

**DIRECTIVE ON CENTRAL CLEARING AND SETTLEMENT SERVICE TO BE PROVIDED BY
ISTANBUL SETTLEMENT AND CUSTODY BANK INC. IN BORSA ISTANBUL INC. PRECIOUS
METALS MARKET AND THE PRINCIPLES REGARDING THIS SERVICE**

**CHAPTER ONE
General Provisions**

Purpose

ARTICLE 1- (1) The purpose of this Directive is to regulate the principles regarding the clearing and settlement and collateral management service to be provided by Istanbul Settlement and Custody Bank Incorporation in Borsa Istanbul Precious Metals Market.

Scope

ARTICLE 2- (1) This Directive covers the matters regarding membership, clearing and settlement, collateral, default, discipline, earnings and other issues related to the clearing and settlement, risk and collateral management service to be provided by Istanbul Settlement and Custody Bank Incorporation in Borsa Istanbul Precious Metals Market.

Basis

ARTICLE 3- (1) This Directive has been prepared in accordance with articles 77 of the Capital Markets Law no. 6362 published in the Official Gazette no. 28513 dated 30.12.2012, the General Regulation on the Establishment and Operating Principles of the Central Clearing and Settlement Institutions published in the Official Gazette no. 28662 dated 30.05.2013, Istanbul Settlement and Custody Bank Inc. Central Clearing and Settlement Regulation published in the Official Gazette no. 28711 dated 18.07.2013, the Regulation on Principles of Foundation, Activities, Operations and Audit of Stock Exchanges and Market Operators published in the Official Gazette no. 28712 dated 19.07.2013, Borsa Istanbul Inc. Regulation on Principles Relating Stock Exchange Activities published in the Official Gazette no. 29150 dated 19.10.2014 and Borsa Istanbul Inc. Regulation on Principles of Exchange Activities Relating to Precious Metals and Precious Stones published in the Official Gazette no. 29150 and 19.10.2014.

Definitions and abbreviations

ARTICLE 4- (1) Terms used in this Directive shall bear the following meanings;

- a) Intermediary bank: The bank to which the members are requested their market receivables and withdrawable cash collateral amounts to be automatically transferred.
- b) Exchange: Borsa Istanbul Inc.
- c) General Manager: The General Manager of Istanbul Settlement and Custody Bank Inc.
- ç) Intra-day risk calculation: Risk and collateral valuations being made by using the last balances and prices of collateral and positions determined during the day.
- d) Trade margin: Collateral deposited to the custody accounts opened at Takasbank.
- e) Central Clearing and Settlement Regulation: Istanbul Settlement and Custody Bank Inc. Central Clearing and Settlement Regulation published in the Official Gazette dated 18.7.2013 and numbered 28711.
- f) Market: Borsa Istanbul Inc. Precious Metals Market.
- g) Position: The settlement debts and receivables arising in relation to the transactions conducted in the Market.
- ğ) Procedure: The implementing principles comprising the procedures related to the operation and practices in accordance with the rules and principles stipulated in the Directive, of which are approved by the General Manager.
- h) System: Takasbank system in which the clearing and settlement, risk and collateral management of the transactions conducted in the Market is carried out.
- ı) Clearing and settlement: All of the processes that enable the funds and/or assets to be transferred between the parties by fulfillment by the Members of the obligations arising in relation to the transactions conducted in the Market, within the time period and on the conditions set by Takasbank.

- i) Takasbank: Istanbul Settlement and Custody Bank Inc.
- j) Member : Those among the institutions authorized by the Exchange to trade in the Market, which have fulfilled Takasbank membership conditions under this Directive.
- k) Directive: This Directive on Central Clearing and Settlement Service to be Provided by Istanbul Settlement and Custody Bank Inc. in Borsa Istanbul Inc. Precious Metals Market and the Principles Regarding This Service.
- l) Board of Directors : The Board of Directors of Takasbank.

