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# **BORSA İSTANBUL A.Ş.**

## **PROCEDURE ON DEBT SECURITIES MARKET**

İSTANBUL – 2017

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### **1 PURPOSE**

(1) The purpose of this Procedure is to regulate the operational principles and rules of Borsa İstanbul A.Ş. Debt Securities Market.

### **2 SCOPE**

(1) This Procedure sets down the order and trading rules regarding trading of debt securities, securitized asset and income backed debt securities, lease certificates, liquidity bills, real estate certificates and other capital market instruments decided to be traded in Debt Securities Market, as well as operational principles of markets where outright purchases, outright sales, sale with a commitment to repurchase in committed transactions, purchase with a commitment to resell in committed transactions, repo and reverse repo transactions are executed.

### **3 GROUNDS**

(1) This Procedure is issued in reliance upon Borsa İstanbul A.Ş. Regulation on Principles Relating to Exchange Activities promulgated in the Official Gazette edition 29150 on 19/10/2014, as well as Borsa İstanbul A.Ş. Directive on Debt Securities Market.

### **4 DEFINITIONS AND ABBREVIATIONS**

(1) For the purposes and in the context of this Procedure:

- a) “Exchange” stands for Borsa İstanbul Anonim Şirketi (Borsa İstanbul); and
- b) “Exchange Regulation” stands for Borsa İstanbul A.Ş. Regulation on Principles Relating to Exchange Activities; and
- c) “GDDS” stands for the government domestic debt securities; and
- ç) “CEO” stands for Chief Executive Officer (General Manager) of Borsa İstanbul A.Ş.; and
- d) “Executive Management” stands for CEO of Borsa İstanbul A.Ş. or the relevant Executive Vice President; and
- e) “Treasury” stands for the Ministry of Treasury and Finance of the Republic of Türkiye; and
- f) “PDP” stands for Public Disclosure Platform; and
- g) “Dirty price” refers to price including accrued interest or accumulated rent; and
- ğ) “CMB” stands for the Capital Markets Board; and
- h) “Liquidity bills” refers to monetary policy instruments issued on behalf of CBRT (Central Bank of the Republic of Türkiye) within the frame of CBRT open market operations; and
- ı) “CSD” stands for Merkezi Kayıt Kuruluşu Anonim Şirketi (Central Securities Depository of Türkiye); and

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- i) “Sub-market” refers to an electronic trading environment created in Debt Securities Market Trading System according to types, operational principles or other defined specifications of investment instruments traded therein; *(tn: while stating a specific “sub-market”, the word “Market” is used rather than “sub-market” in the title. For instance, “Watchlist Market” is used instead of “Watchlist sub-market”).* and
- j) “Market” stands for Borsa İstanbul Anonim Şirketi Debt Securities Market; and
- k) “Repo” refers to sale with a commitment to repurchase capital market instruments; and
- l) “Committed transactions” refers to sale with a commitment to repurchase or purchase with a commitment to resell where the traded capital market instrument is predetermined, and a third party having the right of withdrawal is involved at the end value date of transaction; and
- m) “Takasbank” stands for İstanbul Takas ve Saklama Bankası Anonim Şirketi (İstanbul Settlement and Custody Bank); and
- n) “Settlement price” refers to the price used in calculating settlement value of transaction; and
- o) “CBRT” stands for Türkiye Cumhuriyet Merkez Bankası Anonim Şirketi (Central Bank of the Republic of Türkiye); and
- ö) “Clean price” refers to price excluding accrued interest or accumulated rent; and
- p) “Reverse repo” refers to purchase with a commitment to resell capital market instruments; and
- r) “TLREF” stands for Turkish Lira Overnight Reference Rate; and
- s) “BIST TLREF Index” stands for index calculated in order to track return on TLREF; and
- ş) “Member” refers to an investment firm authorized to trade at Debt Securities Market; and
- t) “Value Date” refers to settlement date of transactions at Debt Securities Market.

## 5 INSTITUTIONS AUTHORIZED TO TRADE IN DEBT SECURITIES MARKET

(1) Investment firms authorized to trade as per the Exchange Regulation and other related Exchange regulations, as well as CBRT are authorized to trade in Debt Securities Market.

### 5.1 Application Procedure

(1) Banks and intermediary institutions willing to trade in markets within Debt Securities Market file an application within the framework of the related Exchange regulations to be authorized by the Borsa İstanbul A.Ş.

## 6 REPRESENTATIVES

(1) Those who fulfil the required conditions as per the Exchange Regulation and other Exchange regulations pertaining thereto may trade as representatives in Debt Securities Market.

## **7 SUB-MARKETS**

(1) The following sub-markets are operated within Debt Securities Market:

- a) Outright Purchases and Sales Market
- b) Repo and Reverse Repo Market
- c) Repo Market for Specified Securities
- ç) Equity Repo Market
- d) International Bonds Market
- e) Committed Transactions Market
- f) Watchlist Market
- g) Offering Market for Qualified Investors

## **8 GENERAL OPERATIONAL PRINCIPLES OF THE MARKET**

### **8.1 Principles on Eligible Capital Market Instruments and Trades**

(1) Capital market instruments are traded in the Market within the frame of principles of the listing regulation and this Procedure.

(2) CEO has the right to decide specific capital market instruments not to be traded on sub-market basis that are eligible to trade in the Market.

(3) Capital market instruments issued by CBRT, the Treasury, asset lease companies founded by the Treasury, and asset lease companies founded by public capital institutions assigned by the Treasury start to be traded in the related market with effect from the date of issue or if they are issued by auction / direct sale, with effect from the moment the results of sale are announced. Capital market instruments with stripped coupons / rent payments may be subject to trade separately as stripped principal and coupon / rent payments in the Market, and cannot be traded together.

(4) Trading date of capital market instruments other than those specified in third paragraph is announced to public via PDP.

(5) Capital market instruments issued in Exchange or over-the-counter markets without public offering may be traded in Debt Securities Market only between qualified investors as defined in the CMB's regulations. This condition is met and satisfied by the trading investment firms.

(6) Institutions trading in the Market are anonymous to each other during trading. Trading parties are informed about counterparty member together with trading information upon execution of trade. Institutions not being a party to the executed trade may also track trading information, but cannot learn identity of trading parties.

(7) Price types, price and yield calculations and formulae to be used in the markets are listed in Annex-1 attached hereto. If maturity or coupon dates of capital market instruments traded in



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the Market are changed, or their coupon or redemption payments cannot be made, or are postponed or advanced, or are redeemed early, then and in this case, the price type used in trading of capital market instrument may be changed by a decision of the Executive Management, which is then made public via PDP.

### 8.2 Order Submission and Trading Hours

(1) In the Market, order submission and transactions are held between 09:30 and 17:30 hours every weekday. The following table shows the hours of order submission and transactions with same value date or same starting value date, and order submission and transactions with future value date or future starting value date. Order submission and transactions with same value date or same starting value date regarding mutual funds may be conducted within periods of time allowed for order submission and transactions with future value date or future starting value date.

	Same Value Date	Future Value Date
Outright Purchases and Sales Market	09.30 – 14.00	09.30 – 17.30
Watchlist Market		
Repo and Reverse Repo Market		
Repo Market for Specified Securities		
Committed Transactions Market		
Equity Repo Market	10.00 – 14.00	10.00 – 17.30
International Bonds Market	-	09.30 – 17.30
Offering Market for Qualified Investors	09.30 – 14.00	

(2) Within the frame of open market transactions, orders may be submitted by CBRT to the system in Repo and Reverse Repo Market and Committed Transactions Market between 09:00 and 09:30 hours. Orders may not be submitted to the system by members other than CBRT within said time period, or otherwise, orders submitted to the system by members other than CBRT and trades executed upon said orders are cancelled by the Exchange.

### 8.3 Order and Trade Types

(1) Outright purchases, outright sales, repo, reverse repo and committed transaction orders and trade report orders and indicative quotes may be submitted to sub-markets within the Market. Order cannot be submitted for value dates for which it is not possible to calculate a settlement price.

(2) Primary market trades, outright purchases, outright sales, repo, reverse repo transactions and committed transactions may be executed in the Market.

### 8.4 Order Types

(1) Three types of orders, namely limit order, market order and imbalance order may be submitted in the Market.

(2) Limit orders are submitted for outright purchases and outright sales by stating price or yield and nominal amount, and for repo and reverse repo and committed transactions by stating rate, trading value, and definition and price of capital market instrument depending on the market to which order is submitted.

(3) Market orders are submitted for outright purchases and outright sales by stating nominal amount without reference to price or yield, and for repo and reverse repo and committed transactions by stating trading value and definition of capital market instrument depending on the market to which order is submitted, without reference to rate and price of capital market instrument depending on the market to which order is submitted. Market order may be partially or fully met by passive orders existing in the system. Non-executed portion of market order is automatically cancelled.

(4) Where single price method is applied, imbalance order is a type of order which is not taken into consideration in the process of determining equilibrium price, but may be converted to a trade by being matched by remaining orders unmet at the matching price level. These types of orders may be matched by market orders or limit orders, and may also be matched by each other when orders remaining at the matching price level are finished or in case of lack of any orders remaining at the matching price level. Imbalance order is submitted for outright purchase and outright sale transactions by stating nominal amount without reference to price or yield. The remaining portion of an imbalance order unmet at the matching price level is cancelled automatically.

(5) Orders may further be submitted under the specific conditions defined below for use together with limit order, market order or imbalance order.

a) Fill and kill order: The condition that the unmatched part of an order is to be cancelled as of the time the order is submitted.

b) Fill or kill order: A condition to fill the order completely. If not filled completely as of the time the order is submitted, order is fully cancelled.

### 8.5 Order Alteration

(1) Orders that are submitted to the Market but are not matched and remaining portions of partially matched orders may be changed. However, account type, account code and account number areas of an order cannot be changed. Where single price method is applied, orders may not be changed during the matching stage.

(2) In Outright Purchases and Sales Market, International Bonds Market, Watchlist Market and Offering Market for Qualified Investors, order loses its priority in case of changes in order price or yield or increase in nominal amount thereof. However, changes in information field and/or reduction in nominal amount do not lead to loss of order priority.

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(3) In Repo and Reverse Repo Market and Equity Repo Market, order loses its priority in case of changes in rate of order or increase in -quantity thereof. However, changes in information field and/or reduction in quantity do not lead to loss of order priority.

(4) In Repo Market for Specified Securities and Committed Transactions Market, order loses its priority in case of changes in rate of order or in price of capital market instrument or increase in quantity thereof. However, changes in information field and/or reduction in quantity do not lead to loss of order priority.

### **8.6 Order Submission, Trading Methods, Priority and Matching Rules**

(1) Member representatives submit their orders via trading system terminals or remote access interface.

(2) In case of an order entry on behalf of customer, the code identified for customer account type and account code fields in “Order Entry” window is required to be chosen, and information identifying the customer is required to be entered into account number field.

(3) “Single price” and “multiple price” trading methods are applied in trading of capital market instruments.

a) Single price method is a method wherein orders submitted for a particular capital market instrument are collected by the Exchange through predetermined time periods, and are then matched over a single trading price determined in accordance with priority rules and in such manner to reach the maximum trading quantity by being repeated once or more than once during the day. In the course of this method, bid/ask orders are submitted to the system within the frame of predetermined rules, and are not executed throughout the order collection time, and accordingly, orders submitted to the system may be cancelled or changed throughout the order collection time. After the end of order collection time, a single price (equilibrium price) ensuring execution of the maximum trading quantity is determined and announced. Then, in the matching process after the end of order collection time, all trades are executed over this single price according to the rules of priority.

b) Multiple price method is a method wherein orders submitted for a particular capital market instrument are matched over different price levels continuously during the trading time determined by the Exchange in accordance with priority and trading rules. Bid/ask orders are submitted within the frame of predetermined rules, and may be converted into trades by being matched fully or partially with other orders existing in the system as of the moment of submission within the frame of the rules of priority.

(4) In the markets, orders may be matched in accordance with principles of single price or multiple price methods. Multiple price method is applied in the markets unless specifically stated otherwise in this Procedure.

(5) In Outright Purchases and Sales Market, International Bonds Market, Watchlist Market and Offering Market for Qualified Investors:

a) Orders with the highest price have priority in bid side, while orders with the lowest price have priority in ask side. Time priority rule is applied in case of orders with the same price.

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b) Outright purchase orders are matched with outright sale orders with the same or lower prices, while outright sale orders are matched with outright purchase orders with the same or higher prices. In the matching where price equality is lacking, price of the order previously entered into the system is taken and treated as transaction price.

(6) In Repo and Reverse Repo Market and Equity Repo Market:

a) Orders with the highest rate have priority in repo orders, while orders with the lowest rate have priority in reverse repo orders. Time priority rule is applied in case of orders with the same rate.

b) Repo orders are matched with reverse repo orders with the same or lower rates, while reverse repo orders are matched with repo orders with the same or higher rates. In the matching where rate equality is lacking, price of the order previously entered into the system is taken and treated as transaction price.

(7) In Repo Market for Specified Securities and Committed Transactions Market:

a) In repo orders and sale orders with a commitment to repurchase in committed transactions, respectively orders with the highest rate or the lowest capital market instrument price have priority, while in reverse repo orders and purchase orders with a commitment to resell in committed transactions, respectively orders with the lowest rate or the highest capital market instrument price have priority. Time priority rule is applied in orders with the same rate and the same capital market instrument price.

b) Repo orders are matched with reverse repo orders with the same or lower rates and with the same or higher capital market instrument prices, while reverse repo orders are matched with repo orders with the same or higher rates and with the same or lower capital market instrument prices. In the matching where rate and price equality are lacking, rate and price of the order previously entered into the system are taken and treated as transaction rate and price.

c) Sale orders with a commitment to repurchase in committed transactions are matched with purchase orders with a commitment to resell in committed transactions with the same or lower rate and with the same or higher capital market instrument price, while purchase orders with a commitment to resell in committed transactions are matched with sale orders with a commitment to repurchase in committed transactions with the same or higher rate and with the same or lower capital market instrument price. In the matching where rate and price equality are lacking, rate and price of the order previously entered into the system are taken and treated as transaction rate and price.

(8) Members may execute trades by meeting and filling their own orders submitted to trading system.

(9) If and when needed, members may submit orders to the system by calling Market specialists by phone. Member representative submitting orders by phone may submit orders after telling the assigned user code and representative password to Market specialists. In order submission

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by phone, order is entered into the system by Market specialists, and order number generated by the system is notified to the representative. In case of changes intended to be made in orders given, representative is under obligation to tell the assigned order number to Market specialists.

### **8.7 Cancellation of Trades**

(1) Trades executed in the Market may be cancelled within the frame of Article 33 of the Exchange Regulation.

