AGRICULTURAL DERIVATIVES-MARGINS MANUAL

(MMeG)

VERSION 2.0 AS OF APRIL 2021

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SUMMARY

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1. FOREWORD

This document describes the methodology for calculating Margins for wheat derivative contracts traded on a dedicated segment of IDEM market (AGREX) for which CC&G will act as Central Counterparty (Agricultural Commodities Derivatives Section).

On AGREX will be guaranteed futures contracts for the delivery of Durum Wheat on fixed deadlines. The final settlement of the futures will be through physical delivery of the underlying at Silos authorized by Borsa Italiana. However, whenever such settlement would not be possible due to reasons of force majeure CC&G reserves the right to use Cash Settlement.

The Direct Participant and Indirect Participant, if delegated by the GCM, can register the positions in their own account and in client account. Participants must register their contract positions in specific subaccounts. The clients and the Direct and Indirect participants acting on their own behalf will be identified herein as Delivery Counterparty, i.e. those with short positions (sellers) who are going to deliver the Durum Wheat, and Withdrawing Counterparty, i.e. those with long positions (buyers) who are preparing to withdraw Durum Wheat.

The positions of each client are recorded in appropriate subaccounts opened by their Direct and Indirect Participants to CC&G. The computation of guarantees to be deposited at CC&G, while maintaining the subaccount positions, are calculated on the basis of the net positions across all subaccounts of Participants (net per account). For the contracts close to the delivery date that are registered in Class DWHEAT (see paragraph 6.1), from the tenth day of CC&G trading day before the last trading day of the futures contract (LTD – also equal to the maturity day of the futures contract), the guarantees to be deposited at CC&G are instead calculated on the net positions per account, but gross among the subaccounts of the different participants (gross per account).

The methodology described in the following pages (Margins for Wheat Futures – MMeG) foresees the following categories of Margins:

- Variation Margins, whose purpose is the daily settlement of losses and gains deriving from the valuation of positions at the Daily Settlement Prices (Settlement-to-the-Market). These Margins will be calculated until LTD;

- Ordinary Initial Margins, whose purpose is the valuation of the largest possible loss in the event of settlement of futures positions with a reasonably more unfavorable price scenario. These Margins will be applied until the eighth trading day prior to the maturity day of the futures contract;

- Initial Margins on Positions in Delivery, whose purpose is the valuation of the largest loss in the Delivery Period. For the Delivery Counterparty these Margins are applied from the end of the seventh trading day prior to LTD, until the final settlement day. For the Withdrawing Counterparty they are calculated on the positions outstanding at

the end of trading on the seventh trading day prior to LTD, until the second CC&G trading day after LTD; on the third CC&G trading day after LTD and until the final settlement day they will be put equal to 100% of the value of the contract increased by a percentage;

- Increased Initial Margins on Positions in Delivery, that are applied to Delivery Counterparty for positions not covered by a Certificate of Deposit from the fourth trading day before LTD until possession of the Certificate of Deposit is attested (it should be noted that for this purpose the time limit is 12:00 on T+1);

- Mark-to-Market Margins (exclusively for Delivery Positions): whose purpose is to carry out, in the Delivery Period, a possible revaluation just for Delivery Counterparty of Positions in Delivery by considering a new Daily Settlement Price.

During the trading phase and until the eleventh trading day prior to LTD Margins will be calculated on the net positions of each account of the Members (net margining); from the tenth trading day prior to LTD they will be calculated separately for the positions in each sub-account (gross margining).

2. TYPES OF LISTED CONTRACTS

The contracts listed on AGREX[1] refer to the supply of Durum Wheat.

The value of Durum Wheat Futures (expressed in €/ton) is given by the product of its price times its volume [number of tons in the contract itself].

The listed contracts have expires in March, May, September, December.

In each trading session 5 expires are tradable i.e. March 2013, May 2013, September 2013, December 2013, March 2014.