CHAPTER TWO

Principles for Membership

Membership

ARTICLE 5- (1) The institutions satisfying the conditions set forth in article 6 of this Directive may become a member to Takasbank by getting the authorization to perform the transactions of themselves and/or of their customers as a direct clearing and settlement member in the Market within the scope of this Directive.

Conditions for membership

ARTICLE 6 - (1) The following membership conditions must have been met to receive the clearing and settlement, risk and collateral management services for the Market.

- 1) There must be trading authorization in the Market.
- 2) The Market membership agreement and the pre-agreement information form whose contents are determined by Takasbank must have been signed and submitted.
- 3) The technical infrastructure determined and announced to the members by Takasbank must have been established and the necessary measures to ensure its operability must have been taken in order to perform the transactions at Takasbank.
- 4) The accounts designated by Takasbank must have been opened.

Commencing activities by members

ARTICLE 7- (1) The institutions to be applied for membership are required to make an application to the membership affairs department together with a letter containing the information and documents affirming the fulfillment of the conditions prescribed for membership in the Directive and send the information and documents referred to in article 10 of the Central Clearing and Settlement Regulation as well as the membership agreement and the pre-agreement information form by appending them to the said letter to Takasbank.

(2) The filed applications shall be reviewed by Takasbank in terms of whether the conditions prescribed in article 6 have been met or not. In order to commence its operations at Takasbank, the institution whose membership application is accepted must, following the notification that its membership application has been found eligible, deposit the membership fee and the membership collateral and authorize the personnel who will trade on behalf of the member in Takasbank system.

Obligations of members

ARTICLE 8 - (1) The Market members are obliged to comply with the following issues to be able to get authorization to perform the transactions of themselves and/or of their customers as a direct clearing and settlement member:

- a) Act in accordance with all rules and principles stipulated by this Directive and other relevant legislation for the service being provided.
- b) Behave in accordance with the principles of honesty and good faith towards their customers and other members.
- c) Adhere to the system time periods determined by Takasbank.
- d) Fulfil the fees, commissions and other obligations required by Takasbank in due time.
- e) Furnish all types of information and documents that may be requested on issues deemed necessary by Takasbank in relation to their business and transactions falling under the scope of this Directive and provide all types of support in the investigations to be carried out by Takasbank officers.

f) Adapt the system revisions to be made by Takasbank within the prescribed time periods and participate in the tests.

g) Fulfill their other obligations under this Directive in due time and in a complete manner.

(2) If any Member foresees that it will be unable to either partially or wholly fulfill its obligations, this Member is obliged to notify such situation immediately to the Exchange and Takasbank together with all substantiating information and documents describing its reasons thereof. Such notification shall not constitute an impediment for Takasbank to take the necessary measures stipulated in the Directive.

(3) The members are responsible for the fulfillment of all obligations relating to the transactions they have conducted in accordance with the activities stipulated under the Directive and for any function performed by their employees pursuant to their duties.

(4) The members conduct their transactions via remote access by using the user codes and passwords allocated to the personnel they have authorized. The responsibility arising from the transactions conducted in the system by using the allocated password and from the use of the password by unauthorized people shall belong to the member.

(5) In cases when access to the system is not possible, the transactions may be executed by Takasbank in accordance with the written instructions to be given by people holding authority to represent the member.

Restricting activities of the members

ARTICLE 9 – (1) The activities of the members under this Directive may be restricted by Takasbank in the following situations.

a) Restriction or temporary suspension of its Market activities to which service is provided pursuant to article 13 of the Central Clearing and Settlement Regulation.

b) Failure to fulfill the obligations stipulated in the Directive, the Procedure and the membership agreement.

c) Identification of any unfavorable situation for the member such as protest, seizure, provisional injunction, etc., or temporary or permanent suspension of its activities, cancellation of its relevant operating permit, prohibition to conduct any transaction for the capital market instruments traded in the Market for any reason, or decision rendered on its gradual liquidation or bankruptcy.

(2) If any situation referred to in this article occurs, Takasbank may resolve the outstanding positions of the Member to be liquidated either in part or in whole in accordance with the provisions of article 21 of the Directive.

