Resolution No. 77/16

of the KDPW_CCP S.A. Management Board

dated 27 December 2016

amending the Detailed Rules of the OTC Clearing System

Pursuant to § 3 subpara. 2, 4 and 8 of the Rules of Transaction Clearing (Non-organised Trading) and § 19 subpara. 2 of the Statute of KDPW_CCP S.A., the KDPW_CCP S.A. Management Board resolves as follows:

§ 1

Appendix 1, 1a and 6-9 to the Detailed Rules of the OTC Clearing System attached to Resolution No. 21/16 of the KDPW_CCP S.A. Management Board dated 17 August 2016 shall be replaced by Appendix 1-6 of this Resolution, respectively.

§ 2

This Resolution shall come into force on 10 January 2017.

Sławomir Panasiuk	Michał Stępniewski
Vice President	Member
of the Management Board	of the Management Board

Appendix No. 1 to the Resolution No. 77/16
of the Management Board of KDPW_CCP S.A.
dated 27 December 2016

Appendix 1 to the Detailed Rules of the OTC Clearing System

I. Forward Rate Agreement (FRA)

1. Description of the transaction

In a FRA, the counterparties set the interest rate to apply in the future to a specific amount arising from a transaction, expressed in a given currency, for a predefined period. The FRA settlement amount is the difference between the amount of interest calculated at the FRA rate and the amount of interest calculated at the reference rate.

2. Detailed terms of the transaction

Underlying instrument	WIBOR interest rate	EURIBOR Interest rate
FRA rate	R_{FRA}; fixed interest rate set by counterparties at trade execution date (t_0)	
Nominal value	Any	
Currency	PLN	EUR
Trade date	Any business day	
FRA settlement date/ FRA start date	Day t_1, which is the deposit period start date as well as the FRA settlement date	Day t_1, which is the deposit period start date as well as the FRA settlement date
FRA end date	Day t2, which is the deposit period end date not later than the novation date + spot + 24M, set according to the convention defined in the terms of the transaction.	Day t2, which is the deposit period end date not later than the novation date + spot + 36M, set according to the convention defined in the terms of the transaction.
Reference rate	WIBOR: 1M, 3M, or 6M	EURIBOR: 1M, 3M, or 6M

Fixing date	Reference rate fixing day, which is two business days before the FRA settlement date t_1.
FRA settlement amount	Set at settlement date according to the formula: $$W = \frac{[R_r - R_{FRA}] \times N \times yf(t_1; t_2)}{1 + R_r \times yf(t_1; t_2)}$$ where: R_r – reference rate R_{FRA} – FRA rate N – contract nominal value $yf(t_1; t_2)$ – part of the year determined according to the interest base defined in the contract If $R_r - R_{FRA} >= 0$, then: - the counterparty with a long position is credited with the settlement amount and the counterparty with a short position is debited with the settlement amount. If $R_r - R_{FRA} < 0$, then: - the counterparty with a long position is debited with the settlement amount and the counterparty with a short position is credited with the settlement amount.

3. Other terms of the transaction

Furthermore, the terms of the transaction may specify the amount of additional cash payments at specific future dates.

The other terms of the transaction, including the terms of valuation, are set according to the Clearing Rules and the Detailed Rules of the OTC Clearing System.

II. Interest Rate Swap (IRS)

1. Description of the transaction

In an IRS, the counterparties agree to exchange a series of interest payments calculated for an agreed nominal amount and for a specified period but calculated on different terms.

One counterparty to IRS agrees to pay for a predefined period interest on the nominal amount arising from the transaction calculated at a predefined fixed rate. In the same period, the other counterparty agrees to pay interest on the same amount calculated at a floating rate. Both payment streams have the same currency.

2. Detailed terms of the transaction

Underlying instrument	WIBOR interest rate	EURIBOR Interest rate
IRS rate	$R_{IRS,n;}$ interest rate set by counterparties at trade execution date (t_0), for interest period n: fixed or floating according to the defined schedule	
Nominal value	Fixed or floating according to a schedule	
Currency	PLN	EUR
Trade date	Any business day	
Maturity / IRS end date	t_m; End date of the last interest period not later than the novation date +spot+3Y - contracts with underlying WIBOR1M; novation date +spot+20Y- contracts with underlying WIBOR3M and WIBOR6M; set according to the convention defined in the terms of the transaction.	t_m; End date of the last interest period not later than the novation date+spot+50Y, set according to the convention defined in the terms of the transaction.

Interest payment date	Fixed and/or floating interest payment date set according to the convention defined in the terms of the transaction.	
Floating rate margin	Amount added to the floating rate, fixed or floating according to the defined schedule	
Floating rate in the first interest period	R_1; fixed interest rate for the first interest period for the floating rate, if set.	
Fixing date	Floating reference rate fixing date, which is two business days before the floating interest period start date.	
Reference rate	WIBOR: 1M, 3M, or 6M	EURIBOR: 1M, 3M, or 6M
Settlement amount	At interest payment date, for the fixed rate – the counterparty which pays the fixed rate is debited with the settlement amount and the counterparty which receives the fixed rate is credited with the settlement amount: $W_n = N_n \times R_{IRS,n} \times yf(tp_{s,n}; tk_{s,n})$ At interest payment date, for the floating rate – the counterparty which pays the floating rate is debited with the settlement amount and the counterparty which receives the floating rate is credited with the settlement amount: $W_n = N_n \times R_n \times yf(tp_{z,n}; tk_{z,n})$ where: $R_{IRS,n}$ – IRS rate in period n R_n– floating reference rate in the n-th period plus floating rate margin in the period N_n – contract nominal value in period n n – interest period index $tp_{s,n}$ – start date of n-th fixed rate interest period, set according to the convention defined in the terms of the transaction $tk_{s,n}$ – end date of n-th fixed rate interest period, set according to the convention defined in the terms of the transaction $yf(tp_n; tk_n)$ – part of the year determined according to the interest base defined in the contract $tp_{z,n}$ – start date of n-th floating rate interest period, set according to the convention defined in the terms of the transaction $tk_{z,n}$ – end date of n-th floating rate interest period, set according to the convention defined in the terms of the transaction	

	Payments of both legs at the same date are settled in the net amount.

3. Other terms of the transaction

Furthermore, the terms of the transaction may specify the amount of additional cash payments at specific future dates.

The other terms of the transaction, including the terms of valuation, are set according to the Clearing Rules and the Detailed Rules of the OTC Clearing System.

