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Resolution No. 50/25

of the KDPW_CCP S.A. Management Board

dated 8 December 2025

amending the Detailed Rules of Transaction Clearing (organised trading)

Pursuant to § 2(1), (3) and (5) of the Rules of Transaction Clearing (organised trading) and § 19(2) of the Statute of KDPW_CCP S.A., the Management Board of KDPW_CCP S.A. hereby resolves as follows:

§ 1

Appendix 3 "Calculating Margins for the Cash Market, Repo and Negotiated Loans (Share and Bond Positions)" to the Detailed Rules of Transaction Clearing (organised trading) shall be replaced by the appendix hereto.

§ 2

This Resolution shall come into force on 22 December 2025.

Maciej Trybuchowski
President of the Management Board

Marcin Truchanowicz
Member of the Management Board

Appendix to Resolution No. 50/25
of the KDPW_CCP S.A. Management Board
dated 8 December 2025

Appendix 3 to the KDPW_CCP Detailed Rules of Transaction Clearing (organised trading)

CALCULATING MARGINS FOR THE CASH MARKET, REPO AND NEGOTIATED LOANS (SHARE AND BOND POSITIONS)

1. Definitions

Whenever these provisions refer to:
1) liquidity class – this shall mean all series of securities, other than derivatives, with a similar risk profile;
2) duration class – this shall mean all series of non-equity securities, within the meaning of Article 4 point 10 of the Law on Public Offerings and Conditions Governing the Introduction of Financial Instruments to Organised Trading and Public Companies of 29 July 2005 (Dz. U. (Journal of Laws) of 2020, item 2080), with similar modified life spans and the same ratings class defined by KDPW_CCP, with similar risk profiles;
3) portfolio – this shall mean a set of positions arising from concluded transactions, which have not yet been settled, with the same clearing account identifier;
4) cc – this shall mean the liquidity class identifier;
5) k – this shall mean the portfolio identifier.
6) reference price – this shall mean a price equal to the current reference price determined by GPW; for bonds, the current market price increased by accrued interest at day t+2; for instruments listed in a currency, the reference price is expressed in PLN at the average exchange rate published by the National Bank of Poland.

2. Methodology for calculating margins in the cash market, repo and negotiated loans

Margins are calculated using SPAN® methodology.
KDPW_CCP calculates the value of the SPAN® margin for each portfolio for the assumed confidence ratio, within the assumed liquidation period, determined using correlated positions within the portfolio.
The margin is calculated daily starting from the date of the execution of the transaction, until the settlement date.

3. Calculating risk for shares

The algorithm used to assign instruments to a given liquidity class takes into account the following:

- the average liquidity of the instrument,
- the instrument type.

3.1. Calculating the total net position in the portfolio (CPN)

The value of the positions in the portfolio in a given instrument is calculated by multiplying the net number of instruments by the reference price. Adding together the sum total of values for positions in

each instrument in a given class and multiplying them by the exchange rate of the listing currency gives the value of purchase positions (PK) and sell positions (PS).
The total net position in the portfolio (*CPN*) is calculated by liquidity class and expresses an absolute value which is the difference between the total of purchase and sale positions.

$$CPN_{k,cc} = \left|PK_{k,cc} - PS_{k,cc}\right|$$

3.2. Calculating the total gross position in the portfolio (CPB)

The total gross position in the portfolio (*CPB*) is calculated by liquidity class and corresponds to the total value of purchase and sale positions multiplied by the exchange rate of the listing currency.

$$CPB_{k,cc} = PK_{k,cc} + PS_{k,cc}$$

3.3. Calculating the margin for intermediate risk (DPLR)

The margin for intermediate risk (*DPLR*) is calculated as the sum of the margin for market risk (*DRR*) and the margin for specific risk (*DRS*).

$$DPLR_{k,cc} = DRR_{k.cc} + DRS_{k,cc}$$

3.3.1. Calculating the margin for market risk (DRR)

Market risk is understood to mean the risk of price variation of financial instruments within a given liquidity class. In order to calculate the margin for the value of margin risk, the parameter y_{cc} is used, which defines the level of market risk for a given liquidity class.

The margin for market risk (*DRR*) is calculated by multiplying the total net position of the portfolio (*CPN*) by the level of market risk (y_{cc}).

$$DRR_{k.cc} = y_{cc} \times \left|PK_{k,cc} - PS_{k,cc}\right|$$

3.3.2. Calculating the margin for specific risk (DRS)

Specific risk includes the variation risk inherent in a given liquidity class and the price volatility of a given financial instrument. The parameter x_{cc} is used to calculate the margin for the value of specific risk, which defines the level of specific risk for a given liquidity class.
The margin for specific risk is calculated by multiplying the total gross position of the portfolio (*CPB*) by the parameter x_{cc}

$$DRS_{k,cc} = x_{cc}\left(PK_{k,cc} + PS_{k,cc}\right)$$

3.4. Calculating the inter-class spread credit (KSPK)

Margin requirements for intermediate risk may be lowered by applying inter-class spread credit, which reflects correlations between certain liquidity classes.

