



IDM Project

Intra-day Margin for derivatives

Service Description

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|-----------------------|---|
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1.Introduction

LCH.Clearnet SA currently performs intra-day margin calls on its derivatives clearing activity on the basis of previous end of day positions and previous closing prices to which “extra” margin parameters are applied, higher than the ones used in the end of day margin process. The procedure is triggered in exceptional situations following market crisis which final appreciation belongs to the risk management.

The Intra-day Margin Call project intends to improve the accuracy and pro-activeness of its risk management by implementing a daily intra-day margin process, based on updated intra-day prices and positions on derivatives markets, allowing LCH.Clearnet SA to measure and monitor members’ exposures throughout the day and take action under exceptional circumstances when necessary in the form of an intra-day margin call.

2. Initiative Background

The project focuses on intra-day margin solution in derivatives markets as these are considered the most volatile in risk profile intra-day.

2.1. INITIATIVE RATIONALE: GOALS & OBJECTIVES

The Intra-Day Margin project aims to achieve the following main objectives:

- To strengthen the Clearing House's safety and guarantee mechanism by implementing margin cover for intra-day activity at member level (thus further reducing intra-day counterparty risk);
- To implement standards of best practice for intra-day margin call & monitoring policy on LCH.Clearnet SA derivatives clearing activity;

2.2. SCOPE

2.2.1. In scope

Intra-day margin valuations are calculated on positions in:

- Derivatives instruments of Amsterdam, Brussels, Lisbon and Paris markets including futures and options on equity, index, currency and Amsterdam commodity instruments;

Using their corresponding intra-day prices;

Intra-day day prices of the following are also required for the intra-day margin calculation:

- Underlying instruments of the above Derivatives instruments listed on Euronext cash Amsterdam, Brussels, Lisbon and Paris markets;

Collateral deposited in securities will also be re-valued intra-day as part of the process. Intra-day prices are therefore required for:

- All assets eligible as collateral.

2.2.2. Out of scope

Intra-day margin valuations are not calculated on positions on the following financial instruments:

- Paris commodities derivatives (approximate amount of margins for these products represents 0.2% of margins collected for derivatives);
- Euronext cash equity markets;
- LCH.Clearnet SA fixed income and Energy clearing services.

3. Benefits

3.1. SERVICE IMPROVEMENT & RATIONALISATION

The main rationale for implementing an intra-day margin calculation is to strengthen risk management by enabling the Risk Department of LCH.Clearnet SA to measure and monitor the risk profiles of its members during the day and to take action when necessary in the form of an intra-day margin call. This improves the accuracy and pro-activeness of its risk management.

The choice was made not to perform intra-day margin calculations using the SPAN® module of the Derivatives Clearing System, but by using a margin module outside of the Clearing System. This will ensure that the real-time process of the Derivatives Clearing System will not be disturbed by the intra-day margin process and that performance will not be adversely impacted. This will also ensure a better rationalisation of the infrastructure by performing risk calculations outside of the clearing engine.

An investigation resulted in the selection of the Chicago Mercantile Exchange (CME) product SPAN® Risk Manager Clearing (SPAN® RMC¹) as the margin calculation tool. The product meets the requirements for managing intra-day margin calculations in terms of speed and range of option models used. It also uses the SPAN® model currently used by the Clearing System.

3.2. COMPLIANCE WITH EXTERNAL REGULATORY BODY REQUIREMENTS

The project will contribute to meet a requirement expressed by LCH.Clearnet SA's regulators (CCC, Commission bancaire, AFM), i.e., to implement an intra-day margining solution taking into account intra-day updated prices and positions. It is currently under their validation.

It will also allow LCH.Clearnet SA to observe the recommendation n°3 of CPSS-IOSCO.

¹ Proven tool widely used by Trading Members, Clearing Members, Exchanges (e.g. Chicago Mercantile Exchange, Montreal Derivatives Exchange, Tokyo Stock Exchange), Regulators (e.g. Commodity Futures Trading Commission). It is currently used by CME to process intra-day calculations on CME and CBOT open interest and clearing member's positions.

4. Business rules

4.1. FUNCTIONAL MODEL

4.1.1. Functional overview

SPAN® RMC, developed by the CME, allows LCH.Clearnet SA to perform a full revaluation of margins – Initial Margins, Variations Margins and Premiums - based on:

- Updated intra-day prices provided by the data provider Reuters,
- Updated intra-day position movements generated by the Derivatives Clearing System,
- End of day margin parameters used for regular margin calls from the Derivatives Clearing System,
- SPAN® methodology currently in place in the Derivatives Clearing System.

LCH.Clearnet SA Treasury and Banking tool are used to perform a re-valuation of the collateral deposited by members, to compare the result of the margin calculations with the re-valued collateral and to call additional cover, if required.

