



September 2019

TAKAS ISTANBUL CHEQUE CLEARING SYSTEM ASSESSMENT DOCUMENT

An Assessment of the Compliance of Takas
Istanbul's Cheque Clearing System Against the
CPMI-IOSCO Principles for Financial Market
Infrastructures

The information provided in this document reflects, entirely, the opinion of Takas Istanbul and does not include any opinion belonging to the Capital Markets Board, Banking Regulation and Supervision Agency, Central Bank of the Republic of Turkey or other institutions. A copy of this document is published on the Takas Istanbul's corporate website (www.takasbank.com.tr).

ABBREVIATIONS

BRSA	Banking Regulation and Supervision Agency
BIAS	Borsa Istanbul Inc.
IT	Information Technology
PDC	Primary Data Center
COBIT	Control Objectives for Information and Related Technologies
CPMI	Committee on Payment and Market Infrastructures
DvD	Delivery versus Delivery
DvP	Delivery versus Payment
EFT	Electronic Funds Transfer
EMIR	European Market Infrastructure Regulation
ESTS	Electronic Securities Transfer System
EU	European Union
FMI	Financial Market Infrastructure
IOSCO	International Organization of Securities Commission
ICAAP	Internal Capital Adequacy Assessment Process
BCMS	Business Continuity Management System
ITIL	Information Technology Infrastructure Library
PS	Payment System
PDPA	Personal Data Protection Authority
MASAK	Financial Crimes Investigation Board
SSS	Securities Settlement System
CCP	Central Counterparty
CSD	Central Securities Depository
CCSI	Central Clearing and Settlement Institution
PvP	Payment versus Payment
CMB	Capital Markets Board
CBRT	Central Bank of the Republic of Turkey
TR	Trade Repository
BoD	Board of Directors

I. EXECUTIVE SUMMARY

Takas Istanbul was founded in 1992 as a Joint Stock Company subject to the provisions of Turkish Commercial Code, under the auspices of Istanbul Stock Exchange (ISE) with the title of ISE Clearing, Settlement and Custody Inc. to provide clearing, settlement and custody services in capital markets. After receiving an 'investment banking license' in 1996 to offer banking services associated with clearing, settlement, and custody services, the company acquired 'bank status' and changed its title to 'ISE Clearing, Settlement and Custody Bank Inc.'. With the entry into force of the Temporary Article 8 of the new Capital Markets Law No. 6362 on 30.12.2012, Takas Istanbul obtained 'central clearing and settlement agency' status, and its title was changed in 2013 to 'Istanbul Clearing, Settlement and Custody Bank Inc.'.

Takas Istanbul has a paid-up capital of TRY 600.000.000. Except for Borsa Istanbul Inc., no partner can have a share of more than 5% of the Bank's capital directly or indirectly. 64.1478% of the Bank's capital belongs to Borsa Istanbul, 17.0427% to 11 Banks, 18.8095% to 28 intermediary institutions.

Istanbul Clearing, Settlement and Custody Bank Inc. (Takasbank), which has strategic importance for the banking and capital markets in Turkey, has the titles of "Central Clearing and Settlement Agency", "Custodian for Private Pensions Funds", "Custodian for Investment Funds", "National Numbering Agency", "Central Counterparty", and the licenses of "Payment and Securities Settlement System" and "Investment Bank". Takasbank is the only agency that is under constant monitoring by the Capital Markets Board, Central Bank of the Republic of Turkey, and Banking Regulation and Supervision Agency.

As per Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions (Law), Takasbank is authorized by the CBRT in the payment and securities settlement system to offer services in Cash Equity Market Clearing System, and Debt Securities Market Clearing System, and Cheque Clearing System. In that regard, Takasbank is defined as a "Critical Bank" due to its strategic importance in banking and capital markets.

As per Article 5 of the Regulation on Cheque Clearing Operations, Takasbank Cheque Clearing System was established to manage all operations from one center, including payment for cheques on account between bank branches, and incorporating the function of collateral management which is otherwise not included in cheque clearing services.

The Cheque clearing System includes a guarantee mechanism to address cases where participants fail to fulfill their obligations. Contributions to this guarantee mechanism, which were specified as per the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., were taken as collateral in events of default. Termination of the event of default is limited to the guarantee mechanism amounts deposited by the participants.

On the other hand, the main objective of Istanbul Clearing, Settlement and Custody Bank Inc. is to enhance our country's competitiveness by offering clearing and custody services in accordance with relevant regulations, and conducting financial and economic services of various types.

Authorized by the CMB as the Central Clearing and Settlement Agency, Takasbank offers clearing, collateral, and cash management services to markets at Borsa Istanbul Inc. and other markets in our country (Commodity Exchange, Energy Exchange). Takasbank currently offers services as Central Counterparty (CCP) at the Securities Lending Market, Debt Securities Market, Borsa Istanbul Money Market, Cash Equity Market, Derivative Instruments Market, and SWAP Market. Takasbank guarantees the realization of the transactions it carries out as part of its CCP services, and offers comprehensive risk management thanks to its advanced technological infrastructure. In addition, Takasbank operates Takasbank Money Market, one of the organized money markets in our country which gathers financial institutions that demand and supply funds and carry out transactions with up to six-month maturity, and in that sense, this is also where imputed market interest rates are determined.

Takasbank's Central Counterparty legislation and business model has been designed in observance of the CPMI-IOSCO's (Committee on Payment and Market Infrastructures-International Organization of Securities Commission) core principles and the EMIR document (European Market Infrastructures Regulation) No 648/2012 of the European Union and the technical standards (EU) No 152/2013 and (EU) No 153/2013 with regard to EMIR.

Takasbank is authorized within the scope of the Equity and Debt Securities Market Clearing System, Securities Settlement System, Cheque Clearing System, and Payment System.

Securities settlement systems (SSS) are categorized as "critical systems" without further differentiation. The CBRT expects SSSs operating in Turkey to comply with all principles laid out in the CPMI-IOSCO Report. In that regard, Takasbank has prepared a "Disclosure Framework for Financial Market Infrastructures" for Equity and Clearing Systems. This document is published on Takasbank's corporate website.

On the other hand, CPMI and IOSCO expect that the principles they have published with regard to FMIs are also enforced in systemically important payment systems. However, the compliance principles of SSS and payment systems are different.

Payment systems are categorized in order of importance as Critically Important Payment Systems, Important Payment Systems, and Important Payment Systems on a Limited Scale. Critically important payment systems are expected to comply with 18 of the FMI principles published by CPMI-IOSCO.

A compliance assessment has been conducted for Takasbank Cheque Clearing System, which is designated as a Critically Important Payment System, with regard to the 18 principles listed in the table below.

Principle	Critically Important Payment System
1- Legal Basis	X
2- Governance	X
3- Framework for the Comprehensive Management of Risks	X
4- Credit Risk	X
5- Collateral	X
7- Liquidity Risk	X
8- Settlement finality	X
9- Money Settlements	X
12- Exchange-of-Value Settlement Systems	X
13- Participant-Default Rules and Procedures	X
15- General Business Risk	X
16- Custody and Investment Risks	X
17- Operational Risk	X
18- Access and Participation Requirements	X
19- Tiered Participation Arrangements	X
21- Efficiency and Effectiveness	X
22- Communication Procedures and Standards	X
23- Disclosure of Rules, Key Procedures, and Market Data	X

At the end of each core principle, the outcome of Takas Istanbul's assessment of its Cheque Clearing System is explained by ticking one of the five rating scales given below.

Observed <input type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Warm Regards,

September 2019

II. ASSESSMENT BASED ON PRINCIPLES AND KEY CONSIDERATIONS

Principle 1- Legal Basis

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Key Consideration 1: The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.

Main considerations and relevant jurisdictions

S.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; immobilisation and dematerialisation of securities; arrangements for DvP, PVP or DvD; collateral arrangements including margin arrangements; and default procedures)?

Legal certainty for the Cheque Clearing System is achieved thanks to the legal framework underpinned by Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions (Law), Regulation on Payment and Securities Settlement Systems (Regulation), and Regulation on Cheque Clearing Operations. Regulations listed below explicitly cover the activities that require high degree of legal certainty:

- Within the scope of Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions (Law);
 - In Article 10 titled "Transfer order, netting, and collateral";
 - Paragraph 1 stipulates that the moment when the transfer order becomes irrevocable shall be clearly determined in the system rules and the transfer order cannot be revoked by the participant or any third party thereafter.
 - Paragraph 2 stipulates that the moment of entry of a transfer order into the system is defined in the system rules.
 - Paragraph 3 stipulates that all kinds of measures and decisions that are regulated by Laws and preclude the participant or the system operator to make transactions with their funds or securities including the temporary suspension, imposition of restrictions or permanent suspension of a participant's or system operator's fund or securities transfers, apply only to the transfer orders which enter into the system after the notification regarding the aforementioned measures and decisions are made to the system operator.
 - Paragraph 4 stipulates that in case the system works according to the netting principle, the transfer orders, which have entered into the system before the measures and decisions stated in the third paragraph are conveyed to the system operator, shall be included in the netting process.

- Paragraph 5 stipulates that the funds and securities, which are present in the settlement account of the participant on the day the measures and decisions defined in the third paragraph are notified to the system operator, shall primarily be used to fulfill the participant's obligations in the system.
 - Paragraph 6 stipulates that the measures and decisions defined in the third paragraph shall become effective in terms of the participant's or the system operator's rights and obligations within the system, only after these measures or decisions are notified to the system operator.
 - Paragraph 7 stipulates that the collateral given to the participant or the system operator with respect to the system and the collateral given to the CBRT shall be used to fulfill the obligations of the collateral's owner to the system, and that the measures and decisions in the third paragraph shall apply to the remaining part of the collateral after the obligations of the collateral owner are fulfilled.
- Within the scope of the Regulation on Operations of Payment and Securities Settlement Systems;
 - Section Five titled "Provisions on Risk Management" regulates how the risk management framework, as well as collateral, credit, and guarantee mechanisms shall be implemented.
 - Article 19 titled "Notification pertaining to enforcement of Article 10 of the Law" regulates the notifications that shall be made to the CBRT.
- In Section 4 titled "Principles on Clearing and Settlement Transactions" of the Regulation on Cheque Clearing Operations;
 - Article 12 specifies the principles of clearing transactions,
 - Article 13 specifies the provisions that need to be complied with in settlement transactions, and stipulates that mechanisms should be established for cases of participants' failure to fulfill their obligations toward the system.
- In addition, within the scope of Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc.;
 - In Chapter Three titled "Principles for Clearing and Settlement Operations", the following articles regulate the topics specified below:
 - Article 14 on clearing operations,
 - Article 15 on delivering the information to the concerned participants,
 - Article 16 on authorization and return operations,
 - Article 17 on netting operations,
 - Article 18 on settlement accounts,
 - Article 19 on settlement operations,

- Article 20 on clearing, settlement date and period,
- Article 21 on currency to be used in the payment of settlement obligations,
- Article 22 on the finality of settlement.
- In Chapter Four titled "Principles Regarding Collateral and Guarantee Mechanism Contribution", the following articles regulate the topics specified below:
 - Article 23 on participation collateral,
 - Article 24 on guarantee mechanism contribution,
 - Article 25 on guarantee mechanism contribution determination procedure,
 - Article 26 on assets eligible as guarantee mechanism contribution,
 - Article 27 on depositing the guarantee mechanism contribution,
 - Article 28 on valuation of guarantee mechanism contribution,
 - Article 29 on guarantee mechanism contribution call,
 - Article 30 on valuation prices of the assets accepted as guarantee mechanism contribution,
 - Article 31 on use of the guarantee mechanism contribution,
 - Article 32 on interest accrual on cash TRY as guarantee mechanism contribution,
 - Article 33 on exercising the rights arising from the guarantee mechanism contributions,
 - Article 34 on returning the guarantee mechanism contributions,
 - Article 35 on guarantee mechanism contribution deposit and withdrawal transactions,
- In Chapter Five titled "Default and Mistreatment Payment Procedures", the following articles regulate the topics specified below:
 - Article 36 on default principles,
 - Article 37 on default interest,
 - Article 38 on calculating default interest,
 - Article 39 on accrual, notification and collection,
 - Article 41 on mistreatment payment.

The abovementioned articles were approved by Takasbank Board of Directors, and subsequently were sent to the CBRT for approval, and announced to participants via a General Letter. In addition, an up to date version is available on Takasbank's corporate website.

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

Takasbank offers Cheque Clearing Service only via banks operating in Turkey and in TRY. For that reason, Cheque Clearing Service is not directly subject to the laws of a jurisdiction.

S.1.1.3: 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?

- Within the scope of Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions (Law),
- Regulation on Operations of Payment and Securities Settlement Systems,
- And the Communiqué on Information Systems Used in Payment and Securities Settlement Systems,
- And the Regulation on Cheque Clearing Operations

provide legal certainty, and within the legal framework drawn by these regulations,

- The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., which was approved by the CBRT, governs the operational principles of the services on offer.

In addition, participant agreements that determine the rights and responsibilities of participants and Takasbank with regard to the system are sent to the CBRT for approval and signed with each participant.

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

Article 10 titled "Transfer order, netting, and collateral" of Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions (Law) stipulates that in case the system works according to the netting principle, the transfer orders, which have entered into the system before the measures and decisions codified in law are conveyed to the system operator, shall be included in the netting process.

Subparagraph (ç) of Article 7 titled "System Rules" of the Regulation on Operations of Payment and Securities Settlement Systems stipulates that methods to be used for clearing or settlement of the transactions in the system and principles regarding the implementation of these methods shall be clearly determined and stated within the system rules. In addition, in Section 4 titled "Principles on Clearing and Settlement Transactions" of the Regulation on Cheque Clearing Operations published by the CBRT;

- Article 12 titled "Clearing Transactions" states the following:
 - Cheques printed according to the communiqués published by the CBRT and magnetically coded in accordance with the cheque coding standards, which are not physically presented to the concerned participants shall be processed in the system.
 - Takasbank is not the entity paying the cheque and cannot be a party to any content apart from the technical requirements of the information sent at any stage of the clearing operations.
 - Information regarding other participants' cheques handed to the participant branches by the holder for collection shall be presented in the electronic

environment to the concerned participants through the clearing rooms in accordance with the principles and procedures referred to in the system rules.

- The participant to which the cheque is presented shall be responsible for the timely presentation of cheque information to the concerned participant.
 - Cheques presented through the clearing room shall be processed by getting authorization from the concerned participant.
 - The authorization operations shall be concluded on the same day.
 - Should the authorization of the cheques presented through a clearing room be failed to be completed, these cheques shall be processed like other covered cheques.
 - If it is identified that the cheques recorded to the relevant participants' accounts because of failing to get authorization are dishonored or will not be paid for any reason, the participant to which the cheque has been presented shall be given information in writing by the concerned participant (by indicating the participant code, branch code, account number, cheque number, cheque amount and the name of the branch sending the cheque to collection) on the relevant clearing day until the time designated.
 - If it is determined that cheques being processed like the covered cheques due to the failure to complete authorization operations are not to be paid for any reason later on, the relevant participant shall be immediately notified in writing by the concerned participant and the return operations shall be performed at the latest within 3 business days from the notification date
 - The authorization operations shall be carried out according to the principles set forth in the Regulation on Cheque Clearing Operations and the System Rules.
 - Cheques issued by a participant in favor of another participant cannot be presented to the clearing room.
 - Participants shall be responsible for the completion of their clearing and settlement obligations within their time period.
 - The operating principles with regard to clearing and settlement transactions shall be included in the System Rules.
- Article 13 titled "Settlement Transactions" states the following:
- Participants' cash obligations calculated as per principles outlined in Article 12 of the Regulation on Cheque Clearing Operations shall be fulfilled by way of transfer to settlement accounts in accordance with the principles and time constraints stated in the System Rules.
 - After obligations are fulfilled, the System Operator shall credit the cash receivables to the relevant participant's account.
 - The participants' net payable and receivable balances generated daily are final and shall not be dishonored.
 - The System Operator shall establish mechanisms to address failures to fulfill obligations.
 - The operating principles of these mechanisms shall be laid down in the System Rules.

In Chapter Three titled "Principles for Clearing and Settlement Operations" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. (System Rules), the following articles regulate the topics specified below.

- Article 13 on the general principles detailed in Articles 12-13 of Section Four of the Regulation on Cheque Clearing Operations,
- Article 14 on clearing operations,
- Article 15 on delivering the information to the concerned participants,
- Article 16 on authorization and return operations,
- Article 17 on netting operations,
- Article 18 on settlement accounts,
- Article 19 on settlement operations,
- Article 20 on clearing, settlement date and period.

The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., which was approved by the CBRT, governs the operational principles of the services on offer.

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?

The provision on the transfer order being irrevocable and noncancelable is included in Article 10 of Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions (Law). Similarly; Article 4, paragraph 1, subparagraph (aa) of The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. defines a transfer order as "the participant instruction facilitating the transmission of cheque information to the System together with the clearing packages for the purpose of transferring a specific amount of funds between the participants within the system", and states the irrevocable nature of transfer orders in Article 22 of the System Rules titled "Finality of Settlement". In that regard, there are systemic checks preventing transfer orders from being revoked after clearing packages have been entered into the system and the clearing time period has ended. As per the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the system works on the principle of finality of settlement.

Key Consideration 2: An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.

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

- The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. were first approved by the Bank's Board of Directors, then negotiated with the CBRT, and entered into force with the CBRT's approval and announced to system participants and the public on the Bank's corporate website (in Turkish and English).
- Before the "Cheque Clearing Transactions System Agreement" is signed with participants, the "Pre-Agreement Information Form" is dispatched to them that highlights the issues detailing Takasbank's general transaction conditions of indispensable nature, with regard to the parts of the System Rules that directly concern the participants. It is stated in this form that participants can conduct their legal and financial assessments before the signing and express their opinions.
- Where necessary, detailed explanations are offered to participants via a General Letter or Announcements with regard to how the regulations and arrangements in the System Rules are to be applied down to the lowest level.
- In the Customer Satisfaction survey held annually by the Bank, participants were asked whether the rules, agreements and procedures with regard to the services they receive were sufficiently clear and easy to understand, and there were no negative responses.

S.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?

Compliance with the following laws and regulations is ensured while preparing the system rules and agreements to be enforced within the framework of the Cheque Clearing System.

- Law on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions,
 - Regulation on Operations of Payment and Securities Settlement Systems,
 - Communique on Information Systems Used in Payment and Securities Settlement Systems,
 - Regulation on Cheque Clearing Operations,
 - Banking Law No. 5411,
 - General Regulation on the Establishment and Operating Principles of Central Clearing and Settlement Institutions,
 - Istanbul Clearing, Settlement and Custody Bank Inc. Regulation on Central Clearing and Settlement.
- A. In addition, legal opinions, meetings, briefings, official written communication, and emails are also taken into consideration, and no issues of compliance have been detected. With

that said, if requested by the relevant team, the Internal Control and Compliance Unit can carry out a separate assessment of compliance with current regulations. Moreover, the Internal Control and Compliance Unit routinely follows regulatory changes pertaining to the operations of the Bank, and makes daily announcements to Bank personnel in terms of informing the staff of the effects the changes are expected to have. In addition to the announcement, if action needs to be taken, the unit that is affected by regulations is contacted directly and the issue is addressed in cooperation with them. Moreover, each change of procedures is submitted to the Internal Control and Compliance Unit before first and then necessary approvals are obtained, and finally the Board of Directors is also informed of the changes that have been made. The Internal Control and Compliance Unit sends an email to all Bank personnel to inform them of the regulatory changes sent to the approval of the Board of Directors on a monthly basis, and updates its regulation lists.

B. Details regarding the review of the Bank's rules, procedures, and contracts by external authorities or entities are provided below.

- Provisional Article 3 of Banking Law No. 5411 *stipulates that "All banks that have received operating permission from the Agency as of the effective date of this Law shall carry on with their activities in the areas they were legally operating pursuant to other laws before the effective date of this Law. Within two months following the effective date of this Law, banks shall submit to the Agency a letter of declaration indicating the fields they have been operating in. Agency permission shall be required for banks to extend their areas of activity under Article 4 of this Law."* In that regard, before the Cheque Clearing System began operations, the Bank applied to the Banking Regulation and Supervision Agency (BRSA) in writing on 11/05/2018, and the approval to conduct cheque clearing transactions was received from the Agency after its 28/06/2018 resolution no. 7863 published on the Official Gazette on 03/07/2018 no. 30467.
- Paragraph five of Article 9 titled "Operating Requirements of Chapter Two titled "Establishment and Operations of Central Clearing and Settlement Institutions" of the General Regulation on the Establishment and Principles of Central Clearing and Settlement Institutions states that "*CCSIs should notify the Board for engaging in activities outside the scope of Capital Markets Law.*" Similarly, the Bank informed the Capital Markets Board in writing on 11/05/2018, and the Board confirmed having been informed by the Bank with its written communique no. 6191 on 31/05/2018.
- As per the provision - "*The system operator is obliged to get the approval of the Bank in case it intends to establish a new system or plans to make structural changes in its current system after it obtained an operating license.*" - in paragraph 7 of Article 9 titled "Operating License" in the Regulation on Operations of Payment and Securities Settlement Systems enacted as part of the Law on Payment and Securities Settlement Systems, Payment Services and Electronic Money

Institutions; the Bank filed an application (no. 10152, dated 18/05/2018) to the CBRT for a license to operate the Cheque Clearing System. The CBRT granted the license and designated the Bank as system operator with a resolution (no. 10617/2016, dated 20/06/2018) published on the Official Gazette (no. 30463, dated 29/06/2018). During the application process, the Bank sent the System Rules governing the operating principles of the system and participant agreements to the CBRT, which approved the documents.

- Participant agreements that were approved were signed separately with each participant. The System Rules were announced to the participants via a General Letter and is published on the Bank's corporate website.

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

The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., were first approved by Takasbank Board of Directors, and then by the CBRT. There is no other authority from which approval was sought.

Key Consideration 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.

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

Arrangements specified in Laws and Regulations are published on the Official Gazette. The System Rules that entered into force as per these arrangements after being approved with a Takasbank Board of Directors resolution were delivered to participants via a General Letter sent to each participant separately, and are available at all times on the Bank's website (in Turkey and English).

Moreover, in the Customer Satisfaction survey held annually by the Bank, participants were asked whether the rules, agreements and procedures laid out with regard to the services they receive were sufficiently clear and easy to understand, and there were no negative responses.

Key Consideration 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

S.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 (for example, through legal opinions and analyses)?

The System Rules that govern the principles implemented in the Cheque Clearing System are approved by the Board of Directors, and then reviewed in great detail by the CBRT, which can demand the amendment of articles or rules that are not enforceable, and the final version of the document is approved by the CBRT. In addition, the Internal Control and Compliance Unit and the Bank's Legal Department both offer their opinion on the System Rules and Participant Agreements.

Moreover, rights and/or responsibilities are included in the agreements signed with each participants, and these rights and responsibilities are part of a contractual relationship that can be executed and legally challenged.

Takasbank offers Cheque Clearing Service only via banks operating in Turkey and in TRY. For that reason, Cheque Clearing Service is not directly subject to the laws of a jurisdiction.

Degree of certainty for rules and procedures

S.1.4.2: 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?

The provision on the transfer order being final and irrevocable is included in Article 10 of Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions (Law). As per Article 10 of the Law, transfer orders, clearing and settlement transactions and payment transactions cannot be revoked or canceled, even in the case of temporary or permanent stays on participant activities, or the launch of liquidation procedures by administrative and legal authorities.

