

CME GLOBEX REFERENCE GUIDE

The CME Globex electronic trading platform provides trading opportunities on the world's most diverse array of futures and options on futures products to customers around the world nearly 24 hours a day.

As the world's leading and most diverse derivatives marketplace, CME Group (www.cmegroup.com) is where the world comes to manage risk. CME Group exchanges offer the widest range of global benchmark products across all major asset classes, including futures and options based on interest rates, equity indexes, foreign exchange, energy, agricultural commodities, metals, weather and real estate. CME Group brings buyers and sellers together through its CME Globex electronic trading platform and its trading facilities in New York and Chicago. CME Group also operates CME Clearing, one of the largest central counterparty clearing services in the world, which provides clearing and settlement services for exchange-traded contracts, as well as for over-the-counter derivatives transactions through CME ClearPort.

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ELECTRONIC TRADING AT CME GROUP

GLOBAL ACCESS TO ALL YOUR MAJOR ASSET CLASSES FROM A SINGLE PLATFORM

The CME Globex platform was the first—and remains among the fastest—global electronic trading system for futures and options. Through its advanced functionality, high-reliability and global connectivity, it is now the world's premier marketplace for derivatives trading. CME Globex gives you access to the broadest array of futures and options products available on any exchange, virtually around the clock, from anywhere in the world.

CME Group electronic markets are among the most liquid in the world, enabling customers to choose from a wide range of products in thousands of possible expirations and spreads. In addition to a single point of connection, customers who trade CME, CBOT, NYMEX and COMEX futures and options enjoy streamlined development efforts, a single source for customer support and more efficient access to real-time market data.

The platform is continuously enhanced to serve customers with high-speed, high-volume capacity, improved options capabilities and a range of new products. Functionality and capacity continue to grow dramatically to accommodate demand.

Benefits include:

Performance and speed

Trades on CME Globex are executed and confirmed to the customer with millisecond precision. CME Group is constantly working to reduce processing time—the platform continues to handle significantly more volume at a significantly faster pace. Our average daily order volume continues to increase, while the response time for trades continues to decrease.

Diverse, innovative products

CME Globex is the first derivatives platform to offer global access to all major asset classes—interest rates, equity indexes, FX, agriculture, energy, metals, weather and real estate. Customers can trade a range of global benchmark futures and options, including our flagship Eurodollar and E-mini S&P 500 contracts, benchmark metals and energy products, and highly innovative alternative investment products such as weather and real estate futures. Additionally, through partnerships with exchanges like the Brazilian Exchange BM&FBOVESPA, Bursa Malaysia (BMD), the Dubai Mercantile Exchange (DME), the Korea Exchange (KRX), the Minneapolis Grain Exchange (MGEX), and CME Europe Ltd, CME Globex gives you simple and easy access to market exposure around the world.

Open access and direct participation

The platform is an open access marketplace that allows customers to participate directly in the trading process, view the book of orders and prices for CME Group products and enter their own orders. Anyone who has an account with a Futures Commission Merchant (FCM) or Introducing Broker (IB), who in turn has a CME Clearing guarantee, can trade on the platform.

Access the CME Globex platform from nearly 150 countries and foreign territories through a range of connectivity options.

Our electronic trading platform offers customers:

- Streamlined development efforts
- Single source for production customer support
- Access to free risk management tools
- More efficient access to real-time market data
- 10-deep futures and 3-deep options for most markets
- High-speed, high-volume capacity
- Improved options capabilities and a range of new products
- Access to listed products traded on, Bursa Malaysia Derivatives Berhad (BMD), the Dubai Mercantile Exchange (DME), the Korean Exchange (KRX), and the Minneapolis Grain Exchange (MGEX)

Connectivity Options

Customers worldwide have access to the platform from nearly 150 countries and foreign territories, with new connections being added all the time. The range of connectivity options include Internet connections, direct connections and several telecommunication hubs that provide reduced connectivity costs, increased accessibility and fast efficient trading. Our telecommunication hubs are located in Hong Kong, London, Seoul, Singapore, and Tokyo.

Fairness, transparency, anonymity

CME Group electronic markets provide fair and equal trading opportunity for all participants. Individual retail traders, small businesses and large institutions alike see and have access to the same prices. The anonymity of traders and firms is protected electronically in all bids, offers and trades.

Market integrity

CME Clearing, the largest derivatives clearing house in the world, guarantees all contracts traded on the CME Globex platform and ensures that all traders honor their performance obligations. The CME Global Command Center (GCC) monitors trading activity and system performance around the clock to assure the orderly functioning of CME Group electronic markets.

[Learn more about the connectivity options and benefits delivered by the CME Globex platform at cmegroup.com/globex.](https://cmegroup.com/globex)

PRODUCT OVERVIEW – WHAT'S ACCESSIBLE ON CME GLOBEX

The CME Globex platform brings diverse product solutions to customers around the world nearly 24 hours a day. These products address the business and risk management objectives of customers which are as varied as our products.

To view a complete list of CME Group products available on the CME Globex platform as well as contract codes, up-to-date specifications and expiration dates for all CME Group products, visit cmegroup.com.

Click on the product names below to go to a description for that product.

- [CME Group Interest Rate Products](#)
- [CME Group Energy Products](#)
- [CME Group Agricultural Products](#)
- [CME Group Equity Indexes](#)
- [CME Group Metals Products](#)
- [CME Group FX Products](#)

CME Group Interest Rate Products

CME Group offers the world's deepest centralized pool of interest rates liquidity, providing traders with a safe, efficient means for managing interest rate risk across the entire U.S. dollar-denominated yield curve. Trade futures and options on the most widely followed global benchmarks, including Eurodollars, U.S. Treasuries, 30-Day Fed Funds, SOFR and SONIA. Plus, benefit from portfolio margining with our market-leading 24 currencies of cleared Interest Rate Swaps (IRS). For more information, visit cmegroup.com/ir.

CME Group Equity Indexes

CME Group is the leading equity index derivatives marketplace, offering futures and options on key benchmark indexes that cover the spectrum of small-, mid- and large-cap indexes in the United States, Europe and Asia.

CME Group FX Products

CME Group offers the world's largest regulated FX marketplace and one of the top two FX platforms with over \$125 billion in daily liquidity. We offer transparent pricing in a regulated centralized marketplace that provides all participants equal access to 56 futures contracts and 31 options contracts based on 20 major world and emerging market currencies. Trading FX at CME Group gives you effective and efficient investment and risk management opportunities and unprecedented access to a global array of market participants – including banks, hedge funds, proprietary trading firms and active individual traders. Additionally, we continue to roll-out comprehensive and flexible clearing services for OTC FX trades through CME ClearPort – an open-access, platform agnostic, post-execution clearing solution.