The size of the futures contract (Multiplier) equals 50 tons.

LTD (last trading day and maturity day of the futures contract) is the tenth calendar day of the month in which delivery will occur. If the tenth calendar day is a non trading day, the contract expires on the first following trading day.

The Wheat must be delivered/picked up at silos authorized by Borsa Italiana within the end of the delivery month. The delivery of the Wheat will be for a minimum quantity of 50 tons, with a tolerance of +/- 20 kg for each truck load.

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[1] Trading hours: 2,30 p.m. -5,40 p.m.

3. CLASS STRUCTURE

In order to determine the Participant's risk exposure, derivative contracts traded on AGREX are aggregated in Integrated Portfolios, evaluated unitarily and consequently subjected to an aggregated calculation of Initial Margins.

The MMeG Margining methodology foresees a Class structure capable of classifying the contracts which are actually traded on the market, as indicated in paragraph 2 above, plus additional Classes for managing Delivery Positions Covered and Uncovered and Matched Positions.

For the contracts listed on AGREX since inception, the following Classes will apply (codes are provided as an example):

Class	Positions
$DWHEAT_{expiry}$	Trading Futures[2]
DWHDLV	Delivery Positions[3]
DWHINC	Uncovered Delivery Positions[4]
DWHMAD	Matched Positions of Delivery Person
DWHMAW	Matched Positions of Withdrawal Person

4. POSITION SHIFTING

In order to ensure a separate management of the matched positions which will be delivered at the end of LTD, before Margins calculation, it is necessary to shift DWHEAT positions of the Delivery and Withdrawing Counterparty, to DWHMAD and DWHMAW respectively.

Pre-*Shifting*	Post-*Shifting*
DWHEAT (short)	→ *DWHMAD*
DWHEAT (long)	→ *DWHMAW*
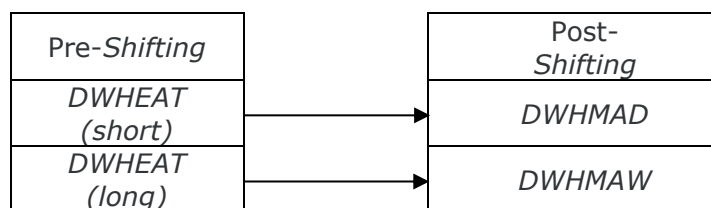
The Classes DWHDLV and DWHINC described in the previous paragraph (cfr. paragraph 3) are not affected by the shifting of positions (which always remain "delivery positions" and tradable) but they only refer to the margining logic. It is therefore a logical classification which is traceable in Margins reports but does not change the name of the instruments DWHEAT that are still tradable.

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[2] For each expiry there will be a class DWHEAT (i.e. DWHEAT2013Dec, DWHEAT2014Mar).
[3] From the seventh CC&G trading day prior to LTD.
[4] From the fourth CC&G trading day prior to LTD to the first CC&G trading day after LTD.

In summary, in order to calculate Margins on the positions which are close to delivery, on the seventh CC&G trading day prior to LTD, the Futures positions DWHEAT, are considered as DWHDLV, before Margins calculation.

In addition, so as to compute Margins considering the delivery positions that are not covered by Certificate of Deposit, on the fourth CC&G trading day before LTD, the Futures DWHDLV positions are considered as DWHINC before the Margins calculation.

When the Delivery Counterparty certifies the coverage of positions, the Futures DWHINC positions are considered again as DWHDLV, before the Margins calculation.

5. VARIATION MARGINS CALCULATION

Variation Margins are calculated according to the same methodology applied for IDEM Market Futures.

Variation Margins are determined on each futures position registered on each account or sub-account of the Participant.

The amount of the Variation Margins is equal to:

- For Open Positions arising from the trading activity of that same day, to the difference between the Daily Settlement Price of the current day and the trade price;
- For Open Positions arising from previous days' activity, to the difference between the Daily Settlement Price of the current day and the Daily Settlement Price of the preceding Open Market day;

Variation Margins are calculated until the Last Trading Day of each contract (i.e. Variation Margins are not calculated during the Delivery Period).

