GENERAL PRINCIPLES REGARDING ADJUSTMENTS TO SINGLE STOCK FUTURES AND EQUITY OPTIONS DUE TO CORPORATE ACTIONS

1. PURPOSE

In this Circular, general principles regarding adjustments carried out due to corporate action which affects price and/or quantity of the underlying asset to single stock options and futures contracts (PVIOS) traded at Futures and Options Market (VIOP) are established.

2. DEFINITIONS

2.1. Corporate Actions

Corporate Actions refers to events made by company including but not limited to capital increase through rights/bonus issues, dividend payment, consolidation, a spin-off or any other event that may influence the price and/or quantity of the underlying asset.

2.2. Standard Contracts

Standard Contracts refers to the contracts defined in the Article Contracts and Contract Specifications of the VIOP Market Circular and contain standard quantity of stocks.

2.3. Non-standard Contracts

Non-Standard Contracts refers to the contracts contain different quantity of stocks from standard contract size determined for the standard contract. Non-Standard Contracts are quoted with a different contract code in the trading system

2.4. Theoretical Price

In case of corporate actions, the theoretical price is the price calculated by the Index and Data Department to determine lower and upper price limits for the affected stocks.

2.5. Reference Price

The reference price is the price that does not constitute a base for setting the upper and lower price limits at which the stocks can be traded.

2.6. Gross Dividend

Gross dividend refers to net dividend for an ordinary share with 1 TRY nominal value plus income tax (if any).

2.7. Dividend Yield

Dividend Yield refers to the ratio calculated by dividing gross dividends paid per share by the closing price of common stock at the last session. Valuation day is the last trading day prior to the day of the underlying asset's dividend payment adjustments.

2.8. "Ordinary" Stock

Ordinary Stock refers to the stocks issued before the capital increase of the underlying asset and has the right to participate the profits for the previous accounting period.

2.9. "New" Stock

New Stock refers to the stocks issued due to the capital increase of the underlying asset and has not right to participate the profits for the previous accounting period.

2.10. Formulas, Symbols and Abbreviations

SSF : Single Stock Futures
SSO : Single Stock Options
$\mathbf{P_t}$: Theoretical price of the stock calculated after the corporate action
$\mathbf{P_{cum}}$: Theoretical price of the ordinary stock which represents actual capital
$\mathbf{P_{new}}$: Theoretical price of the New stock after corporate action
$\mathbf{P_c}$: Last session's closing price on the trading day before the corporate action
$\mathbf{n_1}$: Bonus issue ratio
$\mathbf{n_2}$: Subscription right use rate
D : Gross dividend
R : Subscription right exercise price for a stock with 1 TRY nominal value
$\mathbf{F_{base}}$: Base price of SSF
$\mathbf{F_{cum}}$: Last trading day's settlement price of SSF before corporate action
$\mathbf{E_{cum}}$: SSO's strike price before corporate action
$\mathbf{E_{ex}}$: SSO's strike price after corporate action
$\mathbf{S_{cum}}$: Contract size before corporate actions (contract multiplier)
$\mathbf{S_{ex}}$: Contract size after corporate actions (contract multiplier)
$\mathbf{V_{cum}}$: Total position value before corporate action
$\mathbf{V_{ex}}$: Total position value after corporate action
AC : Adjustment coefficient
Po : Open positions

AC : P_t / P_c
$\mathbf{P_{base}}$: $F_{cum} \times AC$
$\mathbf{S_{ex}}$: S_{cum} / AC
$\mathbf{V_{cum}}$: $F_{cum} \times S_{cum} \times Po$
$\mathbf{V_{ex}}$: $F_{base} \times S_{ex} \times Po$
$\mathbf{E_{ex}}$: $E_{cum} \times AC$

