



# EQUITY MARKET CENTRAL COUNTERPARTY SERVICE



# Presentation Agenda

- ❖ RISK and COLLATERAL MANAGEMENT PROCESS in EQUITY MARKET
  - ❖ Account Structure
  - ❖ End-of-Day Risk Management Applications
  - ❖ Intraday Risk Management Applications
- ❖ BISTECH RISK MANAGEMENT APPLICATIONS
  - ❖ Collateral Calculation Method
  - ❖ Assets Eligible as Collateral and Collateral Valuation Method
  - ❖ Guarantee Fund Calculation
- ❖ TRANSITION TO CENTRAL COUNTERPARTY SERVICE IN EQUITY MARKET
- ❖ MEMBER SCREENS
- ❖ EQUITY MARKET RISK MANAGEMENT PROCESS ILLUSTRATION

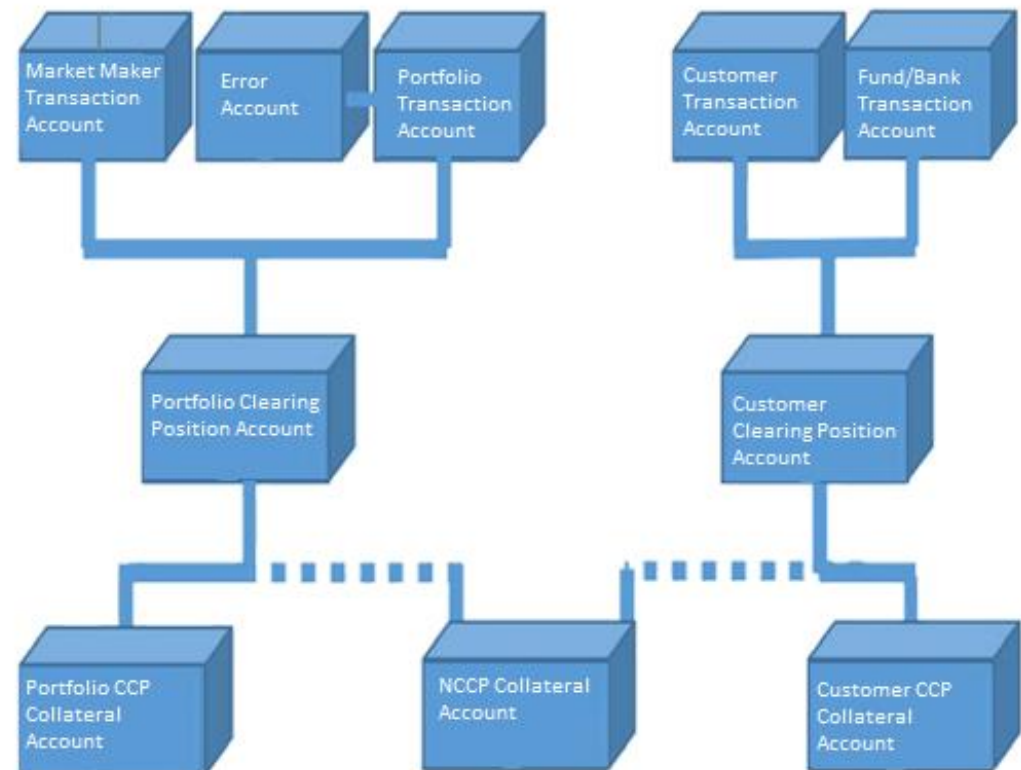
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## Equity Market- Account Structure

- ❖ The account structure in Borsa Istanbul Equity Market has been established based on the segregation by customer/portfolio and by capital market instrument to which CCP service is/is not provided.
- ❖ The trade positions shall be monitored in separate position accounts by pursuing the portfolio and customer segregation.
- ❖ For the financial instruments to which CCP service is provided, the collateral adequacy shall be monitored in the separate accounts for the customer and portfolio positions.
- ❖ For the positions to which CCP service is not to be provided, the collateral shall be monitored in a single account without any customer/portfolio segregation.

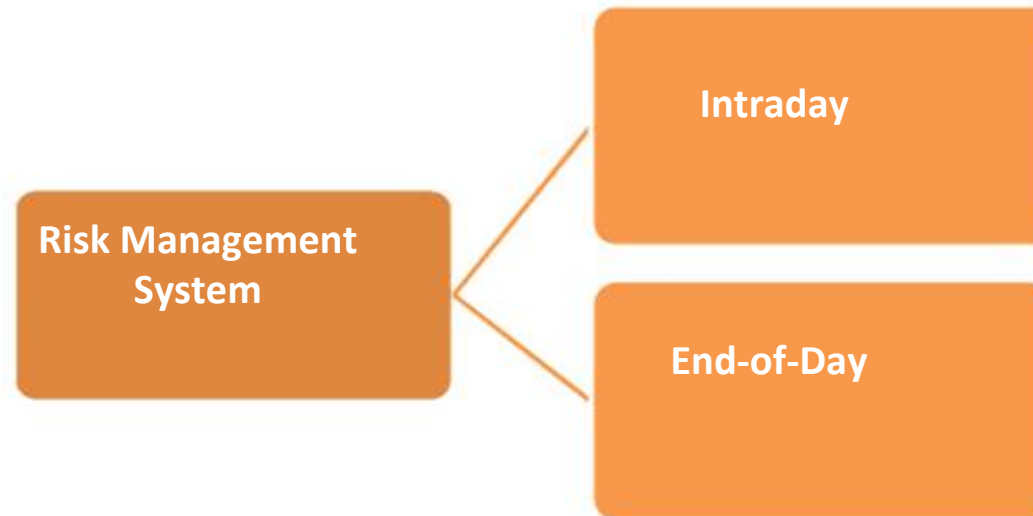


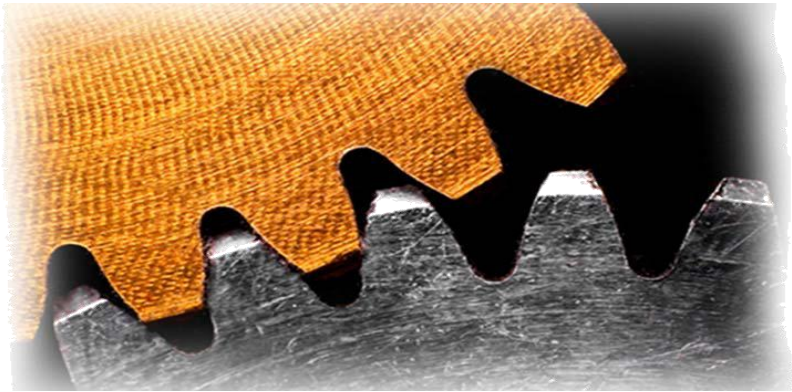


# Risk and Collateral Management Process

## Processes

- ❖ The risk management system shall be carried out over two different processes: intraday and end-of-day.

