

Research & Product Development

An Introduction to Grain Calendar and Basis Swaps

Introduction

Futures markets are the benchmarks for price discovery, price risk management and price transparency in the world agricultural markets. Futures on corn, wheat and soybeans traded at CME Group represent approximately eight, five, and 20 times world production, respectively, in any given year. Those in the grain and oilseed markets depend on these standardized futures contracts to manage their price risk throughout the crop year. Traditionally, these market participants have been forward-looking one to three crop years. However, recent demand growth spurred by developing nations, monetary policy, and the use of agricultural products to produce biofuels has resulted in higher prices and greater price volatility.

This environment of higher market volatility has resulted in customers requiring additional creative price risk management tools and looking for protection beyond the typical two to three crop year cycles. These hedging needs often are more individualistic in character and are not as easy to satisfy with a traditional standardized futures contract, where contract terms do not vary and liquidity is concentrated within the nearby crop year. Some market participants have looked to specialized swap dealers in the over-the-counter (OTC) market to draw up customized swap contracts and find parties to take the opposite side of these contracts. This introduces a problem — counterparty default risk. However, the Commodity Futures Trading Commission (CFTC) has granted exemptions to exchanges to clear agricultural OTC swaps. This will enable more market participants, who previously had concerns about OTC counterparty default risk, the ability to use them.

Swaps

A swap is an agreement between counterparties to exchange cash flows over some period of time. The oldest and most popular swaps are exchanges of interest rates. For example, assume a pension fund owns significant debt that pays variable-rate interest while a community bank owns significant debt that pays fixed-rate interest. The pension fund manager may want to lower the fund's exposure to variable-rate interest payments while the community banker may want to increase the bank's exposure to variable-rate interest payments. In this scenario, the pension fund manager may agree to pay a floating interest rate on \$5 million to the community bank while the community banker agrees to pay a fixed interest rate on \$5 million to the pension fund. Assume the community banker agrees to pay a fixed rate of 6.2 percent to the pension fund (\$310,000) and in return, the pension fund manager agrees to pay the London Interbank Offer Rate (LIBOR) plus 200 basis points to the community bank (see figure 1.1).

If LIBOR is 5 percent at the time of the swap settlement, the pension fund is obliged to pay the community bank \$350,000 (5 percent LIBOR plus 200 basis points is 7 percent times \$5 million is \$350,000). Meanwhile, the community bank is obliged to pay the fixed 6.2 percent rate of \$310,000. The pension fund is obliged to pay \$350,000 and the community bank is obliged to pay \$310,000; so the swap is settled with the pension fund paying the community bank the difference in obligations or \$40,000 (\$350,000 - \$310,000). In this example, the pension fund manager was able to reduce the fund's exposure to variable interest rates and received a fixed rate of 6.2 percent on outstanding variable-rate

debt. On the other hand, the community banker was able to take advantage of higher interest rates through exposure offered in the swap. Without the swap, the community banker would have had to be content with the fixed interest payments characteristic of the outstanding debt owned by the bank. Essentially, the two entities are swapping their risk positions in a similar market to better meet their institutional goals.

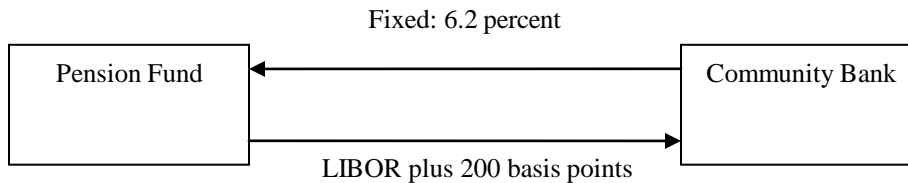


Figure 1 – Plain Vanilla Interest Rate Swap Between Two Counterparties

Basic Commodity Swap

A commodity swap is similar to an interest rate swap, but the parties are exchanging a fixed price with a floating or variable price for the commodity. For example, suppose a farmer is interested in managing the price risk of selling his corn crop while an ethanol plant, which needs to buy corn to produce ethanol, is also interested in managing the price risk of buying corn. These two business operations could manage their respective risks by entering a commodity swap.

In this example, the ethanol producer agrees to pay the farmer a fixed price of \$5 per bushel, and the farmer agrees to pay the ethanol producer a variable price for corn, such as the settlement price of the May Corn futures, on the day the swap expires.

Assuming this May swap expires on April 30, the ethanol producer will pay the farmer \$5 per bushel for corn and the farmer will pay the ethanol producer the May Corn futures settlement price on that day. As with the interest rate swap example, there is a fixed-for-floating exchange with the fixed side of the equation set at \$5 per bushel and the variable side of the equation to be based on the May futures contract settlement price. (See figure 2).

Assume on April 30, the May Corn futures contract settles at \$6 per bushel. The ethanol producer is obligated to pay the farmer the fixed price of \$5 per bushel and the farmer is obligated to pay the ethanol producer the variable price of \$6 per bushel. In actuality, this swap would be settled with the farmer paying the ethanol producer the difference in obligations or \$1 per bushel ($\$6 - \$5 = \1) on the swap expiration day.

