Risk Management Goes to Grad School

A CBOT primer: New ways to manage risk

By Diana Klemme

Before 1848 farmers brought wagons of grain to Chicago, and took the price a buyer offered or returned home. Some opted to dump their grain in the Lake when prices got too cheap. The system was easy, but not very useful. The 1848 launch of the CBOT introduced forward cash prices, which evolved over the years into standardized ag futures contracts at Chicago, Kansas City and Minneapolis. Managing risk became more complex but the results were worth the effort for farmers, as well as for buyers that needed grain throughout the year. The first formal clearing system was established by the CBOT in 1883 to further improve efficiency and ease of entry and exit with futures.

Not a lot changed out in the country until well into the 20th century. Elevator managers bought cash grain, sold futures between 9:30 and 1:15 p.m., and sometimes pre-hedged on the close against expected afternoon purchases. Buyers took "protection" if bearish news came out in the afternoon by lowering their cash price against a lower opening on futures the next morning.

Then options on ag futures were launched in 1985, paving the way for greater pricing flexibility, especially for farmers. The risk-management universe was slowly expanding and becoming more challenging. By the mid 1990s, serial options joined the mix. These are short-term options for which there is no underlying futures month, and offer the advantage of relatively low premiums due to the short time until expiration. (An October corn serial option would trade from late July until late September, for example, with December corn futures as the underlying instrument.)

By 1993 China's Dalian futures exchange appeared on the scene, followed in 1996

"The world's gone and got itself in a big (darn) hurry."

— BROOKS HATLEN, from "The Shawshank Redemption"

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with the CBOT adding overnight electronic trading of full-size ag futures contracts to accommodate global trade. The trading world was speeding up. Since then the changes and new products have come even faster:

- The subsequent adding of "side by side" electronic and open-outcry trading (2006),
- Adding mini-futures (2007) and eventually options contracts to the electronic platform.
- From 2008 through 2011 the exchanges raised daily price limits several times as prices rose,
- Amended the delivery procedures and terms on wheat contracts, and
- Launched "Weekly Grain Options" in 2011. (WGO's ensure an option expiration every Friday.)

But more tools were needed. The CME responded in 2011 with Calendar Spread Options (CSO). These are put and call options on an underlying futures spread. Buying a December12/July13 corn call CSO gives the buyer the right to set a new-crop corn carry at a certain value, for example. CSOs are now listed on corn, soybeans and wheat, as well as on certain livestock futures.

By the end of 2011, merchandisers could hedge price risk using futures, as well as by using conventional options, Serial Options, and Weekly Grain Options — depending on the length of time a firm wants to cover price risk. An end user might buy an inexpensive WGO on corn, for example, ahead of major government reports in the summer for some protection against higher input costs. Or an elevator can offer minimum price contracts to farmers using any of the short- or long-term options. Country elevators can use CSOs to protect carrying charges on inventory.

New in 2012

Rising consumption of grains and oilseeds and declining world inventories have only increased volatility in price and spreads, adding even more merchandising risk for ag businesses. The futures exchanges continue to evolve to meet these needs.

As of March 2012, merchandisers can trade options on the volatile Minneapolis/Chicago wheat spread, called a protein-spread. With a range of almost $1.70 over the last two years, this is an inter-commodity spread where options seem well-suited to manage that trading risk.

Then in June the CBOT added short-dated new-crop options on corn, soybeans and wheat. These puts and calls on *new-crop futures* expire much earlier than regular new-crop options, and are more affordable as a result — all else equal. Short-dated calls on new-crop corn could be paired with a farmer's forward sale ahead of a major crop report, for example. This could make producers more confident of protecting good prices instead of waiting for even higher prices, and in time could tie in with certain crop insurance products. Feedlots might buy short-dated options to temporarily protect forward feed needs, or ethanol plants could lock in minimum conversion margins.

