

RISK

SPEAKERS

The Intersection of Market Structure and Market Regulation

Andrew Vrabel, Managing
Director and Chief Regulation
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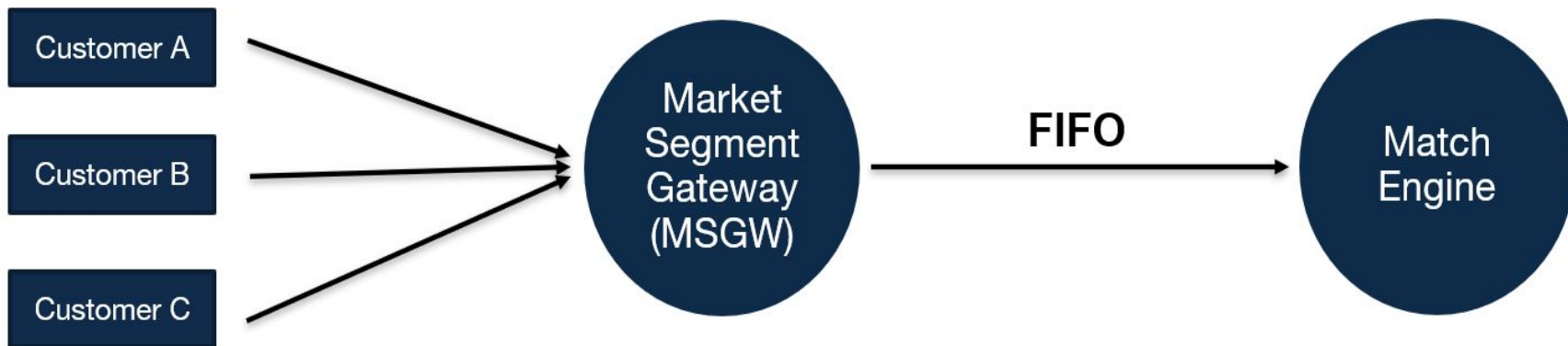
Matt Haynes, Director, Global
Command Center, CME Group

Market Structure & Regulation

Understanding the intersection of market structure and market regulation is key to successful, lawful trading strategies. This discussion will center on market structure facets, including:

- The Globex environment
- Market integrity controls
- Trade matching examples
- Trade cancellation and price adjustment protocols, and
- Rules and regulations designed to prevent market disruptions

FIFO Determinism



- Orders flow sequentially through the Market Segment Gateway with no ability for one order to move ahead of another.
- Cancellations are handled the same as buy/sell orders, a cancellation will not be processed ahead of a buy/sell that has reached the gateway.

Market Integrity Controls

Price Banding

- A mechanism which subjects all orders to price validation and rejects orders outside the instrument's bands.
- Bands are calculated dynamically for each product based on fair value, plus or minus a fixed band value.
- Thus, if markets quickly move in one direction, the price bands dynamically adjust to accommodate new trading.

Velocity Logic

- Designed to detect swift market movement – too far too fast.
- When triggered, the market transitions to a 5 second trading pause during which the market is in a pre-open state (no matching but order entry is allowed).
- Following the trading pause, markets revert to open trading.
- No limit to the number of Velocity Logic events.
- Two versions of Velocity Logic (narrow / wide).

Ex: Emini S&P VLn = \$6.00 (1 milli) VLw = \$18.00 (1 sec)

