

**İSTANBUL CLEARING SETTLEMENT AND CUSTODY BANK
BORSA İSTANBUL MONEY MARKET DIRECTIVE ON CLEARING AND CENTRAL
COUNTERPARTY SERVICE PRINCIPLES**

CHAPTER ONE

General Provisions

The Objective

ARTICLE 1- (1) The objective of this Directive is to regulate procedure and principles regarding membership, risk management and collateral, settlement, default, discipline, revenue and other issues in relation to central counterparty service that İstanbul Clearing Settlement and Custody Bank shall provide at Borsa Istanbul Money Market.

The Scope

ARTICLE 2- (1) This Directive involves membership, risk management and collateral, settlement, default, discipline, revenue and other issues in relation to the central counterparty service that İstanbul Clearing Settlement and Custody Bank shall provide at Borsa Istanbul Money Market.

The Ground

ARTICLE 3- (1) This Directive has been issued in reliance upon articles 77 and 78 of 6362 no Capital Markets Law released on 30/12/2012 dated and 28513 no Official Gazette, İstanbul Clearing Settlement and Custody Bank Clearing and Settlement Regulation released on the 18/07/2013 dated and 28711 no Official Gazette, İstanbul Clearing Settlement and Custody Bank Central Counterparty Regulation released on 14/08/2013 dated and 28735 no Official Gazette.

Definition and abbreviations

ARTICLE 4- (1) In this Directive the following mean;

- a) **Open Bid Method:** The instant a transaction is executed, Takasbank joining market participants and assuming seller role vs. buyer and buyer role vs. seller,
- b) **Borsa/BİAŞ:** Borsa İstanbul A.Ş.
- c) **Omnibus Accounts:** Accounts opened with Takasbank on behalf of CCP members, where members' proprietary or client positions are collectively held, but in any event CCP member's proprietary positions and client positions are segregated,
- ç) **Appraised Collateral:** The amount calculated by applying collateral haircuts, group limits and sub-group limits to the total collateral deposited,
- d) **General Manager:** İstanbul Clearing Settlement and Custody Bank General Manager,
- e) **General Regulation:** General Regulation on Establishment and Operating Principles of Clearing and Settlement Institutions released on 30/05/2013 dated and 28662 no Official Gazette,
- f) **The Law:** 6362 no Capital Markets Law released on 30/12/2012 dated and 28513 no Official Gazette,

- g) **Board:** Capital Markets Board,
- ğ) **CCP:** Central counterparty,
- h) **Central Counterparty Regulation:** İstanbul Clearing Settlement and Custody Bank Central Counterparty Regulation released on 14/08/2013 dated and 28735 no Official Gazette,
- ı) **Clearing and Settlement Regulation:** İstanbul Clearing Settlement and Custody Bank Clearing and Settlement Regulation released on 18/07/2013 dated and 28711 no Official Gazette,
- i) **Market:** Borsa İstanbul Money Market
- j) **Portfolio Based Collateralization:** Calculation of collateral amounts to be received from CCP members by Takasbank by taking into account risk mitigating effect of correlations among assets in the same account,
- k) **Position:** Clearing debit and credit arising in relation to transactions executed at the Market,
- l) **Procedure:** Application principles including procedures for operation and practices subject to rules and principles laid down in the Directive and approved by the General Manager,
- m) **System:** Takasbank system established to clear transactions executed at Borsa İstanbul Money Market,
- n) **Clearing:** The entire processes, which facilitate cash transfer between parties subject to the collaterals deposited, through performance of obligations arising from transactions executed at the Market by members, in time and conditions stipulated by Takasbank,
- o) **Takasbank:** İstanbul Clearing Settlement and Custody Bank,
- ö) **Individual Position Account:** Accounts where a single client of the members or members' proprietary positions are held, as sub-account of accounts opened with Takasbank on behalf of CCP members,
- p) **Collateral accounts:** Accounts opened with Takasbank on behalf of CCP members, where collaterals required for members' proprietary or client positions are held,
- r) **CBRT:** Türkiye Cumhuriyet Merkez Bankası A.S. (The Central Bank of the Republic of Turkey),
- s) **Member:** CCP members, who are allowed to be a party to clearing services provided by Takasbank as central counterparty at the Market, subject to 6th article of Central Counterparty Regulation,
- ş) **Directive:** İstanbul Clearing Settlement and Custody Bank Borsa İstanbul Money Market Clearing and Central Counterparty Services Principles Directive,
- t) **Board of Directors:** Takasbank Board of Directors.

CHAPTER TWO

Membership Principles

Membership

ARTICLE 5- (1) Banks and brokerage firms which meet the requirements as per 6th article of the Directive may be a member of CCP application that shall be provided by Takasbank for transactions executed at the Market on the condition that they are authorized by Board of Directors.

(2) Members executing transactions at the Market are regarded as Direct CCP Member.

CCP Membership Requirements

ARTICLE 6- (1) It is Takasbank's job to identify and assess whether membership requirements are met and at least the following requirements should have been met for membership:

- a) Central Clearing Regulation membership requirements should be met,
- b) Market trading license should not have been revoked due to violation of regulations,
- c) CCP service agreement and/or undertakings, whose content is determined by Takasbank should be signed and submitted to Takasbank,
- ç) Its financial structure should be at a level to serve commitments to Takasbank,
- d) Other information and documents to be requested by Takasbank should be presented,
- e) Statement regarding IT, risk management, internal control and internal audit systems according to sample outlined by Takasbank should be approved and submitted by Boards of members,
- f) For bank and brokerage firms to be Direct CCP Member:
 - i. It should have a restricted or general custody service license pursuant to the existing legislation,
 - ii. Brokerage firms should have at least 10,000,000 TRY, banks 50,000,000 TRY capital,
 - iii. It should have received at least D grade following internal rating conducted by Takasbank.

(2) In assigning firm grade during internal rating study conducted by Takasbank financial tables of the respective firm, annual reports, introductory firm information form, firm primary information form, market trade volumes, TRY safekeeping balances, default and intelligence information, if exist grades received from rating agencies, market intelligence info and printed and visual media news. Takasbank announces the parameters it employs in internal rating methodology and the effect of these parameters on rating grades on its website.