The intra-day margining tool, SPAN® RMC, performs a margin calculation every hour from 9:45 am CET until the close of the market at 5:45 pm CET.

Each intra-day session are defined as either “With cover call” or “Without cover call”, with the ability to modify the indicator (*) 15 minutes prior to the starting time of each session:

- The regular situation is the following: one intra-day session is marked as “With cover call” → and consequently one intra-day margin call could be performed once a day at latest 2:45 pm on the basis of the 1:45 pm observations. Actual calls are only made when increase of the intra-day margin requirement over the margins already held exceeds a certain threshold and if there is insufficient member collateral deposited. The threshold will be set at such level that cover calls will only be made in case of significant increases of margin requirements;
- In exceptional situations (e.g. high market volatility, major events with high impacts on the market) intra-day sessions marked as “With cover call” can be added → the Risk Department will modify the indicator from “Without cover call” to “With cover call” 15 minutes before the starting time of the related intra-day session (e.g., at 10:30 am CET for the 10:45 am CET calculation);
- The process lasts between 30 minutes to 60 minutes maximum from price capture to cover call finalisation.
- The settlement shall take place after 30 minutes of settlement window.

The table below provides an overview of the planned intra-day sessions:

| Start time | Intra-day session | Call time |
|----------------------|-------------------------|---------------------------|
| 09:45am CET | Without cover call* | |
| 10:45am CET | Without cover call* | Before 11:45pm CET |
| 11:45am CET | Without cover call* | |
| 11:45am CET | Without cover call* | |
| → 01:45pm CET | With cover call* | Before 02:45pm CET |
| 02:45pm CET | Without cover call* | Before 03:45pm CET |
| 03:45pm CET | Without cover call* | |
| 04:45pm CET | Without cover call* | |

| | | |
|-------------|---------------------|--|
| 05:45pm CET | Without cover call* | |
|-------------|---------------------|--|

4.1.2. Business rules for updating intra-day prices

The intra-day margin calculation requires updated intra-day prices for all products which are within the scope of the project. For each intra-day session intra-day prices are used to perform a revaluation of:

- Members' open positions;
- The collateral deposited by members to cover partly or fully the margin requirements, collateral which is recorded in the LCH.Clearnet SA Treasury and Banking tool.

The source for intra-day prices is based Reuters' intra-day data flow. Prices are retrieved at the start of each intra-day session and a certain number of business rules (of price cleaning) are applied to ensure quality of the prices retrieved, i.e., that prices used for the calculation are comprehensive and accurate.

Updated prices used at each intra-day session for margin calculations are made available in the intra-day SPAN® parameter file.

4.1.3. Business rules for updated positions

The source of position movements is based on the Clearing System, which currently already manages all positions movements (trades posting, position transfers, etc) in real time during the day. The intra-day margin architecture does not interfere with the Clearing System real-time process.

The following rules are applied:

- Members receive a "milestone" for each intra-day session informing them that all the instructions executed before reception of the milestone are taken into account in the calculation of their positions for the intra-day session;
- Intra-day introduced series created during the day by Euronext on members' request are not included. Such series represent a low volume – currently 10 to 15 in average per week - and are therefore not material while attempting to include them would have added a high level of complexity². LCH.Clearnet SA currently completes the trade notification process for transactions made on such series at the end of the trading session, i.e. by 5 p.m. CET (business rules implemented with ADCM project);
- At each intra-day session, the balance of the position movements is ensured;
- Non-posted trades registered on derivatives instruments are considered as being part of the house positions of the trade owner³;
- Exercise/abandonment requests of options during the day are excluded from the process;
- Cross-margined positions on cash equity instruments from the previous business day are included in the process to be consistent with the end of day margin calculation's process.

² Ensuring immediate intra-day introduction of series shall be considered as a significant project by itself involving Euronext.

³ For consistency purposes with the end of day clearing process, it is assumed that this rule will be applied during the day for any intra-day session: the principle being that non-allocated trades remain under the responsibility of the trading member who has executed the order on the market.

4.1.4. Intra-Day Margin thresholds

IDM margin calls from members will be executed only when the increase of the intra-day margin requirement over the initial margin previously deposited exceeds the threshold defined. Intra-day margin calls are claimed if the re-valued members' collateral deposited is insufficient.

The following thresholds will be defined:

1. A threshold to ensure that intra day margin calls are only executed under exceptional circumstances implying abnormal price or position movements. This threshold is defined as a percentage of the margin previously deposited (parameter B%).
2. A threshold to ensure that immaterial amounts are not called, even if the percentage-threshold above is exceeded. This threshold is defined as a fixed amount (parameter C).
3. A threshold to ensure that exceptionally large amounts are always called, even if the percentage-threshold is not exceeded (parameter A).