(3) If the member's activities are restricted for reasons referred to in this article, the situation shall be immediately notified to the Exchange.

Terminating the membership

ARTICLE 10- (1) The membership may be terminated in accordance with the relevant provisions of article 13 of the Central Clearing and Settlement Regulation.

CHAPTER THREE Clearing and Settlement Principles

Takasbank's responsibility

ARTICLE 11 - (1) Takasbank shall not be responsible for the members' obligations against the Exchange and other members other than those it undertakes through this Directive in relation to the clearing and settlement, risk and collateral service.

General principles for clearing and settlement

ARTICLE 12-(1) The clearing and settlement operations are performed over Takasbank system.

(2) The members conduct their transactions by accessing Takasbank system through the infrastructure provided by Takasbank. The features of the system messaging to be established between the members and Takasbank and the contents of message shall be determined and announced to the members by Takasbank.

(3) The rights and obligations of the members arising from their transactions subject to the clearing and settlement are concluded on account over the designated accounts by Takasbank.

(4) No Takasbank guarantee exists for the completion of transactions on the settlement date and within its time period. Completion of clearing and settlement operations in due time is conditional upon the fulfillment by the obligor members of their obligations on time.

(5) Obligations relating to the transactions conducted in the Market shall be fulfilled on the settlement date by using the relevant settlement accounts. Issues relating to the settlement accounts shall be stipulated in the Procedure.

(6) In all business and transactions to be conducted in accordance with the Central Clearing and Settlement Regulation and this Directive, Takasbank shall only deal with the relevant member irrespective of whether the transactions belong to the customers of the members or not.

(7) In the clearing and settlement operations, the delivery versus payment principle shall be applied. The settlement receivables of the members failing to fulfill their settlement obligations shall not be paid.

(8) In calculating the net debt or receivable amount for the transactions conducted in the Market, use of multilateral netting method on the basis of precious metal and trade currency is essential. Cash receivables or debts are created against the net precious metal debts or receivables arising as a result of netting.

(9) Depending on the members' preference, transactions conducted in the Market can be made subject to gross settlement between two members without processing any netting operation. The principles for the implementation of gross settlement shall be stipulated in the Procedure.

(10) Closing the settlement debts by the members is essential. However, the debts may also be collected ex-officio from the member's relevant account. The implementing principles thereof shall be stipulated in the Procedure.

(11) The receivable distribution operations are performed in an automatic manner by taking account of the settlement pool balance and the members' remaining obligations during the distribution.

(12) The settlement is collectively concluded in a manner to settle the highest number of records at the time intervals set by Takasbank. It is also possible to partially fulfill the settlement obligations, and partial settlement can be made against the partially fulfilled obligations at the time periods set by Takasbank.

(13) Upon request of the members and to the extent the conditions set forth in the Procedure have been met, the settlement of the transactions conducted in the Market may also be processed before the end-of-day settlement start time designated in the Procedure.

(14) If requested by the members, their settlement receivables and TL, USD and EUR denominated collateral amounts shall be transferred to their intermediary bank accounts they have informed. The time periods related to the transfer operations shall be stipulated in the Procedure.

Settlement dates and periods

ARTICLE 13 - (1) The settlement dates and periods are determined in the Procedure by obtaining the opinion of the Exchange. The provision of the second paragraph of article 24 of the Central Clearing and Settlement Regulation shall be reserved.

Currency

ARTICLE 14 - (1) In the payment of cash obligations arising from the clearing and settlement operations, the currency in which the transactions are conducted shall be used.

Correcting the transactions conducted in the Market

ARTICLE 15 - (1) Corrections of the transactions conducted in the Market are performed over the system. The principles and procedures for transaction corrections and the method to be used shall be determined by the Procedure and announced to the members.