The value of the inter-class spread credit is calculated using the credit co-efficient (crt) and the value of the total net position in each class. The priority in which spreads are created is defined on the basis of tables containing credit spread priorities, determined by KDPW_CCP.

$$KSPK(cc1, cc2) = crt_{cc1/cc2} \times min\{|PK - PS|_{k,cc1}; |PK - PS|_{k,cc2}\}$$

TABLE 1 Principles used for determining credits for spreads

No.	PRINCIPLE
1.	Total net positions in classes cc_1 and cc_2 must have opposite sides.
2.	KDPW_CCP defines a table of valid class pairs for which credit is provided, the value of the credit and the order in which each pair is credited.
3.	If a total net position in a given class remains unused for credit, then the next opposite total net position is searched for, in accordance with the principles contained in the priority table defined by KDPW_CCP.
4.	The credit for the inter-class spread relates to each leg of the spread.

3.5. Calculating the margin for final intermediate risk (DOLR)

The margin for final intermediate risk (*DOLR*) for a given portfolio in a given class of instruments is calculated on the basis of final market risk, which itself is determined by deducting the value of the spread credit for a given class of instrument (*KSPK*) from the value of intermediate market risk (*DPLR*).

$$DOLR_{k,cc} = DPLR_{k,cc} - KSPK_{k,cc}$$

4. Calculating risk for debt securities

The risk for debt securities is calculated on the basis of net purchase and sale positions awaiting clearing. Debt securities are assigned to a duration class indicated by KDPW_CCP for a given day. Calculations are performed at the portfolio level.

4.1. Assigning debt securities to a duration class

Each debt security is assigned to a duration class on the basis of the value of the modified duration indicator and rating class. The assignment is carried out at the end of each day on which transaction clearing is performed. KDPW_CCP reserves the right to change the assignment to a class taking into account the risk characteristics. KDPW_CCP provides information to market participants on each debt security assigned to the relevant duration class.

4.2. Calculating net positions according to the debt securities type

The net position value in each instrument is calculated by multiplying the number of instruments by the modified duration indicator, the reference price and the exchange rate of the listing currency

The value of purchase positions (PK) and sale positions (PS) is obtained by adding the value of calculated positions in each instrument in a given duration class.

4.3. Calculating the total net position (CPN)

The total net position (CPN) is calculated for a duration class as the absolute value of the difference between the total of purchase position values (*PK*) and the total of sale position values (*PS*) in the portfolio of the clearing member.

$$CPN_{k,cc} = \left|PK_{k.cc} - PS_{k,cc}\right|$$

4.4. Calculating the total gross position (CPB)

The total gross position (*CPB*) is calculated for a duration class, as the total of purchase position values (*PK*) and the total of sale position values (*PS*).

$$CPB_{k,cc} = PK_{k,cc} + PS_{k,cc}$$

4.5. Calculating the margin for intermediate market risk (DPLR)

Determining intermediate risk takes place on the basis of the calculation of the value of the market risk and the value of the specific risk at the level of each duration class within the portfolio.

The margin for intermediate market risk (*DPLR*) is calculated using the total margin determined for market risk (*DRR*) and the margin determined for specific risk (*DRS*).

$$DPLR_{k,cc} = DRR_{k,cc} + DRS_{k,cc}$$

4.5.1. Calculating the margin for market risk

Market risk is understood to mean the risk of variation in the income curve in a given duration class. The parameter (y_{cc}) is used to calculate the margin for the value of market risk.

The parameter (y_{cc}), which defines the level of market risk, is indicated by KDPW_CCP for each duration class.

The margin for market risk (*DRR*) is calculated by multiplying the total net position for a portfolio (*CPN*) by the level of market risk (y_{cc}), for a given instrument class (cc).

$$DRR_{k,cc} = y_{cc} \times \left|PK_{k.cc} - PS_{k,cc}\right|$$

4.5.2. Calculating the margin for specific risk

Specific risk includes the risk of variation of a given instrument from the standard inherent in a given duration class, based on the instrument's specific characteristics. In order to calculate the margin for the value of specific risk, the parameter (x_{cc}) is used, which is defined by KDPW_CCP for each duration class.

