

TAKASBANK CENTRAL COUNTERPARTY DIRECTIVE ON COLLATERAL MANAGEMENT IMPLEMENTATION PRINCIPLES

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TAKASBANK CENTRAL COUNTERPARTY DIRECTIVE ON COLLATERAL MANAGEMENT IMPLEMENTATION PRINCIPLES

CHAPTER ONE

Purpose, Scope, Basis, Definitions and Abbreviations

ARTICLE 1 - Purpose

- (1) The purpose of this Regulation is to regulate the implementing principles of the collateral management activities in the markets to which Istanbul Settlement and Custody Bank Incorporation (Takasbank) provides service as the Central Counterparty (CCP).

ARTICLE 2 - Scope

- (1) For the collaterals received by Takasbank as margin requirement and guarantee fund contribution amounts in relation to the market or capital markets instruments to which Takasbank provides CCP service, the operations relating to;
- determination of their valuation haircuts,
 - determination of their compositions and types,
 - establishment and control of the processes for their valuation,
 - their segregation, transferring, monitoring, investment and safekeeping
- fall within the scope of this Regulation.

ARTICLE 3 - Basis

- (1) This Regulation has been prepared on the basis of article 12 of the Articles of Association of Istanbul Clearing, Settlement and Custody Bank Inc. and article 13 of the General Regulation on the Establishment and Operating Principles of the Central Clearing and Settlement Institutions.

ARTICLE 4 - Definitions and Abbreviations

- (1) Terms used in the implementation of this Regulation shall bear the following meanings:
- BİAŞ/Exchange:** Borsa Istanbul Inc.
 - Department:** Central Counterparty Department.
 - Large-scale bank:** The commercial banks whose share by asset size in the total sector is above 5%.
 - GDDS:** Government domestic debt securities.
 - Eurobond:** Bonds issued by the Republic of Turkey Undersecretariat of Treasury abroad in foreign currency.
 - Guarantee Fund:** The fund/funds established with the contribution amounts of the CCP members for utilization in the event the clearing and settlement obligations relating to the

- markets or capital market instruments to which central counterparty service is provided are failed to be fulfilled.
- g) **Backtesting:** Tests aiming to measure the performances of risk measurement models used in determining the collateral valuation haircuts.
 - h) **General Manager:** The General Manager of Takasbank.
 - i) **Discount factor:** The figure indicating the relative depreciation that may be incurred in the market values when the need for converting the collaterals into cash arises.
 - j) **Margin requirement:** Initial, variation, physical delivery margins and any other collateral that may be established for risks arising from the positions.
 - k) **Law:** The Capital Markets Law No. 6362.
 - l) **Credit risk/specific risk:** The probability of loss that may arise from the depreciation in the market values of the assets accepted as collateral due to default or impaired credibility of the issuers of those assets.
 - m) **Board:** The Capital Markets Board.
 - n) **Liquidity risk:** The probability of loss that may result from conversion into cash by the Bank of the assets it has accepted as collateral with the prices lower than those it has estimated as a result of extreme fluctuations or declined depth in the markets.
 - o) **Macaulay duration:** The method estimating the average principal repayment/recovery period of the financial assets and liabilities by weighting the present value of all cash flows within the term with the number of payment periods.
 - p) **Central Counterparty (CCP) service:** The activity where Takasbank ensures settlement finality, becoming buyer to seller and seller to buyer through open-offer, contract novation or any other legally-binding method on the basis of the markets or capital markets instruments deemed appropriate by the Board.
 - q) **CCP:** The central counterparty.
 - r) **CCP Regulation:** Istanbul Settlement and Custody Bank Incorporation Central Counterparty Regulation published in the Official Gazette numbered 28735 and dated 14.08.2013.
 - s) **CCP Default Management Committee:** The Committee in charge of managing the default of the members in the markets or capital market instruments to which CCP service is provided, whose duties and powers are stipulated in the Regulation on CCP Default Management Implementation Principles.
 - t) **Model:** The technique and approaches used for calculating the collateral valuation haircuts.
 - u) **SLM:** Takasbank Securities Lending Market.
 - v) **Market:** Places where in Takasbank is authorized by the Board to provide CCP service.