#### **8.7.1 Cancellation of Trades Executed by a Mistake of Member**

(1) In order for a trade executed as a result of a mistake of member to be cancelled by Market Director (Manager) pursuant to subparagraph (b) of first paragraph of Article 33 of the Exchange Regulation, requests of both parties thereto are required to be electronically submitted to the Exchange by the authorised member representatives via trading system. Request of cancellation should be based on an acceptable reason. Reasons acceptable for cancellation of trades are listed below.

a) To enter by mistake an ask order / reverse repo order / purchase order with a commitment to resell in committed transactions instead of bid order / repo order / sale order with a commitment to repurchase in committed transactions, or to enter by mistake a bid order / repo order / sale order with a commitment to repurchase in committed transactions instead of ask order / reverse repo order / purchase order with a commitment to resell in committed transactions; and

b) To make an obvious error in price / yield, transaction rate, capital market instrument definition, account type, account code, account number or quantity entries while entering an order; and

c) To sell by mistake the cash funds / capital market instruments that are not available in its portfolio or in the possession of mutual fund, investment trust or customer on behalf of whom it is trading.

(2) Trade(s) of a member who files a request of cancellation electronically via trading system due to at least one of the reasons listed in first paragraph and gets approval of counterparties of trade(s) electronically via trading system may be cancelled by the Debt Securities Market Director pursuant to the provisions of Article 33 of the Exchange Regulation. If trade cancel requests cannot be sent electronically in mandatory cases such as problems in remote access network or complications arising in Borsa İstanbul trading system, then trade cancel requests should be submitted by using the “Debt Securities Market Trade Cancellation Form” in writing, which is included in Annex-2. This cancellation is made public in the Public Disclosure Platform.

#### **8.7.2 Cancellation of Trades Executed by a Mistake of Market Specialist**

(1) Where member submits an order through a Market specialist by phone, a trade executed due to erroneous entry of order into the system by the Market specialist should be objected within 15 minutes after execution of trade, or otherwise, trade will be deemed valid.

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(2) Orders submitted by member representatives to the Market by phone are entered into the system after they are repeated by the Market specialist, and are approved by member representative. In case of a mistake in the repetition made by the Market specialist, such mistake is required to be corrected immediately by member representative. Otherwise, as the erroneous repetition would have been approved by member representative, objections will be rejected, and trade will be deemed valid. If not repeated by the Market specialist, order submitted by member representative is valid, and is to be taken as a base in evaluation of objection.

(3) If objection is found acceptable, then, trade is cancelled with a notification to the trade counterparties thereto. No compensation is made due to cancellation, and if the counterparties of the trade suffer losses as a result of cancelled trade, such losses are not compensated by the Exchange.

(4) For trades executed in the name of a different member due to a mistake of Market specialist, no compensatory step will be taken, and process will be completed by only making a change of member code.

### **8.8 Registration of Prices and Trades, Notification to Parties, and Announcement**

(1) Information on price and quantity of trades executed in the Market is registered in the Exchange, and announced in Exchange Bulletin in the same day.

(2) A separate bulletin is published for each market. Bulletins contain registered lowest, highest and weighted average price/yield/rate as well as accrued interest or accumulated rent, settlement price, simple and compound yield, trading value and contract number information by capital market instrument for outright purchases and sales, and by repo term and group code or capital market instrument for repo and reverse repo, and by term and capital market instrument for committed transactions. As for securities subject to single price method, bulletins cover equilibrium prices formed at single price trading hours, and trading value, trading quantity and contract number by capital market instruments and value dates.

(3) Trades executed by members by meeting and filling their own orders submitted to trading system, in which a single member is counterparty, are not registered in the Exchange, and information on price and yield of these trades is not published in bulletins. However, information on trading value and contract number of these trades is added to the total amounts.

(4) Information on executed trades may be retrieved by the member from the system at any time during trading hours. Trading books containing information on executed trades are sent on daily basis by electronic report distribution system to members.

### **8.9 Publishing of Information on Orders and Trades**

(1) Information on the best bid, ask, repo, reverse repo and committed transaction orders, and information on price, yield, nominal amount, rate and quantity of the last trade executed, depending on the types of trades, are concurrently displayed on trading system screens. A query could be done by market, orders and trade on a real time basis, and position information could

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be retrieved. Information on order and price depth, aside from the best asks and bids, may be retrieved through Price Information screens.

(2) Information on trades executed in the Market, and order depth information relating to orders pending in the system by capital market instruments, are published instantaneously or with delay in trading screens, and in platforms operated by data vendors contracted by the Exchange, and in other electronic media that may be deemed appropriate by the Exchange.

(3) Where single price method is applied, order depth information relating to orders pending in the system is not published.

### **8.10 Notifications Regarding Traded Capital Market Instruments**

(1) If an institution whose capital market instruments are traded in the Market, does not publish a disclosure in PDP until the last date specified in the pertinent regulations such as financial statements, monthly notifications, investment trusts weekly reports, and results of general assembly meetings, then, trading of capital market instruments issued by that institution are not suspended.

## **9 OPERATIONAL RULES OF SUB-MARKETS**

### **9.1 Outright Purchases and Sales Market**

#### **9.1.1 Operations of Outright Purchases and Sales Market**

(1) In Outright Purchases and Sales Market, outright purchases and outright sales of capital market instruments are executed with same value date or future value date.

(2) Outright purchases, outright sales and trade report orders may be submitted to Outright Purchases and Sales Market.

(3) Trade report is submitted by selecting a counterparty investment firm for trading and by giving such information as nominal amount, price/yield, value date and definition of capital market instrument. A trade report submitted to the system is seen only by counterparty investment firm selected for trading. Trade reports may be submitted only for capital market instruments issued by CBRT, the Treasury, asset lease companies founded by the Treasury, and asset lease companies founded by public capital institutions assigned by the Treasury.

(4) Capital market instruments mentioned in this Procedure may be traded in Small Orders Market or Normal Orders Market within the Outright Purchases and Sales Market depending on the size of the orders.

(5) For orders to be submitted on behalf of customer, at the order submission stage, it is required to enter the account number of customer held with CSD in “Account Number” field.

#### **9.1.2 Capital Market Instruments Tradable in Outright Purchases and Sales Market**

(1) In Outright Purchases and Sales Market, debt securities, securitized asset and income backed debt securities, lease certificates, liquidity bills, real estate certificates and other capital market



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instruments decided to be traded within the frame of listing regulations, issued and denominated in Turkish Lira or foreign currency, may be traded.

(2) In the Market, except for debt securities with coupon payments based on TLREF or TLREF index, if the next coupon rate of a capital market instrument traded over clean price is not reported to the Exchange by 17:30 hours one trading day before the coupon payment date, then, trading of that capital market instrument may be suspended by the CEO.

(3) In case of notification of a wrong coupon rate, the Exchange cannot be held liable for probable damages and losses resulting from trades executed in the Market.

### 9.1.3 Validity and Size of Orders in Outright Purchases and Sales Market

(1) Orders are valid for the day they are given. Unfilled orders and remaining parts of partially filled orders, which are submitted to the Market, may be cancelled. All same value date orders submitted to the system are automatically cancelled by the system at the end of order submission time for orders with same value date if they are unfilled by then, while unfilled orders with future value date are automatically cancelled by the system at the closing time of the Market.

(2) a) Orders are submitted in the form of minimum order size and its multiples over nominal value of the subject capital market instruments. In trade reports, nominal order size tick is applied as 1,000,000. Current minimum and maximum nominal order sizes are as tabulated below:

	Normal Orders Market		Small Orders Market		Trade Report Orders (*)	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
GD DS (TRY)	500,000	100,000,000	1,000	499,000	100,000,000	500,000,000
GD DS (USD/EUR)	1,000	5,000,000	----	----	5,000,000	50,000,000
CBRT Liquidity Bills (TRY)	500,000	100,000,000	1,000	499,000	100,000,000	500,000,000
Other Capital Market Instruments (TRY)	10,000	100,000,000	----	----	100,000,000	500,000,000
Other Capital Market Instruments (USD/EUR)	1,000	5,000,000	----	----	5,000,000	50,000,000

(\*) Valid for securities for which trade report is allowed.

b) The minimum and maximum order sizes of gold bonds and gold denominated lease certificates issued by the Treasury are nominals of 995 and 99,500 respectively at Normal



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Orders Market, and nominals of 99,500 and 995,000 respectively for trade reports. Orders are submitted in the form of a nominal of 995 and its multiples.

c) For capital market instruments with different minimum amounts of denomination sizes, different principles may be determined for order sizes thereof. This is also made public by being published in PDP.

(3) The Executive Management may change minimum and maximum order sizes determined in second paragraph by capital market instruments. This is made public by the Exchange.

### **9.1.4 Value Term in Outright Purchases and Sales Market**

(1) In the Market, orders may be given with same value date or future value date. Value term is maximum 90 days in GDDS trades, maximum 7 days for trades in gold bonds and gold denominated lease certificates issued by the Treasury, and maximum 30 days for other capital market instruments, except for those that are identified and published by the Executive Management separately on capital market instrument basis. Orders may not be submitted for value dates for which accrued interest of debt securities traded over clean price cannot be calculated, and for value dates of periods of CPI indexed bonds for which a reference index is not published. For those debt securities with coupon payments on the basis of BIST TLREF index and which are issued in accordance with Type 10C security type as shown in Annex-1 attached hereto, if coupon payment date is not a business day, orders with future value date cannot be transmitted on the business day immediately before the coupon payment date in said security.

(2) Foreign currency denominated capital market instruments may be traded with a minimum 1 business day value date.

### **9.1.5 Price Types, Order Entry Methods and Price and Yield Ticks Applicable in Outright Purchases and Sales Market**

(1) Bid/ask orders are submitted on the basis of 100 unit price base in the currency the related capital market instrument is issued, except the capital market instruments identified and published by the Executive Management separately. Bid/ask orders are submitted on the basis of 1 unit price base in Turkish Lira for gold bonds and gold denominated lease certificates issued by the Treasury.

(2) Price of capital market instrument excluding its accrued interest or accumulated rent is called as clean price, while its price including its accrued interest or accumulated rent is called as dirty price. Accrued interest or accumulated rent refers to the amount of periodical coupon interest or yield corresponding to the number of days starting from the date of issue in the initial coupon period and from the last coupon payment date to the value date in other coupon periods. (Method of calculation of accrued interest or accumulated rent for debt securities with coupon payments on the basis of TLREF or BIST TLREF index which are traded in clean price is separately described in Annex-1 attached hereto.) Settlement price is the price used in calculating settlement value of transaction, and is calculated by taking the inflation coefficient

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into consideration for inflation-indexed government bonds. It is equal to dirty price for other capital market instruments.

(3) Orders are submitted over a single price type or yield determined by the Exchange for each capital market instrument. Orders for foreign currency denominated capital market instruments are given in the currency of issue.

a) Capital market instruments for which orders are submitted over simple yield:

Discounted capital market instruments denominated in Turkish Lira or foreign currency and stripped principals of bonds with coupons (except for CPI indexed bonds)

b) Capital market instruments for which orders are submitted over clean price:

Fixed rate bonds denominated in Turkish Lira or foreign currency, and fixed yield lease certificates denominated in Turkish Lira or foreign currency, and floating rate bonds denominated in Turkish Lira with fixed initial coupon interest rate, and debt securities with coupon payments on the basis of TLREF or BIST TLREF index issued by the Treasury which are issued in accordance with Type 10 security type as shown in Annex-1 attached hereto (Clean price, except for inflation coefficient, is used for CPI indexed government bonds started to be issued by the Treasury in February 2007.)

c) Capital market instruments for which orders are submitted over dirty price:

CPI indexed annuity government bonds (except for inflation contribution), and stripped coupons of bonds with coupons, and floating rate bonds with floating initial coupon interest, and foreign currency denominated floating rate bonds with unknown initial coupon interest rate, gold bonds and gold denominated lease certificates issued by the Treasury and real estate certificates (Dirty price, except for inflation contribution, is used for stripped coupons and principals of CPI indexed government bonds started to be issued by the Treasury in February 2007.)

d) The Executive Management may determine different price types and order entry methods by definitions of capital market instruments. This is made public by the Exchange.

(4) Price field included in trading system and bulletins shows clean or dirty price according to order entry method of the subject capital market instrument. For each capital market instrument, aside from price field, settlement price and if any, accrued interest or accumulated rent are also published.

(5) In the Market, except for those that are identified and published by the Executive Management separately for capital market instruments, a tick of TRY 0.001 is applied in orders submitted over price, and an increment of 0.01% is applied in orders submitted over yield. A tick of TRY 0.0001 is applied in orders submitted for periods with uncertain coupon interest rate of debt securities with coupon payments on the basis of TLREF or BIST TLREF index, which are traded over clean price and a tick of TRY 0.00001 is applied in orders submitted for gold bonds and gold denominated lease certificates issued by the Treasury.

### 9.1.6 Application of Single Price Method in Outright Purchases and Sales Market

(1) For securities identified and published by the Executive Management, trades are executed according to the single price method principles in the Market between 12:10 and 12:30 hours. Between 12:10 and 12:25 hours, orders are collected according to the single price method principles, and then, the collected orders are matched between 12:25 and 12:30 hours within the frame of principles set down in this Procedure. For securities subject to single price method, during application of single price method, trades cannot be executed according to the multiple price method principles.

(2) For securities subject to single price method, during application of single price method, orders with same value date or future value date may be submitted within the frame of general rules specified in this Procedure. For these securities, limit orders with same value date or future value date submitted during trading hours where multiple price method is applied, if and to the extent not filled, are transferred to order collection stage by single price method.

(3) For securities subject to single price method, during application of single price method, limit orders and imbalance orders may be submitted, and limit orders and imbalance orders with “Fill or kill” special condition may not be submitted, nor may market orders be submitted.

(4) Where single price method is applied, orders may not be cancelled at matching stage.

(5) Limit orders submitted at order submission stage are prioritized according to price and time priority and are matched over equilibrium price within the frame of general priority rules. Imbalance orders are prioritized according to time priority within the frame of general priority rules, and are matched respectively first with limit orders unfilled at the predetermined equilibrium price level, and when limit orders unfilled at the matching price level are finished or in absence of any orders unfilled at the matching price level, are matched with each other over equilibrium price in accordance with priority rules.

(6) Equilibrium price is the price which ensures the maximum trading quantity among price levels of orders submitted to the system. If there are several price levels ensuring the maximum trading quantity, then, the price level which ensures the minimum unfilled quantity among orders ensuring the matching of orders at said price levels is accepted as equilibrium price. In the case of several prices that meet and satisfy both of these two conditions, for the orders pending at the price levels ensuring the matching of orders at prices meeting these conditions, if total nominal quantity of bid orders is higher than total nominal quantity of ask orders, the higher price is determined as equilibrium price, or if total nominal quantity of ask orders is higher than total nominal quantity of bid orders, the lower price is determined as equilibrium price, or if total nominal quantity of bid orders is equal to total nominal quantity of ask orders, the arithmetic average of prices is determined as equilibrium price.