CHAPTER FOUR

Risk Management Principles

Risk management

ARTICLE 16 - (1) The risk management in the Market is performed by Takasbank in accordance with the principles established by obtaining the opinion of the Exchange. At-trade and post-trade risk management methods are applied for the precious metals traded in the Market. Takasbank may also apply the pre-trade risk management method during the transmission of orders to ensure availability of sufficient collateral in the account by considering the possibility of orders to turn into trades. Rules regarding the transactions for the accounts failing to have sufficient collateral before the trading and the accounts to which a margin call is served shall be stipulated in the Procedure.

(2) The settlement positions and collateral held in the accounts opened by the members at Takasbank shall be made subject to the updating operation at least at the end of each business day by Takasbank.

(3) A margin call shall be issued for the accounts whose collateral fails to be sufficient as a result of the update being made. Margin calls shall be issued via the member screens provided by Takasbank and/or by way of reporting. If the margin call is sent through the system, the member shall be deemed to have received the call without any need for further notice and warning. The responsibility of the member starts upon delivery to the member of the margin call issued by Takasbank.

(4) The members may fulfill their margin call obligations by depositing collateral or closing positions. Collateral deposit, withdrawal and valuation and account update and obligation fulfillment operations are performed on a position account basis. Intra-day and end-of-day risk management processes to be applied by Takasbank by obtaining the opinion of the Exchange, the model and/or content of the parameters to be used in calculating the margins and the calculation methods and the margin call processes and the deadlines thereof are explained in the Procedure.

(5) In which layers (pre-trade, at-trade and post-trade) the risk controls applied on the basis of submarkets/markets at the structure of the Market will be made is decided by Takasbank by also obtaining the opinion of the Exchange.

CHAPTER FIVE

Collateral Management Principles

Membership collateral

ARTICLE 17 – (1) The members deposit a “membership collateral” to cover the losses that may be incurred in case of failure to fulfill the dues, fees and commissions and other obligations against Takasbank within the time period given to them. The membership collateral is deposited in Turkish Lira. This amount determined by the Board of Directors can be re-determined by the Board of Directors by taking account of the market developments occurred in the Market.

(2) If the Members fail to fulfill their obligations, Takasbank shall collect the relevant amount from the membership collateral. After the collection operation, the Member shall restore its membership collateral to the required amount within 3 business days. Should the deficit amount be failed to be restored, the relevant amount shall be collected ex officio from the member.

(3) In case of termination of membership, the membership collateral shall be returned provided that all obligations of the member against Takasbank have been settled.

Principles for trade margin

ARTICLE 18 – (1) Collateral shall be requested from the members to cover the risks arising from the transactions conducted in the Market. In determining the parameters to be used for calculating collateral, the confidence levels and holdings periods to be designated in the Procedure shall be used provided that they are not less than 99% and 2 days respectively. Takasbank may perform end-of-day maintenance level application.

(2) In calculating the margin requirements, the portfolio-based net collateralization method shall be used. The implementing principles regarding the collateralization method shall be explained in the Procedure.

(3) The principles and procedures regarding the deposit, withdrawal and replacement of assets eligible as collateral and the time periods thereof shall be stipulated in the Procedure.

Trade margin valuation haircuts

ARTICLE 19- (1) In calculating the valuation haircuts reflecting the deduction rates and to be applied to the collateral, the parametric, non-parametric or simulation-based statistical methods deemed appropriate by Takasbank shall be used. In determining the collateral valuation haircuts, the relevant asset's credit risk rated by Takasbank, its maturity, its volatility under extraordinary market conditions, its liquidity, and its currency risk, if any, shall be taken into account.

(2) The statistical confidence level and the liquidation period to be used in the calculations to be made cannot be less than 99.50% and 2 business days respectively. The historical data to be used in the calculations must not be shorter than 1 year. For the assets in which there is insufficient data or no data at all, the valuation haircuts shall be determined by taking the haircuts calculated for the assets in similar nature as reference.

(3) The valuation haircuts to be used in calculating the collateral values of the assets to be deposited as collateral shall be explained in the Procedure.

(4) In determining the collateral haircut rates, the opinion of the Exchange shall be obtained.