Dynamic Circuit Breakers

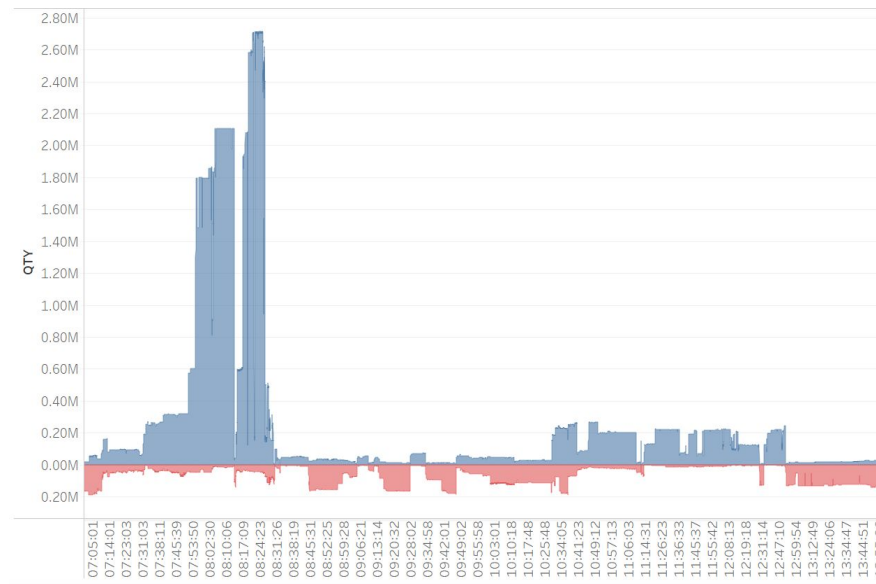
- Price variation measured across a rolling one-hour window.
- The value is primarily % based and calculated using prior day settlement.
- When triggered, the market transitions to a 2-minute, pre-open (no matching, order entry allowed).
- Following the trading pause, markets revert to open trading.
- There are no limits on how many DCBs can be triggered.
- Energies, Metals, FX, and Interest Rates.

** Crypto futures had daily price limits of 30% removed in January 2023.*

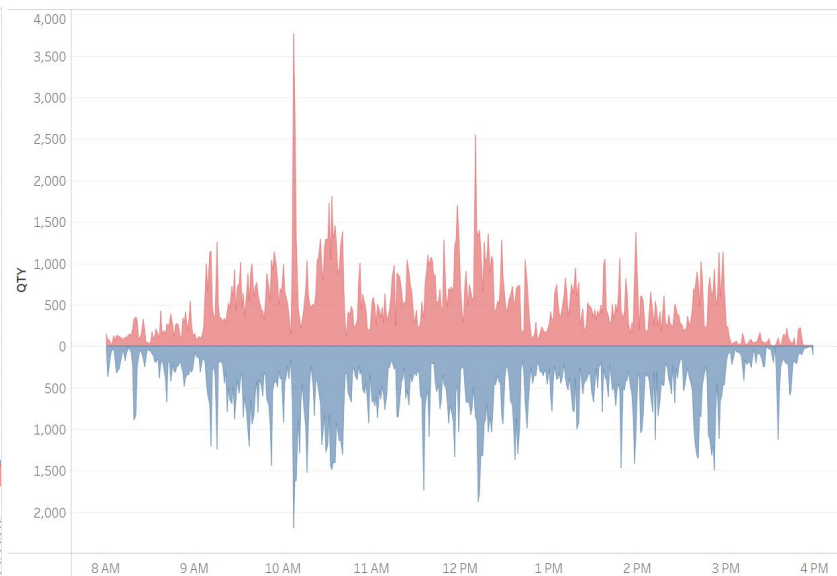
Maximum Order Quantity

- Fat-finger protection designed to prevent *erroneous* orders from being accepted by the match engine.
- Maximum Order Quantity (MOQ) varies by product.

Match Algorithm Influence on Order Books



30 Year Bond Spread
Pro-Rata



S&P 500 Spread
FIFO

An instrument's match algorithm has a significant impact on order book behavior.