- w) **Market risk:** The probability of loss that may be incurred as a result of the fall in the market values of the financial instruments accepted as collateral below the amount valued by the Bank due to the interest rate, currency, commodity and stock price risks or specific risk.
- x) **Market directive:** The arrangements for the markets and capital market instruments to which Central Counterparty service will be provided, which have been adopted by the Board of Directors and approved by the Board.
- y) **Procedure:** The arrangements comprising the rules, principles and procedures for the CCP activity and its functioning and implementations, which have been prepared pursuant to the general framework stipulated in the Central Counterparty Regulation, market directives and regulations, and approved by the General Manager.
- z) **Repo:** A financial transaction where an entity or its counterparty transfers the securities with a commitment to buy them back at a prescribed price on a date it has designated or will designate (This transaction is a repo for the entity selling the securities or commodities and a reverse-repo for the entity buying them).
- aa) **Value at Risk (VaR):** The value estimated by generally accepted quantitative methods, which indicates, at a given time period and in certain probability level, the maximum loss that may be incurred on the value of a portfolio or an asset held due to fluctuations in the interest rates, exchange rates, commodity or stock prices.
- bb) **Capital market instruments:** Securities and derivative instruments as well as other capital market instruments, including the investment contracts, determined by the Board as falling into this scope.
- cc) **Specific wrong-way risk:** The risk that may result from the presence of a wrong-way correlation between the market value of the received collateral and the current value of the risk being exposed.
- dd) **Takasbank/Bank:** Istanbul Settlement and Custody Bank Incorporation.
- ee) **Historical simulation approach:** A methodology analyzing the loss or gain in value to be resulted upon adaptation of the historical market conditions of a certain previous time period to the current market portfolio.
- ff) **Collateral:** Assets delivered by the central counterparty members to Takasbank as security for **margin requirement** and guarantee fund contribution amount.
- gg) **Collateral valuation haircut:** The haircut which takes into account the depreciation that may be incurred in the market values of the assets accepted as collateral in the event of their liquidation under stress conditions.
- hh) **Volatility:** The change in the prices of the financial assets or the level of risk factors over a given period of time.
- ii) **Board of Directors:** The Board of Directors of Takasbank.

CHAPTER TWO

General Principles

ARTICLE 5 - General Principles

- (1) The expected post-liquidation cash proceeds of the assets received as collateral in all markets to which service is provided as CCP must not be less than the expected appreciated values of these assets. Accordingly;
 - 1) The collateral valuation haircuts must be periodically calculated on the basis of a dataset containing sufficient number of observations, in a manner to include the major financial volatilities experienced in the past, as well as to cover the recent period and they must be monitored continuously by taking account of the market conditions and revised in case any significant change is seen;
 - 2) The collateral types and their compositions required for different markets must be determined by taking the risk levels of the relevant financial assets into consideration and reviewed in a routine manner;
 - 3) The collateral valuation must be made in a manner to cover the intraday price movements;
 - 4) The collateral adequacy must be monitored constantly.
- (2) Procedures may be issued to provide guidance for the operations, processes and rules to be observed in the implementation of the principles stipulated in this Regulation.

CHAPTER THREE

Determining Assets Accepted as Collateral and Monitoring Risks

ARTICLE 6 - Determining assets accepted as collateral

- (1) In determining the financial assets to be accepted as collateral in the markets to which CCP service will be provided, the liquidity, credit and market risks of such financial asset are taken into account.
- (2) In the organized derivative markets where profit/loss (variation margin) distribution is regularly made, the priority is given mainly to Turkish Lira cash, and to USD and EURO denominated foreign currency, gold and short-term GDDSs.
- (3) The assessment and review of the financial assets to be accepted as collateral are made once a year in December. Market and operations departments may submit a financial asset inclusion request regardless of the routine assessment period.