The threshold 1 is automatically and daily updated by applying the parameter B% to the initial margin requirements on D (corresponding to D-1 business day end of day position).

In case of unforeseen events or circumstances, the threshold level can be amended by LCH.Clearnet SA on an ad hoc basis with immediate effect. The members will be notified of these amendments via both Riskinfo and OP Info.

The following thresholds' parameters (X, Y, A, B and C) are defined and will be assessed with a regular frequency (e.g. monthly or quarterly basis) as any other parameters by the Risk Department. These parameters will be provided via a regular Riskinfo.

| Possible situation | Conditions | Determined Threshold (amount in €) |
|--------------------|--------------|------------------------------------|
| Case 2 | $IM \geq Y$ | A |
| Case 1 | $X < IM < Y$ | $B\% \cdot IM$ |
| Case 3 | $IM \leq X$ | C |

With IM = Initial margin requirement of morning D corresponding to D-1 business day

Examples

Parameters:

Y = 50,000,000

X = 1,000,000

B = 25 %

A = 12,500,000

C = 250,000

| Conditions | Determined Threshold (amount in €) |
|-------------------------------|------------------------------------|
| $IM \geq 50,000,000$ | 12,500,000 |
| $1,000,000 < IM < 50,000,000$ | $25\% * IM$ |
| $IM \leq 1,000,000$ | 250,000 |

CMF 1: $IM = 35,000,000 \Rightarrow$ threshold B applies

IDM variation = 10,000,000

$10,000,000 = 29\%$ of 35,000,000 \Rightarrow threshold B exceeded

CMF2 : $IM = 40,000,000 \Rightarrow$ threshold B applies

IDM variation = 4,000,000

$4,000,000 = 10\%$ of 40,000,000 \Rightarrow threshold B not exceeded

CMF3: $IM = 400,000 \Rightarrow$ threshold C applies

IDM variation = 200,000

$200,000 < 250,000 \Rightarrow$ threshold C not exceeded

CMF4: $IM = 800,000 \Rightarrow$ threshold C applies

IDM variation = 300,000

$300,000 > 250,000 \Rightarrow$ threshold C exceeded

CMF5: $IM = 100,000,000 \Rightarrow$ threshold A applies

IDM variation = 20,000,000

$20,000,000 > 12,500,000 \Rightarrow$ threshold A exceeded

4.1.5. Margin requirements

SPAN® RMC calculates margin requirements providing initial margin, variation margin and premium amounts per member at Performance Bond account level, in currency.

The margin requirement is aggregated as follows:

- Sum together initial margin, variation margin and premium in one amount,
- Convert into Euro any amount expressed in USD.

For intra-day sessions “With cover call” only, LCH.Clearnet SA Treasury and Banking tool will calculate the cover call requirements.

Intra-day Margin call will be actually performed on Clearing Members for which:

- The amount of Intra-day Margin requirement is above the aggregate amount of (i) the last cover call and (ii) the threshold defined by LCH.Clearnet SA:

$$\text{Intra-day Margin requirement} > (\text{last cover call} + \text{threshold})$$

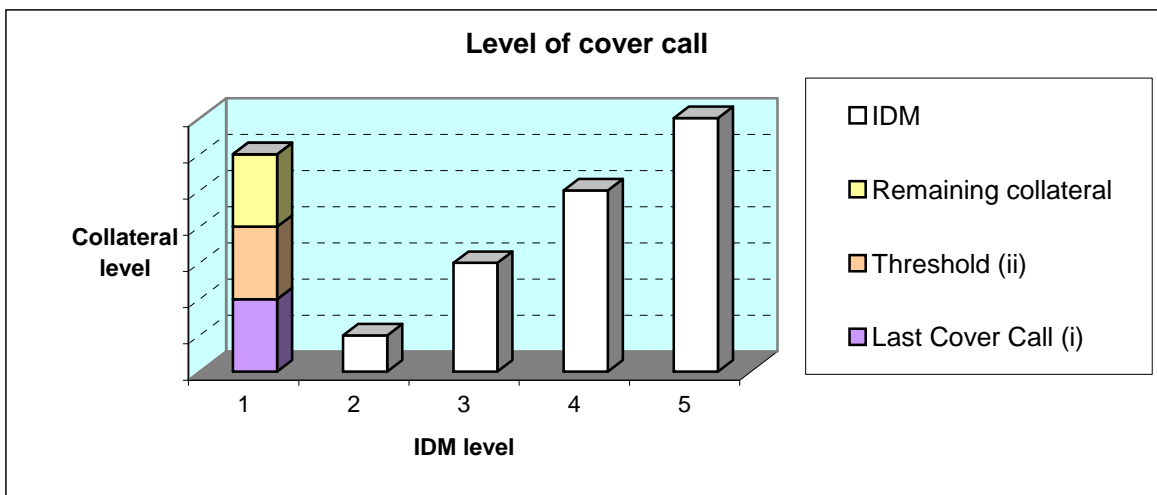
and for which,

- The amount of existing re-valued collateral amount is below the Intra-day Margin requirement:

$$\text{Existing re-valued collateral} < \text{Intra-day Margin requirement}.$$

In case of insufficient re-valued collateral, either central bank guarantee or cash settlements in euro will be accepted.