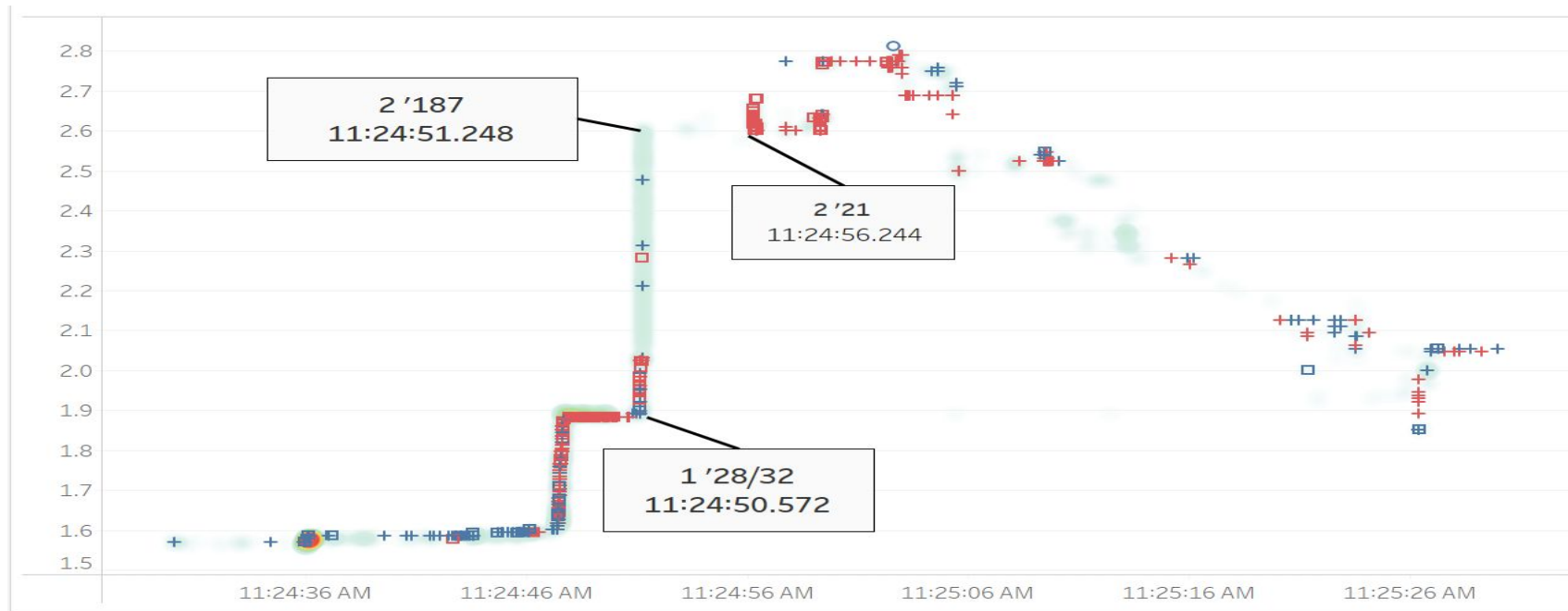
- In Pro-Rata markets, there are larger resting quantities, with frequent fluctuations in size.
- In FIFO markets, the quantities are generally smaller and more consistent.

An Illustrative Event

U.S. Treasury Bond Futures Calendar Spread



Velocity Logic – 30 Year Bond Spread



- Price Bands = 7.5/32
- Velocity Logic Narrow = 7.5/32 in 1 millisecond
- Velocity Logic Wide = 22.5/32 in 1 second
- Velocity Logic will trigger on an incoming order that will either match or rest.

Disruptive Practices Prohibited

Rule 575

All orders must be entered for the purpose of executing bona fide transactions. Additionally, all non actionable messages must be entered in good faith for legitimate purposes.

Time	
11:24:35.924406155	29,999
11:24:35.924565509	29,999
11:24:35.924699843	29,999
11:24:35.924827219	29,999
11:24:35.924956099	29,999
11:24:35.925085835	29,999
11:24:35.925178677	29,999
11:24:35.925298891	29,999

- A. No person shall enter or cause to be entered an order with the intent, at the time of order entry, to cancel the order before execution or to modify the order to avoid execution;
- B. No person shall enter or cause to be entered an actionable or non-actionable message(s) with intent to mislead other market participants;

C.1. No person shall enter or cause to be entered an actionable or non-actionable message(s) with intent to overload or delay the systems of the Exchange or other market participants;

C.2. No person shall intentionally or recklessly submit or cause to be submitted an actionable or nonactionable message(s) that has the potential to disrupt the systems of the Exchange; and

D. No person shall enter or cause to be entered an actionable or non-actionable message(s) with intent to disrupt, or with reckless disregard for the adverse impact on, the orderly conduct of trading or the fair execution of transactions.

Disruptive Trading Practices

Market Regulation Advisory Notice RA2107-05

Time	
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11:24:35.924956099	29,999
11:24:35.925085835	29,999
11:24:35.925178677	29,999
11:24:35.925298891	29,999

Q14: Is a market participant precluded from entering orders that may be considered large for a particular market, and thus may have a potential impact on the market?