- (4) Should the inclusion of any financial asset listed among the collateral types set forth in the CCP Regulation but not named in the assets eligible as collateral in the relevant market directives or procedures be considered, the risk assessment of the relevant financial asset shall be made and the valuation haircut shall be designated. The evaluations of the market and operations departments regarding the designated haircut shall be obtained. The valuation haircut proposed to be applied to the asset requested for inclusion shall be submitted for approval to the General Manager, the Assistant General Manager in charge of CCP and Financial Services. The revision approved by the General Manager shall be communicated to the market and operations departments as well as to the relevant application development teams to facilitate the necessary revisions to be made in the relevant directives and procedures and - if any- the software. The revisions being made shall be announced to the members together with the enforcement date upon their approval by the Board of Directors and the Board and published on Takasbank website.
- (5) Should the inclusion of any asset as collateral other than the collateral types set forth in the CCP Regulation be considered, the asset inclusion process shall be conducted following the amendment of the CCP regulation thereof.
- (6) Should the exclusion of any asset accepted as collateral from the collateral scope be considered due to any increase in their risk levels, an analysis about the subject matter which also depicts the impact of such decision shall be prepared and the approval process shall be conducted in the manner as stipulated in the subparagraph 4 above.

ARTICLE 7 - Managing and monitoring the liquidity, credit and concentration risks of the assets accepted as collateral

- (1) For the debt securities accepted as collateral, the average remaining term to maturity of the established portfolio must not exceed 2 years on a member basis. In calculating the average remaining term, the Macaulay duration based on the repricing dates of the debt securities can be used. The average remaining term to maturity of the debt securities accepted as collateral is monitored on member and market basis.
- (2) Except those issued by the Undersecretariat of Treasury, the aggregate amount of guarantees provided and the capital market instruments issued by the same issuer must not exceed 25% of the total collateral outstanding in the relevant market. The concentration limits are monitored on a monthly basis. In case of overrun, the members may be granted extra time upon the proposal of the Central Counterparty Manager, opinion of appropriateness from Assistant General Manager in charge of CCP and Financial Services and approval of the General Manager to ensure compliance with the concentration limits.
- (3) To be able to monitor the liquidation capabilities of the assets accepted as collateral; the trading volumes of the assets accepted as collateral or the index and benchmark data representing such assets as well as the spread between the bid/ask prices of these assets, indexes and benchmark prices -if any- are monitored on a daily basis.
- (4) To monitor the international credibility of Turkey, the course of 5-year Credit Default Swap (CDS) premiums of the Republic of Turkey, together with its credit ratings, are monitored on a periodic

basis. In addition, should the private sector debt instruments be accepted as collateral, the credit ratings of the relevant company as well as its CDS premiums are also monitored in a periodic basis.

CHAPTER FOUR

Determining, Monitoring and Approving Collateral Valuation Haircuts

ARTICLE 8 - Risks to be considered in determining the valuation haircuts of the assets accepted as collateral

- (1) The historical volatility data to be used in determining the valuation haircuts is deemed to include, theoretically, the credit and specific risk, liquidity risk and other market risk premiums. Accordingly, calculating premium for each risk individually or segregating volatility by its resources is not a requisite. On the other hand, if it is concluded that the valuation haircuts calculated on the basis of historical data fail to reflect one or more than one of these risks properly, additional risk premiums may also be applied for such risks.
- (2) Government domestic debt securities and lease certificates issued by the Republic of Turkey Undersecretariat of Treasury are deemed to include no credit risk. Should the private sector debt instruments be accepted as collateral, their valuation haircuts can be determined by adding credit and/or liquidity risk premium to the valuation haircuts designated for the government domestic debt securities at the same maturity.
- (3) In determining the valuation haircuts, if it is concluded despite the classifications made on the basis of maturity, Macaulay duration, index or trading volume and other criteria that the valuation haircuts fail to differentiate adequately to reflect the liquidity risk, the liquidity risk premium can be added to the valuation haircuts being calculated.
- (4) To take the liquidity risk into account to the maximum extent, the minimum 2-days holding period set forth in the 6th subparagraph of article 9 can be differentiated on asset basis and increased accordingly.
- (5) The valuation haircuts of the foreign currency-indexed assets can be calculated by deducting the discount factors designated for the currency risk from the valuation haircuts determined for the TL denominated assets with approximate maturity.
- (6) In case the historical data used in calculating the volatility of gold and foreign currency assets is not denominated in TL, the discount factors designated for the currency risk is deducted from the valuation haircuts being calculated.
- (7) The valuation haircut for the currency risk can be determined, depending on its significance, either separately for each currency type or as a single rate to be based on historical volatility data representing a foreign exchange basket.