On the other hand;

- As per Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions, the CBRT Head Office Payment Systems Department shall be authorized to suspend or revoke the operating license of the Bank should it conclude that any of the Bank's practices violate regulations or go against the operating principles of the system.
- Paragraph five of Article 9 titled "Operating Requirements of Chapter Two titled "Establishment and Operations of Central Clearing and Settlement Institutions" of the General Regulation on the Establishment and Principles of Central Clearing and Settlement Institutions states that "CCSIs should notify the Board for engaging in activities outside the scope of Capital Markets Law." The Capital Markets Board is entitled to ask Takasbank not to engage in such activities.

- As per Article 77 titled "Central Clearing Institutions" of the Capital Market Law No. 6362, the Capital Markets Board is the regulation, surveillance and supervision authority for central clearing institutions, and is authorized to take any measures it deems necessary.
- Provisional Article 3 of Banking Law No. 5411 stipulates that the BRSA's permission shall be required for banks to extend their areas of activity, and the BRSA is entitled to take any measures it deems necessary.

Before launching operations in its Cheque Clearing System, Takasbank

- Became a System Operator licensed by the CBRT,
- Received permission from the BRSA to extend its area of activity,
- And informed the Capital Markets Board of its operations, to which the Board responded affirmatively by confirming having received the information.

S.1.4.3: 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?

No, it hasn't.

Key Consideration 5: An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.

(The following question shall be answered by FMIs that deal with foreign jurisdictions.)

S.1.5.1: 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?

Within the framework of payment and securities settlement systems, the Bank has been assessed to have no engagement with foreign jurisdictions.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 1

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 2: Governance

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Key Consideration 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.

S.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? How does the FMI assess its performance in meeting its objectives?

Takasbank's strategic goals and plans for the future are determined by a Strategic Plan prepared for three-year periods and approved by the Board of Directors. Our goals have been encapsulated in Takasbank Strategic Plan under four main areas, including "robust financial structure", "market efficiency and consolidation", "operational and technological excellence", and "organizational effectiveness and group synergy enhancement". The Board of Directors routinely reviews the progress made in achieving the goals expressed in the Strategic Plan. To that end, a Strategic Plan Progress Report is prepared for year-ends and submitted to the Bank's Board of Directors. In addition, the financial model presented as an appendix to the Strategic Plan is updated every year with new balance sheet and income figures, as well as changes that took place in the macroeconomic indicators that the Plan is based on.

Key corporate performance indicators are determined based on the goals in the Bank's strategic plan and related initiatives, and the assessments made using these indicators allow the Bank to measure its ability to reach its goals. Key corporate performance indicators are measured annually and the results are shared with the Senior Management.

The main goals and initiatives contained in Takasbank's 2019-2021 Strategic Plan include the following: Under "robust financial structure", the Bank aims to protect the interests of its shareholders. Under "market efficiency and consolidation", it aims to contribute to the Country's economy and the development of the sector. Under "operational and technological excellence", it aims to ensure that our customers continue to receive quality and uninterrupted services. Under "organizational effectiveness and group synergy enhancement", it aims to improve the satisfaction and competence of our employees, while enhancing the synergy in Borsa Istanbul Group.

The 2019-2021 Strategic Plan document also includes global trends in clearing and custody services, assessments regarding the Turkish and world economy, information on Takasbank operational profile and financial performance, and a SWOT analysis.

S.2.1.2: 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?

The Bank has 81 initiatives listed under 10 core strategic goals. Many of these initiatives emphasize safety and effectiveness. Projects and other efforts regarding these initiatives are followed, monitored and reported to the Senior Management and Board of Directors on a regular basis. Similarly, "market efficiency and consolidation" and "operational and technological excellence" are goals that are designed to ensure financial stability and corporate sustainability. There are also several initiatives developed to this end. On the other hand, Takasbank prioritizes safety, systemic effectiveness, and business continuity over all else. The Bank's business processes have been designed to be compatible with ISO27001 information security and ISO22301 business continuity management systems certifications. These management systems are closely supervised by the Bank's Senior Management. In addition, Takasbank has created an Improvement and Demand Management Procedure in order to improve and further develop Bank services and processes. All improvement and development requests for Bank services are channeled to the demand management committee composed of IT Directors, along with a feasibility report if necessary. These demands for improvements and developments are sorted in order of priority and importance, and necessary enhancements are made to the Takasbank IT infrastructure.

Key Consideration 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

S.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?

In general terms, the regulations that the Board of Directors and other organs are the following: Turkish Commercial Code (TCC) No. 6102, Banking Law No. 5411, Capital Market Law No. 6362, Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions, Regulation on Operations of Payment and Securities Settlement Systems, Takasbank Audit Committee Directive, Takasbank Corporate Governance Principles Directive, and Istanbul Clearing, Settlement and Custody Bank Inc. Articles of Association prepared within the framework of the TCC and Banking Law. All channels of responsibility and accountability are detailed in the abovementioned regulations.

The activities carried out by the Board of Directors during the year are evaluated by the Bank's highest decision-making body, the General Assembly, where the Board of Directors is discharged. The operating principles and procedures of the Bank's Board of Directors have been specified in the Internal directive on the Istanbul Clearing, Settlement and Custody Bank Inc. Board of Directors. This directive is published on the Bank's internet page.

S.2.2.2: For central bank-operated systems, how do governance arrangements address any possible or perceived conflicts of interest?

As a Bank Takasbank is subject to the BRSA Regulation dated November 1, 2006 on Corporate Governance Principle. As a PS and SSS, Takasbank is subject to the provisions contained in Section Three titled "Operating License and the Persons Responsible for Administration of the System Operator" of the Regulation on Operations of Payment and Securities Settlement Systems. As a CCSI as per the Capital Market Law 6362, the Bank is subject by analogy to the corporate governance principles determined on the basis of Article 17 of the said Law. Moreover, Takasbank Corporate Governance Principles Directive was approved by the Board of Directors on 29/04/2013, and was updated and sent for the approval of the Board on 21/01/2019. This directive includes the corporate governance policy that allows the Bank to be governed in a transparent, accountable, responsible and equitable manner, the tasks and responsibilities of the Corporate Governance Committee created within the Board of Directors, the establishment of the Bank's relationship with its shareholder, stakeholders, regulatory and supervisory authorities, executives and employees in accordance with principles of honesty, reliability, impartiality, confidentiality, and equity, as well as the responsibilities of the Bank towards the environment and social life.

In addition, the Bank operates under the supervision of the CMB, BRSA, and CBRT. As per the operating principles of the Bank, participants and relevant stakeholders can file legal complaints against the Bank on the basis of the Banking Law, Capital Market Law, and the Commercial Code, as well as the Law on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions, provided that the rights of these participants and stakeholders are harmed in any way.

S.2.2.3: How does the FMI provide accountability to owners, participants and other relevant stakeholders?

The Bank's Articles of Association, and the Corporate Governance Principles Compliance Report contained in the Bank's Annual Report are published on the Bank's website and thus disclosed to the public.

In addition, the explanations made during General Assembly meetings and the minutiae of the said meetings are also published on the Takasbank website.

Moreover, the announcements that will be made to the public regarding the risk management evaluation included in the Bank's annual report and in the independent auditing report are also published on the website.

Key Consideration 3: The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of

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

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

The roles and responsibilities of the Board of Directors are clearly outlined in the Banking Law No. 5411, Capital Market Law No. 6362 and related regulations, and the Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions and related regulations.

It is the responsibility of the Board of Directors in accordance with the relevant legislation, to ensure the establishment, operational viability, appropriateness and adequacy of internal control, risk management and internal audit systems in the Bank, to secure the financial reporting systems and to determine the authorities and responsibilities within the Bank.

The Board of Directors; continuously and effectively evaluates the achievement of the Bank's targets, its activities and performance, monitors and controls the compliance of its activities with the relevant legislation, the Articles of Association, internal regulations and established policies.

Other principal duties, powers and responsibilities of the Board of Directors are:

- a) To manage the Bank in the direction of its purpose, to carry out legal proceedings on behalf of the Bank in all manners of business and activities related to the purpose and the subject of the Bank, to use the title of the Bank and to represent the Bank with respect to its shareholders, third parties, Public Authorities and Courts, to sign contracts on behalf of the Bank, to resort to conciliations when necessary, to apply for waivers and arbitration,
- b) To determine the principles and operating policy for the Bank's activities to be carried out efficiently and profitably,
- c) To determine the principles, terms and limits of the loans to be extended by the Bank, funds to be collected and services to be provided and the rates and amounts of interest and commission,
- ç) To determine the authority limits for secured and unsecured loans for the Credit Committee, the General Management, and branch management under the condition that these are in compliance with the provisions of the Banking Law,
- d) To make decisions on loans within its own authority and to approve decisions made by a majority at the Credit Committee,
- e) To request all kinds of information and documents related to the activities of the committees operating under the Board of Directors, to check every issue deemed necessary, and to continuously monitor the activities of the committees,
- f) To prepare the annual budget of the Bank, to provide reconciliation of accounts following each accounting period, to submit the balance sheet, profit and loss statement and annual report together with the dividend distribution proposal to the approval of the General Assembly, if required, to take the measures provided in the Turkish Commercial Code,

- g) To maintain financial records required by the Turkish Commercial Code, tax laws and the Banking Law and other financial records necessary for the Bank, to have them approved in accordance with the legislation when necessary, to organize the documents and to preserve them for the statutory period, to prepare other documents and financial reports required by legal authorities in accordance with the provisions of the legislation and submit them to the relevant authorities,
- ğ) To decide whether to purchase, lease, sell and submit as security any real-estate considered necessary for the Bank's business or to collect any receivables that it considers necessary for its business, to manage the Bank's capital market instruments,
- h) To approve and put into force the regulations on the Bank's credit, administration, organization and services,
- ı) To conclude the issues of conciliation, discharge and cancellation exceeding the limits of authority granted to the General Management,
- i) To determine the staff positions of the Bank, the principles regarding the salaries, bonuses, social benefits, and allowances of the employees, to set the rules on appointments, promotions, transfers and dismissals and binding these decisions to the responsible bank employees,
- j) To decide on opening, transferring, merging and closing of branches, agencies and offices, representative offices and correspondents and to determine their authorities, and the capital to be allocated to branches according to the provisions of the legislation on banks,
- k) To perform all the tasks and transactions ascribed to the Board of Directors by the Turkish Commercial Code and the Banking Law other than those entrusted to the General Assembly by the Articles of Association,
- l) To issue bank bonds in amounts and terms as deemed appropriate under the capital market legislation.

S.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?

The core components of the Bank's corporate governance policy are equality, transparency, accountability, and responsibility. The Bank's Corporate Governance Policy includes the following principles:

- Necessary measures are taken to ensure that the Bank's Senior Management and all levels of management carry out their roles in a manner that is effective, fair, transparent, accountable, and free of conflicts of interest. All levels of management are allowed to make decisions that comply with the responsibilities that they have undertaken in the Bank's administration. Board of Directors members are elected on the basis of being appointed as per the Bank's Articles of Association, and having the qualities that enable them to make objective and independent assessments about the Bank's operations. In addition, these members are screened for any conflicts of interest within the scope of corporate governance practices.

- The Bank does not discriminate between its shareholders and non-share-holding members when it comes to determining the fees and commissions in Banking operations. Relationships with shareholders and clients are carried out in a fair, transparent, and accountable manner.

The Board of Directors has established a Corporate Governance Committee made up of at least 2 members selected by the Board. This committee is responsible for monitoring the Bank's compliance with corporate governance principles, make improvements to cement this compliance, and submit recommendations to that end to the Board of Directors. The committee identifies the conflicts of interest resulting from a lack of full compliance with corporate governance principles, and ensures that necessary policies are instituted to manage these conflicts. In addition, the committee reviews complaints and demands regarding corporate governance practices, and presents to the Board of Directors its opinion and recommendations with regard to these complaints and demands.

These processes have been documented in the Corporate Governance Principles Directive, and relevant regulations have been announced to all Bank employees. Similarly, the Corporate Governance Principles Compliance Report contained in the annual report is also announced to the public.

The Bank has prepared Takasbank Conflicts of Interest Policy Directive, approved by the Board of Directors, which regulates the relationships of all Bank employees with clients, amongst themselves, and the shareholders. Moreover, the Board of Directors has also approved Takasbank Ethical Principles Directive and endorsed Takasbank Gifting Procedure. These internal measures have allowed the Bank to address the issue in a comprehensive manner. These procedures and directives are announced to all Bank employees, and in the event that they are modified, the most recent version is first sent to the BoD for approval, and then announced to the employees, therefore aiming to raise awareness on the matter.

S.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 these committees?

Information on committees operating under the Board of Directors is provided below:

Audit Committee

The Audit Committee is comprised of two members that are elected among non-executive members of the board to assist the Board of Directors in its audit and supervision tasks.

The powers and responsibilities of Audit Committee members:

- (1) The Audit Committee is tasked with and responsible for ensuring, on behalf of the Board of Directors, the effectiveness and sufficiency of the Bank's internal systems, monitoring the operations of the accounting and reporting systems within the framework of the Banking Law and relevant regulations, making the necessary preliminary assessments for the selection - by the Board of Directors - of independent auditing institutions, and organizations providing rating, valuation and support services, and periodically monitoring the operations of these institutions that have been selected by the Board of Directors and that have signed an agreement with the Bank.
- (2) As per the first paragraph, the Audit Committee;

- a) Checks whether the internal policy and procedures approved by the Board of Directors with regard to risk management are observed, and makes recommendations to the Board of Directors where necessary,
- b) Creates the channels of communication that will enable internal systems employees to contact the committee directly,
- c) Scrutinizes whether the internal audit system encompasses the current and planned operations of the Bank and the risks associated with these operations, reviews intrabank regulations and arrangements related to internal audit that shall enter into force with the approval of the Board of Directors,
- ç) Makes recommendations to the Board of Directors regarding the selection of internal systems unit managers, and expresses its opinion during the Board of Directors-led process of dismissing these managers,
- d) Receives and assesses the opinions and recommendations of the Senior Management with respect to internal systems,
- e) Ensures that the necessary channels of communication are established to allow staff to report, directly to the committee, to the Internal Audit Unit, or auditors, any irregularities at the Bank,
- f) Monitors whether the auditors perform their duties in an independent and impartial manner,
- g) Reviews internal audit plans,
- ğ) Makes recommendations to the Board of Directors with regard to the qualifications that should be sought in candidates to be employed in internal systems units,
- h) Monitors the measures taken by the Senior Management and the associated units regarding the issues identified in internal audit reports,
- ı) Evaluates the professional and educational background and adequacy of the managers and personnel working in internal systems units,
- i) Assesses whether the necessary methods, tools, and implementing procedures are in place to identify, measure, monitor, and control risks to the Bank,
- j) Holds meetings with auditors and the independent auditors of the independent auditing company that carries out an independent audit of the Bank, at regular intervals and no less than four times a year, on matters and agenda items that have been set beforehand,
- k) Informs the Board of Directors of the opinions of the Senior Management, employees working at the Risk Management, Internal Control and Compliance, and Internal Audit Units, and the independent auditing company representatives, with regard to the practices that are needed to ensure that tasks and obligations are carried out, and effectiveness is achieved and further developed,
- l) Reviews the independent auditing company's assessments regarding the compliance of the Bank's accounting practices with the Banking Law and other relevant regulations, and receives an explanation from the Senior Management about the inconsistencies that have been identified,

- m) Assesses, along with the Senior Management and independent auditors, the results of the independent audit, yearly and quarterly financial tables and related documents, and the independent audit report, and resolve other issues that have given a pause to the independent auditors,
- n) Evaluates the independence of the rating agencies that the Bank will sign an agreement with, as well as the independent auditing companies - including companies that audit IT systems - valuation institutions, and the Board of Directors Chairmen and members, auditors, managers, and employees of these organizations in their activities related to the Bank, and presents these evaluations in the form of a report to the Board of Directors, and repeats this process periodically for no less than once every three months (a year for the valuation institutions) as long as the agreements between them and the Bank continue to be enforced and the Bank receives services from them.
- o) Assesses the risks related to the support services that the Bank will procure, presents this assessment to the Board of Directors in the form of a report, and repeats this process periodically for no less than once a month provided that the Bank receives services from these firms and the agreements between the parties continue to be enforced, and monitors the adequacy of the services provided by support services institutions,
- ö) Monitors whether the financial reports of the Bank accurately represent all information that must be made public and are prepared in compliance with the Banking Law and other relevant regulations, and ensures that any errors or irregularities that have been identified are corrected,
- p) Holds meetings with independent auditors on whether the financial reports of the Bank accurately represent the Bank's financial status, the results of the operations and arrangements carried out, and the Bank's cash flows, and are prepared in compliance with the Banking Law and other relevant regulations,
- r) Reports to the Board of Directors the operations it carried out during a six-month period (without exceeding the length of this period) and the results of these operations, and expresses its opinion in the report regarding the measures that need to be taken at the Bank, as well as the practices that are needed and other issues that it deems important in terms of the Bank's ability to conduct its operations in a secure manner,
- s) Monitors whether employees authorized to extend lines of credit are involved in the evaluation or decision-making stages of any credit arrangements to which they, their spouses or children, or other real or legal persons that pose a risk are party, and creates channels of communication that make it possible for such issues to be reported to the committee,

Credit Committee

It comprises the full and reserve members and the Committee Chairman. These individuals are selected from among members of the Board of Directors.

Tasks and Responsibilities

The Board of Directors has the authority to extend a line of credit. The Board can delegate this authority to the Credit Committee or the Head Office in accordance with the principles specified in regulations and without exceeding certain limitations.

Regarding the credit limit offers that have been deemed appropriate by the Head Office, the offers that the Head Office is authorized to handle are approved by the General Manager, and the ones that the Credit Committee is authorized to handle are approved by the Credit Committee. The Head Office may alternatively submit such offers directly to the Board of Directors.

Corporate Governance Committee

The Board of Directors establishes a Corporate Governance Committee made up of at least 2 members selected by the Board. This committee is responsible for monitoring the Bank's compliance with corporate governance principles, make improvements to cement this compliance, and submit recommendations to that end to the Board of Directors. It is essential that the Committee Chairman is an independent BoD member, and the other member(s) is selected from among BoD members that have no operational duties.

The Committee monitors the Senior Management's conducting in governing the Bank in accordance with the stated goals, Laws, relevant and other regulations, articles of association, intrabank arrangements, and ethics principles related to banking that the Bank complies with, in a responsible, equitable, transparent, and accountable manner that protects the rights and interest of all stakeholders, shareholders and account owners.

Functions of the Corporate Governance Committee:

- a) Assists the Bank's Board of Directors in specifying the Bank's mission and vision, and ensures that the Bank's operations are carried out in keeping with this mission and vision.
- b) Assesses whether the importance and benefits of having good governance practices are shared by the Bank's Senior Management with employees, and whether an efficient and effective corporate governance culture has taken root at the Bank or not, and makes recommendations to the Board of Directors on this matter.
- c) Leads the way in establishing corporate values and ethics principles, and supports any efforts to that end.
- ç) Identifies the conflicts of interest resulting from a lack of full compliance with corporate governance principles, and ensures that necessary policies are instituted to manage these conflicts.
- d) Ensures that the necessary channels of communication are established to allow the Bank's employees to safely report actions or transactions that are in contravention to corporate values and ethics principles.
- e) Assesses the sufficiency of resources that shall be allocated to ensuring that the Bank's policies are implemented and compliance is achieved.
- f) Follows the processes of developing and updating standards, policies, instructions, and implementing procedures with respect to the Bank's operations and transactions.
- g) Makes recommendations to the Board of Directors with respect to the establishment of committees that are not required by law but may help in enhancing the effectiveness of the Bank's operations and supporting management.
- ğ) Evaluates social responsibility projects and presents the ones deemed appropriate to the Board of Directors.

- h) Reviews complaints and demands regarding corporate governance practices, and presents to the Board of Directors its opinion and recommendations with regard to these complaints and demands.
- ı) Prepares the Corporate Governance Compliance report and presents it to the Board of Directors.
- i) Taking the Bank's long-term goals into account, makes recommendations to the Board of Directors with respect to compensation principles, including bonus and benefits payments to Board of Directors members and executive managers.

Central Counterparty Risk Advisory Committee

The Committee comprises two independent members of the Board of Directors, two members to represent CCP members, and one member to represent the clients of CCP members.

Tasks and Responsibilities

As per the Capital Market Law, the committee presents its advisory opinion to the Board of Directors on issues regarding CCP arrangements and the management of CCP risks.

The following issues are discussed at the CCP Risk Advisory Committee:

- a) Important changes to be made in CCP membership types and criteria,
- b) Important changes to be made in the methods and models used in calculating initial and variation margins utilized in markets where CCP services are offered,
- c) Important changes to be made in guarantee fund accounts,
- d) Important changes to be made in collateral valuation methods or collateral compositions,
- e) Important changes to be made in assets accepted as collateral,
- f) Stress testing results and measures to be taken,
- g) Backtesting results and measures to be taken,
- h) Important changes to be made in the calculation and utilization of amounts allocated or committed from Takasbank capital towards CCP default management resources,
- i) Important changes to be made in the directives and procedures regarding CCP default management,
- j) The launch of CCP services in new market or capital market instruments,
- k) The use of insurance in CCP default management,

And similar issues. After discussing the abovementioned matters, the Committee also decides which ones to make recommendations about to the Board of Directors, and the content of the recommendations to be made.

Review of performance

S.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?

Key corporate performance indicators are determined based on the goals in the Bank's strategic plan and related initiatives, and the assessments made using these indicators allow the Bank to measure its ability to reach its goals. Realizations with respect to the strategic plan and related indicators are evaluated by the Board of Directors members on an annual basis.

The activities carried out by the Board of Directors during the year are evaluated by the Bank's highest decision-making body, the General Assembly, where the Board of Directors is discharged.

Key Consideration 4: The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles.

S.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?

The Bank's Board of Directors Members are selected and appointed to Takasbank Board of Directors within the framework of the competence and criteria defined in BRSA Regulations.

The activities carried out by the Board of Directors during the year are evaluated by the Bank's highest decision-making body, the General Assembly, where the Board of Directors is discharged.

S.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?

The Bank's Board of Directors provides the following incentives and services to its Members in accordance with the Bank's Articles of Association.

The General Assembly determines each year the financial benefits - such as attendance fees, wages, and premiums - as well as other benefits in kind and in cash, shares in yearly profit and other bonuses that will be given to the Board of Directors Chairman and Members. The Board of Directors, on the other hand, determines the travel, accommodation and representation expenses, as well as insurance and similar guarantees. The Board of Directors Chairman and Members, as well as their spouses, children and dependents are provided with the same health care benefits as the personnel.

Key Consideration 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

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

The roles and responsibilities of management are clearly specified with reference to regulations set forth by the BRSA, CMB, CBRT (relating to PSs and SSSs), and the Bank's internal regulations.

Similarly, roles and responsibilities are clearly defined job descriptions based on teams/departments and titles. Job descriptions of teams are included in the Bank's Organization and Task Directive, and the job descriptions defined on the basis of titles are included in the Bank's Document Management System.

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

The roles and responsibilities of management are set with reference to regulations set forth by the BRSA, CMB, CBRT (relating to PSs and SSSs), and the Bank's internal regulations. Similarly, roles and responsibilities are clearly defined job descriptions based on teams/departments and titles.

At the same time, goals are set on an annual basis within the framework of the Strategic Plan and Corporate Performance Management process, and these goals are measured periodically, and the findings are presented to the Senior Management in the form of a strategic plan progress report.

Experience, talent, and honesty

S.2.5.3: 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?

Managers have experience, talent, and honesty, as defined in regulations. The talents that the Bank looks for in candidates are defined separately for each title in the Bank's Personnel Directive and the respective Directives of Internal System Units. Performance assessments and appointments are made on the basis of role and task descriptions.

S.2.5.4: What is the process to remove management if necessary?