(3) Takasbank is authorized to determine minimum criteria it shall seek in technical infrastructure, IT, risk management, internal control and internal audit systems, grant extra time for compliance to institutions that don't meet the criteria sought, to get commitment and audit if the criteria have been met or not.

(4) Board of Directors is authorized to increase minimum capital amount by taking into consideration relevant capital markets and banking regulations and market conditions or to reduce to previous level.

Membership application and admission

ARTICLE 7- (1) Institutions applying for membership should apply with a letter addressing Takasbank General Management and including application request and information and documents certifying that requirements sought for membership in this Directive are met and in the attachment of this letter information and documents as per article 10 of Central Clearing Regulation and following documents should be delivered to Takasbank.

- a) Membership application form,
- b) License certificate (notarized copy),
- c) Document to be obtained from Borsa that investment institutions applying for direct CCP membership are operating at the Market,

- c) Membership Agreement and Pre-Agreement Information Form,
 - d) Cash, Security, Collateral, DVP and EFT Instruction Commitment,
 - e) Application Agreement in Relation to Client Instructions that shall be sent to İstanbul Clearing Settlement and Custody Bank via fax,
 - f) Other documents that shall be requested by Takasbank subject to respective legislation,
- (2) For membership applications to be included into evaluation, information and documents as per first paragraph of this article and other information to be requested by Takasbank must be completed. Takasbank evaluates the application in terms of whether the requirements sought in 6th article are met or not. Takasbank's decision regarding the application is notified in writing within 2 months to the party concerned.
- (3) To start its operations under Takasbank, the institution whose membership application is accepted must
- a) Deposit its membership collateral,
 - b) Deposit Guarantee Fund contribution share,
 - c) Authorized personnel who shall execute transactions on behalf of the member over Takasbank system, within 1 month following the notification that membership application is deemed suitable,
- (4) Otherwise membership license granted to the respective institutions revoked. The date such obligations are performed, is considered as the date that the institution is admitted into central counterparty service membership provided at the Market and the Member acquires the right to execute transactions as of this date.
- (5) Institutions, who are admitted into BİAŞ Debt Securities Market, must only issue the statement as per article, paragraph 1 and (e) chapter of 6th article and perform the obligation as per paragraph 1, (ç) chapter of this article.
- (6) Institutions, which have deposited BİAŞ Debt Securities Market membership collateral are exempt from membership collateral.

General obligations of members

ARTICLE 8- (1) Members are obliged to abide by the following matters:

- a) To act in accordance with all the principles and rules set with this Directive and other related legislations in relation to central counterparty service,
- b) To act in accordance with principles of good intention and integrity to its clients and other members,
- c) To deposit guarantee fund contribution shares stipulated by Takasbank,
- ç) To take all necessary measures in ensuring sustainability of internal control, risk management and internal audit mechanisms required to be CCP member,
- d) If a segregated individual account is opened; in cases where member accounts with Takasbank and associated sub-accounts must be migrated a CCP member, who shall act as transferee, has been determined in advance, to provide information on such matter in the framework agreements signed with clients,
- e) If segregated individual account is opened to ensure that clients are fully and accurately

informed on matters involving the structure of accounts where collaterals are held and the extent of segregation provided by Takasbank, that the Member has disposal authority over collateral accounts opened with Takasbank and this authority is restricted by Takasbank to only the required amount of collateral,

f) To inform the client that other client positions are held under member's position accounts, the collateral associated with these accounts shall be used for total risk arising from omnibus account and it is accepted by Takasbank that collaterals associated with these accounts belong to the member,

g) Members should meet collaterals to be deposited for their proprietary trades from their own assets,

ğ) To meet collaterals to be deposited for client positions with own collaterals or those that it has gained right of disposal over through transfer of possession agreements according to the Law,

h) If collaterals deposited for client positions have been obtained from clients or other person and institutions through transfer of possession agreements, keeping transfer of possession agreements, establishing a sound record and monitoring system which shall ensure matching of individual and institutions that the collaterals have been received from with collateral deposited into associated position accounts,

ı) To act in accordance with the entire principle and rules in the Law and other related legislations in relation to monitoring client asset and collaterals and safekeeping them,

i) To promptly meet fee, charge, commission and other obligations demanded by Takasbank,

j) To establish constant reconciliation between records related to position and collateral accounts with Takasbank and its portfolio and client accounts,

k) To deposit collateral into respective collateral accounts at Takasbank,

l) To provide all kinds of information and documents that shall be requested by Takasbank and the Board on matters deemed necessary in relation to the tasks and transactions under this Directive and to provide all kinds of support during examinations that shall be conducted by those assigned by Takasbank and the Board,

m) In addition to books and records that it is legally obliged to keep, to keep other records decided by Takasbank, to arrange information and documents according to the procedure; to deliver these periodically or upon Takasbank's request to Takasbank and to keep such records and documents for 2 years,

n) To perform other obligations under this Directive promptly and fully.

(2) If any Member envisages that it shall not be able to perform obligations partially or fully, it is mandatory to notify the Board and other relevant public organization and institutions immediately with all substantiating information and documents also including the reasons for the situation. Such notification does not constitute an impediment to Takasbank taking measures laid down in this Directive.

Restriction of member activities

ARTICLE 9- (1) Members' activities under this Directive may be restricted by Takasbank in the following circumstances.

a) Termination of its activities pursuant to Central Clearing Regulation article 13 or Central Counterparty Regulation article 14 in the markets or capital market instrument where clearing

service is provided or dismissal from membership,

b) Failure to perform obligations laid down in Directive, Procedure and membership agreement,

c) In relation to the member; discovery of adversities such as protest, confiscation, interim injunction, temporary or permanent suspension of activities, cancellation of respective operation license certificate, banned from execution of transactions on capital market instruments traded at any market under BİAŞ, gradual liquidation or bankruptcy decision issued or negative intelligence.

ç) Determining that the Member lacks credit worthiness or it has decreased following intelligence, financial analysis and/or rating studies conducted periodically by Takasbank.

(2) Member is not allowed to trade in accounts belonging to individuals on whom trading ban and the Board has imposed similar restrictions.

(3) If any of the situations written in this article prevails, Takasbank may decide to partially or fully liquidate the Member's existing positions.