III. Overnight Index Swap (OIS)

1. Description of the transaction

In an OIS, the counterparties agree to exchange periodic interest payments calculated for an agreed nominal amount and for specified periods but calculated on different terms.

One counterparty agrees, for the term of the agreement, to pay the amount of interest on the nominal amount calculated at a predefined fixed interest rate; the other counterparty agrees to pay the amount of interest on the nominal amount calculated by compounding daily floating interest rates in annual interest periods. Both payment streams have the same currency.

2. Detailed terms of the transaction

Underlying instrument	POLONIA interest rate	EONIA interest rate
OIS rate	R_{OIS}; fixed interest rate set by counterparties at trade execution date (t_0)	
Nominal value	Any	
Currency	PLN	EUR
Trade date	Any business day	
Contract start date	t_1, date set according to the convention defined in the terms of the transaction.	t_1, date set according to the convention defined in the terms of the transaction.
Maturity	t_2, date not later than the novation date + spot +1Y, set according to the convention defined in the terms of the transaction.	t_2, date not later than the novation date + spot +30Y, set according to the convention defined in the terms of the transaction.
Reference rate	OIS_i; POLONIA interest rate	OIS_i; EONIA interest rate
Fixing date	Reference rate fixing date; every business day	

Settlement date	For transactions with maturities up to 1 year, settlement at t_2+1, set according to the convention defined in the terms of the transaction. For transactions with longer maturities, settlement at the end of defined interest periods.
Settlement amount	For the fixed leg, set at settlement date according to the formula: $$W_{s,n} = N \times R_{OIS} \times yf(tp_{s,n}; tk_{s,n})$$ where: $W_{s,n}$ – settlement amount for the fixed leg in the n-th interest period R_{OIS} – OIS fixed rate N – transaction nominal value yf – year fraction according to the convention set in the terms of the transaction $tp_{s,n}$ – start date of the n-th interest period for the fixed rate according to the convention set in the terms of the transaction $tk_{s,n}$ – end date of the n-th interest period for the fixed rate according to the convention set in the terms of the transaction For the floating leg, set at settlement date according to the formula: $$R_{z,n} = \left(\prod_{i=1}^{K} (1 + OIS_{i-1} \times yf(t_{i-1}; t_i) - 1) \right) / yf\left(tp_{z,n}; tk_{z,n}\right)$$ $$W_{z,n} = N \times R_{z,n} \times yf\left(tp_{z,n}; tk_{z,n}\right)$$ where: OIS_i – reference rate for i-th day of the contract $R_{z,n}$ – floating rate for interest period n rounded off to four decimal places N – contract nominal value i – POLONIA/EONIA rate fixing date index K – number of business days in interest period n yf – year fraction according to the convention set in the terms of the transaction $tp_{z,n}$ – start date of the n-th interest period for the floating rate according to the convention set in the terms of the transaction $tk_{z,n}$ – end date of the n-th interest period for the floating rate according to the convention set in the terms of the transaction

	Payments of both legs at the same date are settled in the net amount.

3. Other terms of the transaction

Furthermore, the terms of the transaction may specify the amount of additional cash payments at specific future dates.

The other terms of the transaction, including the terms of valuation, are set according to the Clearing Rules and the Detailed Rules of the OTC Clearing System.

IV. Basis Swap

1. Description of the transaction

In a Basis Swap, the counterparties agree to exchange a series of interest payments calculated for an agreed nominal amount and for a specified period but calculated on different terms.
One counterparty agrees to pay within the term of the contract interest on the nominal amount of the swap calculated at one reference rate. In the same period, the other counterparty agrees to pay interest on the same amount calculated at another reference rate. Both payment streams have the same currency.

2. Detailed terms of the transaction

Underlying instrument	WIBOR interest rate	EURIBOR interest rate
Nominal value	Fixed or floating according to a schedule	
Currency	PLN	EUR
Trade date	Any business day	
Maturity / Transaction end date	t_m; End date of the last interest period, set according to the convention defined in the terms of the transaction, not later than the novation date +spot +3Y - contracts with underlying WIBOR1M vs WIBOR3M and WIBOR1M vs WIBOR6M; novation date +spot +20Y - contracts with underlying WIBOR3M vs WIBOR6M.	t_m; End date of the last interest period set according to the convention defined in the terms of the transaction, not later than the novation date +spot+50Y
Reference rate A, B	WIBOR: 1M, 3M, or 6M	EURIBOR: 1M, 3M, or 6M
Rate A/B margin	Margin on rate A/B, fixed or floating according to the defined schedule	
A/B fixing date	A/B reference rate fixing date, which is two business days before the interest period start date.	
Start date of n-th interest period	Start date of the A or B reference rate interest period ($tp_{A,n}$ or $tp_{B,n}$ respectively), set according to the convention defined in the terms of the transaction.	
End date of n-th interest period	End date of the A or B reference rate interest period (tkA,n or tkB,n respectively), set according to the convention defined in the terms of the transaction.	

Interest payment date	Interest payment date
Settlement amount	At interest payment date, for rate A – the counterparty which receives rate A is credited with the settlement amount and the counterparty which pays rate A is debited with the settlement amount: $$WA_n = N_n \times R_{A,n} \times yf\,(tp_{A,n}; tk_{A,n})$$ At interest payment date, for rate B – the counterparty which receives rate B is credited with the settlement amount and the counterparty which pays rate B is debited with the settlement amount: $$WB_n = N_n \times R_{B,n} \times yf\,(tp_{B,n}; tk_{B,n})$$ where: $R_{A,n}$ – reference rate A in period n plus margin A in the period N_n – contract nominal value in n-th period n – interest period index $tp_{A,n}$ – start date of n-th interest period for reference rate A, set according to the convention defined in the terms of the transaction $tk_{A,n}$ – end date of n-th interest period for reference rate A, set according to the convention defined in the terms of the transaction yf – part of the year set according to the convention defined in the terms of the transaction $R_{B,n}$ – reference rate B in period n plus margin B in the period $tp_{B,n}$ – start date of n-th interest period for reference rate B, set according to the convention defined in the terms of the transaction $tk_{B,n}$ – end date of n-th interest period for reference rate B, set according to the convention defined in the terms of the transaction Payments of both legs at the same date are settled in the net amount.

3. Other terms of the transaction

Furthermore, the terms of the transaction may specify the amount of additional cash payments at specific future dates.
The other terms of the transaction, including the terms of valuation, are set according to the Clearing Rules and the Detailed Rules of the OTC Clearing System.