Commodity swaps, which are usually financially settled products, can be used to hedge the eventual physical (cash market) transactions. Therefore, the farmer in this example would still need to sell the physical corn to a local buyer (grain elevator) and the ethanol plant would still need to purchase physical corn from a local supplier.

In this example, the commodity swap fulfilled its purpose. When the farmer sells corn in the local cash market, the physical corn is now based off of the \$6 per bushel May Corn futures settlement price on April 30, which was used to price the variable side of the swap. Although the farmer is obligated to pay \$1 per bushel to the ethanol producer in settlement of the swap, the physical corn sale is based on the higher current value of \$6 per bushel. The farmer has effectively locked-in \$5* per bushel for his corn crop – the initial objective when he entered the swap.

The ethanol producer has similar results. The purchase of physical corn is based on the current \$6 per bushel May Corn futures settlement price. However, to offset the higher cash market purchase price, the ethanol producer receives a \$1 per bushel payment from the farmer as settlement of the swap. Thus, the ethanol producer has also effectively locked-in a purchase price of \$5* per bushel for corn.

** Note that the local basis will impact the final purchase and selling prices of the physical corn transactions.*

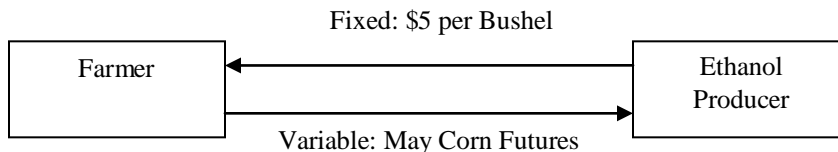


Figure 2 - Plain Vanilla Commodity Swap Between a Farmer and Ethanol Producer

In this basic example, the price of corn may have been more efficiently hedged by both the farmer and ethanol producer by trading May Corn futures contracts. However, an ethanol producer, who must continually purchase corn to meet their ethanol production needs, may be more interested in a long-term swap arrangement that prices corn monthly for the next year or two rather than using standardized futures contracts. The ethanol producer might find counterparty in the OTC swap market, perhaps a grain merchandiser, who would be interested in selling corn every month at a fixed price. The two parties could enter into a series of monthly swaps (a strip) that expire each month for the next year or two depending on their objectives and outlook.

OTC Swap Positions in an Off-exchange Environment

The seller of the physical commodity, the farmer in this example, is the seller (short position) of the OTC swap. The buyer of the physical commodity, the ethanol producer, is the buyer (long position) of the OTC swap. In other words, the position you plan to take in the physical market at a later date is the current position you take in the OTC swap market. This is similar to the futures positions you would take if you were hedging with standardized futures contracts.

OTC Swap Limitations

Although OTC swaps have some inherent benefits, including the ability to customize your risk management positions, there are several inherent limitations, as well.

One limitation is that a business entity must find a counterparty willing and able to take the opposite side of the swap transaction. In the previous example, the ethanol producer would have to locate a cash merchandiser who has the opposite price risk exposure. Due to this limitation, a significant industry has emerged of swap dealers (swap brokers), who help facilitate trade between potential counterparties. In fact, many counterparties of a swap transaction will not even know who takes the opposite position, as their interactions are usually with a swap dealer.

Another major limitation of the current OTC swap market is the potential financial risk of counterparty default. OTC swaps typically don't have a financial guarantor, such as a central clearing house, to ensure the financial integrity of the transaction.

Additionally, most current OTC swaps only have one settlement day, which is the last day in the life of a swap. These swaps may require a lump sum settlement payment, which is required in full on the swap expiration day. Depending on the market volatility, this lump sum payment may be significant, again leading to concerns about counterparty default risk.

Agricultural Swaps Cleared Through CME ClearPort

About CME ClearPort

When Enron filed for bankruptcy in late 2001, credit risk management and accounting became key concerns in the OTC energy business. To serve its customers' needs for counterparty credit assurance, NYMEX initially launched ClearPort in 2002 as a clearing service for off-exchange energy transactions, it grew rapidly. Currently, CME ClearPort has over 2,000 active registered companies, over 6,500 global users and an average daily volume of over 500,000 contracts. CME ClearPort provides clearing services for more than 600 products.

After CME Group acquired NYMEX in 2008, its clearing service became CME ClearPort and expanded its scope. CME ClearPort now offers a set of flexible clearing services and is open to all qualified OTC market participants. It is able to provide clearing services across all asset classes, and is no longer limited to clearing services where OTC positions are substituted into futures. CME ClearPort can now provide pure OTC clearing services offered both through and apart from the CME ClearPort API.

The First Cleared OTC Agricultural Swaps

To alleviate the financial integrity limitations of trading OTC swaps, CME Group received approval from the CFTC to provide clearing services for agricultural swaps through CME ClearPort. These OTC swap transactions will be cleared by CME Clearing and will have the same financial integrity as standardized futures contracts, but will not be substituted into futures transactions.

The first agricultural swaps offered are two types of Grain and Oilseed Swaps — Calendar and Basis Swaps. The initial Calendar Swaps include Corn, Wheat and Soybeans. The Basis Swaps, to be considered initially, are only for Corn and are based on Northeastern Iowa, Northwestern Iowa, Southern Iowa, Eastern Nebraska, Eastern South Dakota and Southern Minnesota cash markets.