The margin for specific risk is calculated by multiplying the total gross position of the portfolio (*CPB*) by the parameter describing the specific risk (x_{cc}) for a given instrument class.

$$DRS_{k,cc} = x_{cc} \times \left(PK_{k.cc} + PS_{k,cc}\right)$$

4.6. Calculating the margin for intra-class spread (DSWK)

The margin for intra-class spread is calculated in such a way as to secure against the risk of an uneven shift of the yield curve within a given duration class. This margin is only calculated for debt securities in relation to both opposite positions forming the spread within a given class.

$$DSWK_{k,cc} = dep_{cc} \times min\{PK_{k.cc}; PS_{k,cc}\}$$

where:
dep_{cc}- percentage for intra-class spread margin

4.7. Calculating the inter-class spread credit (KSPK)

Calculating the inter-class spread credit (KSPK) allows for the reduction of intermediate market risk by recognising the correlation between positions in different duration classes.

$$KSPK(cc1, cc2) = crt_{cc1/cc2} \times min\{|PK - PS|_{k,cc1}; |PK - PS|_{k,cc2}\}$$

TABLE 2 Principles used for calculating margins for spreads

No.	PRINCIPLE
1.	Total net positions in classes cc_1 and cc_2 must have opposite sides.
2.	KDPW_CCP defines a table of valid class pairs for which credit is provided, the value of the credit and the order in which each pair is credited.
3.	If a total net position in a given class remains unused for credit, then the next opposite total net position is searched for, in accordance with the principles contained in the priority table defined by KDPW_CCP.
4.	The credit for the inter-class spread relates to each leg of the spread.

4.8. Calculating the margin for final risk (DOLR)

The margin for final risk (*DOLR*) calculated for a portfolio in a given duration class is equivalent to the margin for intermediate market risk (*DPLR*) less the assigned credit (*KSPK*) plus the required deposit for spread in a given class (*DSWK*).

$$DOLR_{k,cc} = DPLR_{k,cc} - KSPK_{k,cc} + DSWK_{k,cc}$$

5. Marking to market (WR) for cash market

Marking to market is the process of calculating the debits and credits within a portfolio using up-to-date market prices. It is calculated as the difference between the value of positions in the clearing cycle revalued using existing market prices and the clearing value based on the concluded transaction.

$$WR_{k,i}^{cash} = \left(WROZ_{k,i} \times EN_i + \left(B_{k,i} - S_{k,i}\right) \times c_i \times EN_i + \left(BPD_{k,i} - SPD_{k,i}\right) \times d_i \times ED_i\right)$$

where:
$WR_{k,i}^{cash}$ – marking to market for portfolio k, security i,

$WROZ_{k,i}$ – the number of securities i bought and sold for portfolio k multiplied by the transaction unit price (this is a negative figure for purchase transactions),
c_i – securities reference price,
d_i – dividend/coupon amount as at the payment date; if the reference price c_i is the price of a security including the acquired right to dividend/coupon, then $d_i = 0$,
$B_{k,i}$, $S_{k,i}$ – quantity of bought/sold securities,
$BPD_{k,i}, SPD_{k,i}$ – quantity of bought/sold securities with the right to dividend/coupon,
ED_i – exchange rate of the currency of the dividend/coupon,
EN_i – exchange rate of the listing currency.

The mark-to-market value used to calculate the margin is expressed by the following formula:

$$DWR_{u,k}^{cash} = -min\left(\sum_i WR_{u,k,i}^{cash}; 0\right)$$

6. Calculating the SPAN® margin for the cash market

The required SPAN® margin for a portfolio that is not marked-to-market is calculated as the sum of the margin for final margin risk for each liquidity class and the margin for final market risk for each duration class.

$$DSPAN_k{}^{cash} = \sum_{cc} DOLR_{k,cc} = \sum_{cc}\left(DLPR_{k,cc} - KSPK_{k,cc} + DSWK_{k,cc}\right)$$

7. SPAN® margin methodology for repo transactions

The SPAN® margin for a portfolio of repo transactions $(DSPAN^{repo})$ is calculated according to points 1, 2, 4 and 6, provided that:

- concluded transactions shall be understood as repo transactions,
- a portfolio shall be understood as a set of positions arising from concluded repo transactions whose opening leg is settled or is scheduled to be settled no later than the next business day, identified by the same clearing account,
- a purchase position shall be understood as the position of the repo counterparty,
- a sale position shall be understood as the position of the reverse repo counterparty,
- a position in a security is equal to the quantity of securities in the repo transaction multiplied by the reference price and modified duration,
- the SPAN® margin for repo transactions is calculated from the business day preceding the settlement date of the opening leg to the settlement date of the closing leg. The SPAN® margin requirement is the greater of: the SPAN® margin based on the position at day *t* and the SPAN® margin based on the position at the next business day *(t+1)*,
- For repos where the opening leg is scheduled to be settled at day t or was scheduled to be settled at or before day t but failed, the position at t and t+1 ignores the scheduled settlement of the closing leg if t or t+1 is the repurchase date.

8. Mark-to-market methodology for repo transactions

Marking-to-market of repo transactions in a portfolio (WR^{repo}) is equal to the sum of WR^{repo} per trade. A negative value stands for the member's debit.