(4) If the member's activities are restricted due to issues provided in this article, the situation is notified to Borsa, the Board and the relevant public authority.

Termination of membership

ARTICLE 10- (1) CCP membership may be terminated with Board decision if,

a) It is determined by Takasbank that the member no longer qualifies for any of the CCP membership requirements set in this Directive and other relevant regulations,

b) It is discovered by Takasbank that significant risks to the extent of endangering safe and continuous operation of CCP system have arisen due to failure to serve the obligations set in this Directive or other relevant regulations,

c) CCP members whose activities have been restricted subject to provisions of CCP Regulation, article 14, second paragraph fail to perform their respective obligations within maximum 6 months period granted to them pursuant to sixth paragraph of the same article,

ç) CCP member request so.

(2) Those who wish to end their CCP membership subject to first paragraph, (ç) chapter of this article notify Takasbank of the situation in writing. Insofar members wishing to end CCP membership must have performed their entire obligations under this Directive and other related regulations. In such case, the Board of Directors may allow termination of CCP membership.

(3) Takasbank refers to Borsa for opinion while terminating membership of a CCP member.

(4) Even in the event of termination of CCP membership, the subject institution's obligations to Takasbank under this Directive and other related regulations continue for the transactions until Board of Directors' ruling regarding termination of membership.

(5) It is mandatory to immediately inform the Board and other related public organizations and institutions and Borsa on the member whose CCP membership has been terminated.

CHAPTER THREE

Settlement and CCP service principles

Takasbank's responsibility

ARTICLE 11- (1) Takasbank is central counterparty through open bid method in transactions executed at the Market and cleared in the System. In such transactions Takasbank guarantees completion of settlements by acting as buyer against seller and seller against buyer. Takasbank assumes settlement obligations arising for transactions executed by Members in accordance with the procedures and principles set in this Directive and the regulation without any prejudice to restrictions to set in article 36 of Central Counterparty Regulation and market liquidity conditions.

(2) In open bid method Takasbank's obligation to the parties to the transaction starts at the instant the buy and sell orders are matched at the Market and ends upon the completion of settlement at the end of maturity. Takasbank's obligation to the parties regarding transactions cancelled by Borsa is removed when Takasbank updates cancellations. Subject to paragraph 4, article 5 of Central Counterparty Regulation, if transactions-based limit allocated to the Member is exceeded, without prejudice to provisions of article 21, the Member is not held liable for losses that may arise from transactions it avoided.

(3) In transaction executed at the Market, Takasbank faces Members. Takasbank is not responsible for members' obligations to clients.

(4) Provisions of Central Counterparty Regulation, Chapter 5, are applied during meeting liquidity needs and loss, which may arise in the event of default, restricted with liquidity conditions and constraints.

Settlement date and time

ARTICLE 12- (1) Transactions conducted in the Market shall be settled on the same day. (T+0) Settlement of the future-dated transactions shall be performed on the value date.

(2) In determining settlement periods business days on which Takasbank and the Market is open, are taken into account.

(3) Half-day settlement processes are determined by Takasbank and announced to members.

(4) It is not possible to conclude settlement process by fulfillment of cash obligations by the parties before settlement date.

(5) Market settlement deadlines are determined in the Procedure by obtaining Borsa's opinion.

(6) Obligations regarding transactions executed at the Market are performed within the hours announced in the Procedure. Otherwise default provisions are applied.

(7) Settlement period may be temporarily changed by the General Manager due to issues arising from clearing, custody, payment and market operation systems.

Certainty of Settlement

ARTICLE 13- (1) Settlement instruction and transactions and payment transactions arising from trades executed at the Market are irreversible and cannot be cancelled including temporary or permanent suspension of the member's activities, launch of liquidation process at administrative and judiciary authorities.

(2) Borsa is informed for immediate halt of transactions the instant that suspension of member's activities or a decision which may lead to such consequence is notified to Takasbank.

(3) Settlement transactions for all contracts, which are executed at the market and transferred to

settlement systems, are concluded subject to provisions of this Directive.

(4) Collaterals established by the member with existing cash and securities balance at Takasbank are used to end obligations.

Netting-off

ARTICLE 14- (1) On the maturity and value date of the transaction, debit credit information is produced through net-off.

(2) Net debit and credit amount of transactions executed at the Market are calculated based on the following as of the respective settlement date of the member;

- a) “Member Risk Group” for transactions executed for portfolio account
- b) “Client Risk Group” for transactions executed on behalf of clients as of the member’s respective settlement date.

Delivery versus payment principle

ARTICLE 15- (1) In settlement transaction deliver versus payment principle is applied. Cash receivables of member who don’t perform their collateral obligations, are not paid.

(2) Receivables are too paid partially for obligations fulfilled partially.

Market clearing processes

ARTICLE 16- (1) Takasbank faces members with respect to transactions executed at the Market.

(2) Settlement obligations are formed based on risk group.

(3) Cash liabilities for transactions executed at the market, are paid into debt closeout account opened with Takasbank for every member, and announced through the Procedure, until settlement day deadline.

(4) Transactions executed at the market for the members’ proprietary portfolio are followed under “Member Risk Group”, transactions executed on behalf of clients in “Client Risk Group”, under 2 different risk groups.

(5) If the member is in debt to both risk groups partial payments are first used to close out “Client Risk Group” debt.

(6) If a member, who is distributed credit, is in debt to other risk group, the distributed credits deducted from the debt for other risk group that the member owes to.

(7) To be able to distribute credits, the member should have met collateral obligation. Credits are transferred automatically to current accounts of members, who are known to have met collateral obligations, at certain intervals by the system.

(8) If the balance available for distribution is insufficient, credit distribution is made pro-rata.

CHAPTER FOUR

Account Processes

Account structure

ARTICLE 17- (1) All members that wish to execute transactions at the Market are obliged to deposit

cash, transaction collateral and guarantee fund accounts required to execute transactions with Takasbank.

- (2) Respective accounts are opened automatically for members with accounts at Takasbank.
- (3) Transaction collaterals are held under two different accounts, “Member“ for Portfolio and “Client” for Clients.
- (4) Net amounts calculated by netting-off accounts are held in the position accounts. Risk management is performed via position accounts.