Appendix No. 2 to the Resolution No. 77/16
of the Management Board of KDPW_CCP S.A.
dated 27 December 2016

Appendix 1a to the Detailed Rules of the OTC Clearing System

Sell transaction

1. Description of the transaction

In a sell transaction between two counterparties, the seller agrees to transfer rights in Treasury bonds to the buyer and the buyer agrees to pay the agreed purchase price of the bonds to the seller.

2. Detailed terms of the transaction

Instrument	Treasury bonds
Type of bonds	The list of acceptable securities is published by KDPW_CCP on its website.
Designations of operation codes for sell transaction	Operation type: TR Market code: OC Trading mode: ZG
Currency	PLN,
Trade date	Any BondSpot SA session day
Settlement date	Date set in the instruction
Quantity of securities	Quantity of securities set in the instruction
Sale value	Settlement amount set in the instruction
Settlement mode	DVP settlement: at settlement date, the seller receives the settlement amount and the buyer receives the securities.

3. Other terms of the transaction

The other terms of the transaction, including the terms of valuation, are set according to the Clearing Rules and the Detailed Rules of the OTC Clearing System. The rules of valuation of a repo transaction are set out in Appendix 6.

Appendix No. 3 to the Resolution No. 77/16
of the Management Board of KDPW_CCP S.A.
dated 27 December 2016

Appendix 6 to the Detailed Rules of the OTC Clearing System

Margin Calculation Methodology and Derivatives, Repo and Sell Transactions Valuation Methodology

1 Overview

This Appendix presents the valuation formulas for interest rate derivatives and repo transactions implemented in the KDPW_OTC system, as well as the calculation algorithms used to determine the yield curve and to calculate historically simulated value at risk.

2 Valuation formulas for different types of financial instruments

2.1 Definitions

The valuation of a transaction is performed in the currency of the contract.

The definitions of symbols used in the valuation formulas are presented below.

$r_{t,Z}$	is the rate for curve Z at date t
df_t	is the discount factor for a discount curve at date t
$df_{Z,t}$	is the discount factor at date t for curve Z consistent with the instrument tenor
znak	is the counterparty sign, possible values: 1 or -1
N	is the contract nominal amount
r_{FRA}	is the FRA rate
$t(d_1, d_2)$	is the year fraction between date d_1 and d_2, calculated according to the relevant convention
eff	is the instrument effective date or coupon start date
mat	is the instrument maturity date or coupon end date

2.2 FRA valuation

FRAs are agreements where the counterparties determine the interest rate to be used at a future date for a specific amount in the transaction currency for a determined period. The FRA value is determined differently before and after the reference rate is set.

The value is determined as follows:

- before the reference rate is set:

$$PV_{FRA} = znak\ N\ [df_{eff} - \left(1 + r_{FRA}\ t(eff, mat)\right) df_{eff}\ \frac{df_{Z,mat}}{df_{Z,eff}}]$$

- after the reference rate is set:

$$PV_{FRA} = znak \frac{(r_{fixing} - r_{FRA}) N \; t\,(eff,mat)}{1 + r_{fixing}\; t(eff,mat)} \; df_{eff}$$

2.3 IRS valuation

Interest Rate Swaps is an agreement to exchange interest rate periodic and are made up of two interest cash flows. One counterparty pays interest calculated at a fixed interest rate (fixed leg) and receives interest calculated at a floating rate (floating leg); the other counterparty does the opposite. The contract value is the difference between the valuation of the received leg and the valuation of the paid leg. The valuation of each IRS leg is presented below.

- Fixed leg valuation:

$$PV_{fixed}(t) = \sum_{j:mat(j)>t}^{M_{fixed}} r_{IRS,j}\; N_j\; t(eff(j), mat(j))\; df_j$$

where:

M_{fixed} - is the number of interest periods of the fixed leg

N_j - nominal amount of the contract in interest period *j*

$r_{IRS,j}$ - contractual IRS rate in interest period *j*

- Floating leg valuation:

$$PV_{float}(t) = \sum_{j:mat(j)>t}^{M_{float}} N_j \left(r_j + m_j\right) t\;(eff(j), mat(j))\; df_j$$

$$r_j = \begin{cases} r_{t_{;refix_j},index} & t_{refix_j} \le t \\ r_{j,\propto} & t_{refix_j} > t \end{cases}$$

where:

$r_{j,\alpha}$	is the rate at date *j* for curve α, where *j* = 0 (first coupon cash flow) the rate may be set explicitly without an input rate
$r_{t_{;refix_j},index}$	observed index rate on day t_{refix_j}
M_{float}	is the number of interest periods of the floating leg
m_j	is the additive margin (spread) in interest period *j*

2.4 Basis Swap valuation

Basis Swaps are a type of interest rate swaps for which both parties pay interest at a different floating rate. The contract value is the difference between the valuation of the received leg and the valuation of the paid leg. The valuation of each leg is presented below.

$$PV_A(t) = \sum_{j:mat(j)>t}^{T} N_j\left(r_{j.A} + m_{A,j}\right)\, t(eff(j), mat(j))\; df_j$$

$$PV_B(t) = \sum_{j:mat(j)>t}^{T} N_j\left(r_{j,B} + m_{B,j}\right)\, t\left(eff(j), mat(j)\right)\; df_j$$

where:

$$r_j = \begin{cases} r_{t_{refix_j},index} & t_{refix_j} \le t \\ r_{j,\propto} & t_{refix_j} > t \end{cases}$$

$r_{t_{;refix_j},index}$ the index rate observed on day t_{refix_j} $index$ rate index for a given floating leg

$r_{j,\propto}$ is the rate at date *j* for curve ∝, where *j* = 0 it is the rate which may be determined for the first cash flow

T is the number of interest periods

$\mathrm{m_{A,j}}, \mathrm{m_{B,i}}$ is the additive margin (spread) in the interest period

2.5 OIS valuation

OIS are fixed to floating interest rate swaps where the floating leg is indexed to the overnight rate (POLONIA rate in Poland, EONIA in EUR currency). OIS swap two cash flows: a fixed leg which is a one-off cash flow of interest set at a fixed rate determined in the contract for a specific nominal amount, and a floating leg which is a one-off cash flow of interest compounded over every day set at an overnight rate for a specific nominal amount. The settlement amount is the absolute value of the difference between the two legs. The valuation of each leg is presented below.