CME Group Agricultural Products

CME Group offers the widest range of agricultural futures and options available on any exchange. Our agricultural contracts include grains, oilseeds, livestock, dairy, lumber, fertilizer and other products. We serve agricultural producers, commercial firms, and entities seeking risk management and

hedging tools, alongside asset managers, hedge funds, and liquidity providers who seek investment opportunities.

View our agricultural contracts and specifications at cmegroup.com/agriculture.

CME Group Metals Products

CME Group offers a full range of precious, base and ferrous contracts, including gold, silver, platinum, palladium, copper, steel and aluminum futures and options. We also offer smaller size contracts for gold (miNY 50 oz.), (E-micro 10 oz.), silver (E-mini 1,000 oz.), (miNY 2,500 oz.) and copper (E-mini 12,500 lbs.). Additionally, we offer clearing services of OTC London Gold spot and forwards and Iron Ore Swap futures through CME ClearPort.

View our metals contracts and specifications at cmegroup.com/metals.

CME Group Energy Products

CME Group offers the most extensive and liquid energy marketplace in the world. We offer global benchmarks WTI crude oil and Henry Hub natural gas as well as gasoline, heating oil, electricity, and weather products. Our benchmarks set the price for energy resources worldwide. From the world's largest industrial companies to financial institutions, our diverse universe of participants trade on CME Globex, through CME ClearPort. Building on the legacy of NYMEX, CME Group is the world's leading energy marketplace.

View our energy contracts and specifications at cmegroup.com/energy.

ACCESSING THE CME GLOBEX PLATFORM

AN OPEN ARCHITECTURE THAT EASILY ACCOMMODATES CHANGING MARKETS, NEW CUSTOMERS AND NEW PRODUCTS

The open architecture of the CME Globex platform provides a wide range of access solutions and extensive functionality. The platform readily accommodates changing markets, new customers and new products. In addition to the trade matching system, components of the platform include trading applications, an order entry interface, a market data dissemination system and order risk management tools. These components all work together seamlessly to provide virtually instantaneous market visibility and trading.

A Wide Range of Trading Solutions

Traders may develop a proprietary front-end application or select from a variety of certified applications to execute electronic orders and receive market data directly. These applications are available from CME Group, FCMs, IBs and Independent Software Vendors (ISVs), and vary in the types of functionality supported.

Learn more about front-end trading solutions at cmegroup.com/tradingapplications.

CME Group Solutions

CME Direct

CME Direct is a highly-configurable trading front-end system that allows customers to directly access CME Group markets. CME Direct's integrated environment allows you to trade futures and options, enter blocks and fulfill reporting requirements, all on one screen. The platform is fast and robust, with click-optimized options strategy builders, rapid order entry tickets, real-time block and RFQ feeds and real-time streaming quotes, to help you make the most of your trading front-end.

Key Functions:

- Online trading of CME Group futures, including all NYMEX benchmarks
- Electronic trading of OTC markets, supported by selected, independent brokers

- Support for hybrid, broker-assisted trading combines the convenience of online execution with the benefits of voice brokerage
- Fully customizable instant messenger platform, CME Direct Messenger for your trading and communication needs
- Available globally, regionally supported

For more information please visit cmegroup.com/direct.

The CME Globex Order Routing Interface: iLink

iLink provides direct access to all CME Globex markets and supports all the enhanced trading functionality available on the platform. Based on the industry-standard FIX 4.X protocol, it readily supports customized trading systems.

Learn more about iLink at cmegroup.com/ilink.

Market Data Platform (MDP 3.0)

Market Data Platform (MDP) 3.0, a low latency and direct data access solution designed to improve customers' ability to process and act on real-time price information.

MDP 3.0 includes:

- Simple Binary Encoding (SBE)
- FIX 5.0 (SP2) Market by Price messaging formats
- Event-driven market price and trade information
- Enhanced market state dissemination
- Increased timestamp granularity
- Opt-In functionality for Order identifier on both market data and order entry messages
- MBO (Market by Order) on the same feed as MBP providing full depth of book
- Order identifier on both market data and order entry messages (mandatory based on MBO availability)

CME Group Login

CME Group Login is a self-managed, centralized user profile service that authenticates access to CME Group applications and services. CME Group Login provides:

- Access to CME Group applications and services with one user ID and password.
- Ability to update or change your CME Group Login profile online, without paperwork.
- Access to CME Group systems with permissions for multiple clearing firms, when appropriate.
- A unique user ID that is retained when changing clearing firms or employers.

Learn more about CME Group Login at cmegroup.com/login.

CME Globex Risk Management Tools

Cancel on Disconnect

Cancel on Disconnect (COD) monitors the order routing interface iLink system for involuntary lost connections between customers and the CME Globex platform. If a lost connection is detected, COD cancels all resting futures and options orders for the disconnected registered customer. This does not include Good Till Cancel (GTC) and Good Till Date (GTD) orders. It is the customer's responsibility to reenter all orders that have been canceled by COD. There is no charge for the COD service.

Features:

- Free service

Learn more about this tool at cmegroup.com/cod.

Kill Switch

Kill Switch is a GUI that is designed to allow firms a one step shutdown of all their CME Globex activity at the SenderComp ID level.

When the Kill Switch functionality is activated by the permissioned firm, all order entry is blocked and all working orders are cancelled for either a selected subset or all of firm's SenderComp IDs.

Kill Switch functionality includes:

- Day Orders and Good Till messages are blocked when Kill Switch is invoked, however, Kill Switch will not cancel resting Good Till or Day Orders when a market is "closed" or in the final "30 seconds" prior to an open.
- Impacted customers are prevented from submitting any message other than what is required to keep alive the connection with the exchange (session management).
- Only orders intended for CME Group core match engines are supported.
- Customers receive a reject message with entity level and administrator role information.
- Blocking takes less than one second, though the cascading cancellations may extend beyond this time frame.

CME Globex Credit Controls (GC2)

CME Globex Credit Controls (GC2) provides pre-execution risk controls and allows Clearing Firm Risk Administrators to set real-time credit limits on all CME Globex customers. Clearing Firm Risk Administrators can define trading limits and dynamically act if those limits are exceeded. GC2 is intended to complement existing Clearing Firm risk systems and front-end risk tools. GC2 access is only available at the Class A Clearing Member level. As stated in the CME mandatory Credit Control Policy (Rule 949), clearing members must employ GC2 credit control functionality on every one of their CME Globex Executing Firms.