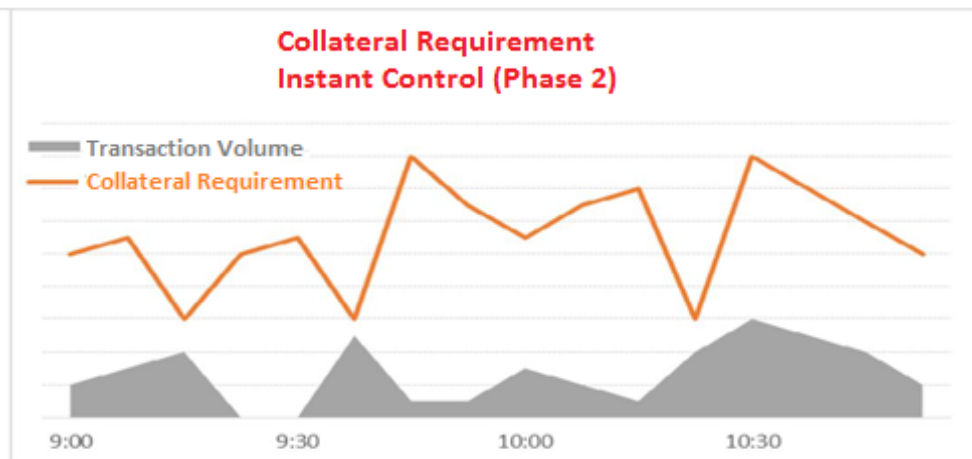
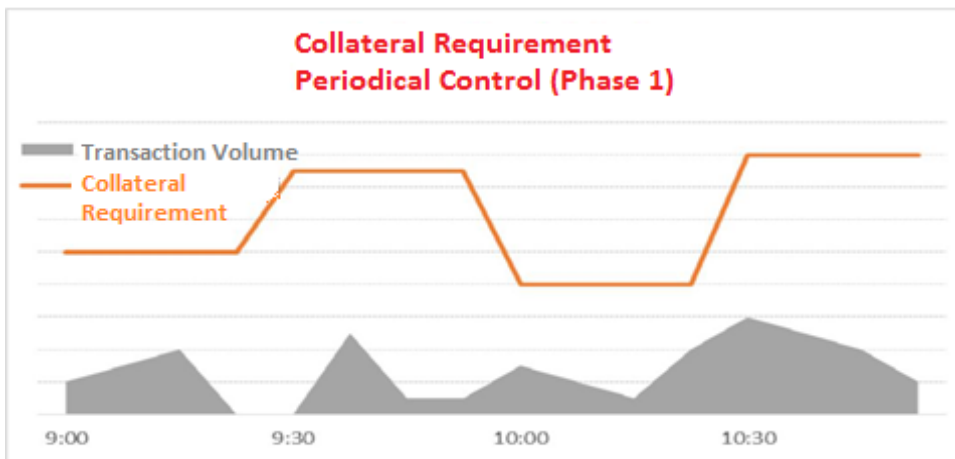




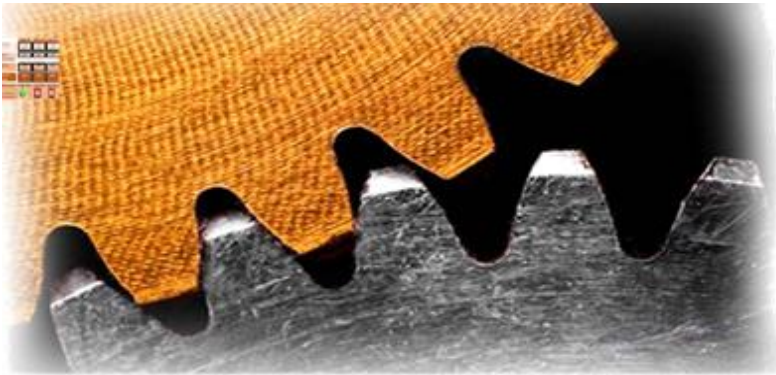
# Risk and Collateral Management Process

## Intraday Process

- ❖ Intraday risk management system to be applied in the Equity Market is comprised of two components.
  - ❖ **Periodic controls:** The post-trade risk management applications consisting of the periodically conducted risk collateral calculations that have been introduced by the first phase (November 2015).
  - ❖ **Instant Risk Management:** At-trade risk management system which is scheduled to be introduced in 2017 and will monitor the collateral adequacy in an instant manner.







# Risk and Collateral Management Process

## End-of-Day Process



- Risk calculation and collateral valuation shall be performed for all accounts by using the prices formed at the end of each business day and the current risk parameters.

### Day T Time XX:XX

- Risk and collateral calculation.
- Margin call for the members with inadequate collateral.

### Day T+1 Time YY:YY

- Collateral control for the accounts for which margin call is issued.

	CCP - PORTFOLIO	CCP - CUSTOMER	OTHER - NCCP
CLEARING POSITIONS	+15 A EQUITY -20 B EQUITY	+100 C EQUITY -20 B EQUITY	+25 G EQUITY -10 P EQUITY
RISK CALCULATION COLLATERAL REQUIREMENT	10.000 TL	60.000 TL	45.000 TL
COLLATERAL ACCOUNTS	20.000 TL 20.000 USD	15.000 TL 50.000 TL TRT XXX	40.000 TL
COLLATERAL VALUATION AVAILABLE COLLATERAL	70.000 TL	55.000 TL	40.000 TL
COLLATERAL ADEQUACY CONTROL	70.000 TL > 10.000 TL	55.000 TL < 60.000 TL	40.000 TL < 45.000 TL
AVAILABLE > REQUIRED AVAILABLE < REQUIRED			

- Further to the calculations, a margin call shall be issued for the accounts whose appreciated collateral amount (available collateral) is below the margin requirement (required collateral).
- The collateral shall be requested to be deposited to the relevant accounts until the designated time on the next business day and any order transmission over these accounts can be restrained.