(7) Limit orders unfilled and not converted to trades at matching stage are converted to passive orders, and kept in the system during the general order validity time specified in this Procedure, and if unfilled, all orders with same value date are automatically cancelled at the end of order submission time for orders with same value date, and orders with future value date are

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automatically cancelled at the closing time of the Market. Both imbalance orders and limit orders submitted with “Fill and kill” special condition, which are unfilled and not converted to trades at matching stage, are automatically cancelled as of the ending time of single price application.

(8) Equilibrium price does not change in case of cancellation of transactions executed in single price session.

### **9.2 Repo and Reverse Repo Market**

#### **9.2.1 Operations of Repo and Reverse Repo Market**

(1) In Repo and Reverse Repo Market, capital market instruments are sold with a commitment to repurchase or purchased with a commitment to resell with same or future starting value date.

(2) Repo, reverse repo and trade report orders may be submitted to Repo and Reverse Repo Market.

(3) Repo and reverse repo orders are submitted by giving such information as quantity, repo rate, starting and ending value dates and group of capital market instruments to be traded.

(4) Trade reports are submitted by selecting a counterparty investment firm for trading and by giving information such as quantity, repo rate, starting and ending value dates and group of capital market instruments to be traded. A trade report submitted to the system is seen only by counterparty investment firm selected for trading.

(5) After completion of trade, repo party sends a notification of capital market instrument of the group stated at the order entry time by using the settlement system screens.

(6) Settlement obligation is fulfilled by delivery of the notified capital market instruments to the Takasbank at the starting value date. These capital market instruments are kept in custody in a blocked account in the name of reverse repo party until the ending value date. Capital market instruments acquired by reverse repo may be used by reverse repo party in another repo transaction, providing that its ending value date is earlier than the end of initial repo/reverse repo transaction.

(7) Capital market instruments may be traded in Small Orders Market or Normal Orders Market by size of orders in Repo and Reverse Repo Market.

#### **9.2.2 Capital Market Instruments Tradable in Repo and Reverse Repo Market**

(1) GDDSs and liquidity bills may be traded in Repo and Reverse Repo Market.

(2) Capital market instruments are traded by being grouped as shown below.

a) S: Turkish Lira denominated GDDSs and CBRT liquidity bills

b) K: Foreign currency denominated GDDSs

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(3) Maturity date of capital market instruments to be traded may not be equal to or earlier than the ending value date of trade.

(4) Capital market instruments with coupons may be traded to ensure that coupon payment day is equal to starting value date or ending value date or later ending value date. Capital market instruments coupon payment day of which coincides with a time between starting and ending value dates of trade cannot be subject to repo transaction.

### 9.2.3 Validity and Size of Orders in Repo and Reverse Repo Market

(1) Orders are valid for the day they are given. Unfilled orders and remaining parts of partially filled orders, which are submitted to the Market, may be cancelled. All orders with same starting value date are automatically cancelled by the system at the end of order submission time for orders with same starting value date if they are unfilled by then, while unfilled orders with future starting value date are automatically cancelled by the system at the closing time of the Market.

(2) Orders are submitted in the form of minimum order size and its multiples. Current minimum and maximum order sizes are as tabulated below:

Normal Orders Market		Small Orders Market		Trade Report Orders	
Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
1,000,000	200,000,000	10,000	990,000	200,000,000	500,000,000

### 9.2.4 Value Term and Applicable Rate Ticks in Repo and Reverse Repo Market

(1) In the Market, orders with a future starting value date up to 7 days may be submitted. Repo ending value date may be maximum 1 year.

(2) A rate tick of 0.01% is applicable in orders submitted to the Market.

## 9.3 Repo Market for Specified Securities

### 9.3.1 Operations of Repo Market for Specified Securities

(1) In Repo Market for Specified Securities, repo and reverse repo with same or future starting value date are executed in capital market instruments predetermined for trading.

(2) Orders are submitted to the system by giving information such as repo rate, repo amount, starting and ending value dates, and capital market instruments to be traded, and price of said capital market instruments.

(3) Settlement obligation is fulfilled by delivery of the subject capital market instruments to the Takasbank at the starting value date. These capital market instruments are delivered to reverse repo party.

### 9.3.2 Capital Market Instruments Tradable in Repo Market for Specified Securities

(1) Capital market instruments issued and denominated in Turkish Lira, which are traded in Outright Purchases and Sales Market, may be traded in Repo Market for Specified Securities.

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(2) Capital market instruments issued by investment firms trading in Repo Market for Specified Securities cannot be sold by way of repo by the same investment firms in the account of their own portfolio.

(3) Capital market instruments with coupons may be traded to ensure that coupon payment day is equal to starting value date or ending value date or later ending value date. Capital market instruments the coupon payment day of which coincides with a time between starting and ending value dates of trade cannot be subject to repo.

(4) Maturity date of capital market instruments to be traded may not be equal to or earlier than the ending value date of trade.

(5) Trading of capital market instruments that are suspended in Outright Purchases and Sales Market is also suspended in Repo Market for Specified Securities.

### 9.3.3 Validity and Size of Orders in Repo Market for Specified Securities

(1) Orders are valid for the day they are given. Unfilled orders and remaining parts of partially filled orders, which are submitted to the Market, may be cancelled. All orders with same starting value date are automatically cancelled by the system at the end of order submission time for orders with same starting value date if they are unfilled by then, while unfilled orders with future starting value date are automatically cancelled by the system at the closing time of the Market

(2) Orders are submitted in the form of minimum order size and its multiples. Current minimum and maximum order sizes are as tabulated below:

Minimum	Maximum
10,000	100,000,000

### 9.3.4 Price in Order Entry

(1) In orders submitted to Repo Market for Specified Securities, price of capital market instrument is also required to be entered, aside from repo rate. Orders are submitted over the price type traded in Outright Purchases and Sales Market for each capital market instrument. Orders are submitted over settlement price for capital market instruments traded over yield in Outright Purchases and Sales Market.

### 9.3.5 Value Term, and Applicable Rate and Price Ticks in Repo Market for Specified Securities

(1) In the Market, orders with a future starting value date up to 7 days may be submitted. Repo ending value date may be maximum 1 year.

(2) A tick of 0.01% for repo rate and a tick of TRY 0.001 for price of capital market instrument are applicable in orders submitted to the Market.

## **9.4 Equity Repo Market**

### **9.4.1 Operations of Equity Repo Market**

(1) In Equity Repo Market, repo and reverse repo with same or future starting value date are executed in equities predetermined for trading.

(2) Orders are submitted to the system by giving information such as repo rate, repo amount, starting and ending value dates, account type, account code and account number, and equities intended to be traded. If, as of the time the order is submitted, the equity subject to repo has not yet been traded in the Equity Market, order is rejected by the system. In repo transactions, price of the traded equity is equal to the price of last trade executed for the subject equity in the Equity Market as of the moment of trade.

(3) Settlement obligation is fulfilled by delivery of the subject equities to Takasbank at the starting value date. These equities are delivered to reverse repo party.

(4) Members may trade in the account of their portfolio, fund or customers. Accordingly, portfolio, fund or customer account number held with CSD is required to be entered into “Account Number” field at the order submission stage.

### **9.4.2 Equities Tradable in Equity Repo Market**

(1) In Equity Repo Market, equities included in BIST 50 index and traded in the Equity Market may be subject to repo transactions if they are deemed appropriate by the Executive Management. Open transactions covering equities closed for repo transactions are continued until repo ending value date.

(2) Equities issued by investment firms, which are authorized to trade, cannot be sold by way of repo by the same investment firms in the account of their portfolio.

### **9.4.3 Validity and Size of Orders in Equity Repo Market**

(1) Orders are valid for the day they are given. Unfilled orders and remaining parts of partially filled orders, which are submitted to the Market, may be cancelled. All orders with same starting value date are automatically cancelled by the system at the end of order submission time for orders with same starting value date if they are unfilled by then, while unfilled orders with future starting value date are automatically cancelled by the system at the closing time of the Market.

(2) Orders are submitted in the form of minimum order size and its multiples. Current minimum and maximum order sizes are as tabulated below:

Minimum	Maximum
10,000	100,000,000



#### **9.4.4 Value Term, and Applicable Rate and Price Ticks in Equity Repo Market**

(1) In the Market, orders with a future starting value date up to 2 days may be submitted. Repo ending value date may be maximum 1 year.

(2) A tick of 0.01% for repo rate is applicable in orders submitted to the Market.

#### **9.4.5 Equity Repo Term Decrease**

(1) Repo term of the trades executed in Equity Repo Market may be decreased before ending value date. Procedures and principles regarding repo term decrease are determined by Takasbank.

#### **9.4.6 Corporate Actions**

(1) In case of corporate actions such as dividend payments, increase of capital through rights or bonus issues, decrease of capital, corporation mergers and divisions affecting the equities subject to repo transactions, the rules applicable thereon, as well as the principles regarding method of change of settlement balances of open repo transactions are determined by Takasbank.

(2) Equities subject to corporate actions cannot be traded at the date the share price is changed in the Equity Market and for two days of execution of the related corporate action in CRA.

#### **9.4.7 Suspension of Trading and Extension of Repo Term**

(1) If trading is suspended in the Equity Market for any reason, trading is also suspended in the Equity Repo Market.

(2) For an equity the trading of which is halted in the Equity Market for any reason, trading of the related equity is also halted in the Equity Repo Market until its trading is restarted in the Equity Market.

(3) If demanded so by the counterparties in writing, in case the trading of an equity is halted for a certain time, ending value date of trades which coincides with the period of suspension may be extended until third business day following trade restart day in the Equity Market.

(4) Open repo transactions covering an equity the trading of which is suspended indefinitely are closed by the CEO or the Executive Vice President in the first business day following the statement as to suspension of trading indefinitely by means of granting a time to the member.

### **9.5 International Bonds Market**

#### **9.5.1 Operations of International Bonds Market**

(1) In International Bonds Market, outright purchases and sales of capital market instruments are executed with the minimum and maximum future value dates as determined by this Procedure.

(2) Outright purchases, outright sales, trade report orders and indicative quotes may be submitted to International Bonds Market.



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(3) Outright purchase and sale orders are submitted by giving information such as nominal amount, price/yield, value date and capital market instruments.

(4) Trade report is submitted by selecting a counterparty investment firm for trading and by giving information such as nominal amount, price/yield, value date and definition of capital market instrument. A trade report submitted to the system is seen only by counterparty investment firm selected for trading.

(5) Indicative quote may be submitted to the system by giving information such as price/yield or quantity, or both of them, as well as definition of capital market instrument and value date. Indicative quote serves the function of announcement of request of trade in the system by the investment firm submitting the order to the system through use of advertising board, and cannot be converted into transactions in the system.

### 9.5.2 Capital Market Instruments Tradable in International Bonds Market

(1) In International Bonds Market, foreign debt instruments issued by the Treasury, and capital market instruments denominated in foreign currency may be traded within the frame of the listing regulations.

### 9.5.3 Currency

(1) In the Market, bid/ask orders are given in the currency in which the subject capital market instruments are issued.

### 9.5.4 Validity and Size of Orders in International Bonds Market

(1) Orders are valid for the day they are given. Unfilled orders and remaining parts of partially filled orders, which are submitted to the Market, may be cancelled. All unfilled orders are automatically cancelled by the system at the closing time of the Market.

(2) Orders are submitted in the form of minimum order size and its multiples over nominal value of traded capital market instruments. Current minimum and maximum nominal order sizes are as tabulated below:

Minimum	Maximum
10,000	5,000,000

(3) For capital market instruments with different minimum amounts of denomination sizes, different principles may be determined for order sizes thereof. This is also made public by being published in PDP.

### 9.5.5 Value Term in International Bonds Market

(1) In the Market, orders may be given with at least one business day, and maximum fifteen days forward value date.

### **9.5.6 Price Types, Order Entry Methods and Price and Yield Ticks Applicable in International Bonds Market**

(1) Bid/ask orders are submitted on the basis of 100 unit price base in the currency the subject capital market instrument is issued.

(2) In the Market, orders are submitted over clean price or dirty price. Price of capital market instrument excluding its accrued interest or accumulated rent is called as clean price, while its price including its accrued interest or accumulated rent and called as dirty price.

(3) Orders are submitted over a single price type determined by the Exchange for each capital market instrument.

(4) Price field included in trading system and bulletins shows clean or dirty price according to order entry method of the subject capital market instrument. For each capital market instrument, aside from price field, settlement price and if any, accrued interest or accumulated rent are also published.

(5) In the Market, a tick of 0.0001 is applied in orders submitted over price.

## **9.6 Committed Transactions Market**

### **9.6.1 Operations of Committed Transactions Market**

(1) In Committed Transactions Market, sale with a commitment to repurchase and purchase with a commitment to resell with same or future starting value date are executed in capital market instruments predetermined for trading.

(2) Orders are submitted to the system by giving information such as rate, amount, starting and ending value dates, and capital market instruments intended to be traded, and price of said capital market instruments.

(3) After execution of trade in the Market:

a) At the starting value date, member selling with a commitment to repurchase performs its obligation to deliver the capital market instruments and member purchasing with a commitment to resell performs its obligations to deliver cash mutually.

b) At the ending value date (trade maturity date), member purchasing with a commitment to resell sells the subject capital market instruments to Takasbank and collects the cash price thereof, while member selling with a commitment to repurchase buys the subject capital market instruments from Takasbank and pays the cash price thereof to Takasbank.

c) At the ending value date, Takasbank has the right of withdrawal from trades executed with either or both of the members, individually or collectively, in its convenience without being liable to justify its decision, whereupon Takasbank may in no event be legally held liable therefor.

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ç) If Takasbank withdraws from both trades by using its right of withdrawal, the initial trade settled between the members being parties thereto at the starting value date becomes valid, and none of the parties has any settlement claims or owes any settlement debts at the ending value date.

d) If, at the ending value date, Takasbank uses its right of withdrawal for only one of two trades committed, then, none of the parties has any settlement claims or owes any settlement debts for the withdrawn trade, while for the other, the purchasing/selling transaction committed between Takasbank and the member is executed.

### **9.6.2 Capital Market Instruments Tradable in Committed Transactions Market**

(1) Lease certificates denominated in Turkish Lira issued by asset lease companies founded by the Treasury, and asset lease companies founded by public capital institutions assigned by the Treasury, and other capital market instruments approved by the Board may be traded in the Committed Transactions Market.

(2) Capital market instruments with periodic return may be traded to ensure that periodic return payment day is equal to starting value date or ending value date or later than ending value date. Capital market instruments with periodic return payment day coinciding between starting and ending value dates of trade cannot be traded in the Committed Transactions Market.