Assets eligible as trade margin and the composition limits

ARTICLE 20- (1) The following assets can be used by the members for the fulfillment of the margin requirements.

- a) Cash Turkish Lira (TL)
- b) Foreign Currency (USD, EUR)
- c) Government Domestic Debt Securities (GDDS)
- ç) Republic of Turkey Undersecretariat of Treasury Foreign Debt Securities
- d) Lease certificates issued by the Republic of Turkey Undersecretariat of Treasury, Asset Leasing Company
- e) Precious metals traded in the Exchange
- f) Letter of Credit (TL, USD, EUR)

(2) Takasbank Board of Directors is authorized to set composition limits for the new assets to be accepted as collateral by obtaining the opinion of the Exchange or make revision in the composition limits including those determined in this Directive by obtaining the opinion of the Exchange.

(3) In the collateral valuation process, the asset-based group limit shall be applied as 100%.

(4) If applied, the group limits are calculated over the total deposited collateral,

(5) Assets eligible as collateral shall be made subject to valuation over the prices determined by Takasbank to ensure their valuation at current market prices, during the intra-day risk calculation times, the collateral withdrawal operations and at the end of each trading day. The implementing principles for determining collateral values shall be explained in the Procedure.

Use of collateral

ARTICLE 21- (1) The letters of credit and precious metal-denominated collateral held at the Exchange and other trade margins held in custody at Takasbank are used for the fulfillment of the member's settlement and margin requirements against other members.

(2) In cases where the receivables are required to be covered from collateral because of the reasons stipulated in the provisions of the agreement or of the relevant legislation or due to the default of the Member, then Takasbank shall be entitled to sell the asset subject to collateral provided that it would not be lower than its value in the exchange or another organized market, if such asset is listed in any of these markets, and cover its receivable from the sale proceeds or offset the values of such assets from the obligations of the obligor without having any obligation to fulfill any precondition such as serving any notice or warning, allotting time, obtaining a permission or approval from the administrative or judicial authorities, converting collateral into cash through an auction or another way, etc.

(3) Should the collateral be liquidated by Takasbank, the collateral held in custody at Takasbank shall be liquidated directly. However; for the collateral held at the Exchange, the necessary actions shall be immediately performed by the Exchange in accordance with the instruction to be given to the Exchange.

(4) Takasbank shall return the collateral together with their rights upon request of the Member on condition that the obligations have been fulfilled.

Accrual of interest on cash collateral

ARTICLE 22 - (1) Cash Turkish Lira collateral deposited by the members are accrued interest over the amount remaining after deducting the portion to be set aside as compulsory reserve, with the best possible conditions by Takasbank in accordance with the principles stipulated in the Procedure by taking the credit risk and liquidity conditions into consideration. The accrual of interest process is performed within Takasbank limits.

(2) Taxes and other legal liabilities and Takasbank commission shall be deducted from the gross interest amount obtained as a result of accrual of interest.

CHAPTER SIX

Principles Regarding the Default Procedures

General principles

ARTICLE 23- (1) In case of presence of the following situations, the relevant member shall be deemed to have defaulted without the need for any further notice and the default provisions shall be applied.

a) Failure to fulfill the end-of-day margin call obligations calculated by Takasbank within the time periods prescribed in the Procedure;

b) Failure to fulfill the obligation related to the clearing and settlement operations until the end of the time set forth in the Procedure;

c) Decision by Takasbank for the liquidation of the member's obligations pursuant to article 21 of the Directive.

(2) In case of any default, the member shall be allowed by Takasbank to withdraw its collateral in its relevant accounts by taking account of the default amount. By taking the size of default into consideration, Takasbank may ask from the Exchange to restrain the order transmission over the member's accounts.

(3) The member can be allotted time by Takasbank to resolve its event of default until, at most, the time prescribed in the Procedure on the business day following the default date. Should the event of default be failed to be resolved by the end of the allotted time period, Takasbank may place an order to the Market to close the position deficit arising from the default by trading with the same day value (T+0). In order for the order to be processed, the trade margin of the member can be used in addition to its receivables kept blocked against its settlement debt.