The level of cover call related to a potential IDM call is illustrated in the following diagram:



| IDM level | Situation | Impact |
|-----------|---|---|
| Level 1 | Initial situation without any IDM calculations. | Levels/situations 1 to 3 do not lead to any intra-day margin call. => Treasury report: with "No call" information. |
| Level 2 | Decrease of the margin with an IDM amount lower to the previous Margin deposited (MM). | |
| Level 3 | Increase of the margin with an IDM amount lower than the (previous Margin deposited + determined threshold). | |
| Level 4 | Increase of the margin with an IDM amount higher than the (previous Margin deposited + determined threshold) and lower than the level of deposited and re-valued collateral. In that case the member is eligible to an IDM call (as the threshold is exceeded) but will not be called as there is sufficient collateral deposited. The member will be notified of the additional collateral blocked by LCH.Clearnet SA. | Level/situation 4 and 5 lead to an intra-day margin call: ✓ Level 4: as the collateral is sufficient, no additional cover is required. ✓ Level 5: requires to cover the difference between the IDM amount and the level of deposited collateral. => Treasury reports with the amount of the IDM call |
| Level 5 | Increase of the margin with an IDM amount higher than the (previous Margin deposited + determined threshold) and higher than the level of deposited and re-valued collateral. In that case the member is eligible to an IDM call and will be called as there is insufficient collateral deposited. The member will be notified of the additional cover required. | |

4.1.6. Clearing funds

The implementation of the intra-day margin calculation also has an impact on the calculation of the Clearing Fund, notably due to a change in the determination of the level of the un-margined risk.

This change will ensure that the contribution to the Clearing Fund will take into account the amount called during the day for the affected members.

4.1.7. Cash payment and collateral accepted

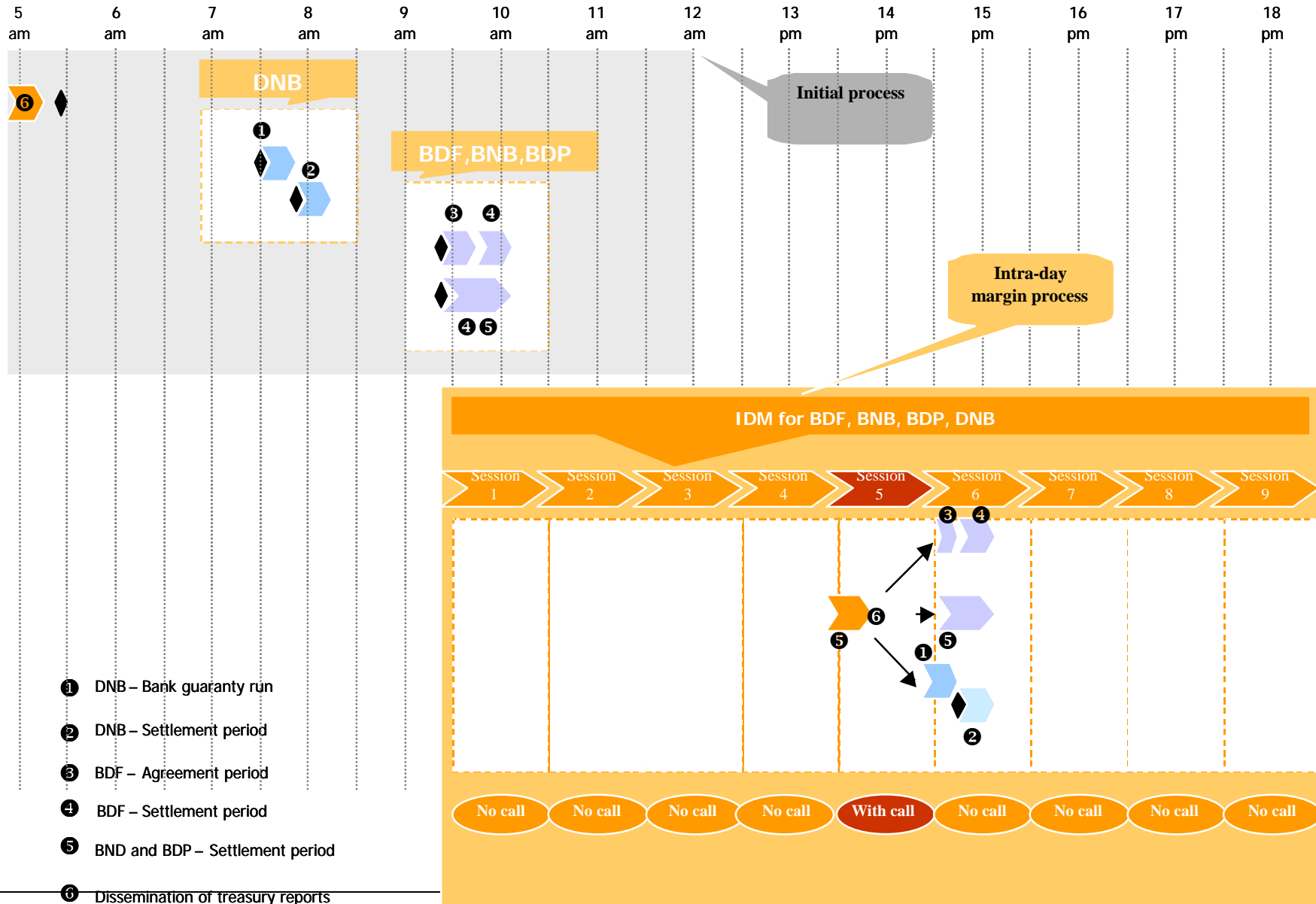
As for any intra-day margin call, either central bank guarantee or cash (in case of insufficient re-valued collateral) will be accepted.