Learn more about this tool at cmegroup.com/gc2.

Risk Management Interface (RMI)

An Application Programming Interface (API) and Graphical user interface (GUI) that supports granular, pre-trade risk management for Clearing firms. RMI allows Clearing Firms to block or unblock order entry by execution firm, account, exchange, derivative type, and/or side.

For more information, visit cmegroup.com/rmi.

FirmSoft

FirmSoft is a free, browser-based order management tool that provides real-time visibility and access to working and filled orders across multiple firm IDs. FirmSoft provides view and cancel capabilities for all CME Globex orders.

Users can view:

- Order information, including status
- Fill information, including partial fills
- History
- Details, including timestamps and cancel replace history

Users can also cancel an individual order, a group of orders or all working orders for which they are permitted with FirmSoft.

Market participants also have the ability to call into the GCC to cancel and/or status orders based on their CME Group Login profile permissions being enabled in FirmSoft.

Learn more about this tool at cmegroup.com/firmsoft.

Inline Credit Controls (ICC)

ICC is an optional risk management function that is used by Clearing Member Firms (CMF) and Executing Firms (EF) to set daily position limits for CME Globex orders, per product, at the account level. Each order will be checked on an in-line, preexecution basis.

For more information, visit cmegroup.com/icc.

THE TRADING SESSION

Trading sessions on the CME Globex platform meet customer needs around the world.

Electronic Trading Availability

Virtually all CME Group products trade electronically at some point during the day, but specific schedules vary according to product.

Note: Special holiday trading hours are available at cmegroup.com/holiday.

A current list of products on CME Globex and specific availability can be found online at cmegroup.com/trading_hours.

Trading Sessions and States

Trading on the CME Globex platform is generally available Sunday evening through late Friday afternoon. Exact trading hours vary by product. CME Globex sessions start in the afternoon or evening and mark the beginning of the next trading day (for example, orders entered during Sunday's evening session are dated for and cleared on the following Monday).

Market States

All CME Globex markets cycle through the daily order entry states. Below are the pre-defined market states:

1. Pre-Opening

A predetermined time before the trading session opens when customers can begin entering, modifying and canceling orders for the next trading day, but no trades are executed.

2. Pre-Opening/No-Cancel

During the Pre-Opening period, the last 30 seconds prior to transitioning to Open.

The Pre-Opening/No-Cancel period allows orders to be placed for the next trade date, however it does not allow orders to be canceled or modified. Trades are also not executed during this period.

3. Open

The period of time when orders are sent and matched in real time, based on the product's trading times.

4. Pause

A predetermined time when customers can only cancel orders. No trades are executed.

5. Closed

This CME Globex state change cancels, day orders and advance the trade date.

6. Post Close/Pre Open (PCP)

This market state allows order placement, modification, and cancellation of GTC/GTD orders only. No matching takes place and no action can be taken on non GTC/GTD orders.

7. Maintenance Period

Occurring between 16:00 Central Time (CT) and 16:45 (CT) Monday through Thursday.

The ability to enter, modify or cancel orders varies according to the CME Globex predefined state, as the chart below shows:

	Order Entry	Order Modification	Order Cancellation
CME Globex Session Starts 1. Pre-Opening	✓	✓	✓
2. Pre-Opening/No Cancel	✓		
MARKET OPEN			
3. Open	✓	✓	✓
4. Post Close/Pre-Open (PCP)*	✓	✓	✓
MARKET CLOSE			
CME Globex Session Ends 5. Pause			✓
6. Closed			
7. Maintenance Period			

■ No order functionality available

Note: All open session orders are automatically canceled at market close.

* GTC and GTD orders only.

ENTERING ORDERS ON CME GLOBEX

The CME Globex platform supports a broad array of order functionality, offering convenience and flexibility to meet a wide variety of individual trading needs. This section

summarizes the order types and order duration qualifiers available in the CME Group markets.

Supported Order Types and Functionality on CME Globex – By Product Line

Order Types	Agriculture	Equities	FX	Interest Rates		Energy	Metals	Real Estate	Weather
				CME	CBOT				
Limit	F,O	F,O	F,O	F,O	F,O	F,O	F,O	F	F
Market Order with Protection	F,O	F,O	F,O	F,O	F,O	F,O	F,O	F	F
Market to Limit	F,O	F,O	F,O	F,O	F,O	F,O	F,O	F	F
Stop Limit	F	F	F	F	F	F	F	F	F
Stop Order with Protection	F	F	F	F	F	F	F	F	F

Order Types	Agriculture	Equities	FX	Interest Rates		Energy	Metals	Real Estate	Weather
				CME	CBOT				
Minimum Quantity	F,O	F,O	F,O	F	F,O	F	F	F	F
Display Quantity	F,O	F,O	F,O+	F*	F,O	F,O	F,O	F,O	F

*Allowed only with a Hidden Quantity / Display Quantity less than or equal to 60:1

+Only for non-Big Six (excluding 6A, 6B, 6C, 6E, 6J, 6S)

Functionality	Agriculture	Equities	FX	Interest Rates		Energy	Metals	Real Estate	Weather
	CME	CBOT							
Cross	O	O*	O	O	O	O	O		
Mass Quote	O	O	O	O	O	O	O		
UDS	O	O	O	O	O	O	O		

*Only allowed between 7 p.m. and 7:45 a.m.

KEY: F = Available for futures O = Available for options

Order Types

The availability of specific order types varies based on how customers access CME Globex and the products they trade.

Limit

A Limit order allows the buyer to define the maximum price to pay and the seller the minimum price to accept (the limit price). A Limit order remains on the book until the order is either executed, canceled or expires.

Market Order with Protection

Market orders at CME Group are implemented using a “Market with Protection” approach. Unlike a conventional Market order, where customers are at risk of having their orders filled at extreme prices, Market with Protection orders are filled within a predefined range of prices (the protected range). The protected range is typically the current best bid or offer, plus or minus 50 percent of the product's Non-Reviewable Trading Range. If any part of the order cannot be filled within the protected range, the unfilled quantity remains on the book as a Limit order at the limit of the protected range.

Stop Limit

A resting Stop Limit order is triggered when the trigger price is traded in the market. The order then becomes a Limit order with the customer's specified limit price. The order is executed at all price levels between the trigger price and the limit price. If the order is not fully filled, the unfilled quantity remains in the market at the limit price. A buy Stop Limit order must have a trigger price greater than the last traded price for the instrument. A sell Stop Limit order must have a trigger price lower than the last traded price for the instrument.