The swaps will continue to trade as OTC products with private negotiations directly between two counterparties or via a swap dealer (broker) acting as an intermediary between the two counterparties. However, once an OTC swap agreement is reached between the two parties, the swap positions can be brought to CME ClearPort.

Sending an OTC Swap Through CME ClearPort

End-users, swap dealers and Futures Commission Merchants (FCMs) can submit OTC swap transactions for clearing through CME ClearPort. After the OTC swap transactions are posted on CME ClearPort, margin requirements are calculated and marked-to-market daily by CME Clearing.

Every entity that enters OTC swaps through CME ClearPort must have signed the Exchange User License Agreement (EULA). Information on the registration and licensing process is available on the NYMEX website at http://www.nymex.com/cp_start.aspx.

Users of CME ClearPort can enter trades three ways:

- Through a CME ClearPort Internet-based portal via a broker and end user

- Directly through an API that connect to CME ClearPort
- Over the phone to the CME ClearPort facilitation desk

CME Clearing will act as the central counterparty for the swaps submitted for clearing. It will guarantee performance on “cleared-only” swap products by collecting and maintaining performance bond requirements (margin) and the mark-to-market clearing system. In particular, the mark-to-market process will eliminate the risks associated with the one-time lump sum settlement at the expiration of the swap.

OTC agricultural swap products will also provide other benefits of central clearing, including multi-lateral netting (for swaps and other types of products), post-trade give-ups, real-time trade confirmation, and risk offsets (spread credits) against other highly correlated products.

CME Group *will not* provide a market with bids and offers on these OTC swaps, as they are “cleared-only” products and not Exchange-traded products. CME Group will publish daily settlement prices, daily volume and open interest for all cleared-only swaps. This information will bring additional transparency to the OTC swap market.

Calendar Swaps¹

Corn, Wheat and Soybean Calendar Swaps contain features similar to Corn, Wheat, and Soybean futures contracts listed at the CBOT exchange, the primary difference being the settlement process. Corn, Wheat, and Soybean futures contracts have a physical delivery settlement process while the Calendar Swaps are cash-settled to an underlying futures contract settlement price. There will be cross margin offsets between underlying futures and OTC Calendar Swaps, but position limits will not be aggregated between futures and swaps.

Cleared-Only Calendar Swap Transaction — Establishing an OTC Swap

The initial step in a cleared-only Calendar Swap transaction is establishing a privately negotiated OTC swap. Two parties will agree on the specific fixed price component of the swap and the specific calendar month. Each cleared-only Calendar Swap contract must contain a quantity of 5,000 bushels.

Depending on the calendar month chosen by the two parties, the daily and final settlement process will be based on the futures contract month closest to (but not before) the negotiated swap month.

As such, the variable price (floating price) component of the cleared-only Calendar Swap will be based on an underlying futures contract. For example, May Corn futures underlie the May Corn Calendar Swap.

Cleared-Only Calendar Swap Transaction — Listing and Expiration Schedule

Calendar swaps are listed for each calendar month and are priced off of the underlying futures contract closest to, but not before, the calendar swap month. The following table indicates which futures contract underlies each listed Calendar Swap:

Calendar	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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¹ See Appendix 1 for contract specifications for Corn, Wheat and Soybean Calendar Swaps

Swap Contract													
Corn Futures	Mar	Mar	Mar	May	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec	
Soybean Futures	Jan	Mar	Mar	May	May	Jul	Jul	Aug	Sep	Nov	Nov	Jan	
Wheat Futures	Mar	Mar	Mar	May	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec	

For each Corn, Soybean or Wheat futures contract listed for trading, all Corn, Soybean or Wheat Calendar Swaps corresponding to the listed futures contracts shall be listed for clearing only.

Calendar Swap expiration dates shall be the last business day of the month preceding the calendar swap month. For example, if a July 09 Soybean futures contract is listed, then a June 09 Soybean Calendar Swap would be listed that expires on the last business day in May 09 and also a July 09 Soybean Calendar Swap would be listed that expires on the last business day in June 09.

Cleared-Only Calendar Swap — Clearing of the OTC Calendar Swap

The next step in a cleared-only Calendar Swap transaction is for the two parties to agree to submit the OTC Calendar Swap through CME ClearPort.

OTC Calendar swaps can be submitted through CME ClearPort by an end-user, a swap dealer (broker) or an end-user's FCM. As with the Basis Swaps, anyone who enters an OTC swap into CME ClearPort must be registered with CME ClearPort. Information on the registration and licensing process is available on the NYMEX website at http://www.nymex.com/cp_start.aspx.

The counterparties of an OTC grain calendar swap and whoever sends the OTC Calendar swap through CME ClearPort must be registered with CME ClearPort. Additionally, both parties of the OTC Calendar swap *must* have a clearing firm. As soon as the OTC Calendar swap is sent through CME ClearPort, it becomes a cleared-only Calendar swap, where it will be held at CME Clearing and maintained in a fashion similar to a futures transaction.

Daily Settlement Process

Cleared-only Calendar swaps are settled each day based on the underlying futures contract settlement price. For example, a May Corn Calendar Swap is assigned the exact same settlement price as the May Corn futures contract during the life of the swap, except for the final month of clearing.