Segregation

ARTICLE 18- (1) Client trade, position and collaterals are followed separately from Member’s proprietary, position and collateral accounts in omnibus or individual trade and position accounts opened for the Member and collateral accounts associated with these accounts.

- (2) Trades, positions and collaterals for members’ own portfolio are followed under individual trade and position account to be opened exclusively for member and the collateral account associated with this account.

Account migrations

ARTICLE 19- (1) Positions held in position accounts and collaterals associated with such positions may be migrated among CCP members by Takasbank upon transferor and transferee CCP members’ instructions. In this case, transferor CCP member obtains written consent of clients whose positions and collaterals are to be transferred.

- (2) To be able to migrate accounts, which hold multiple client positions, instructions from all clients who hold positions in the accounts, are required. Positions accounts for, which migration instructions have been provided by clients, and associated collaterals, are migrated upon the member’s instruction.
- (3) Takasbank reserves the right to reject account migration requests in terms of health settlement transactions and soundness of the settlement.
- (4) If positions held in accounts associated with a Member, whose membership activities have been restricted due to default and other reasons, or whose membership has been terminated, and collaterals associated with such positions, are migrated to another Member, migration process is carried out by Takasbank;
 - a) If the transferee Member has been previously assigned in the agreement signed between the Transferor Member and Takasbank Under the framework of provisions provided in the agreement,
 - b) Notwithstanding that a previous assignment has not been arranged in the agreement signed between the Transferor Member and Takasbank, if until the date of migration transferor Member makes an agreement with transferee Member, subject to the provisions provided in this agreement,
 - c) If an assignment has not been arranged in accordance with the provisions in (a) and (b) chapters of this paragraph, in case a transferee Member is found by Takasbank.
- (5) If an account is migrated, collaterals in the transferred accounts cannot be withdrawn until records of Member, whose activities has been restricted or membership terminated, and Takasbank are reconciled. Provisions with respect to proceedings continued by judiciary and administrative authorities are reserved.

Accounts, which cannot be migrated due to absence of a Member to assume positions and collaterals, lack of sufficient amount of time or margin shortfall, or accounts where margin shortfall occurs after liquidation of positions, may be subjected to liquidation as per the principles in Chapter Five of Central Counterparty Regulation. Collateral balance, which shall be produced in the accounts that cannot be migrated due to lack of a Transferee Member, after liquidation of positions, is returned subject to article 27 of Central Counterparty Regulation.

CHAPTER FIVE

Risk Management and Margining Principles

Risk management

ARTICLE 20- (1) Risk management at the Market is conducted by Takasbank.

(2) At the Market trades that the member executes on its behalf are followed under "Member" account, and clients under client account opened as omnibus account. Risk management is performed through 2 account/risk groups.

(3) Margin requirement for each account/ risk group is separately calculated and the margin sufficiency of each position account is checked separately.

(4) At the Market, pre-trade, trade instant and post-trade risk management processes are applied. Rules with respect to accounts that lack sufficient margin in pre-trade and trade instant risk management processes and accounts with margin calls are determined in the Procedure.

(5) Settlement positions in risk group accounts opened by members at Takasbank, guarantee fund contribution shares and Takasbank subjects margins to update process.

(6) Margin calls are issued via member screens provided by Takasbank or reporting. If margin call is sent via system, the member is considered to have received the call without further warning and notice. The member's responsibility starts the instant that margin call issued by Takasbank reaches it.

(7) Risk management processes that shall be applied by Takasbank intraday and end of the day, content of model and/or parameters to be used in calculation of margins and margin call deadlines are explained in the procedure.

(8) Default penalty is imposed on accounts with short margin until the time set in the procedure and in cases where margins are not met settlement credits are not distributed

Risk limits

ARTICLE 21- (1) Takasbank assigns risk limits for Members to the extent of their financial Capability at the Market it services as CCP. While risk limits may be set separately for the Market, they may also be assigned as a total for all CCP- serviced markets. Risk limits are assigned over the margin amount required due to positions that Members carry at CCP –serviced markets.

(2) Limit set for the member is only notified to the respective member by Takasbank.

(3) It is also checked intraday whether the total required margin arising from positions the member takes across all CCP-serviced markets for it and clients, exceeds risk limit.

(4) It is essential that member exceeding risk limit does not route any orders. The liability lies with the member.

CHAPTER SIX

Margin principles

Initial margin

ARTICLE 22- (1) Initial margin is demanded from Members to compensate for risks arising from Borsa Istanbul Money Market positions. Initial margin is taken at the beginning to meet interest rate changes that may occur in the market, in case of member's default, from the date that default occurs to its resolution. In determining statistical parameters, which shall serve as the basis of initial margin, provided that confidence is not below 99.5 percent and holding period, less than 2 days, confidence levels and holding periods that shall be set in the Procedure are used. Historical data sets that shall be employed in calculating volatility must cover at least the last 12 months period, if available.

(2) In calculating margin requirement portfolio based margining method is used at the Market. While margin requirement is calculated, positions from different risk groups are not netted-off. Application principles for margining method are explained in the procedure.

Assets eligible for margin and guarantee fund contribution share

ARTICLE 23- (1) The following assets may be used by members to serve margin requirements. Takasbank Board of Directors is authorized to accept other assets set in Central Counterparty Regulation, article 19 as margin or guarantee fund contribution share and change group limit and sub-group limits.

- a) Cash (Turkish Lira),
- b) Convertible Currency (USD/EUR/GBP),
- c) Government Debt Securities,
- ç) Foreign debt securities issued by the Ministry of Treasury and Finance of the Republic of Turkey (Eurobond),
- d) Lease Certificates Issued by Asset Leasing Incorporation of the Undersecretariat of Treasury of the Republic of Turkey,
- e) Shares in BIST100 Index,
- f) Equity Umbrella Fund Shares,
- g) Debt Instruments Umbrella Fund Shares,
- ğ) Standard gold traded on the exchanges,
- h) Mortgage-backed securities, mortgage-based securities, asset-backed securities and asset based securities,
- ı) Borsa İstanbul A.Ş. shares,
- i) Electronic Warehouse Receipt.

(2) Takasbank may not accept as margin or guarantee fund contribution share securities and guarantees that it considers to be associated with the member due to specific correlation relations that may exist between the creditworthiness of the member and value of assets received as margin and may restrict acceptance of these as margin and guarantee fund contribution share. Margin application principles regarding assets considered to be associated with the member's credit worthiness, are determined in the procedure.