$$PV_{fixed} = \sum_{j:mat(j)>t}^{T} N\; r_{OIS}\, t(eff(j), mat(j))\; df_{OIS,j}$$

where:

r_{OIS} - set fixed rate of the contract

$$PV_{float}(t) = NR'\, t\,(eff, mat) df_{OIS,mat}$$

$$R' = int(R * 10^4 + 0{,}5)/10^4$$

$$R = \left(\prod_{i=1}^{T}(1 + r_i\, t(eff(i), mat(i))) - 1\right)/t\ (eff, mat)$$

where:

T is the number of interest periods in the term of the contract,

$$r_i = \begin{cases} r_{i,index} + s & i \leq t \\ r_{i,OIS} + s & i > t \end{cases}$$

$r_{i,index}$ observed the index rate at day i

$r_{i,OIS}$ OIS curve rate at the start date of interest period i

s is the additive margin (spread)

R is the effective interest rate

R' is the effective interest rate rounded off to four decimal places

2.6 Valuation of additional cash flows

If there are additional cash flows under the terms of the transaction, their valuation is determined as follows:

$$NPV_{fee} = \sum_{i=1}^{k} znak\ F_i df_i$$

where:

k - number of additional cash flows

F_i - amount of *i*-th cash flow

$znak$ - 1 if the additional cash flow is to be received or -1 if the additional cash flow is to be paid

2.7 Valuation of repo transactions

The contract value before the settlement of the first leg is calculated as follows:

$$PV = znak\ (N_{Bonds}\ MarketPrice(t) df_{spot} - GrossAmount1\ df_{t1})$$
$$- znak\ \left(N_{Bonds}\ MarketPrice(t) df_{spot} - GrossAmount2\ df_{t2}\right)$$

where:

N_{Bonds} is the transaction volume

$t1$ is the settlement date of the first leg

$t2$ is the settlement date of the second leg

$GrossAmount1$ is the settlement amount of the first leg

$GrossAmount2$ is the settlement amount of the second leg

$MarketPrice\ (t)$	is the settlement price of bonds on day t (including interest accrued since the last coupon payment date)
df_{spot}	discount factor from day t+2 to current date
df_{t2}	discount factor from day t2 to current date
$znak$	constant equal to -1 for the repo counterparty and 1 for the reverse repo counterparty

The contract value after the settlement of the first leg is calculated as follows:

$$PV = -znak\left(N_{Bonds}\ MarketPrice(t)df_{spot} - GrossAmount2df_{t2}\right)$$

2.8 Valuation of sell transactions

$$PV = znak\left(N_{Bonds}\ MarketPrice(t)df_{spot} - GrossAmountdf_{t}\right)$$

$znak$	constant equal to -1 for the seller and 1 for the buyer
$GrossAmount$	sell transaction settlement amount
df_t	discount factor from day t to current date

3 Determining the yield curve

Yield curve generation is an essential step in the valuation of interest rate products. The curve represents the relationship between the interest rate and time for a specific currency.
Yield curves are implied from market observable interest rate instruments (input rates).
The yield curve is made up of a term structure of observable input interest rates of different maturities r_t and the resultant zero coupon discount factors df_t implied by the input rates at time *t*.
Each term structure groups input rates with a common asset, tenor and currency but of different maturities.
Discount factors are derived from the CASH, FRA, IRS and OIS observable input rates using the bootstrapping method. Discount factors between intermediary points are derived using the loglinear interpolation method.

3.1 Definitions

df_t	is the discount factor at time t
r_t	is the input rate with maturity at time t
$t(d1, d2)$	is the year fraction between date $d1$ and $d2$

3.2 Curve bootstrapping

Discount factors are implied from input rates iteratively in order of maturity. The initial discount factor is derived first for the shortest maturity. Each next discount factor is derived from previously established values.

3.3 Curve generation for Cash and FRA inputs

3.3.1 Calculation of initial discount factor

The first step of curve generation is to derive the initial discount factor df_{on}. It is derived from the overnight rate r_{on} as follows:

$$df_{on} = \frac{1}{1 + r_{on} t(0, on)}$$

3.3.2 Calculation of remaining discount factors

The remaining discount factors are calculated in order of maturity (from the shortest to the longest) as follows:

$$df_{mat(i)} = \left(\frac{1}{1 + r_i \, t\big(eff(i), mat(i)\big)} \right) df_{eff(i)}$$

where:

$eff(i)$ is the effective date of instrument i

$mat(i)$ is the maturity date of instrument i

If $df_{eff(i)}$ is unknown, it is interpolated from the two nearest discount factors.

3.4 Curve generation for IRS inputs

The system supports two methods to derive the discount factor df_t, from an input swap rate r_t:
FIXEDLEG – the final fixed coupon is derived from all known fixed coupons for the swap
FLOATLEG – the final floating coupon is derived from all known fixed coupons and floating coupons for the swap.

3.4.1 FIXEDLEG method

The final fixed cash flow is derived from all previous known fixed cash flows as follows:
For each input rate $r_{s\,(N,t)}$, the zero coupon rate for period t must be derived:

r_s is the input rate for swap s

N is the number of coupons paid annually

t is the tenor in years

In order to derive this rate, the theoretical price of a bond is calculated as the present value of the cash flows to be received in the future. As the par rate is used the present value of the future coupon payments and the nominal amount is equal to 1.

$$1 = \frac{\big(r_{s(N,t)} t\big(eff(1), mat(1)\big) df_1\big) + \big(r_{s(N,t)} t\big(eff(2), mat(2)\big) df_2\big) + \cdots + \big(1 + r_{s\,(N,t)} t(eff(n), mat(n)\,)) df_n\big)}{df_{eff(s)}}$$

where:

$df_{eff(s)}$ is the discount factor on the effective date of swap s

$eff(n)$ is the effective date of coupon n

$mat(n)$ is the maturity date of coupon n

This can be rearranged as:

$$df_n = \frac{1 - \frac{r_{s(N,t)}}{df_{eff(s)}} \sum_{i=1}^{n-1} \mathrm{t}\big(eff(i), mat(i)\big) df_i}{\Big(1 + r_{s(N,t)} t\big(eff(n), mat(n)\big)\Big)} df_{eff(s)}$$

This enables us to solve for df_n from the known fixed coupons.