The process of dismissing managers is operated as per resolutions by the Board of Directors and the Audit Committee, and in accordance with the articles of Takasbank Personnel Directive that are related to voluntary resignation, retirement, disability and death, cancellation of the position, dismissal as a result of disciplinary action, and re-employment. The process of dismissing Internal System Unit Managers is operated as per resolutions by the Audit Committee and the Board of Directors.

In addition, regulatory and supervisory institutions are informed and their approval is sought when members of Senior Management (Board of Directors, President, Vice President, and Internal System Unit Managers) begin their tenure or are dismissed. With respect to how such a process is operated, a written document titled Takasbank Senior Management Appointment Guide has been created, and the legal process has been instituted step-by-step.

Key Consideration 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 risk management and internal control functions have sufficient authority, independence, resources, and access to the board.

Risk management framework

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

The Bank's risk management framework has been created based on the banking regulations, good practices, regulations on PSs and SSSs, and capital markets regulations that the Bank is subject to. Approved by the Board of Directors/CEO, the following documents form the basis of the Bank's risk management framework:

- Takasbank Risk Management Directive, Takasbank Operational Risk Management Procedure,
- Takasbank Internal Capital Adequacy Assessment Process Directive, and Takasbank Stress Testing Program Policy and Implementing Principles Procedure,
- Takasbank Business Continuity Directive, Takasbank Business Continuity Procedure, Takasbank Business Continuity Plan and Emergency Action Plan, Service Restoration Plans, Emergency Operations and Data Centers Transition Plan, Communication Plan,
- Takasbank Recovery Plan and Takasbank Orderly Wind-Down Plan,
- Directive on the General Principles of Credit Rating and Assessment Systems, and within the scope of this directive, the Procedures on the General Principles of Credit Rating and Assessment prepared separately for each intermediary firm and financial institution.

S.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?

The Bank's general risk management policy is predicated on the principle of conducting Banking operations with a manageable, controllable level of risk that is in keeping with the income-expenses balance.

The Bank's risk capacity is set in accordance with the capital adequacy policy. In that regard, the Bank's risk capacity is equal to the maximum amount of risk that will not exceed the legal capital limits that the Bank must comply with in order to continue all its operations.

The Bank's risk appetite is represented by the level of risk that the Bank wants to undertake - collectively or in a particular risk type - relative to its risk capacity in order to achieve its goals and strategies. The Board of Directors has determined as "low" the Bank's general risk appetite, as well as its appetite for market risk, liquidity risk, and interest rate risk due to banking accounts. The Board of Directors has assessed the Bank's appetite for credit risk and operational risk as "high".

The Bank has determined risk limits and early-warning signal values in terms of general risk and important risk types in order to ensure that the current risk profile is kept under control, and the general and other types of risk appetite approved by the Board of Directors are observed. Considering the Bank's risk capacity, operations, as well as the scope and complexity of its products and services, risk limits and signal values have been set for liquidity risk, interest rate risk due to banking accounts, market risk, credit risk, and operational risk. The development of these limits

and signal values is monitored periodically by the Risk Management Unit, and reported to the Bank's Senior Management.

Istanbul Clearing, Settlement and Custody Bank Inc. Recovery Plan, prepared in line with the Regulation on Operations of Payment and Securities Settlement Systems and approved by the Bank's Board of Directors, includes actions that can be taken during crises and in times of emergency. There is also Istanbul Clearing, Settlement and Custody Bank Inc. Orderly Wind-Down Plan, which contains actions that should be taken if the scenarios outlined in the plan come true.

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

The Risk Management Unit is responsible for designing and operating the risk management system, and contributing to the processes of designing, selecting, implementing and pre-approving the risk measurement models used in the Unit's operations. The Unit also regularly monitors these models and makes the necessary changes.

The Board of Directors and the Senior Management assess the underlying assumptions and limitations regarding the model in use, while also evaluating the fundamental assumptions in risk measurement, and the adequacy and appropriateness of data sources and implementation principles.

The Audit Committee checks whether the internal policy and procedures approved by the Board of Directors with regard to risk management are observed, and makes recommendations to the Board of Directors where necessary.

The Board of Directors determines the general and various types of risk appetite, as well as risk limits and signal values. In addition, the Board approves the policies and implementing procedures with respect to risk management, and ensures that these are effectively implemented.

Authority and independence of risk management and audit functions

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

The core tasks and responsibilities of the Risk Management Unit have been determined as the following, as per Takasbank Risk Management Directive approved by the Board of Directors:

- Designing and operating the risk management system.
- Contributing to the processes of designing, selecting, implementing and pre-approving the risk measurement models used in the operations of the Risk Management Unit, as well as regularly monitoring these models and making the necessary changes.
- Creating regular reports using risk measurement models utilized by the Risk Management Unit, and analyzing the said reports.

- Monitoring the development of the Bank's risk appetite, risk limits, and signal values specified by the Risk Management Unit and approved by the Board of Directors.
- Ensuring that the results of the risk measurement and risk monitoring activities carried out by the Risk Management Unit are presented to the Senior Management in the form of regular and timely reports.
- Coordinating the implementation of the internal capital adequacy assessment process (ICAAP) within the Bank, and the preparation of the ICAAP report.

The reports written by the Risk Management Unit are periodically presented to the Board of Directors, and - via the Senior Management - to the units responsible for risk creation and monitoring.

The Bank's Internal Control and Compliance Unit has been structured to act independently and in keeping with the Regulation on Banks' Internal Systems and Internal Capital Adequacy Assessment Process. The unit is linked to the Board of Directors via the Audit Committee. The legal framework for monitoring compliance and other efforts for internal control is established with regulations published by the Capital Markets Board (CMB), Central Bank of the Republic of Turkey (CBRT), and Banking Regulation and Supervision Agency (BRSA), as well as the Bank's internal regulations.

The following are the tasks and responsibilities of the Internal Control and Compliance Unit:

- It constantly monitors and controls the compliance of banking operations with principles and standards set by regulatory bodies, regulations on banking, capital markets and payment systems, and the internal regulations and general policies approved by the Board of Directors. The unit also drafts reports representing the results of its monitoring and control activities.
- It establishes the policies and implementing procedures with regard to internal control and compliance, and designs and reviews the Bank's internal control system.
- It prepares internal control lists for Business and Information Technology process, and revises them annually. It carries out internal control activities in keeping with these lists, and pursues the points that have been raised as a result.
- It carries out the internal validation of the risk measurement methodology used by the Bank as part of the internal capital adequacy assessment process.
- It follows the national and international regulations with regard to money laundering and terrorist financing, and carries out correspondence and takes necessary measures related to asset freezes, demands for the postponement of transactions, dubious transactions, and any requests by legal authorities for information and documents.
- It reviews sanctions lists by OFAC, the UN, Great Britain, European Union, and FATF, and carries out research in the Bank to make necessary changes and take precautions.
- It fills out the Anti-Money Laundering (AML) surveys requested from the Bank, in accordance with the Bank's regulations and working principles.
- It announces to the Bank personnel the changes that have taken place in the regulations that the Bank is subject to, and monitors any actions that must be taken in cases of important changes that might have an impact on the Bank.

- It ensures that Bank employees participate in two training programs: MASAK - the Fight Against Money Laundering and Terrorist Financing, and the PDPL - the Personal Data Protection Law (along with the Legal Department).
- It prepares and keeps up to date a document listing the legal requirements related to business continuity and IT, and makes announcements to relevant units in order for them to take appropriate action.
- It advises units about the regulatory aspects of their area of operations, informs them of the deficiencies of the internal regulations of individual units, and makes observations and recommendations with regard to improving existing regulations.
- It prepares obligatory regulations such as Ethical Principles Policy and Conflicts of Interest Policy, and informs Bank employees about them.
- It validates the model for TFRS 9 expected credit loss provisioning.
- It cooperates with the Internal Audit Unit annually to carry out work on the corporate governance declaration.
- It evaluates the Bank's compliance with relevant regulations with regard to new products, transactions, and planned activities.
- It carries out work to determine the control environment as part of efforts to conduct a yearly review of the Operational Risk Database.
- It monitors the actions that need to be taken with respect to the risks whose net risk level is equal to or more than operational risk appetite.
- It offers its opinion on whether a service can be considered a support service or not.
- It checks procedure changes against the provisions of relevant directives/laws/regulations, and provides feedback as to the compliance of the new procedures.
- It makes monthly announcements to Bank employees to raise awareness about the regulations submitted to the Board of Directors for information or approval, as well as the Bank's existing regulation lists.

The Bank's Internal Audit Unit comprises a sufficient number of senior auditors, auditors, and deputy auditors, led by the Internal Audit Unit Director. The Unit operates under the auspices of the Board of Directors and via the Audit Committee that has been appointed by the Board as an internal systems committee made up of Board members. Auditors carry out reviews and audits in accordance with the instructions they receive from the Internal Audit Unit Director.

The Internal Audit Unit reviews the Bank's operations periodically and based on risks, and works to uncover errors and malfeasance, in order to reassure the Senior Management that the Bank's operations are conducted in compliance with Laws, regulations and the Bank's internal regulations and goals, and that internal control and risk management systems are effective and sufficient. The legal framework for the abovementioned efforts is established with regulations published by the Capital Markets Board (CMB), Central Bank of the Republic of Turkey (CBRT), and Banking Regulation and Supervision Agency (BRSA), as well as the Bank's internal regulations.

The Internal Audit Unit, which has been structured to act independently in accordance with the provisions of the Regulation on the Banks' Internal Systems and Internal Capital Adequacy Assessment Process - while operating under the Board of Directors via the Audit Committee - carries out its auditing activities in keeping with the annual internal audit plan created on the basis of the risk assessments made within the framework of the provisions of the Regulation on the

Banks' Internal Systems and Internal Capital Adequacy Assessment Process and enforced with the approval of the Board of Directors. The internal audit activities aim to ensure that accounting records and financial reports are coherent, accurate and reliable. To this end, the activities include the following: verifying the accuracy of records representing the Bank's assets listed in financial tables; assisting in the discovery of malfeasance; reviewing financial accounts, records, and documents; identifying the risks and control points in business processes and testing the effectiveness of controls; and conducting control tests for information systems and processes that contain financial and administrative data.

In addition, the Internal Audit Unit also carries out the following activities: reviewing whether the data used in the ICAAP Report created by the Risk Management Unit is accurate, and the relevant systems and processes are sufficient, and the abovementioned data, systems, and processes allow for proper information and analysis; examining the validation process carried out by the Internal Control and Compliance Unit; offering consulting services related to the new products and services the Bank plans to offer, or the policies and implementing procedures; conducting on-site audits at CCP members in order to check the sustainability of the internal control, risk management, and internal audit mechanisms that are required for CCP membership, as per Istanbul Clearing, Settlement, and Custody Bank Inc. Central Counterparty Regulation.

As per the Bank's Governance Declaration, the Internal Control and Compliance Unit and the Internal Audit Unit cooperate on efforts to ensure the effectiveness, adequacy and compliance of controls established with respect to banking processes. Controls regarding information systems - regardless of the framework, standards or methodology used in their establishment - are carried out by the Internal Audit Unit as per COBIT 4.1, in consideration of the provisions of regulations published by the BRSA, CMB, and the CBRT. The abovementioned Information Technology audit comprises the IT audit carried out by the Internal Audit Unit, and the "IT Systems Processes audit" portion of the Governance Declaration. The Banking Processes Audit report and the IT Management Processes internal audit reports, which are prepared by the Internal Audit Unit, are presented to the Board of Directors via the Audit Committee.

The Banking Processes and IT Controls Report prepared by the Internal Control and Compliance Unit is presented to the Board of Directors, and communicated to the independent auditing company that audits the Bank's IT systems and banking processes.

S.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?

The Internal Control and Compliance Unit annually carries out the internal validation of the risk measurement methodology based on the economic and/or legal capital adequacy model used by the Bank as per the internal capital adequacy assessment process (ICAAP), and the related Validation Report is presented to the Board of Directors as an appendix to the ICAAP Report, and subsequently sent to the BRSA. The "Review Report", which deals with whether the data used in the ICAAP Report created by the Risk Management Unit is accurate, and the relevant systems and processes are sufficient, and the abovementioned data, systems, and processes allow for proper

information and analysis, is also presented to the Board of Directors as an appendix to the ICAAP Report, and subsequently sent to the BRSA.

Key Consideration 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

S.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?

The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., in which the rules and principles with respect to how the system works, are first approved by Takasbank Board of Directors, and then by the CBRT. In that regard, the interests of the stakeholders are also taking into account by the audit authority. In addition, in order to ensure transparency in the services that Takasbank provides, the system rules and the fees and commissions the Bank receives in exchange for the services it offers are explained to the participant and the public, announced via general letters and published on the Takasbank website.

The Bank has prepared Takasbank Conflicts of Interest Policy Directive, approved by the Board of Directors, which regulates the relationships of all Bank employees with clients, amongst themselves, and the shareholders. Moreover, the Board of Directors has also approved Takasbank Ethical Principles Directive and endorsed Takasbank Gifting Procedure. These internal measures have allowed the Bank to address the issue in a comprehensive manner. These procedures and directives are announced to all Bank employees, and in the event that they are modified, the most recent version is first sent to the BoD for approval, and then announced to the employees, therefore aiming to raise awareness on the matter. Relevant directives are also published on the Bank's website.

Moreover, the customer satisfaction surveys implemented every year cement the Bank's service approach based on continuous improvement by ensuring that the impact that the services have on the other party are measured and necessary improvements are made.

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

The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., in which the rules and principles with respect to how the system works, are first approved by Takasbank Board of Directors, and then by the CBRT. In that regard, the interests of the stakeholders are also taking into account by the audit authority. In addition, in order to ensure transparency in the services that Takasbank provides, the system rules

and the fees and commissions the Bank receives in exchange for the services it offers are explained to the participant and the public, announced via general letters and published on the Takasbank website.

Meetings are held by Takasbank - and with participants upon their request - in order to make sure that the system rules meet the needs of the participants in an effective manner. Moreover, the customer satisfaction surveys implemented every year cement the Bank's service approach based on continuous improvement by ensuring that the impact that the services have on the other party is measured and necessary improvements are made.

The Bank has prepared Takasbank Conflicts of Interest Policy Directive, approved by the Board of Directors, which regulates the relationships of all Bank employees with clients, amongst themselves, and the shareholders. Moreover, the Board of Directors has also approved Takasbank Ethical Principles Directive and endorsed Takasbank Gifting Procedure. These internal measures have allowed the Bank to address the issue in a comprehensive manner. These procedures and directives are announced to all Bank employees, and in the event that they are modified, the most recent version is first sent to the BoD for approval, and then announced to the employees, therefore aiming to raise awareness on the matter. Relevant directives are also published on the Bank's website.

Moreover, Takasbank Corporate Governance Principles Directive includes the corporate governance policy that allows the Bank to be governed in a transparent, accountable, responsible and equitable manner, the tasks and responsibilities of the Corporate Governance Committee created within the Board of Directors, the establishment of the Bank's relationship with its shareholder, stakeholders, regulatory and supervisory authorities, executives and employees in accordance with principles of honesty, reliability, impartiality, confidentiality, and equity, as well as the responsibilities of the Bank towards the environment and social life.

According to the Corporate Governance Policy created as part of this Directive;

- 1) Necessary measures are taken to ensure that the Bank's Senior Management and all levels of management carry out their roles in a manner that is effective, fair, transparent, accountable, and free of conflicts of interest. All levels of management are allowed to make decisions that comply with the responsibilities that they have undertaken in the Bank's administration. Board of Directors members are elected on the basis of being appointed as per the Bank's Articles of Association, and having the qualities that enable them to make objective and independent assessments about the Bank's operations. In addition, these members are screened for any conflicts of interest within the scope of corporate governance practices.
- 2) The Bank does not discriminate between its shareholders and non-share-holding members when it comes to determining the fees and commissions in banking operations. Relationships with shareholders and clients are carried out in a fair, transparent, and accountable manner.

The Board of Directors has established a Corporate Governance Committee made up of at least 2 members selected by the Board. This committee is responsible for monitoring the Bank's compliance with corporate governance principles, make improvements to cement this compliance,

and submit recommendations to that end to the Board of Directors. It is essential that the Committee Chairman is an independent BoD member, and the other member(s) is selected from among BoD members that have no operational duties. The committee identifies the conflicts of interest resulting from a lack of full compliance with corporate governance principles, and ensures that necessary policies are instituted to manage these conflicts. The committee follows the processes of developing and updating standards, policies, instructions, and implementing procedures with respect to the Bank's operations and transactions. In addition, the committee reviews complaints and demands regarding corporate governance practices, and presents to the Board of Directors its opinion and recommendations with regard to these complaints and demands.

These processes have been documented in the Corporate Governance Principles Directive, and relevant regulations have been announced to all Bank employees and are available at all times. Similarly, the Corporate Governance Principles Compliance Report contained in the annual report is also announced to the public.

S.2.7.3: To what extent does the FMI disclose major decisions made by the board to relevant stakeholders and, where appropriate, the public?

In addition, in order to ensure transparency in the services that Takasbank provides, the system rules and the fees and commissions the Bank receives in exchange for the services it offers are explained to the participant and the public, announced via general letters and published on the Takasbank website.

When making any data public, the Bank seeks to ensure that trade secrets are well protected, as per the BRSA, CMB, and CBRT regulations that the Bank is subject to.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 2

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Key Consideration 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

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

Pillar 1 and Pillar 2 risks, defined in banking regulations, constitute the risks that the Bank is exposed to. Pillar 1 risks that the Bank is exposed to are credit risk, market risk, and operational risk, while Pillar 2 risks are liquidity risk, interest rate risk arising out of banking accounts, and central counterparty general business risk.

Due to the nature of the Bank's structure and operations, business continuity risks are considered particularly significant as any disruptions to the services that the Bank provides can impact all capital markets. Business continuity risks are categorized under operational risk.

The highest authority responsible for the establishment of an effective risk management function at Takasbank, and the monitoring and audit of the efficacy of this function is the Board of Directors. The measures taken by the Board of Directors and listed above (in response to question 2.6) provide a comprehensive, coherent, and robust risk management framework to define, measure, monitor, and manage risks. Takasbank's risk management framework is reviewed once a year at a minimum and constantly kept up to date. The effectiveness of the risk management policies, procedures, and systems is kept under surveillance by the Board of Directors using the internal control and internal audit functions.

Risk management policies, procedures, and systems

S.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?

The Bank has created a set of principles regarding the identification, measurement, monitoring, and management of risks, as per Takasbank Risk Management Directive approved by the Board of Directors. Similarly, the Bank has formed a related set of principles regarding the identification, measurement, monitoring, and management of operational risk, as per Takasbank Operational Risk Management Procedure.

The principles with regard to the internal capital adequacy assessment process, the capital adequacy policy, the liquidity and funding policy, and any reports related to these policies are included in Takasbank Internal Capital Adequacy Assessment Process Directive. Similarly, the principles, assumptions, and practices regarding the stress tests applied by the Bank are included in Takasbank Stress Testing Program Policy and Implementing Principles Procedure.

The framework policy for the identification and implementation of strategies related to Business Continuity Management System is Takasbank Business Continuity Directive. In addition, the Bank also has in place a Business Continuity Directive, Business Continuity Procedure, Business Continuity Plan, Emergency Action Plan, Service Restoration Plans, Emergency Operations and Data Centers Transition Plan, and Communication Plan, as well as Takasbank Recovery Plan and Takasbank Orderly Wind-Down Plan.

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

Risks that are defined by each unit of the Bank as process and subprocess-based risks are monitored in the Operational Risk Database, as per Takasbank Operational Risk Management Procedure. In the Operational Risk Database updated at least once a year, sub-process risks and controls instituted with respect to these risks can be defined in an open platform that is available to the Bank personnel at all times by process owners and/or risk and control supervisors, after holding meetings with all Bank units coordinated by the Risk Management Unit, and the Internal Control and Compliance Unit, based on the Bank's Service Manual. The records related to the abovementioned database are also fed as input to the internal audit and control efforts, as well as the Governance Declaration document. Actions that need to be taken with respect to the risks whose net risk level is equal to or more than operational risk appetite, and key risk indicators are monitored by the Internal Control and Compliance Unit, and these risks are reported to the Senior Management and it is ensured that necessary action is taken.

S.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?

As per Takasbank Operational Risk Management Procedure, process and subprocess-based risks of the Bank are monitored in the Operational Risk Database, while losses incurred are gathered in the Operational Risk Loss Database. Looking at the abovementioned databases, we see that there has not been any loss in the Cheque Clearing System, and there are no records of any risks that are equal to or more than operational risk appetite. Moreover, participants take part in emergency drills held annually.

Review of risk management policies, procedures, and systems

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

Risk management policy and procedures are prepared by the Risk Management Unit and presented to the Audit Committee, which then endorses them and submits them to the Board of Directors for approval. Policies and procedures approved by the Board of Directors are transferred to a platform (system) that is accessible to all Bank employees, and announced to the personnel via email.

The Board of Directors is responsible for instituting a system necessary for the evaluation of risks to the Bank, developing a system that will associate Bank risks with its capital levels, and determining the necessary methods for monitoring internal policy compliance.

It is incumbent upon the Audit Committee to assess whether the necessary methods, tools, and implementing procedures are in place to identify, measure, monitor, and control risks to the Bank.

In operational risk management, a triple defense line approach is employed, consisting of activity line management, central risk management function, and independent review.

- In activity line management, operational risks arising from the products and services offered and the processes, human resources and systems used are identified and the Senior Management is informed, ensuring that appropriate action is taken.
- The central risk management function is ensured by instituting risk and control systems inside the Bank, segregating the roles and responsibilities, and having the Risk Management Unit and the Internal Control and Compliance Unit to review the Bank's processes and functions, in addition to the review of the operational units that carry out these processes and functions.
- The independent audit process, on the other hand, consists of evaluating the risk management and internal control framework in all its aspects, and this function is executed by the Internal Audit Unit.

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

It is essential that policies, procedures, and systems are compliant with regulations and up to date. Efforts to keep intrabank regulations, job descriptions and business flows updated are carried out by all units at the Bank, through the coordination of the Internal Control and Compliance Unit.

The Board of Directors; continuously and effectively evaluates the achievement of the Bank's targets, its activities and performance, monitors and controls the compliance of its activities with the relevant legislation, the Articles of Association, internal regulations and established policies.

The Audit Committee is responsible for ensuring the effectiveness and adequacy of the Bank's internal control, risk management, and internal audit systems on behalf of the Board of Directors.

The Internal Control and Compliance Unit and the Internal Audit Unit cooperate on efforts to ensure the effectiveness of risk management policies, procedures, and systems through their routine controls and audits. In addition, these issues are also audited by independent auditors, external

auditors focusing on business continuity and information security, as well as regulatory and supervisory authorities.

S.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?

Risk management policies, procedures, and systems are reviewed at least once a year and as many times as deemed necessary (due, for instance, to changing market conditions or financial disruptions).

Takasbank's risk management framework is reviewed once a year at a minimum and constantly kept up to date. The effectiveness of the risk management policies, procedures, and systems is kept under surveillance by the Board of Directors using the internal control and internal audit functions.

Key Consideration 2: An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.

S.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?

Takasbank does not offer any central counterparty services in the Cheque Clearing System. However, there is a guarantee mechanism in the Cheque Clearing System designed to intervene in cases of participant default, and participants are able to follow, via Takasbank screens, the guarantee mechanism contribution call amounts, the valuated versions of the collateral they deposited, and their collateral obligations in the case of a margin call.

The principles regarding this matter are explained in detail in Chapter Four titled "Principles Regarding Collateral and Guarantee Mechanism Contribution" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc.

S.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?