For any position included in the Class DWHEAT expiry X, Variation Margin for positions arising from previous days' trading activity is determined:

$$MV(DWHEAT) = (P_{t(DWHEAT)} - P_{t-1(DWHEAT)}) \times Multiplier \times previous\_days\_positions\_DWHEAT$$

For each trade executed in the current trading day:

$$MV(DWHEAT) = (P_{t(DWHEAT)} - P_{neg}) \times Multiplier \times trades\_executed\_during\_the\_day\_DWHEAT$$

Where:

- $MV(DWHEAT)$ are the Variation Margins for any position included in Class DWHEAT expiry month X

- $P_{t(DWHEAT)}$ is the Daily Settlement Price for the position included in Class DWHEAT of the day Variation Margins are calculated

- $P_{t-1(DWHEAT)}$ is the Daily Settlement Price for the position included in Class DWHEAT of the day before Margins are calculated

- P_{neg} is the trade price

- *Multiplier*: indicates the size of the contract, equal to 50 tons

- *Previous days positions*: indicates the number of net positions arising from the preceding trading days (positive sign for net long positions and negative sign for net short positions)

- *Trades executed during the day*: indicates the number of positions for every contract executed during the day (positive sign for long positions and negative sign for short positions)

The Total Variation Margins for each account/sub-account of the Participant will be equal to the algebraic sum of the Variation Margins for each Class:

$$MV(Tot) = \sum_{Scad\,1}^{N} MV(DWHEAT)$$

If this amount is positive, it will be a credit for the Participant; if this amount is negative, it will be a debit for the Participant.

6. INITIAL MARGIN CALCULATION

6.1 Ordinary Initial Margins Calculation

The risk associated with an integrated portfolio is evaluated by assuming that the prices of each instrument undergo an unfavorable price change of a predetermined maximum daily percentage, defined Margin Interval, and CC&G therefore must, in case of insolvency, liquidate the positions of the Participant in the most unfavorable market conditions reasonably conceivable.

In order to establish the largest theoretical loss within the hypothesis of daily market price Variations, the theoretical gains/losses for each portfolio are determined in correspondence

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with a number of underlying price scenarios within the Margin interval. The Ordinary Initial Margin is set equal to the largest of such losses, calculated for each price scenario.

Price scenarios do not take into consideration only extreme price variations; theoretical gains/losses are determined also under the hypothesis of intermediate price variations, in order to properly evaluate the risk also for certain trading strategies whose maximum loss arises in correspondence with certain underlying values, comprised between the extremes (this circumstance will apply when options will be introduced on AGREX).

Ordinary Initial Margins are calculated for each Class according to the same method of calculation of the ordinary initial Margins for Futures on Index traded on IDEM Market.

10 prices scenario (5 Upside and 5 Downside) are built separately for each Class, as described in the following breakdown. For the Class DWHEAT expiry X, whose Margin interval is $IM_{1(DWHEAT)}$ and including positions whose Daily Settlement Price is $P_{t(DWHEAT)}$, the total liquidation gains/losses are determined for each price scenario by multiplying the unitary theoretical gain/loss times the Multiplier, times the number of positions (with positive sign if long and negative sign if short).