3.4.2 FLOATLEG method

The FLOATLEG approach derives the final floating coupon from a combination of all known fixed and floating coupons. The fixed coupons are derived from the discount curve, and the floating coupons are derived from a combination of the discount curve and the forward curve.
The FLOATLEG bootstrap approach uses the following methodology.
For a par swap, the NPV of the fixed leg equals the NPV of the floating leg.

$$\sum_{i=1}^{n_{fix}} r_{s(N,t)}\, \mathrm{df_{i,D}}\, t\big(eff(i), mat(i)\big) = \sum_{i=1}^{n_{float}} r_i\ \mathrm{df_{i,D}}\, t\big(eff(i), mat(i)\big)$$

where:

r_i is the forward rate for floating coupon i

$\mathrm{df_{i,D}}$ is the discount factor from discounting curve D for end day of coupon i

Rearranging the above enables us to solve for the forward rate of the final floating coupon:

$$r_{n_{float}}\, df_{n_{float},D}\ t\Big(eff\big(n_{float}\big), mat\big(n_{float}\big)\Big) = \sum_{i=1}^{n_{fixed}} r_{s(N,t)}\, \mathrm{df_{i,D}}\, t\big(eff(i), mat(i)\big) - \sum_{i=1}^{n_{float-1}} r_i\, \mathrm{df_{i,D}}\, t\big(eff(i), mat(i)\big)$$

The final discount factor can be derived from the implied forward rate as follows:

$$df_{n_{float},F} = \frac{df_{n_{float}-1,F}}{r_{n_{float}}\, t\Big(eff\big(n_{float}\big), mat\big(n_{float}\big)\Big) + 1}$$

where:

$df_{n_{float},F}$ is the discount factor from curve F for end date of coupon n_{float}

The discount factors $df_{n,D}$ are derived from the discount curve D using the FIXEDLEG method described in section 3.4.1. The discount factors $df_{n,F}$ for curve F are derived iteratively using the above approach.

3.4.3 Swap rate interpolation

When the curve is bootstrapped, discount factors for more than one cash flow may be unknown. Interpolation is required in order to derive the unknown cash flows. KDPW_CCP determines the unknown swap rates through cubic spline interpolation.

3.5 Interpolation methods

KDPW_CCP system derives missing discount factors using the loglinear interpolation method.

3.6 Exceptions

In certain cases, curve inputs are not available due to lack of liquidity or for other reasons. Bootstrapping issues can also occur during the yield curve calculation process. This section describes common exceptions and how they are handled by the KDPW_CCP system.

3.6.1 First curve input effective date later than business date

If the first curve input effective date is after the business date, then both the effective date discount factor df_{eff} and the maturity date discount factor df_{mat} are unknown.
In that case, KDPW_CCP approximates them as follows:

- First, an approximate discount factor $df_{\sim mat}$ is calculated:

$$df_{\sim mat} = \frac{1}{1 + (r_t \; t(0, mat))}$$

df_{eff} can then be interpolated:

$$df_{eff} = 1 - (1 - df_{\sim mat}) \; \frac{t(0, eff)}{t(0\,, mat)}$$

- Finally, df_{mat} can be derived in the same manner as other curve input points:

$$df_{mat} = \left(\frac{1}{\left(1 + \left(r_t \; t(eff, mat)\right)\right)} \right) df_{eff}$$

3.6.2 Second curve input effective date later than business date

If the effective date of the second curve input is later than the business date, both $df_{eff(2)}$ and $df_{mat(2)}$ will be unknown for this curve input (unless the effective date for this curve input is the same as the maturity date of the first curve input).

Approximation is required to derive either $df_{eff(2)}$ or $df_{mat(2)}$. The KDPW_CCP system extrapolates $df_{\sim eff(2)}$ from the first discount factor as follows:

$$df_{\sim eff(2)} = 1 - \left(1 - df_{mat(1)}\right) \frac{t(0, eff(2))}{t(0, mat(1))}$$

$df_{mat(2)}$ can then be derived in the same manner as other curve input points using $df_{\sim eff(2)}$.

3.6.3 Multiple curve inputs mature on the same date

If multiple curve input points have the same maturity date, KDPW_CCP chooses one curve input only. Precedence is given to CASH rates over FRAs, and FRAs over Swaps.

4 Calculating the required initial margin

The required initial margin is equal to the value of HVaR (i.e. VaR calculated using historic scenarios) for a given account while applying the following parameters:

- holding period
- confidence level
- decay rate
- number of historical events (time horizon)
- method used to calculate rates for VaR scenarios

4.1 Overview

KDPW_CCP performs a Value at Risk (HVaR) calculation. The model calculates a potential Profit / Loss (PL) based on historical market movements within the set time horizon. Statistical analysis of the P&L sample space is then used.

Calculation of margins (and other risk measures, if any) is a three-step process:

- generate scenarios from the market history;
- price the portfolio using each of the generated historical scenarios;
- calculate quantile values.

4.2 Scenario generation

The HVaR model generates market scenarios based on historical market movements over a specified date range, from today to a specified date in the past.

Scenarios are generated in the date range:

$(t - N)$ to (t)

where:

t is the current business day

N is the number of the historical observation period

Each scenario *i* is defined as the vector of *n* market inputs that impact the value of the portfolio.

For interest rates, KDPW_CCP calculates δ_i using the additive movement which includes scaling of the portfolio holding period:

$$\delta_i = r_t + \sqrt{l}\,(r_{i+1} - r_i)$$

and for fx rates it uses the multiplicative movement:

$$\delta_i = \max(0, r_t(1 + \left(\frac{r_{i+1}}{r_i} - 1\right)\sqrt{l})).$$

4.3 Valuation under scenarios

The portfolio is valued as at today's business date for each scenario using the historical market inputs.

This results in the following vector *V* of potential loss:

$$V = \begin{bmatrix} \sum_{c=1}^{Y}\left(MtM_{1,c} - MtM_{t,c}\right)ExR_{1,c} \\ \sum_{c=1}^{Y}\left(MtM_{2,c} - MtM_{t,c}\right)ExR_{2,c} \\ \dots \\ \sum_{c=1}^{Y}\left(tM_{N,c} - MtM_{t,c}\right)ExR_{N,c} \end{bmatrix}$$

where:

N	is the number of scenarios,
$MtM_{i,c}$	is the hypothetical value of the portfolio of transactions in currency *c* in scenario *i* in the range 1 to N,
$MtM_{t,c}$	is the mark to market of the portfolio of transactions in currency *c*,
$ExR_{i,c}$	is the fx rate under scenario *i*, used to convert the value of the portfolio in currency *c* to PLN.