Takasbank does not offer any central counterparty services in the Cheque Clearing System. The participants of the Cheque Clearing System are banks, and Takasbank cannot be held liable towards the clients of these banks. There is a guarantee mechanism in the Cheque Clearing System designed to intervene in cases of participant default, and participants are able to follow, via Takasbank screens, the guarantee mechanism contribution call amounts, the valuated versions of the collateral they deposited, and their collateral obligations in the case of a margin call.

The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules, which contain details regarding this matter, are announced to participants via general letters, and the document is accessible on the Bank's website.

S.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?

Takasbank does not offer any central counterparty services in the Cheque Clearing System. However, there is a guarantee mechanism in the Cheque Clearing System designed to intervene in cases of participant default, and participants are able to follow, via Takasbank screens, the guarantee mechanism contribution call amounts, the valuated versions of the collateral they deposited, and their collateral obligations in the case of a margin call.

The principles regarding this matter are explained in detail in Chapter Four titled "Principles Regarding Collateral and Guarantee Mechanism Contribution" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc.

The System Rules are announced to participants via general letters, and the document is accessible on the Bank's website.

Key Consideration 3: An FMI should periodically 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

S.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? What material risks has the FMI identified?

The CBRT's EFT system is used in completing settlements within the scope of cheque clearing services. Takasbank has been designated by the CBRT as a critical participant. If for any reason the EFT system fails to function, settlements must still be completed. Within this framework, on account of being a critical participant and with the goal of ensuring the continuity of the services we offer, Takasbank participates in the CBRT Payment Systems Business Continuity tests held by the CBRT every year. These tests, within the framework of a number of planned scenarios, handle the issue of how payments and transfers are to be made in the hypothetical case where the EFT system fails.

Takasbank

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

In the event that support services provided to the Bank are disrupted, the Bank is able to maintain its services over secondary systems thanks to the fact that there are back-up lines established between Borsa Istanbul Data Center and the Emergency Data Center located in Ankara. In addition, disruptions to foreign services are monitored, and submitted to the Board of Directors via the Audit Committee in the form of the Risk Assessment Report related to IT Technologies, which is prepared biannually. Moreover, these Risk Assessment Reports related to IT Technologies are sent to the CBRT, along with Takasbank sustainability-reliability report and penetration testing report.

Risks are monitored via the Operational Risk Database and the Operational Risk Loss Database, and there are no records of any risks originating from the CBRT listed in the Operational Risk Loss Database.

As per the "Guidelines on the Bank's Procurement of Support Services" published by the BRSA, an annual risk management program is created, and the Risk Analysis Report prepared by the Risk Management Unit regarding support services providers, along with the technical adequacy report published by the relevant unit that receives the said services, are reported to the Board of Directors at least once a year as an appendix to the assessment report of the Audit Committee. Similarly, the Bank determined levels of criticality for service providers, and designates the important ones.

Risk management tools

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

The risks that the Bank is/might be exposed to are covered for the most part with the insurance policies being purchased. In this context, the following insurance policies have been purchased: electronic equipment and machinery breakdown, fire and theft, employers' financial liability, personal accident, third party financial liability, auto, and traffic. Moreover, there are also the Common Professional Liability Policy and Executive Liability Policy that covers the Bank alongside Borsa Istanbul and the CRA.

In addition, through the "Comprehensive Insurance Policy for Financial Institutions" jointly purchased by the Bank, Borsa Istanbul, and the CRA, the theft risks that may occur due to an asset lost including transport and erroneous transfer, breach of confidence, damage risk to the office and contents, threats of cyber-attack and physical attack to people and assets, forgery, counterfeit document and counterfeit money risks, computer and telephone crimes and data protection risks are taken under coverage.

With that said, the Bank also asks companies to have liability insurance in order to compensate potential damages that might result from the risks that the Bank may be exposed to due to the services procured from support services providers.

S.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?

The insurance policies that have been purchased are renewed every year, and the general process related to insurance policies is reviewed annually with respect to all services, including Bank operations that must be included in insurance coverage as a result of the Bank's new products or services.

Key Consideration 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.

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

S.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?

Disruption scenarios in the Bank's business continuity management system (BCMS) are determined after all parties assess potential cases in which the resources (assets) that are critical for providing services have been rendered useless or inaccessible. Resources at the Bank have been grouped into 6 categories:

- Financial Assets (Money),
- Human Resources,
- Facilities (workplaces and hardware),
- Technology (applications, infrastructures, and all other relevant IT assets),
- Providers (Türk Telekom etc.) and
- External organizations that we depend on for our services

Cases in which each resource might be temporarily or permanently disabled are analyzed both by service managers as part of the Operational Risk Database reviews, and by the BCMS Team from a business continuity perspective, and as a result of this analysis, risks are defined and reviewed on an annual basis. Occupational health and safety risks are incorporated into the risks of the Human Resources and Support Services Unit and thus covered by insurance. The BCMS Team further enhances business continuity risks by assessing all stakeholders outside the Bank (neighbors, partners, regulators, legal authorities, employees and their families, provider supplier groups etc.) through the analyses it carries out.

There are a total of 23 different business continuity disruption scenarios at Takasbank:

- Unserviceability of the Bank's premises (exposure to earthquake or earthquake risk, acts of terrorism in front of the Bank, lack of access to the Bank due to natural disasters, fire, flooding or other situations that endanger employee safety, power outages due to sources of power rendered dysfunctional)

- Malfunction of systems and backups at the Primary Data Center (PDC) (exposure to earthquake, fire, flooding, power outage)
- Configuration/hardware/software issues with firewall, spine switch, load balancer, virtualization systems and the backups of these components at the PDC
- Malfunction of primary and backup virtualization systems at the PDC
- Configuration/hardware/software issues with banking database servers
- Loss of data integrity at the banking database (violation of information security, human/process/application error)
- Configuration/hardware/software issues with application and/or web and/or queue servers and their backups
- Lack of access by participants or other stakeholders and lack of internet connectivity from within the system due to configuration/hardware/software issues with internet and local routers and their backups
- Issues with Borsa Istanbul PDC extranet lines and their PDC backups
- Configuration/hardware/software issues with CRA messaging queue servers
- Configuration/hardware/software issues with BISTECH application and/or queue servers
- Configuration/hardware/software issues with EFT GW application and/or queue servers
- Configuration/hardware/software issues with SWIFT Backoffice and SWIFT application and/or queue servers
- Loss of data integrity at the SWIFT database servers (violation of information security, human/process error)
- Issues with BISTECH primary and backup hardware
- Corruption/deletion of one or more of the objects (.exe files, stored procedures, tables etc.) that are necessary for the proper functioning of applications
- Issues with the messaging interface that facilitates data transfer between the Bank and the CBRT
- Issues with web service messaging or lines of communication between the Bank and Turkish Energy Exchange (EPIAS)
- Issues with Borsa Istanbul TSMR application or lines of communication
- Service provider-related issues with SWIFT communications
- Simultaneous hardware issues with the primary and backup domain servers
- Issues with operating system (Linux, Windows) configuration and/or software
- Lack of internet access inside or outside the Bank resulting from internet service providers

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

Disruption scenarios listed in the *Q.3.4.1* segment have been analyzed and designated so as to include all risks defined in the Operational Risk Database, and the scenarios encompass independent and relevant risks that the FMI is exposed to.

Recovery or orderly wind-down plans

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

Istanbul Clearing, Settlement and Custody Bank Inc. prepares a Recovery Plan that is approved by the Bank's Board of Directors, as per Article 11, paragraph 1, subparagraph (i) of the Regulation on Operations of Payment and Securities Settlement Systems.

There is also Istanbul Clearing, Settlement and Custody Bank Inc. Orderly Wind-Down Plan, which was prepared and approved by the Board of Directors in September 2019.

S.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?

Given the robust capital structure of the Bank, the recovery plan has been designed to prevent any slowdown in operations and maintain the continuity of services by taking the actions listed in the plan. The Bank also sets aside provision for business risk and recovery costs.

There is also Istanbul Clearing, Settlement and Custody Bank Inc. Orderly Wind-Down Plan, which was prepared and approved by the Board of Directors in September 2019. This plan includes actions, designated in regulations published by the CMB, that should be taken for the wind-down of CCS operations carried out by Takasbank. The plan also includes actions to be taken in the event that CBRT permissions for SSS operations are canceled or transferred to other institutions, as per Payment Systems Law.

S.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?

Istanbul Clearing, Settlement and Custody Bank Inc. Recovery Plan is reviewed and updated annually before being approved by the Board of Directors. Similarly, Istanbul Clearing, Settlement and Custody Bank Inc. Orderly Wind-Down Plan is also reviewed annually.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 3

Observed	Broadly Observed	Partly Observed	Not Observed	Not Applicable
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposure to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two largest participants and their affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions. All other CCPs should maintain, at a minimum, total financial resources sufficient to cover the default of the one participant and its affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions.

Key Consideration 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.

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

Credit risk management framework is included in Takasbank Risk Management Directive. In this context, the Bank's risk policies based on risk type are predicated on maintaining the Bank's operations in a manner that ensures that legal and internal capital limits are not exceeded, and that the general risk and various types of risks remain below the risk appetite determined by the Board of Directors.

The capital amount that the Bank is expected to need within the next three years are calculated for base, negative, and extremely negative scenarios in the ICAAP Report published as per the Directive on Banks' Internal Systems and Internal Capital Adequacy Assessment Process. Pursuant to regulations that the Bank is subject to, should the capital adequacy level falls below the targeted rate calculated in accordance with ICAAP, an action plan shall be prepared and presented to the BRSA that would allow the Bank to swiftly raise capital adequacy above the target. There have been no occasions on which the Bank's current capital adequacy level fell below the target.

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

It is obligatory that risk management processes, policies, and implementing procedures adapt to changing conditions. The Board of Directors regularly reviews the adequacy of abovementioned policies and implementing procedures, and introduces changes where necessary.

Takasbank's risk management framework is reviewed once a year at a minimum. Credit risk limits and signal values are reviewed in keeping with market conditions and changes in the Bank's strategy.

As per Takasbank Internal Capital Adequacy Assessment Process Directive, ICAAP is reviewed annually. Should there be any changes significant enough to make an impact on the Bank's strategy, business plan, operational framework, or assumptions and methods it uses within the scope of ICAAP, necessary changes are introduced immediately, without waiting for the periodic review of ICAAP.

Istanbul Clearing, Settlement and Custody Bank Inc. Recovery Plan, which contains credit risk-related actions, is reviewed at least once a year with the participation of all relevant units of the Bank in a meeting coordinated by the Risk Management Unit.

Key Consideration 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.

S.4.2.1: How does the FMI identify sources of credit risk? What are the sources of credit risk that the FMI has identified?

Takasbank defines credit risk as the failure of banks that are system participants to fulfill their settlement obligations towards Takasbank in a complete and timely manner. The source of credit risk can be the failure of a system participant to fulfill its obligations towards Takasbank in a complete and timely manner, and this source can also be a situation in which assets set aside as collateral against these risks are not large enough to cover potential damage in the event of a default.

Transaction collateral and guarantee fund contributions deposited to Takasbank by system participants are placed in certain institutions with a view to investing and preserving them. Takasbank features placements as part of its banking operations. Takasbank might face credit risk if relevant institutions are not able to fulfill their payment obligations with respect to placement transactions.

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

The Bank's credit risk is calculated monthly with a standard approach and within the framework of the Guidelines on the Measurement and Assessment of Banks' Capital Adequacy published by the BRSA and other relevant regulations. This information is then reported to the BRSA via the legal forms designed by the BRSA.

In a bid to keep credit risk under control, the Bank's Board of Directors has instituted five concentration limits and signal values. The Risk Management Unit monitors the credit risk concentration limits mentioned above, and reports it to the Senior Management and the Bank's relevant units via daily emails.

The Risk Management Unit reports signal value breaches to the Audit Committee, Senior Management, and the managers of units responsible for risk via email. The Risk Management Unit swiftly issues a written notification to the Senior Management and the Audit Committee in order to ensure that necessary action is taken in the event of any breaches in risk limits and risk appetite.

Credit risk limits and signal values are reviewed in accordance with changes in the Bank's strategy, and this review is aimed at determining whether the limits are meaningful and adequate within the context of the risks and the Bank's risk appetite. The Board of Directors is principally responsible for reviewing credit risk limits, and for ensuring that the risks undertaken by the Bank are within the designated risk limits and are being monitored by the Bank's Senior Management.

S.4.2.3: What tools does the FMI 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 FMI measure the effectiveness of these tools?

Banking operations related to credit risk are executed by business units with a risk-oriented perspective. In addition to the checks conducted by business units, the operations of units are regularly reviewed by the Internal Audit Unit, which conducts reviews and audits on behalf of the Board of Directors, and are controlled by the Internal Control and Compliance Unit on a regular basis and with a risk-based approach.

Key Consideration 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. 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.

Coverage of exposures to each participant

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

Takasbank manages the credit risks that it is exposed to within the context of the Cheque Clearing System according to the following provisions.

- Participants are obliged to deposit a guarantee mechanism contribution against their possible defaults arising from their risks regarding the finalization of the clearing operations.
- Takasbank constantly monitors the adequacy of the contribution amounts that have been designated, and may introduce changes to contribution amounts where necessary with respect to market conditions.
- The guarantee mechanism contribution amount is calculated by multiplying the default probability haircut by the average balance found by dividing the total amount of the net debt amounts on the days on which each participant is in net debt to the System in the last 12 months to the number of business days in the last 12 months.
- The haircut representing the average default probability of the system participants shall be determined by Takasbank by taking account of the market conditions and revised once every three months.
- An additional guarantee mechanism contribution shall be collected from the three participants which have the highest average concentration in the system.
- Assets deposited as guarantee mechanism contribution are made subject to valuation on a daily basis, and a contribution call shall be issued for accounts in which a contribution deficit has occurred.

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

Takasbank annually tests the adequacy of its financial resources in its cheque clearing system. As per the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following resources shall be used in the event of the default of a system participant:

- Guarantee mechanism contribution of the system participant that defaulted
- Guarantee mechanism contributions of other system participants.

The stress testing program outlined below is used for the Cheque Clearing System.

- Stress tests are applied with regard to the adequacy of current and potential financial resources, and the settlement obligations of system participants relative to market conditions.
- With the stress testing program, the adequacy of the size of the guarantee mechanism created for the Cheque Clearing System is verified in the event of the default of system participants.

- As for the stress testing methodology, the adequacy of the guarantee mechanism is tested by taking into account the number of participants whose daily settlement obligations are lower than the size of the guarantee mechanism on a daily basis.

Key Consideration 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.

Allocation of credit losses

S.4.7.1: How do the FMI'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 FMI? How do the FMI's rules and procedures address the allocation of uncovered credit losses and in what order, including the repayment of any funds an FMI may borrow from liquidity providers?

Details regarding default management are explained in Chapter Five titled "Default and Mistreatment Payment Procedures" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. In that regard, the following order shall be observed in the use of resources in the event of the default of a system participant:

- Guarantee mechanism contribution of the system participant that defaulted
- Guarantee mechanism contributions of other system participants.

The default management resources in the Cheque Clearing System are limited to the guarantee mechanism.

Replenishment of financial resources

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

As per Article 29 titled "Guarantee mechanism contribution call" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody

Bank Inc., a guarantee mechanism contribution call shall be issued by Takasbank at the end of each business day in the event these assets fall below the contribution amount determined by Takasbank due to the increase in the participant's guarantee mechanism contribution, any change occurred in the appreciated guarantee mechanism contribution amount or for other reasons. Upon delivery of the guarantee mechanism contribution call by Takasbank in the electronic environment, the participant shall be deemed to have received the call without the need for any further warning or notice. The participants are obliged to fulfill their guarantee mechanism contribution call obligations at the latest until 11:00 on the next business day. The default provisions shall be applied for the obligations that fail to be fulfilled during this time period.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 4

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 5: Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

Key Consideration 1: An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.

S.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?

As per Article 23 of the Regulation on Operations of Payment and Securities Settlement Systems, the system operator shall pay attention to the assets accepted from the participants for having low credit, liquidity and market risks, update the valuation of the non-cash assets and discount rates in parallel with the developments in financial markets and establish an effective system for managing and monitoring these assets. In that regard, as per Article 26 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following assets are accepted as guarantee mechanism contribution:

- Cash (Turkish Lira/Convertible Foreign Currency)
- Government Domestic Debt Securities
- Lease certificates issued by the Republic of Turkey Undersecretariat of Treasury, Asset Leasing Company

Any assets other than those listed in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. can only be accepted as collateral with the approval of the Bank's Board of Directors and the CBRT.

There are no exceptions made with respect to accepted collateral regarding the application of the general rules outlined in the system.

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

All parameters with regard to collateral have been defined in the Takasbank system, and there are no processes that are carried out manually. It is systemically not possible to deposit as collateral those assets that are not accepted as collateral.

S.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)?

Specific wrong-way risk is said to occur when there is a negative correlation between the market value of the received collateral and the current value of the risk that a financial entity is exposed to. As per Article 26 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following assets are accepted as guarantee mechanism contribution:

- Cash (Turkish Lira/Convertible Foreign Currency)
- Government Domestic Debt Securities
- Lease certificates issued by the Republic of Turkey Undersecretariat of Treasury, Asset Leasing Company

Key Consideration 2: An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.

Valuation practices

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

Assets accepted by Takasbank as guarantee mechanism contribution for clearing transactions shall be subjected to valuation at the end of each business day. Assets accepted as guarantee mechanism contribution are made subject to valuation minimum at the end of each business day over the prices determined by Takasbank to ensure their valuation with the current market prices.

S.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?

Prices announced by the CBRT shall be used for the valuation of assets accepted as guarantee mechanism contribution for clearing transactions. Moreover, as per Article 30 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., if any difficulty occurs in accommodating the valuation-related prices, the theoretical price manual published by Takasbank on its website shall be used for the guarantee mechanism contribution valuation.

Haircutting practices

S.5.2.3: How does the FMI determine haircuts?

As per Article 23 of the Regulation on Operations of Payment and Securities Settlement Systems, the system operator shall pay attention to the assets accepted from the participants for having low credit, liquidity and market risks, update the valuation of the non-cash assets and discount rates in parallel with the developments in financial markets and establish an effective system for managing and monitoring these assets.

In calculating the valuation haircuts reflecting the deduction rates and to be applied to the guarantee mechanism contribution, the parametric, non-parametric or simulation-based statistical methods

deemed appropriate by Takasbank shall be used. In determining the guarantee mechanism contribution valuation haircuts, the relevant asset's credit risk rated by Takasbank, its maturity, its volatility under extraordinary market conditions, its liquidity, and its currency risk, if any, shall be taken into account.

The statistical confidence level and the liquidation period to be used in the calculations to be made shall be taken into account as 99.90% and 2 business days, respectively. The historical data to be used in the calculations must not be shorter than 1 year. The valuation haircuts for the assets in which there is insufficient data or no data at all are determined by taking the haircuts calculated for the assets in similar nature as reference. The collateral valuation haircuts have been determined and announced in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc.

S.5.2.4: 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?

The collateral valuation haircuts are calibrated before their use by applying in-sample backtesting. If, in the last one-year period, the relative value changes being calculated by using the assets accepted as collateral, the collateral valuation haircuts, and the holding periods exceed the discount factor by more than two business days, the valuation haircuts are calibrated by the multiplication factors. In case the value changes exceed the discount factor by more than 5 business days, the dataset, confidence level, and the model being used are reviewed.

In the same vein, the haircuts used in the collateral valuation are validated on a monthly basis by being made subject to backtesting using out-of-sample data. If on average the value changes at an asset group exceed the discount factor by more than two days in the last one-year period and the valuation haircuts have not been made subject to any calibration before, these haircuts are calibrated by the multiplication factors; and if they have been previously calibrated, they are recalculated.

Key Consideration 3: In order to reduce the need for procyclical 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.

S.5.3.1: How does the FMI identify and evaluate the potential procyclicality of its haircut calibrations? How does the FMI consider reducing the need for procyclical adjustments – for example, by incorporating periods of stressed market conditions during the calibration of haircuts?

As explained above in detail (5.2), as per Article 23 of the Regulation on Operations of Payment and Securities Settlement Systems, the system operator shall pay attention to the assets accepted from the participants for having low credit, liquidity and market risks, update the valuation of the non-cash assets and discount rates in parallel with the developments in financial markets and establish an effective system for managing and monitoring these assets. In determining the valuation haircuts, minimum five-year data set and 99.9% confidence level are used to take into account the volatility recorded in extreme market conditions in the collateral value, reduce

procyclicality and set a prudent and stable level. Particular attention is given to ensure that the data set covers the extreme volatilities experienced in the recent period.

Key Consideration 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.

S.5.5.1: 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?

Securities that can be defined as cross-border are not yet accepted as guarantee mechanism contribution within the scope of cheque clearing transactions.

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

Securities that can be defined as cross-border are not yet accepted as guarantee mechanism contribution within the scope of cheque clearing transactions.

Key Consideration 6: An FMI should use a collateral management system that is well-designed and operationally flexible.

Collateral management system design

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

As per Article 23 of the Regulation on Operations of Payment and Securities Settlement Systems, the system operator shall pay attention to the assets accepted from the participants for having low credit, liquidity and market risks, update the valuation of the non-cash assets and discount rates in parallel with the developments in financial markets and establish an effective system for managing and monitoring these assets. The Bank's risk and guarantee mechanism management system as part of cheque clearing transactions operates in an integrated manner thanks to the asset types it accepts, accurate and timely updates of margin requirements, collateral valuation methodology it conducts at the end of each day, and the rules it has established in order to minimize the risks that it may face.

As per Article 23, paragraph nine of the Regulation on Operations of Payment and Securities Settlement Systems, the assets provided by the system participants to the mechanisms that are constituted cannot be used for another purpose. Any legal proceedings related to these assets are governed by the provisions of Article 10 of Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions. The assets deposited as guarantee mechanism contribution are monitored separately from the system operator's own assets and from other participants' other assets in the system. The abovementioned provisions are mentioned in Article 31 titled "Use of the Guarantee Mechanism Contribution" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc.

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

As per Article 23, paragraph nine of the Regulation on Operations of Payment and Securities Settlement Systems, the assets provided by the system participants to the mechanisms that are constituted cannot be used for another purpose. The assets deposited as guarantee mechanism contribution pursuant to this Article are monitored separately from the system operator's own assets and from other participants' other assets in the system.

In case of investing in the liquid assets which are provided by the system participants to the mechanisms that are constituted pursuant to this Article, in an interest-bearing instrument to make a profit, the system operator can utilize these assets by means of investing in financial instruments that have low risk and high liquidity.

Operational flexibility

S.5.6.3: How and to what extent does the FMI's collateral management system accommodate changes in the ongoing monitoring and management of collateral?

The collateral management system has the operational flexibility to allow for the determination of new limits, acceptance of different types of collateral and modification of applied risk parameters where necessary.

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

The Collateral and Default Management Team is responsible for monitoring the collateral and default management processes of Cheque Clearing transactions. At Takasbank, the management of the collateral, accepted in the markets to which CCP services are provided, in accordance with the relevant legislation and the risk limits and parameters is closely monitored by the Collateral and Default Management Team. The said Team is also responsible for Default Management, and it has rules and procedures for the management of collateral under stress. In addition, there have not been any events of default in the system, and the guarantee mechanism in place has been structured to adequately respond to any potential events of default.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 5

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 7: Liquidity risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and 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 liquidity obligation for the FMI in extreme but plausible market conditions.

Key Consideration 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.

S.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?

Article 23 titled "Participation Collateral" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. states that Takasbank asks for a participation collateral at a fixed amount to cover its losses in case the participants fail to fulfill their obligations against Takasbank for the dues, fees and commissions and other liabilities within the time period given to them. This participation collateral is demanded in cash in order to preclude liquidity risks in the market, and after collections are made from this collateral, the participant shall restore its participation collateral to the required amount within 5 business days.