- (8) For the valuation haircuts determined for the bank guarantee letters, only the currency risk is taken into account. Risks carried by the guarantee letters are managed through the risk limits prescribed for the banks whose guarantee letters are accepted.
- (9) In addition to the fund prices in calculating the valuation haircuts of the exchange mutual funds, the risk level of the underlying asset, asset class or benchmark index may also be taken into account.
- (10) To prevent occurrence of any wrong-way risk in determining the assets accepted as collateral, due care is given to the acceptance of assets that would not lose value due to the default of the members.

ARTICLE 9 - Calculating collateral valuation haircuts

- (1) In determining the valuation haircuts to be applied to the assets accepted by Takasbank as collateral and guarantee fund contribution amount, the discount factors indicating the relative depreciation in value of the assets accepted as collateral and calculated in accordance with the principles stipulated in this article shall be taken into account. The collateral valuation haircut is calculated by deducting the calculated discount factor from 1.
- (2) In determining the collateral valuation haircuts, the credit or specific risks of the assets accepted as collateral, their interest, commodity, currency and stock price risks analyzed by the Department as well as their maturity and liquidation capabilities shall be taken into account.
- (3) The discount factors are calculated through the historical simulation based value-at-risk approach. The discount factors for the bonds and bills may also be calculated by way of applying the interest rate shocks to be determined in accordance with the parameters set forth in this article to the yield curves derived via linear interpolation method.
- (4) To reduce cyclicity of the dataset used in the model and facilitate prudent calculation of the collateral values, it is ensured that it incorporates financial volatilities experienced in the recent period. The duration of the dataset used in the collateral calculation model must cover a historical period of minimum 5-years.
- (5) For the assets in which there is inadequate or no historical data, the haircuts shall be determined by using datasets with a shorter duration or taking the haircuts calculated for the assets with similar qualifications as a benchmark.
- (6) For the calculations being made, the holding period is taken into account as minimum 2-business days. In taking account of the holding period, either the volatilities calculated directly for the holding period or the volatility data found by adjusting the volatility calculated for another time frame to the desired holding period in accordance with the square-root-of-time principle shall be used.
- (7) In calculating the discount factors, 99.9% confidence level must be used. In case the dataset fails to have sufficient duration, or the determined figure gets very closer to the maximum value for a similar reason or move highly away from the next lower value, the confidence level may be reduced up to 99.5%.
- (8) The discount factors may be determined so as to be above the values calculated with the historical data by taking current and future market conditions into account.

- (9) The collateral valuation haircut calculations are made in December.
- (10) To ensure the up-to-dateness of data to be used in the calculations and assessments made within the scope of this Regulation, the dataset must include, at minimum, the last business day of the month preceding the month in which the calculation or the assessment was made.

ARTICLE 10 - Calibrating collateral valuation haircuts

- (1) The valuation haircuts of the assets accepted as collateral are calibrated before their application through intra-sample backtests.
- (2) In backtesting, the discount factors of the assets accepted as collateral or the indexes thereof which are used in calculating the collateral valuation haircut are compared with the relative value changes being observed by taking account of the holding period of the underlying asset or relevant index.
- (3) Backtesting can be conducted by using the index, maturity and indicators representing the asset group subject to collateral.
- (4) If the relative value depreciation being calculated by taking account of the holding periods used in calculating the collateral valuation haircut of the financial asset group exceeds the calculated discount factor by more than two business days in the last one year period, the calculated valuation haircut shall be reduced by using the multiplication factors that have been determined by taking account of the number of exceeds occurred or the collateral valuation haircut is recalculated with the most recent data set.

$$\text{Collateral Valuation Haircut (\%)} = 1 - (\% \text{Discount Factor} \times \text{Multiplication Factor})$$

- (5) The multiplication factors corresponding to the number of exceeds and to be used in determining the haircuts are given below.

Number of Exceeds	Multiplication Factor
2 or less	1,00
3	1,20
4	1,35
5	1,50

- (6) In case of any exceed occurs in the valuation haircuts by more than 5 business days in the last one year period, the dataset, confidence level and the model being used shall be reviewed.
- (7) The validity of the collateral valuation haircuts being used shall be reviewed at least once a year by the Internal Audit Team and the outcome of the audit shall be reported to the Board of Directors.

ARTICLE 11 - Backtesting

- (1) Collateral valuation haircuts are made subject to backtesting on a monthly basis.
- (2) Backtesting can be conducted by using the index, maturity and indicators representing the assets subject to collateral.