Scen.	Price scenario	Unitary Theoretical Liquidation Gain/loss	Total Theoretical Liquidation Gain/loss
D5	$P_{D5} = P_{t(DWHEAT)} - \left(P_{t(DWHEAT)} \times IM_{1(DWHEAT)} \times (5/5)\right)$	$GL_{D5} = P_{D5} - P_{t(DWHEAT)}$	$MI_{D5} = GL_{D5} \times M \times Pos$
D4	$P_{D4} = P_{t(DWHEAT)} - \left(P_{t(DWHEAT)} \times IM_{1(DWHEAT)} \times (4/5)\right)$	$GL_{D4} = P_{D4} - P_{t(DWHEAT)}$	$MI_{D4} = GL_{D4} \times M \times Pos$
D3	$P_{D3} = P_{t(DWHEAT)} - \left(P_{t(DWHEAT)} \times IM_{1(DWHEAT)} \times (3/5)\right)$	$GL_{D3} = P_{D3} - P_{t(DWHEAT)}$	$MI_{D3} = GL_{D3} \times M \times Pos$
D2	$P_{D2} = P_{t(DWHEAT)} - \left(P_{t(DWHEAT)} \times IM_{1(DWHEAT)} \times (2/5)\right)$	$GL_{D2} = P_{D2} - P_{t(DWHEAT)}$	$MI_{D2} = GL_{D2} \times M \times Pos$
D1	$P_{D1} = P_{t(DWHEAT)} - \left(P_{t(DWHEAT)} \times IM_{1(DWHEAT)} \times (1/5)\right)$	$GL_{D1} = P_{D1} - P_{t(DWHEAT)}$	$MI_{D1} = GL_{D1} \times M \times Pos$
U1	$P_{U1} = P_{t(DWHEAT)} + \left(P_{t(DWHEAT)} \times IM_{1(DWHEAT)} \times (1/5)\right)$	$GL_{U1} = P_{U1} - P_{t(DWHEAT)}$	$MI_{U1} = GL_{U1} \times M \times Pos$
U2	$P_{U2} = P_{t(DWHEAT)} + \left(P_{t(DWHEAT)} \times IM_{1(DWHAT)} \times (2/5)\right)$	$GL_{U2} = P_{U2} - P_{t(DWHEAT)}$	$MI_{U2} = GL_{U2} \times M \times Pos$
U3	$P_{U3} = P_{t(DWHEAT)} + \left(P_{t(DWHEAT)} \times IM_{1(DWHEAT)} \times (3/5)\right)$	$GL_{U3} = P_{U3} - P_{t(DWHEAT)}$	$MI_{U3} = GL_{U3} \times M \times Pos$
U4	$P_{U4} = P_{t(DWHEA)} + \left(P_{t(DWHEA)} \times IM_{1(DWHEATB)} \times (4/5)\right)$	$GL_{U4} = P_{U4} - P_{t(DWHEAT)}$	$MI_{U4} = GL_{U4} \times M \times Pos$
U5	$P_{U5} = P_{t(DWHEAT)} + \left(P_{t(DWHEAT)} \times IM_{1(DWHEAT)} \times (5/5)\right)$	$GL_{U5} = P_{U5} - P_{t(DWHEAT)}$	$MI_{U5} = GL_{U5} \times M \times Pos$

Where:

M = Multiplier

Pos = Net positions (long positions – short positions)

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The Ordinary Initial Margin for any Class will therefore be equal to the largest theoretical loss (largest negative amount) among the theoretical gains/losses determined for each of the ten prices scenarios:

$$MI\,(DWHEAT\,) = \min(\,MI_{D5}, MI_{D4}, ..., MI_{U5}\,)$$

When only futures contracts are considered, the Ordinary Initial Margins of the Class DWHEAT expiry X will be immediately determined by multiplying the Daily Settlement Price of the positions included in the Class, times the Multiplier, times the number of net positions, times the Margin Interval of the Class.

Please note that the Ordinary Initial Margin, while the positions are registered in the individual subaccount, will be calculated on the basis of the net positions of the Direct Participant of CC&G until the eleventh day before LTD, and from the tenth day after LTD on the net positions for each subaccount, but gross for account of the Direct Participant of CC&G .

6.2 Initial Margin Calculation for Delivery Positions

The Initial Margin for Delivery Positions aims at covering the amount of the largest potential loss that could arise in the last days of futures contract trading until its settlement.