Stop Order with Protection

A Stop with Protection is a Stop Limit order (see above) with the limit price calculated based on:

- The trigger price, and
- The protected range.

The protected range is typically the trigger price, plus or minus 50 percent of the Non-Reviewable Trading Range for that product. The limit price for a buy Stop with Protection will be calculated by adding the protected range to the trigger price. Likewise, the limit price for a sell Stop with Protection will be calculated by subtracting the protected range from the trigger price. Once the limit price for the order is calculated, it becomes a Stop with limit order in all respects.

Request for Cross (RFC)

A Request for Cross Order ("RFC Order") is required to be entered to facilitate options orders that result from allowable pre-execution communications. An RFC Order contains both the buy and sell sides in a single message, and must be entered by one party at a single price and quantity. Both sides of the RFC Order are exposed to the market and will first be matched against resting orders that are at the same or a better price than the price on the RFC Order prior to any portion of the two orders matching opposite each other. Any unmatched quantity on one side of the RFC Order will remain as a working order. Please refer to Rule 539 for additional information on RFC Orders.

Mass Quote

A Mass Quote is a bundle of two-sided, actionable quotes in one or more options markets submitted via a single message. Only designated customers can submit Mass Quotes, and they have special protections that help mitigate their risk in matched transactions.

Additional Notes on Order Types

- Some order types require an opposing bid or offer to be present in the market before the order can be submitted. Entering one of these order types without an opposing bid or offer present will cause the order to be rejected.
- Front-end system vendors may offer additional functionality in their applications. Check with your vendor for more information.
- Information on Non-Reviewable Trading Ranges is available in the [Client Systems Wiki](#).

Order Quantity and Duration

Order duration qualifiers allow you to indicate how long the order will be valid – for example, if it should remain open for the next trading session if it isn't executed by the end of the trading session in which it was entered. An order submitted without an order duration qualifier will be eliminated at the end of that same trading session if not filled, or if it was received between trading sessions, at the end of the following session.

Day

An order to buy or sell a contract during that trading day only. Day orders that have been placed but not executed on a trade date do not carry over to the next trade date. Unexecuted Day orders are eliminated at the end of the day.

Good 'Till Canceled (GTC)

GTC orders will remain in force until executed, canceled or the contract expires.

Good 'Till Date (GTD)

GTD orders remain in force through the end of the specified date unless executed or canceled, or the contract expires.

Fill and Kill (FAK)

FAK orders are immediately filled in whole or in part at the specified price or better. Any remaining quantity is eliminated.

Fill or Kill (FOK)

FOK orders are canceled if not immediately filled for the specified minimum quantity at the specified price or better.

Minimum Quantity

A Minimum Quantity order is immediately executed only if a certain minimum quantity of that order can be immediately matched. If the minimum quantity cannot be immediately filled, the entire order is canceled.

Display Quantity

A Display Quantity displays only a portion of the order to the marketplace. When the displayed quantity has been filled, another portion equal to the displaced quantity is then displayed as a new order

Additional Functionality

UDS

User-Defined Spreads (UDS) functionality enables customers to create and trade unique instruments intra-day. A UDS: Covered instrument is composed of an outright option or options strategy covered by one or more underlying outright futures.

A UDS: Combos instrument is composed of any or all of the following:

- Exchange-defined outright option(s)
- Existing user-defined spread(s)
- Futures outrights

MARKET PROTECTIONS

The following features minimize excessive price movements on the CME Globex platform and ensure fair, competitive markets.

Velocity Logic

Velocity Logic is designed to detect market movement of a predefined number of points either up or down within a predefined time. Velocity Logic introduces a momentary suspension in matching by transitioning the futures instrument(s) and related options into the Reserved/Pause State.

Whenever a lead month futures instrument is placed in a Reserved State, the Options Auto-Reserve functionality automatically pauses matching in the associated options markets. All resting Mass Quotes are canceled when the Auto-Reserve functionality is initiated. This state is maintained for a few seconds after the futures contract has resumed trading. During the reserved period, customers can submit, modify and cancel all orders except Market Orders and Mass Quotes; Mass Quotes and Market Orders are rejected.

Price Limits and Circuit Breakers

Numerous CME Group products have rules that establish daily price limits and/or circuit breakers in order to promote market confidence and mitigate risks to the market infrastructure by allowing market participants time to assimilate information and mobilize liquidity during periods of sharp and potentially destabilizing price swings. Circuit breakers are calibrated at defined levels and completely halt trading for a defined period of time or for the balance of the day's trading session. Price limits allow trading to continue, but only within the defined limits.

Price Banding

To ensure fair and orderly markets, CME Group has a price banding mechanism in place that subjects all incoming electronic orders to price verification and rejects all orders with clearly erroneous prices. Price bands are monitored throughout the day by the CME Global Command Center (GCC) and adjusted if necessary. A dynamic enhanced options price banding system is implemented for options and options spreads traded on the CME Globex platform.

For complete banding information on each CME Globex product, including information on the enhanced options price banding, visit cmegroup.com/pricebanding.

Reserve Price Band Multiplier

When a non-implied Lead Month and/or Secondary Month futures instrument transitions into the Reserved State, the price band values are expanded by a predefined Reserve Price Band Multiplier. The Reserve Price Band Multiplier expands the default Price Band by a positive whole number multiplier (e.g., 2x or 3x) during the Reserved State, to allow Limit and Stop order entry from the non-biased Buy or Sell side of the market. Allowing Limit and Stop order entry supports the creation of an Indicative Opening Price (IOP) at a fair market value level, thus supporting a more accurate reopening.

Matching Algorithms

To ensure that customers get the best possible executions at the fairest prices, the CME Globex platform employs predefined sets of matching rules—algorithms—designed to best meet the needs of market participants in each product group. Learn more about these features by visiting the [Client Systems](#).

MARKET OPERATIONS

The CME Global Command Center (GCC)

The GCC provides market operations, support and customer service for all electronic trading on CME Globex. That includes handling all CME Globex inquiries and requests for assistance from CME Group-registered contacts. The GCC supports the matching engine, order routing and market data interfaces and network connectivity.

Additionally, the GCC also provides customers with order status and, in cases of emergency, may cancel orders for customers. The GCC will only provide critical assistance to CME Group registered contacts. Critical assistance consists of order status, order cancellation and net position. If you are not registered, have your firm administrator call the GCC on your behalf.