A14: The size of an order or cumulative orders may be deemed to violate Rule 575 if the entry results in disorderliness in the markets, including, but not limited to, price or volume aberrations. . . .

Accordingly, market participants should be cognizant of the market characteristics of the products they trade and ensure that their order entry activity does not result in market disruptions.

Exigent circumstances may be considered in determining whether a violation of Rule 575 has occurred and, if so, what the appropriate sanction should be for such violation.

Disruptive Trading Practices

Intentional or Reckless Disregard for the Adverse Impact on the Orderly Conduct of Trading

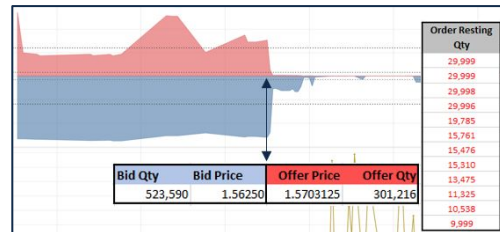
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11:24:35.925085835	29,999
11:24:35.925178677	29,999
11:24:35.925298891	29,999

- a. What front-end was used to generate and submit this order? Please describe what is viewable on the screen (e.g. price ladder, price charts, etc.) and include the number of book levels viewable.
 - i. Please provide a screenshot showing what is generally viewable on you front-end screen.
- b. Was the cited activity intended to be made by the trader managing this account?
 - i. If the activity was intentional, please explain the business reason and rationale for the cited activity. This explanation should include, but not be limited to, a description of the value and need for the cited activity.

10. Provide all documentation reflecting the acknowledgment of receipt of any training on the following materials by the individual(s) associated with Tag50 XXXXX:

- a. CME Group Rules and Regulations, in general.
- b. CME Group Rule 575, Disruptive Trading Prohibited.

Disruptive Practices Prohibited – Spoofing



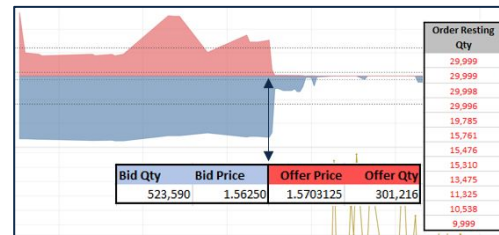
Rule 575 Disruptive Practices Prohibited

A. No person shall enter or cause to be entered an order with the intent, **at the time of order entry**, to cancel the order before execution or to modify the order to avoid execution

Disruptive Practices Prohibited - Spoofing

CME Group Interpretation in Pro-Rata Markets

Market Regulation Advisory Notice RA2107-05

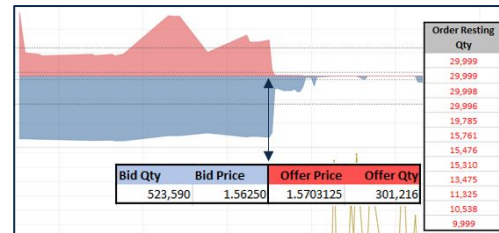


Q11: Is it prohibited to enter an order for a quantity larger than a market participant expects to trade in electronic markets subject to a pro-rata matching algorithm?

A11: Orders entered for the purpose of achieving an execution are permitted. Accordingly, orders entered into markets subject to a pro-rata matching algorithm that are intended to maximize execution of those orders are permitted.

Spoofing Fundamentals

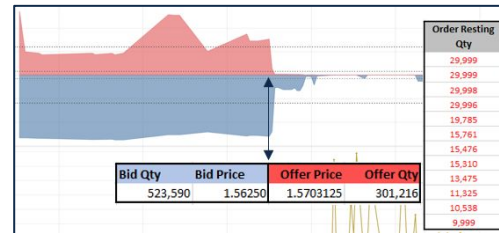
Order book imbalances are related to future price directions:



- Strong relationship between trade imbalances and future returns. Tarun Chordia et al., *Order Imbalance, Liquidity, and Market Returns*, 65 Journal of Financial Economics, 111-130 (2002).
- Price changes over short time intervals are mainly driven by imbalances between supply and demand at the best bid and ask prices. Specifically, large buying (selling) pressure on the bid (ask) price predicts future price rises (falls). Rama Cont et al., *The Price Impact of Order Book Events*, 12 Journal of Financial Econometrics, 47-88 (2014).
- All trader types (*HFT, Institutions, and Retail*) on average trade in the direction of the imbalance, indicating that traders are more likely to submit a market buy (sell) order when the bid (ask) depth is much larger than the ask (bid) depth. Goldstein, Michael A. and Kwan, Amy and Philip, Richard, *High-Frequency Trading Strategies* (May 23, 2017). Available at SSRN: <https://ssrn.com/abstract=2973019>
- Strong positive relationship between the size and direction of the depth imbalance and future stock returns indicating that depth imbalances in the order book can predict future stock returns. Expect more aggressive buying (i.e., more buyer initiated trades) when a large positive depth imbalance exists and more aggressive selling when there are large negative imbalances. Goldstein, Michael A. and Kwan, Amy and Philip, Richard, *High-Frequency Trading Strategies* (May 23, 2017). Available at SSRN: <https://ssrn.com/abstract=2973019>

Disruptive Practices Prohibited

CME Group Interpretation in Pro-Rata Markets Market Regulation Advisory Notice RA2107-05



Q11: Is it prohibited to enter an order for a quantity larger than a market participant expects to trade in electronic markets subject to a pro-rata matching algorithm?

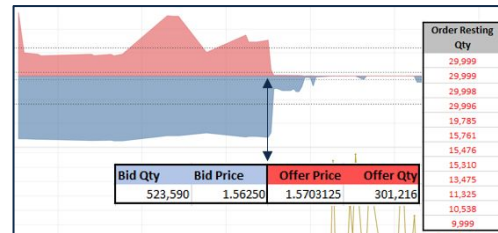
A11: Orders entered for the purpose of achieving an execution are permitted. Accordingly, orders entered into markets subject to a pro-rata matching algorithm that are intended to maximize execution of those orders are permitted.

However, it is considered an act detrimental to the welfare of the Exchange and may be a violation of other Exchange rules for a market participant to enter an order without the ability to satisfy, by any means, the financial obligations attendant to the transaction that would result from full execution of the order.

Participants should be prepared to, and capable of, handling the financial obligations and risk attendant to the full execution of their orders *without disrupting the market*.

Disruptive Practices Prohibited

Inquiries in Pro-Rata Markets



- Describe how your firm would handle the financial obligations attendant to the full execution of the firm's total resting order quantities in the identified instruments.
- Provide documentation supporting the firm's financial capacity to satisfy the full execution of all resting order quantities in the identified instruments.
- Describe how your firm would offset the risk associated with a large fill event, and how your firm would not intentionally or recklessly disregard the orderliness of the market when offsetting the risk associated with a large fill event.
- Describe how your firm monitors the firm's total resting order quantity in pro-rata markets.
- Provide any written risk management procedures or policy documents in effect.
- Detail all risk parameters, thresholds, and controls governing the identified orders, including real-time risk monitoring alerts, dashboards, or other tools utilized for risk management.

Rule 588 – Trade Cancellations and Price Adjustments

- Customers have 8 minutes from the execution time, to call the Global Command Center (GCC).
- The trading community is alerted via email that there is a trade under review.
- GCC determines if the trade was outside of the Non-Reviewable Range (NRR).
- If outside the NRR, trades will be adjusted to FV +/- NRR.
- Resolution email is sent (Trade adjusted / stands).
- Arbitration Process is available.

11:25:02 CT. Multiple trades Questioned in CME Group Futures XXX3

Please be aware this message is being sent to all individuals who have subscribed to receive GCC Targeted Messaging via email. If you have any questions, please contact the CME Global Command Center in the U.S. at +1 800 438 8616, in Europe at +44 20 7623 4747 or in Asia at +65 6532 5010.

11:37:02 CT. Trades Adjusted in CME Group Futures. All trades in XXX3 above 102 adjusted to 102. Effective Time: 11:49 CT

Trade Cancellation & Price Adjustment Claims



Rule 588.E. Liability for Losses (in part)

A party entering an order that results in a price adjustment or trade cancellation shall be responsible for demonstrated claims of realized losses incurred by persons whose trade prices were adjusted or cancelled provided, however, that a claimant shall not be entitled to compensation for losses incurred as a result of the claimant's failure to take reasonable actions to mitigate the loss.