(3) Takasbank may apply to assets eligible as margin or guarantee fund contribution share

concentration limits for a single market or sum of all markets where it provides CCP service, subject to Central Counterparty Regulation article 43. Concentration limit application principles are determined with the procedure.

(4) Theoretical pricing formula and methods, which may be used in valuation of assets accepted as margin and guarantee fund contributions share by Takasbank, are published on Takasbank website

(5) The date and criteria of which the mortgage bonds, mortgage backed bonds, assets backed securities, asset guaranteed securities, Borsa İstanbul A.Ş. shares, Government Foreign Debt Securities (Eurobond), Gold in the standard traded in the Exchange shall be accepted as collateral is determined in the procedure

Valuation Haircuts

ARTICLE 24- (1) Parametric, non-parametric and simulation based statistical methods that are deemed suitable by Takasbank, are used in the calculation of haircuts to be applied to collaterals and guarantee fund contribution shares, reflecting deduction rates. The assigned method is determined in the procedure. In determining market risk of the respective asset as assessed by Takasbank, volatility under extreme market conditions, liquidity and FX risk if exists, are taken into account. In determining, haircut values announced by CBRT may be taken into account.

(2) Statistical confidence level to use in calculations to conduct cannot be less than 99.5% and liquidation period cannot be less than 2 business days. It is essential that historical data to use in the calculations is not less than 12 months. Haircuts for assets, where there is no sufficient or historical data, are determined based on multiples calculated for assets carrying similar specifications.

Collateral composition limits

ARTICLE 25- (1) The ratios provided in the following table is applied for other assets eligible as collateral besides TRY cash and composition limits in relation to these. Takasbank is authorized to determine composition limits for new assets that may be accepted as collateral by Board of Directors and change composition limits including those determined by the Directive.

Assets Eligible as Collateral	Group Limit	Sub-group Limit (As group limit percentage)
Cash (Turkish lira)	En Fazla %100	-
Convertible Currency (USD/EUR/GBP)	En Fazla %100	-
Government Debt Securities	En Fazla %100	%35
Eurobond issued by the Ministry of Treasury and Finance of the Republic of Turkey	En Fazla %100	%35
Lease certificates issued by Asset Leasing Incorporation of the Undersecretariat of Treasury of the Republic of Turkey	En Fazla %50	%40
Shares in BIST100 Index	En Fazla %90	%20
Equity Umbrella Fund Shares	En Fazla %50	%20
Debt instruments umbrella fund shares	En Fazla %50	%20
Standard gold traded on the exchanges	En Fazla %25	-

Mortgage-backed securities, mortgage-based securities, asset-backed securities and asset-based securities	En Fazla %50	%40
Borsa İstanbul A.Ş. Shares	En Fazla %50	-
Electronic Warehouse Receipt	En fazla %25	%20

(2) Haircuts reflecting deduction ratios to be used in calculation of collateral values of assets that shall be deposited as collateral, are explained in the Procedure.

(3) Assets eligible as collateral are subjected to valuation over prices determined by Takasbank. Application principles for determination of collateral values are explained in the Procedure.

Possession of collaterals

ARTICLE 26- (1) The possession of collaterals received under CCP service, is passed onto Takasbank, subject to second paragraph of article 78 of the Law. Takasbank acquires the right of possession at the instant the agreement is established and following transfer of eligible collateral in accordance with legal procedures.

(2) If due to member's default or reasons stipulated in the respective legislation or contract provisions, Takasbank's claims are to be paid-off collaterals, Takasbank has the right to sell the collateral asset at exchange or if quoted at another market not lower than the market value in this market and meet its due through sales proceeds and deduct the value of these instruments from the liabilities of the debtor without fulfilling preliminary requirements such as issuing any warning or notice, obtaining permit or approval from a judiciary or administrative authority, cashing collateral in through open auction or another way .

(3) As the collaterals are under Takasbank's possession pursuant to article 78 of the Law, rights arising from the collateral also belong to Takasbank. Takasbank returns collaterals at the end of maturity with their rights subject to article 27 of Central counterparty Regulation and member request on the condition that obligations are met.

Margin Monitoring and Management

ARTICLE 27- (1) Margins associated with positions in the risk groups are followed separately under accounts associated with the member. An excess margin in a risk group cannot be used to close out margin deficit due to positions in another risk group or ending default. The provision of article 78, paragraph three of the Law is reserved.

(2) The member is obliged to close its debt due to margin call and settlement obligations until the deadlines determined in the procedure. Otherwise the Member is considered to have defaulted with the need for any warning, if there is, its cash due is not paid and default provisions are applied to the Member.

(3) Members may meet their margin call obligations by depositing collateral for respective position accounts. Transactions involving margin deposit, withdrawal, valuation, account mark to market and fulfillment of obligations are executed in the position account.

(4) Pursuant to article 79 of the Law, Takasbank's rights and power over the value of assets received as collateral due to transactions executed as central counterparty, cannot be restricted in any way. Non-existence of member's title of possession for any reason does not prevent Takasbank's bona fide real right acquisition. Third persons' claims or restricted real right claims over the value of margin

assets cannot be brought forward against Takasbank.

(5) Granting of concordato period to the provider of the collateral, approval of such concordato, granting of post-bankruptcy concordato period, entering concordato period by abandonment of assets, restructuring through reconciliation, bankruptcy, postponement of bankruptcy or enforcement procedures under 2004 no Execution and Bankruptcy Law or the Law provisions on gradual liquidation cannot in any way restrict Takasbank's right and powers over the collateral.

Collateral deposit or withdrawal transactions

ARTICLE 28- (1) Procedures and principles regarding deposit, withdrawal and change of eligible collateral and the related periods are determined in the Procedure.

Interest accrual on cash collateral and guarantee fund contributions

ARTICLE 28/A- (1) Turkish Lira collateral and guarantee fund contributions deposited by the members are invested after deducting the portion to be set aside as reserve requirement, with the best effort basis conditions by Takasbank in accordance with the principles stipulated in the Procedure by taking the credit risk and liquidity conditions into consideration. The investment process is performed within the limits of Takasbank by way of depositing the amount subject to the interest to the banks as either deposit or depo and making it subject to a repo transaction. Takasbank can also place the cash collateral to the organized money markets for investment purposes. Investment may not be made in extraordinary market conditions. No interest shall be paid if the investment process is failed to be made by Takasbank due to market conditions.