Similarly, the participants are obliged to deposit a guarantee mechanism contribution against their possible defaults arising from their risks regarding the finalization of the clearing operations. Cash, GDS, and the Lease certificates issued by the Republic of Turkey Undersecretariat of Treasury, Asset Leasing Company are accepted as guarantee mechanism contribution, and the adequacy levels are monitored on a daily basis.

It is evaluated that there is no need for a liquidity provider in the market in order to close positions and fulfill reverse orders during the course of default management. In addition, we believe it is highly unlikely that a negative situation would arise in converting the securities accepted by the CBRT as collateral.

S.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?

In the Cheque Clearing System, settlement operations are conducted in TRY, and the assets accepted as collateral in the guarantee fund contribution mechanism, which shall be used in the event of a failure to fulfill obligations, are composed of assets with high liquidity. It is evaluated that there is no need for a liquidity provider in the market in order to close positions and fulfill reverse orders during the course of default management. In addition, we believe it is highly unlikely that a negative situation would arise in converting the securities accepted by the CBRT as collateral.

In addition, monthly liquidity tests are conducted to better understand the Bank's total liquidity risks, and the results of these tests are reported to the Board of Directors via the Audit Committee. Since the difference between the Bank's assets and liabilities is positive, during the stress tests, an artificial scenario is employed to increase the recognition rate of off-balance obligations and to create open positions which otherwise do not exist, and the rate at which free equity is able to meet the costs of covering this liquidity need is calculated. As a result of the stress tests, the Bank's capital was found to comfortably cover the capital needs even in an extremely negative scenario, and therefore we have concluded that there are no actions to be taken under the present set of circumstances.

S.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?

Clearing and settlement transactions are carried out in the national currency. In addition, obtaining sufficient amounts of collateral is ensured by way of applying collateral valuation haircuts to the assets eligible as collateral according to their cash conversion potential. In this context, 99.9% confidence level and 2- business day liquidation period are used when calculating the collateral valuation haircuts.

An additional guarantee mechanism contribution shall be collected from the three participants which have the highest average concentration in the system, and the guarantee mechanism contribution amount calculated for each participant cannot be less than TRY 20.000.

Key Consideration 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.

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

Article 19 titled "Settlement Operations" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. clarifies the methods and rules regarding settlement and funding flows.

Settlement transactions are monitored constantly, and the participants that have not fulfilled their obligations by the settlement deadline are contacted and notified. The debt shall be closed only after all participants have fulfilled their obligations. In case any non-fulfilled obligation exists by 12:00 on the settlement date, the receivables shall be distributed on a pro-rata basis. In case any non-fulfilled obligation exists by 12:00 on the settlement date, the receivables shall be distributed on a pro-rata basis.

Cash flows over the EFT system can be followed on the position monitoring screens constantly and moment by moment. Settlement payments in processes are always prioritized, taking into account market trading hours. The CBRT payment systems define and prioritize settlement hours as critical hours from a business continuity perspective.

S.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?

By virtue of the banking license it has obtained in 1995, Takasbank has a strong fund management organization and infrastructure which it has developed over time. Within the scope of the liquidity risk management, Takasbank is able to continuously monitor the settlement transactions and fund flows on a currency, participant and account breakdown basis through in-house-developed software; and the participants are also able to monitor their fund flows over their screens. Besides; online banking tools and SWIFT confirmations can be used for monitoring these flows.

Key Consideration 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.

S.7.3.1: How does the payment system or SSS 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 does the payment system or SSS use to make this determination?

All settlement transactions in the market are carried out in TRY. The guarantee mechanism contribution amount is calculated by multiplying the default probability haircut by the average balance found by dividing the total amount of the net debt amounts on the days on which each participant is in net debt to the System in the last 12 months to the number of business days in the last 12 months. The haircut shall be determined by taking account of the market conditions and revised once every three months. In addition, valuation haircuts shall be applied to the assets deposited as contribution. The statistical confidence level and the liquidation period to be used in the calculations to be made shall be taken into account as 99.90% and 2 business days, respectively. The historical data to be used in the calculations must not be shorter than 1 year.

An additional guarantee mechanism contribution shall be collected from the three participants which have the highest average concentration in the system, and the guarantee mechanism contribution amount calculated for each participant cannot be less than TRY 20.000.

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

All settlement transactions in the market are conducted in TRY, and the assets accepted as collateral are composed of assets with high liquidity.

Key Consideration 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

S.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?

Takasbank asks for participation collateral at a fixed amount to cover its losses in case the participants fail to fulfill their obligations against Takasbank for the dues, fees and commissions and other liabilities within the time period given to them. Participation collateral is demanded in cash in order to preclude market liquidity risks. Cash (TRY, USD, EURO), GDS, and the Lease certificates issued by the Republic of Turkey Undersecretariat of Treasury, Asset Leasing Company, all of which have high liquidity, are accepted as guarantee mechanism contribution.

Assets deposited as guarantee mechanism contribution are monitored separately from Takasbank's own assets and from other participants' other assets in the system, and cannot be used for any purpose other than their delivery. Immediate access to the abovementioned resources is possible.

Availability and coverage of qualifying liquid resources

S.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?

Takasbank has an advanced infrastructure and fund management function that it can use to access CBRT and commercial bank liquidity. Takasbank has determined the order in which non-cash collateral can be converted into cash, and periodically monitors the lines of credit extended to the Bank by other banks.

As per Article 31 titled "Use of the Guarantee Mechanism Contribution" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., if Takasbank is able to access the liquidity facilities of the CBRT or has an opportunity to provide liquidity by way of borrowing against collateral from a financial institution, the assets deposited as guarantee mechanism contribution by the participants can be given as collateral to the CBRT or the financial institution providing the credit facility to benefit from the liquidity opportunities, provided that they shall be compliant with the rules of these entities related to collateral. The Bank has until now encountered no difficulties in reaching sources of liquidity.

S.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?

It is equal to the securities that can be provided as collateral to the CBRT within the borrowing limits of Takasbank.

S.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?

In the Cheque Clearing System, Takasbank ensures the settlement on the basis of the transaction collateral. In order to ensure that liquidity is provided in margin requirements, assets accepted by the CBRT as collateral can be deposited to the system as collateral. If necessary, Takasbank has the capacity to create liquidity thanks to its banking license.

Key Consideration 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 38 CPSS-IOSCO – Disclosure framework and assessment methodology – December 2012 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

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

There are no additional sources of liquidity in the Cheque Clearing System other than the participation collateral and guarantee mechanism contribution call.

Availability of supplemental liquid resources

S.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?

There are no additional sources of liquidity in the Cheque Clearing System other than the participation collateral and guarantee mechanism contribution call.

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

There are no additional sources of liquidity in the Cheque Clearing System other than the participation collateral and guarantee mechanism contribution call.

S.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?

There are no additional sources of liquidity in the Cheque Clearing System other than the participation collateral and guarantee mechanism contribution call.

S.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?

There are no additional sources of liquidity in the Cheque Clearing System other than the participation collateral and guarantee mechanism contribution call.

Key Consideration 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.

Use of liquidity providers

S.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?

There is no structure to provide liquidity for markets in the cheque clearing system. As for liquidating collateral, if Takasbank is able to access the liquidity facilities of the CBRT or has an opportunity to provide liquidity by way of borrowing against collateral from a financial institution, the assets deposited as guarantee mechanism contribution by the participants can be given as collateral to the CBRT or the financial institution providing the credit facility to benefit from the liquidity opportunities, provided that they shall be compliant with the rules of these entities related to collateral.

Reliability of liquidity providers

S.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?

There is no structure to provide liquidity for markets in the cheque clearing system.

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

There is no structure to provide liquidity for markets in the cheque clearing system.

S.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?

There is no structure to provide liquidity for markets in the cheque clearing system.

Key Consideration 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.

S.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?

On account of being a member of the payment and securities settlement system, and of having a banking license, Takasbank has first-degree access.

By virtue of its banking license, Takasbank not only has access to the liquidity of the Central Bank of the Republic of Turkey, but also operates in an integrated manner with the Turkish Lira, Electronic Funds Transfer (EFT) System and Electronic Securities Transfer System (ESTS) in the CBRT's system.

S.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?

On account of being a member of the payment and securities settlement system, and of having a banking license, Takasbank has first-degree access.

The CBRT EFT system is used in fulfilling settlement obligations, and EFT, SWIFT, and the CBRT ESTS system are used in meeting guarantee mechanism obligations.

S.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?

In Takasbank Cheque Clearing System, the CBRT EFT system is used in fulfilling settlement obligations, and EFT, SWIFT, and the CBRT ESTS system are used in meeting guarantee mechanism obligations. Services by another institution are not used.

S.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?

There are no areas that we plan to expand.

Key Consideration 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.

Stress test programme

S.7.9.1: How does the FMI use stress testing to determine the amount and test the sufficiency of its liquid resources in each currency? How frequently does the FMI stress-test its liquid resources?

Takasbank annually tests the adequacy of its financial resources in its cheque clearing system. As per the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following resources shall be used in the event of the default of a system participant:

- Guarantee mechanism contribution of the system participant that defaulted
- Guarantee mechanism contributions of other system participants.

The stress testing program outlined below is used for the Cheque Clearing System.

- Stress tests are applied with regard to the adequacy of current and potential financial resources, and the settlement obligations of system participants relative to market conditions.
- With the stress testing program, the adequacy of the size of the guarantee mechanism created for the Cheque Clearing System is verified in the event of the default of system participants.
- As for the stress testing methodology, the adequacy of the guarantee mechanism is tested by taking into account the number of participants whose daily settlement obligations are lower than the size of the guarantee mechanism on a daily basis.
- As part of stress testing, the Bank also assesses the adequacy of liquidity sources that are found in the guarantee mechanism. Cash (TRY, USD, EURO), GDS, and lease certificates are accepted as guarantee mechanism contribution. Within the context of liquidity stress testing, securities that are accepted as guarantee fund contribution mechanism can be used as liquid sources, provided that they are accepted as collateral by the CBRT.

S.7.9.2: What is the process for reporting on an ongoing basis the results of the FMI's liquidity stress tests to appropriate decision-makers at the FMI, for the purpose of supporting their timely evaluation and adjustment of the size and composition of the FMI's liquidity resources and liquidity risk management framework?

Takasbank tests the adequacy of the financial resources in its cheque clearing system, and the adequacy of the liquid resources among them. As per the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following resources shall be used in the event of the default of a system participant:

- Guarantee mechanism contribution of the system participant that defaulted
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- As part of stress testing, the Bank also assesses the adequacy of liquid resources that are found in the guarantee mechanism. Cash (TRY, USD, EURO), GDS, and lease certificates are accepted as guarantee mechanism contribution. Within the context of liquidity stress testing, securities that are accepted as guarantee fund contribution mechanism can be used as liquid sources, provided that they are accepted as collateral by the CBRT.

Stress testing scenarios

S.7.9.3: What scenarios are used in the stress tests, and to what extent do they take into account a combination of peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over 40 CPSS-IOSCO – Disclosure framework and assessment methodology – December 2012 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?

As for the stress testing methodology, the adequacy of the guarantee mechanism is tested by taking into account the number of participants whose daily settlement obligations are lower than the size of the guarantee mechanism on a daily basis.

As part of stress testing, the Bank also assesses the adequacy of liquid resources that are found in the guarantee mechanism. Cash (TRY, USD, EURO), GDS, and lease certificates are accepted as guarantee mechanism contribution. Within the context of liquidity stress testing, securities that are accepted as guarantee fund contribution mechanism can be used as liquid sources, provided that they are accepted as collateral by the CBRT.

S.7.9.4: To what extent do the scenarios and stress tests take into account the FMI's particular payment and settlement structure (for example, real-time gross or deferred net; with or without a settlement guarantee; DVP model 1, 2 or 3 for SSSs), and the liquidity risk that is borne directly by the FMI, by its participants, or both?

As for the stress testing methodology, the adequacy of the guarantee mechanism is tested by taking into account the number of participants whose daily settlement obligations are lower than the size of the guarantee mechanism on a daily basis.

As part of stress testing, the Bank also assesses the adequacy of liquid resources that are found in the guarantee mechanism. Cash (TRY, USD, EURO), GDS, and lease certificates are accepted as guarantee mechanism contribution. Within the context of liquidity stress testing, securities that are accepted as guarantee fund contribution mechanism can be used as liquid sources, provided that they are accepted as collateral by the CBRT.

S.7.9.5: 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 FMI to settle its payment obligations on time, including the potential that individual entities and their affiliates may play multiples roles with respect to the FMI?

As for the stress testing methodology, the adequacy of the guarantee mechanism is tested by taking into account the number of participants whose daily settlement obligations are lower than the size of the guarantee mechanism on a daily basis.

As part of stress testing, the Bank also assesses the adequacy of liquid resources that are found in the guarantee mechanism. Cash (TRY, USD, EURO), GDS, and lease certificates are accepted as guarantee mechanism contribution. Within the context of liquidity stress testing, securities that are accepted as guarantee fund contribution mechanism can be used as liquid sources, provided that they are accepted as collateral by the CBRT.

Review and validation

S.7.9.6: How frequently does the FMI assess the effectiveness and appropriateness of stress test assumptions and parameters? How does the FMI's stress test programme take into account various conditions, such as a sudden and significant increase in position and price volatility, position concentration, change in market liquidity, and model risk including shift of parameters?

The parameters used in stress testing are reviewed annually.

S.7.9.7: How does the FMI validate its risk management model? How frequently does it perform this validation?

As per Article 25 titled "Guarantee mechanism contribution determination procedure" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., guarantee mechanism contribution is determined on a monthly basis. The guarantee mechanism contribution amount is calculated by multiplying the default probability haircut by the average balance found by dividing the total amount of the net debt amounts on the days on which each participant is in net debt to the System in the last 12 months to the number of business days in the last 12 months.

The haircut representing the average default probability of the system participants shall be determined by Takasbank by taking account of the market conditions and revised once every three months. If it is deemed necessary, it can be revised without waiting for the three months' period to end. An additional guarantee mechanism contribution shall be collected from the three participants which have the highest average concentration in the system. The parameter constituting the basis of the additional contribution calculation to be received shall be determined by Takasbank by considering the market conditions and revised once every three months.

Other details regarding the risk management model are included in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul clearing, Settlement and Custody Bank Inc. Any changes to the System Rules are possible by the approval of Takasbank Board of Directors, and that of the CBRT.

S.7.9.8: Where and to what extent does the FMI document its supporting rationale for, and its governance arrangements relating to, the amount and form of its total liquid resources?

The Bank documents the structure of its total liquid resources and their administrative arrangements in the form of Takasbank Fund Management Strategies Directive, approved by the Board of Directors. Measurements regarding the amount and maturity of the total liquid assets are monitored daily by our main banking system software.

Key Consideration 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

S.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?

Chapter Five titled "Default and Mistreatment Payment Procedures" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. states that in case of presence of the following situations, the relevant participant

shall be deemed to have defaulted without the need for any further notice and the default provisions shall be applied.

- Failure to fulfill the obligation related to the settlement operations until 12:00 (12:00 included),
- Failure to fulfill the end-of-day guarantee mechanism contribution call obligations calculated by Takasbank until 11:00 (11:00 included).
- The default interest is collected by applying different haircuts from the participants fulfilling their obligations with the same value date but after the designated time periods and from the participant fulfilling their obligations not with the same value date but on subsequent days.
- The default interest is calculated by taking the calendar days between the default date and the fulfillment date of the obligation as the base.
- In the event of default, Takasbank may not allow the participant to withdraw its guarantee mechanism contributions in its relevant accounts, but it may also exclude from netting the cheques to which such participant is a party and which have not been made subject to netting as of the default date.
- The participant can be allotted time by Takasbank to resolve its event of default until 10:00 on the business day following the default date at most. Should the event of default be failed to be resolved until the end of the allotted time period, the guarantee mechanism contribution deposited by the defaulting participant shall be converted to cash at first.
- Should such amount of default be failed to be closed, the non-defaulting participants' assets subject to the guarantee mechanism contributions shall be converted to cash and the obtained amount shall be distributed to the beneficiary participants of the day subject to default pro-rata to their receivables.
- In the fulfillment of cash obligations; for the payments made via EFT, the time on which the funds are credited to Takasbank's free cash account at the CBRT, and for the virements made from the accounts at Takasbank, the transaction time shall be taken as the base.
 - The Article also includes information on the details of the interest rate used to calculate default interest,
 - The method by which default interest is calculated,
 - Accrual, notification and collection,
 - And the rules governing Mistreatment Payment.

S.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?

The guarantee mechanism contribution amount is calculated by multiplying the default probability haircut by the average balance found by dividing the total amount of the net debt amounts on the days on which each participant is in net debt to the System in the last 12 months to the number of business days in the last 12 months. The haircut representing the average default probability of the system participants shall be determined by Takasbank by taking account of the market conditions and revised once every three months. Valuation haircuts are applied to assets that system participants can deposit. In determining the guarantee mechanism contribution valuation haircuts, the relevant asset's credit risk rated by Takasbank, its maturity, its volatility under extraordinary market conditions, its liquidity, and its currency risk, if any, shall be taken into account. The statistical confidence level and the liquidation period to be used in the calculations to be made shall be taken into account as 99.90% and 2 business days, respectively. The historical data to be used in the calculations must not be shorter than 1 year.

Article 22 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., includes provisions with regard to the finality of settlement. The transfer order cannot be revoked by Takasbank, the participant or a third party from the moment at which the netting has been made. Default provisions shall be applied without the need for any further notice for the obligations failed to be fulfilled in a timely manner. It is the responsibility of the participants to fulfill their clearing and settlement obligations in a timely manner, and Takasbank does not offer any guarantees thereof.

Replenishment of financial resources

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

Takasbank asks for participation collateral at a fixed amount to cover its losses in case the participants fail to fulfill their obligations against Takasbank for the dues, fees and commissions and other liabilities within the time period given to them. Should any portion of the contribution call deposited by a participant be used, the participant is expected to raise it to the required amount within five days.

However, Takasbank monitors the adequacy of the assets deposited as guarantee mechanism contribution at least on a daily basis. A guarantee mechanism contribution call shall be issued by Takasbank at the end of each business day in the event these assets fall below the contribution amount determined by Takasbank due to the increase in the participant's guarantee mechanism contribution, any change occurred in the appreciated guarantee mechanism contribution amount or for other reasons. The participants are obliged to fulfill their guarantee mechanism contribution call obligations at the latest until 11:00 on the next business day. The default provisions shall be applied for the obligations that fail to be fulfilled during this time period.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 7

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 8: Settlement Finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

Key Consideration 1: An FMI's rules and procedures should clearly define the point at which settlement is final.

Point of settlement finality

S.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?

Similarly; Article 4, paragraph 1, subparagraph (dd) of The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. defines a transfer order as "the participant instruction facilitating the transmission of cheque information to the System together with the clearing packages for the purpose of transferring a specific amount of funds between the participants within the system", and in Article 22 of the System Rules titled "Finality of Settlement", it is stated that

- For the finality of settlement, the provisions of article 10 of the Law on Payment and Security Settlement Systems, Payment Services and Electronic Money Institutions published in the Official Gazette dated 27/06/2013 and numbered 28690 shall be applied,
- The moment of entry of the transfer order to the system is the moment at which the clearing packages sent by the participants have been received by the System within the time periods set forth in the System Rules,
- All types of measures and decisions stipulated by the laws in a manner to also cover suspension of the clearing and settlement operations of the participant, impose of any restriction on them or their permanent suspension shall be applied for the transfer orders entering to the system after the notification of such measure and decision is served to Takasbank,
- The transfer orders which have entered the system before the notification of the measure and decision referred to in the third paragraph is served to Takasbank shall be included in the netting and settlement operations,
- The transfer order cannot be revoked by the participant or by a third party from the moment at which the netting has been made,
- For the transactions conducted by the participant in accordance with the cheque clearing operations stipulated by the laws which hinder its disposition on the funds in a manner to

also cover suspension of its fund transfers, impose of any restriction on them or their permanent suspension;

- a) If any issue that would lead to the suspension of participant activities or constitute an impediment for their continuation, the CBRT shall be informed thereof by the fastest mean of communication,
- b) By netting, the transfer order shall be deemed finalized, and the settlement operations of the payable and receivable amounts arising at the end of netting shall be completed,
- c) The guarantee mechanism contribution provided by the participant by using its available cash and security balances held at Takasbank shall be used for terminating its system-related obligations,
- d) The measures and decisions referred to in the third paragraph shall be applied for the unused portion of collateral remaining after the fulfilment of the collateral owner's obligations.

S.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?

It is stated in Article 10 of the Law No. 6493 on Payment and Security Settlement Systems, Payment Services and Electronic Money Institutions that the moment when the transfer order becomes irrevocable shall be clearly determined in the system rules and the transfer order cannot be revoked by the participant or any third party thereafter, and that all kinds of measures and decisions that are regulated by Laws and preclude the participant or the system operator to make transactions with their funds or securities including the temporary suspension, imposition of restrictions or permanent suspension of a participant's or system operator's fund or securities transfers, apply only to the transfer orders which enter into the system after the notification regarding the aforementioned measures and decisions are made to the system operator.

Paragraph 1 of Article 22 of the System Rules refers to the relevant legislation.

S.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)?

Takasbank offers Cheque Clearing Service only via banks operating in Turkey and in TRY. For that reason, Cheque Clearing Service is not directly subject to the laws of a jurisdiction.

Key Consideration 2: An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.

Final settlement on the value date

S.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?

Article 20 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. states that the settlement deadline is T+1 day at 12:000, and Article 19 of the System Rules has the following provisions:

- (1) The participants' general payable and receivable balances generated according to the clearing operations list are final and fulfillment of all obligations until the deadline set forth in article 20 is a must.
- (2) Net cash obligations shall be fulfilled by way of direct transfer via EFT to the settlement accounts opened at Takasbank on a participant basis or by virement between Takasbank cash accounts.
- (3) The cash receivables shall be credited to the participants' "Member Free Account No.11" at Takasbank.
- (4) Depending on the participants' preferences to be made through the screens to be provided to them, the cash receivables;
 - 1) Can be transferred to their free cash accounts at the CBRT via EFT,
 - 2) Remain in their free current accounts no. 11 at Takasbank,
 - 3) Can be sent to an intermediary bank account they will define.
- (5) In transferring the settlement receivables via EFT, a minimum parametric amount determined by Takasbank may be taken into account.
- (6) For distributing the settlement receivables, fulfillment by all participants of total net debt closing obligations shall be awaited.
- (7) It is possible to make partial debt closing from the settlement account.
- (8) If all obligations are fulfilled before the designated deadline, the receivables shall be distributed without waiting for the settlement deadline.
- (9) In case there is any obligation failed to be fulfilled before the settlement deadline, no partial receivable distribution shall be made and the settlement deadline shall be awaited.

- (10) In case there is any obligation that fails to be fulfilled at the end of the settlement deadline, the receivable distribution shall be made by allocating the deficient amount pro-rata to all participants.
- (11) When the incomplete obligation is fulfilled by the participant subject to the default or by such participant's guarantee mechanism contribution, the settlement amounts shall be sent in the same manner to all participants in a proportional manner.
- (12) In case any non-fulfilled obligation exists at the end of the day on the settlement date, the settlement shall be completed in default.
- (13) Termination of the event of default is limited to the guarantee mechanism amounts deposited by the participants.

S.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?

Since 02/07/2018, when the Cheque Clearing System began to be operated by Takasbank, there have not been any deferrals of final settlement to the next business day.