On the first day that a cleared-only Calendar Swap is cleared, the credits and debits are equal to the difference between the privately negotiated fixed component of the swap and the underlying futures contract settlement price on that day.

For example, if a December Corn Calendar Swap has a fixed price component of \$4.90 per bushel and the December Corn futures contract settles at 5.00 that day, the buyer of this cleared-only Calendar Swap will have a \$0.10 per bushel credit and the seller will have a \$0.10 per bushel debit in their respective margin accounts.

Final Month Daily Settlement Process

Cleared-only Calendar Swaps expire on the last business day of the month preceding the swap month. For example, May Corn Calendar Swaps expire on the last business day in the month of April.

During the final month of clearing, the daily settlement price is calculated differently. It is the cumulative average of the daily settlement prices for the underlying futures contracts. For example, on the first business day in April, the settlement price for the May Corn Calendar Swap is equal to the settlement price for the May Corn futures contract on that day. On the second business day in April, the settlement price for the May Corn Calendar Swap is the average of the daily settlement prices for the May Corn futures contract on the first two business days in April. This procedure continues throughout the month of April.

Final Settlement

The final settlement price for a cleared-only Calendar Swap is calculated as the sum of the daily futures settlement prices in the month prior to the Calendar Swap month divided by the total number of business days in that month. Final settlement is completed by a cash settlement. In the previous example, the final settlement price for the May Corn Calendar Swap is the average of the May Corn futures contract daily settlement prices during the month of April.

Cleared-Only Calendar Swap: Application

A country grain elevator, who wants to reduce the amount of wheat in storage, would like to sell 50,000 bushels per month for the next three months. The elevator manager, preferring a more predictable cash flow, enters into a three-month OTC Calendar Swap with a swap dealer (on behalf of a flour mill) to hedge these wheat sales at a fixed price of \$7.00 per bushel. The OTC Calendar Swap hedge is financially equivalent to a cash-forward sale of 50,000 bushels of wheat per month for 3 months. The elevator enters into the three-month OTC Calendar Swap transaction (May, June and July swaps) in early April with the swap settlements due on the last business day in April, May and June, respectively.

By mutual agreement, the flour mill and the grain elevator manager agree to submit this OTC Calendar Swap through CME ClearPort for clearing by CME Clearing. At this point in time, the OTC Calendar swap becomes a cleared-only Calendar Swap.

The elevator is initially assigned short positions in May, June and July Wheat Calendar swaps at \$7.00 per bushel and the flour mill is assigned long positions opposite the elevator at \$7.00 per bushel. Each party would receive 10 swap positions in each of the May, June and July Wheat Calendar Swaps because each Calendar Swap represents 5,000 bushels (10 swaps represent 50,000 bushels).

Note that the fixed price in the swap, \$7.00 per bushel, is privately negotiated between the grain elevator and swap dealer on behalf of the flour mill and is not published by the exchange.

On the first day of clearing, the net credits and debits will be the difference between the \$7.00 per bushel fixed price and the settlement price of the underlying futures. For the May Calendar Swap, the initial credit and debit will be the difference between \$7.00 and the May Wheat futures settlement price. For the June and the July Calendar Swaps, the initial credit and debit will be the difference between \$7.00 per bushel and the July Wheat futures settlement price.

For example, if the May Wheat futures contract settles at \$6.85 and the July Wheat futures contract settles at \$6.95 on the first day of clearing the swap, the initial credits and debits will be \$0.15 for the May Calendar Swaps and \$0.05 for the June and July Calendar Swaps. In this example, the grain elevator (seller) will have the credits and the flour mill (buyer) will have the debits in their respective margin accounts.

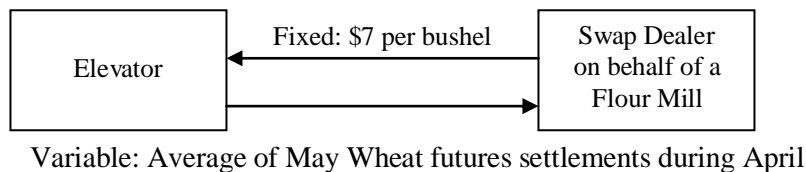
On each settlement date thereafter, other than during the final month, the elevator and flour mill will receive credits and debits based on the change in the daily Calendar Swap settlement prices.

Remember, the daily settlement price for the Calendar Swap is the same as the underlying futures settlement price. This process, which is identical in the futures market, is referred to as marked-to-market.

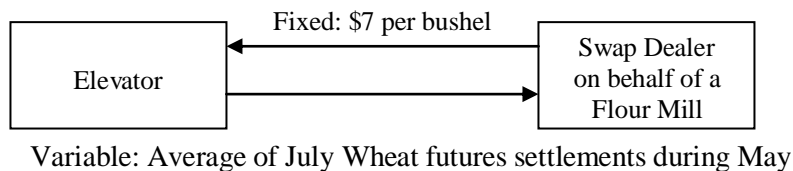
Remember that the daily settlement price for the Calendar Swap is calculated differently during the month prior to the swap month. During the month prior to the swap month, the Calendar Swap settlement price is the cumulative arithmetic average of the daily settlement prices of the Wheat futures contract month nearest to (but not before) the swap month.

