

CME Group Variable Storage Rate Proposal for CBOT Wheat Futures

CFTC Agricultural Advisory Committee

October, 29 2009 Washington, DC

Variable Storage Rate

Each business day from the 19th calendar day of the delivery month of the contract that expires prior to the nearby contract month until option expiration day, full carry is calculated from the nearby contract to the next contract expiration.

Full Carry Formula:

Days * {(Interest/360 * Futures Price) + Daily Storage}

Where:

Days = Number of calendar days from first delivery day in the nearby contract to first delivery day in the contract following the nearby contract

Interest = Three-Month LIBOR rate + 200 basis points

Futures Price = Settlement price for the nearby contract

Daily Storage = Current daily premium charge



Variable Storage Rate

The spread between the nearby futures settlement price and the next futures expiration settlement price is calculated and the percentage of full carry this spread represents is calculated and published on cmegroup.com.

On option expiration day, each of the calculated daily percentage of full carry calculations are averaged.

If the average spread during this period is 85 percent of full carry or greater, premium charges shall increase by 10/100s of one cent per bushel per day (3 cents per bushel per month) following the delivery period on the 18th calendar day of the delivery month.

If the average spread during this period is 50 percent of full carry or less, premium charges shall decrease by 10/100s on the 18th calendar day of the delivery month.

Premium charges will not be reduced below 16.5/100s of a cent per bushel per day (5 cents per bushel per month) and there will be no maximum premium charge.



Variable Storage Rate Components

Interest Rate – 3-Month LIBOR plus 200 Basis Points
Market Feedback Confirms as an Accurate and Transparent Market Measure of the Cost of Capital
Current Market Spreads Consistent with this Measure

Storage Rate Expansion Trigger: 85% of Full Financial Carry
Easily Met during Weak Basis Periods
After Convergence is Achieved, Represents a Harder Target to Meet for Firms With Incentives to Influence Wider Spreads in order to Garner Additional Storage Revenue

Storage Rate Reduction Trigger: 50% of Full Financial Carry
Allows Storage Charges to Fall During Periods of Shortage
50% Trigger High Enough to Allow Lower Storage Rates When Spreads Narrow Significantly but Low Enough to Represent a Harder Target to Meet for Firms With Incentives to Influence Narrower Spreads in order to Garner Lower Storage Charges



Wheat Storage Rate History

Jan 2000 to Jul 2008 – 15/100s of one cent per bushel per day (Approximately 4.5 cents per bushel per month)

Jul 2008 to Jul 2009 – 16.5/100s of one cent per bushel per day (Approximately 5 cents per bushel per month)

Jul 2009 Forward – 26.5/100s of one cent per bushel per day (Approximately 8 cents per bushel per month) from July 18 to December 17 each year and 16.5/100s of one cent per bushel per day from December 18 to July 17 each year (Seasonal Storage Rate).

September 2010 Forward -- Pending CFTC Approval, Variable Storage rate will replace Seasonal Rate.



Potential Financial Impact with December 2009 Implementation

Dec-Mar, Mar-May, May-Jul are at or near Financial Full Carry so Dec 09, Mar 10, May 10, and Jul 10 Open Interest is Affected. Assumptions: Market expects VSR to trigger storage increases with the Dec 09, Mar 10, and May 10 expirations. Spreads currently at or near full carry will widen to reflect full carry with increased storage. The impact of a widening spread is reflected in both the nearby and next contract expirations; for example, if the Dec-Mar spread is expected to widen 8 cents, the assumption here is the Dec contract will fall 4 cents and the Mar contract increase 4 cents. Effects from more distant spreads (e.g., Mar-May) widening feed back through the system so all spread relationships are maintained.

Dec 09 Open Interest (10/23/09): 184,270 Mar 10 Open Interest (10/23/09): 64,494 May 10 Open Interest (10/23/09): 9,203 Jul 10 Open Interest (10/23/09): 45,656

Effects: Dec-Mar spread widens from 19 cents to 27 cents Mar-May spread widens from 12.25 cents to 24.5 cents May-Jul spread widens from 10.25 cents to 29.5 cents



Potential Financial Impact with December 2009 Implementation cont.

Settlement Prices on 10/23/09:

Dec	Mar	May	Jul	Sep
547.75	566.75	579	589.25	600

Projected Prices with Dec 09 Implementation of VSR with Above Assumptions, Ceteris Paribus:

Dec	Mar	May	Jul	Sep
516.75	543.75	568.25	597.75	600
Change				
Dec	Mar	May	Jul	Sep
(31)	(23)	(10.75)	8.5	0

Potential Financial Impact on the Market:

\$384,137,012



Potential Financial Impact with March 2010 Implementation

Mar-May and May-Jul are at or near Financial Full Carry so Mar 10, May 10, and Jul 10 Open Interest is Affected. Assumptions: Market expects VSR to trigger storage increases with the Mar 10 and May 10 expirations. Spreads currently at or near full carry will widen to reflect full carry with increased storage. The impact of a widening spread is reflected in both the nearby and next contract expirations; for example, if the Mar-May spread is expected to widen 4.5 cents, the assumption here is the Mar contract will fall 2.25 cents and the May contract increase 2.25 cents. Effects from more distant spreads (e.g., May-Jul) widening feed back through the system so all spread relationships are maintained.