Areas of expertise include:

- Product and market information
- Block trade reporting
- Performance troubleshooting
- GCC notifications
- Product scheduling
- Trading halt management
- Limit move procedures
- Error trade oversight and resolution
- Liability claim support
- Order status and cancellation
- Settlement and limit price maintenance
- Price banding oversight
- Product state management (launching, listing, delisting, activations and expirations)

Hours

The GCC is available from 14:00 CT Sunday through 16:45 CT Friday. An international number is provided for the convenience of our global customers.

How to contact the GCC

U.S.:

+1 800 438 8616

Europe:

+44 20 7623 4747

Asia:

+65 6532 5010

Order Cancel/Status Requests

In order to process an order cancellation or status, the GCC requires CME Group-registered contacts to be able to confirm their identity (through security information) and provide:

1. CME Group Login
2. Nature of inquiry
3. Account number
4. Instrument, buy or sell and quantity

Market participants also have the ability to call into the GCC to cancel and/or status orders based on their CME Group Login profile permissions being enabled in FirmSoft.

GCC Phone Requests – Quick Navigation Guide

This quick reference guide to the automated GCC telephone system is designed to help customers navigate the phone system more quickly

Note: You do not need to wait for the menu prompts to play, you can select your option at any time.

CME GLOBAL COMMAND CENTER PHONE MENU

GCC – +1 800 438 8616

GCC Outside U.S. – +44 20 7623 4747 / +65 6532 5010

Press Option 1 for ~~CME Globex Support~~

Sub Menu Option:	Description:	Select For:
1	Invoke the Error Trade Policy	Invoke the Error Trade Policy
2	Order Status, Order Cancellation	Critical Order Status Assistance
3	All Technical or Market Support	Assistance for issues relating to Production Connectivity, Order Entry, Market Data, General Functionality and FirmSoft Support
4	Report a Block Trade	Report a Block Trade

Press Option 2 for ~~CME ClearPort and API Support~~

Sub Menu Option:	Description:	Select For:
1	To facilitate a CME ClearPort Transaction including corrections	GPC Transactions
2	Other CME ClearPort, API and CME ConfirmHub Support	All other GPC, API, ConfirmHub Support

Note: You can select the desired option at any time after the menu begins.

For GCC Administrative Assistance:	+1 312 580 5387
For Certification and New Release Environments, call CSET:	United States: +1 312 930 2322 Europe: +44 20 3379 2803 Asia: +65 6593 5593 Email: cset@cmegroup.com

All calls to the GCC are recorded. cmegroup.com/gcc

GCC Notification System

To keep customers informed, especially during system emergencies, the GCC also provides CME Group-registered customer contacts with real-time CME Globex updates via telephone, e-mail and pager. In emergency situations, special procedures are implemented to enhance information sharing.

If CME Group determines that an event is likely to affect a significant number of customers or may require an emergency market halt, the information is disseminated via GCC Targeted Messaging, Market Data Platform administration messages, the CME Group Web site and/or the GCC Phone Menu.

Registered contacts also can sign up for GCC Targeted Messaging to receive messages via e-mail, pagers, mobile phones and land phones.

If markets are halted, the GCC will send regularly timed messages throughout the investigation of the event. Once the issue has been resolved, the GCC will send appropriate messages with the same methods used to announce that the event has been resolved.

In the event of a Market Halt, the GCC will also make this information available to all customers via cmegroup.com.

Trade Review Policy

If an order execution occurs at a price not representative of the current market, the CME Group customer may call the GCC to request to have the trade reviewed.

Some important notes:

The customer must call the GCC within eight minutes of the error trade. A trade stands if the GCC is not notified within the eight-minute limit. The GCC also sends out a message (including the contract, time of trade, quantity and trade price) to all CME Globex registered contacts via Targeted Messaging alerting them that the trade has been questioned.

In order to cancel or price adjust a trade, the GCC must first determine if the trade is within the Non-Reviewable Trading Range:

- If a trade is within the Non-Reviewable Trading Range, the trade will stand and cannot be canceled or price adjusted.
- If a trade is outside the Non-Reviewable Trading Range, the GCC will send a message (including the contract, time of trade, quantity and trade price) to all CME Globex registered contacts via Targeted Messaging alerting them that the trade has been canceled, adjusted or stands.

Note: All futures and options contracts are price adjusted, not canceled, except in certain circumstances. View more information on the trade cancellation and price adjustment procedures in Rule 588, including the Non-Reviewable Trading Ranges for each product.

CME Globex Messaging Efficiency Program

The CME Globex Messaging Efficiency Program creates fair business guidelines by which customers are billed a surcharge for overly high message rates. This program benefits all customers trading on CME Globex by discouraging excessive messaging abuses. This helps ensure that CME Globex maintains the responsiveness and reliability that our customers around the world have come to expect.

The CME Globex Messaging Efficiency Program scoring system establishes an executing firm's messaging score based on the specific message type submitted. During this process, the Volume Ratio measures the ratio between an executing firm's messaging score and the executing firm's traded volume in a particular product group between 7:00 a.m. and 3:15 p.m. Central Time (CT). If an executing firm's daily Volume Ratio exceeds the established Product Group Benchmark and all exemption types have been exhausted or are not applicable, CME Group will levy a surcharge of \$1,000 per product group, per day.

To account for unusual market conditions, there are a number of exceptions to the CME Globex Messaging Efficiency Program.

More information on the CME Globex Messaging Efficiency Program is available at cmegroup.com/messagingefficiencyprogram.

The Liability Claim Process

Customers who take market action based upon an incorrect order status provided by the GCC or a CME Group system, service or facility may complete a Liability Claim Form to recover realized losses. In general, CME Group may accept liability for direct losses incurred by a customer who takes market action based upon an incorrect order status provided by the GCC or a CME Group system, service or facility. CME Group liability in such situations is subject to cumulative liability caps. A customer who receives an incorrect status must take immediate action to limit any losses as soon as the customer knows or should have known that the order status information is incorrect.

In addition, CME Group will not be liable if it provides prior notification that a CME Group system, service or facility may produce such incorrect order status information and a means to access the correct information. CME Group liability to such a customer will be limited to the price at which the customer's position could have reasonably been liquidated.

If you have any questions regarding the Liability Claim Process, please contact the GCC or refer to the complete text of the policy in the Liability Claim Form document posted on the CME Group Web site.