The member or its paying agent has to centralise its payments in EURO to LCH.Clearnet SA's account at either in **Banque de France (BdF)**, **Banco de Portugal (BdP)**, **National Bank of Belgium (NBB)**, or **De Nederlandsche Bank (DNB)**.

The settlement cycles are described below. The settlement window for the session scheduled at 1:45 CET time is due to close at 2:45.

4.1.8. Central bank Settlement cycles

The scheme bellow recaps the settlement cycles combined with the intraday sessions schedule.



4.2. LEGAL ENVIRONMENT

4.2.1. Clearing Rules

There is no need to review deeply the Rule Book as article **1.5.1.3** already contains the principles on intra-day margin call:

« Based on the Open Positions of Clearing Members at any time during the day, LCH.Clearnet SA shall have the right during the day to re-determine and, if necessary according to LCH.Clearnet SA, to call Margin upon Clearing Members and to inform them accordingly. If this results in a higher Margin, the Clearing Member in question shall be obliged to ensure that the difference between the previous Margin and the newly determined intra-day Margin is transferred or, as the case may be guaranteed, at the latest within one hour of it having been informed thereof. »

This project implied to adapt slightly the Rule Book by integrating the concept of Intra-day Margin and notably Chapter I (Definitions) and Chapter 5 (Guarantee Requirements and Risk Supervision).

In addition, this project implied to modify:

- **Instruction I.5-1** relative to “Collateral accepted to meet margin requirements and cash payments”
- **Instruction I.5-2** on “Basis for the calculation of the Margins for Transactions registered on Euronext regulated cash markets ”
- **Instruction I.5-3** on “Margin requirements on Derivatives Markets”.

Please, be aware that a dedicated **notice** called “**Intra-day Margin Calls**” will be published on Margin Calls pursuant to the amendments of articles 7 to 11 of the Instruction I.5-3 related to margins requirements on Derivatives markets.

Regulators are currently reviewing all this documentation. The current process of regulators' validation is at its final stage and final ratification is expected by the end of February 2007. Subsequent to Regulators' approval, the relative documentation will be circulated to members. Circulation is expected early March 2007.

4.2.2. Agreements

The current legal framework in place between the Clearing Members and their Payment Agents (the so called PR/PDSE contract) have to be amended in case the paying limit is insufficient to cover an increase of intra-day margin. LCH.Clearnet SA will inform members for whom the limit needs to be reviewed to that end in February 2007.

5. Impacts on clearing members

5.1. AMENDMENTS TO DERIVATIVES SPAN® PARAMETER FILES

5.1.1. Removal of current intra-day SPAN® parameter files

the Derivatives Clearing System currently provides two daily SPAN® parameter files – intra-day Up SPAN.OP.XXX.BA and intra-day Down SPAN.OP.XXX.BB - corresponding to the current intra day margin process.

After the go-live of the Intra-day Margin, these two daily SPAN® risk parameter files will not be distributed to members any longer on their clearing APIs (CAP, CCW) and will also not be available on LCH.Clearnet SA website.

5.1.2. Introduction of new intra-day derivatives SPAN® parameter files

A single intra-day SPAN® parameter file is made available for each intra-day session including the usual elements required for the calculations of the initial margins.

Members have to use and retrieve this intra-day SPAN® parameter file from the LCH.Clearnet SA website to perform intra-day margin calculations.