In particular, in the delivery phase which takes place from the day after LTD till the physical settlement of the contract, in case of Participant's default, CC&G will not have the possibility to close out existing Delivery Positions in Futures (hereinafter "Delivery Positions") on the market (neither derivatives, nor cash).

The Margin Interval for Delivery Positions is applied in advance from the seventh CC&G trading day before LTD in order to avoid that CC&G – in case a Participant does not deposit the Margins due for Delivery Positions – would find itself in the situation in which it could not close out positions of the insolvent Participant. In fact if the Margin for Delivery Positions were to be applied at the end of LTD and on the following Open Market day (first day of the Delivery Period) such Margins were not deposited, CC&G would be requested to manage the risk of the Delivery Positions (being impossible to close them out on AGREX or on the cash markets) without the adequate Margins.

The methodology for calculating the Margins for Delivery Positions is the same described for Ordinary Initial Margins (see paragraph 6.1) applying, in lieu of the Margin Interval foreseen for Class DWHEAT, the Margin Interval for Delivery Position applicable for Class DWHDLV.

$$D_{(DWHDLV)} = P_{t(DWHDLV)} \times IM_{(DWHDLV)} \times M \times Pos$$

The price to be used for calculating Initial Margins for Class DWHDLV from the seventh CC&G trading day before LTD until LTD is equal to the Daily Settlement Price

$$P_{t(DWHDLV)} = P_{t(DWHEAT)}$$

From LTD to the contract physical settlement, the price to be used to calculate the Initial Margins for Delivery Positions in Class DWHDLV is the last Daily Settlement Price of the Futures DWHEAT, that is the Settlement Price at LTD except for mark-to-market adjustments where a new price will be applied (see paragraph 6.4).

$$P_{t(DWHDLV)} = P_{ltd(DWHEAT)}$$

For the Delivery Counterparty these Margins are calculated from the seventh CC&G trading day before LTD to the contract settlement.

For the Withdrawal Counterparty these Margins are calculated from the seventh CC&G trading day before LTD to the second CC&G trading day after LTD; at the third CC&G trading day after LTD and until the settlement contract these Margins will be equal to 100% of the contract value plus a percentage.

6.3 Increased Initial Margins for Delivery Positions Calculations

The increase in Margins for Delivery Positions aims at covering the amount of the largest potential loss that could be suffered while close to expiry due to the uncertainty in the delivery of the wheat object of the contract (assuming that the Delivery Counterparty has not certified the wheat existence at the authorized silos). In that condition, CC&G is exposed to a greater risk of Delivery Counterparty fail.

So for Delivery Counterparty positions included in Class DWHDLV that are not covered by Certificate of Deposit, from the fourth CC&G trading day before LTD until the Certificate of Deposit notification the Initial Margin for Delivery Positions will be increased by a percentage to be fixed parametrically.

Increased Initial Margins for Delivery Positions are calculated by increasing the Margin Interval for Delivery Positions of a percentage P.

6.4 Mark to Market Margin Calculation

During the delivery period, the Mark-to-Market Margin is calculated exclusively for Delivery Positions included in Class DWHMAD. This Margin is applied in case the Daily Settlement Price for the Class containing the Delivery Positions is modified , to re-evaluate positions at such a new price.

In case of a Participant with a short Delivery Position, the Mark-to-Market Margin represents a theoretical credit if the Daily Settlement Price of the contract DWHEAT on the Last Trading Day $P_{ltd(DWHEAT)}$ is lower than the new Daily Settlement Price determined for DWHMAD $P_{t(DWHMAD)}$; vice versa it represents a theoretical debit in case $P_{ltd(DWHEAT)}$ is higher than $P_{t(DWHMAD)}$.

The Mark-To-Market Margin will be therefore equal to:

$$MTM(DWHMAD) = (P_{t(DWHMAD)} - P_{ltd(DWHEAT)}) \times Multiplier \times posizions\_DWHMAD$$

Where net long Delivery Positions have a positive sign and net short Delivery Positions have a negative sign.