(3) Trading of capital market instruments that are suspended in Outright Purchases and Sales Market or in other markets of the Exchange is also suspended in the Committed Transactions Market.

### **9.6.3 Price at Order Entry**

(1) In orders submitted to Committed Transactions Market, price of each capital market instrument is submitted over the price type used for the subject capital market instrument in Outright Purchases and Sales Market. Orders are submitted over settlement price for capital market instruments traded over yield in Outright Purchases and Sales Market.

### **9.6.4 Committed Transactions Market Value Terms, and Applicable Rate and Price Ticks**

(1) In the Market, orders with a future starting value date up to 7 days may be submitted. Ending value date may be maximum 1 year.

(2) A tick of 0.01% for rate and a tick of TRY 0.001 for price of capital market instrument are applicable in orders submitted to the Market.

### **9.6.5 Validity and Size of Orders in Committed Transactions Market**

(1) Orders are valid for the day they are given. Unfilled orders and remaining parts of partially filled orders, which are submitted to the Market, may be cancelled. All orders with same starting value date are automatically cancelled by the system at the end of order submission time for orders with same starting value date if they are unfilled by then, while orders with future starting

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value date are automatically cancelled by the system at the closing time of the Market if they are unfilled by then.

(2) Orders are submitted in the form of minimum order size and its multiples. Current minimum and maximum order sizes are as tabulated below:

Minimum	Maximum
10,000	100,000,000

### 9.7 Watchlist Market

#### 9.7.1 Operations of Watchlist Market

(1) In Watchlist Market, outright purchases and outright sales of capital market instruments are executed with same value date or future value date.

(2) Principles set down in this Procedure regarding value term, applicable price types, order entry methods and price and yield ticks for operations in Outright Purchases and Sales Market are also valid for Watchlist Market.

#### 9.7.2 Capital Market Instruments Tradable in Watchlist Market

(1) Capital market instruments which are previously traded in Outright Purchases and Sales Market and are then decided to be traded in Watchlist Market within the frame of listing regulations may be traded in Watchlist Market.

(2) In the Market, except for securities with coupon payments based on TLREF or TLREF index, if the next coupon rate of a capital market instrument traded over clean price is not reported to the Exchange by 17:30 hours one trading day before the coupon payment date, then, trading of that capital market instrument may be suspended by the CEO.

(3) In case of notification of a wrong coupon rate, the Exchange cannot be held liable for probable damages and losses resulting from trades executed in the Market.

#### 9.7.3 Validity and Size of Orders in Watchlist Market

(1) Orders are valid for the day they are given. Unfilled orders and remaining parts of partially filled orders, which are submitted to the Market, may be cancelled. All orders with same value date are automatically cancelled by the system at the end of order submission time for orders with same value date if they are unfilled by then, while unfilled orders with future value date are automatically cancelled by the system at the closing time of the Market.

(2) Orders are submitted in the form of minimum order size and its multiples. Current minimum and maximum order sizes are as tabulated below:

Minimum	Maximum
10,000	100,000,000

## **9.8 Offering Market for Qualified Investors**

### **9.8.1 Operations of Offering Market for Qualified Investors**

(1) In Offering Market for Qualified Investors, the issued capital market instruments are sold to qualified investors with same value date or future value date.

(2) In this Market, orders are submitted over price or yield depending on the capital market instrument.

### **9.8.2 Issuable Capital Market Instruments**

(1) In Offering Market for Qualified Investors, only capital market instruments issuance of which is approved by the CMB and intended to be issued to qualified investors be sold.

### **9.8.3 Trading of Capital Market Instruments upon Completion of Issuance**

(1) Upon completion of issuance to qualified investors in this Market, the subject capital market instruments are started to be traded between qualified investors in Outright Purchases and Sales Market unconditionally in the first business day following completion of issuance or expiration of sales period.

(2) Execution of trades between qualified investors in Outright Purchases and Sales Market is under responsibility of investment firms involved in execution of orders regarding the subject capital market instruments.

### **9.8.4 Issuance Term**

(1) In issuance of capital market instruments in Offering Market for Qualified Investors, sales term set forth in Borsa İstanbul Listing Directive is valid and applicable.

### **9.8.5 Price of Issue**

(1) Issuer may freely determine sales price during sales term, and may change price of an ask order which is unfilled or partially filled.

### **9.8.6 Validity and Size of Orders in Offering Market for Qualified Investors**

(1) Orders are valid for the day they are given until closing time of Market. Unfilled orders and remaining parts of partially filled orders, which are submitted to the Market, may be cancelled.

(2) Orders are submitted in the form of minimum order size and its folds over nominal value of the subject capital market instruments. Minimum order size is TRY 50,000, while maximum order size is TRY 100,000,000.

### **9.8.7 Value Term, Price Base, Order Entry Method and Price and Yield Ticks Applicable in Offering Market for Qualified Investors**

(1) In the Market, trades may be executed with same value date and with a future value date up to 7 days.

(2) Bid/ask orders are submitted on the basis of 100 unit price base in the currency the subject capital market instruments are issued.

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(3) In the Market, orders are submitted over price or yield depending on type of the subject capital market instrument.

(4) In the Market, a tick of 0.001 is applicable in orders submitted over price, and a tick of 0.01% is applicable in orders submitted over yield.

### **9.8.8 Rules of Cancellation of Trades in Offering Market for Qualified Investors**

(1) Pursuant to fifth paragraph of Article 33 of the Exchange Regulation, the subject trades are ex officio cancelled upon occurrence of any one of the following incidents:

a) In the case of a trade executed at a value date outside the value date specified in the value date article; or

b) If the selling party of trade is not the investment firm involved in issuance, or in the case of execution of trade as a result of entry by the investment firm involved in issuance of an ask order which is not in the account of the issuer company; or

c) In the case of sales above the limit allotted by the CMB.

(2) Upon occurrence of the incident referred to in subparagraph “c” hereinabove, transactions in excess of limit are cancelled starting from the last trade by considering the execution time of them until the limit is reached.

## **10 PRINCIPLES REGARDING OPERATIONS OF MUTUAL FUNDS AND INVESTMENT TRUSTS**

### **10.1 General Principles**

(1) In trades to be executed by mutual funds and investment trusts in the Exchange, the following rules will be applicable in addition to the rules applied in the related markets of Debt Securities Market.

a) Orders to be submitted in the account of investment trust or mutual fund are submitted to the Exchange by representatives of an investment firm authorized to trade in Debt Securities Market. In order submission, it is stated for which investment trust or mutual fund the order is submitted. In these orders, standard account codes identified by the Exchange for each investment trust and mutual fund are used.

b) Orders submitted in the account of investment trust or mutual fund may be matched with other orders of the investment firm submitting the order.

c) In reverse repo transactions executed in Repo and Reverse Repo Market in the account of investment trust or mutual fund, the subject capital market instruments are kept and held in the name of the related investment trust or mutual fund, rather than the trading member, until ending value date of transaction. Members are not allowed to trade these capital market instruments in their own accounts.

**10.2 Principles Regarding Mutual Fund Transactions with Same Value Date Executed after Ending Time of Transactions with Same Value Date**

(1) In the case of mutual fund transactions with same value date executed after ending time of transactions with same value date, investment firm first submits the order of the mutual fund. Authorized firm submitting the order may itself execute the order.

(2) In the case of mutual fund transactions with same value date executed after ending time of transactions with same value date, weighted average rates and prices in each market arising until the ending time of transactions with same value date are used as reference. In the Markets, transactions may be executed in favour of the mutual fund as follows:

a) In Outright Purchases and Sales Market, transactions may be executed at a price equal to or lower than weighted average price in bid orders, and at a price equal to or higher than weighted average price in ask orders.

b) In Repo and Reverse Repo Market, transactions may be executed at a rate equal to or higher than weighted average rate in reverse repo orders, and at a rate equal to or lower than weighted average rate in repo orders.

c) In Repo Market for Specified Securities, weighted average repo rate at the related term, and weighted average price of the subject capital market instrument in Outright Purchases and Sales Market at the related term are taken as reference. Accordingly, reverse repo orders may be executed at a rate equal to or above the weighted average rate and at a price equal to or below the weighted average price of capital market instrument, while repo orders may be executed at a rate equal to or below the weighted average rate and at a price equal to or above the weighted average price of capital market instrument.

ç) In Equity Repo Market, weighted average repo rate at the related term is taken as reference. Accordingly, reverse repo orders may be executed at a rate equal to or above the weighted average rate, while repo orders may be executed at a rate equal to or below the weighted average rate.

(3) Trades with both parties being mutual funds may be executed over weighted average rates and prices arising until the ending time of transactions with same value date in the markets.

(4) Any rates or prices are not taken as reference for use in favour of mutual fund for any capital market instrument or term in which no transaction is executed during the day. Authorized investment firm may enter orders at a rate or price determined by itself in the account of mutual fund.

(5) Investment firms are deemed to have accepted and undertaken in advance to settle between themselves the mutual fund transactions with same value date, which are executed after ending time of transactions with same value date.

(6) These trades are not included in the listing of members published by the Exchange separately for each Market.



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(7) Orders with same value date cannot be submitted in the account of investment trusts after ending time of transactions with same value date.

### **11 MARKET MAKER SYSTEM**

(1) In the Market, two types of market maker systems, namely GDDS primary dealer system and private sector market maker system, are applied.

#### **11.1 Government Domestic Debt Securities (GDDS) Primary Dealer System**

(1) Principles of government domestic debt securities primary dealer system, and market makers (primary dealers) are determined by the Treasury.

(2) Primary dealers may, in compliance with the rules of operation of the Exchange, enter market maker quote for benchmark issuances requiring a two sided quote. Market maker quotes are submitted to trading system by using the special account type relating to primary dealer system.

(3) If market maker quotes submitted to the trading system are the best bid/ask orders, they are reflected onto Price Information screens. Furthermore, orders of market makers are made public with code of the related market maker member in pages of data vendors as well. Thus, all market participants have the opportunity to see orders of market makers given for benchmark securities.

(4) Two-sided quote obligations of primary dealers determined by the Treasury are tracked by the Exchange, and in case of a breach, it is notified both to the Treasury and to the firm in breach.

#### **11.2 Private Sector Debt Securities Market Maker System**

(1) Market maker system may be applied for all private sector debt securities and lease certificates traded in Debt Securities Market.

(2) All investment firms authorized to trade in Outright Purchases and Sales Market of Debt Securities Market may file an application for becoming a market maker by signing the sample petition given in Annex-3 and the letter of undertaking given in Annex-4 prior to or after issuance. Applications are evaluated and determined by the Executive Management.

(3) In evaluation to be made by the Executive Management, such factors as:

a) Trading value in Outright Purchases and Sales Market in the past period, and

b) Events of default in the past period, and

c) Market maker performance in the past period of the firm wishing to be appointed as a market maker are taken into consideration. As a result of said evaluation, the member found eligible for becoming a market maker and securities for which that member will serve as market maker are announced via PDP by the Exchange.

(4) An investment firm may serve as market maker for more than one security, and more than one market maker may also be appointed for a security. However, number of securities for



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which a firm will serve as market maker and number of firms to be appointed as market maker for a security may be limited by the Executive Management.

(5) An investment firm serves as market maker for a security throughout the maturity of that security. Market maker may withdraw from market maker system separately for securities by sending a written notice of withdrawal to the Exchange 5 (five) trading days in advance. This is made public via PDP by the Exchange. Delivery day of this written notice is not taken into account in calculation of 5 trading days.

(6) Market makers are under obligation to give two-sided quotes with one business day future value date between 10:00 and 12:00 hours and 13:30 and 15:00 hours for securities they are serving as market maker. If orders are executed or cancelled fully or partially, it is required to ensure that a new order is entered into the system within 10 minutes thereafter. Market maker quotes are submitted to the system by using the special account type relating to market maker system.

(7) Market maker may have only one bid market maker order and one ask market maker order for a security at the same time. When market maker enters new bid and ask orders, the remaining parts of the existing bid and ask orders are automatically cancelled.

(8) Quotes to be entered by market makers into the system are given over price for debt securities with coupons, and bid-ask spread for a security with a price base of TRY 100 is maximum TRY 1. Quotes for discounted securities are given over annual simple interest, and bid-ask spread is as tabulated below according to interest rate range with which bid quote coincides:

Interest Rate Range (For bid quotes)	Maximum Bid-Ask Spread (Interest Rate Difference)
19.99% and below	0.50
20% and above	0.75

In the case of market fluctuations, the Executive Management may change bid-ask spreads required to be given by market makers.

(9) Obligation of market maker to give quotes is tracked daily by the Exchange on security basis. In the case of more than one breach in the same security during the same day, they are accepted and treated as a single breach. If controls reveal more than 4 breaches committed by market maker in one security within one month, the market maker is warned and followed up. If more than 4 breaches are committed in the same security during the next month, then, the Exchange terminates market maker authorization of the relevant member for the subject security in the next day, and this termination is made public in PDP. However, market maker authorization of the market maker in other securities, if any, is maintained.

(10) If controls reveal more than 7 breaches committed by market maker in one security within one month, then, the Exchange terminates market maker authorization of the relevant member for the subject security in the day immediately after the 7<sup>th</sup> breach, and this termination is made

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public in PDP. However, market maker authorization of the market maker in other securities, if any, is maintained.

(11) Upon occurrence of extraordinary events, market maker activities of market makers may be temporarily suspended separately for securities or completely by the Executive Management ex officio or upon the market makers' request, and this suspension is made public in PDP.

(12) Market maker quote size is minimum nominal TRY 50,000.

### **12 PRE-TRADE RISK MANAGEMENT**

(1) With a view to controlling the probable post-trade risks in the Market, limitations may be imposed before transaction on capacity, quantity and/or amount of tradable capital market instruments, submitted orders, and transactions to be executed. Margin requirements may also be brought on the basis of orders/transactions. Risk criteria to be employed and limits to be applied are determined by the Executive Management. Upon occurrence of extraordinary events in the market or at any time if deemed necessary by providing a written explanation, the Executive Management may change the limits defined in risk criteria on the basis of members, users and/or capital market instruments.

(2) Rules of application of pre-trade risk management are described in Annex-5.

### **13 SETTLEMENT AND DEFAULT PRINCIPLES AND OTHER PROVISIONS**

#### **13.1 Settlement Transactions**

(1) Settlement obligations arising out of transactions executed in Debt Securities Market are performed within the frame of regulations issued by Takasbank.

#### **13.2 Default Transactions**

(1) Buy-in and sell-out transactions may be executed by Takasbank on behalf of investment firm with the intention of closing the deficits occurring in the process of settlement due to failure in full or partial performance of settlement obligations within the frame of terms and methods stipulated in the applicable laws and regulations.

(2) In default transactions, one of the parties is required to be the investment firm on behalf of whom the buy-in and sell-out transactions are executed by Takasbank, or otherwise, executed transactions are cancelled.