# Presentation Agenda

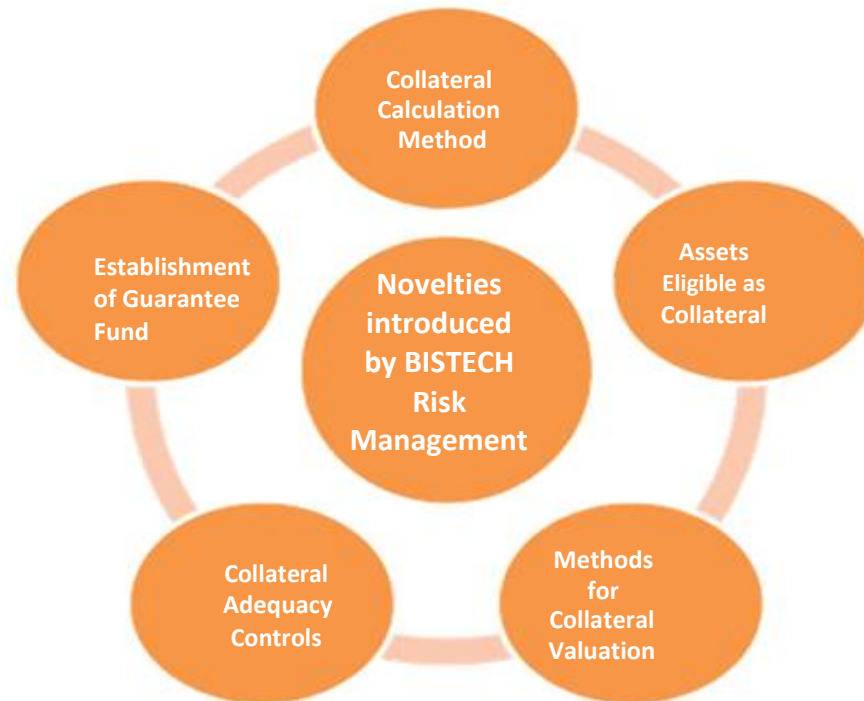
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  - ❖ Collateral Calculation Method
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# BISTECH Risk Management Applications

- ❖ Upon introduction of BISTECT system, there will be fundamental changes in the current risk and collateral management applications.





# BISTECH Risk Management Applications

## Collateral Calculation Method

- ❖ The margin requirements in the Equity Market shall be calculated based on the positions carried by the members. In the Equity Market, the position concept refers to the asset/cash receivable/debt obligations. The positions occur on T-day when the orders are matched and end upon completion of the settlement on T+2 day.
- ❖ Collateral calculation method (Delta Hedge) to be used in Borsa Istanbul Equity Market has two components: the initial margin and the variation margin (bid/ask spread margin).
- ❖ The initial margin is requested against the potential risks (potential future exposures) in case any default occurs in future.
- ❖ The variation margin, on the other hand, refers to the difference between the market values of the positions calculated by using the trade price and their market values calculated by using the current prices. To that end, the variation margin is requested for the current exposures.





# BISTECH Risk Management Applications

## Collateral Calculation Method - Combined Commodity

- ❖ One of the main pillars of the risk calculation method in the Equity Market is the commodity group (combined commodity) concept.
- ❖ In the combined commodity, the shares are assumed to have similar price movements; hence, the positions of the shares included in the same combined commodity shall be netted-off.

**Example:** Let's assume that share A with a price of 10 TL and share B with a price of 20 TL are included in the same combined commodity and the netting parameter in this combined commodity is not completed; and the member has conducted 1.000 units of share A buying transaction and 200 units of share B selling transaction on T-day.

During the collateralization, the risk amount arising from the long positions in the same combined commodity shall be taken into account as "+", whereas the risk amounts arising from the short positions shall be taken into account as "-".



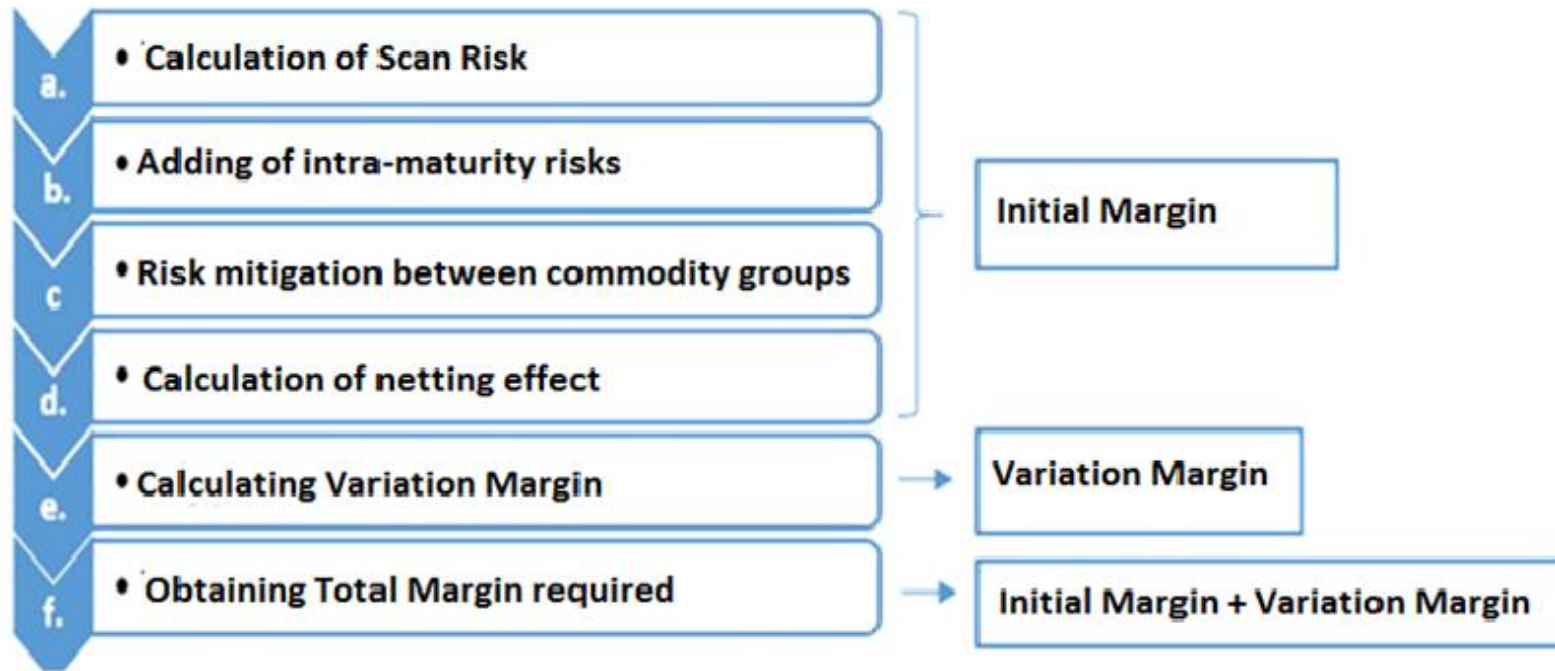




# BISTECH Risk Management Applications

## Collateral Calculation Method - Calculation Steps

- ❖ In Delta Hedge method, the required margin level shall be calculated in 6 steps:





# BISTECH Risk Management Applications

## Collateral Calculation Method - Scanning Risk

- ❖ Scanning risk is calculated by multiplying each share's price by the number of positions and by the risk parameters set for the relevant position.
- ❖ The risk parameters set for the shares refer to the price scan range of the relevant share.
- ❖ The risk parameter of a share may vary according to the number of remaining days to the settlement.
- ❖ Delta Hedge method takes such variation into account by using the time-dependent risk parameters.
- ❖ In this method, it is possible to differentiate the risk parameters of the positions whose settlement is to be completed after two days (T+2) and of those whose settlement is to be completed today (T) or tomorrow (T+1).



# BISTECH Risk Management Applications

## Collateral Calculation Method - Intra-Commodity Spread Charge

- ❖ As in SPAN, there is also no maturity concept in the Delta Hedge method.
- ❖ In the calculation, netting-off the opposite positions with different settlement dates is the case.
- ❖ In order to cover such gap, the intra-commodity spread charge across the different settlement dates of the shares included in the same combined commodity is calculated.
- ❖ The calculated intra-commodity spread charge is added to the total margin requirement.





PRODUCT GROUPING  
EXAMPLE -2  
(INDEX BASED)

# BISTECH Risk Management Applications

## Collateral Calculation Method - Inter-Commodity Risk

- ❖ In the Equity Market margining method, the situations in which the correlations between the price movements of the combined commodities might decrease the total margin requirement of the member shall be taken into account.
- ❖ If, upon netting-off the combined commodities internally, there is any opposite transaction (buy/sell) between these groups, the correlation effect shall be calculated and deducted from the total margin requirement.



# BISTECH Risk Management Applications

## Collateral Calculation Method - Netting Effect

- ❖ In the model, it is possible to limit the netting effect of the shares included in the same combined commodity.
- ❖ In the calculation, the difference between the amount to be calculated as a result of the gross margining of all positions in an account and the amount to be found by way of netting-off shall be used.
- ❖ Total Collateral Amount =  
Gross Margining Result \* (100-X)% + Net Margining Result \* X%



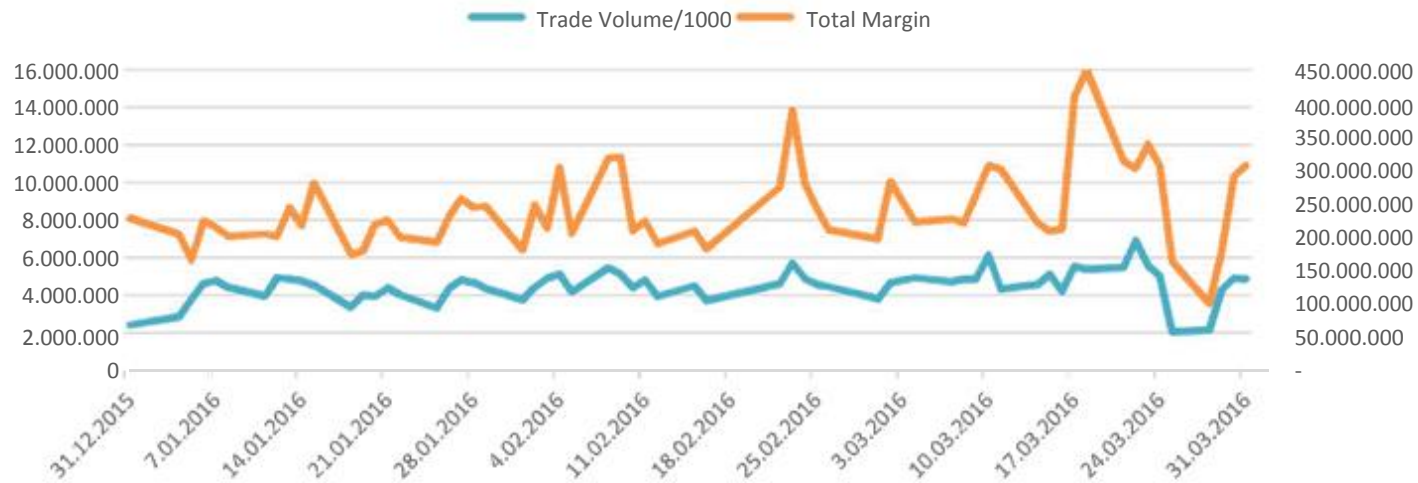
# BISTECH Risk Management Applications

## Collateral Calculation Method - Variation Margin

- ❖ In the model, the risk calculation is made by using the current (market) price of the share.
- ❖ The difference between the amount of the taken positions valued by the current prices and valued by their settlement prices constitutes the variation margin.
- ❖ The variation margin may increase or decrease the total margin requirement.

# BISTECH Risk Management Applications

Trade Volume vs Total Margin



Date	Total Margin in Market (Max 3)	Trade Volume
18/03/2016	448,126,981	5,365,168,874
17/03/2016	407,251,934	5,493,593,097
23/02/2016	388,906,628	5,676,943,056

Date	Total Margin in Market	Trade Volume (Max 3)
22/03/2016	301,659,382	6,879,047,664
10/03/2016	305,545,137	6,104,303,260
23/02/2016	388,906,628	5,676,943,056



# BISTECH Risk Management Applications

## Margin Variations

Maximum Margin Variation Occurring Between Two Days



Date	Margin Variation Occurring Between Two Days
17/03/2016	132,025,299
24/02/2016	90,326,944
21/03/2016	89,668,521