- (3) If, as a result of the backtesting, there is more than two business days overrun on average at the asset group in the last one year period and such asset group has not been previously calibrated by the multiplication factors, the valuation haircut shall be reduced in accordance with article 10 and calibrated. In case any re-calibration need arises for a previously-calibrated asset group, the collateral valuation haircuts shall be recalculated. The validation process for the revised haircut change shall be performed in the manner as stipulated in article 13 of this Regulation.

ARTICLE 12 - Monitoring the adequacy of collateral valuation haircuts

- (1) The expected post-liquidation cash proceeds of the assets accepted as collateral in all markets to which CCP service is provided must not be less than the expected appreciated values of these assets.
- (2) The collateral valuation haircuts are monitored in a continuous manner by observing the market conditions, and are revised in case any significant change is seen. If any overnight price change occurs at the markets in either one of the following variables in a way to cause depreciation in the collateral value at a rate exceeding;
- 1) 10% of BIST 30 and/or BIST 100 index(es),
 - 2) 300 basis points of Benchmark GDDS interest rate,
 - 3) 5% of the market price of the currency basket comprising of 1 United States Dollar (USD) and 1 European Currency Unit (EUR),
 - 4) 200 basis points of 10-years Eurobond interest rate,
 - 5) 10% of TL gold price per gram,

then the adequacy of the collateral valuation haircuts shall immediately be checked through the backtests, and the haircuts shall be revised, if deemed necessary, in the manner as stipulated in article 10 of this Regulation.

ARTICLE 13 - Approving collateral valuation haircuts

- (1) Haircut revision proposals, including an analysis regarding the possible effects that such revisions may cause on the values of the members' financial assets subject to collateral, shall be submitted for approval, together with their recommended enforcement dates, to the General Manager through the Assistant General Manager in charge of CCP and Financial Services.
- (2) The valuation haircut revisions approved by the General Manager shall be announced, as to be implemented following the completion of necessary modifications - if any - in software, to the members by Takasbank market and operations department and published on its website.

CHAPTER FIVE

Determining Market-Based Compositions of the Assets Accepted as Collateral and Transferring Rights Arising from the Assets to the Accounts

ARTICLE 14 - Collateral composition

- (1) Collateral compositions of the assets to be accepted as collateral in the markets to which CCP service is provided and their limits thereof are determined on market basis in the relevant market regulations or procedures by taking the characteristic features regarding the functioning of the markets and the risks of assets subject to collateral into consideration.
- (2) Assets provided in excess of the composition limits are not taken into account in the collateral adequacy calculations.
- (3) Periodic review of the collateral compositions is made in December.
- (4) Market and operations departments may submit a collateral composition revision request regardless of the routine assessment period.
- (5) Should any market-based revision for the collateral composition be envisaged, the impact of such decision on the collateral levels of the members is analyzed. The approval process shall be conducted in the manner as stipulated in article 13.

ARTICLE 15 - Transferring rights arising from the assets accepted as collateral to the accounts

- (1) Any change in the value of the assets whose value has changed as a result of the rights arising from the assets accepted as collateral must be posted immediately to the accounts.
- (2) The principles for transferring rights arising from the assets provided as collateral to the relevant accounts shall be stipulated in the relevant market directives and/or procedures.

CHAPTER SIX

Collateral Valuation

ARTICLE 16 - End-of-day collateral valuation operations

- (1) Financial assets accepted as collateral in the markets to which CCP service is provided must be made subject to valuation at the end of each trading day.
- (2) In addition to the latest traded or weighted average prices, the values determined as benchmark by the Central Bank of the Republic of Turkey or Borsa Istanbul can be used for valuation. In case no trading occurs in the market, the theoretical price calculated by the Department or the average of the buy and sell prices prevailing at market closing can be used as the price. Prices to be used for the

valuation of assets accepted as collateral and their order of priority shall be stipulated in the market procedures.

- (3) Unless an alternative valuation method is stipulated for the financial assets which have neither an established price under the prescribed valuation principles nor any theoretical price or whose theoretical price is considered to show significant deviation, the values to be determined by the Department or the previous end-of-day prices shall be used.
- (4) The price-set to be used for the end-of-day collateral valuation is validated on a daily basis by the Department prior to the valuation operations.
- (5) Should the trading of securities deposited as collateral be halted, the valuation principles are stipulated in the market directives.