Example:

Short-dated puts and calls on December 12 corn futures:

Short-dated #1	would expire in May 2012
Short-dated #2	would expire in July 2012
Short-dated #3	would expire in Sept 2012

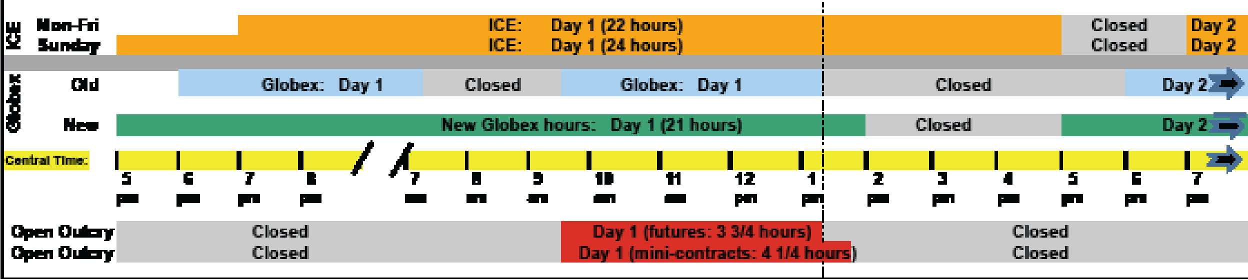
Risk around the clock

But the hot and controversial item for the summer was the expansion of Globex electronic trading hours at CBOT/CME, KCBT and MGEX to a 21-hour trading day for grain and oilseed futures, and all related option products. The exchanges submitted the change to the Commodity Futures Trading Commission for the schedule as shown below. **[See Figure 1]**

The 21-hour day

Now the world's *really* in a hurry. Being able to manage price risk 21+ hours a day is fine — especially for global entities. But the change will involve some adjustments for the grain industry. Under the new CBOT, KC and MGEX Globex hours, the *electronic* futures trading day will end at 2 p.m. CST rather than closing with the pits

Figure 1. Trading hours changes for CBOT, KCBT, MGEX and ICE futures/options. All times are shown in Central time.



Blue: Present Globex hours for Chicago, KCBT and MGEX grains/oilseeds.
Green: New Globex hours for Chicago, KCBT and MGEX grains/oilseeds.Red: Open outcry for CBOT grains/oilseeds and KC wheat.

Tan: ICE hours for Chicago look-alike grain contracts.
ICE has not applied for trading on look-alike contracts on KC or Mpls wheat.
CME meat trading hours are not reflected on this graphic.

at 1:15 p.m. Orders subsequently executed between 1:15 and 2 p.m. CST will be on the same day's business with settlement prices and margin calls based on the 1:15 closing time. Elevators, end users and exporters that close their books daily at 1:15 CT to coincide with their futures statements will now find hedges done between 1:15 and 2 p.m. will appear on the same day's futures statement but with the offsetting cash purchases or sales showing on the next day's DPR. In time new procedures, policies, and industry standards for setting bids will evolve to smooth out the changes.

Another new risk-management tool joined the mix in 2012. In May the Intercontinental Electronic Exchange (ICE) launched look-alike, cash-settled futures and options contracts on CBOT corn, wheat and oilseeds that are identical in most ways to the legacy physical-settled contracts. The ICE contracts trade 22 hours/day (electronic only), but with slightly different hours than Chicago: from 7 p.m. to 5 p.m., Monday through Friday, central time; and 5 p.m. to 5 p.m. for Sunday night/Monday. Figure 1 shows firms that use open outcry, and both electronic systems now have access to futures markets 24 hours/day, from Sunday evening through Friday afternoon across the various venues. (At this time ICE has *not* proposed a look-alike contract on KCBT or MGEX wheat, nor on CBT oat or rice futures. ICE futures on grains and oilseeds expire the day prior to First Notice Day of the corresponding CBOT futures contract.)

ICE contracts offer one distinct trading feature: Trade At Settlement (TAS). TAS ('taz' as it's known) can be attractive to grain firms. TAS buy and sell orders are entered for a price equal to the settlement price, or at a price up to five ticks above or below settlement. "Sell 10 Dec corn, TAS, -3 ticks." The trader won't know the settlement price when entering the order, of course, but knows the fill will be no lower than 3 ticks (3/4¢) below settlement.

Futures have been around for over 150 years, but the pace of innovation and change has accelerated. The world's just in a big darn hurry. And no longer will passing Risk Management 101 be sufficient for merchandisers and managers to understand all the new tools and strategies. Now you need "Risk Management 501." Could you pass the test?

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