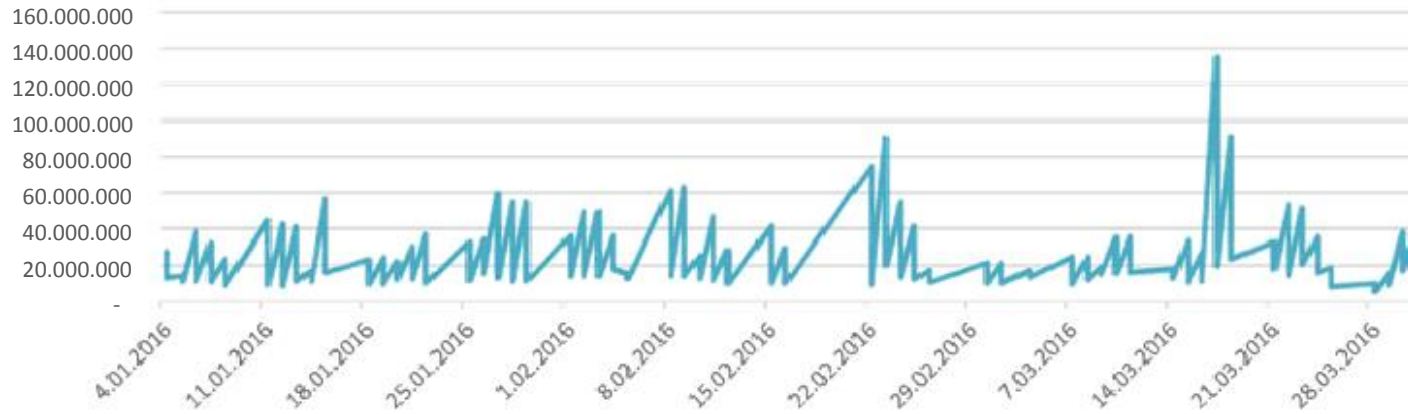




# BISTECH Risk Management Applications

## Member-Based Margin

Maximum Margin Amount Calculated on a Member Basis



Date	Maximum Margin Amount Calculated on a Member Basis
17/03/2016	134,728,818
18/03/2016	91,146,105
23/02/2016	90,327,917
22/02/2016	74,411,579
09/02/2016	62,453,214





# BISTECH Risk Management Applications

## Guarantee Fund Calculations

Period - Month	Calculated Guarantee Fund Size
January	43,868,455
February	43,926,834
March	52,041,459
April	52,045,176

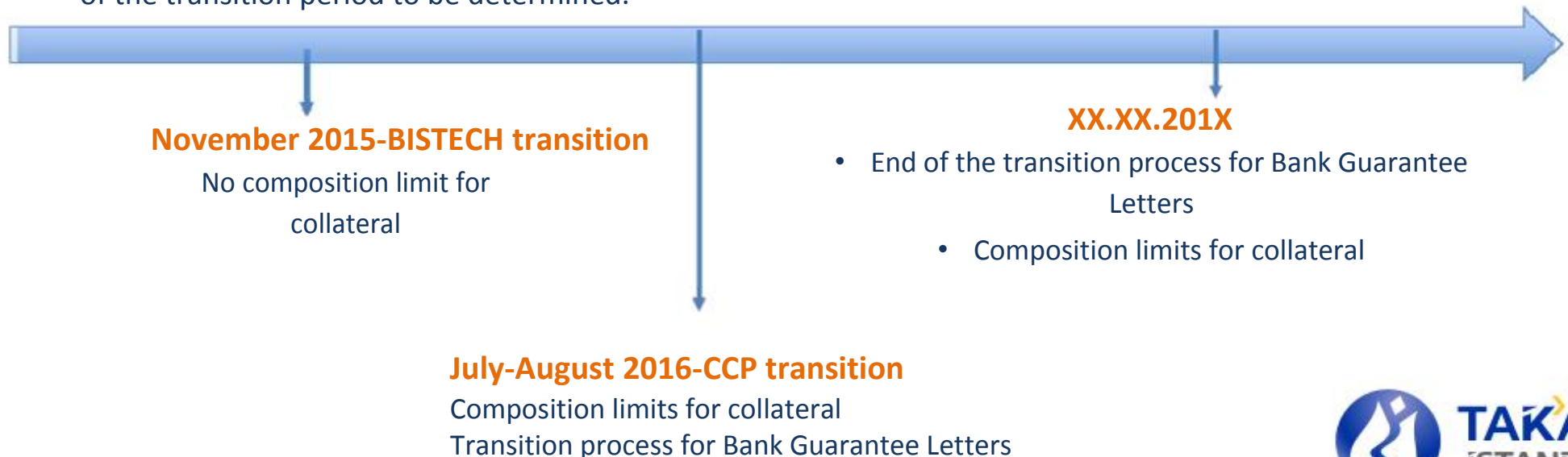
Member	January 2016	February 2016	March 2016	April 2016
1st Member	3,299,738	5,031,820	7,754,537	7,494,079
2nd Member	2,790,182	2,750,348	3,098,705	2,970,388
3rd Member	2,711,710	2,648,704	3,001,534	2,797,220



# BISTECH Risk Management Applications

## Collateral Management

- ❖ Collateral management service in the Equity Market shall be provided by Takasbank. The principles regarding the collateral deposit-withdrawal times, the valuation of collateral and assets eligible as collateral and the composition limits thereof shall be stipulated in Takasbank regulations and procedures.
- ❖ Following the launch of CCP service in Borsa Istanbul Equity Market, a limitation shall be introduced to the collateral compositions, and the Bank Guarantee Letters shall not be accepted as collateral at the end of the transition period to be determined.





# BISTECH Risk Management Applications

## Collateral Management

- ❖ Deposited collateral shall be made subject to valuation by Takasbank. The valuation process is comprised of two stages. The first of these stages is the valuation of collateral by using the current prices and collateral valuation haircuts.
- ❖ The next step of the collateral valuation is the identification of total collateral available for use.
- ❖ The composition in the total collateral of each type of asset that can be provided as collateral in the Equity Market can be restricted. A lower limit shall be imposed for Turkish Lira.
- ❖ Collateral exceeding such limit shall not be taken into account in the valuation. A TL margin call shall be issued for the accounts maintaining TL below that limit.
- ❖ Total margin requirement arising from the taken positions shall be compared with the total collateral available for use and the collateral deficit/collateral surplus shall be comprised of the difference between the said amounts.

