels of payment exchange, e.g. direct links.   | ✓              |       |      |
| 8.6.1 How is the efficiency and the effectiveness of the established links evaluated? What is the frequency of the assessment? Which parties are involved in these assessments?   | ✓              |       |      |
| 8.6.2 Which procedure is to be followed to establish a new link or to make any change to the existing links? How and when does the system operator inform the participants about these events?  | ✓              |       |      |

© **European Central Bank, 2018**

Postal address 60640 Frankfurt am Main, Germany

Telephone +49 69 1344 0

Website [www.ecb.europa.eu](http://www.ecb.europa.eu)

All rights reserved. Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.