Given a portfolio of *m* trades, the potential PV_i is calculated in PLN as:

$$MtM_{i,c} = \sum_{j=1}^{m} f\left(T_{j,c}, s_{i,c}\right)$$

where:

f	is the function which returns the valuation of transaction T_j in currency *c* in scenario s_i
$T_{j,c}$	is the j-th trade in currency *c* in the portfolio
$s_{i,c}$	is scenario *i* for currency *c*

4.4 Calculating the margin

In its statistical analysis of a sample of potential Profit / Loss values, KDPW_CCP assumes that scenarios used in the portfolio valuation are assigned equal weights (each scenario has equal probability).

When calculating percentiles, vector values are ordered from lowest (largest loss) to highest (largest profit). Given *N* ranked valued from the sector *V*, the rank *x* L for target percentile *P* is calculated as:

$$x = \frac{P}{100}(N-1)+1$$

Then splitting *n* into its integer *k* and decimal component *d*, such that $x = k + d$, we calculate the percentile value P (v_P) as:

$$v_P = \begin{cases} v_1, & x = 1 \\ v_N, & x = N \\ v_k + d(v_{k+1} - v_k), & 1 < x < N \end{cases}$$

The value V_p is the required level of initial margin.

5 Definition of projection curves and discount curves

5.1 Projection curves

5.1.1 1M curve

	PLN	**EUR**
1M	WIBOR	EURIBOR
2M	FRA 1x2	IRS 2m1s
3M	FRA 2x3	IRS 3m1s
6M	IRS 6m1s	IRS 6m1s
9M		IRS 9m1s
1Y	IRS 1y1s	IRS 1y1s
2Y	IRS 2y1s	IRS 2y1s
3Y	IRS 3y1s	IRS 3y1s
4Y		IRS 4y1s
5Y		IRS 5y1s
6Y		IRS 6y1s
7Y		IRS 7y1s
8Y		IRS 8y1s
9Y		IRS 9y1s

10Y		IRS 10y1s
12Y		IRS 12y1s
15Y		IRS 15y1s
20Y		IRS 20y1s
30Y		IRS 30y1s
50Y		IRS 50y1s

5.1.2 3M curve

	PLN	**EUR**
3M	WIBOR	EURIBOR
4M	FRA 1x4	FRA 1x4
5M	FRA 2x5	FRA 2x5
6M	FRA 3x6	FRA 3x6
7M	FRA 4x7	FRA 4x7
8M	FRA 5x8	FRA 5x8
9M	FRA 6x9	FRA 6x9
10M	FRA 7x10	FRA 7x10
11M	FRA 8x11	FRA 8x11
1Y	FRA 9x12	FRA 9x12
15M	FRA 12x15	FRA 12x15
18M	FRA 15x18	FRA 15x18/IRS 18m3s
21M	FRA 18x21	FRA 18x21
2Y	FRA 21x24	FRA 21x24/IRS 2y3s
3Y	IRS 3y3s	IRS 3y3s
4Y	IRS 4y3s	IRS 4y3s
5Y	IRS 5y3s	IRS 5y3s
6Y	IRS 6y3s	IRS 6y3s
7Y	IRS 7y3s	IRS 7y3s
8Y	IRS 8y3s	IRS 8y3s
9Y	IRS 9y3s	IRS 9y3s

10Y	IRS 10y3s	IRS 10y3s
12Y	IRS 12y3s	IRS 12y3s
15Y	IRS 15y3s	IRS 15y3s
20Y	IRS 20y3s	IRS 20y3s
30Y		IRS 30y3s
40Y		IRS 40y3s
50Y		IRS 50y3s

5.13 6M curve

	PLN	**EUR**
6M	WIBOR	EURIBOR
7M	FRA 1x7	FRA 1x7
8M	FRA 2x8	FRA 2x8
9M	FRA 3x9	FRA 3x9
10M	FRA 4x10	FRA 4x10
11M	FRA 5x11	FRA 5x11
1Y	FRA 6x12	FRA 6x12
18M	FRA 12x18	FRA 12x18
2Y	FRA 18x24	FRA 18x24
3Y	IRS 3y6s	IRS 3y6s
4Y	IRS 4y6s	IRS 4y6s
5Y	IRS 5y6s	IRS 5y6s
6Y	IRS 6y6s	IRS 6y6s
7Y	IRS 7y6s	IRS 7y6s
8Y	IRS 8y6s	IRS 8y6s

9Y	IRS 9y6s	IRS 9y6s
10Y	IRS 10y6s	IRS 10y6s
12Y	IRS 12y6s	IRS 12y6s
15Y	IRS 15y6s	IRS 15y6s
20Y	IRS 20y6s	IRS 20y6s
30Y		IRS 30y6s
40Y		IRS 40y6s
50Y		IRS 50y6s

5.1.4 OIS curve

	PLN	**EUR**
O/N	POLONIA (index)	EONIA
1W	OIS 1W	OIS 1W
2W	OIS 2W	OIS 2W
3W	OIS 3W	OIS 3W
1M	OIS 1M	OIS 1M
3M	OIS 3M	OIS 3M
6M	OIS 6M	OIS 6M
9M	OIS 9M	OIS 9M
1Y	OIS 1Y	OIS 1Y
15M		OIS 15M
18M		OIS 18M
21M		OIS 21M
2Y		OIS 2 Y
3Y		OIS 3Y

4Y		OIS 4Y
5Y		OIS 5Y
6Y		OIS 6Y
7Y		OIS 7Y
8Y		OIS 8Y
9Y		OIS 9Y
10Y		OIS 10Y
15Y		OIS 15Y
20Y		OIS 20Y
30Y		OIS30Y
50Y		OIS 50Y

5.2 Discount rate curves

5.2.1 PLN curve

O/N	POLONIA (index)
1W	OIS 1W
2W	OIS 2W
3W	OIS 3W
1M	OIS 1M
3M	OIS 3M
6M	OIS 6M
9M	OIS 9M
1Y	OIS 1Y
2Y	IRS 2y1s
3Y	IRS 3y1s
4Y	IRS 4y3s

5Y	IRS 5y3s
6Y	IRS 6y3s
7Y	IRS 7y3s
8Y	IRS 8y3s
9Y	IRS 9y3s
10Y	IRS 10y3s
12Y	IRS 12y3s
15Y	IRS 15y3s
20Y	IRS 20y3s

5.2.2 EUR curve

The EUR discount curve is the OIS EUR curve described in point 5.1.4.