General Formula: $$P_t = \frac{P_c + (n_2 \text{ x } R) - D}{1 + n_1 + n_2}$$

3. GENERAL PRINCIPLES REGARDING ADJUSTMENTS DUE TO CORPORATE ACTIONS

Parallel with the adjustments made on the price and quantity of the underlying stock regarding corporate action, adjustments shall be made on the available contracts at VIOP of the price, strike price and contract size (contract multiplier) and contract codes. Open interest amounts shall not be adjusted. The purpose of the price, strike price and multiplier adjustments are to reflect changes in price and quantity of the underlying stock in cash market. The purpose of these adjustments is to maintain the open position's value balance before and after the corporate action. Possible differences between open position values in terms of TRY according the open position value figure before corporate action due to rounding shall not be adjusted.

In case the adjustments applied to the underlying due to corporate action, available contracts at VIOP are closed and non-standard contracts are listed for the same maturities. Open positions in closed standard contracts shall be transferred to the new non-standard contracts listed with the new codes. Pending "Good Till Cancel" and "Good Till date" orders for the related contracts shall be cancelled. New standard contracts with adjusted price and contract size of 100 shares shall be listed with a new code. New strike prices and maturities shall not be listed for non-standard contracts.

In case there is no open position and pending order for the non-standard contracts, related contracts shall be closed before maturity date.

In case there is no open position for the PVIOS serial on the last trading day before the corporate action, only prices are adjusted and contract size shall not be adjusted. In this case available standard contracts shall be closed and new standard contracts with new codes shall be listed.

In case new adjustment due to corporate action on the underlying stock of a PVIOS for which capital adjustment shall be made before and standard and non-standard contracts on the relevant underlying are traded is made, open standard and non-standard contracts are closed and new contracts with a different code from the previous non-standard contracts shall be listed. Open position on the closed contracts shall be transferred to the new listed non-standard contracts. Due to corporate action, new standard contracts with standard size and a new code different from the previous standard contract shall be listed. New maturity months and strike prices for non-standard contracts shall not be listed.

Adjusted base and strike prices of the relevant contracts shall be rounded to two decimal places to the nearest price tick and general rounding rules shall be applied. Multiplier shall be determined by rounding the nearest integer according to the general rounding rules. "Adjustment coefficient" used for reflecting the changes in the cash market to the contracts traded at VIOP shall be determined by rounding to eight decimal places to the nearest value.

In case price limits applied to the relevant stock in the cash market shall be abolished due to corporate action, price limits applied to relevant SSF shall be abolished. In this case, reference price calculated at cash market shall be used in relevant adjustments for PVIOS.

In case of cash dividend payment, if dividend yield determined by using closing price on the trading day before the corporate action is more than 10%, adjustment shall be applied to the relevant PVIOS. In this case, adjustments shall be made according to exceeding portion from 10%.

In case dividend payment is made in terms of stock distribution, adjustment shall be carried out by using the formula used for non-cash capital increase. In case dividend is paid in terms of cash and bonus shares, adjustment is determined based on dividend yield for the cash paid portion. Adjustment shall be made according to non-cash capital increase for the stock paid portion. On the other hand, Corporate Action Committee can determine another method except below mentioned methods.

In case "Ordinary" and "New" stocks are traded at the same time for underlying stock due to corporate action, "Ordinary" stocks are taken as underlying asset.

New listed contracts and adjustments to be made shall be announced to the market with a Notice by the Exchange.

Security type based examples regarding corporate actions are listed in the following sections.