(2) The balance remaining after deducting the Bank and Insurance Transaction Tax (BITT) and other legal charges and the amount to be collected by Takasbank as "collateral monitoring and interest accrual fee" at a rate proposed by Takasbank and deemed appropriate by the Board from the gross interest amounts earned from accrual of interest on the amount of collateral and guarantee fund contributions remaining after setting aside the compulsory reserve obligation, if any, shall be credited to the relevant accounts as interest.

CHAPTER SEVEN

Guarantee Fund Principles

Guarantee fund and general principles thereof

ARTICLE 29- (1) Takasbank establishes a guarantee fund with regards to the CCP service it shall provide at the Market, to be used for the portion of losses that may occur in case of members' default, exceeding margin of the respective members. Participation of CCP members to the guarantee fund is mandatory.

(2) CCP members' guarantee fund contributions shares consist of deposited and additional guarantee fund contribution shares to be deposited upon Takasbank's demand. If Guarantee Fund is used subject to provisions of CCP Regulation, Directive and Procedure, CCP members may be asked to deposit additional contribution share not surpassing guarantee fund contribution share amount. Members may be asked to deposit additional contribution share at the most 4 times for the one period between 1 April - 31 March. Additional guarantee fund contribution share that may requested at one time cannot surpass required guarantee fund contribution share amount for each member calculated for the month that the defaults serving as the basis for the request, have occurred. Additional guarantee fund contribution share amount may be requested more than once as long as it does not exceed full amount deposited once

or total amount deposited in portions.

- (3) The maximum guarantee fund liability members may be exposed to where CCP members have requested to leave membership but such requests have not been decided by the Board of Directors or request to leave CCP membership has been accepted by the Board of Directors but members have been granted time for the return of deposited guarantee fund contribution, is double the guarantee fund amount, otherwise three times, if there is no default which is still being resolved at the request date. Members, who are judged to have left CCP membership or requested to leave to avoid potential guarantee fund liabilities may not again admitted into CCP membership.
- (4) Guarantee fund contribution shares of other Members may not be resorted to unless trade margins of the defaulted member, guarantee fund contributions thereof and capital allocated by Takasbank for covered risks at the Market remain insufficient.
- (5) If membership is terminated, guarantee fund contribution share is returned subject to article 33 of Central Counterparty Regulation.
- (6) Assets in the guarantee fund cannot be used outside the objective.
- (7) It is essential that contribution shares to be deposited by members be met with assets under their ownership.
- (8) Guarantee fund is represented and managed by Takasbank.

Size of the guarantee fund and amount of contribution shares

ARTICLE 30 - (1) The size of guarantee fund cannot be less than larger of the resource requirement that shall arise from simultaneous default of the Member who has the largest required collateral obligation and members who have second and third largest required collateral obligation, under stress conditions. Resource requirement consists of the part remaining outside portion of member risks calculated under stress conditions, which may be met with trade margins. In the estimation of risk under stress conditions with statistical methods statistical confidence level, holding period and historical data determined in the Procedure are used, not to be less than respectively 99.5%, 2 business days and 5 years. Takasbank may set minimum guarantee fund obligation larger than the obligation statistically calculated seeking market conditions, collateral concentrations and sufficiency of default management resources.

- (2) The sufficiency of existing guarantee fund is tested by renewing calculation for guarantee fund total size no longer than quarterly basis.
- (3) Members' contribution to guarantee fund consists of fixed contribution shares and variable contribution shares calculated in proportion with the risks they carry.
- (4) The size of fixed contribution share is determined at a level so as to not surpass the average amount obtained by dividing required guarantee fund size with number of members and is announced in the Procedure.
- (5) Variable contribution amount is calculated by Takasbank in light of average collateral amount that the member should keep in the market and announced via member screens.
- (6) A member's deposited guarantee fund contribution share cannot be less than fixed contribution share amount.
- (7) The length of data set that shall be employed in determining average collateral amount that shall be the basis for the calculation of size of guarantee fund to be established and members' variable contributions share is explained in the Procedure. To reach the total guarantee fund contribution

share that must be deposited by each member, guarantee fund risk value calculated by multiplying members' average collateral amount with the risk multiple to be set, is used.

(8) Guarantee Fund contribution share obligations are calculated as of the last business day of every month, and updated as of the first business day of the following month. Appraised collateral amount, which corresponds to guarantee fund contribution share amount imposed upon accounts by Takasbank, must be deposited into the accounts until the account mark-to-market time determined in the Procedure. Default provisions are applied for undeposited amounts.

(9) Calculations for guarantee fund contribution shares of members may be delivered by Takasbank in light of respective members' risk situations and market conditions, without waiting for the last business day of the month,

Assets eligible as guarantee fund contribution share and obligation to top up contribution share

ARTICLE 31- (1) Assets eligible for guarantee fund contributions share and the composition limits in relation to these are shown in the following table. Takasbank Board of Directors is authorized to change composition limits of assets eligible for guarantee fund contribution share and set composition limits for new assets.

Assets Eligible to Guarantee Fund	Group Limit	Sub-group Limit (As group limit percentage)
Cash (Turkish lira)	En Fazla %100	-
Convertible Currency (USD/EUR/GBP)	En Fazla %100	-
Government Debt Securities	En Fazla %100	%35
Eurobond issued by the Ministry of Treasury and Finance of the Republic of Turkey	En Fazla %100	%35
Lease certificates issued by Asset Leasing Incorporation of the Undersecretariat of Treasury of the Republic of Turkey	En Fazla %50	%40
Shares in BIST100 Index	En Fazla %90	%20
Equity umbrella fund shares	En Fazla %50	%20
Debt instruments umbrella fund shares	En Fazla %50	%20
Standard gold traded on the exchanges	En Fazla %25	-
Mortgage-backed securities, mortgage-based securities, asset-backed securities and asset-based securities	En Fazla %50	%40
Borsa Istanbul A.Ş. Shares	En Fazla %50	-
Electronic Warehouse Receipt	En fazla %25	%20

(2) Haircuts reflecting reduction rates to be used in calculation of collateral values of assets to be deposited as guarantee fund contribution share, are explained in the Procedure.

