X-pand into the Future

e u r e x *circular 070/03*

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Recipients: All Eurex members and vendors
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Information on CCP Risk Margining Calculation on Report RPTCC040

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Content may be most important for:

- ➲ Front Office / Trading
- ➲ Middle + Back Office
- ➲ Auditing / Security Coordination

Attachments: None

Summary:

This Circular illustrates a special case in the risk margin calculation for CCP trades which was not explicitly covered in the CCP Functional Release Notes.

The prerequisites for this special case are:

- Pending trades in a Margin Class must exist with different settlement days for the instrument of the Margin Class (e.g. buys have a settlement day of 15.05.03 and sells 16.05.03);
- On at least one settlement day the risk position must have been created exclusively by buy-side gross trades or sell-side gross trades.

Provided these prerequisites are satisfied, the single-sided position is not just subject to margin provision alone, but margin credit is also taken into account. In this case, this is independent of whether the position has been created by net or gross transactions.

As margin credits are taken into account for single-sided positions over the different settlement days this can lead to a lower margin calculation for the member.

The circular includes examples of margin calculations in one situation where the prerequisites are met and one where they are not met.

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The following example illustrates the situation described:

Example 1

Margin Class: ABC Instrument: DE0001234567 Margin Parameter 20% Business Day: 17.05.2003
Settlement Price: 100.00 Interest Rate: 0.00% (to simplify the example calculation)

A member has traded the following positions on different days:

Settlement Day	Buy/Sell	Security Pos.	Cash Pos.	Gross/Net
15.05.2003	Buy	1,000.00	-105,000.00	Net
16.05.2003	Sell	-100.00	10,500.00	Gross
16.05.2003	Sell	-100.00	10,500.00	Gross
16.05.2003	Sell	-500.00	52,500.00	Gross

Calculation of Current Liquidating Margin:

Settlement Day	Security Pos.	Cash Pos.	CL Value Sec.	CL Value Cash	Adjusted Margin
15.05.2003	1,000.00	-105,000.00	-100,000.00	105,000.00	5,000.00
16.05.2003	-100.00	10,500.00	10,000.00	-10,500.00	0.00
16.05.2003	-100.00	10,500.00	10,000.00	-10,500.00	0.00
16.05.2003	-500.00	52,500.00	50,000.00	-52,500.00	0.00
CLM for Margin Class					**5,000.00**

Calculation of Downside Additional Margin (Special Case):

Security	Settlement Day	Risk Position	Current Value	Minimum Value	Risk Value
			100.00	80.00	80.00
DE0001234567	15.05.2003	1,000.00	-100,000.00	-80,000.00	-80,000.00
DE0001234567	**16.05.2003**	**-700.00**	**70,000.00**	**56,000.00**	**56,000.00**
Total per Sec.			-30,000.00	-24,000.00	-24,000.00
Variation					**6,000.00**

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Calculation of Upside Additional Margin:

Security	Settlement Day	Risk Position	Current Value	Maximum Value	Risk Value
			100.00	120.00	120.00
DE0001234567	15.05.2003	1,000.00	-10,000.00	-120,000.00	-120,000.00
DE0001234567	16.05.2003	-700.00	70,000.00	84,000.00	84,000.00
Total per Sec.			-30,000.00	-36,000.00	-36,000.00
Variation					**-6,000.00**

For the Gross trades in this example with the Settlement day of 16.05.2003 in addition to the Risk Value of the Upside Margin, the Risk Value and Current Liquidating Value is also calculated for the Downside.

Had the Downside of trades with settlement day of 16.05.03 not been taken into account, the Additional Margin would have been EUR 20,000.00 (Risk Value (-80,000.00) – Current Value (-100,000.00).

Considering as well the Downside for the Settlement day of 16.05.2003, in the above example this leads to a margin requirement reduction of EUR 14,000.00 and the value of the Additional Margin is indicated with EUR 6,000.00.

The result of this constellation in the Upside Margin is a total margin credit in favor of the Clearing-Member and, consequently, the Risk Value of the Downside Margin is taken into account as well for the Additional Margin assessment.

This special case only applies when at least one Settlement day only has gross buy or sell transactions.

Example 2

The example below illustrates the margin calculations carried out when the prerequisites have not been satisfied.

Margin Class: ABC Instrument: DE0001234567 Business Day: 17.05.2003
Settlement Price: 100.00 Margin Parameter: 20% Interest Rate: 0.00% (to simplify the example calculation

A member has traded the following positions on different business days:

Settlement Day	Buy/Sell	Security Pos.	Cash Pos.	Gross/Net
15.05.2003	Buy	1,000.00	-105,000.00	Net
16.05.2003	Buy	100.00	-10,500.00	Gross
16.05.2003	Sell	-100.00	10,500.00	Gross
16.05.2003	Sell	-500.00	52,500.00	Gross

Calculation of Current Liquidating Margin:

Settlement Day	Security Pos.	Cash Pos.	CL Value Sec.	CL Value Cash	Adjusted Margin
15.05.2003	1,000.00	-105,000.00	-100,000.00	105,000.00	5,000.00
16.05.2003	100.00	-10,500.00	-10,000.00	10,500.00	500.00
16.05.2003	-100.00	10,500.00	10,000.00	-10,500.00	0.00
16.05.2003	-500.00	52,500.00	50,000.00	-52,500.00	0.00
CLM for Margin Class					**5,500.00**

Calculation of Downside Additional Margin (Special Case):

Security	Settlement Day	Risk Position	Current Value	Minimum Value	Risk Value
			100.00	80.00	80.00
DE0001234567	15.05.2003	1,000.00	-100,000.00	-80,000.00	-80,000,00
DE0001234567	16.05.2003	100.00	-10,000.00	-8,000.00	-8,000.00
Total per Sec.			-110,000.00	-88,000.00	-88,000.00
Variation					**22,000.00**

Calculation of Upside Additional Margin:

Security	Settlement Day	Risk Position	Current Value	Maximum Value	Risk Value
			100.00	120.00	120.00
DE0001234567	15.05.2003	1,000.00	-100,000.00	-120,000.00	-120,000.00
DE0001234567	16.05.2003	-600.00	60,000.00	72,000.00	72,000.00
Total per Sec.			-40,000.00	-48,000.00	-48,000.00
Variation					**-8,000.00**

As soon as there exist a gross long position and a gross short position on one Settlement day, only the Downside Risk Value will be calculated for the gross long position and, for the gross short position, the Upside Risk Value.

Therefore, for the gross trades with settlement day 16.05.03, the Risk Value for the long position of 100 is calculated for the Downside risk assessment, and the Risk Value for the short position of 600 is included in the Upside calculation.

Thus, in Example 2, no margin reduction occurs, and in this case the Additional Margin amounts to the sum of EUR 22,000.00

Frankfurt, July 4, 2003