3.1. Adjustments Due to Corporate Actions for Single Stock Futures (SSF)

Adjustment examples for SSF in case of a corporate action are mentioned in this section. Contract codes for SSF before corporate action are listed in Table 1:

Table 1: Contract Codes Before/After First Corporate Action Adjustment

Contract Codes Before Corporate Action Adjustment	**Contract Codes After Corporate Action Adjustment**	
F_GARAN0113S0	F_GARAN0113N1	F_GARAN0113S1
F_GARAN0213S0	F_GARAN0213N1	F_GARAN0213S1

Contract codes for the futures contracts on GARAN are F_GARAN0113S0 and F_GARAN0213S0 as listed in Table 1. In case of corporate action such as bonus/rights issue or dividend payment: F_GARAN0113S0 and F_GARAN0213S0 contracts are closed. Open positions on these contracts shall be transferred to the new non-standard contracts F_GARAN0113N1 and F_GARAN0213N1 consequently and new standard contracts with F_GARAN0113S1 and F_GARAN0213S1 contract codes are listed. Base prices of the new standard contracts that will be listed for the first time after the corporate action are the base prices calculated for non-standard contracts.

In case second consecutive corporate action adjustment is applied, contract code examples are given in Table 2:

Table 2: Contract Codes Before/After Second Consecutive Corporate Action Adjustment

Contract Codes Before Second Corporate Action Adjustment		
F_GARAN0113N1	F_GARAN0113S1	
F_GARAN0213N1	F_GARAN0213S1	
Contract Codes After Second Corporate Action Adjustment		
F_GARAN0113N2	F_GARAN0113N3	F_GARAN0113S2
F_GARAN0213N2	F_GARAN0213N3	F_GARAN0213S2

After the first corporate action (before the second corporate action) future contract codes are F_GARAN0113N1, F_GARAN0213N1, F_GARAN0113S1 and F_GARAN0213S1.

In case second corporate action adjustment is applied for GARAN:

F_GARAN0113N1 and F_GARAN0213N1 are closed. Open positions on these contracts are transferred to non-standard contracts F_GARAN0113N2 and F_GARAN0213N2 respectively. On the other hand standard contracts F_GARAN0113S1 and F_GARAN0213S1 are closed and open positions on these contracts are transferred to non-standard contracts F_GARAN0113N3 and F_GARAN0213N3 respectively. Finally new standard contracts F_GARAN0113S2 and F_GARAN0213S2 are listed.

Calculated Adjustment Coefficient is used in all adjustments applied on single stock futures' price and contract size for all open maturities. In the examples below, it is assumed that there is only one future contract on the relevant stock.

3.1.1. Cash Dividend Payment

$$P_t = P_c - D$$

30% (0.30 TRY) dividend payment of Company "A" is started to be made as of April 11, 2012.

"A" stock' closing price is 3.20 TRY at the end of the session on April 10, 2012 and dividend yield for "A" stock is 9.38%. In this case any adjustment shall not be applied on stock future contracts. On the other hand, 50% (0.50 TRY) dividend payment of Company "B" is started to be distributed as of April 11, 2012.

Since, on 10 April 2012 B stock's end of the session's closing price 3.20 TRY and its dividend yield 15.63% is greater than 10% which identified as a critical ratio, the following adjustments shall be applied to the underlying stock of the SSFs:

Dividend amount = 0.50 TRY

Value of %10 dividend yield = 3.20*0.10 = 0.32 TRY

Dividend amount to consider for %10 adjustments = 0.50-0.32 = 0.18 TRY

AC = (3.20-0.32-0.18) / (3.20-0.32) = 0. 93750000

$\mathbf{F_{cum}}$ = 3.42 (Future price before corporate action)
$\mathbf{F_{base}}$ = $F_{cum} \times$ AC
$\mathbf{F_{base}}$ = 3.42 $\times$ 0. 93750000= 3.21

Similarly, contract size shall be adjusted in order not to affect open position values in term of TRY.

$\mathbf{S_{cum}}$ = 100
$\mathbf{S_{ex}}$ = S_{cum} / AC
$\mathbf{S_{ex}}$ = 100 / 0. 93750000 = 106.6666667 (107)

3.1.2. Bonus Issue

$$\mathbf{P_t} = \frac{\mathbf{P_c}}{\mathbf{1 + n_1}}$$

130% bonus issue of Company "B" is started to be made as of May 8, 2012. Closing price of B stock is 2.84 TRY on May 7, 2012 and price of B stock used in theoretical price calculations is 1.23 TRY on May 8, 2012.