#### **13.3 Tax Calculation**

(1) Withholding tax is calculated by the Exchange for and over the proceeds resulting from transactions executed in Debt Securities Market and considered to be subject to withholding tax within the frame of tax laws and regulations. However, whether withholding tax is required to be calculated over the proceeds of trading within the frame of tax laws and regulations or not, and if withholding tax is calculated, checking the accuracy of withholding tax amount calculated as above, and the payment of withholding tax by the counterparty of transaction in the name of the party earning the income are entirely under responsibility of the parties to

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transaction, and the Exchange may in no event be held liable for the resulting losses and damages.

### **13.4 Exchange Fee**

(1) Tariff of exchange fees to be applied in transactions executed in markets within Debt Securities Market is given in Annex-6 attached hereto.

### **14 REPEALED REGULATIONS**

(1) The following circulars are hereby repealed:

- a) Circular no. 422 dated 02/04/2013,
- b) Circular no. 459 dated 22/08/2014,
- c) Circular no. 351 dated 17/12/2010, and
- ç) Circular no. 446 dated 28/02/2014.

### **15 EFFECTIVE DATE**

(1) This Procedure enters into force and becomes effective as of the date it is published.

### **16 ENFORCEMENT**

(1) The provisions of this Procedure are enforced and executed by the CEO.

**ANNEXES**

**ANNEX 1- PRICE TYPES AND PRICE AND YIELD CALCULATIONS**

**1- DEFINITIONS**

**Price:** Refers to a value assigned to a security, other than capital market instruments determined and announced by the Executive Management and gold bonds and gold denominated lease certificates issued by the Treasury, over 100 units of nominal value. It refers to a value assigned to 1 nominal security representing 1 gram gold with 1000/1000 purity for gold bonds and gold denominated lease certificates issued by the Treasury. It is termed as clean, dirty or settlement price according to the order entry method of security determined by the Exchange.

**Accrued Interest or Accumulated Rent:** Refers to the amount of periodic coupon interest or yield corresponding to the number of days passed (GGS) from the issue date (i.e. dated date) in the first coupon period or from the last coupon payment date in the other coupon periods to the value date. (Method of calculation of accrued interest or accumulated rent for debt instruments with coupon payments on the basis of TLREF rate or BIST TLREF index which are traded over clean price is separately described in the Formulations table.)

$$\text{Accrued Interest or Accumulated Rent} = \text{Periodic Coupon} \times \frac{\text{Number of days passed (GGS)}}{\text{Number of days in coupon period}} \times 100$$

**Clean price:** Refers to price of securities excluding accrued interest or accumulated rent.

**Dirty price:** Refers to price of securities also including accrued interest or accumulated rent.

**Repo Securities Price:** Refers to clean or dirty price entered in repo transactions for specified securities.

**Value Date2 Price:** Refers to Value Date2 price calculated over repo rate in repo transactions for specified securities.

$$\text{Value Date2 Price} = \text{Value Date1 Price} \times \left(1 + \frac{\text{Repo Rate}}{365} \times \text{Repo Term}\right)$$

**Reference Indices:** Refers to indices calculated and published by the Treasury with the following formula by using CPI index values announced by the Turkish Statistical Institute.

Reference index for day “g” of month “A”

$$\text{Daily Reference Index}_g = \text{CPI}_{a-3} + \frac{g-1}{AG} \times (\text{CPI}_{a-2} - \text{CPI}_{a-3})$$

CPI<sub>a-2</sub> : CPI of month a-2

CPI<sub>a-3</sub> : CPI of month a-3

g : Number of days since the beginning of month

AG : Total number of days in the month

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**Government Bonds Indexed to CPI:** Refers to bonds with coupons which guarantee a fixed real yield as determined by the Treasury over CPI inflation throughout their maturity. Coupon and principal sum payments are made according to the following formulations:

$$\text{Principal Sum Payment} = \frac{\text{Reference index}_{\text{Maturity date}}}{\text{Reference index}_{\text{Date of issue}}} \times 100$$

$$\text{Coupon Payments} = \frac{\text{Reference index}_{\text{Coupon date}}}{\text{Reference index}_{\text{Date of issue}}} \times 100 \times \text{Real coupon rate}$$

**Inflation Coefficient:** Refers to a coefficient calculated by dividing the reference index value as of the value date by the reference index value of security as of the date of issue. For GDDSs, this coefficient cannot be smaller than 1. If it is calculated smaller than 1, it is accepted as 1.

**Index Coefficient:** Refers to a coefficient calculated by dividing BIST TLREF index value taken as a base at the value date by BIST TLREF index value taken as a base for issue date (i.e. dated date) in the first coupon period and by BIST TLREF index value taken as a base at the previous coupon date for the subsequent coupon periods, and by applying exponential smoothing thereon.

**Settlement Price:** Refers to the price used in calculating settlement value of transaction. For securities which are indexed to inflation and traded by exclusion of inflation contribution, settlement price is calculated by multiplying dirty price by inflation coefficient valid as of the value date. For other securities, settlement price is equal to dirty price.

The following equations are generally valid by taking into consideration that the variables referred to hereinabove may be 0 or 1 in some securities (for instance, accrued interest being 0 in discounted securities, and inflation coefficient being 1 in securities other than CPI indexed bonds).

In trading value or amount calculations, nominal multiplier is taken as 1 (one) except for securities which are determined and published by the Executive Management on the basis of definition of capital market instruments and gold bonds and gold denominated lease certificates issued by the Treasury. In trading value or amount calculations, nominal multiplier is taken as 100 (one hundred) for gold bonds and gold denominated lease certificates issued by the Treasury.

**Settlement Price** = Dirty Price x Inflation Coefficient

**Trading Value** = Nominal Amount x Settlement Price x Nominal Multiplier / 100

**Amount of Accrued Interests** = Nominal Amount x Accrued Interest x Nominal Multiplier x Inflation Coefficient / 100

**Amount of Accumulated Rent** = Nominal Amount x Accumulated Rent x Nominal Multiplier x Inflation Coefficient / 100

**Principal Sum** = Nominal Amount x Clean Price x Nominal Multiplier x Inflation Coefficient / 100



**2- FORMULATIONS**

No	Formulations	
1	$Price = \frac{A}{1 + \frac{r \times VKG}{YGS}}$	
2.1	$Dirty Price = \frac{\frac{KPN}{M}}{\left(1 + \frac{R}{M}\right)^{\frac{KGS}{DGS}}} \times \left(1 + \frac{1 - \frac{1}{\left(1 + \frac{R}{M}\right)^{N-1}}}{\frac{R}{M}}\right) + \frac{A}{\left(1 + \frac{R}{M}\right)^{N-1 + \frac{KGS}{DGS}}}$	
2.2	<p>First Period is Different</p> $Dirty Price = \left(\frac{1}{\left(1 + \frac{R}{M}\right)^{\frac{KGS}{DG}}}\right) \times \left\{C_{first} + \frac{A}{\left(1 + \frac{R}{M}\right)^{N-1}} + \sum_{i=1}^{N-1} \frac{\frac{KPN}{M}}{\left(1 + \frac{R}{M}\right)^i}\right\}$ <p>Note: If value date is after the first coupon payment, C1=0</p>	
2.3	<p>Last Period is Different</p> $Dirty Price = \left(\frac{1}{\left(1 + \frac{R}{M}\right)^{\frac{KGS}{DG}}}\right) \times \left\{\left[\sum_{i=1}^{N-1} \frac{\frac{KPN}{M}}{\left(1 + \frac{R}{M}\right)^{i-1}}\right] + \frac{1}{\left(1 + \frac{R}{M}\right)^{N-2}} \times \frac{C_{last} + A}{\left(1 + \frac{R}{M}\right)^{\frac{DGS2}{DG}}}\right\}$	
2.4	<p>First and Last Periods are Different</p> $Dirty Price = \left(\frac{1}{\left(1 + \frac{R}{M}\right)^{\frac{KGS}{DG}}}\right) \times \left\{C_{first} + \left[\sum_{i=2}^{N-1} \frac{\frac{KPN}{M}}{\left(1 + \frac{R}{M}\right)^{i-1}}\right] + \frac{1}{\left(1 + \frac{R}{M}\right)^{N-2}} \times \frac{C_{last} + A}{\left(1 + \frac{R}{M}\right)^{\frac{DGS2}{DG}}}\right\}$ <p>Note: If value date is after the first coupon payment, C1=0</p>	
3	3.1	3.2
	3.3	3.4
3.1	$Compound Yield = \left(1 + \frac{r \times VKG}{YGS}\right)^{\frac{YGS}{VKG}} - 1$	$Compound Yield = \left(1 + \frac{R}{M}\right)^M - 1$
3.3	$Dirty Price = \sum_{i=1}^N \frac{C_i}{(1+r)^{\frac{KGS_i}{YGS}}} + \frac{A}{(1+r)^{\frac{VKG}{YGS}}}$	$Compound Yield = \left(\frac{A+C}{Dirty Price}\right)^{\frac{YGS}{VKG}} - 1$
4.1	$Accrued Interest or Accumulated Rent = \left(\frac{KPN}{M}\right) \times \frac{GGS}{DGS}$	
4.2	$Accrued Interest or Accumulated Rent = \sum_{i=k}^{T-1} \left(\frac{n_i * TLREFORAN_{i-m}}{YGS}\right) + \frac{Annual Additional Yield * GGS}{YGS}$ <p>If value date coincides with coupon payment date or maturity starting date (dated date), the amount of accrued interest/accumulated rent is equal to zero.</p>	
4.3	$Accrued Interest or Accumulated Rent = \left(\left[\prod_{i=k}^{T-1} \left(1 + \frac{n_i * TLREFORAN_{i-m}}{YGS * 100}\right) - 1\right] * 100\right) + \frac{Annual Additional Yield * GGS}{YGS}$	

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	If value date coincides with coupon payment date or maturity starting date (dated date), the amount of accrued interest/accumulated rent is equal to zero.
4.4	$\text{Accrued Interest or Accumulated Rent} = (\text{Index Coefficient} - 1) * 100 + \frac{\text{Annual Additional Yield} * \text{GGS}}{\text{YGS}}$ <p>If value date coincides with coupon payment date or maturity starting date (dated date), the amount of accrued interest/accumulated rent is equal to zero.</p>
5.1	$\text{Inflation Coefficient} = \frac{\text{REF}_{\text{value date}}}{\text{REF}_{\text{date of issue}}}$
5.2	$\text{Index Coefficient} = \left( \frac{\text{TLREFENDEKS}_{T-m}^{\frac{\text{GGS}}{\text{EG}}}}{\text{TLREFENDEKS}_{k-m}} \right)$ <p>[If coupon payment date is not a business day, for T+0 value dated transactions on the business day immediately after coupon payment date;</p> $\text{Index Coefficient} = \left( \frac{\text{TLREFENDEKS}_{T-m+1 \text{ business day}}^{\frac{\text{GGS}}{\text{EG}}}}{\text{TLREFENDEKS}_{k-m}} \right)$
6	Settlement Price = Dirty price x Inflation coefficient
7	$\text{Simple Yield } (r) = \left( \frac{A + C_{\text{last}}}{\text{Dirty Price}} - 1 \right) * \frac{\text{YGS}}{\text{VKG}}$
8	Dirty Price = Clean Price + Accrued Interest or Accumulated Rent



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Abbreviations	Definitions
<b>VKG</b>	Days to Maturity
<b>DGS</b>	Number of days included in a coupon period
<b>DGS2</b>	Maturity date – Date of penultimate coupon
<b>DG</b>	Number of days assumed in regular period
<b>KGS</b>	Number of days to next coupon payment date
<b>GGS</b>	Number of days from the previous coupon payment date (if value date is before the first coupon payment date, from the maturity starting date, i.e. dated date) to the value date
<b>YGS</b>	Number of days assumed in one year <i>(In ACTACT ISMA &amp; ACT365 convention, YGS=365 In ACT364 convention, YGS=364 In EU30360 &amp; US30360 convention, YGS=360)</i>
<b>M</b>	Number of coupon payments in one year
<b>N</b>	Number of coupons to maturity
<b>r</b>	Annual simple yield
<b>R</b>	Yield to maturity
<b>A</b>	Principal sum
<b>KPN</b>	Annual coupon rate x100
<b>C<sub>i</sub></b>	Relevant period coupon rate x 100
<b>REF</b>	Reference index announced by the Treasury
<b>TLREFENDEKS</b>	BIST TLREF Index
<b>TLREFORAN</b>	TLREF Turkish Lira Overnight Reference Rate
<b>n<sub>i</sub></b>	As of <i>i</i> business day, number of calendar days between next business day and day <i>i</i>
<b>T</b>	Value date
<b>k</b>	Date of last coupon prior to value date (if value date is before the first coupon payment date, maturity starting date, i.e. dated date)
<b>m</b>	Delay parameter showing the value of how many business days before will be taken as a base for TLREF rate or TLREF index to be referenced
<b>EG</b>	Number of calendar days between business day immediately after “T - m” and business day immediately after “k - m”  (If coupon payment date is not a business day, for T+0 value dated transactions on the business day immediately after coupon payment date; number of calendar days between two business days after “T - m” and two business days after “k - m”)

- In VKG, DGS, DGS2, DG, KGS and GGS calculations:
  - If day count convention is ACTACT ISMA, ACT365 or ACT364, the actual number of days is used.
  - If day count convention is EU30360 or US30360,  $(D2-D1)+30(M2-M1)+360(Y2-Y1)$  formulation is used.