In this example, the final settlement price for the May Wheat Calendar Swap settlement will be the cumulative average of the May Wheat futures contract settlement prices during the entire month of April; the June Wheat Calendar Swap final settlement price will be the cumulative average of the July Wheat futures contract settlement prices during the entire month of May; and the July Wheat Calendar Swap final settlement price will be the cumulative average of the July Wheat futures contract settlements during the entire month of June.

May Calendar Swap Results



June Calendar Swap Results



July Calendar Swap Results

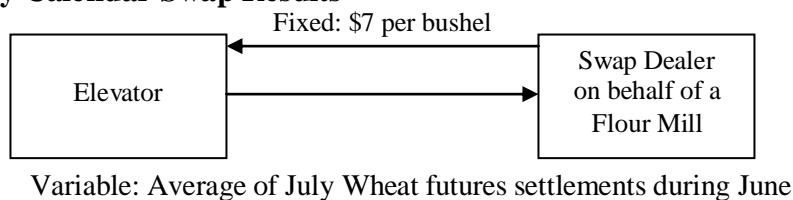


Figure 3: Wheat Calendar Swap Between an Elevator and Swap Dealer on Behalf of a Flour Mill

Final Results

The average of the May Wheat futures contract settlement prices during April was \$7.86 per bushel. The average of the July Wheat futures contract settlement prices during May was \$7.05 per bushel. The average of the July Wheat futures contract settlement prices during June was \$6.82 per bushel.

Therefore, the final settlement prices for the cleared-only May, June and July Wheat Calendar Swaps are \$7.86, \$7.05 and \$6.82, respectively.

The table below shows the final results of the Calendar Swap transactions for the grain elevator and the swap dealer. If the final swap settlement price is below the fixed price component, the elevator receives a payment from the swap dealer. If the final swap settlement price is above the fixed swap price, the swap dealer receives a payment from the elevator. In actuality, the final result of the cleared-only Calendar Swap will be the final credit or debit amount in each parties' margin account.

Results of Wheat Calendar Swap

	(May Swap)	(June Swap)	(July Swap)
Fixed Payment (Paid by Flour Mill and Received by Elevator)	\$7.00/bu.	\$7.00/bu.	\$7.00/bu.
Floating Payment (Paid by Elevator and received by Flour Mill)	\$7.86/bu.	\$7.05/bu.	\$6.82/bu.
Swap Result	\$0.86/bu. payment by Elevator to Flour Mill	\$0.05/bu. payment by Elevator to Flour Mill	\$0.18/bu. payment by Flour Mill to Elevator

DTN Basis Swaps²

A Corn Basis Swap provides customers with an alternative method to hedge their basis risk. In the past, some customers wanted exposure to basis risk and as such, the demand for basis risk management tools was relatively limited. Recently, the relatively high price volatility and changes in local supply and demand fundamentals have resulted in increased basis risk and a corresponding increase in demand for basis risk management tools. Cleared-only Basis Swaps allow market participants to bring their OTC Basis Swap positions to CME ClearPort for central clearing.

The initial step in a cleared-only Basis Swap transaction is establishing the privately negotiated OTC Basis Swap. The two parties of the OTC Basis Swap will agree on the applicable cash market region of the United States, the specific fixed basis component, and the specific swap month, which can be any calendar month.

The variable (floating) basis component of the cleared-only Basis Swap will be the specific DTN Regional Cash Price Index minus the futures contract month closest to, but not before, the swap contract month.

Important Notes on Basis Swaps:

1. Although the two parties determine the number of OTC swap contracts in the transaction, each cleared-only Basis Swap contract has to be a standardized quantity of 5,000 bushels.
2. Cleared-only Basis Swaps will be referred to by the specific DTN Regional Cash Market Index and the underlying futures contract month (e.g., May Northeastern Iowa Corn Basis Swap).
3. The DTN Regional Cash Price Index is based on cash market bids (grain elevators, ethanol plants, feed mills etc.) in a region and is calculated by DTN. CME Group chose the DTN Regional Cash Price Index as the cash market component used in their cleared-only Basis Swaps.

² See Appendix 2 for contract specifications for Northeastern Iowa, Northwestern Iowa, Southern Iowa, Eastern Nebraska, Eastern South Dakota, and Southern Minnesota Corn Basis Swaps.

The next step in a cleared-only Basis Swap transaction is for the two parties to agree to bring the OTC Basis Swap to CME ClearPort for clearing by CME Clearing.

OTC Basis Swaps sent through CME ClearPort by an end-user, a swap dealer (broker) or an end-user's FCM. Parties of a Basis Swap and anyone who enters an OTC Swap into CME ClearPort must be registered with CME ClearPort.

Additionally, both parties of the OTC Basis Swap *must* have a clearing firm. As soon as the OTC Basis swap is entered into CME ClearPort, it becomes a cleared-only Basis Swap.