$\mathbf{P_c}$ = 2.84

$\mathbf{P_t}$ = $\frac{2.84}{(1+1.3)}$ = 1.23

Adjustment Coefficient (AC) is calculated as dividing price used in theoretical price calculations by Index and Data Department of the Exchange by the closing price on the trading day before the corporate action.

AC = 1.23/2.84 = 0.43309859

SSF's new base price is calculated as multiplying previous day's settlement price by AC and rounding it to the nearest price tick according to the general rules of rounding:

$\mathbf{F_{cum}}$ = 3.42 (Future price before corporate action)
$\mathbf{F_{base}}$ = $F_{cum} \times$ AC
$\mathbf{F_{base}}$= 3.42 $\times$ 0.43309859 = 1.48

Similarly, contract size will be adjusted in order not to affect open position values in term of TRY after adjustment of price from 3.42 TRY to 1.48 TRY.

$\mathbf{S_{cum}}$ = 100
$\mathbf{S_{ex}}$= S_{cum} / AC

$\mathbf{S_{ex}}$ = 100 / 0.43309859 = 230.89431 (231)

On 7 May 2012, total position value of an investor who has 150 open positions in this future contract is calculated as follows:

$\mathbf{Po_{cum}}$= 150
$\mathbf{V_{cum}}$ = **(**S_{cum})*Open Position Amount*Price=$100 \times 150 \times 3.42$=51,300 TRY

On 8 May 2012, investor's 150 positions are transferred to the non-standard contracts which are newly opened and investor's position value is calculated as follows:

$\mathbf{Po_{ex}}$ = 150
$\mathbf{V_{ex}}$ = (S_{ex})*Open Positions*New contract's base price
$\mathbf{V_{ex}}$ = $231 \times 150 \times 1.48$= 51,282 TRY

3.1.3. Rights Issues

$$P_t = \frac{P_c + (n_2 \text{ x } R)}{1 + n_2}$$

100% rights issue of Company "C" is started to be made as of July 19, 2012. Closing price of C stock in spot market is 6.00 TRY at the end of the session on July 18, 2012 and price of B stock used in theoretical price calculations is 3.50 TRY on July 19, 2012.

$\mathbf{P_c}$ = 6.00

$\mathbf{P_{cum}}$ = $\frac{[6.00 + (1 \times 1)]}{(1+1)}$ = 3.50

Adjustment Coefficient (AC) is calculated as dividing price used in theoretical price calculations by Index and Data Department of the Exchange by the closing price on the trading day before the corporate action.

AC = 3.50/6.00 = 0.58333333

SSF's new base price is calculated as multiplying previous day's settlement price by AC and rounding it to the nearest price tick according to the general rules of rounding:

$\mathbf{F_{cum}}$ = 6.20 (Future price before corporate action)
$\mathbf{F_{base}}$ = $F_{cum} \times$ AC
$\mathbf{F_{base}}$ = 6.20 $\times$ 0.58333333 = 3.62 TRY

Similarly, contract size will be adjusted as follows in order not to affect open position values in term of TRY after adjustment of price from 6.20 TRY to 3.62 TRY:

$\mathbf{S_{cum}}$ = 100
$\mathbf{S_{ex}}$ = S_{cum} / AC
$\mathbf{S_{ex}}$ = 100 / 0.58333333 = 171.42857 (171)

On 18 July 2012, total position value of an investor who has 150 open positions in this future contract is calculated as follows:

Po_{cum}= 150
V_{cum} = (S_{cum}) * Open Positions* Price=$100 \times 150 \times 6.20$= 93,000 TRY

On 19 July 2012, investor's 150 open positions are transferred to the non-standard contracts which are newly opened and investor's open position value is calculated as follows:

Po_{ex} = 150
V_{ex} = (S_{ex})*Open Positions*New contract's base price
V_{ex} =$171 \times 150 \times 3.62$= 92,853 TRY

3.1.4. Bonus and Rights Issue

$$P_t = \frac{P_c + (n_2 \text{ x } R)}{1 + n_1 + n_2}$$

%50 Bonus issue and 100% rights issue of Company "D" is started to be made as of July 19, 2012. Closing price of D stock in cash market is 4.82 TRY on July 18, 2012 and price of stock D used in theoretical price calculations is 2.33 TRY on July 19, 2012.

P_c = 4.82

P_t = $\frac{[4.82 + (1 \times 1)]}{(1 + 1 + 0.5)}$ = 2.33

Adjustment Coefficient (AC) is calculated as dividing price used in theoretical price calculations by Index and Data Department of the Exchange by the closing price on the trading day before the corporate action:

AC = 2.33/4.82 = 0.48340249

SSF's new base price is calculated by multiplying the previous day's settlement price by AC and rounding it to the nearest price tick according to the general rules of rounding:

F_{cum} = 5.10 (Future price before corporate action)
F_{base} = $F_{cum} \times$ AC
F_{base} = $5.10 \times$ 0.48340249 = 2.47 TRY

Similarly, contract size will be adjusted as follows in order not to affect open position values in term of TRY after adjustment of price from 5.10 TRY to 2.47 TRY:

S_{cum} = 100
S_{ex} = S_{cum} / AC
S_{ex} = 100 / 0.48340249 = 206.86695 (207)

On 18 July 2012, total position value of an investor who has 150 positions in this future contract is calculated as follows:

$\mathbf{Po_{cum}}$= 150
$\mathbf{V_{cum}}$ = (S_{cum}) * Open Positions* Price=100 × 150 × 5.10= 76,500 TRY

On 19 July 2012, investor's 150 positions are transferred to the non-standard contracts which are newly opened and investor's open position value is calculated as follows:

$\mathbf{Po_{ex}}$ = 150
$\mathbf{V_{ex}}$ = ($\mathbf{S}_{ex}$)*Open Positions*New contract's base price
$\mathbf{V_{ex}}$ =207 × 150 × 2.47= 76,693 TRY

3.1.5. Capital Decrease

$$P_t = \frac{(\text{Number of stocks before capital decrease X } P_c \text{ before capital decrease})}{\text{Number of stocks after capital decrease}}$$

20% capital decrease of Company "D" is started to be made as of July 19, 2012. Closing price of D stock in cash market is 4.84 TRY on July 18, 2012 and price of D stock used in theoretical price calculations is 6.05 TRY on July 19, 2012.

$\mathbf{P_c}$ = 4.84

$$\mathbf{P_t} = \frac{[4.84 \times 1)]}{(1-0{,}2)} = 6.05$$

Adjustment Coefficient (AC) is calculated as dividing price used in theoretical price calculations by Index and Data Department of the Exchange by the closing price on the trading day before the corporate action:

AC = 6.05/4.84 = 1.25

SSF's new base price is calculated by multiplying the previous day's settlement price by AC and rounding it to the nearest price tick according to the general rules of rounding:

$\mathbf{F_{cum}}$ = 5.10 (Future price before corporate action)
$\mathbf{F_{base}}$ = F_{cum} × AC
$\mathbf{F_{base}}$ = 5.10 × 1.25 = 6.38 TRY

Similarly, contract size will be adjusted as follows in order not to affect open position values in term of TRY after adjustment of price from 5.10 TRY to 6.38 TRY:

$\mathbf{S_{cum}}$ = 100
$\mathbf{S_{ex}}$ = S_{cum} / AC
$\mathbf{S_{ex}}$ = 100 / 1.25 = 80

On 18 July 2012, total position value of an investor who has 150 positions in this future contract is calculated as follows:

$\mathbf{Po_{cum}}$= 150
$\mathbf{V_{cum}}$ = (S_{cum}) * Open Positions* Price=100 × 150 × 5.10= 76,500 TRY

On 19 July 2012, investor's 150 positions are transferred to the non-standard contracts which are newly opened and investor's open position value is calculated as follows:

$\mathbf{Po_{ex}} = 150$
$\mathbf{V_{ex}} = (\mathbf{S}_{ex})$*Open Positions*New contract's base price
$\mathbf{V_{ex}} = 80 \times 150 \times 6.38 = 76{,}560$ TRY

3.2. Adjustments Due to Corporate Actions for Single Stock Options (SSO)

Adjustment examples for SSO in case of a corporate action are mentioned in this section.

Contract codes for standard (S0) call and put options on AKBNK with 02/13 maturity and 6.75 strike price before corporate action are listed in Table 3.

Table 3: Contract Codes Before/After First Corporate Action Adjustment

Before Adjustment	After Adjustment	
O_AKBNK A 0213 C 6.75 S0 O_AKBNK A 0213 P 6.75 S0	AKBNK A 0213 C 3.78 N1 AKBNK A 0213 P 3.78 N1	AKBNK A 0213 C 3.75 S1 AKBNK A 0213 P 3.75 S1

Contract codes for American type standard (S0) call and put options on AKBNK with 02/13 maturity and 6.75 strike price before corporate action are O_AKBNKA0213C6.75S0 and O_AKBNKA0213P6.75S0 as listed in Table 3.

In case of corporate action such as bonus/rights issue or dividend payment;

Standard (S0) contracts are closed. Open positions on these contracts shall be transferred to the newly opened non-standard (N1) contracts; new standard contracts (S1) are listed. Contract codes for standard (S1) call and put options on AKBNK with 02/13 maturity and 3.75 strike price after corporate action shall be O_AKBNKA0213C3.75S1 and O_AKBNKA0213P3.75S1 and contract codes for non-standard contracts (N1) with 02/13 maturity and adjusted 3.78 strike price shall be O_AKBNKA0213C3.78N1 and O_AKBNKA0213P3.78N1 as listed in Table 3.

In case second consecutive corporate action adjustment is applied, contract code examples are given in Table 4.

Table 4: Contract Codes After Second Consecutive Corporate Action Adjustment

After Adjustment		
O_AKBNK A 0213 C 2.86 N2	O_AKBNK A 0213 C 2.83 N3	O_AKBNK A 0213 C 3.00 S2
O_AKBNK A 0213 P 2.86 N2	O_AKBNK A 0213 P 2.83 N3	O_AKBNK A 0213 P 3.00 S2

In case of second corporate action such as bonus/rights ıssue or dividend payment for AKBNK;

Non-standard (N1) contracts O_AKBNKA0213C3.78N1 and O_AKBNKA0213P3.78N1 are closed. Open positions on these contracts are transferred to non-standard (N2) contracts O_AKBNKA0213C2.86N2 and O_AKBNKA0213P2.86N2 respectively. On the other hand, standard contracts (S1) O_AKBNKA0213C3.75S1 and O_AKBNKA0213P3.75S1 are closed and open positions on these contracts are transferred to non-standard contracts (N3) O_AKBNKA0213C2.83N3 and O_AKBNKA0213P2.83N3 respectively. Finally, new standard contracts (S2) O_AKBNKA0213C3.00S2 and O_AKBNKA0213P3.00S2 are listed.

Examples in the sections below, it is assumed that subscription right is used for 1 TRY on a stock whose nominal value is 1 TRY. In case subscription right at a premium, subscription right cost in the formula below should take into account as (R).

Calculated Adjustment Coefficient is used in all adjustments applied on single stock options' strike price and contract size for all open maturities. In the examples below, it is assumed that there is only one option contract on the relevant stock.