ARTICLE 17 - Intraday collateral valuation operations

- (1) The intraday valuation of the collaterals is conducted in the markets to which CCP service is provided.
- (2) In addition to the latest traded or weighted average prices, the values determined as benchmark by the Central Bank of the Republic of Turkey or Borsa Istanbul can be used for valuation. In case no trading occurs in the market, the theoretical price calculated by the Department or the average of the buy and sell prices prevailing in the market at the moment of valuation can be used as the valuation price. Prices to be used for intraday valuation of assets accepted as collateral and their order of priority shall be stipulated in the market procedures.
- (3) If any intraday price change occurs at the markets in either one of the following variables in a way to cause depreciation in the collateral value at a rate exceeding;
 - 1) 10% of BIST 30 and/or BIST 100 index(es),
 - 2) 300 basis points of Benchmark GDDS interest rate,
 - 3) 5% of the free market price of the currency basket comprising of 1 United States Dollar (USD) and 1 European Currency Unit (EUR),
 - 4) 200 basis points of 10-years Eurobond interest rate,
 - 5) 10% of TL gold price per gram,

then the collateral values of the members/accounts shall immediately be updated.

- (4) Should the trading of securities deposited as collateral be halted during the session hours, the valuation principles thereof shall be stipulated in the market procedures.
- (5) The control points to ensure the reliability of the price-set to be used for intraday collateral valuation are determined by the Department and its accuracy is validated on certain time periods. If it is system-wise detected that the thresholds to be set for the difference with the previous day's price according to the categories of the assets deposited as collateral were exceeded, the prices of these assets shall be reviewed by the Department. In case any error is identified in the prices, the necessary

corrections shall be made. If it is determined that such error has resulted from the valuation process, these processes shall be reviewed and the necessary corrections shall be made accordingly.

CHAPTER SEVEN

Collateral Segregation, Depositing/Withdrawal and Pre-Default Transferring Processes

ARTICLE 18 - Collateral accounts and segregation

- (1) At Takasbank, the margin requirement amounts in each market to which central counterparty service is provided are monitored in separate accounts from the guarantee fund contribution amounts; and the margin requirement and guarantee fund contribution amounts of each member are monitored in separate accounts from other members' margin requirement and guarantee fund contribution amounts.
- (2) The margin requirement amounts belonging to the customers of the members are monitored separately from the accounts where the collaterals belonging to the member's own portfolio are monitored. In segregating collaterals of the customers, single or multiple collateral accounts are used to the extent permitted by the CCP Regulation. Accounts where the collaterals belonging to the customers of the members are monitored shall be opened by the members in their names to conduct trade on behalf of their customers. The necessary arrangements shall be made in the directives and procedures to enable the members to inform the customers of the fact that the customers have no direct disposition power over these accounts opened by the members and the power to withdraw free collateral belongs to the member.
- (3) A system shall be established where the transaction, collateral and position information in the single customer accounts opened by the members in the markets to which CCP service is provided by Takasbank can directly be examined and monitored by the relevant members via remote access.
- (4) The types of permissible collateral accounts to be opened on market basis, the principles and procedures regarding the opening and use of the collateral accounts shall be stipulated in the market procedures. The operations and transactions for the opening and use of the collateral accounts shall be performed by the market and operations departments.

ARTICLE 19 - Collateral depositing/withdrawal processes

- (1) While withdrawing the collaterals, it must be ensured that the collateral levels stay above the level required to be maintained. Accordingly, during the collateral withdrawal, the collaterals are revalued by their current prices. The compatibility of the risks and the required collateral levels against such risks shall be observed.

- (2) The principles and procedures regarding collateral depositing and withdrawal shall be stipulated in the relevant market procedures. The operations and transactions thereof shall be performed by the market and operations departments.