(3) To ensure that non-cash assets used as guarantee fund contribution share are valued at recent market prices, collaterals are subjected to valuation at the end of day over price set by Takasbank.

(4) Contribution margin call is issued to accounts with contribution share shortfall after end-of- day valuation. Contribution shares should be topped up until the end of deadline set in the Procedure.

Default provisions are applied for amounts that are not topped up.

(5) Non-cash assets in the Guarantee Fund may be changed upon the Member's request.

Guarantee fund using principles

ARTICLE 32- (1) In default management, when resources that may be expended until Takasbank Central Counterparty Regulation article 36, paragraph 1, (d) chapter fall short and it is understood that guarantee fund contributions shares deposited in cash shall be insufficient, non-cash contribution shares of solvent members, are started to be converted to cash.

(2) Contribution shares deposited by members who joined participation fund after the date the respective default occurred or by existing members for risks taken after the occurrence of default, are not used.

(3) In cases, which require resorting to the guarantee fund, it is not allowed to withdraw contribution fund from guarantee fund during the time that shall pass until the loss arising due to default is covered.

(4) Recourse to contribution shares starts from the most liquid assets and highness of cash conversion ability is considered as key, provided that article 36 of Central counterparty Regulation is complied with and the order provided in the respective article is adhered to. Unused cash from non-cash collateral in the guarantee fund converted to cash is returned on pro-rata basis to members whose non-cash collaterals have been used.

(5) In the distribution of loss that shall be attributed to guarantee fund to solvent members, members' shares in the guarantee fund is considered as key.

(6) Members are obliged to redeposit deposited guarantee fund contribution shares used under default management, in 3 business days.

(7) If it is seen that potentially the loss attributable to guarantee fund may surpass 50% of the fund size, members may be asked to deposit additional contribution shares that they have committed to. Members are obliged to pay additional contribution shares in 5 business days after the request. Additional contribution shares partially used or unused in closing-out the respective default, are returned. Additional guarantee fund request is considered not to have been issued upon its return without using in closing-out the default despite the request.

(8) Additional guarantee fund contribution share that may be requested from the Member during one-month period cannot exceed the guarantee fund contribution share amount calculated for that month that must be deposited.

(9) If additional guarantee fund contribution shares requested by members are partially or fully used due to default, members are asked to top up their guarantee fund obligations to the amount calculated pursuant to article 30. In the same month the guarantee fund contribution shares over maximum loss limit that shall be borne by the member in case of other members' default are used until the end of the month only for members' own defaults. Normal additional guarantee fund contribution amounts to be requested from members, who fulfilled their additional guarantee fund contribution share obligation within one year period between 1 April - 31 March, are used only for their own defaults until the current one year period is completed.

CHAPTER EIGHT

Principles of Default Processes

General principles

ARTICLE 33- (1) Debts arising from transactions executed at the Market become due in the following conditions.

- a) On the debt's value date or maturity;
- b) Failure to serve the intraday and end of day margin call requirements calculated by Takasbank within the deadline determined in the Procedures;
- c) Failure to meet guarantee fund and additional guarantee fund contribution share top-up requirements within their deadline;
- ç) Decision to liquidate Member's obligations by Takasbank pursuant to article 9 of the Directive.

(2) If the obligations are not met on the date that the debt becomes due in accordance with the procedures and principles determined in the Procedure, the Member defaults without further notice. If the Member defaults on a debt, which has become due, the member's entire debts become due.

(3) In case of default Takasbank does not allow withdrawal of collateral from the Member's respective accounts. Takasbank may prevent order routing through the Member's accounts taking into consideration the size of default.

(4) At the most, the deadline for the Member to end default situation, may be extended by Takasbank until the time determined in the Procedure on the business day following default date. If default status is not ended until the end of the assigned time, Takasbank may trade at organized and OTC markets. The member's trade collateral and guarantee fund contribution share amounts may be used to be able to execute the transaction.

(5) Default interest is applied if margin and guarantee fund requirements are not served within the deadlines determined in the Procedure.

Collateral default

ARTICLE 34- (1) Provided that the limits determined with Central Counterparty Regulation article 36 and market liquidity constraints are reserved, Takasbank's financial liability with respect to collateral defaults on transaction value date is fulfillment of margin requirement with settlement credit on the value date and completion of settlement, if the transaction cannot be completed on value date, limited to the period as per the procedure, the amount of interest calculated over transaction interest

(2) In the event of default of member who is obliged to deliver collateral with respect to trades executed at the market, it is essential that transaction of the member providing funds be executed. If collateral debt is fully delivered, without any prejudice to default provisions of collateral debtor, the transaction is deemed to have been executed on the same day. In case of partial collateral payment the transaction is considered to have been executed to the extent of collateral amount. Default provisions are applied for the unexecuted transaction.

(3) The obligation of the Member failing to end the default situation until the end of the deadline, is served with settlement dues, and if there is a shortfall it is met from guarantee fund and if required, from other default resources. If default management resources do not suffice, the unsettled trade amount is considered to have been cancelled. The respective amount is paid to the aggrieved member with the default penalty of the amount subject to trade cancellation.

Cash default on trade value date or maturity

ARTICLE 35- (1) In cash defaults that have occurred at the value date of the transactions, Takasbank's financial liability is restricted to payment of cash on settlement date provided that limits determined under article 36 of Central Counterparty Regulation and market liquidity constraints are reserved; and if cash cannot be paid on settlement date, depending on market conditions and Takasbank's liquidity facilities, payment subject to the following procedure and principles, and additionally grievance payment that shall be calculated for the period until payment date.

(2) If the cash debt is closed-out partially or fully settlement creditor is paid on the same day.

(3) Takasbank tries to source funds with best effort from organized and/or OTC markets to ensure payment of due amount to the cash creditor by using the collateral of the Member, who failed to end default situation until the end of deadline, locked -up before the trade and guarantee fund as collateral. Grievance payment is issued to cash creditor for default period regarding the amount that cannot be received until the end of period determined in the Procedure.