Listing and Expiration Schedule

Basis Swaps are listed for each calendar month and are priced off the difference between the agreed upon DTN Regional Cash Price Index and the underlying futures contract closest to, but not before, the basis swap month. The following table indicates the futures contract which underlies each listed cleared-only Corn Basis Swap:

Corn Basis Swap Contract	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Underlying Corn Futures	Mar	Mar	Mar	May	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec

For each Corn futures contract that is listed for trading, all cleared-only Corn Basis Swaps corresponding to that listed futures contract will be listed for clearing. For example, if July 09 Corn futures contracts are listed for trading, then the June 09 and the July 09 Corn Basis Swaps for all cash market regions (territories) would be listed for clearing.

Basis Swap Expiration

Each cleared-only Corn Basis Swap expiration date will be on the last business day of the month preceding the Basis Swap month. For example, a June Basis Swap will expire on the last business day of May and a September Basis Swap will expire on the last business day of August.

Daily Settlement Process

On the first day that a cleared-only Basis Swap is cleared, the credits and debits are equal to the difference between the privately negotiated fixed basis component of the OTC swap and variable basis component (specific DTN Regional Cash Price Index minus the underlying futures contract settlement price on that day).

For example, if a December Corn Basis Swap has a fixed price component of \$0.25 per bushel under December futures (-0.25) and the variable basis is calculated at \$0.35 per bushel under December (-0.35) on the first day, then the seller of the Basis Swap will receive a \$0.10 per bushel credit and the buyer will receive a \$0.10 per bushel debit in their respective margin accounts.

Each day during the life of a Corn Basis Swap, other than the five business days prior to the expiration day (last day in the month preceding the Basis swap month), the change in the variable basis component will determine the net credits and debits in the respective margin accounts.

If the variable basis component *weakens* from one day to the next, the seller of the Basis Swap will receive a credit and the buyer will receive an equivalent debit in their respective margin accounts on that day. If the variable basis component *strengthens* from one day to the next, the buyer of the Basis swap will receive a credit and the seller will receive an equivalent debit in their respective margin accounts.

Daily Settlement Process — Last Five Days

During the final five days of clearing (i.e., the five business days prior to the expiration day in the month prior to the Basis swap month), the daily settlement price of a cleared-only Basis Swap is the cumulative average of the variable basis component (difference between the DTN Regional Cash Price Index and the underlying futures contract settlement price).

For example, on the fifth business day prior to April 30, the settlement price for the May Northeastern Corn Basis Swap is equal to the DTN Northeastern Iowa Corn Cash Price Index minus the May Corn futures contract on that day. On the fourth business day prior to April 30, the settlement price for the May Northeastern Corn Basis Swap is equal to the average of the DTN Northeastern Iowa Corn Cash Price Index minus the Corn futures contract on the fifth business day and the fourth business day prior to April 30. This process continues for all five business days prior to April 30, which is the May Basis Swap expiration day. Note that the expiration day is always the last business day in the calendar month prior to the swap month.

Final Settlement

The final cash settlement of the cleared-only May Corn Basis Swap is calculated as the average of the DTN Northeastern Iowa Corn Cash Price Index minus the corn futures contract settlement price during the five business days prior to the last business day in April. Final settlement is completed by a cash settlement

Final Results

In actuality, the final result of the Basis Swap will be the final credit or debit amount in each parties' respective margin accounts on expiration day. Remember that during the life of a cleared-only Basis Swap, these swaps will be marked-to-market daily with respective credits and debits being assigned to the two parties.

In summary, at expiration of a cleared-only Basis Swap, if the variable basis component is stronger than the agreed upon fixed basis component, then the buyer of the Basis Swap receives a net payment for the difference from the Basis Swap seller. If the final variable basis component is weaker than the agreed upon fixed basis component, then the seller of the Basis Swap receives a net payment for the difference from the buyer.

Cleared-Only Basis Swap: Application

A country elevator in Eastern Nebraska is concerned about basis volatility and would like to assure sufficient basis appreciation to provide a return on storage for 100,000 bushels of corn. Meanwhile, an ethanol plant would like to establish a reasonable basis level for upcoming corn purchases. A swap dealer, negotiating on behalf of both the elevator and the ethanol plant, establishes an OTC Basis Swap between the counterparties at \$0.30 per bushel under July Corn futures. In early April, the grain elevator and the ethanol plant both agree to a July Eastern Nebraska Corn Basis Swap with expiration slated for the last business day in June.

In fulfillment of this July OTC Basis Swap at expiration (the last business day in June), the grain elevator will receive a fixed payment equal to \$0.30 per bushel under July Corn futures from the ethanol plant. Additionally, a floating (variable) payment will be made based on the arithmetic average over the five business days prior to the expiration day in June of the DTN Eastern Nebraska Corn Cash Price Index minus the July Corn futures contract settlement price. The party who receives and the party who makes

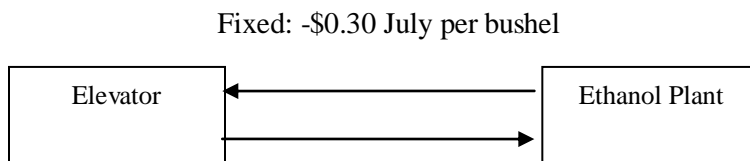
the floating payment will depend on whether the variable basis component is stronger or weaker than the fixed basis component.

By mutual agreement, the ethanol plant manager and the grain elevator manager agree to bring this OTC Basis Swap to CME ClearPort for clearing. At this point in time, the OTC Basis Swap becomes a cleared-only Basis Swap.