### ASSETS ELIGIBLE AS COLLATERAL

TURKISH LIRA

CONVERTIBLE FOREIGN CURRENCY

GDSS

EQUITY CERTIFICATE

INVESTMENT FUND PARTICIPATION CERTIFICATE

EUROBOND ISSUED BY REPUBLIC OF TURKEY UNDERSECRETARIAT OF TREASURY

LEASE CERTIFICATES ISSUED BY REPUBLIC OF TURKEY UNDERSECRETARIAT OF TREASURY ASSET LEASING COMPANY



# BISTECH Risk Management Applications

## Guarantee Fund

- ❖ A guarantee fund shall be established by the contributions of the members as to be used for the part of total fund requirement exceeding the collateral of the relevant members which may arise upon default of one or more of the members in the Equity Market to which the CCP service is to be provided.
- ❖ Margin valuation principles to be used for the trade margin shall also be applicable for the contributions to be deposited for the Guarantee Fund.
- ❖ Guarantee fund collateral composition can be different from the composition of collateral received for the initial margin.
- ❖ It shall be calculated based on 99.9% confidence level.
- ❖  $\text{Guarantee Fund Size} > \text{Max} (\text{Fund requirement of the member with the highest risk, fund requirement of the second member with the highest risk} + \text{fund requirement of the third member with the highest risk})$
- ❖ Guarantee fund shall be composed of the fixed and variable contributions.
- ❖ Guarantee fund size shall be calculated on a monthly basis.
- ❖ Guarantee fund contribution to be requested from each member shall be computed by distributing the total guarantee fund size in proportion to the risks that are carried by the members.

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## Transition to Central Counterparty Service in the Equity Market

- ❖ Takasbank shall provide the Central Counterparty (CCP) service in Borsa Istanbul Equity Market and in this context, the risk and collateral management shall be performed by Takasbank.
- ❖ In the Equity Market, transition to the new system and launch of the CCP service shall be gradually introduced.

### 2015 November

- \* Post-Trade Risk Management (Periodic)
- \* End-of-Day Risk Management

- There is no change in the risk management system.
- New functions are for monitoring purposes.

### 2016 July-August

- \* CCP Transition
- \* Establishment of Guarantee Fund

- Start of daily collateral adequacy application.
- Periodic risk management process exists in the intraday processes.

### 2017

- \* At-Trade Risk Management (Instant)

- Launch of instant risk management system.



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## Member Screens - Results Monitoring

- ❖ Risk calculations during the day shall be monitored from the **Total Margin Requirement** screen.

Marjin Gereksinimi Hesabi	Marjin Hesaplanma Zamanı	Toplam Marjin	Başlangıç Marjini	Değişim Marjini (Vade Sonu)	Risk Para Birimi	Enstrüman Para Birimi
BI ACA MJ-TM-M-C	03.11.2015 15:00:00	-260.500	-201.000	-59.500	TRY	TRY
BI ACA MJ-TM-M-C	03.11.2015 15:00:00	-260.500	-201.000	-59.500	TRY	TRY

- ❖ In this screen, any minus (-) amount means debit and any plus (+) amount means credit. The minus (-) amounts must be topped-up. Total margin comprising of the sum of the initial and variation margins indicates the risk/obligation of the member.

## Member Screens - Total Margin Requirement

Toplam Marjin Gereksinimi [ACA\_TT\_100]

Marjin Gereksinimi Hesabı: \*\*\* Tarih: 03.11.2015

Gün Sonu Marjin Hesaplama  Gün İçi Son Hesaplama

Para Birimi: [Dropdown] Gün İçi Teminat: [Text Box]

Spesifik Gün İçi Hesaplama

Arama sonucu bulunamamıştır.

Marjin Gereksinimi Hesabı	Marjin Hesaplama İçin Kullanılan Hesap	Marjin Hesaplanma Zamanı	Başlangıç Marjini	Toplam Marjin	Değişim Marjini (Vade İçi)	Deği
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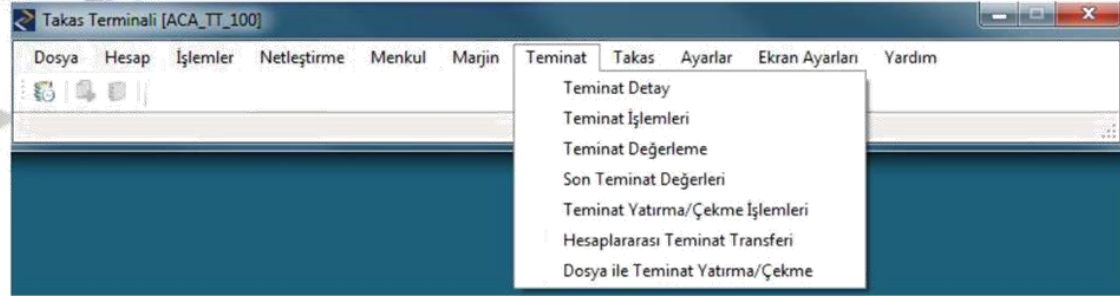
Takas Terminali

The specified batch log item was not found. / Belirtilen batch log ögesi bulunamadı. transaction aborted

OK

- ❖ The Last End-of-Day Calculation given in the screen shows the results of the most recent half-hourly conducted calculations. The End-of-Day Margin Calculation demonstrates the results that can be monitored from the screen upon completion of the end-of-day operations.
- ❖ If a search is made in the screen by clicking the end-of-day margin calculation during the day, the above-given error would appear.

# Collateral Menu



## Collateral Valuation

- ❖ Risk and collateral amounts based on the batches running once every hours shall be monitored from this screen.

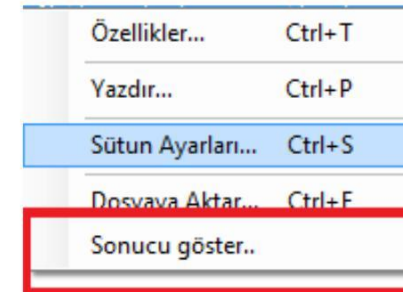
Teminat Değerleme [AKM\_TT\_121]

Tarih Seçiniz

Değerleme Tarihi: 02.11.2015

Arama

Hesap	Değerleme tarihi	Teminat Değerleme No	Teminat Durumu	Değerleme Tipi	Oluşturulma Tarihi	Gün İçi	Son	Doğrudan Borçlandırma
***	02.11.2015	1	Tamamlandı	Tüm teminatların değerlendirilmesi	30.10.2015 17:24:47	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	2	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 09:00:42	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	3	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 09:30:31	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	4	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 10:00:27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	5	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 10:30:27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	6	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 11:00:26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	7	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 11:30:00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	8	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 11:30:29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	9	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 12:00:32	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	10	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 12:30:28	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	11	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 13:00:27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	12	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 13:30:27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	13	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 14:00:29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	14	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 14:30:28	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	15	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 15:00:30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	16	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 15:30:28	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





## Member Screens - Collateral Valuation

- ❖ In each collateral deposit/withdrawal, the system shall perform a valuation by using the most recently calculated margin amounts. The results can be monitored from this screen.
- ❖ The margin call issued within the day shall also be monitored from this screen; and its details can be displayed from the Risk and Collateral Monitoring Screen.