CME Clearing

In today's market environment, effective risk management is a business imperative. Risk management opens the door to opportunity and it supports faster and smarter decisions. CME Group's centralized clearing capability brings the benefits of transparency, trust and confidence to our markets. By acting as the counterparty to every trade, CME Clearing mitigates counterparty credit risk, meaning that for every trade completed on our exchange, we guarantee the financial soundness of both parties. By being at the center of every transaction, we can protect everyone's interest and ensure the integrity of the marketplace.

Key Features of CME Clearing:

- **Your counterparty credit risk is substantially mitigated** as CME Clearing becomes the buyer to every seller and the seller to every buyer. We guarantee the financial soundness of both parties.
- **Accumulation of debts/losses is limited** and transparency is achieved as CME Clearing marks your positions to market twice daily.

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- **Financial safeguards** stand ready to mitigate systemic risk.* In over a century of excellence, CME Clearing has never had a default. For more information on financial safeguards, visit cmegroup.com/clearing/cme-clearing-overview/safeguards.html.
 - **Customer segregation protections** under which your funds are not subject to creditor claims against your own clearing firm should it become financially unstable or insolvent are included.
 - **Multilateral netting helps you gain capital efficiencies** and decreases your credit exposure.
 - **Your choice of execution is preserved** and made safer. You have the flexibility to manage your risk on-exchange or with cleared-only services for OTC products, all with the performance guarantee of CME Clearing.

Electronic Market Data (E-data) Information

CME Group provides customers with access to real-time, delayed and historical market data via Internet-based E-data applications.

Real-Time Data

CME E-quotes

The CME E-quotes application offers a best-in-class display of data. In both web-based desktop and mobile editions, CME E-quotes delivers real-time, delayed and historical quotes and charts, and analytics to your exact specifications. Benefit from global access and a powerful combination of sophistication, usability, performance and price.

For more information about CME E-quotes, visit cmegroup.com/e-quotes.

Delayed Data

Charts

This application provides current and historical performance of CME Group contracts with free delayed snapshot charting.

Delayed Futures and Options

Customers can get detailed delayed price information at each product and contract level.

Historical Data

CME DataMine

With a broad array of data types, CME DataMine makes it easier than ever to access historical price information in a form that can be easily used to develop, enhance or refine trading algorithms. By providing market depth, top-of-book, time and sales, and end-of-day data, CME DataMine has established itself as a premier information resource. Customers can access daily updates through a secure cloud service as well as conduct one-time bulk orders.

For more information on CME DataMine, visit cmegroup.com/datamine.

Important Contacts

Contact Information	Department	Phone
CME Globex Market Access	CME Global Account Management U.S. Europe Asia	+1 312 634 8700 +44 203 379 3754 +65 6593 5505
Market and System Inquiries	CME Global Command Center (U.S.) U.S. Europe Asia	+1 800 438 8616 +44 20 7623 4747 +65 6532 5010

CME GLOBEX ELECTRONIC TRADING RULES AND POLICIES

The following list of rules and policies is not meant to be exhaustive or complete, but is intended as a summary of the most common CME Globex rule or policy questions. For the text of actual rules or interpretations, please refer to the CME, CBOT or NYMEX Rulebooks, which are available online at cmegroup.com, or the various Market Regulation Advisory Notices or other policies that have been published on the Web site. This document should not be relied upon as the official source of the rules. Further, while many rules have been harmonized across CME Group Exchanges, several rules remain different and market participants must be aware of these differences. Specific differences are noted with respect to the rules referenced below.

Accessing CME Globex

Rule 574 outlines certain requirements for gaining access to CME Globex, including a requirement that all connections to CME Globex be guaranteed by a clearing member firm. Additionally, all individuals entering orders in other than a clerical capacity on behalf of non-member customers must have appropriate industry registration. These orders may be entered only from designated areas on the trading floors or from the premises of an entity registered to conduct customer business. Any clearing member firms providing CME Globex access to their customers must comply with all Credit Control requirements as set forth in Schedule 6 of the Customer Connection Agreement.

Market Data Usage on CME Globex

Any entity connecting to CME Group for market data is required to sign the Market Data License Agreement (MDLA) and complete a Scope of Use document. The Market Data License Agreement (MDLA) covers acceptable uses of all CME Group market data and participating Partner Exchanges.

CME Globex Trade Cancellations and Price Adjustments

Rule 588 states that trade prices determined by GCC to be within the Non-Reviewable Trading Range will generally not be canceled or adjusted. The only exception to this rule is when the GCC determines that allowing a trade to stand as executed may have a material, adverse effect on the integrity of the market. The GCC may review a trade based on its analysis of market conditions or a request for review by a CME Globex user. A request for review must be made as soon as possible, but will generally not be considered if more than eight minutes have passed since the trade occurred. A party responsible for an order(s) which results in a trade price adjustment or a trade cancellation may be liable for realized losses incurred by affected parties pursuant to the criteria outlined in Rule 588. The Non-Reviewable Trading Ranges for all products and the Bid/Ask Reasonability Allowance for options trading on CME Globex are set forth in Rule 588.

Identification of CME Globex Terminal Operators

Rule 576 requires that CME Globex terminal operators be identified to the Exchange in the manner prescribed by the Exchange, and are subject to Exchange rules. For parties accessing CME Globex through iLink, clearing member firms or ISVs will issue the workstation user ID (known as the Tag 50 ID).

The user ID must be submitted with each order sent to CME Globex. Additionally, some user IDs are required to be registered with the applicable Exchange by an Exchange clearing member firm. **In no event may a member or clearing member firm enter or permit another party to enter an order with a user ID other than the individual's own unique user ID.**

Clearing member firms must maintain historical records of the identities of each user for at least five years. Additionally, please see the most recent Market Regulation Advisory Notice concerning Tag 50 IDs and registration requirements which may be accessed here cmegroup.com/rulebook/rulebook-harmonization.html.