Intraday or real-time final settlement

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

In the Cheque Clearing System, the information and images regarding the cheques Banks receive during the day are communicated to Takasbank in the form of a clearing package until 06:00 the next day (T day). The cheque information added to the System by the banks via the clearing packages before 06:00 is sent to the concerned banks as a clearing distribution package prepared by Takasbank in order to carry out the authorization procedure. The banks review the information conveyed to them in the clearing distribution package and transfer it to the Takasbank system with return packages between 06:01-17:45. After the return period is closed, the System sends the return distribution package to banks.

After the return distribution operations are completed, the settlement file containing information regarding the net cash receivable/payable amounts that must be handled by the next day is sent to participants.

Net obligations shall be transferred to the CEKTK - Cheque Clearing Account at Takasbank by 12:00 on the next business day (T+1 day).

All transactions can be monitored online on the participant screens.

S.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?

The netting operation shall be performed once a day by comparing the cheque information in the clearing packages and the information in the return packages (at return distribution hour on T day). Participants acquire receivables or payables as a result of the netting operation.

Settlement operations shall be completed until 12:00 on T+1 day.

For distributing the settlement receivables, fulfillment by all participants of total net debt closing obligations shall be awaited.

It is possible to make partial debt closing from the settlement account.

If all obligations are fulfilled before the designated deadline, the receivables shall be distributed without waiting for the settlement deadline.

In case there is any obligation failed to be fulfilled before the settlement deadline, no partial receivable distribution shall be made and the settlement deadline shall be awaited.

In case there is any obligation that fails to be fulfilled at the end of the settlement deadline, the receivable distribution shall be made by allocating the deficient amount pro-rata to all participants.

When the incomplete obligation is fulfilled by the participant subject to the default or by such participant's guarantee mechanism contribution, the settlement amounts shall be sent in the same manner to all participants in a proportional manner.

In case any non-fulfilled obligation exists at the end of the day on the settlement date, the settlement shall be completed in default.

Termination of the event of default is limited to the guarantee mechanism amounts deposited by the participants.

Key Consideration 3: An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.

S.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?

Similarly; Article 4, paragraph 1, subparagraph (dd) of The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. defines a transfer order as "the participant instruction facilitating the transmission of cheque information to the System together with the clearing packages for the purpose of transferring a specific amount of funds between the participants within the system", and in Article 22 of the System Rules titled "Finality of Settlement", it is stated that the moment of entry of the transfer order to the system is the moment at which the clearing packages sent by the participants have been received by the System within the time periods set forth in the System Rules. There are also

provisions on the finality of settlement in Article 10 of the Law on Payment and Security Settlement Systems, Payment Services and Electronic Money Institutions.

The transfer order cannot be revoked from the moment at which it has become final. The participant can only ask for an update or cancellation to the clearing package with a written application to Takasbank before the moment at which the transfer order becomes final. It is not possible for the participant to apply for the cancellation of the clearing package from its own screens.

S.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?

The transfer order cannot be revoked from the moment at which it has become final.

The participant can only ask for an update or cancellation to the clearing package with a written application to Takasbank before the moment at which the transfer order becomes final. It is not possible for the participant to apply for the cancellation of the clearing package from its own screens.

The netting operation shall be performed by comparing the cheque information in the clearing packages and the information in the return packages, and sending the concerned banks information on return distribution. The netting transaction leads to the creation of the settlement file, and at this point, it is not possible for it to be cancelled, either by the participant or by Takasbank.

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

The finality of settlement is governed by the provisions of Article 10 of Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions, and no exceptions are made.

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

The provision on the transfer order being irrevocable and noncancelable is included in Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions and the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. This information has also been announced to participants via a general letter, and is available on the Bank's website.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 8

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 9: Money settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Key Consideration 1: An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.

S.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?

As per Article 21 titled "Currency" of Chapter Three titled "Principles for Clearing and Settlement Operations" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., it is stated that

- In the payment of cash obligations arising from the settlement operations, the currency in which the transactions are conducted shall be used.

Currently, clearing and settlement operations in Takasbank Cheque Clearing System are only carried out in Turkish Lira (TRY). The clearing of cheques in foreign currency is currently conducted outside the Cheque Clearing System. If a foreign currency cheque is added to the system, its settlement shall be made and the payment obligations shall be specified in the currency the cheque is in.

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

Thanks to its banking license, Takasbank conducts its money settlements in the accounts opened at itself, and no central bank money or commercial bank money is used in the money settlements.

In the CBRT legislation, there exists no arrangement which envisages the offering of money settlement services. Indeed, due to the fact that Takasbank owns a banking license, has access to CBRT liquidity, and conducts settlement transactions at itself by using CBRT payment systems and no commercial bank money is used in settlement operations, and that it is not exposed to credit and liquidity risks, the use of CBRT money becomes unnecessary.

Key Consideration 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.

S.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?

In money settlements, Turkish Lira demand deposit accounts at Takasbank are used, obligations are handled at settlement accounts; and money transfers are conducted through the CBRT electronic payment systems (EFT).

S.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?

No commercial bank money is used in money settlements. Participants fulfill their settlement obligations at the relevant settlement accounts at Takasbank via the CBRT EFT system.

Key Consideration 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.

Thanks to its banking license, Takasbank conducts its money settlements in the accounts opened at itself, and no central bank money or commercial bank money is used in the money settlements. That is why the questions below were not answered.

S.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?

S.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?

S.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?

Key Consideration 4: If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.

S.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?

Takasbank conducts its money settlements in the accounts opened by its participants at itself, and it has the knowledge, experience, organization, legislation and technical infrastructure to minimize and ideally manage its credit and liquidity risks.

Key Consideration 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.

Thanks to its banking license, Takasbank conducts its money settlements in the accounts opened at itself, and no central bank money or commercial bank money is used in the money settlements. That is why the questions below were not answered.

S.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?

S.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?

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 9

Observed <input type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 12: Exchange-of-value settlement systems

If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Key Consideration 1: An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.

The following questions were not answered as there are no exchange-of-value settlements in the Cheque Clearing System.

S.12.1.1: How do the FMI's legal, contractual, technical and risk management frameworks ensure that the final settlement of relevant financial instruments 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?

The Cheque Clearing System does not offer exchange-of-value settlements.

S.12.1.2: How are the linked obligations settled? On a gross basis (trade by trade) or on a net basis?

The Cheque Clearing System does not offer exchange-of-value settlements.

S.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?

The Cheque Clearing System does not offer exchange-of-value settlements.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 12

Observed	Broadly Observed	Partly Observed	Not Observed	Not Applicable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Principle 13: Participant-default rules and procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Key Consideration 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

S.13.1.1: Do the FMI's 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?

In Chapter Five titled "Default and Mistreatment Payment Procedures" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. (System Rules), the following articles regulate the topics specified below.

- Article 36 on default principles,
- Article 37 on default interest,
- Article 38 on calculating default interest,
- Article 39 on accrual, notification and collection,
- Article 41 on mistreatment payment.

If obligations are not fulfilled within the deadlines specified in the System Rules, the participant shall be deemed to have defaulted.

S.13.1.2: How do the FMI's 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.

The actions that shall be taken against the System participant that is deemed to have defaulted for any reason are specified in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul clearing, Settlement and Custody Bank Inc. The default interest is collected by applying different haircuts from the participants fulfilling their obligations with the same value date but after the designated time periods and from the participant fulfilling their obligations not with the same value date but on subsequent days. In the event of default, Takasbank may not allow the participant to withdraw its guarantee mechanism contributions in its relevant accounts, but it may also exclude from netting the cheques to which such participant is a party and which have not been made subject to netting as of the default date. The decision thereof shall be

made by Takasbank by considering the size of default, excess/deficit amounts outstanding in its accounts, and the market conditions.

The participant can be allotted time by Takasbank to resolve its event of default until 10:00 on the business day following the default date at most. Should the event of default be failed to be resolved until the end of the allotted time period, the guarantee mechanism contribution deposited by the defaulting participant shall be converted to cash at first. Should such amount of default be failed to be closed, the non-defaulting participants' assets subject to the guarantee mechanism contributions shall be converted to cash and the obtained amount shall be distributed to the beneficiary participants of the day subject to default pro-rata to their receivables.

b) The extent to which the actions are automatic or discretionary.

The extent to which actions are automatic or discretionary is governed by the provisions of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. Details regarding default management are explained in Chapter Five titled "Default and Mistreatment Payment Procedures" of the System Rules.

c) Changes to normal settlement practices.

Details regarding default management are explained in Chapter Five titled "Default and Mistreatment Payment Procedures" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. Among potential actions, there are no methods that can be considered outside normal settlement practices.

d) The management of transactions at different stages of processing.

As per Article 8 titled "Central Counterparty Default Management Committee (DMC)" of the Directive on Takasbank Central Counterparty Default Management Principles, a Default Management Committee shall be established as a decision-making mechanism during default management processes in the markets and/or capital market instruments in which Takasbank offers CCP services. The Committee shall also act as the decision-making body in resolving defaults that occur in markets and platforms where Takasbank offers central clearing or operational services.

Takasbank's CCP default management process is designed not as a set of rules that must be applied in the same way under all circumstances without considering their impact, but as a process which enables the CCP Default Management Committee to use its discretionary power to look after the interests of both the defaulting participant and Takasbank, as well as the non-defaulting CCP participants and the markets. The Default Management Committee takes into account the causes of the default and its effects on the markets in utilizing default management instruments.

e) The expected treatment of proprietary and customer transactions and accounts.

After the notification of default, the process is governed by the resolutions that the Default Management Committee shall take in accordance with the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc.

f) The probable sequencing of actions.

After the notification of default, the process is governed by the resolutions that the Default Management Committee shall take in accordance with the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc.

In that regard, the following order shall be observed in the use of resources in the event of the default of a system participant:

- Guarantee mechanism contribution of the system participant that defaulted
- Guarantee mechanism contributions of other system participants.

g) The roles, obligations and responsibilities of the various parties, including non-defaulting participants.

Decisions regarding the measured and orderly use of default management resources shall be made by the Default Management Committee, including the decision to use the guarantee mechanism contributions of participants that have not defaulted. The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. clearly defines the responsibilities of the system participants that have not defaulted.

h) The existence of other mechanisms that may be activated to contain the impact of a default.

The Bank aims to ensure that resources in the guarantee mechanism, which was created for Cheque Clearing transactions in a bid to minimize the impact of defaults on the markets, have high liquidity. In that regard, as per Article 26 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following assets are accepted as guarantee mechanism contribution:

- Cash (Turkish Lira/Convertible Foreign Currency)
- Government Domestic Debt Securities
- Lease certificates issued by the Republic of Turkey Undersecretariat of Treasury, Asset Leasing Company

As per Article 31 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., Takasbank may incur a debt in order to manage the default and mitigate its effects on markets. As per this Article, when the transactions in the system are failed to be completed, and if Takasbank is able to access the liquidity facilities of the CBRT or has an opportunity to provide liquidity by way of borrowing against collateral from a financial institution, the assets deposited as guarantee mechanism contribution by the participants can be given as collateral to the CBRT or the financial institution providing the credit facility to

benefit from the liquidity opportunities, provided that they shall be compliant with the rules of these entities related to collateral.

Use of financial resources

S.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?

The Bank aims to ensure that resources in the guarantee mechanism, which was created for Cheque Clearing transactions in a bid to minimize the impact of defaults on the markets, have high liquidity. As per Article 26 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following assets are accepted as guarantee mechanism contribution:

- Cash (Turkish Lira/Convertible Foreign Currency)
- Government Domestic Debt Securities
- Lease certificates issued by the Republic of Turkey Undersecretariat of Treasury, Asset Leasing Company

As per Article 31 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., Takasbank may incur a debt in order to manage the default and mitigate its effects on markets. As per this Article, when the transactions in the system are failed to be completed, and if Takasbank is able to access the liquidity facilities of the CBRT or has an opportunity to provide liquidity by way of borrowing against collateral from a financial institution, the assets deposited as guarantee mechanism contribution by the participants can be given as collateral to the CBRT or the financial institution providing the credit facility to benefit from the liquidity opportunities, provided that they shall be compliant with the rules of these entities related to collateral.

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

As per the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following resources shall be used in the event of the default of a system participant:

- Guarantee mechanism contribution of the system participant that defaulted
- Guarantee mechanism contributions of other system participants.

As per Article 31 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., Takasbank may incur a debt in order to manage the default and mitigate its effects on markets. As per this Article, when the transactions in the system are failed to be completed, and if Takasbank is able to access the liquidity facilities

of the CBRT or has an opportunity to provide liquidity by way of borrowing against collateral from a financial institution, the assets deposited as guarantee mechanism contribution by the participants can be given as collateral to the CBRT or the financial institution providing the credit facility to benefit from the liquidity opportunities, provided that they shall be compliant with the rules of these entities related to collateral.

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

As per Article 29 titled "Guarantee mechanism contribution call" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., Takasbank monitors, at least in a daily manner, the adequacy level of the assets deposited against the guarantee mechanism contribution. A guarantee mechanism contribution call shall be issued by Takasbank at the end of each business day in the event these assets fall below the contribution amount determined by Takasbank due to the increase in the participant's guarantee mechanism contribution, any change occurred in the appreciated guarantee mechanism contribution amount or for other reasons. The participants are obliged to fulfill their guarantee mechanism contribution call obligations at the latest until 11:00 on the next business day. The default provisions shall be applied for the obligations that fail to be fulfilled during this time period.

Key Consideration 2: An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.

S.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?

The rules and procedures to be applied in default management against the defaulting and non-defaulting participants have been stipulated in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. In addition, the rights and powers of Takasbank and the responsibilities of the participants in events of default have also been incorporated into the agreements executed with the participants, and the legal risks that might arise thereof have been minimized.

Moreover, a Default Management Committee is established in order to act as the decision-making mechanism in default management processes. The Default Management Committee determines and is responsible for all measures to be taken and appointments to be made during the default management process.

S.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?

As per Article 18 titled "Obligation to notify the Bank" of the Regulation on Operations of Payment and Securities Settlement Systems, the system operator shall promptly notify the CBRT about situations which disrupt the regular operation of the system and cause interruptions or prevent the closure of the system. In that regard, except for cases of pre-default where the Takasbank Default Management Committee has concluded that the default does not stem from a permanent deficiency

in the participant's ability to fulfill its obligations, Takasbank shall promptly notify the CBRT in the event that a participant is presumed to fail to fulfill its obligations towards Takasbank, and that it has been decided that the provisions of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. shall be applied against the participant.

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

It is stipulated that at Takasbank, the CCP Department shall carry out the secretariat operations of the Default Management Committee, and prepare and submit to the Committee all types of technical analysis that will constitute a basis for the decisions to be made by the Committee. The Collateral and Default Management Team under the CCP Department is responsible for continuously monitoring of default management resources and the risk/collateral balances, and for reviewing the collateral management process.

Key Consideration 3: An FMI should publicly disclose key aspects of its default rules and procedures.

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

Details regarding default management are explained in Chapter Five titled "Default and Mistreatment Payment Procedures" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. This document can be accessed on Takasbank's website.

- 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;
- e) Where direct relationships exist with participants' customers, the mechanisms to help address the defaulting participant's obligations to its customers.

The abovementioned issues are clarified in great detail in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc.

Key Consideration 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.

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

A default management simulation shall be conducted once a year by the Default Management Committee and with the participation of market participants, in order to test the executability of default management processes. The simulations can be based on a single market, and can also be applied to cover single or multiple defaults that might be experienced in more than one market. Default scenarios are determined by Takasbank.

S.13.4.2: 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?

Default management tests for the Cheque Clearing System are expected to be conducted in December 2019.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 13

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 15: General Business Risk

An FMI should identify, monitor, and manage its general business risk. In this respect, it should hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Key Consideration 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.

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

General business risk is defined as a potential deterioration in the Bank's financial conditions as a result of covering - using equity - a loss that stems from the Bank's expenses exceeding its income.

As per banking regulations, risks that result from all of Takasbank's operations are categorized under credit risk, market risk, and operational risk. Therefore, the general business risk mentioned above is defined under banking risks.

S.15.1.2: How does the FMI monitor and manage its general business risks on an ongoing 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?

Takasbank is obligated to manage all risks that it is exposed as part of its banking operations in accordance with the capital adequacy requirements stipulated in Banking regulations. Under the supervision of the BRSA, Takasbank keeps its capital adequacy ratio, which represents the ratio to equity of the total amount subject to the Bank's credit risk, market risk, and operational risk combined, above 12%. In that regard, the Bank complies with legal capital adequacy ratios in a manner that prevents its equity from reducing as a result of an income/expense imbalance due to any of its operations; the Bank conducts its operations so that its equity can always cover the risks it is exposed to.

Takasbank budgets its income and expenses by taking into account the trading volume forecasts of Borsa Istanbul to which it offers clearing & settlement and CCP services, and the operations are maintained with a profitability that would provide each year to the shareholders a return on equity at a level higher than the inflation and risk-free interest rate. Income and expense realizations and deviations from the budget are rigorously evaluated in the monthly Asset and Liability Committee meetings; and necessary actions are taken to not to stay below the income targets and above the expense targets. With that said, the abovementioned monthly meetings also witness discussions and assessments on operational loss, which is the risk of an income/expense imbalance resulting from all of Takasbank's services except for clearing & settlement and CCP operations, and necessary actions are taken in consideration of all budget deviations in all services. However,

considering the Bank's strong capital structure and sustainably high return on equity, the general business risk is deemed to be fairly low.

Key Consideration 2: An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.

S.15.2.1: Does the FMI hold liquid net assets funded by equity so that it can continue operations and services as a going concern if it incurs general business losses?

Takasbank holds some of its equity as liquid net assets so that it can continue operations as a going concern if it incurs general business losses.

S.15.2.2: How does the FMI calculate the amount of liquid net assets funded by equity to cover its general business risks? How does the FMI determine the length of time and associated operating costs of achieving a recovery or orderly winddown of critical operations and services?

Takasbank's net liquid assets comprise its total securities and total net cash entries. The part of the total securities that is added to net liquid assets is arrived at by excluding securities subject to repo and securities blocked for any reason. The other component that is added to total net liquid assets, which is net cash entries, represents the positive difference between future cash inflows and outflows happening on the same day.

Key Consideration 3: An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.

Recovery or orderly wind-down plan

S.15.3.1: Has the FMI developed a plan to achieve a recovery or orderly wind-down, as appropriate? 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)?

Istanbul Clearing, Settlement and Custody Bank Inc. prepares a Recovery Plan that is approved by the Bank's Board of Directors, as per Article 11, paragraph 1, subparagraph (1) of the Regulation on Operations of Payment and Securities Settlement Systems. There is also Istanbul Clearing, Settlement and Custody Bank Inc. Orderly Wind-Down Plan, which was prepared and approved by the Board of Directors.

The manner in which the Cheque Clearing System structure would be transferred to another institution should the scenarios listed in Takasbank Orderly Wind-Down Plan come true is explained in detail in the plan. The actions that shall be taken before the transfer in order to prevent any negative impact on system participants, as well as the steps to be taken with regard to settlement transactions, are all documented in the plan mentioned above.

Resources

S.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?

Takasbank does not allocate nor commit any portion of its capital for Cheque Clearing transactions for which it does not act as a CCP and only functions as a System operator.

S.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?

Takasbank does not allocate nor commit any portion of its capital for Cheque Clearing transactions for which it does not act as a CCP and only functions as a System operator.

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

Takasbank does not allocate nor commit any portion of its capital for Cheque Clearing transactions for which it does not act as a CCP and only functions as a System operator.

Key Consideration 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.

S.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?

Takasbank does not allocate nor commit any portion of its capital for Cheque Clearing transactions for which it does not act as a CCP and only functions as a System operator.

S.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?

Takasbank does not allocate nor commit any portion of its capital for Cheque Clearing transactions for which it does not act as a CCP and only functions as a System operator.

Key Consideration 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 periodically.

S.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?

In capital planning, Takasbank complies with Takasbank Internal Capital Adequacy Assessment Process Directive and Takasbank Recovery Plan approved by the Board of Directors. Capital increase is considered as one of the actions to be resorted to when required; and although it is envisaged that the capital support to be needed in terms of the shareholding structure can easily be obtained, Takasbank endeavors to minimize the likelihood of encountering any need for capital increase under difficult conditions by establishing, while still under normal circumstances, the capital it may need under stressed conditions. Making the decision for capital increase when necessary is under the authority of the General Assembly (the shareholders), and Takasbank Board of Directors can call the General Assembly for an extraordinary meeting.

Also see 15.3.1.

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

Takasbank Recovery Plan is reviewed at least once a year with the participation of all relevant units of the Bank in a meeting coordinated by the Risk Management Unit. Should there be a change in the Plan regarding the system or services being provided, the process owner applies to the Risk Management Unit for a review of this Plan. Both Takasbank Orderly Wind-Down Plan and Takasbank Recovery Plan are reviewed simultaneously.

During the review, the Bank's risk profile, new products and services, and the results of ICAAP reporting are taken into account, and the appropriateness of the actions found in the Plan is checked.

S.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?

After Takasbank Recovery Plan and Takasbank Orderly Wind-Down Plan have been reviewed, they are approved by the Board of Directors and begin to be enforced; the CBRT is subsequently notified of the plans that have been prepared.

Making the decision for capital increase when necessary is under the authority of the General Assembly (the shareholders), and Takasbank Board of Directors can call the General Assembly for an extraordinary meeting.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 15

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 16: Custody and Investment Risks

An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

Key Consideration 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.

S.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?

Takasbank does not employ custodians in cheque clearing transactions.

S.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?

Takasbank does not employ custodians in cheque clearing transactions.

Key Consideration 2: An FMI should have prompt access to its assets and the assets provided by participants, when required.

S.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?

Takasbank does not employ custodians in cheque clearing transactions.

S.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?

Takasbank does not employ custodians in cheque clearing transactions.

Key Consideration 3. An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.

S.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 the concentration of risk exposures to its custodian banks?

Takasbank does not employ custodians in cheque clearing transactions.

Key Consideration 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 claimed on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.

Investment strategy

S.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?

The Bank's fund management strategy is focused on the goals of not having any liquidity issues, ensuring the optimization of the risk/return balance, and leveraging the resources with the highest possible level of efficiency.

The investment strategy is approved by the Board of Directors, and when there are changes that need to be made to the strategy, the updated version is submitted to the Board of Directors for approval.

Due to the GDS and derivative financial instruments that can/will be added to the portfolio cause the Bank to become exposed to market risk. There are also the interest rate risk, currency risk limits, and signal values, which are defined as the ratio of the portfolio's current value to its value subject to risk that it might have in the future. These are all followed daily by the Risk Management Unit. Should there be any breaches in the limits and signal values, the Senior Management can take such actions as modifying the liquidity and funding strategy, and creating a portfolio that comprises instruments with less risk, as per Article 8, paragraph 11 of Takasbank ICAAP Directive.

S.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?

In determining investment maturity, the needs of the markets that Takasbank provides services for are taken into account, with respect to the structure and use of their collateral or guarantee funds.

With "best efforts" as the performance criteria, Takasbank chooses to engage in placements to deposit banks with public capital in a bid to minimize credit risk.

Risk characteristics of investments

S.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?

It is essential that fund management operations are carried out within legal limits, and are realized while taking into account the Bank's risk appetite, risk limits, and signal values.

As per the fund management strategy, treasury operations are carried out with banks that have been issued a limit by the Board of Directors. The Bank's securities portfolio can include Government Domestic Debt Securities issued by the Republic of Turkey Ministry of Treasury and Finance, as well as debt securities issued by Turkey-based banks, and lease certificates. With that said, derivative products can be used for risk-mitigating transactions in a protective manner and with regard to the positions that have been undertaken as a result of CCP services.