This intra-day SPAN® parameter file is available to members on LCH.Clearnet SA website only. **Intra-day SPAN® parameter file will not be provided to clearing member APIs.**

The format of this file respects the current SPAN® Paris Expanded format or PA3 layout. A few fields used for technical purposes are filled slightly differently, although the technical description of these fields remains identical (cf. specifications available on LCH.Clearnet SA website and recap in appendix 7.1).

Since 15 January 2007, a single iteration of the intra-day SPAN® parameter file is made available for each intra-day session “With Cover Call”.

From 12 March 2007, the service will slightly improve as per members’ request. The intra-day SPAN® parameter file will be made available on the Website of LCH.Clearnet SA for each intra-day session whatever the session’s indicator is. (i.e. “With Cover Call” or “Without Cover Call”).

One new pop-up page will be added on the website in order to retrieve the relevant information.

The improvements are as follow:

Clicking on OPXXXBI file, a new pop up page will be displayed that will be organized as a folder page, each folder including intra-day SPAN® parameter files for all the sessions file for one day. (See table below).

There will be five folders for 5 working days, updated on a daily basis.

The name of the intra-day SPAN® parameter file corresponding to the OPXXXBI file will now contain the “With Cover Call” or “Without Cover Call” attribute on the page: OPXXXBI_Mjjhhmns_Y.dat and OPXXXBI_Mjjhhmns_N.dat (Y stands for “With Cover Call” session, N stands for “Without Cover Call” session and M stands for the month).

OHXXXBI

| 16 Jan | 15 Jan | 12 Jan | 11 Jan | 10 Jan |
|--------|--------|--------|------------|-------------|
| Date | Heure | Call | .zip | .dat |
| 15 Jan | 12:49 | Y | (608.0 Ko) | (3454.0 Ko) |
| 15 Jan | 13:50 | N | (601.0 Ko) | (3353.0 Ko) |

5.1.3. Enhancement to ALL derivatives SPAN® parameter files with the systematic presence of Physical type products

Physical type products (e.g. product type used to identify underlying of index options and currency options) used to be available in the SPAN® parameter file in the risk arrays (type record 8) only at options' contract expiration date.

This product type is systematically available in the SPAN® parameter file since 27 October 2006. More precisely, this information is used to retrieve the underlying price (cf. field "Settlement price or premium" of sub record type 83).

5.2. AMENDMENT TO SHORT OPTION MINIMUM IN PERFORMANCE BOND REQUIREMENTS CALCULATIONS

Short Option Minimum Charge calculation formula is changed since 8 December 2006 and concerns both end of day and intra-day SPAN® calculations.

SOM formula is changed:

| | |
|--|--|
| From | To |
| Short Option Minimum amount = Short positions*Short Option Minimum rate | Short Option Minimum amount = Short positions * Delta Scaling Factor * Short Option Minimum rate. |

5.3. TREASURY REPORTS

For each intra-day session with call, treasury reports are sent informing members whether they are called or not and if so on their intra-day cash call amounts.

Intra-day treasury reports have the same layout as the current ones except for a slight new information (cf. appendix 7.3): the reports contain since 15 September 2006 the margin call reference (Initial, Intra-day number) in the title of the document. In the intra-day cash call document, the amount of margin requirement ("Couverture exigée du jour") is the sum of initial margin + variation margin + premiums.

The treasury reports are contained in a file named as follow (for example EP00099999CNMC01060):

EP000⁴ : Production platform
99999 : Member code
CNMC : Treasury reports code
99 : Session ID in the treasury tool
999 : Number out of 365 corresponding to the process day

This file is produced for each intra-day session « **With Cover Call** ».

The file could be either empty or contain the exact replication of the scope of reports received in the morning for the Initial computation (session 00) depending on the member's exposure.

- If no intra-day margin call is claimed by LCH.Clearnet SA, the file will contain a message acknowledging that no reports have been created for the session.
- If an intra-day margin is called, the member will receive an update of the reports received in the morning.

This file is available on the CCW or the CAP/MAP of the member depending on the member's connectivity. The files of the current day and the 2 prior business days remain available.

Please, refer to section 6 to see the treasury reports details.

Important note: please, be aware that treasury adjustments (on cash and/or collateral) performed by the Treasury department also generate similar reports. The process provides the appropriate information via intra-day reports to the members for whom an adjustment was made **and** also generates empty reports to the other members; the intra-day sequence numbering of the treasury reports is therefore affected and should not be reconciled with the IDM milestone session number (cf. paragraph 5.4).

5.4. INTRODUCTION OF A NEW DERIVATIVES CLEARING SYSTEM'S MESSAGE

Members receive since 15 January 2007 for each intra-day session (with or without call) the Derivatives Clearing System timestamp (cf. appendix 7.2) at which members can re-calculate

¹ NB: File for the EUA platform will start with EH000 for "homologation platform"

on their side the level of intra-day positions. This message is distributed to the current clearing APIs, i.e. CAP/MAP and CCWs.