Rules and Requirements for Entering Orders on CME Globex

This section highlights the most commonly referenced rules and requirements for entry of orders into CME Globex. **It is not intended as an exhaustive list of all such rules and requirements.**

- Pursuant to Rule 548, all non-discretionary customer orders must be entered into CME Globex in the order received. If the non-discretionary order is not able to be entered immediately upon receipt, it must be entered when it becomes executable.
 - Pursuant to Rule 529, no person may withhold or withdraw any order from the market for the benefit of any person other than the person placing the order.
 - Pursuant to Rule 531, a person in possession of a customer order may knowingly trade against his customer order for his own account only if the customer order has been entered immediately upon receipt and has first been exposed on CME Globex for a minimum of five seconds in the case of futures orders or for a minimum of 15 seconds in the case of options orders.
 - Pursuant to Rule 532, no person may disclose another person's order or solicit or induce another person to disclose order information. An exception to this prohibition is set forth in each Exchange's Rule 539.C., which allows parties to engage in pre-execution communications regarding CME Globex trades in certain products provided that the parties comply with the requirements set forth in the rule. Please see the section on pre-execution communications for a more detailed discussion of the rules regarding pre-execution communications concerning CME Globex trades.
 - Pursuant to Rule 534, no person shall place or accept buy and sell orders in the same product and expiration month, and, for a put or call option, the same strike price, for accounts with the same beneficial ownership or for accounts with common beneficial ownership; and where the person knows or reasonably should know that the purpose of the orders is to avoid taking a bona fide market position exposed to market risk.
- Every order entered into CME Globex must include an account designation, although there is an exception to the requirement of entering the actual account number if the order is entered by an eligible account manager for accounts eligible for post execution allocation as set forth in Rule 536.C.
 - Pursuant to Rule 530, no person may enter an order into CME Globex for an account they own, an account in which they have a financial interest or an account over which they have discretionary trading authority (including an order allowing discretion as to time and price) when such person is in possession of any order for another party that CME Globex is capable of accepting.

CME Globex Record Keeping and Records Retention Requirements

For each order entered into CME Globex, Rule 536.B. requires the terminal operator to input a) the user ID assigned him by the Exchange, a clearing member or other authorized entity (Tag 50 ID) b) the price, quantity, product, expiration month, CTI code, automated or manual indicator (Tag 1028) and account number (except as provided in Section C.), and, for options, put or call and strike price.

Definitions concerning each of the four CTI codes are set forth in Rule 536.D.

Each order entered into CME Globex must be entered with the correct user ID assigned by the Exchange, a clearing member or other authorized as described earlier in this document.

Pursuant to Rule 536.B, terminal operators who receive orders that are capable of and are immediately entered into CME Globex are not required to create a written, time-stamped order. Orders that are not or cannot be entered immediately into CME Globex must be reduced to writing and include the date, time stamp, order instructions and account designation. CME Globex users are encouraged, but not required, to print and save a listing of all orders they enter into CME Globex during each session.

Clearing member firms are responsible for maintaining or causing to be maintained for five years an audit trail for electronic orders entered into CME Globex through iLink, and must be able to display this data in a pre-approved format using terminology and field names consistent with other CME Group systems. Please see Rule 536 in each Exchange's Rulebook for more information on record keeping requirements.

Pre-Execution Communications Concerning CME Globex Trades

In certain markets, market participants are allowed to engage in pre-execution communications with regard to transactions executed on CME Globex. Such pre-execution communications are permitted in all CME, NYMEX and COMEX futures products traded on CME Globex, and in all CBOT interest rate, equity index, ethanol, commodity index and real estate index futures products and CBOT interest rate swaps traded on CME Globex. Pre-execution communications remain prohibited in all CBOT grain and oilseed futures products traded on CME Globex. In order for parties to engage in pre-execution communications where allowed, they must adhere to the requirements and procedures set forth in each Exchange's **Rule 539.C** and the applicable [Market Regulation Advisory Notice](#).

Some circumstances in which pre-execution discussions might take place include the following:

- A firm may wish to contact potential contra parties on behalf of its customers or for the benefit of the firm proprietary account, in order to gain some assurance that someone will be ready and willing to take the opposite side of the order. These opposite parties could be the firm's customers, other firms' customers or proprietary traders, or individual traders.
- An individual member may also contact potential contra parties to trade opposite his or her personal trading account.

More detailed information, including the text of Rule 539.C. and a question and answer document concerning the policies and procedures concerning CME Globex pre-execution discussions are available on the CME Group Web site via the following link: cmegroup.com/rulebook/rulebook-harmonization.html.

Pre-execution communications concerning trades intended for open outcry/pit execution are expressly prohibited and constitute a violation of Rule 539.

APPENDIX – GLOSSARY

After-Hours Electronic Contracts (i.e., ETH only)

After-hours electronic contracts trade on the CME Globex platform only after they stop trading via open outcry on the trading floor.

Application Program Interface An application program interface (API) is a set of tools and protocols that help integrate a solution with other software programs or facilitate the customization of a user interface.

CME Clearing The division of CME Group that confirms, clears and settles all trades. CME Clearing also collects and maintains performance bond funds, regulates delivery and reports trading data.

CME Direct CME Direct is a highly-configurable trading front-end system that allows customers to directly access CME Group markets.

CME Globex The CME Group electronic trading platform.

CME Global Command Center (GCC) The department that supports and maintains the CME Group electronic trading environment.

Continuous Trading Phase The phase on the CME Globex platform in which orders are sent to the market for real-time matching.

Cross Margin The process of allowing for a reduction in performance bond (margin) requirements. This reduction is possible because risk is reduced when offsetting positions are cleared by the same or affiliated clearing members.

CSET See *Customer Support for Electronic Trading*.

Customer Forum A communication vehicle to update customers and solicit feedback on topics related to CME Group's electronic trading strategy over the next six to 12 months, including new policies, enhancements and products.

Customer Support for Electronic Trading (CSET) The department that assists with certification and development to CME Globex.

Derivatives Financial instruments whose value is based upon other financial instruments, such as stock indexes, interest rates or interest rate indexes..

E-px (e-“packs”) A Web-based application that provides real-time Eurodollar pack and bundle data, including prices for the 40 underlying quarterly Eurodollar futures contracts and a daily log of all executed Eurodollar spread trades.

E-quotes A CME Group real-time market data application that offers streaming quotes directly from CME Group for all futures products, in addition to interactive charts and OsterDowJones news.

Error Trade A trade that falls outside a contract's Non-Reviewable Range and is deemed to have been submitted in error. Such trades can be removed from official CME Group records, including Time and Sales information.

FCM See *Futures Commission Merchant*.

FEC-ETP See *Front-End Clearing System Electronic Trade Posting*.

FirmSoft A user-friendly, browser-based order management business continuity tool offered at no cost by CME Group to provide firms easy access to view and cancel their orders.

Front-End Clearing System Electronic Trade Posting (FEC-ETP) Application that enables brokers to inquire about CME Globex net positions and spread prices. FEC-ETP is accessible from any PC with an Internet connection.

Fungibility Interchangeability of contracts. For example, five E-mini S&P 500 contracts are fungible with one standard-sized S&P 500 contract

Futures Commission Merchants (FCM) Individuals, associations, partnerships, corporations and trusts that solicit or accept orders for the execution of a commodity transaction on and pursuant to the rules of a contract market, and which accept payment from or extend credit to customers.