**3- PRICES, YIELDS AND FORMULATIONS USED IN ORDER ENTRY SEPARATED ACCORDING TO INFORMATION ON TYPES OF SECURITIES**

Prices, Yields and Formulations Used in Order Entry Separated According to Information on Types of Securities													
Type	Order Entry Method	Accrued Interests (IF)	Amount of Accrued Interests	Principal Sum	Dirty Price (KF)	Settlement Price	Settlement Value	Inflation Coefficient (EK)	Index Coefficient	Yield (R)	Yield Last Period (r)	Compound Yield	Compound Yield (last period)
Type 1	Yield	----	----	----	F1	F1	KF*Nom.*Nom. Multiplier/100	----	---	EGF	EGF	F3.1	F3.1
Type 2A	TF	F4.1	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	----	----	F2.1	F7	F3.2	F3.1
Type 2B	TF	F4.1	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	----	----	F2.2	F7	F3.2	F3.1
Type 2C	TF	F4.1	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	----	----	F2.3	F7	F3.2	F3.1
Type 2D	TF	F4.1	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	----	----	F2.4	F7	F3.2	F3.1
Type 3A	TF	F4.1	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	----	----	---	---	---	---
Type 3B	KF	---	---	---	EGF	EGF	KF*Nom.*Nom. Multiplier/100	----	----	---	---	---	---
Type 4	KF	---	---	---	EGF	F6	KF*EK*Nom.*Nom. Multiplier/100	F5.1	----	---	---	---	---
Type 5	TF	F4.1	IF*EK*Nom.*Nom. Multiplier/100	TF*EK*Nom.*Nom. Multiplier/100	F8	F6	KF*EK*Nom.*Nom. Multiplier/100	F5.1	----	F2.1	F7	F3.2	F3.1
Type 6 (USD)	TF	F4.1	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	---	----	F2.1	F7	F3.2	F3.1
Type 7 (EUR)	TF	F4.1	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	---	----	F2.1	F7	F3.2	F3.1
Type 8A	TF	F4.1	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	---	----	---	---	F3.3	F3.4
Type 8B	KF	---	---	---	EGF	EGF	KF*Nom.*Nom. Multiplier/100	----	----	---	---	---	---
Type 10A	TF	F4.2	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	---	----	---	---	---	---
Type 10B	TF	F4.3	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	---	----	---	---	---	---
Type 10C	TF	F4.4	IF*Nom.*Nom. Multiplier/100	TF*Nom.*Nom. Multiplier/100	F8	F8	KF*Nom.*Nom. Multiplier/100	---	F5.2	---	---	---	---

Abbreviations: IF: Accrued Interest; F: Formulation; TF: Clean Price; KF: Dirty Price; Nom.: Nominal Amount; Nom. Multiplier: Nominal Multiplier; EK: Inflation Coefficient; EGF: Order Entry Price / Rate

<ul style="list-style-type: none"> <li>■ Type 1: Stripped principal sums of discounted bonds and bonds with coupon. For instance: treasury bills, discounted government bonds and commercial papers.</li> <li>■ Type 2: Debt securities with fixed coupons. For instance: Fixed interest bonds denominated in TRY and foreign currency / Fixed yield lease certificates denominated in TRY <ul style="list-style-type: none"> <li>○ Type 2A) Securities with regular coupon payment periods</li> <li>○ Type 2B) Securities with irregular first coupon payment period</li> <li>○ Type 2C) Securities with irregular last coupon payment period</li> <li>○ Type 2D) Securities with irregular first and last coupon payment periods</li> </ul> </li> <li>■ Type 3: Variable interest rate securities <ul style="list-style-type: none"> <li>○ Type 3A) Securities with next coupon rate known (full security). For instance: Variable interest rate bonds denominated in TRY with first coupon interest rate fixed beforehand</li> <li>○ Type 3B) Securities with next coupon rate unknown (full security) and coupons of stripped Securities, gold bonds and gold denominated lease certificates issued by the Ministry of Treasury and Finance. For instance: Stripped coupons of bonds with coupons, variable interest rate bonds with first coupon interest rate not fixed either, variable interest rate bonds and real estate certificates denominated in foreign currency</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Type 4: Stripped principal sums and coupons of inflation indexed securities. For instance: CPI indexed annuity government bonds, and coupons and principal sums of CPI indexed bonds</li> <li>■ Type 5: The full non-stripped inflation indexed securities</li> <li>■ Type 6: Euro Bond (USD)*</li> <li>■ Type 7: Euro Bond (EUR)*</li> <li>■ Type 8: Bonds with Irregular Cash Flow <ul style="list-style-type: none"> <li>○ Type 8A) Securities with irregular periods traded over clean price</li> <li>○ Type 8B) Securities with irregular periods traded over dirty price</li> </ul> </li> <li>■ Type 10: Securities with coupon payments on the basis of TLREF or TLREF index** <ul style="list-style-type: none"> <li>○ Type 10A) Securities using TLREF arithmetic average</li> <li>○ Type 10B) Securities using TLREF compounded interest rates</li> <li>○ Type 10C) Securities using TLREF index securities</li> </ul> </li> </ul>
<p>* If first and last periods are irregular in Euro bonds, formulations in Type 2 are used</p> <p>** Formulations in Type 3A are used for periods with a certain coupon rate of securities with coupon payments on the basis of TLREF or TLREF index.</p>	

**ANNEX 2 – DEBT SECURITIES MARKET TRADE CANCELLATION FORM**

Deal No. (*)	
Transaction No. (Match Id) (*)	
Instrument Definition (Id) (*)	
Purchaser / Repo Member Code (*)	
Seller/Reverse Repo Member Code (*)	
Transaction Value Date (*)	
Cause of Cancellation (*)	
Purchaser / Repo Transaction Account (AFK)	
Seller / Reverse Repo Transaction Account (AFK)	
Transaction Price / Rate	
Transaction Amount	

(\*) Mandatory Fields required to be filled in

The Cancellation Form given above is required to be printed on the firm's letterhead, and signed under name, surname and job title of duly authorized officers and stamped by the member firm. Original copy of the Form should be sent to Borsa İstanbul correspondence unit and an electronic copy should be sent via email to the address of [bacancel@borsaistanbul.com](mailto:bacancel@borsaistanbul.com).

**Valid Causes of Cancellation**

Inadequate balance	Account code error
Price error	Rate error
Securities error	Amount error
Execution of reverse transaction	Value date error
Customer code error	

**ANNEX 3- PRIVATE SECTOR SECURITIES MARKET MAKER  
AUTHORIZATION APPLICATION PETITION**

TO: EXECUTIVE MANAGEMENT OF BORSA İSTANBUL ANONİM ŞİRKETİ

İSTANBUL

We, the Undersigned, wish to serve as a private sector market maker in security/securities with ISIN code ..... at Borsa İstanbul A.Ş. Debt Securities Market Outright Purchases and Sales Market.

You are hereby kindly requested to take necessary actions in relation therewith.

.../.../20..

Signature

Investment Firm

Name & Surname of Duly Authorized Officer

\*Letter of undertaking shown in Annex-4 will be attached to this petition.

**ANNEX 4- DEBT SECURITIES MARKET PRIVATE SECTOR DEBT SECURITIES  
MARKET MAKER LETTER OF UNDERTAKING**

...../...../.....

TO: EXECUTIVE MANAGEMENT OF BORSA İSTANBUL ANONİM ŞİRKETİ  
İSTANBUL

We, the Undersigned, hereby unconditionally and irrevocably declare, agree and undertake that if we are accepted as a private sector debt securities market maker to Debt Securities Market:

1. For all kinds of trades to be executed in Borsa İstanbul A.Ş. (“Exchange”) Debt Securities Market Outright Purchases and Sales Market, the operating principles of private sector debt securities market maker system, and all kinds of applicable laws and regulations, and the terms and conditions of this letter of undertaking will be applicable, and the Exchange will be authorized to interpret such terms, conditions and provisions, and in case of unclear matters, to take decisions by also considering the general law provisions, and to regulate and direct the enforcement of said terms, conditions and provisions; and
2. The Exchange may at any time rearrange and change the market maker system operating principles, and in this case, we are going to comply with all such changes, revisions and rearrangements, and we are not going to make any claims due to such changes, revisions and rearrangements; and
3. We are going to fulfil and meet all conditions which are included in the market maker system operating principles and may at any time be requested by the Exchange in respect of market maker system; and
4. We are personally liable for performance of all kinds of obligations arising out of bid and ask orders entered by us into the system in respect of security/securities for which we are acting as a market maker, and also our Company will be held liable for all and any civil and criminal sanctions and material and/or moral damages and losses of every kind that may arise out of use of our market maker system by unauthorized persons with or beyond prior consent of our Company; and
5. Our duty as a market maker for the subject security/securities will continue until expiration or termination of our duty as a market maker separately for each security; and
6. All and any matters on which this letter of undertaking and the market maker system operating principles remain silent shall be governed by the provisions of laws and regulations in respect of the Exchange pertaining thereto; and
7. Except for termination of our duty as a market maker upon our own demand, if and when we breach any terms, conditions and provisions of this letter of undertaking and the applicable laws, or upon occurrence of any conditions stipulated by the Exchange, or if we lose the conditions and qualifications sought for in market makers, then and in this case, our duty as a market maker may be unilaterally cancelled or temporarily

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suspended by a notice of the Exchange, and such cancellation or suspension will be published in Public Disclosure Platform; and

8. In the case of suspension of our business activities, or cancellation of our certificates of authorization, for any reason whatsoever, also including bankruptcy and/or liquidation, and/or if we become a party to a process causing our Company to be transformed into another legal entity as a result of merger with or acquisition by another firm, whether our market maker status will be maintained or not will be determined by the Exchange, and if the Exchange decides to terminate our market maker status, then, the procedure of settlement of rights and obligations arising out of this status may also be determined by the Exchange, and in this case, we are going to comply with all procedures and principles determined by the Exchange; and
9. In the case of any dispute, the records kept by the Exchange will be considered and treated as valid, binding, sole, final and prima facie evidence within the meaning ascribed thereto by Article 193 of the Turkish Code of Civil Procedure.

Investment Firm's name

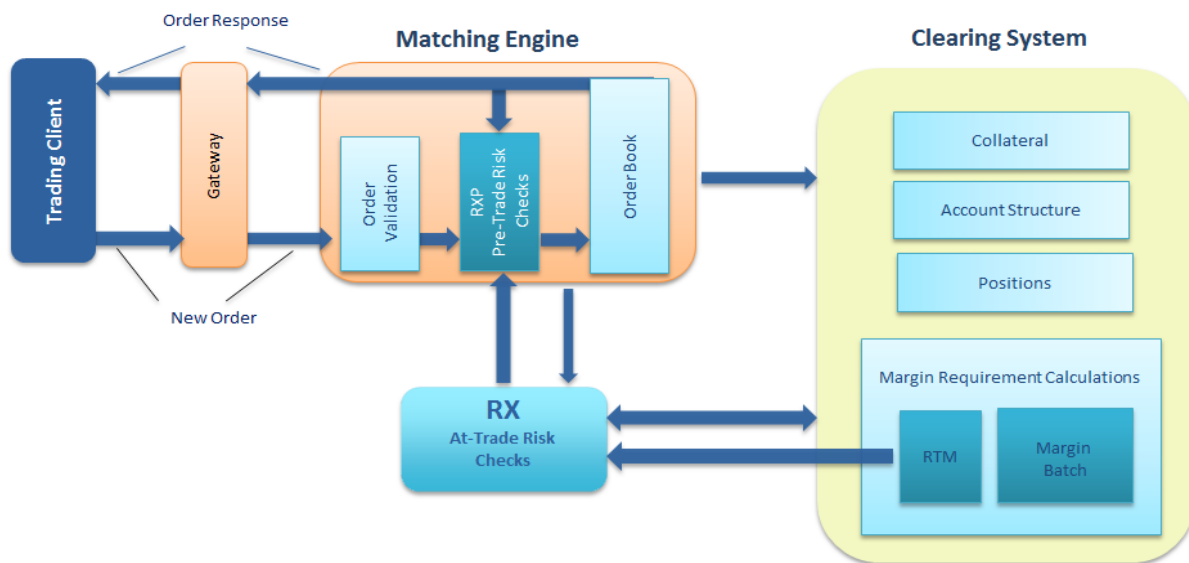
Authorized signatures and common seal

**ANNEX 5- PRE-TRADE RISK MANAGEMENT APPLICATION**

**1. Pre-Trade Risk Management – General Structure**

BISTECH Pre-Trade Risk Management (PTRM) application is a risk management tool developed in integration with trading and settlement platforms in order to keep under control and to monitor probable risks that may be encountered due to orders entered and transactions executed in Debt Securities Market. With this application, risks of orders sent to and transactions executed in the system via trading workstation (TW) and FIX protocol are controlled. Risks may be controlled at different stages, namely before orders are accepted to the system (pre-order) and after they are accepted (post-order).

BISTECH Pre-Trade Risk Management application is a risk management system wherein a module integrated to matching engine containing orders and trades and Takasbank real-time risk management module (RTM) are operating in an integrated manner through real-time data exchange.



With PTRM application, orders which successfully pass the pre-order risk controls are, if accepted, inserted in order book, and taken into order matching assessment. Orders which cannot pass the risk controls are not inserted in order book, and are cancelled.

Risk controls and their consequences may be tracked by PTRM Graphic User Interface (PTRM GUI).

Exchange Members may connect to PTRM GUI application via Remote Access Network (UEA). For eligibility to enter in PTRM via GUI, users are identified and authorized by the

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Exchange. PTRM users are required to have completed any one of PTRM application trainings organized by Equity Market, Derivatives Market or Debt Securities Market.

BISTECH PTRM application may be used for:

- User and account validation controls, and
- Risk group controls (user limits), and
- Account based margin checks.

In addition to these controls, accounts suspended due to various different reasons may also be tracked via PTRM GUI.

*User and account validation controls* are made before order is accepted to the system within the frame of rules determined separately for each Market.

*Risk group controls* may be made at different stages, namely before orders are accepted to the system or after they are accepted in tandem with limits defined by the relevant member. If deemed necessary, the Exchange may also determine limits for members in respect of risk group controls.

*Account based margin checks* are made within the frame of rules determined by Takasbank. Members may track via PTRM GUI the information on their current available collaterals regarding the accounts they are trading for.

PTRM takes the required actions in accordance with member and account suspension instructions sent from the settlement system. In the case of excess of limits relating to margin requirement, Takasbank may block submission of all orders or only position-increasing orders via the account exceeded as such. If and when deemed necessary by Takasbank, acceptance of orders sent from risky accounts into the system may be blocked even if they are position decreasing orders. Rules regarding prevention of order submission are set down in the related procedures of Takasbank. Furthermore, other than excess of limits relating to margin requirement, also upon occurrence of conditions set forth in the Exchange and Takasbank Directives and Procedures or if deemed necessary, members and/or accounts may also be blocked directly via PTRM application. Members may track information on suspended members and accounts via PTRM application.

### **2. User and Account Validation Controls**

At the time of order entry and order amendment, PTRM conducts the following controls relating to the validation of user and account:

- Agency/fund code (AFK) control: Order cannot be sent without entering AFK or with a non-existing or invalid AFK.
- Account type and AFK control: User may send orders only with AFK of the selected account type (portfolio, customer, fund, etc.).



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- User's account access control: A user may send orders only with accounts assigned to it and under its own authorization. User-account access will be made by members via clearing workstations (CW).
- Account's instrument authorization control: An account may send orders only for instruments under its own authorization.

### 3. Risk Group Controls (User Limits)

Risk group controls are conducted within the limits defined by the member or if deemed necessary, by the Exchange. Risk groups are formed through grouping of users by the related member. Members may use this function optionally. Authorizations relating to this function are granted to members upon demand.