Teminat Değerleme [AKM\_TT\_121]

Tarih Seçiniz  
Değerleme Tarihi: 02.11.2015

Arama

Hesap	Değerleme tarihi	Teminat Değerleme No	Teminat Durumu	Değerleme Tipi	Oluşturulma Tarihi	Gün İçi	Son	Doğrudan Borçlandırma
***	02.11.2015	1	Tamamlandı	Tüm teminatların değerlendirilmesi	30.10.2015 17:24:47	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	2	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 09:00:42	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	3	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 09:30:31	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	4	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 10:00:27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	5	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 10:30:27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	6	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 11:00:26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	7	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 11:30:00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	8	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 11:30:29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	9	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 12:00:32	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	10	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 12:30:28	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	11	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 13:00:27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	12	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 13:30:27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	13	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 14:00:29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	14	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 14:30:28	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	15	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 15:00:30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
***	02.11.2015	16	Tamamlandı	Tüm teminatların değerlendirilmesi	02.11.2015 15:30:28	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Özellikler...	Ctrl+T
Yazdır...	Ctrl+P
Sütun Ayarları...	Ctrl+S
Dosyaya Aktar...	Ctrl+F
Sonucu göster..	



## Member Screens - Risk and Collateral Monitoring Screen

Teminat Değerleme Sonucu [ACA\_TT\_100]

Valuation Date: 03.11.2015 Teminat Değerleme No : 29 - Tüm teminatların değerlendirilmesi - Tamamlandı - 03.11.2015 14:00:59

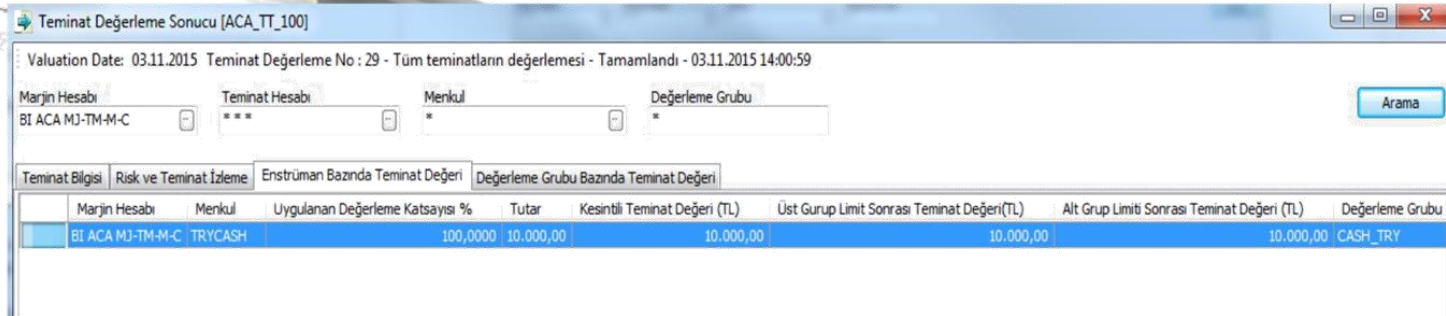
Marjin Hesabi: \*\*\* Teminat Hesabi: \*\*\* Menkul: \* Değerleme Grubu: \*

Teminat Bilgisi: Risk ve Teminat İzleme

Marjin Hesabi	Para Birimi	Baz Para Birimi	Değerleme Katsayısı %	Toplam Marjin	Toplam Teminat Değeri	Ekak veya Fazla	Zorunlu Nakit Temi...	Nakit Teminat Bilgisi	Ekak veya Fazla Nakit (TL)
BI ACA DFEQT	TRY	TRY					32.360,04		-32.360,04
BI ACA DFEQT	TRY	TRY	100,0000	-1.078.668,00	0,00	-1.078.668,00	32.360,04	0,00	-32.360,04
BI ACA MJ-TM...	TRY	TRY					26.184,50		-16.184,50
BI ACA MJ-TM...	TRY	TRY	100,0000	-261.845,00	10.000,00	-251.845,00	26.184,50	10.000,00	-16.184,50
BI ACA MJ-TM...	TRY	TRY					0,00		10,00
BI ACA MJ-TM...	TRY	TRY	100,0000	0,00	10,00	10,00	0,00	10,00	10,00

- ❖ The screen in which we compare the calculated margins with the collateral is the Risk and Collateral Monitoring Screen.
- ❖ In the calculations made once every hour during the day, both the margins and the collateral shall be re-calculated by the new prices.
- ❖ Total collateral value shows the total amount of the deposited collateral further to their valuation.
- ❖ Compulsory cash collateral corresponds 10% of the total margin.
- ❖ Deficit or Surplus is the difference between Total Margin and Total Collateral Value.
- ❖ Deficit or Surplus Cash (TL) is the difference between Cash Collateral and Compulsory Cash Collateral. A minus (-) sign in this field indicates that there is an obligation required to be completed in the account.
- ❖ If the Deficit or Surplus and Deficit or Surplus Cash fields have a minus (-) sign in this screen, neither collateral withdrawal nor collateral transfer shall be possible.

## Member Screens - Instrument-Based Collateral Value



Marjın Hesabı	Menkul	Uygulanan Değerleme Katsayısı %	Tutar	Kesintili Teminat Değeri (TL)	Üst Grup Limit Sonrası Teminat Değeri (TL)	Alt Grup Limiti Sonrası Teminat Değeri (TL)	Değerleme Grubu
BI ACA MJ-TM-M-C	TRYCASH	100,0000	10.000,00	10.000,00	10.000,00	10.000,00	CASH_TRY

- ❖ It is the screen where we can monitor the collateral valuation step by step. The amount field shows the deposited collateral. The applied valuation haircut is the rate that we have set on the basis of valuation groups. The Discounted Collateral Value is the amount resulting from the application of such valuation haircut to the collateral amount.
- ❖ Upper limit and lower limit values shall be determined on the basis of valuation groups. Accordingly, collateral types such as stocks, bonds, etc. shall be accepted up to a certain rate of the total value of the deposited collateral. Collateral being deposited above such value shall not be made subject to valuation. Upon application of the upper group limit, it is possible to apply a lower limit for each serial accepted as collateral. For example; let's say that the upper group limit is set as 25% for the stocks. The stocks collateral shall only be valued up to 25% of the total collateral. When we assume that 5% is set as the lower group limit, each stock can be up to 5% of the upper group limit applied collateral value.
- ❖ The amount which we compare with the risk is Total Post-Lower Group Limit Collateral Value.