3.2.1. Cash Dividend Payment

$$\mathrm{P}_{\mathrm{t}} = P_{\mathrm{c}} - D$$

30% (0.30 TRY) dividend payment of Company "A" is started to be made as of April 11, 2012.

"A" stock' closing price is 3.20 TRY on April 10, 2012 and dividend yield for "A" stock is 9.38%. In this case any adjustment shall not be applied on stock option contracts.

On the other hand, 50% (0.50 TRY) dividend payment of Company "B" is started to be made as of April 11, 2012.

Since, on 10 April 2012 B stock's closing price 3.20 TL and its dividend yield 15.63% is greater than 10% which is defined as the critical ratio, the following adjustments shall be applied to the underlying asset SSOs:

Dividend amount = 0.50 TRY

Value of %10 dividend yield = 3.20*0.10=0.32 TRY

Dividend amount to consider for %10 adjustments = 0.50-0.32=0.18 TRY

AC = (3.20-0.32-0.18) / (3.20-0.32) = 0. 93750000

New strike price for call option on B stock is equal to Adjustment Coefficient (AC) times previous strike price:

$\mathbf{E_{cum}}$ = 3.00
$\mathbf{E_{ex}} = \mathbf{E_{cum}} \times$ AC
$\mathbf{E_{ex}}$ =3.00 ×0. 93750000 =2.81 (2.8125 rounded to two decimal places.)

Contract size shall be adjusted in order not to affect open position values in term of TRY.

S_{cum} = 100
S_{ex} = S_{cum} / AC
S_{ex} = 100 / 0. 9375000 = 106. 6666667 (107)

3.2.2. Bonus Issue

$$P_t = \frac{P_c}{1 + n_1}$$

130% bonus issue of Company "B" is started to be made as of May 10, 2012. Closing price of B stock is 2.84 TRY on May 9, 2012 and price of B stock used in theoretical price calculations is 1.23 TRY on May 10, 2012.

P_c = 2.84

$$P_t = \frac{2.84}{(1 + 1.3)} = 1.23$$

Adjustment Coefficient (AC) is calculated as dividing price used in theoretical price calculations by Index and Data Department of the Exchange by the closing price on the trading day before the corporate action.

AC = 1.23 / 2.84 = 0.43309859

New strike price for call option on B stock is equal to Adjustment Coefficient (AC) times previous strike price:

E_{cum} = 3.00
E_{ex} = **E_{cum}** × AC

E_{ex} = 3.00 × 0.43309859 = 1.30 (1.29929577 rounded to two decimal places)

Similarly, contract size will be adjusted in order not to affect open position values in term of TRY after adjustment of strike price from 3.00 TRY to 1.30 TRY.

S_{cum} = 100
S_{ex} = S_{cum} / AC
S_{ex} = 100 / 0.43309859 = 231 (230.89431 rounded to the nearest integer.)

3.2.3. Rights Issue

$$P_t = \frac{P_c + (n_2 \text{ x } R)}{1 + n_2}$$

100% rights issue of Company "C" is started to be made as of May 10, 2012. Closing price of C stock in spot market is 6.00 TRY on May 9, 2012 and price of B stock used in theoretical price calculations is 3.50 TRY on May 10, 2012.

$\mathbf{P_{lst}} = 6.00$

$$\mathbf{P_t} = \frac{[6.00 + (1 \times 1)]}{(1 + 1)} = 3.50$$

Adjustment Coefficient (AC) is calculated as dividing price used in theoretical price calculations by Index and Data Department of the Exchange by the closing price on the trading day before the corporate action.

AC = 3.50 / 6.00 = 0.58333333

New strike price for call option on C stock is equal to Adjustment Coefficient (AC) times previous strike price:

$\mathbf{E_{cum}} = 5.75$
$\mathbf{E_{ex}} = \mathbf{E_{cum}} \times AC$
$\mathbf{E_{ex}} = 5.75 \times 0.58333333 = 3.35$ (3.35416664 rounded to two decimal places.)