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

Participant assets are not added to the securities of the participants or affiliate companies. The limits associated with investing participant assets are included in the Bank's directive on fund management strategies.

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

Should liquid resources in the guarantee mechanism created for Cheque Clearing transactions become exposed to an adverse price effect, rather than seeking to achieve liquidity by selling assets, if Takasbank is able to access the liquidity facilities of the CBRT or has an opportunity to provide liquidity by way of borrowing against collateral from a financial institution, the assets deposited as guarantee mechanism contribution by the participants can be given as collateral to the CBRT or the financial institution providing the credit facility to benefit from the liquidity opportunities.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 16

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 17: Operational Risk

An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Key Consideration 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.

Identification of operational risk

S.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, from the FMI's participants or from external sources?

The probability of loss resulting from inadequate or failed internal processes, people, and systems or from external events, which also includes legal risk, is defined as operational risk. Legal risks comprise the expense/loss risk stemming from disputes that lead to litigation or settlement (arbitration, receivable negotiations etc.) due to lack of compliance with regulations, the Bank's voluntary actions (payment refunds without a complaint being filed, or discounts in future services to be rendered to customers), or the probability of loss that the Bank might be exposed to as a result of the misinterpretation of or incomplete knowledge of the Law or regulations, unforeseeable amendments in the Law or regulations, and the unenforceability of contracts due to legal barriers. These definitions are included in Takasbank Operational Risk Management Procedure approved by the Board of Directors.

When legal risks, risks associated with IT technologies, and risks emanating from important stakeholders and partners that might have an impact on the Bank's operations and reputation are digitized, they are categorized under operational risk. Business continuity risks that might disrupt the Bank's services are also part of operational risk management.

The Bank's operational risk policy is predicated on maintaining the Bank's operations in a manner that ensures that legal and internal capital limits are not exceeded, and remain below the operational risk appetite determined by the Board of Directors.

In operational risk management, a triple defense line approach is employed, consisting of activity line management, central risk management function, and independent review. According to this approach;

- In activity line management, operational risks arising from the products and services offered and the processes, human resources and systems used are identified and the Senior Management is informed, ensuring that appropriate action is taken.
- The central risk management function is ensured by instituting risk and control systems inside the Bank, segregating the roles and responsibilities, and having the Risk Management Unit and the Internal Control and Compliance Unit to review the Bank's processes and functions, in addition to the review of the operational units that carry out these processes and functions.
- The independent audit process, on the other hand, consists of evaluating the risk management and internal control framework in all its aspects, and this function is executed by the Internal Audit Unit.

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

The probability of loss resulting from inadequate or failed internal processes, people, and systems or from external events, which also includes legal risk, is defined as operational risk. When legal risks, risks associated with IT technologies, and risks emanating from important stakeholders and partners that might have an impact on the Bank's operations and reputation are digitized, they are categorized under operational risk. Business continuity risks that might disrupt the Bank's services are also part of operational risk management.

All of Takasbank's critical systems have backups, including the network infrastructure. That is why no specific faults have been detected.

Management of operational risk

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

The principles regarding the risk management systems dealing with the Bank's reputation-related, operational, and strategic risks are governed by Takasbank Operational Risk Management Procedure approved by the Board of Directors. This document is reviewed by the Board of Directors at least once a year.

Operational risk is measured by the Risk Management Unit on an annual basis with the methods specified in the Guidelines on the Measurement and Assessment of Banks' Capital Adequacy and relevant regulations.

Operational risk stress tests and scenario analyses are implemented in accordance with policies and implementing procedures defined within the framework of the principle of proportionality mentioned in Takasbank Stress Testing Program Policy and Implementing Principles Procedure.

Risks that are defined by each unit of the Bank as process and subprocess-based risks are monitored in the Operational Risk Database. In the Operational Risk Database updated at least once a year, sub-process risks and controls instituted with respect to these risks can be defined in an open

platform that is available to the Bank personnel at all times by process owners and/or risk and control supervisors, after holding meetings with all Bank units coordinated by the Risk Management Unit, and the Internal Control and Compliance Unit, based on the Bank's Service Manual. And the records associated with the database are fed into the Governance Declaration as input. Actions that need to be taken with respect to the risks whose net risk level is equal to or more than operational risk appetite, and key risk indicators are monitored by the Internal Control and Compliance Unit, and these risk are reported to the Senior Management and it is ensured that necessary action is taken.

The Risk Management Unit conducts monthly reviews of operational risk limit and signal values, as well as the level of compliance with operational risk appetite as determined by the Board of Directors. The Risk Management Unit reports signal value breaches to the Audit Committee, Senior Management, and the managers of units responsible for risk via email. The Risk Management Unit promptly issues a written notification to the Senior Management and the Audit Committee in order to ensure that necessary action is taken in the event of any breaches in risk limits and risk appetite.

Regarding information technologies (IT), the progress of indicators such as disruptions, compliance of support service firms with the terms of their contracts and others are monitored every six months and reported to the Senior Management.

Policies, processes, and controls

S.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?

The Bank's operational risk policy is predicated on maintaining the Bank's operations in a manner that ensures that legal and internal capital limits are not exceeded, and remain below the operational risk appetite determined by the Board of Directors.

In managing operational risk, the principle of proportionality is taken into account, as per BRSA regulations and good practice guidelines. Within the framework of the principle of proportionality, issues such as the Bank's size, risk profile, risk appetite, as well as the volume, nature, and complexity of its operations, tasks, and transactions are considered. With that said, the impact levels of the risks associated with IT technologies as defined in the Operational Risk Database are measured on the basis of COBIT information criteria (confidentiality, integrity, and accessibility/reliability).

The Senior Management reviews and submits to the Board of Directors for approval such issues as whether the Bank would accept risks that are equal to or above the Bank's operational risk appetite and that are impossible to control or mitigate, and whether the volume of operations in the abovementioned activity line would be reduced or completely terminated.

Takasbank Procedure for Preparing Workflow Diagrams and Calculating Combined Control Score is taken into account in establishing necessary controls towards operational risk, while Takasbank

Directive on Prevention of Money Laundering and Terrorist Financing is taken into account during all practices aimed at preventing money laundering and terrorist financing.

Practices related to support services, business continuity, and all services procured from service providers are governed by all intrabank regulations, primarily Takasbank Support Services Procurement Procedure, Takasbank Business Continuity Directive, Takasbank Business Continuity Procedure, and Takasbank Service Provider Relations Management Procedure, respectively.

Risks to the Bank are mitigated or transferred through the following;

- a) Use of insurance,
- b) Procurement of services from service providers and/or support services firms,
- c) Determining and monitoring risk appetite, limits and signal values,
- ç) Operations aimed at ensuring business continuity,
- d) And the establishment of controls, and the existence of audit mechanisms.

S.17.1.5: 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?

Takasbank Personnel Directive, Takasbank Career Management Procedure, and Takasbank Personnel Leave Procedure contain detailed information on issues such as the human resources policy, human resources practices, recruitment and placement, compensation management, leave practices, social rights and work life, performance management and career management, and education. Executive managers are recruited in accordance with the provisions of CBRT, CMB, and BRSA regulations. Human resources policies are established by organizing education and orientation programs. These processes are carried out over the ERP (Corporate Resource Management) application.

Directives and procedures at the Bank also contain information on rewarding, motivation, education, rotation, redundancy, job descriptions, and control points.

The principles regarding the reporting of irregularities are included in Takasbank Procedure on Reporting of Intrabank Irregularities-Problems, and Takasbank Gifting Procedure.

S.17.1.6: How do the FMI's change management and project management policies and processes mitigate the risks that changes and major projects inadvertently have on the smooth functioning of the system?

Change management and project management operations are conducted in accordance with pre-defined procedures. The risk management process, which is an important subprocess to project management, is also carried out in keeping with the rules defined in the procedure; and project-

based risks are evaluated by relevant teams and necessary measures are taken under the auspices of the project manager. Again according to procedures, changes are only enforced after they are saved through a portal, necessary approvals are obtained, and relevant parties are notified of the changes to be enforced.

In both processes, integrated tests are conducted in order to see the effects of the changes on the current system, and similar tests are organized with the participation of market stakeholders if necessary. After the results of the tests have been established as positive, practices begin to be executed.

Relevant procedures:

- Takasbank Project Management Procedure
- Takasbank Change Management Procedure

Key Consideration 2: An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk management framework. Systems, operational policies, procedures, CPSS-IOSCO – Disclosure framework and assessment methodology – December 2012 59 and controls should be reviewed, audited, and tested periodically and after significant changes.

Roles, responsibilities and framework

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

As per Takasbank Operational Risk Management Procedure approved by the Bank's Board of Directors, core roles and responsibilities have been defined with a triple defense line approach. The triple defense line approach consists of activity line management, central risk management function, and independent review.

- a) In the first stage, relevant units are responsible for defining the process- and subprocess-based risks and controls that emerge during the execution of operations.
- b) In the second stage, the Risk Management Unit and the Internal Control and Compliance Unit are responsible for establishing risk and control systems within the Bank,
- c) In the third stage, the Internal Audit Unit is responsible for ensuring an independent review of the entire operational risk management system and the internal control system.

It is essential that all Bank personnel actively take part in operational risk management in accordance with their tasks and responsibilities, and as an indispensable part of their daily activities.

Process owners define risk and control supervisors for each unit, taking into account the Bank's organization scheme. Risk and control supervisors are tasked with notifying the Risk Management

Unit of risks arising from Unit operations carried out to support the work related to the Operational Risk Database and the Operational Risk Loss Database, developments regarding risks and controls, losses incurred, and situations that take a toll on business continuity. The supervisors are also tasked with entering the risks that the Bank is exposed to into the Operational Risk Database. With that said, it is incumbent upon Bank employees to adequately assist risk and control supervisors during this process.

As a result of the audit and control operations they carry out, the Internal Audit Unit and the Internal Control and Compliance Unit report the risks and losses that they have found to be absent in the database to the Risk Management Unit.

Risk-mitigating actions recommended with respect to the risks whose net risk level is equal to or more than operational risk appetite, and key risk indicators are monitored by the Internal Control and Compliance Unit.

Other tasks and responsibilities are explained in detail in Takasbank Operational Risk Management Procedure.

S.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?

The results of the Operational Risk Database, which are kept up to date by all units of the Bank and consolidated by the Risk Management Unit, are reported to the Bank's Board of Directors on an annual basis. Moreover, Takasbank Operational Risk Management Procedure, which includes the framework for operational risk management, is reviewed and approved by the Board of Directors at least once a year. Operational risk appetite, operational risk limit, and signal value are reviewed at least once a year.

Review, audit, and testing

S.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?

It is obligatory that risk management processes, policies, and implementing procedures adapt to changing conditions. The Board of Directors regularly reviews the adequacy of abovementioned policies and implementing procedures, and reviews Takasbank Operational Risk Management Procedure annually.

The operational risk management framework and the methodologies, methods, or models in use are reviewed in accordance with any changes in the Bank's risk profile and risk appetite, as well as new products, services, processes, systems, and external factors.

Takasbank's operational risk appetite is reviewed once a year at a minimum. Credit risk limits and signal values are reviewed in keeping with market conditions and changes in the Bank's strategy.

The Operational Risk Database can be reviewed and updated any time by relevant units, as long as the review takes place at least once a year. As a result of the audit and control operations they carry out, the Internal Audit Unit and the Internal Control and Compliance Unit report the risks and losses that they have found to be absent in the database to the Risk Management Unit, and in that regard, necessary updates are carried out by risk and control supervisors.

In the Customer Satisfaction survey held annually by the Bank, participants were asked whether the rules, agreements and procedures with regard to the services they receive were sufficiently clear and easy to understand, and there were no negative responses.

S.17.2.4: To what extent, where relevant, is the FMI's operational risk management framework subject to external audit?

As per BRSA regulations, banking operations are subject to audit by an independent auditing company once a year, and IT systems once every two years. As per CMB and CBRT regulations, however, IT systems are subject to audit once a year by an independent auditing company. The Bank also ensures external testing is carried out within the framework of the Bank's ISO 22301 and ISO 27001 certificates.

Key Consideration 3: An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.

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

FMI operational reliability goals are documented in the IT systems directive, IT process areas, processes, and subprocesses. Compliance with the COBIT framework forms the basis for the principles with regard to IT systems management. All IT procedures and processes are covered in this directive. The entire documentation is versioned, preserved, and kept up to date in the document management system. Similarly, continuity goals with respect to IT services are set and documented for each critical service. These goals are then periodically measured and reported so as to check whether they have been achieved. If the goals in question are unreachable, actions are taken to improve the conditions. Reliability goals are assigned for Takasbank as a whole rather than for individual services, and whether or not these goals have been reached is measured with a participant satisfaction survey held by the Corporate Communication and External Services Team. The goals are documented and reported in the corporate key performance indicators report.

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

The goals set for IT systems are goals of sustainability and continuity, and expectations of stakeholders are taken into consideration when determining them. Measurements are communicated to stakeholders and their feedback is sought. This satisfaction survey is held once a year, and all participants are asked about their level of satisfaction with Takasbank's reliability, and actions are taken to address deviations from the goal.

S.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?

Such policies are documented in Takasbank ISO22301 certificate, BCMS documentation, Takasbank Business Continuity Directive and Takasbank IT Systems Directive approved by the Board of Directors, as well as procedures linked to these regulations.

Key Consideration 4: An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.

S.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?

Takasbank systems offer capacities that are far higher than the current level of usage. The systems are measured periodically in terms of capacity, and their capacities are planned in accordance with ITIL processes. Capacities are assessed during business continuity tests and continuity plans, and IT investment plans are made according to this assessment.

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

The Bank's infrastructure capacity is being reviewed regularly, and we believe it unlikely that capacity problems should arise since connections to the system are secured through Local Area Network. Disk capacities are also monitored periodically, and disks that have reached a certain level of fullness are updated on a daily basis.

Key Consideration 5: An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.

Physical security

S.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?

Processes within the framework of Takasbank information security policy have been defined, and the policy has been approved by the Bank's Board of Directors. Similarly, a self-evaluation shall be conducted while taking into account processes that are compatible with ISO 27001 certification and the guide on "Cyber Resilience for Financial Market Infrastructures". Moreover, penetration tests that are carried out in accordance with BRSA communiques, as well as monthly vulnerability scans help the Bank improve the whole operation.

Risks that might arise during projects are also evaluated on a regular basis, and security tests are conducted using the applications that have been developed by the Bank.

S.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?

Takasbank has ISO 27001 information security certificate, and accordingly, physical security processes are also operated in keeping with certain standards. In addition, a self-evaluation shall

be carried out in accordance with the guide on "Cyber Resilience for Financial Market Infrastructures", and the Bank's security processes shall be reviewed with this approach.

Information security

S.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?

Processes within the framework of Takasbank information security policy have been defined, and the policy has been approved by the Bank's Board of Directors. Similarly, a self-evaluation shall be conducted while taking into account processes that are compatible with ISO 27001 certification and the guide on "Cyber Resilience for Financial Market Infrastructures". Moreover, penetration tests that are carried out in accordance with BRSA communiques, as well as monthly vulnerability scans help the Bank improve the whole operation.

S.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?

As a bank, Takasbank is subject to COBIT audits, and its relevant processes are assessed once every two years as part of an independent audit. Similarly, a conformity to standard review is carried out at Takasbank, which has the ISO 27001 certificate. A self-evaluation shall be conducted while taking into account the guide on "Cyber Resilience for Financial Market Infrastructures". As per CMB and CBRT regulations, IT systems are subject to audit once a year by an independent auditing company.

Key Consideration 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 periodically test these arrangements.

Objectives of business continuity plan

S.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?

All processes and workflows that are necessary to fulfill the requirements of business continuity at the Bank are included in the Business Continuity Management Plan, Takasbank Business Continuity Procedure and Business Continuity Plan, and Takasbank Business Continuity Directive.

Business Continuity Management Review meetings are held once every six months with the participation of the managers all critical business and IT units under the leadership of the General Manager. When it comes to critical issues that come up during these meetings, the recommendations of process owners move the issue at hand forward.

BCMS Committee is responsible for

- a) acting as a consultant in operations aimed at planning, implementing, controlling, and enhancing the BCMS,
- b) reviewing legal and regulatory requirements and the steps that are or have to be taken with regard to them during periodic meetings as far as the continuity of the Bank's operations and services is concerned.

In keeping with the business continuity plan, Takasbank carries out business impact analyses, determines goals, and creates service recovery plans accordingly. The Emergency Operation Center has been established. In addition, comprehensive backups of the systems are being made on a regular basis.

Design of business continuity plan

S.17.6.2: 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?

The business continuity plan of the FMI was prepared by process owners that are responsible for both the business services and the service enablers that make them possible. It is tested at least once a year. The Service Recovery Time Objective (RTO) has been determined by process owners, and the RTO of the services offered by the FMI is 2 hours. There is also a transition plan that includes working from the backup data center or backup operation center for services that cannot be recovered within 2 hours. Compliance with RTOs is tested at least once a year through emergency drills.

S.17.6.3: 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)?

Process owners have determined what risks the recovery plans (Business Continuity Plan) include, and what strategies are to be carried out when such risks materialize. This is tested periodically within appropriate scenarios (including data loss scenarios). In order to minimize data loss, backups of all data are created at the end of each day, and most data at the bank is stored with a storage period of 20 years. In addition, both the primary and secondary data centers receive the data simultaneously.

S.17.6.4: How do the FMI's crisis management procedures address the need for effective communications internally and with key external stakeholders and authorities?

Takasbank has a communication plan, and a Communication Table that features communication texts that must be used during normal periods and in times of crisis.

Secondary site

S.17.6.5: 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?

The Bank's data center complies with today's data center standards. Emergency Data Center (EDC) systems have the capacity to carry out the Bank's functions and communication with other institutions.

The second operation center, Emergency Operation Center (EOC) is based in Borsa Istanbul Yenibosna campus. It is 30 km from Takasbank. It was designed to accommodate an adequate number of employees should it need to be used during an emergency. Employees can use the current clients to promptly access the EDC.

S.17.6.6: 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?

In order to continue business activities during a service disruption, the Service Recovery Procedures consider such methods as conducting business manually, business units carrying out business operations with instructions in lieu of participants, and using alternative applications.

Review and testing

S.17.6.7: 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?

The Recovery Service Plan for critical services is reviewed at least once a year and tested under the Emergency Drill. In addition, process owners also carry out unit testing and/or desktop testing.

S.17.6.8: 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?

Takasbank Emergency Drills, held every year, are carried out with all participants and in cooperation with Borsa Istanbul and the Central Registry Agency, both of which are in Borsa Group. In addition, critical service providers are contacted before each drill, and the timing and scenario of the drill are shared with them, and they are asked for the information related to the employees that will contribute to the drill. Some of them offer remote support, while some participate in the drill in person.

Key Consideration 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.

Risks to the FMI's own operations

S.17.7.1: What risks has the FMI identified to its operations arising from its key participants, other FMIs, and service and utility providers? How and to what extent does the FMI monitor and manage these risks?

The Bank's risks arising from the Cheque Clearing System are categorized under operational risk. These risks are monitored via the Operational Risk Database and the Operational Risk Loss Database, and there are no records of any risks originating from the CBRT listed in the Operational Risk Loss Database.

Risks that are defined by each unit of the Bank as process and subprocess-based risks are monitored in the Operational Risk Database, as per Takasbank Operational Risk Management Procedure. In the Operational Risk Database updated at least once a year, sub-process risks and controls instituted with respect to these risks can be defined in an open platform that is available to the Bank personnel at all times by process owners and/or risk and control supervisors, after holding meetings with all Bank units coordinated by the Risk Management Unit, and the Internal Control and Compliance Unit, based on the Bank's Service Manual. And the records associated with the database are fed into the Governance Declaration as input. Actions that need to be taken with respect to the risks whose net risk level is equal to or more than operational risk appetite, and key risk indicators are monitored by the Internal Control and Compliance Unit, and these risk are reported to the Senior Management and it is ensured that necessary action is taken.

S.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?

The Bank evaluates risks that might occur during service procurement in order to ensure the continuity of the services received from support services firms. As per the "Guidelines on the Bank's Procurement of Support Services" published by the BRSA, an annual risk management program is created, and the Risk Analysis Report prepared by the Risk Management Unit regarding support services providers, along with the technical adequacy report published by the relevant unit that receives the said services, are reported to the Board of Directors at least once a year as an appendix to the assessment report of the Audit Committee. Similarly, the Bank determined levels of criticality for service providers, and designates the important ones.

With that said, the Bank also asks companies to have liability insurance in order to compensate potential damages that might result from the risks that the Bank may be exposed to due to the services procured from support services providers.

The compliance of support services firms with the existing contracts is monitored every six months by the Risk Management Unit, and the results are included in the IT Risk Assessment Report, which is submitted to the Board of Directors.

The Bank's audit of its IT technologies management processes is conducted in accordance with the Communiqué on the Principles of Banks' IT System Management, as well as IT systems regulations related to COBIT, CMB, and CBRT. In addition, the support services firms that the Bank receives services from can also be audited as part of the audit of IT systems management processes.

The Bank's Internal Control Unit may carry out on-site audits with regard to support services.

The obligations of the opposite parties are stated clearly, and the contracts include provisions regarding different levels of services (in terms of call, intervention and resolution times). The Periodic Monitoring Reports, which are prepared to monitor the level of compliance with the provisions of service level contracts, are conveyed to the Purchasing and Administrative Affairs Team in order to ensure that necessary actions are taken. These processes, along with the processes related to the evaluation of service provider performance and priority analysis are explained in detail in Takasbank Purchasing Directive, Takasbank Purchasing Procedure, Service Provider Relationships Management Procedure, Takasbank Support Services Procurement Procedure, and Takasbank Procedure Service Level Contracts Related to External Service Procurement. In addition, appended to contracts are Takasbank Directive on Information Security Policy, and the Declaration on Terms of Usage for Takasbank Information Assets by External Entities. The Internal Control and Compliance Unit also conducts periodic controls with regard to the service provider management process.

Risks posed to other FMIs

S.17.7.3: How and to what extent does the FMI identify, monitor and mitigate the risks it may pose to another FMI?

The Bank's risks arising from the Cheque Clearing System are categorized under operational risk. These risks are monitored via the Operational Risk Database and the Operational Risk Loss Database, and there are no records of any risks originating from the CBRT listed in the Operational Risk Loss Database.

Process and subprocess-based risks are defined by each unit of the Bank in the Operational Risk Database. In the Operational Risk Database updated at least once a year, sub-process risks and controls instituted with respect to these risks can be defined in an open platform that is available to the Bank personnel at all times by process owners and/or risk and control supervisors, after holding meetings with all Bank units coordinated by the Risk Management Unit, and the Internal Control and Compliance Unit, based on the Bank's Service Manual. And the records associated with the database are fed into the Governance Declaration as input. Actions that need to be taken with respect to the risks whose net risk level is equal to or more than operational risk appetite, and key risk indicators are monitored by the Internal Control and Compliance Unit, and these risk are reported to the Senior Management and it is ensured that necessary action is taken.

The risks that the Bank is/might be exposed to are covered for the most part with the insurance policies being purchased.

S.17.7.4: To what extent does the FMI coordinate its business continuity arrangements with those of other interdependent FMIs?

Tests are conducted and scenarios are determined in cooperation with other stakeholders that we rely on by virtue of our services. In addition, analyses related to relevant parties are repeated every year, with a view to evaluating communication efficiency for business continuity, BCMS-related maturity of the abovementioned firms, risks, and aspects that should be improved. The Bank's business continuity regulations, principles, and requirements are evaluated and harmonized by the Borsa Group Business Continuity Works Committee, which was created in coordination with Borsa Istanbul and Central Registration Agency. In addition, there is also a B2B Business Continuity Document prepared jointly for the three organizations.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 17

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 18: Access and Participation Requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Key Consideration 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.