(4) Default interest shall be applied in the event settlement and margin requirements are failed to be fulfilled within the time periods set forth in the Procedure.

(5) Pursuant to article 33 of the Central Clearing and Settlement Regulation; the mistreatment payment for the default interest being collected shall be made in accordance with the procedures determined in the Procedure.

(6) Issues regarding the default management process and the precious metal and cash defaults shall be stipulated in the Procedure.

(7) Default provisions shall not be applied in the event the obligations are failed to be fulfilled for reasons arising from the Exchange, Takasbank or CBRT.

(8) The opinion of the Exchange shall be obtained for the Procedures relating to the default management process and the default penalty.

Default interest

ARTICLE 24- (1) If the member being defaulted by not fulfilling its settlement and collateral obligation fails to settle its obligation within the time designated in the Procedure on the settlement date, a default interest shall be applied up to the amount to be calculated over the default amount by using the highest of the overnight weighted average interest rates created in BİAŞ Repo Reverse-Repo Market, BİAŞ Interbank Repo Reverse-Repo Market, CBRT Interbank Money Market or Takasbank Money Market by taking the haircuts determined in the Procedure as the base.

(2) The default interest haircut can be differentiated for the obligations being fulfilled on the same day but after the cutoff time designated at the settlement date.

(3) If the defaulting member is given time to resolve the default, the moment at which the member falls into default shall be taken into account in calculating the default interest.

(4) If the member falls into default, Takasbank shall inform the member of the calculated default interest in electronic environment on the business day following the date on which the margin restoration obligation has been fulfilled with default status. For the foreign currency denominated obligations, the default interest shall also be calculated over Turkish Lira. In converting the relevant foreign currency to Turkish Lira, the foreign currency buying rates published by the CBRT shall be used.

(5) Lower limit may be applied to the default amount to be collected. If applied, the minimum default amount shall be designated in the Procedure.

(6) Lower limit may be applied for the default base. If applied, the minimum default base shall be designated in the Procedure.

(7) If Takasbank has incurred any loss exceeding the default interest due to non-payment of the debt in whole or in part, such loss shall be indemnified by the defaulting Member.

(8) The default interest shall be paid, at the latest, within one business day after the default date. Should the default interest be failed to be paid within this time period, such amount shall be ex-officio collected from the member's free current account at Takasbank. If no sufficient amount of cash is available in this account, it shall be resorted to the member's membership collateral, and if the membership collateral fails to be sufficient, to the trade margins of its portfolio account. Takasbank has the right of settlement, offset and retention over the member's all assets, rights and receivables at itself.

CHAPTER SEVEN

Miscellaneous Provisions

Fees and commissions

ARTICLE 25 - (1) The fees for the clearing and settlement services under this Directive shall be determined in accordance with the principles stipulated in article 61 of the Central Clearing and Settlement Regulation and announced to the members.

(2) The fees shall be accrued as per the nature of the transaction either at the moment of the transaction or on a monthly basis and collected from the member's accounts at Takasbank.

(3) Any commission amount not being objected within 3 business days after its accrual date shall be deemed accepted.

(4) Any commission failed to be paid within its time period shall be collected ex-officio from the free current accounts of the members.

Disciplinary provisions

ARTICLE 26 - (1) The disciplinary provisions stipulated in the Chapter Seven of the Central Clearing and Settlement Regulation shall be applied to the members failing to comply with the obligations stipulated in this Directive.

Provisions to be applied in case of no provision in the Directive

ARTICLE 27 - (1) In case of no provision in this Directive, the provisions of the Central Clearing and Settlement Regulation shall be applied.

Enforcement

ARTICLE 28 - (1) This Directive shall enter into force from (1) the date announced by Takasbank following the approval of the Board of Directors.

Execution

ARTICLE 29 - (1) The provisions of this Directive shall be executed by the Board of Directors.