ARTICLE 20 - Pre-default transferring

- (1) Upon individual or joint written request to be made to the member by the customers who have the user status of the single or multiple accounts and further to the transferor member's declaration of approval and the transferee member's acceptance; the single or multiple collateral accounts opened in the name of the member but to monitor the collaterals of the customers, and the positions thereof - if any - shall be transferred by Takasbank to the accounts to be opened by the transferee member. For portability, the request of the transferor member and the acceptance of the transferee member must be conveyed to Takasbank in writing. The declaration and acceptance of the transferor and transferee members must include the collateral and position breakdowns on customer basis.
- (2) The principles and procedures regarding pre-default transferring shall be stipulated in the relevant market procedures. The operations and transactions thereof shall be performed by the market and operations departments.

CHAPTER EIGHT

Monitoring Collaterals, Investing them as Deposit/Repo in Other Banks and their Safekeeping

ARTICLE 21 - Collateral monitoring and their reporting

- (1) The collaterals of each market in which Takasbank acts as central counterparty are monitored separately in its financial or managerial records and reports on market basis. The monitoring is conducted for each market in a manner to cover all collaterals booked as margin requirement and guarantee fund contribution amount in the liabilities or off-balance sheet accounts of the Bank and on the basis of the accounts in which these collaterals are monitored in the assets or off-balance sheet, the banks or depository institutions to whom they are invested as repo, deposited or delivered for legal requirements, interest accrual or safekeeping purposes; and reported at least once as of each business day to Assistant General Manager in charge of CCP and Financial Services and the General Manager.
- (2) Reporting-related operations and transactions shall be performed by the Central Counterparty Department.

ARTICLE 22 - Investing cash collaterals as deposit/repo in other banks for interest accrual or other purposes

- (1) In the markets to which central counterparty service is provided, whether or not any interest shall be accrued on cash collaterals posted by the members or on behalf of their customers by the members shall be stipulated in the relevant market directives or procedures.
- (2) Interest payment on collaterals can only be possible to the extent the collaterals are deposited in a manner to provide return in accordance with the daily market conditions and risk management principles. In cases where the market conditions are not eligible or adequate return cannot be achieved due to risk management reasons, the collaterals cannot be made subject to interest accrual process.
- (3) When investing the collaterals as time or demand deposit or repo in other banks for interest accrual or other reasons, the large-scale public banks shall be preferred as the counterparty to keep the credit risk and liquidity risk low. Minimum 95% of the cash collateral amount that cannot be deposited to large-scale public deposit banks shall be made subject to repo at the large-scale commercial banks or on the organized markets.
- (4) For the collaterals of the markets to which central counterparty service is provided, the maximum applicable term for investing them as deposit or repo is two business days.
- (5) Collateral deposit/repo transactions shall be conducted within Takasbank Treasury risk limits.

ARTICLE 23 - Collateral safekeeping

- (1) Pursuant to 2nd subparagraph of article 73 of the Law; cash and non-cash collaterals delivered to Takasbank by the members in the markets to which central counterparty service is provided cannot be used other than for their delivery purposes; they cannot be seized even for collection of public receivables, cannot be pledged, cannot be included in a bankrupt's estate and they are not affected from the liquidation decisions of the administrative authorities and no precautionary attachment can be imposed on them.
- (2) Collaterals delivered to Takasbank in the markets to which central counterparty service is provided can only be used for the fulfillment of risks and obligations resulting from the positions taken by the members or their customers. Collaterals received for the central counterparty service cannot, even for a temporary period, be used to perform the obligations arising out of any activity including those arising from other capital market or banking activities of Takasbank.
- (3) Excess collaterals of any member in the markets to which CCP service is provided can only be used for the fulfillment of other obligations of the member to Takasbank to the extent it is explicitly stipulated in the directives, procedures and contracts.
- (4) Even in the event Takasbank is compelled by a course of legal proceeding to make payment in a manner to ensure the collaterals due to its other activities, the payment requests shall be rejected pursuant to 2nd subparagraph of article 73 of the Law.