Obviously, Mark-to-Market Margins are different from zero only if and when the Daily Settlement Price for Delivery Positions has been modified during the Delivery Period.

It must be highlighted that theoretical gains arising from Mark-to-Market Margin credits are never paid out to the Participant but may be exclusively used within the procedure of Initial Margins calculation for the agricultural derivatives section so as to reduce the Initial Margins requests from other positions.

$$*\qquad*\qquad*$$

The total Initial Margins for each account/subaccount of the Participant will be equal to the lower value between the sum of Initial Margins (Ordinary, Delivery, Increased and Mark-to-Market) of all Classes and zero.

$$MI(Tot) = \min\left(\sum MI + MTM, 0\right)$$

7. ELIGIBLE ASSETS FOR GUARANTEES

Eligible assets for meeting margin requirements will be those currently accepted for all the existing Sections i.e. for initial Margins, euros and Italian, French and German government securities traded on MTS and, for variation Margins, euros exclusively.

8. FINAL SETTLEMENT

Final Settlement will be executed from the fourth day after LTD until the tenth day of open CC&G after LTD through Physical Delivery of the underlying contract at the Silos authorized by the Italian Stock Exchange, by direct settlement between the Delivery Counterparty and the Withdrawal Counterparty.

The Clearing Members promptly notify CC&G about the successful completion of the settlement and CC&G accordingly releases the deposited guarantees. If the Withdrawal Counterparty disputes Wheat quality, CC&G would retain the Margins of both participants until the resolution of the dispute.

In exceptional cases, where it is not possible to store the Wheat in silos for reasons of space or other cause of force majeure, CC&G may indicate alternative sites for the delivery, or postpone the delivery deadline. Whether the previous solutions were impossible due to force majeure or proved to be too costly for counterparties, CC&G will adjust the contract by settling the difference in cash (Cash Settlement).

9. APPENDIX

Margins

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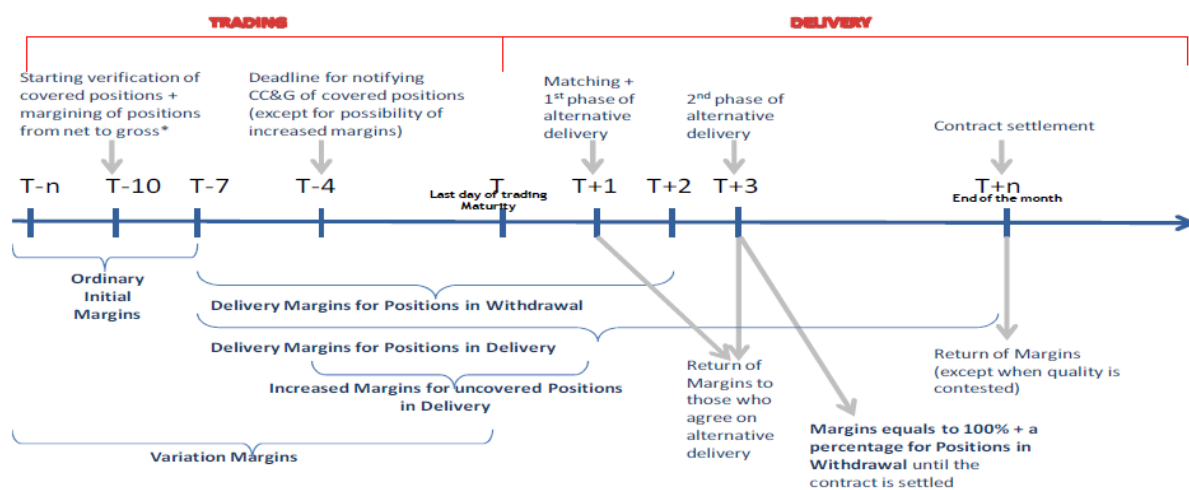
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