6 Sources of market data

Sources of market data for respective types of data include:

1) WIBOR (index) – fixing organised by ACI Polska – the Polish Financial Markets Association,
2) POLONIA (index) - fixing organised by ACI Polska – the Polish Financial Markets Association,
3) FRA, IRS, OIS (PLN) - fixing organised by ACI Polska – the Polish Financial Markets Association and, if not published, other available quotation rates,
4) EURIBOR (index) – European Money Market Institute,
5) EONIA (index) - European Money Market Institute,
6) FRA, IRS, OIS (EUR) – based on quotes of contributors.

Market data will be downloaded from the Thomson Reuters or Bloomberg news service.

In determining market value, KDPW_CCP uses in the first place data available from the Bloomberg service. If on a given day R when valuation is performed the quality of the data from the Bloomberg service is low in the opinion of KDPW_CCP or their availability is limited, KDPW_CCP acting to ensure the safety of transaction clearing may:

1) use data provided by Thomson Reuters in whole or in part, or
2) determine relevant rates taking into account market data provided by both services.

Appendix No. 4 to the Resolution No. 77/16
of the Management Board of KDPW_CCP S.A.
dated 27 December 2016

Appendix 7 to the Detailed Rules of the OTC Clearing System

Detailed rules of calculating collateral limits

Collateral limits referred to in § 1 subpara. 18 of the Clearing Rules and § 20 subpara. 1 and 1a of the Detailed Rules of the OTC Clearing System and referred to in § 1 subpara. 19 of the Clearing Rules are calculated as follows:

1. Collateral limit

The collateral limit is equal to the recognised margins deposited by a participant for own positions and client positions, registered in own and client clearing accounts maintained by KDPW_CCP for the participant to which collateral accounts are assigned, whereby collateral deposited for clients' positions is recognised up to the requirement calculated for the positions while collateral deposited for the participant's own positions is recognised in the amount deposited by the participant. The participant's collateral limit is calculated according to the following formula.

Figure 1. Collateral limit (CL)

$$CL = \sum_{PB\ Client} min(IMR_{PB}, Coll_{PB}) + Coll_{House}$$

where:

IMR_{PB}– margin requirement for account PB calculated according to the following formula:

$$IMR_{PB} = max(IM_{PB} + OutMtM_{PB} + SAdj_{PB}, 0)$$

where:

$\mathrm{IM_{PB}}$ – initial margin calculated for the collateral account PB

$OutMtM_{PB}$ – value of transactions accepted for clearing today, registered in the clearing account assigned to account PB, or value of transactions concluded as a result of closing of positions on demand or automatic closing of positions calculated for the clearing account assigned to account PB

$SAdj_{PB}$ – adjusting amount determined for the clearing account assigned to account PB, resulting from accepted quotes of a participant taking part in automatic closing of positions or closing of positions on demand

$Coll_{PB}$ – recognised value of collateral in account PB

$Coll_{House}$ – recognised value of collateral in participant's own account PB

Available collateral limit

The available collateral limit for a participant is the difference between the collateral limit and the sum of the margin requirements. A negative figure stands for a collateral limit overrun (deficit).

Figure 2. Available collateral limit (AL)

$$AL = CL - \sum_{PB} IMR_{PB}$$

Collateral limit utilisation is reported to participants in a Participant Notification message.

2. Credit limit

The credit limit is equal to the collateral limit.
Credit limit utilisation is reported to participants in a Participant Notification message.

3. Individual limit for a clearing account and a collateral account

Participants may set margin limits for each client clearing account and collateral account.
Clearing account (PA) and collateral account (PB) limits may be:
- for information only, or
- binding.

If a limit for information only is exceeded, the transaction is accepted and the limit overrun is reported to the participant in a Participant Notification.
If a binding limit for the account is exceeded, the transaction is not accepted for clearing. The limit overrun and the suspension of the acceptance of the transaction is reported to the participant in a Participant Notification.

Appendix No. 5 to the Resolution No. 77/16
of the Management Board of KDPW_CCP S.A.
dated 27 December 2016

Appendix 8 to the Detailed Rules of the OTC Clearing System

Processing automatic closing of positions

Automatic closing of positions applies in case of clearing member default.

1. Preparing the auction

In case of default, KDPW_CCP sends an AuctionNotification message to clearing members. The message notifies the clearing members of the planned automatic closing of positions of a clearing member including the planned timing, the type and the tenor of instruments.
Next, clearing members are notified of auction details in an AuctionDetail message which includes:

1) start and end time and results of the auction;
2) auction style (Vickrey, standard);
3) segments (portfolios) including:
   a) number of units in the portfolio;
   b) minimum number of units to be quoted by the clearing member;
   c) unit description (details of trades in each unit).

KDPW_CCP sets the minimum number of units to be quoted by the clearing member on the basis of KDPW_CCP exposure generated by the clearing member.
The minimum number of units is the total number of units in the segment times an augmenting parameter set by KDPW_CCP times the contribution of the clearing member to the Guarantee Fund to the sum of contributions to the Guarantee Fund. The augmenting parameter is set by KDPW_CCP in a Management Board Resolution.

2. Giving quotes

In a process triggered by clearing member default, it is mandatory to send a quote separately for each segment within the auction. Otherwise, quotes are optional. Quotes are sent in an AuctionQuoteRequest message.
The clearing member's AuctionQuoteRequest message specifies:

1) auction number;
2) segment number;
3) number of quoted units and quoted prices.

The clearing member may send multiple price quotes in an AuctionQuoteRequest message together with a number of units specified individually for each quote.
The total number of units in a portfolio to be closed quoted by the clearing member cannot be greater than the maximum or lower than the minimum number of units set by KDPW_CCP in the AuctionDetail message.
The quote sent by the clearing member in the AuctionQuoteRequest message is subject to a check. If the quote does not meet the KDPW_CCP requirements, the clearing member receives an AuctionError message which specifies errors. If the quote is correct, the clearing member receives an AuctionError message which specifies no errors, which means that KDPW_CCP has received a correct quote.

If the clearing member receives an AuctionError message which specifies errors, the clearing member must resend the AuctionQuoteRequest message with a correct quote.
If the clearing member quotes an insufficient number of units in the portfolio, KDPW_CCP reserves the right to use the quote.
The clearing member may resend a quote until the auction timeout. A resent quote replaces a preceding quote.
If no quote is received until timeout, the AuctionTimeout is sent to notify of the auction timeout.