In BISTECH system, various risks that may be caused by users sending orders and/or trading therein are controlled according to user limits defined by "risk groups". Risk groups are formed through grouping of users by the member or if deemed necessary, by the Exchange. While a member may hold multiple risk groups formed by different risk limits, a user cannot be assigned to more than one risk group. At least one user must be assigned to each risk group. Different limits may be identified for each risk group. The following controls are made by the limits determined at the level of these risk groups:

#### a) Pre-order Risk Checks

- Maximum order size
- Restricted Instruments

#### b) Post-order & at-trade Risk Controls

- Position risk limits
- Order rate limit

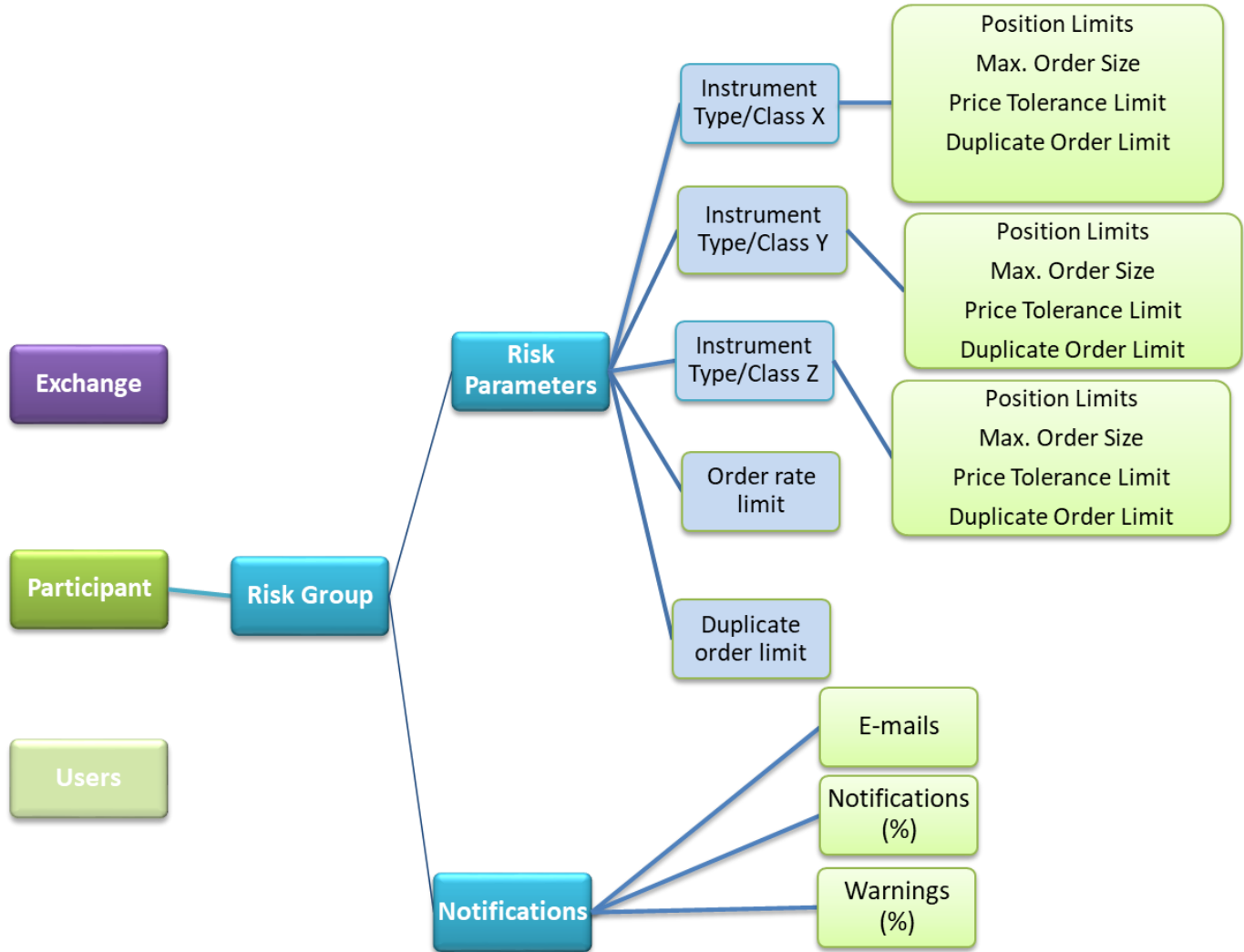
Limits and calculation method to be used in position risk limits and maximum order size controls may be determined at instrument type or instrument class levels under each risk group.

The following different risk calculation methods may be employed in risk calculations made in position risk limit and maximum order size controls:

- Quantity (value inserted in quantity field in the instrument's order entry screen)
- Volume (quantity \* instrument size)
- Value (quantity \* instrument size \* price \* exchange rate)

At the present stage, position risk limits based only quantity method may be determined for risk management in Debt Securities Market.

Risk Group Structure



3.1 Pre-order Risk Controls

3.1.1 Maximum Order Size Control

An order sent by users included in the risk group undergoes the following maximum order size control before it is accepted to the system or before order amendment:

- Order Size  $\geq$  Maximum Order Size ---> Order is rejected
- Order Size  $<$  Maximum Order Size ---> Order is accepted

Maximum order size stands for maximum quantity of an order. Limit to be used in maximum order size control may be determined at instrument class and instrument type level under a risk group.

### 3.1.2 Restricting Instruments for a Risk Group

Tradable instruments by users included in a risk group may be restricted. In case of restriction, users may trade only in instruments belonging to instrument type and instrument class for which a risk limit is defined, and may not trade in instruments belonging to instrument types and/or classes not assigned to a particular risk group.

### 3.2 Post-order Risk Controls

#### 3.2.1 Position Risk Limits

Position risk limit checks are performed by the following nine different risk calculations taking into account the orders placed in the order book and the trades executed from the beginning of the day by the users included in the risk group:

- A: Open Buy Orders
- B: Open Sell Orders
- C: Traded Bought
- D: Traded Sell
- E: Traded Net  $E = |C-D|$
- F: Total Buy  $F = A+C$
- G: Total Sell  $G = B+D$
- H: Total Net Buy  $H = C-D+A$
- I: Total Net Sell  $I = D-C+B$

Limits to be used in position risk limit controls may be determined at instrument type and instrument class levels under a risk group. If the predetermined risk limits are reached or exceeded (i.e. if consumption is equal to or larger than the limit), the instrument type or class with limit excess enters into a breach of limit status.

While a risk group is in breach of limit status, users in that risk group are:

- Not allowed to enter new orders for instruments in the breached instrument type and/or class; and
- Not allowed to make changes in their existing orders for instruments in the breached instrument type and/or class; and
- Allowed to cancel open orders and quotes; and
- Allowed to enter new orders for instruments connected to the unbreached instrument type and/or class.

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Breach restriction is automatically removed if and when the users in the risk group cancel open orders in such manner their limit is no longer in breach. The Exchange or the related member may also remove the breach event by increasing the limit breached by the risk group during the day.

Defining a risk limit as zero means that the related limit is infinite, and the system does not perform any control for a risk limit defined as zero. If the instrument type or instrument class limits determined as zero are moved to a value other than zero during the day, then, unexpected consequences may be faced in limit calculations of the system. For this reason, instrument type or instrument class limits determined as zero should not be changed during the day.

Independently from and regardless of the previous days, position risk limit counters start each trading day as zero, and the system includes only the orders/trades sent in the related trading day into calculations.

### 3.2.2 Order Rate Limit

Order rate limit is a restriction which may be applied on new order insertion speed on risk group basis. It is relied upon the control of new orders sent to the system, and the following orders are not taken into account in the control:

- Order cancellations
- Rejected orders
- Order updates
- Orders which do not remain in order book such as Fill or Kill and Fill and Kill orders (Orders executed at the moment of entry are, however, taken into account.)

The order rate limit determined as above indicates the permitted number of new order insertion per second. Order rate limit checks are realized in intervals of 1/10<sup>th</sup> of second (100 milliseconds). If the number of orders entered in 100 milliseconds is higher than one-tenth of the predetermined order rate limit, an event of breach occurs. If order rate limit is exceeded, the users in the risk group are blocked. Users included in a blocked risk group are:

- Not allowed to enter new orders, and
- Not allowed to change open orders; and
- Allowed to cancel the open orders; and
- Allowed to connect to the system and make an inquiry therein.

Blocking arising out of breach of order rate limit is not automatically removed during the day. It may only be removed manually by member or the Exchange. Blocking not removed manually during the day of breach of limit is automatically removed at the beginning of the next trading day.

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Member and the Exchange may determine order rate limits for a risk group. Both limits are displayed in the PTRM panel. If the Exchange and member identify limits at the same time, one of these two limits which is more restrictive than the other is deemed valid.

### **3.3 Electronic Mail (e-mail) Warnings**

If the risk of a risk group reaches or exceeds the predetermined notification levels, an e-mail message is sent to all recipients named in the notification list determined for that risk group by the related member. There are three types of notification levels:

- Notices: The lowest level of warning.
- Warnings: The highest level of warning.
- Breaches: Risk limits are reached or exceeded.

Each limit identified for a risk group generates only one notice, warning and breach e-mail in a trading day. If a limit is changed during a trading day, then, this limitation is reset, and the limit will generate again one e-mail alert for each notification level, regardless of the previously sent messages. Order rate limit generates only breach e-mails. It does not generate notice or warning e-mails. An e-mail warning is sent in each breach of order rate limit.

### **3.4 Monitored User**

A risk group formed through grouping of users may be structured over monitoring of the connection status of a predetermined user of Exchange member. If this user is disconnected from PTRM system, then, order entries of all users included in that risk group are prevented until the connection is re-established and the blocking is manually removed. Determination of this user by the members is optional.

### **3.5 Blocking of Risk Group**

A risk group may be blocked in three different ways as described below:

- Automatically by the system if and when risk limits are exceeded, or
- Automatically by the system if and when the monitored user is disconnected, or
- Manually by the member or the Exchange.

If a risk group exceeds the predetermined limits, then, that risk group is automatically blocked by the system. If risk group is blocked as a result of or due to excess of position risk limits, then, blocking is terminated and removed if limit excess is terminated or the Exchange or the related member increases the limit breached by risk group during the day. If risk group is blocked due to excess of order rate limit, the blocking is required to be manually removed. Otherwise, blocking of risk group terminates automatically in the following day.

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In the case of disconnection of the monitored user from the system, a manual intervention is needed for termination of blocking, and reconnection of the monitored user to the system is not sufficient.

A risk group may also be manually blocked by the Exchange or a member. A risk group blocked manually may only be unblocked again manually. Pending orders of all users included in a risk group may also be cancelled manually at once.

If an action is not taken for termination or removal of blocking, the blocking is automatically removed at the beginning of the next business day.

Users included in the blocked risk group are:

- Not allowed to enter new orders into the system; and
- Not allowed to change their open orders in the system; and
- Allowed to cancel their orders; and
- Allowed to remain connected to the system; and
- Allowed to continue to monitor the market (receiving broadcasts, order/transaction follow-up, etc.)

### 3.6 Default Group

If a risk group is defined as *default group*, the risk of transactions that do not involve a valid user ID in their user field is also tracked under this risk group. Otherwise, these transactions are not reflected into total risk. Default group feature may be assigned only to one risk group identified under the same member.

### 3.7 Mass Order Cancellation

When a risk group enters into breach status, whether its open orders will be automatically cancelled or not may be identified by members. If the mass cancel option is marked for a risk group, in the case of breach of risk limits determined for an instrument type or class, only open orders of instruments belonging to the related instrument type or class of the risk group are cancelled, but in the case of breach of order rate limit, all open orders of the risk group are cancelled.

### 3.8 Risk Group Parameter Definitions

Some of the definitions required for risk group controls become valid and effective the day after the definition is made, while some other definitions become valid and effective immediately intraday.

Definitions which may at any time be made in PTRM application interface and become valid and effective immediately are as listed below:

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- Updating of limits (position limits, order rate limit, maximum order size)
- Updating of warning & notification percentages
- Additions to e-mail recipients
- Blocking all users included in a risk group from sending orders, or removal of such blocking
- Removal of blocking arising out of breach of order rate limit
- Restriction of instruments tradable by users included in a risk group
- Cancellation at one time of all open orders of all users included in a risk group
- If and when a risk group enters into breach status, activation of mass order cancellation which automatically cancels all open orders of all users included in that risk group

Definitions which may at any time be made in PTRM application interface, but become valid and effective only next day when the system is opened are as listed below:

- Addition of a new limit or deletion of an existing limit
- Activation of e-mail warnings
- Deletion of e-mail recipients
- Addition of new users to risk groups
- Creation of a new risk group or deletion of an existing risk group
- Exclusion of user(s) from a risk group
- Change of the monitored user
- Addition of default group to risk group

### 3.9 Risk Group Lock

The Exchange may lock the member risk groups so that they cannot make any changes. A locked risk group is not authorized to take the following actions:

- Member cannot add new users to or exclude existing users from existing risk group/ groups.
- Member cannot change the warning levels of e-mail alarms.

A locked risk group is authorized to take the following actions:

- Addition and exclusion of e-mail alarm recipients
- Addition of instrument limit
- Change of limits

### 3.10 Special Provisions on Risk Group Controls

This section describes how some special situations are taken into account in risk group controls according to order or transaction types.

#### *Trade Report*

Transactions executed in reliance upon trade reports are taken into account under traded bought and traded sold counters in risk group controls. Trade reports are not rejected in maximum order size controls, or in tradable instrument restrictions, or in case of blocking of a risk group. Limit usage does not happen when the users send trade reports to the system, but when trade reports are accepted by the counterparty and converted into a transaction.

#### *Market Maker Quotes*

They are taken into account in open buy orders and open sell orders calculations just like normal orders in risk group controls. When they are converted into a transaction, they are included in traded bought and traded sold counters like normal orders.

#### *Indicative Quotes*

They are not included in risk calculations of risk group controls.

#### *Locally Inactive Orders*

If orders are made inactive by user, use of limit is updated as if said orders are cancelled.

#### *Orders Automatically Suspended by the System (Centrally Inactive Orders)*

Orders made inactive by the system are treated and considered as open orders in risk group calculations.

#### *Market Orders*

Orders which do not remain in order book such as Fill or Kill and Fill and Kill orders are included in risk calculation if they are converted into a transaction. They are rejected if the risk group is blocked.

#### *Tailor-Made Series*

For the series created by selection of the desired date at order entry stage, risk calculations are made at the instrument type and class level of the related series.

#### *Cross Trades, Non-cleared Trades*

Trades wherein both parties to trade are the same member, and other non-cleared trades are also included in calculation of traded bought and sold limit counters.



### 4. Account-based Margin Checks

Members may track via PTRM application the information on current available collaterals of the accounts they are trading in. Margin controls within PTRM application are conducted on account basis within the frame of rules determined by Takasbank, and adequacy of margins of accounts after completion of trades is checked.