- (5) Since the collaterals delivered by the member to Takasbank shall not, pursuant to 2nd subparagraph of article 73 of the Law, be affected from any administrative and judicial proceeding and liquidation decision, no attachment, bankruptcy and injunction order over the assets of the member shall be applied to the collaterals delivered to Takasbank. The rights and powers of Takasbank over the assets that it has received as collateral from the members for the operations it is obliged to fulfill as central counterparty cannot, pursuant to 3rd subparagraph of article 79 of the Law, be restricted in any manner. Accordingly, devoting time for composition to the member, approval of the composition, composition after bankruptcy or inclusion into composition process by abandonment of its assets, restructuring of its debts by arrangement, postponement of its bankruptcy or other legal proceedings, ruling on its gradual liquidation pursuant to the Law cannot prevent Takasbank from exercising its rights and powers on collaterals. Since the clearing and settlement operations of the capital market instruments can be neither revoked nor cancelled pursuant to 1st subparagraph of article 79 of the Law and in accordance with the "Settlement finality" principle, including the state of temporary or permanent suspension of activities of the members and initiation of liquidation process at the administrative and judicial authorities, the rights and powers of Takasbank over the collaterals cannot be restricted even if the activities of member is suspended temporarily or permanently.
- (6) Regarding the investment of collaterals as deposit or repo in other banks for interest accrual or other reasons or their safekeeping, it is hereby admonitory declared that the funds/assets being transferred thereof shall be under protection in accordance with the 2nd subparagraph of article 73 of the Law.
- (7) In the event the bank in which the collaterals are invested as deposit or repo or are safe-kept becomes insolvent, its management or supervision is transferred to the Savings Deposit Insurance Fund, or its banking license or depository permit is cancelled and the bank is included in a bankruptcy or liquidation process, the collaterals invested as deposit or repo or delivered for safekeeping and/or the assets given against repo shall be asked to be returned immediately pursuant to the 2nd subparagraph of article 73 of the Law and such situation shall be informed promptly by the Legal Affairs Department to the Board, the Banking Regulation and Supervision Agency and the Savings Deposit Insurance Fund.
- (8) In order for the non-cash collaterals in the markets to which CCP service is provided to be safe-kept in the foreign depository institutions, these collaterals must have sufficient legal protection in case of bankruptcy or liquidation of the depository institution or against the claims of creditors from the depository institution, and additionally, a limit must have been allocated for the depository institution by the Board of Directors.
- (9) Operations and transactions relating to the safekeeping of the collaterals shall be performed by the Central Counterparty Department, operations and market departments, Legal Affairs Department and Fund Management Team.

CHAPTER NINE

Miscellaneous and Final Provisions

ARTICLE 24 - Temporary Article

- (1) Activities stipulated in article 7, 16, 17 and 19 of this Regulation, respectively, for monitoring credit and liquidity risks of the assets provided as collateral, use of theoretical prices, intraday collateral valuation, validating the prices of assets provided as collateral before the end-of-day valuation process, revaluation prior to collateral withdrawal shall enter into force upon completion of Nasdaq transformation project.
- (2) The remote monitoring system referred to in the 3rd paragraph of article 18 of this Regulation shall become operative within 2 years after entry into force of this Regulation.
- (3) The collateral monitoring report pursuant to article 21 of this Regulation shall begin to be produced at the latest within 2 years following the completion of the required software.
- (4) The collateral valuation haircuts set forth in Appendix-1 shall be used up until any determination is made for the collateral valuation haircuts under this Regulation.

ARTICLE 25 - Enforcement

- (1) This Regulation shall enter into force on the date of approval by the Board of Directors.

ARTICLE 26 - Execution

- (1) The provisions of this Procedure shall be executed by the General Manager.

APPENDICES

APPENDIX-1: Collateral Valuation Haircuts

Type of Financial Asset	Collateral Valuation Rate	
Turkish Lira (TL)	1	
Convertible Foreign Currency (EUR&USD)	0.94	
Gold	0.86	
Government Domestic Debt Securities 0-1 year	0.98	0.91*
Government Domestic Debt Securities 1-5 years	0.95	
Government Domestic Debt Securities +5 years	0.89	
Eurobond 0-1 year	0.93	0.83*
Eurobond 1-5 years	0.91	
Eurobond +5 years	0.80	
Sukuk (TL)	0.85	
Private Sector Bond-Bank	0.82	
Private Sector Bond-Other Institutions	0.60	
Share Certificate (BIST 30)	0.76	
Share Certificate (BIST 100-30)	0.70	
Share Certificate (Non-BIST100)	0.60	
Mutual Fund Participation Certificate (Stock Intense)	0.82	
Mutual Fund Participation Certificate (Other)	0.88	
Letter of Guarantee (TL)	1	
Letter of Guarantee (EUR&USD)	0.94	

*Valuation rate to be used when the maturity is not taken into account.