3. Setting the price and selecting participants to take over positions

Where the clearing member submits multiple price quotes for units to be taken over, KDPW_CCP first uses the best quote. KDPW_CCP may use a quote in part.
Trades on auction are taken over by the clearing member at a rate notified by KDPW_CCP in an AuctionDetail message. The next KDPW_CCP netting session performs marking to market including the current market rates (under general rules) and settlement of the amount based on quotes accepted by KDPW_CCP.
The price at which units are taken over depends on auction style. For a standard auction, the price at which units are taken over is equal to the price quoted by the clearing member. For a Vickrey auction, the price of all units is set at the price of the least favourable unit accepted by KDPW_CCP from all clearing members. After the auction closes, the clearing members receive an AuctionResult message which specifies the accepted number of quoted units of the portfolio and their prices.
After quotes are accepted, trades resulting from quoted units of the portfolio are registered in the accounts of the relevant clearing member.

4. Confirmation of a trade

A ParticipantNotification message is generated for the clearing member to confirm that trades on auction have been accepted for clearing in KDPW_CCP. ParticipantNotification and AuctionResult messages are confirmations sent to the clearing members. Such trades are not reflected in confirmation platforms.

Appendix No. 6 to the Resolution No. 77/16
of the Management Board of KDPW_CCP S.A.
dated 27 December 2016

Appendix 9 to the Detailed Rules of the OTC Clearing System

Processing the closing of positions on demand

1. Processing the closing of positions on demand

Processing the closing of positions on demand of a clearing member, referred to in § 90 - § 95 of the Rules of Transaction Clearing (Non-organised Trading), requires the clearing member to send an OnDemandTerminationRequest message to the KDPW_CCP clearing system and KDPW_CCP to match parties to trade for the opposite position in the automatic closing of positions process.

The OnDemandTerminationRequest message requires the specification of key parameters necessary to identify the positions to be closed and to determine the opposite positions. The parameters are included in the OnDemandTerminationRequest message structure described in the document kdpw_otc Message Structure published on the KDPW_CCP website.

On receipt of the message, KDPW_CCP checks the formal conditions necessary to start the processing of closing of positions on demand. The first check is to verify whether the clearing member requesting automatic termination has a relevant flag set up for the clearing account in the kdpw_otc IT system necessary to perform automatic termination in the account in which the trades to be terminated are registered. Otherwise, the position closing request will be rejected at the stage of validation of the received OnDemandTerminationRequest message. The next check is to verify whether the specified positions are registered in the designated clearing account.

On receipt of the message requesting the closing of positions, KDPW_CCP checks the collateral maintained in the accounts of the clearing member against margins required for the closing on demand to be executed. If the check indicates that the margins required after closing exceed the available collateral, then closing of positions on demand cannot be executed.

KDPW_CCP confirms either acceptance or rejection of the request to close positions by sending an OnDemandTerminationResponse message to the clearing member who initiated the process. In case of acceptance, the requestAccepted field of the sent message is completed with the value “true”.

The clearing member may send an OnDemandTerminationRequest message to the kdpw_otc system by 16:00h on any business day on which a clearing session is held.

Closing on demand cannot be executed where:

1) the request is received too late to be finalised by the end of day;
2) automatic closing of positions due to default of another clearing member or request of another clearing member is being executed at the same time;
3) there is a high probability of default of another clearing member.

When accepting a request to start the process of closing positions on demand, KDPW_CCP sets the following parameters:

1) auction style and timing;
2) number of units in the portfolio;
3) additionally generated portfolios (to prevent the identification of the actual portfolio on auction).

If KDPW_CCP confirms acceptance of the position closing request, the other clearing members are notified of the initiated process of automatic closing of positions.

1.1 Starting the process of automatic closing of positions

Initiation of a process of automatic closing of positions is notified in an AuctionDetail message sent by KDPW_CCP to the clearing members participating in the process of closing positions on demand. The message contains basic information about the position portfolios including:

1) specification of positions being closed;
2) auction timeout;
3) auction style (Vickrey, standard).

A detailed description of this stage of the process is presented in Appendix 8 to the Detailed Rules of the OTC Clearing System "Processing automatic closing of positions".

1.2 Sending individual trade prices for opposite positions by clearing members to KDPW_CCP

In response to the AuctionDetail message, the clearing members send an AuctionQuoteRequest message to KDPW_CCP. The message includes necessary information of the price quoted for the trade for the opposite position. In the next step, KDPW_CCP select the best quote.

In the processing of closing of positions on demand, KDPW_CCP does not require the clearing members to present quotes for a specific minimum number of units.

1.2.1 Setting the price of quoted trades

The rules of setting prices for trades quoted by the clearing members participating in the process of automatic closing of positions are set out in Appendix 8 to the Detailed Rules of the OTC Clearing System "Processing automatic closing of positions".

1.2.2 Calculating collateral required from clearing members participating in the process of closing positions on demand

Successful processing of closing of positions on demand requires the participating clearing members, including both the initiating clearing member and the clearing members quoting trades for opposite positions, to maintain required collateral in their accounts. If the auction would cause required margins to exceed the deposited collateral, the closing cannot be executed. If the overrun affects the clearing member initiating the process, the process is terminated and the positions cannot be closed. If the overrun affects a clearing member taking over positions, that member is excluded from among the clearing members quoting the positions. In that case, the system reallocates units disregarding the clearing member excluded from the process.

1.3 Ending the process of closing positions on demand

On receipt of quotations from other clearing members, KDPW_CCP immediately presents a price quote of closing the position in an OnDemandTerminationResult message. On receipt of the message, the requesting clearing member may close the position. The clearing member requesting the closing of positions should accept the terms of the quoted closing trade within a specific time limit after receipt of quoted prices by sending an OnDemandTerminationAcceptance message. If no confirmation is received within the time limit, KDPW_CCP considers the quote to be rejected by the

clearing member. The quoted trade price presented to the clearing member requesting the closing of positions is the best quote received by KDPW_CCP from the clearing members responding to the position closing request. KDPW_CCP notifies all clearing members of the result of the auction (acceptance or rejection of their quotes). If a quote is accepted by the clearing member, a position opposite to the position being closed in registered in the member's account to be netted during the netting session and to be cancelled together with the opposite position. Positions are cancelled on FIFO basis, whereby trades in the portfolio which meet the netting requirements are cancelled in the same order that they were registered in the member's account.

The position being closed in registered in the account of the clearing member whose quote has been accepted. The accepted quoted price is considered as an adjustment amount in the calculation of credits and debits in the evening clearing session. As a result of the closing of positions on demand, the opposite position is registered and cancelled in the account of the clearing member who initiated the process.