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May 26, 2011

Mr. David Stawick  
Office of the Secretariat  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21<sup>st</sup> Street, N.W.  
Washington, D.C. 20581

**Re: Supplement to Proposal to amend CBOT Rule 10102.D. Increasing Daily  
Price Limits in Corn Futures  
CBOT Submission No. 11-161S**

Chicago Board of Trade, Inc. ("CBOT" or "Exchange") hereby submits this supplement to CBOT Submission No. 11-161R pursuant to a request by Commodity Futures Trading Commission ("Commission" or "CFTC") Staff. The supplement addresses concerns voiced in comment letters to the Exchange's proposal to amend CBOT Rule 10102.D. to increase daily price limits in Corn futures.

According to most comment letters, market participants are concerned about increasing volatility and margin requirements should Corn price limits expand. This supplement to Submission No. 11-161R is the result of a study examining volatility and margin requirements following past increases in Corn price limits. Evidence does not indicate volatility and margin requirements necessarily increase when price limits expand.

The Exchange hopes this study will help address any concerns around the Exchange's proposal.

If you require any additional information, please contact Randy Shao at 312-648-3795 or via e-mail at [Renyuan.Shao@cmegroup.com](mailto:Renyuan.Shao@cmegroup.com); or Fred Seamon at 312-634-1587 or via e-mail at [Fred.Seamon@cmegroup.com](mailto:Fred.Seamon@cmegroup.com). Alternatively, you may contact me at 212-299-2200. Please reference Submission No. 11-161S in any related correspondence.

Sincerely,

/s/ Christopher K. Bowen  
Managing Director, Chief Regulatory Counsel

Attachment

## Corn Price Limits & Margin Requirements

Because of higher prices and market volatility, an increasing number of CBOT Corn futures contracts have been experiencing trading disruptions due to price limits, which restrict how much prices can move in a single trading day. CME Group recently proposed increasing price limits in CBOT Corn futures and options to rectify this situation. However, some market participants have opposed increased price limits. They argue that increasing price limits will result in higher volatility and higher margin requirements. History does not support this concern; increased price limits are actually associated with reduced volatility and falling margin requirements approximately one-month after a price limit increase.

### Price Limits in the Corn Market

The price limit in Corn futures and options represents the maximum price movement allowed in a single trading day. The current price limit in Corn is \$0.30 per bushel per day expandable to \$0.45 per bushel per day and then to \$0.70 per bushel per day when at least two contracts within the first five expirations close at limit bid or limit offer on the previous trading day. For example, if July Corn futures settle at \$7.00 per bushel one trading day, on the next trading day the July contract may only trade between \$6.70 per bushel and \$7.30 per bushel. If the equilibrium price trying to be discovered in the market is outside this range, price discovery is prevented from occurring in the July futures market.

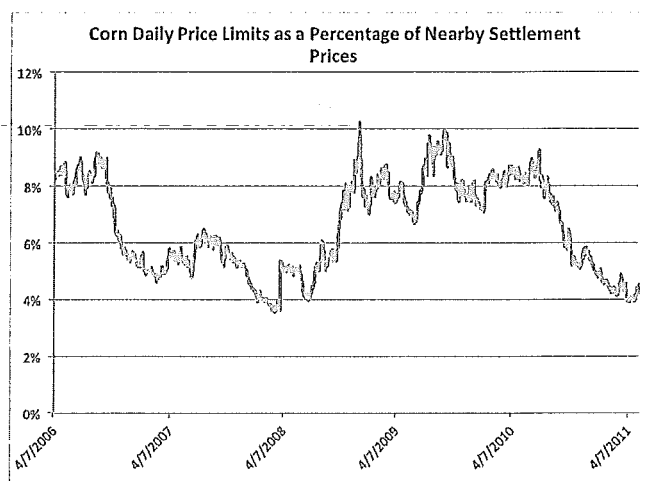
If two or more of the first five contracts settle limit bid or limit offer, then the price limit expands to \$0.45 per bushel the next trading day. For example, suppose two contracts settle limit bid and the July contract settles at a limit bid of \$7.30 per bushel. The trading range for the July contract would become  $\$7.30 \pm \$0.45$  or between \$6.85 and \$7.75 per bushel on the next trading day.

The price of front-month Corn futures has increased over 80 percent over the past year due to increasing demand and a disappointing 2010/11 corn harvest. Meanwhile, price limits have remained steady at \$0.30 per bushel. The result: the Corn price limit relative to the front-month futures contract price is around historical lows (see Figure 1).