A new message NOTICE OF START OF INTRA DAY SESSION (5553) has been introduced to the Clearing System's public messages library for MONEP only. This public message informs members on the intra-day session start time (corresponding to the intra-day positions snapshot time) and defines the intra-day session type "with call" or "without call".

Particularly, the CCW displays this new message 5553 on the screen "End of Batch". This screen contains the list of all messages 5552 and 5553 received. The details of these messages can be visualized by double-clicking on it in the list.

Important note: Please, note that 5553 message is part of the public messages, and to this extent, cannot be downloaded from the CCW.

6. Project Milestones

| Milestone | Status | Start date | End Date |
|--|--------|--------------|----------------|
| External Testing with Central Banks | | | |
| Completion and validation of Acceptance testing with central Banks | Done | 14 Nov 2006 | 28 Nov 2006 |
| Regression testing with Central Banks | | | |
| External Testing with Members | | | |
| Completion of external User Acceptance with members | Done | | End July 2006 |
| Service Description | | | |
| General Members Meeting | Done | | 19/20 Sep 2006 |
| Member specifications | Done | | 02 Oct 2006 |
| Testing guide | Done | | 20 Oct 2006 |
| Testing of IDM features by members | | | |
| - IDM milestone | Done | 13 Nov 2006 | End Jan 2007 |
| - IDM SPAN parameter file | Done | 20 Nov 2006 | End Jan 2007 |
| - IDM treasury reports | | | |
| o Week 1 | Done | 27 Nov 2006 | 01 Dec 2006 |
| o Week 2 | Done | 11 Dec 2006 | 15 Dec 2006 |
| Launch Strategy guide | Done | | 06 Feb 2007 |
| IDM simulations based on production data with IDM components | Done | 15 Jan 2007 | 23 Feb 2007 |
| Implementation and shadow run | | | |
| CATS implementation | Done | | 15 Sep 2006 |
| C21 implementation | Done | | 27 Oct 2006 |
| IDM milestone | Done | | 15 Jan 2007 |
| IDM SPAN parameter file | Done | | 15 Jan 2007 |
| Technical implementation | Done | | 02 Feb 2007 |
| Publication of official treasury threshold levels to members | Done | | 22 Mar 2007 |
| Completion and validation of shadow run | Done | Mid Dec 2006 | Mid Mar 2007 |
| Go-live | | | |
| Business Go-live | Done | | 30 Mar 2007 |

7. APPENDICES

7.1. INTRA DAY SPAN® PARAMETER FILE

A daily SPAN® parameter file (OPXXXBI) is distributed on LCH.Clearnet SA website for each intra-day session on the “MONEP” Clearing Organization. This new daily SPAN® parameter file is the result of a format conversion from SPAN® XML to SPAN® Paris Expanded (PA3) using the CME conversion tool X2F.

Consequently to this conversion, some fields are filled differently in the SPAN® parameter file distributed intra-day from the one currently provided end of day.

The table below identifies the discrepancies between the End of Day and the intra-day SPAN® parameter files.

| Record ID | Record name | Field Name | Intra day | EOD |
|-----------|--|---|--|---|
| Record T | Currency Exchange Rate | one-byte code (Convert from Currency and Conversion Currency) | Provided | Not provided |
| Record 3C | Required intra commodity spreads | Spread table rules | Reduce scope ex closed maturity/expiration dates | Full scope of maturity/expiration dates |
| Record 4 | Third combined commodity definition record | Number of futures months in delivery | ' ' | '00' |
| | | Short Option Minimum Calculation Method | '2' | ' ' |
| Record 4B | Array calculation Parameters | Physical Product family type code rule | 'PHY' always listed | 'PHY' not always listed |
| | | Base Volatility | When not applicable '00000000' | When not applicable ' ' |
| | | Time to Expiration | When not applicable '00000000' | When not applicable ' ' |
| | | Underlying Product Family Code | Always fed with the relevant code | Fed for Options only else ' ' |

Please note that Record P contains the one-byte currency code in the EOD file.