Mar 10 Open Interest (10/23/09): 64,494 May 10 Open Interest (10/23/09): 9,203 Jul 10 Open Interest (10/23/09): 45,656

Effects: Mar-May spread widens from 12.25 cents to 16.75 cents May-Jul spread widens from 10.25 cents to 21.75 cents



Potential Financial Impact with March 2010 Implementation cont.

Settlement Prices on 10/23/09:

Mar	May	Jul	Sep
566.75	579	589.25	600

Projected Prices with Mar 10 Implementation of VSR with Above Assumptions, Ceteris Paribus:

May	Jul	Sep
574.5	596	600
	May 574.5	May Jul 574.5 596

Mar	May	Jul	Sep
(9)	(4.5)	6.75	0

Potential Financial Impact on the Market:

\$46,501,875



Potential Financial Impact with May 2010 Implementation

May-Jul is at or near Financial Full Carry so May 10 and Jul 10 Open Interest is Affected. Assumptions: Market expects VSR to trigger storage increases with the May 10 expiration. The May-Jul spread, currently at or near full carry, will widen to reflect full carry with increased storage. The impact of a widening spread is reflected in both the nearby and next contract expirations; i.e., if the May-Jul spread is expected to widen 6 cents, the assumption here is the May contract will fall 3 cents and the Jul contract increase 3 cents.

May 10 Open Interest (10/23/09): 9,203 Jul 10 Open Interest (10/23/09): 45,656

Effects:

May-Jul spread widens from 10.25 cents to 16 cents



Potential Financial Impact with May 2010 Implementation cont.

Settlement Prices on 10/23/09:

MayJulSep579589.25600

Projected Prices with May 10 Implementation of VSR with Above Assumptions, Ceteris Paribus:

May	Jul	Sep
576.25	592.25	600

Jul

3

Change:

May

(2.75)

Sep 0

Potential Financial Impact on the Market:

\$8,113,812



Potential Financial Impact with July 2010 Implementation

Jul-Sep is trading inside full carry, so July 2010 implementation would have potentially no effect on the Jul-Sep spread and limited financial impact. Note that this was not the case when CME Group recommended September implementation. However, there is no discernable difference between July and September implementation. With September implementation, the current seasonal storage rate rule will trigger storage rates to rise on July 18 while VSR will also cause storage rates to increase on July 18, provided the July-Sep spread averages 85% of financial full carry or greater.

Jul-Sep Full Carry under Existing Rules: \$0.1672/bu. Jul-Sep Full Carry w/ VSR Implemented in July: \$0.1672/bu. (Assuming Jul-Sep spread triggers storage rate increase) Difference (Impact): \$0

Comparison:

Potential Estimated Financial Impact of Dec Implementation: \$384,137,012 Potential Estimated Financial Impact of Mar Implementation: \$46,501,875 Potential Estimated Financial Impact of May Implementation: \$8,113,812 Estimated Financial Impact of July or September Implementation: \$0 CME Group

Contract Expiration	Average Carry From 19 th of Previous Delivery Month Until Option Expiration Date (Red Represents Trigger To Increase Storage Rates)	Carry on First Notice Day	Toledo Basis on FND (Cents per Bushel)
Mar 2007	82%	90%	-45.5
May 2007	93%	65%	-53.5
Jul 2007	88%	87%	-55.5
Sep 2007	69%	30%	-10.5
Dec 2007	53%	63%	-14
Mar 2008	76%	72%	-11.5
May 2008	63%	88%	-62.5
Jul 2008	96%	90%	-131.25
Sep 2008	100%	93%	-195
Dec 2008	89%	94%	-125.5
Mar 2009	98%	92%	-110.5
May 2009	93%	100%	-95.5
Jul 2009	89%	103%	-90.5
Sep 2009	100%	104%	-71

Average Carry Above 85% Would Have Triggered Higher Storage 9 Times, Lower Storage 0 Times, and No Change 5 Times. Carry on First Notice Day Would Have Triggered Higher Storage 10 Times, Lower Storage 1 Time, and No Change 3 Times.



Appendix – Supplementary Slides



20-Day Moving Average Standard Deviation of Price Changes and Basis Changes



A CME/Chicago Board of Trade/NYMEX Company

20-Day Moving Average Correlation Between Changes in Nearby Futures Prices and Changes in Toledo Cash Prices





Nearby Wheat Spread Percent of Full Carry December 06 -October 09



CME Group

Nearby Toledo Basis - December 2006 through October 2009





Nearby Wheat Spread Percent of Full Carry and Toledo Basis



A CME/Chicago Board of Trade/NYMEX Company

3-Month LIBOR Plus 200 Basis Points



A CME/Chicago Board of Trade/NYMEX Compar

December 2008 Wheat Basis



CME Group

March 2009 Wheat Basis



L/Chicago Board of Trade/NTMEX Company

May 2009 Wheat Basis



July 2009 Wheat Basis



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September 2009 Wheat Basis



A CME/Chicage