

# White Papers



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## Managing Order Types in Electronically Traded Commodity Markets

### Abstract

*Electronic trading whereby orders are transmitted online, matched on an exchange-regulated central clearing facility, and then reported is here to stay. This, in turn, requires that the futures trader have working knowledge of the mechanics of electronic trading perhaps the most important of which are types of orders and when to use them.*

When I placed my first futures trade over 15 years ago, electronic trading was in its nascency and far from being a proven concept. Indeed, one exchange, the former New York Cotton Exchange, briefly experimented with an alternative strategy: creating an affiliate trading floor in Europe. Orders received during the North American overnight session were transmitted to the European floor where they were executed via traditional open outcry. Since then, technological victories and hard work on the part of many individuals have led to the resounding success of electronic trading. According to CME Group, electronically executed trading accounted for 88% of its total volume in 2010, up from 86% in 2009. Meanwhile, as a result of mergers and acquisitions, all products of ICE Futures U.S.® – that includes the softs such as coffee, sugar and cotton – only trade electronically on the IntercontinentalExchange® (ICE®) online platform.

Electronic trading has brought many benefits but it has also brought some new challenges in terms of managing the orders that are used to buy and sell. Beyond some changes to the range of available order types, the trader must also consider something that was not an issue during the traditional days of open outcry: How to manage open orders during the overnight session.

| A Menu of Orders       |                    |                   |
|------------------------|--------------------|-------------------|
|                        | CME Globex         | ICE               |
| Market                 | Futures*, Options* | Futures, Options  |
| Market-Limit           | Futures, Options   | No                |
| Limit                  | Futures, Options   | Futures, Options  |
| Stop                   | Futures*           | Futures*          |
| Stop-Limit             | Futures            | Futures           |
| Cabinet                | Options            | No                |
| Day                    | Yes                | Yes               |
| Good-till-Cancel (GTC) | Yes                | Yes, futures only |
| Good-till-Date (GTD)   | Yes                | No                |
| Fill-or-Kill (FOK)     | Yes                | Yes, futures only |
| Fill-and-Kill (FAK)    | Yes                | Yes               |

\* available with protection

**A Menu of Orders.** Shown above are order types permitted on the electronic trade matching platforms of CME Group (Globex) and ICE Futures U.S. as of Dec 2010. Many are the same as their traditional open-outcry counterparts though some have slight improvements designed to meet the needs of traders executing large-quantity orders. Others, like the “Market-on-Open” and “Market-if-Touched” orders, didn’t make the list.

## Selecting the Proper Order

Understanding of the various types of orders that are available when trading electronically is the first step to selecting the proper order. **A Menu of Orders** shows the order types available on the CME Globex and ICE electronic trade matching platforms for futures and options trading. Many of these are familiar to most traders, though it might be useful to clarify a few.

Market-Limit orders are executed at the best available price on the opposite side of the market, meaning that a buy order lifts the best (lowest) offer and a sell order hits the best (highest) bid. If the order cannot be completely filled, then the order becomes a limit order at that best available price for the remaining quantity of the order. The Market-Limit order is used when price is more important than quantity in filling the order.

Stop-Limit orders are activated when an order's trigger price, the stop price, is traded in the market. The order is executed at all price levels between the trigger price and the limit price. Stop-Limit orders provide some control over slippage but if the limit price is set too close to the stop price, then the risk of the order not being filled rises.

Both CME Group and ICE have a protection feature on market and/or stop orders executed on their respective electronic trading platforms that is designed to prevent fills at extreme prices. This might be used by a trader having a large quantity to transact who does not want to fill the order incrementally (see **How to Hide Your Hand**). With protection, the fill price of an order cannot be outside of a dynamic price range set by the exchange for that market. Any unfilled quantity becomes a limit order at the edge of the range. As more bids and offers enter the system, prices may adjust so that the remainder of the order can then be filled.



**How to Hide Your Hand.** Trading electronically allows participants to see current bids and offers and associated quantity. This is an immediate disadvantage to the trader with a large order to fill. In response, the trading platforms of both CME Group and ICE enable the trader to enter an order for just part of the desired quantity and earmark the balance as reserve. The order is displayed with this smaller quantity and, when filled, an identical order is automatically created and sent. This continues until the reserve quantity is filled. In this way, the complete quantity remains hidden.

Among order qualifiers, CME Globex allows a "Good-till-Date" (GTD) order. GTD orders remain active on the order book until they are completely executed, expire at the date specified by the trader, are cancelled, or when the instrument expires. Say that you want to place an open limit order to buy but don't want to trade during the release of upcoming employment data several days hence, expecting volatility to be severe. You might, then, place a GTD limit buy order to expire the day before the data's release.

## Orders Gone but Not Forgotten

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Neither Globex nor the ICE platform supports the “Market-on-Open” (MOO) order, “Market-on-Close” (MOC) order or “Market-if-Touched” (MIT) order. Any trading system that relied on these order types will need to be adjusted accordingly when moving to electronic execution. I, myself, felt this change.

When I was trading 30-year Treasury bond futures during the regular trading hour session, I relied quite a bit on the “Market-on-Close” order. It’s not uncommon for bonds to experience a final push in the last 30 minutes of trading and close at or near the high or low for the day. On a day in which I had decided to make a trade, I would enter a MOC order in the afternoon to capture any such end-of-day price movement. However, with a shift to electronic trading of bonds, I suddenly lost this coveted order. I had to resort to the more tedious effort of calling in a market order at or around the close.

The loss may in fact go a bit deeper than this. In the old days when there was just open outcry trading, the market close was a time when participants gathered, so to speak, to cast a final opinion on the state of the market and to adjust their positions if necessary in accordance with their expectations of what may happen until next morning’s open. Consequently, there may have been informational content in the net result of this group consensus and this, in turn, provided the rationale for giving the market closing price special importance in many econometric and trading models. With extended electronic trading hours, though, the downtime until the next day begins (with the exception of the close prior to the weekend) may be just an hour or less so participants need no longer, out of necessity, make such a decision. The decreasing relevance of the open and close of a market that trades practically around the clock needs to be considered by those who have developed a trading system that, based on traditional regular trading hours, attaches special importance to these two events.

## Managing Orders Overnight

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The extension in hours of electronic trading raises the question of how to handle open orders during the overnight session. Should open orders be left to work just the same as during the day? This is especially pertinent if volume tends to be thin overnight.

The answer depends upon the trading system. For example, when implementing a technical system that was designed based upon prices over the entire trading day, then open orders should continue over the entire day as well. Price behavior in the overnight session is already incorporated into the system’s methodology and performance and the open orders, whether stop or limit, should already be set to accommodate that behavior.

On the other hand, a trading system that was designed based upon prices during the day (traditional regular trading hours) or even a subset of the day and that is implemented only during these hours should not be extended to include trading around-the-clock without prior testing and possible modification. Open orders, then, should not be automatically carried to the overnight session. They will have to be cancelled and re-entered the following day to coincide with the desired session. While this will continue to expose the trader to risk of a gap in prices, the trading system presumably already incorporates this into its methodology.

Beyond this, a trading system originally designed for regular trading hours may itself suffer with the movement toward round-the-clock trading because of volume migration. Prior to electronic trading, all volume occurred in the regular day session. With around-the-clock trading, some of those participants may elect to trade at different hours. The re-distribution of trading activity across the entire day can compromise the profitability of a trading program that had always assumed that all participants traded during the same day session. One solution to this, which would also make order management easier, would be to develop or modify the trading system to operate during the entire trading day.

## Disclosures

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