For repo transaction *m*, marking-to-market at day *t* is calculated as follows:

a) before the repo's settlement date of the opening leg ($t \leq t1$):

$$WR_{m,t}^{repo} = sign_m \times PA_m \times (RR_t - RR_m) \times \frac{t2_m - t1_m}{365} \times df(t2_m)$$

$$PA_m = N_m \times DPR_m$$

b) after the repo's settlement date of the opening leg ($t1 \leq t \leq t2$):

$$WR_{m,t}^{repo} = sign_m \times \left(N_m \times \left(DP_{m,t} \times \left(1 + RR_t \times \frac{t2_m - t}{365} \right) + CPN_m \frac{df(t_p)}{df(t2_m)} \right) - RA_m \right) \times df(t2_m)$$

$$RA_m = N_m \times DPR_m \times \left(1 + RR_m \times \frac{t2_m - t1_m}{365} \right)$$

c) in case of a settlement fail of the closing leg ($t \geq t2$):

for the reverse repo counterparty:

$$WR_{m,t}^{repo} = sign_m \times max\left(\left(N_m \times max\left(DP_{m,t} + CPN_{m,t2}; DPR_m \right) - RA_m \right); 0 \right)$$

for the repo counterparty:

$$WR_{m,t}^{repo} = sign_m \times \left(N_m \times \left(DP_{m,t} + CPN_{m,t2} \right) - RA_m \right)$$

where:

$sign_m$ – counterparty sign of transaction *m*, equal to 1 for the repo counterparty and -1 for the reverse repo counterparty*;*

PA_m – purchase amount of transaction *m* (settlement amount of the opening leg)*;*

RR_t – market repo rate for period $min(t2_m - t; t2_m - t1_m)$ at day *t*;

RR_m – repo rate of transaction *m*;

$t1_m$ – original settlement date of the opening leg of repo transaction *m*;

$t2_m$ – original settlement date of the closing leg of repo transaction *m*;

t_p – payment date of coupon CPN_m*;*

N_m – nominal amount of bonds in repo transaction *m*;

DPR_m – purchase price (dirty price of bonds in repo transaction *m*) as a percentage of the nominal amount;

$DP_{m,t}$ – dirty price of bonds as a percentage of the nominal amount, in transaction *m*, at day *t*, including interest accrued at day *t+1*. Accrued interest is equal to 0 in the period from the record date (inclusive) to the day preceding the interest payment date;

RA_m – repurchase price in transaction *m* (settlement amount of the closing leg)*;*

CPN_m – bond coupon expressed as a percentage of the nominal amount, whose record date (*d*) falls between the settlement date of the opening leg and the settlement date of the closing leg, included in the period from day *d* to the date of coupon payment by the reverse repo counterparty and by KDPW_CCP to the repo counterparty;

$CPN_{m,t2}$– bond coupon expressed as a percentage of the nominal amount, whose record date (*d*) falls after the original settlement date of the closing leg affected by the fail, included in the period from day *d* to the date of curing the fail by the reverse repo counterparty or cancellation of the repo by KDPW_CCP;

$df(t2_m)$ – discount factor for *t2*. Discounting is based on the repo discount curve. Discount factors between nodes are log-linear interpolated;

$df(t_p)$ – discount factor for t_p.

9. Methodology of calculating repo rate change risk margins

The repo rate change risk margin for a portfolio (DZR) is equal to the sum of margins per transaction. For any repo transaction *m*, the repo rate change risk margin at day *t* is calculated as follows:

a) before the settlement of the opening leg ($t \leq t1$):

$$DZR_m = N_m \times DPR_m \times p\_rr \times \frac{t2_m - t1_m}{365} \times df(t2_m)$$

b) after the settlement of the opening leg ($t1 \leq t \leq t2$):

$$DZR_m = N_m \times DP_{m,t} \times p\_rr \times \frac{t2_m - t}{365} \times df(t2_m)$$

where:

p_rr – risk parameter set by KDPW_CCP to hedge against future repo rate change.

Other symbols – see point 8.

10. Methodology of calculating margins for negotiated loans

The provisions of points 1-6 shall apply accordingly to the calculation of margins for negotiated loans provided that:

- concluded transactions shall be understood as open loans,
- a portfolio shall be understood as a set of positions arising from open negotiated loans whose return has not yet been settled, marked with the same clearing account identifier,
- a purchase position shall be understood as the position of the lender,
- a sale position shall be understood as the position of the borrower,
- purchased securities shall be understood as securities which the lender is required to repurchase,

- sold securities shall be understood as securities which the borrower is required to return,
- a margin for negotiated loans is calculated daily from the settlement date of the opening of a loan to the settlement date of the return of the loan,
- marking to market is calculated for positions arising from the negotiated loan return documents,
- the settlement amount for a loan portfolio is a value derived from the negotiated loan return documents.