7.2. MEMBER PUBLIC MESSAGE – IDM MILESTONE 5553

This message is sent by the Clearing System when an intra-day session is starting. Total length of message: 84

| Field name | Description | Type | Lgth | Pos | Format | Mandatory |
|--------------------------------------|--|------|------|-----|----------------|-----------|
| MESSAGE CODE | This field contains an alphanumeric code which gives the message contents (Command of posting, Notice of trade leg creation ...). Depending on this code, the data structure of the message is different. Permitted values: 5553 Notice of end of clearing batch | N | 4 | 0 | | Yes |
| CLEARING ORGANIZATION ID | i.e. MATIF, SBF, MONEP | X | 5 | 4 | | Yes |
| SUBMITTING MEMBER ID | This field contains a Clearing System Member external id. This field contains the submitting member id of the original COMMAND message. If the message is generated after a Clearing Organization action, this field contains the Clearing Organization id. | X | 10 | 9 | | No |
| EXECUTING MEMBER | This field contains a Clearing System Member external id. This field contains the executing member id of the original COMMAND message. | X | 10 | 19 | | No |
| MESSAGE DESTINATION MEMBER CODE | This field contains a Clearing System Member external id This field contains the destination member of the message. | X | 10 | 29 | | No |
| PRODUCT FAMILY ID | This field contains the PRODUCT family id which is linked to the message. In case the message is not linked to a specific PRODUCT family (i.e. account creation message), this field is left blank. | X | 12 | 39 | | No |
| PRODUCT FAMILY INDICATOR | This field indicates if the message has been generated for one product family or for all product families of the Clearing Organization. Permitted values: 0 One product family 1 All product families | X | 1 | 51 | | Yes |
| MATURITY INDICATOR | This field indicates that the status message is sent for all contracts, only the expired contracts, X or only the non-expired contracts. Not filled if and only if the message is corresponding SBF contracts. Permitted values: 1 No - non-expired contracts 2 Yes - expired contracts 3 All - all contracts | X | 1 | 52 | | No |
| BUSINESS DATE | This field gives the business date processed by the Clearing System for this message. | N | 8 | 53 | CCYYMMDD | Yes |
| CLEARING SYSTEM PROCESSING TIMESTAMP | This field contains the timestamp of the last position update occurred in the Clearing System and taken into account in the starting intra day session. | N | 14 | 61 | CCYYMMDDHHMMSS | Yes |
| SESSION NUMBER | This field contains the intra day session number of the starting intra day session. Permitted values: 1 to 9 | N | 2 | 75 | | Yes |
| CALL INDICATOR | This field indicates if the starting intra day session is with call or without call. Permitted values: N No- without call Y Yes- with call | X | 1 | 77 | | Yes |
| RUN TIME | This field contains the starting time of the intra day session | N | 6 | 78 | HHMMSS | Yes |

7.3. TREASURY REPORTS

The Treasury reports are contained in a file named as follow : (for example EP000999999CNMC01060)

EP000 : Production platform (NB: File for EUA platform will start with EH000 for homologation platform)

99999 : Member code

CNMC : Treasury reports code

99 : Session ID from treasury tool

999 : Number out of 365 corresponding to the process day

This file results from each IDM calculation triggered by an IDM session « **With Cover Call** ». The file could be empty or could contain the replication of the scope of reports received in the morning for the Initial calculation (session 00). If LCH.Clearnet SA claims no intra-day margin calls, the file will contain a message acknowledging that no reports have been created for the session. If an intra-day margin is called, the member will receive an update of the reports received in the morning.

This file is available on the CCW or the CAP/MAP of the member depending on the member's connectivity. The files of the current day and the 2 prior business days remain available.

| | Report code | Report Name | New Report | Refresh Frequency |
|---|-------------|--|------------|------------------------------------|
| Case 1 EP000xxxxx is empty – i.e. no IDM requirements | | PAS D EDITION POUR L APPEL DE FONDS INTRADAY NUMERO ## NO DOCUMENT SENT FOR INTRADAY ## | NO | 30 min after the intra-day session |
| Case 2 EP000xxxxx is not empty – i.e. IDM requirements to cover | AC0102E | DOCUMENT APPEL DE FONDS DERIVES ACTIONS ET INDICES EN EUR - INTRADAY SESSION NUMERO ## STOCK AND INDEX DERIVATIVES CASH CALL DOCUMENT IN EUR - INTRADAY SESSION NUMBER ## | NO | 30 min after the intra-day session |
| | AC0103E | DOCUMENT APPEL DE FONDS EN EURO - INTRADAY SESSION NUMERO ## GLOBAL CASH CALL DOCUMENT IN EUR - INTRADAY SESSION NUMERO ## | NO | 30 min after the intra-day session |
| | AC0104E | EXTRAITS DE COMPTE LCH .CLEARNET SA- INTRADAY SESSION ## LCH .CLEARNET SA ACCOUNT STATEMENTS- INTRADAY SESSION ## | NO | 30 min after the intra-day session |
| | AC0110E | SITUATION FINANCIERE GLOBALE INITIALE- INTRADAY SESSION ## INITIAL GLOBAL FINANCIAL STATEMENT - INTRADAY SESSION ## | NO | 30 min after the intra-day session |
| | AC0113E | DOCUMENT DE POSITION NETTE DE REGLEMENT EN EUR- INTRADAY SESSION ## NET PAYMENT POSITION DOCUMENT IN EUR- INTRADAY SESSION ## | NO | 30 min after the intra-day session |