(4) In cash defaults that have occurred at the maturity date of the transactions, Takasbank's financial liability is restricted to payment of cash on maturity date provided that limits determined under article 36 of Central Counterparty Regulation and market liquidity constraints are reserved; and if cash cannot be paid on maturity date, depending on market conditions and Takasbank's liquidity facilities, payment subject to the following procedure and principles, and additionally grievance payment that shall be calculated for the period until payment date.

(5) If cash debt is closed out partially or fully, settlement creditor is paid in the same day. Takasbank tries to source funds with best effort from organized and/or OTC markets through collateral sale, to ensure payment of due amount to the cash creditor by using the locked -up collateral of the Member, who failed to end default situation until the end of deadline, and guarantee fund.

(6) In case of cash default interest is applied pursuant to provisions of article 36. Grievance payment is issued up to $\frac{3}{4}$ of collected default interest amount with respect to undeliverable portion to the cash delivery creditor, for the period until full completion of cash delivery. If the interest amount calculated remains below the minimum default penalty, payment is made over the calculated amount.

(7) Cash delivery obligor is obliged to pay such cash with the default interest that shall be calculated under article 36.

Default interest

ARTICLE 36- (1) Default interest is collected in addition to legal obligations from members who fulfill their settlement, collateral and guarantee fund obligations after the set time.

(2) In calculating default interest, the period between default date and the date that the obligation was served, is taken into account. So as far, default interest multiple may be varied for obligations served after the specified deadline on the settlement date, but the same day.

(3) The default interest applicable to the defaulted member is calculated by treatment of highest of O/N weighted interest rate at BIAS Repo Reverse Repo Market, CBRT Interbank Money Market or Takasbank Money Market to the unfulfilled obligation amount based on multiples determined in the Procedure.

(4) Minimum limit is applied to default interests to be collected. Minimum default interest is determined in the Procedure.

(5) Minimum default basis and minimum default interest amounts are determined by the Finance Ministry by taking into account the revaluation rate announced every year and they are announced to members before application.

(6) If Takasbank has incurred a loss exceeding default interest due failure to partially or fully perform the debt, this loss is compensated by defaulted Member.

Accrual, notification and collection

ARTICLE 37- (1) Accrued default interest is paid in 1 business day after accrual date with other legal obligations.

(2) Member is notified of accrued default interest. Default interest and other legal liabilities, which have not been deposited by the member within the deadline despite accrual, are automatically collected by Takasbank on the following business day from the member's current account.

Default management process

ARTICLE 38- (1) The default of Member, who doesn't fulfill its obligations on time and whose settlement debt cannot be closed-out by Takasbank within the deadlines determined in the Directive following transactions executed by Takasbank at the Market, is notified to Borsa, Board and the respective Member pursuant to article 13 of the CCP Regulation and all kinds of transaction execution powers of the Member over its accounts are suspended.

(2) Takasbank may apply one or several of the following measure regarding the defaulted Member, and not only restricted to these, subject to relevant articles of the Central Counterparty Regulation. During the use of default management tools, the reason of the default and its effects on the market are taken into consideration;

- a) Migration of the open positions in solvent client accounts with their collaterals fully or partially to a solvent Member pursuant to article 26 of the Central Counterparty Regulation;
- b) Use of excess margin of the client at other markets,
- c) Use of guarantee fund contribution shares of the Member at other markets on the condition that it bears no risk at the respective Market.
- ç) Taking action to use guarantee fund contribution shares of solvent Members pursuant to articles 32 of this Directive,
- d) If required migration of client positions and collateral to other members automatically or upon clients' demand, without seeking defaulted Member's consent,
- e) Automatic close-out of positions,
- f) Netting-off debts, positions, collateral rights and obligations with the same party.

(3) Shortfalls which arise after application of default provisions in this Directive and provisions of the Fifth Chapter of Central Counterparty Regulation to the defaulted member and those that cannot be met with collateral and guarantee fund contribution shares belonging to the defaulted Member are defined as the loss of Takasbank and other member and assumed according to the order as per the first paragraph of 36th article of Central Counterparty Regulation. Collections, which shall be received later from the defaulted Member, are distributed pursuant to 36th article, 5th paragraph of Central Counterparty Regulation.

(4) Takasbank replenishes the reduction due to use in case of default, in the capital allocated to

covered risks subject to article 36 of Central Counterparty Regulation, in one month. Allocated capital, which shall be replenished in one-year period as such, cannot exceed the amount set at the beginning of the term. If a default is experienced again during the one month period until replenishment of reduced capital, if exists, the remaining portion of allocated capital is used. Guarantee fund of solvent Members are resorted to for the shortfall. Replenishment of capital does not require return of used guarantee fund contribution shares.

CHAPTER NINE

Final Provisions

Fee and commissions

ARTICLE 39- (1) Provisions of article 35 of the General Regulation are applied regarding fees and commission that Takasbank shall apply to its Members for services it provides under this Directive.

Disciplinary provisions

ARTICLE 40- (1) Regarding Members, who don't comply with the obligations specified in this Directive, in addition to the provisions provided in this Directive, the disciplinary provisions provided in Seventh Chapter of the Central Clearing Regulation are applied as well.

Measures to take during extraordinary situations

ARTICLE 41- (1) Takasbank is authorized to determine and apply the measures to take in case of extraordinary conditions, where it foresees that settlement transactions may be adversely affected. In such cases, it is authorized to take measures provided in the 48th article of Central Counterparty Regulation.

Provisions that shall apply in case where there is not a provision in the Directive

ARTICLE 42- (1) In cases where there is not a provision in the Directive, provisions of Central Clearing Regulation and Central Counterparty Regulation are applied.

TEMPORARY ARTICLE 1- (1) Sub-Group Limit, set as 40% for mortgage-backed securities, mortgage-based securities, asset-backed securities and asset-based securities, is to be applied as 100% until 31/12/2019.

(2) Borsa İstanbul A.Ş. shares are considered as collateral while the buy-back guarantee of Borsa İstanbul remains.

(3) The additions to the assets accepted as collateral and revisions regarding composition limits of these assets become effective after publication in the Procedure.

Taking effect

ARTICLE 43- (1) The Directive takes effect on the date it is released.

Enforcement

ARTICLE 44- (1) The provisions of this Directive are enforced by Board of Directors.