GCC See *CME Global Command Center*.

GCC Notification System The method the GCC uses to send messages regarding system events to customers via e-mail, pagers, fax, mobile phones and land phones.

Hedging Offsetting price risk in a cash market by taking an equal but opposite position in the futures market. A means of protection against loss due to adverse price fluctuations.

Hidden Quantity A Hidden Quantity order – also called Max Show or Iceberg – displays only a small portion of the order to the marketplace. When the displayed quantity has been filled, another portion is then displayed.

IB See *Introducing Broker*.

iLink The order routing interface to CME Globex, based on the FIX 4X protocol. iLink creates a session between CME Group and the client through FIX protocol, eliminating the need for Standard Template Libraries (STLs).

Implied Functionality Implied prices integrate bids and offers in both spreads and their outright contracts to provide the most liquid possible markets with the best possible prices.

Independent Software Vendor (ISV) A company that makes and sells software products that run on one or more computer hardware or operating systems.

Indicative Opening Price (IOP) The price at which a product would trade upon the open, if possible, or the opening bid or offer if no trade would occur. At predefined times prior to the opening on CME Globex, an IOP is calculated as orders are entered for each product. Trading begins at an equilibrium price that falls within the overlap of the bid and offer prices. The IOP is broadcast to all CME Globex users and to the CME Group market data/ticker feed.

Internet Service Provider (ISP) A company that provides Internet access.

Introducing Broker (IB) A firm or person engaged in soliciting or accepting and handling orders for the purchase or sale of futures contracts, subject to the rules of a futures exchange, but not accepting any money or securities to margin any resulting trades or contracts. The IB is associated with a correspondent futures commission merchant and must be licensed by the Commodity Futures Trading Commission (CFTC).

ISP See *Internet Service Provider*.

ISV See *Independent Software Vendor*.

Local Pre-Processing Additional functionality an ISV may provide to its customers before the order is transmitted to the CME Group electronic trading platform.

MDP 3.0: Market Data Platform (MDP) 3.0, a low latency and direct data access solution designed to improve customers' ability to process and act on real-time price information.

Maintenance Period A period of time in each CME Globex trading session in which the market remains closed and customers cannot enter, modify, view or cancel orders. All remaining day, session and expired Good 'Till Date (GTD) orders are purged during this time.

Market Data Platform A dual-feed multicast market data dissemination system used in conjunction with the CME Group order entry interface. Market Data Platform (MDP 3.0) offers superior scalability and more efficient data delivery. The Market Data Platform supports Simple Binary Encoding (SBE) for market data format for CME Globex market data.

Market Enabled/Pre-Opening Period The period in the CME Globex trading day in which the market is enabled and customers can begin to enter orders.

Market Data Platform A dual-feed multicast market data dissemination system used in conjunction with the CME Group order entry interface. Market Data Platform (MDP 3.0) offers superior scalability and more efficient data delivery. The Market Data Platform supports Simple Binary Encoding (SBE) for market data format for CME Globex market data.

Minimum Quantity A Minimum Quantity order is executed only if a certain minimum quantity of that order can be immediately matched.

Non-Reviewable Trading Range A range of prices used in determining if a potential error trade should be canceled. The range is based on the true market price for the contract immediately before the error trade occurred, as determined by considering all relevant information, including the last trade price on the CME Globex platform, a better bid or offer price, a more recent price in a different contract month, the price of the same or a related contract established in open outcry trading and the prices of related contracts trading in other markets (e.g., cash FX and SGX Eurodollars). A trade may not be canceled if it falls within the Non-Reviewable Trading Range for that contract. Non-Reviewable Trading Ranges vary by product.

Order Duration Qualifiers Order Duration Qualifiers define the span of time the order will be active. Default order duration is Day/Session.

Post Close/Pre-Open Phase The phase in the CME Globex trading day in which customers are allowed to enter orders, modify and cancel GTC and GTD on the grain markets only.

Pre-Opening/No-Cancel Phase The phase in the CME Globex trading day in which customers are allowed to enter orders, but are prohibited from modifications and cancellations.

Price Adjustment To alter the price of an executed trade because the order was entered or filled in error and fell outside the Non-Reviewable Trading Range (a price range) for that product. Trades are adjusted according to strictly followed established rules in the CME Globex Error Trade Policy.

Price Banding A CME Group-instituted mechanism to ensure a fair and orderly market. This mechanism subjects all incoming orders to price verification and rejects all orders with clearly erroneous prices. Price bands are monitored throughout the day by the GCC and adjusted if necessary.

Protection Points Used to define the protected range of Market and Stop orders with Protection. The protected range is typically the current best bid or offer, plus or minus 50 percent of the Non-Reviewable Trading Range for that instrument.

Surveillance Intervention Phase A period of time in each CME Globex trading session during which the market is closed and customers are not allowed order entry or modification, although cancellation of orders is permitted. The Surveillance Intervention Period is followed by the CME Globex Maintenance Period.

Trade Cancellation To remove a trade from the official CME Group records because the order was entered or filled in error and fell outside the Non-Reviewable Trading Range (a price range) for that product. Trades are canceled according to strictly followed rules established in the CME Globex Error Trade Policy.

Trading Session The time span marked by the start and end of the period during which the CME Globex platform is in operation. The start of the CME Globex session usually occurs in the afternoon or evening, and marks the beginning of the next trading day. For example, orders entered during Sunday's evening session are dated for and cleared on Monday. The trading day includes both the CME Globex trading session (i.e., ETH) and the trading floor open outcry session (i.e., RTH), if the CME Globex and open outcry sessions overlap for a given product.

Virtual Private Network A private data network that makes use of the Internet's public telecommunication infrastructure, maintaining privacy through the use of a tunneling protocol and security procedures.

VPN See *Virtual Private Network*.

As the world's leading and most diverse derivatives marketplace, CME Group (cmegroup.com) is where the world comes to manage risk. CME Group exchanges offer the widest range of global benchmark products across all major asset classes, including futures and options based on interest rates, equity indexes, foreign exchange, energy, agricultural commodities, metals, weather and real estate. CME Group brings buyers and sellers together through its CME Globex electronic trading platform and its trading facilities in New York and Chicago. CME Group also operates CME Clearing, one of the largest central counterparty clearing services in the world, which provides clearing and settlement services for exchange-traded contracts, as well as for over-the-counter derivatives transactions through CME ClearPort.



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