Each party would receive 20 positions because each Basis Swap represents 5,000 bushels (total of 100,000 bushels). The elevator is assigned 20 short positions in July Eastern Nebraska Basis Swaps at \$0.30 per bushel under July Corn futures (- .30) and the ethanol plant is assigned 20 long positions opposite the elevator at \$0.30 per bushel under July Corn futures (-.30).

Note that the fixed basis in the swap, -\$0.30 per bushel, is privately negotiated between the elevator and the ethanol plant through the swap dealer and is not published by CME Group.

July Corn Basis Swap



Variable: Difference between DTN Regional Cash Price Index and July Corn futures

Figure 4: Corn Basis Swap between an Elevator and Ethanol Plant

Results:

Assume the average difference (basis) over the five business days prior to the last business day in June (July Basis Swap expiration day) between the DTN Eastern Nebraska Corn Cash Price Index and the July Corn futures contract was \$0.50 per bushel under. The final settlement for the July Eastern Nebraska Basis Swap would be - \$0.50.

The table below shows the results of the swap transaction for the country grain elevator and the ethanol plant. The elevator would receive payment from the ethanol plant if the corn basis weakens below \$0.30 under. If the basis strengthens above \$0.30 under, then the ethanol plant receives payment from the elevator.

Results of July Corn Basis Swap at Expiration

Last Business Day in June	
Fixed Payment (Paid by Ethanol Plant and Received by	\$0.30/bu Under

Elevator)	
Floating Payment Paid by Elevator and Received by Ethanol Plant.	\$0.50/bu Under
Swap Result	\$0.20/bu Paid by the Ethanol plant to the Elevator

In this example, the final variable basis settlement (-.50) was \$0.20 per bushel weaker than the fixed basis component (-.30). Without the Corn Basis Swap transaction, the country elevator would have sold his corn at a much weaker basis. As a result of the Basis Swap, the grain elevator received \$0.20 per bushel to counteract the weaker basis of \$0.50 under, effectively locking in the fixed basis of \$0.30 under July for both the grain elevator and the ethanol plant.

In actuality, the \$0.20 difference between the fixed and the variable basis components of the cleared-only Basis Swaps would be reflected in the credit (grain elevator) and debit (ethanol plant) in their respective margin accounts.

Summary

The futures and options markets of the exchanges comprising the CME Group have been and will continue to be the foundation of price discovery and price risk management for the global agricultural community. However, worldwide demand has changed historical market structures and as such, market participants are looking for additional tools to manage their market risk.

The OTC agricultural swaps are products that allow market participants the ability to customize their risk management programs. However, OTC swaps do not typically have counterparty guarantees and as such, may have significant counterparty risk exposure.

CME Group will offer clearing services for Corn, Soybean, and Wheat Calendar Swaps, as well as Northeast Iowa, Northwest Iowa, Southern Iowa, Eastern Nebraska, Eastern South Dakota and Southern Minnesota Corn Basis Swaps.

This will provide market participants with the additional risk management benefits offered by OTC agricultural swaps combined with the key financial integrity benefit of the CME Group – virtually eliminating counterparty default risk. CME Group is committed to providing innovative risk management products and services to their global agricultural customers.

Further information about CME Group and its exchanges' products can be found at www.cmegroup.com.

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Appendix 1: Calendar Swaps Contract Specifications

Available Calendar Swaps

Corn, Soybean, Wheat

Contract Size

5,000 Bushels

Price Quotation

Cents and quarter cents per bushel

Minimum Price Fluctuation

One quarter of one cent (\$0.0025) per bushel

Clearing Hours

CME ClearPort is available from 5:00 p.m. Sunday through 4:15 p.m. Friday.

Note there is a 45minute break between 4:15 p.m. and 5:00 p.m. Central Time on Mondays through Thursdays

Contract Months

Calendar swaps are listed for all 12 calendar months with the corresponding futures contract being the contract closest to the swap's expiration date

Termination of Clearing / Expiration Date

The last business day of the month preceding the Calendar Swap month. For example, a May Calendar Swap will expire on the last business day in April

Daily Settlement

Settled to the corresponding Corn, Soybean or Wheat futures contract closest to but not before the calendar swap month

Final Settlement

During the last month a Calendar Swap is listed, daily settlement shall be a running of the cumulative average of the settlement prices for the corresponding futures contract. Final settlement is completed by a cash settlement. For example, the final settlement for a May Corn Calendar Swap would be the average of daily settlement prices for the May Corn futures contract during the month of April