Participation criteria and requirements:

S.18.1.1: What are the FMI's criteria and requirements for participation (such as operational, financial and legal requirements)?

The conditions for participation are stated in Chapter Three titled "System Participation and Participant Obligations" of the Regulation on Cheque Clearing Operations published by the CBRT.

As per Chapter Two of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., the following conditions must have been met in order to become a participant.

- A bank status being subject to the Banking Law No. 5411 dated 19/10/2005 must be held.
- The system agreement whose content is determined by Takasbank, the "Implementation Agreement for the Customer Instructions to be sent to Istanbul Settlement and Custody Bank Inc. via Fax Machine" and the "Letter of Undertaking for Cash, Assets, Collateral, Conditional Remittance and Electronic Funds Transfer (EFT) Instruction" published on Takasbank website and the pre-agreement instruction forms of these agreements and letters of undertaking should have been signed and submitted.
- The technical infrastructure must have been established to perform its transactions at Takasbank and the necessary measures must have been taken to ensure its operability.

S.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?

Banks applying for participation must have a bank status as per the Banking Law No. 5411.

During the application and admission process, there are no discriminating practices or limitations aside from the CBRT being a "special status participant". As per paragraph four of Article 5 titled "Participation in System", the CBRT is a special status participant of the System. Neither any application nor any assessment is required for the participation of the CBRT in the System.

Participation conditions are clearly stated in Chapter Two of the System Rules titled "Principles for Participation", and are available on Takasbank's website.

In addition, Participation Agreements signed with the Bank have a routine content, and the pre-agreement information form and the agreement are available on Takasbank's website.

Among participation conditions, there are no stipulations that unfairly restrict access.

Key Consideration 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.

Justification and rationale of participation criteria

S.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?

As per Article 9 titled "Participant Obligations" of the System Rules, the participants are responsible for taking measures against any issue that may prevent the proper functioning of the system or may expose the system to risk; participant obligations are also explained in detail in participant agreements.

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

Participants are obliged to have a bank status as per the Banking Law No. 5411.

Also, it is essential that the conditions stipulated in Chapter Three titled "System Participation and Participant Obligations" of the Regulation on Cheque Clearing Operations are met. The provisions found in both regulations were incorporated in the System Rules.

S.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)?

Participation conditions are the same for every participant (except for the CBRT, which as a special participant status), and explained in detail in the System Rules.

Least restrictive access

S.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?

Among participation conditions, there are no stipulations that unfairly restrict access.

Disclosure of criteria

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

Participation conditions are stated in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., announced to participants via a general letter, and shared with the public on the Bank's website.

Key Consideration 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.

Monitoring compliance

S.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?

As per Banking Law regulations, the state of participants is shared with the Bank.

Also, it is essential that participants also meet the conditions stipulated in Chapter Three titled "System Participation and Participant Obligations" of the Regulation on Cheque Clearing Operations. These conditions are also stated in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. Article 10 of the System Rules, which govern processes related to termination of participant activities, removal from the system and Takasbank's powers, also state the methods that shall be used in cases of compatibility with participation conditions.

S.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?

As per paragraph 1 of Article 10 titled "Termination of Participant Activities, Removal from the System and Takasbank's Powers" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., if the participant is found to have acted in contravention to participation conditions, Takasbank shall be entitled to ask for the fulfillment of relevant obligations within an appropriate time period to be given provided that it shall not exceed 3 months.

Suspension and orderly exit

S.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?

As per paragraph 2 of Article 10 titled "Termination of Participant Activities, Removal from the System and Takasbank's Powers" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., in case of occurrence of any risk of significant nature that would jeopardize the secure and uninterrupted

functioning of the clearing system due to failure to fulfill the obligations or loss of conditions for participation in the system, Takasbank shall be entitled to temporarily or permanently suspend the participant's activities without declaring any time period. The CBRT shall be informed of this matter.

Takasbank shall be entitled to take all types of measures it deems necessary including those given below in order to ensure completion of the clearing and settlement operations of the participant who is removed from the system or whose activities are suspended.

- Restraining the participant from conducting transactions directly on its accounts at Takasbank.
- Resorting to the participant's guarantee mechanism contribution.

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

The procedures for managing the suspension or orderly exit of a participant are explained in detail in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., announced to participants via a general letter, and shared with the public on the Bank's website.

In addition, Takasbank's rights and obligations are clearly stated in participant agreements signed with participants.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 18

Observed	Broadly Observed	Partly Observed	Not Observed	Not Applicable
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Principle 19: Tiered Participation Arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Key Consideration 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.

The Cheque Clearing System does not offer tiered participation. That is why the questions below were not answered.

S.19.1.1: Does the FMI have any tiered participation arrangements? If it does, please explain them.

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

Risks to the FMI

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

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

Key Consideration 2: An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.

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

The Cheque Clearing System does not offer tiered participation.

Key Consideration 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.

S.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, (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, and (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?

S.19.3.2: What risks to the FMI arise, and how does the FMI manage these risks arising from key indirect participants?

The Cheque Clearing System does not offer tiered participation.

Key Consideration 4: An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.

The Cheque Clearing System does not offer tiered participation. That is why the questions below were not answered.

S.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?

S.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?

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 19

Observed	Broadly Observed	Partly Observed	Not Observed	Not Applicable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Principle 21: Efficiency and Effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Key Consideration 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.

S.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?

Takasbank closely follows any developments about the Cheque Clearing System. It works with the CBRT to ensure that business rules are applied in an effective manner. Similarly, meetings are held with participants upon their request in order to make sure that the system rules fully meet the needs of the participants. Moreover, the customer satisfaction surveys implemented every year cement the Bank's service approach based on continuous improvement by ensuring that the impact that the services have on the other party are measured and necessary improvements are made.

Application screens are constantly improved in order to increase participant satisfaction.

All new arrangements and developments are first tested with Takasbank users and then with participants, and no application is launched online until after the tests have been completed without issues.

S.21.1.2: How does the FMI determine whether it is meeting the requirements and needs of its participants and other users and continues to meet those requirements as they change (for example, through the use of feedback mechanisms)?

Takasbank closely follows any developments about the Cheque Clearing System. It works with the CBRT to ensure that business rules are applied in an effective manner. Similarly, meetings are held with participants upon their request in order to make sure that the system rules fully meet the needs of the participants. Moreover, the customer satisfaction surveys implemented every year cement the Bank's service approach based on continuous improvement by ensuring that the impact that the services have on the other party are measured and necessary improvements are made.

Application screens are constantly improved in order to increase participant satisfaction.

All new arrangements and developments are first tested with Takasbank users and then with participants, and no application is launched online until after the tests have been completed without issues.

Key Consideration 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.

S.21.2.1: What are the FMI's goals and objectives as far as the effectiveness of its operations is concerned?

Takasbank's vision is as follows: *"To become an internationally preferred, reliable, effective and innovative organization, offering clearing, settlement, banking and central risk management services at international quality standards."* It structures its goals, strategies, and technological infrastructure around this main vision, and supports it with an executive system. In that regard, three-year strategic plans are created in order to determine the strategies that will shape the Bank's recurrent operations. These objectives are set in accordance with the financial targets aiming to increase the strength and financial value of the bank, the customer targets aiming efficient growth on the customers, the process targets intending to enhance technological infrastructure and provide effective and reliable service at a global level, and the organization/HR targets aiming to maximize the competency and performance of human resources.

S.21.2.2: How does the FMI ensure that it has clearly defined goals and objectives that are measurable and achievable?

Pursuant to the "Regulation on Corporate Governance Principles for Banks" published by the Banking Regulation and Supervision Agency (BRSA) and the "Communique on Corporate Governance" published by the Capital Markets Board (CMB), Takasbank prepares three-year strategic plans to determine its strategies that will guide its activities as a going concern. These objectives are set in accordance with the financial targets aiming to increase the strength and financial value of the bank, the customer targets aiming efficient growth on the customers, the process targets intending to enhance technological infrastructure and provide effective and reliable service at a global level, and the organization/HR targets aiming to maximize the competency and performance of human resources.

S.21.2.3: To what extent have the goals and objectives been achieved? What mechanisms does the FMI have to measure and assess this?

The Strategic Plan is reviewed periodically (annually) and the realizations thereof are monitored in a regular manner to ensure continuous and effective management of the level and performance of achieving these objectives.

Key Consideration 3: An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.

S.21.3.1: What processes and metrics does the FMI use to evaluate its efficiency and effectiveness?

The Bank conducts an external client satisfaction survey, and according to the results of this survey, the Bank carries out improvements to increase the efficiency and effectiveness of the

services it provides. In addition to the annual satisfaction survey, the Bank carries out briefing meetings and project tests with its participants.

S.21.3.2: How frequently does the FMI evaluate its efficiency and effectiveness?

Each year.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 21

Observed	Broadly Observed	Partly Observed	Not Observed	Not Applicable
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Principle 22: Communication Procedures and Standards

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

Key Consideration 1: An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.

Communication Procedures

S.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?

Takasbank Cheque Clearing System does not make use of an internationally accepted communications procedure, and CBRT payment systems (EFT) are used in TRY payments since transactions in the system are carried out in TRY.

EFT, ESTS, and SWIFT systems are used in guarantee mechanism contribution payments.

S.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?

Since settlement transactions in Takasbank Cheque Clearing System are not conducted in any currency other than TRY, the system does not make use of an internationally accepted communications procedure.

On the other hand, EFT, ESTS, and SWIFT systems are used in guarantee mechanism contribution payments.

However, as part of Takasbank's other operations, Takasbank systems take the information contained in the messages received according to the SWIFT ISO 15022 standard, and channel them to Takasbank sub-systems. For example, in our current practices, messages arriving at Takasbank over SWIFT related to bank transfers, USD/EUR cash transfers, and global custody services are channeled to the intrabank system according to message details, and the responses generated by the systems are again dispatched to relevant local custody bank, foreign currency cash correspondent, or foreign security correspondent over SWIFT. All incoming or outgoing SWIFT messages can be monitored in the internal systems. In order to ensure security in SWIFT communications, the bank uses a SWIFT application called "Customer Security Framework", and the fact that the Bank is compatible with this application is declared on the SWIFT website, and this compatibility is monitored by the Internal Control and Compliance Unit.

In addition, the Bank uses the AML application for controlling sanctions lists. The AML application can be obtained free of charge and allows the Bank to automatically scan Bank records for sanctioned legal and natural persons listed on the websites of OFAC, UN, UK, EU, and FATF. The AML application set up in the Bank is operated over SWIFT. As part of the SWIFT procedure, the list of those in the sanctions list is sent to the Internal Control and Compliance Unit, and the Unit staff members review the categorizations instantly. After that, the process moves forward in consultation with the Senior Management.

S.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?

The Bank does not make use of an internationally accepted communications procedure for its Cheque Clearing System, but for other services, it uses the SWIFT ISO 15022 standard.

S.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?

Since settlement transactions in Takasbank Cheque Clearing System are not conducted in any currency other than TRY, the system does not make use of an internationally accepted communications procedure.

Takasbank systems take the information contained in the messages received according to the SWIFT ISO 15022 standard, and channel them to Takasbank sub-systems. For example, in our current practices, messages arriving at Takasbank over SWIFT related to bank transfers, USD/EUR cash transfers, and global custody services are channeled to the intrabank system according to message details, and the responses generated by the systems are again dispatched to relevant local custody bank, foreign currency cash correspondent, or foreign security correspondent over SWIFT. All incoming or outgoing SWIFT messages can be monitored in the internal systems.

S.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?

The Bank does not make use of an internationally accepted communications procedure for its Cheque Clearing System, but for other services, it uses the SWIFT ISO 15022 standard.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 22

Observed <input checked="" type="checkbox"/>	Broadly Observed <input type="checkbox"/>	Partly Observed <input type="checkbox"/>	Not Observed <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Principle 23: Disclosure of rules, key procedures, and market data

An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

Key Consideration 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

S.23.1.1: What documents comprise the FMI's rules and procedures? How are these documents disclosed to participants?

The governing rules applicable to Takasbank Cheque Clearing System are specified in the Regulation on Cheque Clearing Operations published by the CBRT. The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul clearing, Settlement and Custody Bank Inc., which contain detailed explanations regarding the processes and methods involved, are made public on Takasbank's website.

In addition, documents such as user manuals, rule amendments and corrections, and information forms are announced to participants via General Letters, and these documents can also be accessed on Takasbank's website.

S.23.1.2: How does the FMI determine that its rules and procedures are clear and comprehensive?

User manuals, information form, and all information that participants may need with regard to existing procedures are announced to participants via General Letters and announcements. The guidelines and System Rules mentioned in 23.1.1 are approved by the CBRT. The System Rules are authored in accordance with relevant regulations, and with the participation of relevant business units and the Legal Department in an open and comprehensive manner. The System Rules are also assessed by the Internal Control and Compliance Team in terms of compliance with existing regulations.

Moreover, in the Customer Satisfaction survey held annually by the Bank, participants were asked whether the rules, agreements and procedures laid out with regard to the services they receive were sufficiently clear and easy to understand, and there were no negative responses.

S.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?

As per Article 14 titled "Extraordinary Situations" of the Regulation on Cheque Clearing Operations, the principles aimed at ensuring the continuity of settlement transactions in

extraordinary situations that might disrupt or completely halt settlement operations are specified in the System Rules.

In that respect, Article 43 titled "Extraordinary Situations" of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., has the following provisions:

- (1) Takasbank is authorized to determine and enforce the measures to be taken in accordance with article 14 of the Regulation in case of presence of any extraordinary situation where it foresees that the cheque clearing and settlement and settlement operations may be adversely affected. Takasbank informs these measures and implementations to CBRT.
- (2) Takasbank may take one or more than one of the following measures, including but not limited to those, depending on the nature of the extraordinary situation pursuant to the first paragraph of this article.
 - a) Changing the clearing period and conditions,
 - b) Freezing the receipt of clearing package,
 - c) Restricting the withdrawal of guarantee mechanism contribution temporarily for specific amounts and time periods,
 - ç) Changing the risk calculation method and its parameters,
 - d) Requesting an additional guarantee mechanism contribution.

In addition, as per Article 45 titled "System Business Continuity" of the System Rules, the system business continuity plan and emergency rules have been stipulated by “Takasbank Business Continuity Directive”, sub-arrangements, and continuity plans associated with this Directive, and general policy texts for business continuity shall be announced to participants via Takasbank website.

S.23.1.4: How and to whom does the FMI disclose the processes it follows for changing its rules and procedures?

Under the title "Revision in System Rules", the System Rules state that Takasbank carries out amendments to the Cheque Clearing System in accordance with the following provisions.

Takasbank is authorized to revise these System Rules. In cases where revision in System Rules are made subject to the approval of the competent authorities pursuant to the relevant legislation, the revisions shall enter into force upon such approval.

Any structural revision to be made in the System Rules shall be announced to the members at least fifteen days before to enable the members to prepare the necessary technical or legal infrastructure.

In this context, changes to the System Rules shall first be submitted to the Board of Directors for approval, and then sent to the CBRT for approval. Any changes that have not been approved by the CBRT cannot be enforced.

S.23.1.5: How does the FMI disclose relevant rules and key procedures to the public?

In addition, documents such as user manuals, rule amendments and corrections, and information forms are announced to participants via General Letters, and these documents can also be accessed on Takasbank's website.

Key Consideration 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.

S.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?

The mutual obligations of Takasbank and participants toward the system are specified in the Regulation on Cheque Clearing Operations. These rules are also stated in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. In addition, participants must review the information form before the participant agreement is signed, and then sign the agreement which contains their obligations associated with the system.

S.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?

The mutual obligations of Takasbank and participants toward the system are specified in the Regulation on Cheque Clearing Operations. Takasbank pledges to create the systems necessary to ensure that clearing transactions are carried out without interruptions, and to establish an effective and reliable technical infrastructure. The Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. provide the necessary details with regard to the functioning of the Cheque Clearing System. In case of any changes, the approval of the CBRT is sought, and the approved changes are announced to participants via a General Letter, and relevant documents are published on the corporate website.

S.23.2.3: What information does the FMI provide to its participants about their rights, obligations and risks incurred through participation in the FMI?

The mutual obligations of Takasbank and participants toward the Cheque Clearing System are stated in the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., a document that is approved by the CBRT and published in the public domain. Takasbank pledges to create the systems necessary to ensure that clearing transactions are carried out without interruptions, and to establish an effective and reliable technical infrastructure. On the other hand, participants are obliged to adapt to the changes

made to the system in order to ensure the sustainability of its uninterrupted and secure functioning, participate in the tests that they are invited to take part in.

In addition, the participant agreements, which must be signed in order to make it possible for participants to carry out transactions in the Cheque Clearing System, draw the line clearly with respect to the principles on the functioning of the Cheque Clearing System and the rights and obligations of the parties involved. Before the "Cheque Clearing Transactions System Agreement" is signed with participants, the "Pre-Agreement Information Form" is dispatched to them that highlights the issues detailing Takasbank's general transaction conditions of indispensable nature, with regard to the parts of the System Rules that directly concern the participants.

Key Consideration 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.

S.23.3.1: How does the FMI facilitate its participants' understanding of the FMI's rules, procedures and the risks associated with participating?

In addition to participant agreements and pre-agreement information forms, the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc. provides detailed information on the rights and obligations of participants, and these documents can also be accessed on Takasbank's website. Moreover, the changes to the rules or functioning of the Cheque Clearing System and user manuals are announced to participants via General Letters.

S.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?

The participant agreements, which must be signed, draw the line clearly with respect to the principles on the functioning of the Cheque Clearing System and the rights and obligations of the parties involved. In addition, the pre-agreement information forms applicable for the Cheque Clearing System contain a copy of the agreement as well as the issues detailing Takasbank's general transaction conditions of indispensable nature; and the participant candidate is obliged to declare before signing of the participation agreement that it has examined these forms in a detailed manner and accepted the conditions.

S.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?

- 1) As per Article 44 of the Cheque Clearing, Clearing, Settlement, and Risk Management System Rules of Istanbul Clearing, Settlement and Custody Bank Inc., in addition to those contemplated in these System Rules, the disciplinary provisions in article 17 of the Regulation on Cheque Clearing Operations (Regulation) shall also be applied to the

participants failing to comply with the obligations stipulated in these System Rules. In accordance with the duties entrusted to Takasbank by the Regulation, it can take the necessary decisions about the following participants;

- Participants failing to comply with the arrangements prepared by Takasbank and the Regulation.
- Participants carrying risks that would adversely affect the clearing and settlement operations and jeopardize the secure and uninterrupted functioning of the System.
- Participants failing to timely fulfill their obligations arising as a result of the daily transactions and delaying therefore the settlement of the transactions.
- Participants failing to execute the measures taken due to the extraordinary situations in accordance with article 15 of the Regulation and Article 43 of these System Rules.
- Participants who do not provide the information and documents asked for their business and operations under the Regulation or execute any change or revision requested to be made. Takasbank can take the necessary decisions about all of the abovementioned participants, including the decision not to accept their cheques either in whole or in part to the clearing houses for a time period it shall deem appropriate.

The CBRT shall be informed of the participants whose trading has been restricted in part or in whole.

While disciplinary provisions are clearly stated in Article 44 of the System Rules, in the case of participants that are believed to have misunderstood or misinterpreted the participation conditions, Takasbank may re-evaluate the situation and warn the participant before resorting to disciplinary measures.

Key Consideration 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.

S.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?

The fees and commissions related to the services offered by Takasbank can be accessed on the corporate website.

S.23.4.2: How does the FMI notify participants and the public, on a timely basis, of changes to services and fees? If it does, how?

If the fees and commissions related to the services offered by Takasbank are updated, participants shall be announced via a General Letter before the date on which new tariffs shall enter into force.

S.23.4.3: Does the FMI provide a description of its priced services? Do these descriptions allow for comparison across similar FMIs?

In determining fees, Takasbank conducts comparisons with similar financial infrastructure institutions in Turkey and abroad, and the new fees and commissions only enter into force after being approved by the Bank's Board of Directors. Therefore, the rationale behind any changes to fees and commissions must be explained to the Board of Directors.

In addition, changes to pricing and their rationale are sent to the CBRT in a written statement for informational purposes.

S.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?

Takasbank has a wide range of services. Changes to any service, and the associated rules and procedures are announced to participants via general letters and are available on the corporate website. In addition, the projects that were/will be completed during a particular year and the value-added of these projects are explained in detail in the annual report pertaining to that year. Annual reports are also published on the Bank's website.

When the Bank wants to change the fees associated with any of its services, it resorts to Takasbank Service-Based Profitability Study. This study is repeated at least once every three months, and the income and expenses related to each service are compared. This study provides an important source of data as to whether a service on offer is able to meet the expenses associated with providing that service.

In light of this data, a reasoned document explaining the changes in fees and commissions is prepared and submitted to the Bank's Board of Directors. In addition, the conditions for changing the fees associated with cheque clearing operations are stated in Article 42 of the System Rules as "The fees can be increased each year by Takasbank so that they don't exceed the Producer Price Index (PPI) rate."

Changes made to fees and commissions are announced to participants via General Letters and communicated to the CBRT.

Key Consideration 5: An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.

S.23.5.1: When did the FMI last complete the CPSS-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?

"An Assessment of the Compliance of Takas Istanbul's Cheque Clearing System Against the CPMI-IOSCO Principles for Financial Market Infrastructures" is published on Takasbank's website.

S.23.5.2: What quantitative information does the FMI disclose to the public?

In order to ensure transparency in the cheque clearing services offered by Takasbank, the following information is announced to participants and the public and updated periodically:

- Regarding business rules;
 - Principles for Participation
 - Principles for clearing and settlement transactions
 - Principles Regarding Collateral and Guarantee Mechanism Contribution
 - Default management rules
 - Guarantee mechanism management rules
 - Assets accepted as guarantee mechanism contribution and valuation haircuts,

Have been designated in the System Rules and are published on Takasbank's website. In addition, after each change, the change in question is announced to participants via a General Letter.

In the Statistics section of Takasbank's website, the following statistical information is published and updated each month:

- Cheque Clearing monthly clearing transactions
- Cheque Clearing monthly bad cheque figures-amounts

In addition, fees and commissions associated with Cheque Clearing Services are reviewed every year, and any pricing changes are first approved by the Board of Directors, and then announced to participants and published on the Bank's website.

When making any data public, the Bank seeks to ensure that trade secrets are well protected.

S.23.5.3: What other information does the FMI disclose to the public?

Aside from the information provided in 23.5.2, any documents that the Bank believes will support participants with regard to the functioning and mechanism of the system are published on the corporate website.

S.23.5.4: How does the FMI disclose this information to the public? In which language(s) are the disclosures provided?

The explanations are published in Turkish and English on the corporate website.

Takas Istanbul Cheque Clearing System Assessment Result for CPMI-IOSCO Principle 23

Observed	Broadly Observed	Partly Observed	Not Observed	Not Applicable
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III. CONCLUSION

In the assessment we made as Takasbank to determine the Cheque Clearing System's level of observance of the core principles published by CPMI-IOSCO in April 2012,

- We have reached the conclusion that the core principles no. 6, 10, 11, 14, 20, and 24 regarding the operations of Central Counterparty (CCP), Central Securities Depositories (CSD), and/or Securities Settlement Systems (SSS) are "Not Applicable",
- And all other principles relating to payment systems (PS) are "Observed".

The summary assessment table on the basis of principles is given below.

Assessment Category	Principle
Observed	1, 2, 3, 4, 5, 7, 8, 13, 15, 16, 17, 18, 21, 22, 23
Broadly Observed	-
Partly Observed	9
Not Observed	-
Not Applicable	6, 10, 11,12, 14, 19,20, 24