Risk Treatment – LiNe

Introduction

Following B3's last improvements in LiNe:

- LiNe Trading and LiNe Clearing segregation implemented on November 8th 2021, where all aggregated metrics become evaluated in near time

- New aggregated metric Potencial Short Uncovered Balance (SPVD) implemented on March 13th

- On Q4 2022 start of day positions will be considered in the evaluation of metrics from LiNe Clearing

Start of day positions' integration

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Changes in LiNe's risk metrics

SDP (Potential Debt Balance)

Objective: To limit the potential financial value to be settled by the investor;

- Currently, the measure evaluates offers and trades with financial settlement in 1 or 2 days (**T+1** or **T+2**).

- After the implementation of the start of day position in LiNe:

  - Financial settlements on **T+0**, **T+1** and **T+2** will be evaluated;

  - Trades and orders of the day may be netted with trades from the start of day position;

  - The account/document may begin the day with consumptions if there are start of day positions with financial settlements;

    - If the calculated consumption considering start of day positions exceeds the limit configured for the entity, the Protected Mode will be activated for the entity.

Changes in LiNe's risk metrics

SPVD (Potencial Short Uncovered Sales Balance)

Objective: To limit the investor's short sales balance;

- Currently, the metric evaluates offers and trades with asset delivery or receive in 1 or 2 days (**T+1** or **T+2**).

- After the implementation of the start of day position in LiNe:

    - Positions with assets delivery on **T+0**, **T+1** and **T+2** will be considered;

    - Trades and orders of the day may be netted with trades from the start of day position;

    - The account/document may begin the day with consumptions if there are start of day positions to be settled on **T+0**, **T+1** or **T+2**;

        - Covered short sales will not be considered in the start of day position;

        - If the calculated consumption considering start of day positions exceeds the limit configured for the entity, the Protected Mode will be activated for the entity.

Changes in LiNe's risk metrics

STD (Forward Trade Balance by Document)

Objective: To control investor's forward positions balance by underlying asset;

- Currently, the metric evaluates orders and trades of the day and that may be rejected in case of limit excess;

- After the implementation of the start of day position in LiNe:
  - Forward contracts trades from previous days will be considered;
  - Trades and orders executed on the day may be netted with trades from start of day positions;

Changes in LiNe's risk metrics

RMKT (Market Risk)

Objective: To limit the potential increase in market risk due to trades and orders by investor or account;

- Currently, the metric evaluates the market risk arising from offers and trades executed on the day.

- After the implementation of the start of day position in LiNe:
    - Orders and trades of the day will have their risks evaluated considering the positions of the day and start of day positions;
    - The calculation will be given by the difference of the calculated risk of the day's portfolio, which considers orders, trades and start of day positions, and the portfolio containing only start of day positions

$$RMKT = -min(min_{\forall c}(Co + RU) - min_{\forall c}(Co); 0)$$

Where:

$Co =$ Market risk from start of day portfolio, in each risk scenario c;

$RU =$ Market risk from orders and trades made on the day, in each scenario c;

Changes in LiNe's risk metrics

SPI (Potential Balance by Instrument)

Objective: To ensure that the inventory of trades on an instrument is reduced while the entity is in Protected Mode;

- Currently, the metric evaluates the balance per instrument of orders and trades made on the day.

- After the implementation of the start of day position in LiNe:
    - The start of day positions will be considered in the evaluation of the balance per instrument;
        - Only orders and trades that reduce the balance per instrument, considering the positions of the day and the opening positions will be accepted.

Changes in LiNe's risk metrics

IRMKT (Protected Mode Market Risk)

Objective: To limit the increase of market risk in the entity in Protected Mode.

- Currently, the metric evaluates the market risk increment in Protected Mode from orders and trades of the day.

- After the implementation of the start of day position in LiNe:

  - Orders and trades of the day will have their risks evaluated considering the positions of the day and start of day positions;

  - The methodology for calculating the measure has not changed, only the trades from start of day portfolio were added to the calculation of the market risk metric RMKT;

$$IRMKT = RMKT - RMKT^*$$

Where:

$RMKT^* =$ Market risk of the portfolio considering only trades executed on the day and start of day position;

$RMKT =$ Market risk of the portfolio considering orders, trades of the day and start of day position.

Risk Treatment – LiNe

Highlights

- With the post-trade integration the LiNe system will begin to consider start of day positions in the calculation of some LiNe Clearing's metrics;

  - There may be consumption for the account/document at the beginning of the day;

  - Orders and trades of the day may be netted with opening positions;

- Along with start of day position implementation, the evaluation of the **STD** metric will be performed by Line Clearing. In case of **STD** consumption in the entity above the defined limit, the Protected Mode will be activated.

- The risk metrics **SDP**, **SPVD**, **STD**, **RMKT**, **SPI** and **IRMKT**, will be calculated and updated at the start of day, considering the specific characteristics of each metric.

LiNe metrics impacted by start of day positions

Metric	Start of day Positions
TMOC/TMOV	
SPCI/SPVI	
SDP	✓
SPVD	✓
STD	✓
SFD	
RMKT	✓
SPI	✓
IRMKT	✓

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Schedule
Next Steps

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Schedule
Next Steps

Schedule:

- Start of day positions integration will be implemented on Q4 2022.

Next steps:

✓ **Bid/ask order size global CAP:** Maximum bid/ask order size limit defined by B3

✓ **New Market Risk metric by instrument:** Maximum Market Risk by instrument (real time evaluation)

✓ **New aggregated metrics for trades only**

✓ **Real-time post-trade integration:** Metrics' comsumptions will be updated after position allocations

✓ **Risk management for Clearing Member:** Monitoring and activation of protected Mode to PNPs/PL

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Thank you!

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