Clearing Codes

Corn Calendar Swap: CCS

Soybean Calendar Swap: SNS

Wheat Calendar Swap: WCS

Appendix 2: DTN Corn Basis Swap Contract Specifications

Basis Regions (See Page 2 for Counties)	Corn Swap contracts listed for each of the following regions: Northeastern Iowa, Northwestern Iowa, Southern Iowa, Eastern Nebraska, Eastern South Dakota and Southern Minnesota
Contract Size	5,000 Bushels
Price Quotation	Cents and quarter cents per bushel
Minimum Price Fluctuation	One quarter of one cent (\$0.0025) per bushel
Clearing Hours	CME ClearPort clearing is available from 5:00 p.m. Sunday through 4:15 p.m. Friday. Note there is a 45-minute break between 4:15 p.m. and 5:00 p.m. CDT on Mondays through Thursdays
Contract Pricing	The basis for each listed region, defined as the cash price index from a region minus the price for the corresponding Corn futures contract
Contract Months	Basis Swaps are listed for all 12 calendar months with the corresponding Corn futures contract being the contract closest to but not before the swap's expiration date
Last Clearing Day	Two business days prior to the first Calendar Day of the month of the Basis Swap. For example, the last clearing day for a May Corn Basis Swap would be the second to last business day in April. This is the last day to enter a Basis Swap into CME ClearPort.
Expiration Day/Final Settlement Day	The last business day prior to the first calendar day of the Basis Swap month.. For example, final settlement for a May 2009 Corn Basis Swap would be April 30, the last business day in April.
Daily Settlement	Settled to the preliminary DTN cash price index for the respective region minus the corresponding Corn futures contract price until the final settlement calculation begins
Final Settlement	During the five days prior to the expiration day of a Corn Basis Swap, daily settlement will be a running cumulative average of the DTN cash price index for the respective region minus the corresponding Corn futures contract. Final settlement is completed by a cash settlement. For example, the final settlement for the May 2009 DTN Northeastern Iowa Corn Basis Swap would be the average of daily settlement prices of the DTN Northeastern Iowa cash price index minus the May Corn futures contract on April 23, 24, 27, 28 and 29. The final settlement and expiration day is April 30, 2009.
Clearing Codes	Southern Minnesota Corn Basis Swap: SMN Eastern Nebraska Corn Basis Swap: ENE Eastern South Dakota Corn Basis Swap: ESC Northeastern Iowa Corn Basis Swap: NEC Northwestern Iowa Corn Basis Swap: NWI Southern Iowa Corn Basis Swap: SIC

Regions with Counties

DTN Corn Cash Price Indexes are constructed from cash market bids (grain elevators, ethanol plants, feed mills etc.) in the indicated counties:

Eastern Nebraska	Adams, Antelope, Boone, Burt, Butler, Cass, Cedar, Clay, Colfax, Cuming, Dakota, Dixon, Dodge, Douglas, Fillmore, Gage, Greeley, Hall, Hamilton, Howard, Jefferson, Johnson, Knox, Lancaster, Madison, Merrick, Nance, Nemaha, Nuckolls, Otoe, Pawnee, Pierce, Platte, Polk, Richardson, Saline, Sarpy, Saunders, Seward, Stanton, Thayer, Thurston, Washington, Wayne, Webster, Wheeler, York.
Southern Iowa	Adair, Adams, Appanoose, Audubon, Benton, Boone, Carroll, Cass, Cedar, Clarke, Clinton, Crawford, Dallas, Davis, Decatur, Des Moines, Fremont, Greene, Guthrie, Harrison, Henry, Iowa, Jackson, Jasper, Jefferson, Johnson, Jones, Keokuk, Lee, Linn, Louisa, Lucas, Madison, Mahaska, Marion, Marshall, Mills, Monona, Monroe, Montgomery, Muscatine, Page, Polk, Pottawattamie, Poweshiek, Ringgold, Scott, Shelby, Story, Tama, Taylor, Union, Van Buren, Wapello, Warren, Washington, Wayne.
Southern Minnesota	Blue Earth, Brown, Carver, Chippewa, Cottonwood, Dakota, Dodge, Faribault, Fillmore, Freeborn, Goodhue, Hennepin, Houston, Jackson, Kandiyohi, Lac qui Parle, Le Sueur, Lincoln, Lyon, Martin, McLeod, Meeker, Mower, Murray, Nicollet, Nobles, Olmsted, Pipestone, Ramsey, Redwood, Renville, Rice, Rock, Scott, Sibley, Steele, Swift, Wabasha, Waseca, Washington, Watonwan, Winona, Wright, Yellow Medicine.
Northeastern Iowa	Allamakee, Black Hawk, Bremer, Buchanan, Butler, Cerro Gordo, Chickasaw, Clayton, Delaware, Dubuque, Fayette, Floyd, Franklin, Grundy, Hamilton, Hancock, Hardin, Howard, Mitchell, Winnebago, Winneshiek, Worth, Wright.
Northwestern Iowa	Buena Vista, Calhoun, Cherokee, Clay, Dickinson, Emmet, Humboldt, Ida, Kossuth, Lyon, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Webster, Woodbury.
Eastern South Dakota	Beadle, Bon Homme, Brookings, Brown, Clark, Clay, Codington, Davison, Day, Deuel, Douglas, Grant, Hamlin, Hanson, Hutchinson, Kingsbury, Lake, Lincoln, Marshall, McCook, Miner, Minnehaha, Moody, Roberts, Sanborn, Spink, Turner, Union, Yankton.

Daily settlement prices will be based on preliminary DTN cash indexes for each region. DTN will calculate preliminary indexes each business day based on the average bids from approximately 30 randomly selected cash market entities in each region. Final settlement prices will be based on final DTN cash indexes for each region. DTN will calculate final indexes based on the 10 percent trimmed mean from bids from approximately 74 to 180 elevators (depending on the region) in each region.

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