A claim for a loss pursuant to this section must be submitted to the Exchange on an Exchange claim form within five business days of the event giving rise to the claim.

To the extent that liability is denied, the party making the claim may submit the claim to arbitration in accordance with Rule 622. Such claims must be submitted to the Market Regulation Department within ten business days of the date the party was issued notification that liability was denied.

Rule 622 – Claims Relating to Trade Cancellations or Price Adjustments

A. All claims relating to price adjustments or trade cancellations pursuant to Rule 588 shall be arbitrated in accordance with the specific requirements of this Rule 622 and, to the extent not inconsistent with such requirements, the rules of this Chapter.

[illegible]

<https://www.cmegroup.com/confluence/display/EPICSANDBOX#all-updates>

Regulatory Resources

MARKET REGULATION
14 LESSONS

0%

OVERVIEW

WASH TRADES

EFRP

BLOCK TRADES

DISRUPTIVE PRACTICES PROHIBITED

DISRUPTIVE PRACTICES PROHIBITED - General Information

DISRUPTIVE PRACTICES PROHIBITED - Factors Market Regulation Considers

DISRUPTIVE PRACTICES PROHIBITED - Spoofing

DISRUPTIVE PRACTICES PROHIBITED - Flipping

DISRUPTIVE PRACTICES PROHIBITED - Additional Examples

DISRUPTIVE PRACTICES PROHIBITED - Frequently Asked Questions

CME GLOBEX OPERATOR ID REQUIREMENTS

PRE-EXECUTION COMMUNICATIONS

RULE 524 - TAS, TAM, BTIC AND TACO

ENFORCEMENT PROCESS

5 MIN

LESSON 1 OF 6

English

Disruptive Practices Prohibited - General Information



113300	open	23
18	206500	178
7	206459	123
112003	11290	
2021	680	475
	3444	

There are types of disruptive order entry and trading practices that the CME Group has prohibited.

Such practices have historically been prohibited by, and prosecuted under:

- Rule 432.T - "to engage in dishonorable or uncommercial conduct"
- Rule 432.B.2 - "to engage in conduct or proceedings inconsistent with just and equitable principles of trade"
- Rule 432.Q - "to commit an act which is detrimental to the interest or well-being of the Exchange"

<https://www.cmegroup.com/rulebook/rulebook-harmonization.html>

<https://www.cmegroup.com/education/courses/market-regulation/disruptive-practices-prohibited/disruptive-practices-prohibited-general-information.html>

CME Group

MARKETS DATA SERVICES | INSIGHTS EDUCATION

Current Market Regulation Advisory Notices (MRANs)

Since the formation of CME Group as a result of the merger of CME and CBOT in 2007, and then the merger with NYMEX/COMEX in 2008, the Market Regulation Department has issued a series of Market Regulation Advisory Notices (MRANs) to the marketplace to provide guidance on the rules. Current MRANs appear below, grouped by the exchange(s) to which they are applicable.

For questions regarding any of the MRANs listed below, please contact the Market Regulation Department by phone at +1 312 341 7970 or via email at MarketReg.Outreach@cmegroup.com.

To obtain a copy of previously issued MRANs or other CME Group issued advisory notices, please use the [Advisory Notice Search](#).

JOINT CME GROUP

CME ONLY

CBOT ONLY

Joint CME Group - CME, CBOT, NYMEX and COMEX

- Reporting Infractions
- Position Limits
- Block Trades
- TAS, TAM, BTIC, and TACO Transactions
- Disclosing Orders Prohibited
- Accurate Submission of Customer Type Indicator (CTI) Codes
- Pre-Execution Communications
- Simultaneous Buy and Sell Orders for Different Beneficial Owners; Trading Against Customers' Orders Prohibited

Quick Links

- Special Executive Reports (SERs)
- Rulebooks
- Market Regulation Advisory Notices (MRANs)
- Position Limits
- Fee Schedule
- Subscribe to MRANs
- Subscribe to SERs
- Subscribe to Disciplinary Notices

View the CME Group webinar about Regulatory Guidance on Block Trades, hosted by the FIA on Sept. 12, 2019 >

Thank you