## Member Screens - Valuation Group-Based Collateral Value

Teminat Değerleme Sonucu [ACA\_TT\_100]

Valuation Date: 03.11.2015 Teminat Değerleme No : 29 - Tüm teminatların değerlendirilmesi - Tamamlandı - 03.11.2015 14:00:59

Marjin Hesabı: BI ACA MJ-TM-M-C Teminat Hesabı: \*\*\* Menkul: \* Değerleme Grubu: \*

Arama

Teminat Bilgisi Risk ve Teminat İzleme Enstrüman Bazında Teminat Değeri Değerleme Grubu Bazında Teminat Değeri

Marjin Hesabı	Değerleme grubu	Kesintili Teminat Değeri (TL)	Üst Grup Limiti Sonrası Teminat Değeri (TL)	Üst Grup Limiti %	Mevcut %	Para Birimi	Alt Grup Limiti Sonrası Teminat Değeri (TL)
BI ACA MJ-TM-M-C	CASH_TRY	10.000,00	10.000,00	100	100,0000	TRY	10.000,00
<b>Total:</b>		<b>10.000,00</b>	<b>10.000,00</b>				<b>10.000,00</b>

- ❖ This screen shows the same results with the Instrument Group-Based Collateral Value. The only difference is that it displays the total in detail based on the valuation group. Other screen provides detail for each deposited instrument. This screen shows the total values on the basis of valuation groups such as stocks, bonds, cash, etc.



## Member Screens - Monitoring Guarantee Fund Results

- ❖ Guarantee Fund results shall be monitored from the **Risk and Collateral Monitoring** screens.
- ❖ In addition, the amount calculated for the Guarantee Fund and the date in which such amount is to be valid shall also be available in the **Margin Details** screen.

Teminat Detay [TT_100]									
Hesap		Menkul		Teminat Tipi					
***		*		*					
Hesap	Harici Hesap Numarası	Menkul	Geçici Nakit Teminat Bakiyesi	Geçici Menkul Kıymet Teminat Bakiyesi	Tutar	Nakit Teminat	Nakit Dışı Teminat	Serbest Metin	Geçerlilik Tarihi
DFEQT	PAYGF	TRYDFMARGIN	0	0	256,698	0	0	0	09.03.2016

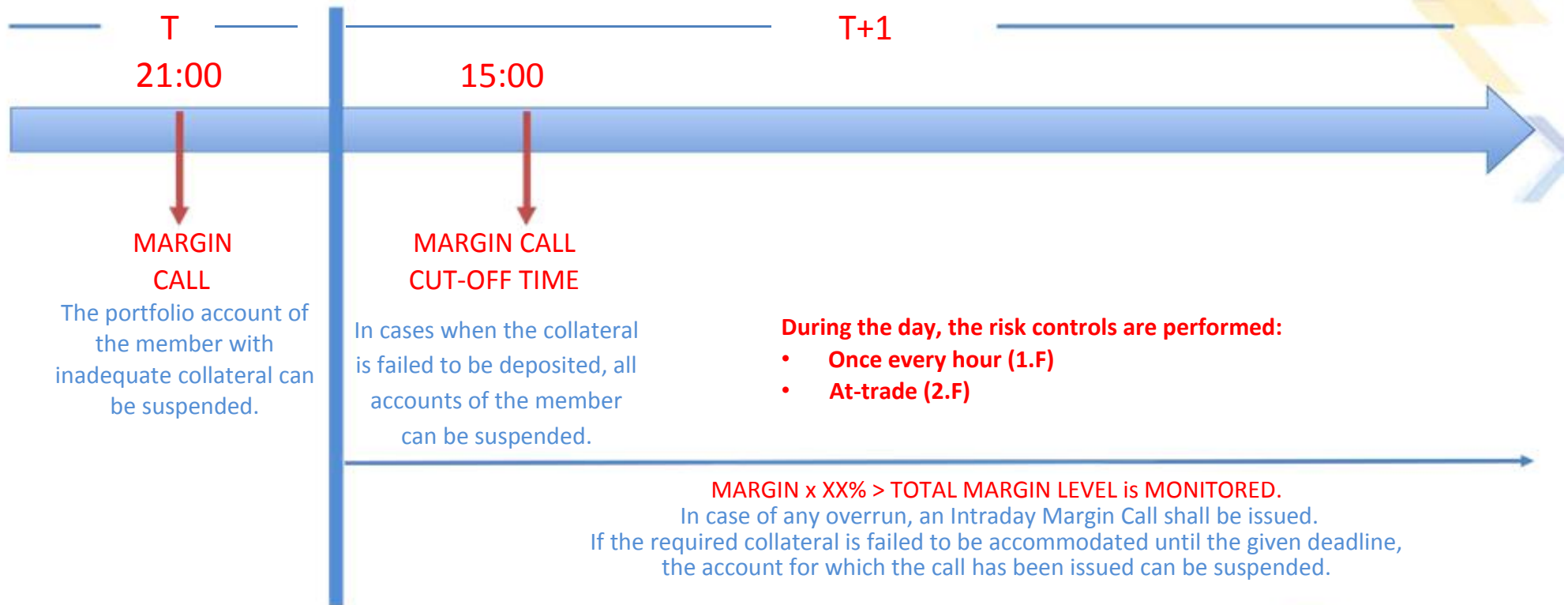
# Presentation Agenda

- ❖ RISK and COLLATERAL MANAGEMENT PROCESS in EQUITY MARKET
  - ❖ Account Structure
  - ❖ End-of-Day Risk Management Applications
  - ❖ Intraday Risk Management Applications
- ❖ BISTECH RISK MANAGEMENT APPLICATIONS
  - ❖ Collateral Calculation Method
  - ❖ Assets Eligible as Collateral and Collateral Valuation Method
  - ❖ Guarantee Fund Calculation
- ❖ TRANSITION TO CENTRAL COUNTERPARTY SERVICE IN EQUITY MARKET
- ❖ MEMBER SCREENS
- ❖ EQUITY MARKET RISK MANAGEMENT PROCESS ILLUSTRATION





## Process Illustration





# THANK YOU

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