Similarly, contract size will be adjusted as follows in order not to affect open position values in term of TRY after adjustment of strike price from 5.75 TRY to 3.35 TRY:

$\mathbf{S_{cum}} = 100$
$\mathbf{S_{ex}} = S_{cum} / AC$
$\mathbf{S_{ex}} = 100 / 0.58333333 = 171$ **(**171.42857 rounded to the nearest integer.)

3.2.4. Bonus and Rights Issue

$$P_t = \frac{P_c + (n_2 \text{ x } R)}{1 + n_1 + n_2}$$

%50 Bonus issue and 100% rights issue of Company "D" is started to be made as of May 10, 2012. Closing price of D stock in cash market is 4.82 TRY on May 9, 2012 and price of D stock used in theoretical price calculations is 2.33 TRY on May 10, 2012.

$\mathbf{P_{lst}} = 4.82$

$$\mathbf{P_t} = \frac{[4.82 + (1 \times 1)]}{(1 + 1 + 0.5)} = 2.33$$

Adjustment Coefficient (AC) is calculated as dividing price used in theoretical price calculations by Index and Data Department of the Exchange by the closing price on the trading day before the corporate action.

AC = 2.33 / 4.82 = 0.48340249

New strike price for call option on D stock is equal to Adjustment Coefficient (AC) times previous strike price:

$\mathbf{E_{cum}} = 5.00$
$\mathbf{E_{ex}} = E_{cum} \times AC$
$\mathbf{E_{ex}} = 5.00 \times 0.48340249 = 2.42$ (2.41701245 rounded to two decimal places.)

Similarly, contract size will be adjusted as follows in order not to affect open position values in term of TRY after adjustment of strike price from 5.00 TRY to 2.42 TRY:

$\mathbf{S_{cum}} = 100$
$\mathbf{S_{ex}} = S_{cum} / AC$
$\mathbf{S_{ex}} = 100 / 0.48340249 = 207$ (206.86695 rounded to the nearest integer.)

3.2.5. Capital Decrease

$$P_t = \frac{(\text{Number of stocks before capital decrease } X\ P_c \text{ before capital decrease})}{\text{Number of stocks after capital decrease}}$$

20% capital decrease of Company "D" is started to be made as of July 19, 2012. Closing price of D stock in spot market is 4.84 TRY on July 18, 2012 and price of D stock used in theoretical price calculations is 6.05 TRY on July 19, 2012.

$\mathbf{P_c} = 4.84$

$$\mathbf{P_t} = \frac{[4.84 \times 1)]}{(1-0,2)} = 6.05$$

Adjustment Coefficient (AC) is calculated as dividing price used in theoretical price calculations by Index and Data Department of the Exchange by the closing price on the trading day before the corporate action.

$\mathbf{AC} = 6.05/4.84 = 1.25$

New strike price for call option on D stock is equal to Adjustment Coefficient (AC) times previous strike price:

$\mathbf{E_{cum}} = 4.75$
$\mathbf{E_{ex}} = E_{cum} \times AC$
$\mathbf{E_{ex}} = 4.75 \times 1.25 = 5.94$ (5.9375 rounded to two decimal places.)

Similarly, contract size will be adjusted as follows in order not to affect open position values in term of TRY after adjustment of strike price from 4.75 TRY to 5.94 TRY:

$\mathbf{S_{cum}} = 100$
$\mathbf{S_{ex}} = S_{cum} / AC$
$\mathbf{S_{ex}} = 100 / 1.25 = 80$

4. ADJUSTMENTS REGARDING OTHER CORPORATE ACTIONS

In cases not defined by the provisions of this Circular, adjustment on price and contract size of PVIOS are applied as defined in the article regarding the functioning of the Corporate Actions Committee at the VIOP Market Circular and announced by the Exchange.