Margin requirement is controlled through comparison of “Margin Consumed”, “Available Collateral” and “Remaining Collateral”. Accounts with margin consumed exceeding its available collateral or with a negative available collateral become risky. Orders belonging to accounts in risky status may be rejected or only position-closing orders may be accepted. Furthermore, open orders of accounts in risky status may be cancelled. Available collateral is calculated by RTM (risk management module), being a component of post-trade risk management system, in accordance with post-trade risk management margin calculation method. Margin consumed is calculated according to margin calculation method developed specifically for PTRM system. PTRM works in integration with RTM during the day. After completion of a trade, RTM calculates the margin required to be held and the available collateral by considering the account’s last position information and other parameters updated according to new prices during the day. Information on current value of available collateral and on trades taken into consideration in calculated of said value is provided by RTM to PTRM. Following receipt of this updated information from RTM, PTRM uses the current available collateral information in margin requirement control, and does not make any calculation for trades included in RTM’s calculation in the course of calculation of margin consumed.

#### 4.1 PTRM Margin Calculation Method

PTRM margin calculation method is a portfolio-based risk calculation method developed on the basis of risk calculation method employed by Takasbank in its risk calculations. This method developed at a level not leading to any latency in order submission is basically a risk calculation method taking into consideration the risks posed not only by open positions but also by orders on real-time basis. Orders may not occasionally be included in calculation of margin consumed within the frame of the rules determined by the Exchange. Orders will not be included in margin calculation at the first stage of commissioning of BISTECH system.

PTRM application makes the margin calculation primarily through netting at the “margin instrument group” level by taking into consideration open positions, open orders, and likelihood of realization of these orders, and the worst-case scenario in case of realization of them.

Margin instrument groups are determined by the Exchange. Netting is made up to a certain extent among the instruments included in the same margin instrument group. This netting rate is fixed in such manner to be between 0 and 1. 1 means that full netting will be made among the instruments included in the same margin instrument group. In determining then margin

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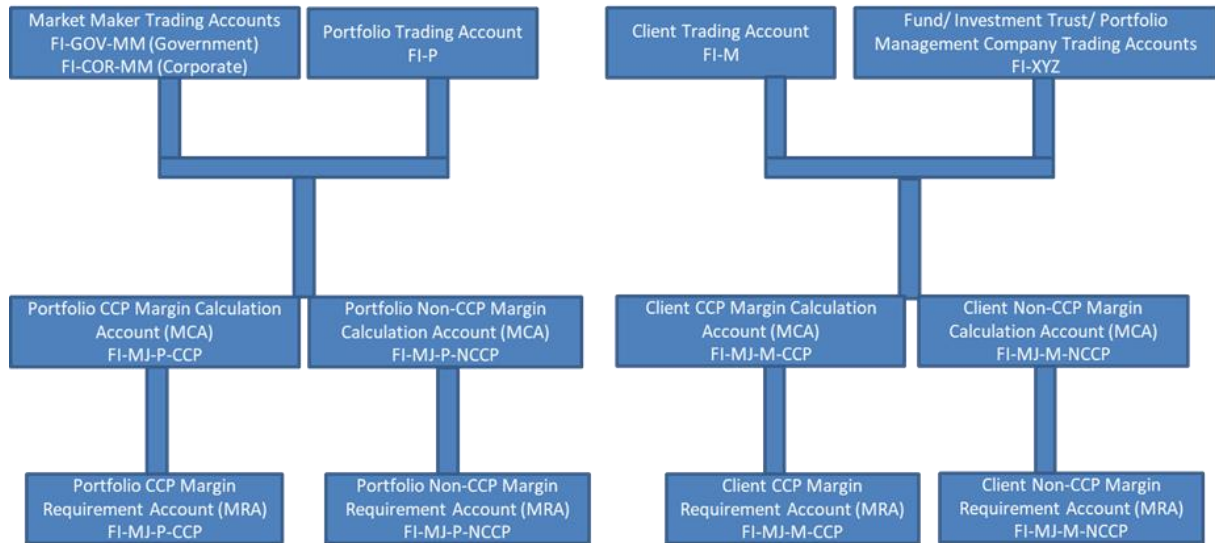
instrument groups, it is aimed to make sure that instruments in the same group are of the same type or their price movements are close to each other. In calculating the contribution of a margin instrument group to margin consumed value, netting calculations are made between instruments under that group, and risks at the bid and ask sides are separately reviewed and examined for each margin instrument group, and the worst-case scenario is created.

Margin value used for an account is calculated by summing up the contributions to margin of all margin instrument groups of that account containing positions and orders therein.

PTRM performs risk calculation on the basis of margin calculation account (MCA) to which trading accounts are linked. Then, margin adequacy is controlled on the basis of margin requirement accounts (MRA) to which margin calculation accounts (MCA accounts) are linked. MRA and MCA accounts may be defined separately or by being grouped on account basis (portfolio, fund, customer, etc.).

After transition to BISTECH, the account structure in Debt Securities Market is formed by taking into consideration the account types (portfolio, fund, customer, etc.) and the capital market instruments for which central counterparty (CCP) services are given / are not given.

### Debt Securities Market Account Structure



#### 4.1.1 Parameters Used in Margin Calculations

Unit margin (BT) is determined by Takasbank separately for

- long position (long unit margin, LUM) and
- short position (short unit margin, SUM)

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on instrument basis. It shows the unit risk value of an instrument. This information received from the Settlement system at the beginning of day is used in margin calculations made by PTRM throughout the day.

*Unit Margin Coefficient (UMC)* is determined on MCA basis. It is used for the purpose of differentiation of unit margin values determined at the instrument level by taking into consideration the different risk profiles of members and their accounts.

*Open Orders Coefficient (OOC)* is determined on MCA basis. It is used for the purpose of determining the contribution of open orders, which are not yet converted into a transaction, to risk calculation at a level lower than that of trades. It is determined by considering the likelihood of realization of the related order.

*Netting Coefficient (NC)* is determined on margin instrument group basis. Risks at bid and ask sides calculated for each instrument included in margin instrument group are netted with each other at the rate of this coefficient.

*Consumption Coefficient (CC)* is determined on MRA basis. It is used for the purpose of weighting of margin value required to be held, as calculated by RTM system.

### 4.1.2 Algorithm Used in Margin Calculations

In PTRM system, the information on positions and orders kept at instrument level for each MCA account as tabulated below constitutes a base for margin calculation:

<b>LP</b>	Long Position (quantity)
<b>SP</b>	Short Position (quantity)
<b>RLP</b>	Resolved Long Position (quantity)
<b>RSP</b>	Resolved Short Position (quantity)
<b>OOLO</b>	Offsetting Long Orders (quantity)
<b>OOSO</b>	Offsetting Short Orders (quantity)
<b>NOLO</b>	Non-Offsetting Long Orders (quantity)*
<b>NOSO</b>	Non-Offsetting Short Orders (quantity) *
<b>OOLT</b>	Offsetting Long Trade Reports (quantity)
<b>OOST</b>	Offsetting Short Trade Reports (quantity)
<b>NOLT</b>	Non-Offsetting Long Trade Reports (quantity) *
<b>NOST</b>	Non-Offsetting Short Trade Reports (quantity) *

\* Non-offsetting orders and non-offsetting trade reports values are not used in Debt Securities Market (NOLO, NOSO, NOLT and NOST are always equal to 0). Temporary non-offsetting orders and trade reports values are used in calculations only temporarily.

The following temporary values calculated out of the position and order values given above are used in margin calculation. These temporary values are multiplied by margin multipliers obtained from parameters used in margin calculation.

<b>OOLTg</b>	Min (OOLT, SP)
<b>OOSTg</b>	Min (OOST, LP)
<b>OOLOg</b>	Min (SP-OOLTg, OOLO)

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<b>OOSOg</b>	Min (LP- OOSTg, OOSO)
<b>NOLTg</b>	NOLT + OOLT - OOLTg
<b>NOSTg</b>	NOST + OOST - OOSTg
<b>NOLOg</b>	NOLO + OOLO - OOLOg
<b>NOSOG</b>	NOSO + OOSO - OOSOG

### Margin Coefficients

<b>MCOL</b>	UMC * OOC * LUM (Margin coefficient for open long orders)
<b>MCOS</b>	UMC * OOC * SUM (Margin coefficient for open short orders)
<b>MCPL</b>	UMC * LUM (Margin coefficient for long positions)
<b>MCPS</b>	UMC * SUM (Margin coefficient for short positions)

All of the accounts at Debt Securities Market are of non-omnibus account structure. Omnibus accounts may at the same time contain both long position and short position for the same instrument in it, while non-omnibus accounts may contain only a long position or a short position for the same instrument.

Accordingly, margin calculations are first of all made as follows by taking into account the executed trades and the open orders for each margin instrument group:

Margin consumed by Traded Long positions (TL)	$\sum_{\text{instrument}}(LP * MCPL)$
Margin consumed by Traded Short positions (TS)	$\sum_{\text{instrument}}(SP * MCPS)$
Margin consumed by Resolved Traded Long positions (RTL)	$\sum_{\text{instrument}}(RLP * MCPL)$
Margin consumed by Resolved Traded Short positions (RTS)	$\sum_{\text{instrument}}(RSP * MCPS)$
Margin consumed by Non-Offsetting Long orders (NOL)	$\sum_{\text{instrument}}(NOL\ O_g * MCOL + NOLTg * MCPL)$
Margin consumed by Non-Offsetting Short orders (NOS)	$\sum_{\text{instrument}}(NOS\ O_g * MCOS + NOSTg * MCPS)$
Margin consumed by Offsetting Long orders (OOL)	$\sum_{\text{instrument}}(OOL\ O_g * MCOL + OOLTg * MCPL)$
Margin consumed by Offsetting Short orders (OOS)	$\sum_{\text{instrument}}(OOS\ O_g * MCOS + OOSTg * MCPS)$

Netting calculations are made not over the quantity, but over the quantity multiplied by margin coefficients. Following multiplication of transaction units by margin coefficients, the worst-case scenario is found for each margin instrument group by taking the existing positions and open orders into account. To this end, risk calculations are made by considering the net

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positions on long and short positions sides. The higher one of the values obtained from these calculations is determined as the margin consumed. Margin consumed (required margin) is calculated as follows for each margin instrument group:

Margin consumed by Net Positions and Long Open Orders (ML)	$\text{abs} (TL + NOL - (TS - OOL) * NC)$
Margin consumed by Net Positions and Short Open Orders (MS)	$\text{abs} (TS + NOS - (TL - OOS) * NC)$
Margin Consumed (MC)	$MC_{\text{instrument group}} = \max(ML, MS) - \max((RTL - RTS * NC), (RTS - RTL * NC))$

Total margin value required for an account (MCA) is calculated as follows by adding the contributions to margin of all instrument groups having positions and orders in that account:

$$MC_{\text{MCA account}} = \sum_{\text{instrument group}} MC$$

### 4.2 Special Cases on Margin Controls

This section describes how some special cases emerging depending upon order or transaction types are taken into account in margin controls.

#### *Trade Reports*

Trade report orders (whether they are accepted by the counterparty and turned into a transaction or not) are taken into account in margin calculation with effect from the moment they are sent.

#### *Market Maker Quotes*

They are taken into account like normal orders in margin controls. When they turn into a position, they are included in calculation of long and short positions again like normal orders.

#### *Indicative Quotes*

They are not included in margin calculation.

#### *Locally Inactive Orders*

If orders are made inactive by user, margin calculations are updated by considering that subject orders are cancelled.

#### *Orders Automatically Suspended by System (Centrally Inactive Orders)*

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Orders automatically made inactive by system are considered and treated as open orders in margin calculations.

### *Market Orders*

Orders which do not remain in order book such as Fill or Kill and Fill and Kill orders are included in margin calculation if they turn into a transaction.

### *Tailor-Made Series*

For the series created by selection of the desired date at order entry stage, margin controls are made by using the unit margins of the instrument class of the series created.

### *Cross Trades, Non-cleared Trades*

Cross trades wherein both parties to trade are the same member, and other non-cleared trade report orders are not included in calculation of margin controls. However, fund transactions with same value date executed after 14:00 hours between different parties are included in margin calculation.

## **5. Suspended Members and Accounts**

Within the frame of risk management principles, if deemed necessary by Takasbank or the Exchange, the orders/transactions may be suspended on the basis of members or accounts via PTRM application. As a part of this suspension, all of the new orders or only position-increasing orders may be prevented by PTRM to be submitted to the trading system, depending on the risk status thereof. Furthermore, all of the open orders may be collectively cancelled via PTRM by Takasbank or the Exchange.

Members may follow any information as to suspension time and level or by which source and for which reason suspension is made via PTRM application. Information as to which actions will be taken in the suspended account may also be followed via the application.

Members may follow via the application not only the status valid as of the current moment, but also the suspension activities affected during the day retroactively.

**ANNEX 6- EXCHANGE FEE TARIFF IN DEBT SECURITIES MARKET**

An exchange trading fee calculated over a rate of the trading value is charged on and collected separately from each of the parties in consideration of transactions executed in the Debt Securities Market.

In repo transactions, exchange trading fee is calculated by multiplying the exchange trading fee rate valid for repo transactions by repo term.

In trades of securities denominated in foreign currency executed in the Debt Securities Market, trading value is converted into Turkish Lira over the foreign exchange buying rate of the Central Bank of the Republic of Türkiye valid as of the trading day, and then, exchange trading fee is calculated by using the exchange trading fee rate valid in the related market.

Exchange trading fee tariff applied on transactions executed in the Debt Securities Market is as tabulated below:

EXCHANGE TRADING FEE TARIFF	Exchange Trading Fee (per ten thousands over trade value, i.e. basis points)
Outright Purchases and Sales Market Watchlist Market	
Buying/Selling transactions (Trades)	0.1
Trades with same value date executed until end of trading hours (09.30-14.00) for transactions with same value date	0.15
Mutual fund trades with same value date executed after the end of trading hours (14.00-17.30) for transactions with same value date	0.2
Market-maker trades executed over market maker quotes	0.05
Repo and Reverse Repo Market Repo Market for Specified Securities Equity Repo Market Committed Transactions Market	
Repo/reverse repo and committed transactions	0.05 x term (*)
Repo/reverse repo transactions with same value date between 14.00 and 17.30 hours	0.1 x term (*)
Offering Market for Qualified Investors	0.1
International Bonds Market	0.1

(\*) Number of calendar days between starting and ending value dates of transaction

In committed transactions, if, at the ending value date, Takasbank uses its right of withdrawal from both or any one of the committed transactions it is involved in, then, no change is made in the exchange trading fee calculation.

The exchange fee is applied as “0” (zero) for the transactions executed by central clearing institutions at Borsa İstanbul Debt Securities Market, which are providing central counterparty

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service at this market, for the purpose of investing own cash resources, cash collaterals deposited to itself as part of providing service as central clearing institution for all markets and cash guarantee fund contributions.