### Price Limits and the Loss of Price Discovery

The consequence of having a price limit that is too low is that trading increasingly becomes disrupted because of limit moves; the contract doesn't trade because it is locked at the price limit. Historically, a four percent price move causes no price limit disruption. At current prices, however, a price move around four percent results in a price limit disruption. Thirty-six Corn futures contracts settled at their limit during the first quarter of 2011 compared to 37 Corn futures contracts settling at limit during all of 2010.

When trading is prevented because the daily price limit is reached, the futures contract cannot do its job of discovering prices. Risk management moves to option and/or OTC markets and price transparency is reduced. Less sophisticated grain merchandisers may even retract or widen their cash market bids and offers for lack of a way to manage risk. The ultimate result is a less efficient market with much less confidence around prices.



### Higher Price Limits – Higher Margins?

Margins are based on volatility, not price limits. Price limits do represent the maximum daily price change, and thus represent an approximate upper limit for margin requirements<sup>2</sup>. However, evidence does not show that Corn futures margins increase following an increase in price limits. Price limits in Corn have increased three times since 1990. On 7/15/1993, Corn price limits increased from \$0.10 per bushel to \$0.12 per bushel; on 8/27/2000, Corn price limits increased from \$0.12 per bushel to \$0.20 per bushel; on 3/28/2008, Corn price limits increased from \$0.20 per bushel to \$0.30 per bushel. In none of these cases did margin requirements increase within two months following implementation of the higher price limit.

The table below shows the dates of the last three Corn price limit increases as well as the hedge margin requirement one month before and one month after the price limit increase.

With the 1993 and 2008 price limit increases, margin requirements increased prior to the price limit expansion date. However, in no case did margins increase following the implementation of higher price limits, and more importantly, in the month following each of these price limit increases, margin requirements fell. These results suggest that high volatility and not higher price limits caused margin increases. As CME Clearing President Kim Taylor recently wrote, "As part of our overall risk management program, margins are adjusted frequently across all of our products based on market volatility. When daily price moves become more volatile, we typically raise margins to account for the increased risk. Likewise, when daily price moves become less volatile, margins typically go down because the risk of the position also decreases."

Figure 2 shows hedge margin requirements and the Corn price limit during the two-month period before and after the price limit increase in 1993. This case is representative of other price limit increases. Because of high volatility underlying the corn market, margin requirements did increase to the same level as the price limit shortly before the price limit increased. However, increasing the price limit did not result in volatility increasing further, resulting in additional margin increases. Instead, volatility actually began to decline allowing the margin requirement to fall one-month after the price limit increase.

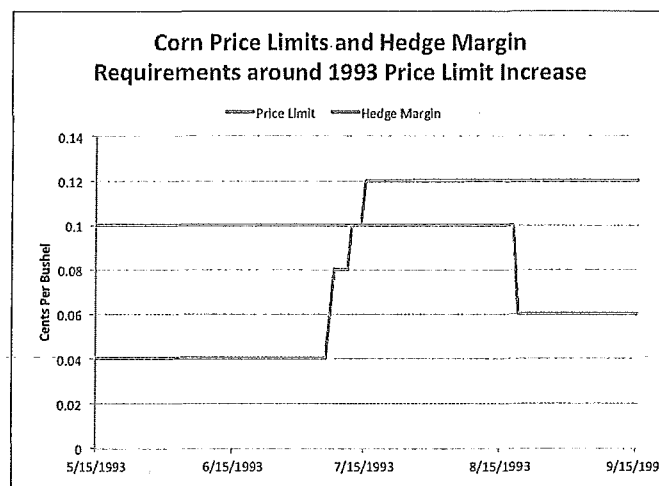


Figure 2 – Price Limits and Hedge Margins Before and After Price Limits Increased in 1993.

Date	Price Limit	Hedge Margin 1-Month Before Price Limit Increase	Hedge Margin on Date of Price Limit Increase	Hedge Margin 1-Month After Price Limit Increase
7/15/1993	\$0.12 per bushel	\$0.04 per bushel	\$0.10 per bushel	\$0.06 per bushel
8/27/2000	\$0.20 per bushel	\$0.10 per bushel	\$0.10 per bushel	\$0.07 per bushel
3/28/2008	\$0.30 per bushel	\$0.20 per bushel	\$0.30 per bushel	\$0.20 per bushel

<sup>2</sup>Because price limits are removed from Corn futures during the delivery month, margins levels can exceed price limits to account for price changes when a contract is in the delivery process.



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