This webinar will begin shortly.

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FIA Best Practices paper

In July 2024, FIA released its [Best Practices for Automated Trading Risk Controls and System Safeguards](#).

The document consolidates our previous work and covers best practices in pre-trade risk management, exchange volatility control mechanisms, post-trade analysis and exchange-based conformance testing, among other areas. These practices are designed to help ensure that markets operate safely, regardless of the technology used. The tools developed through the collaboration of market participants and exchanges to manage the risks related to automated trading have proven highly effective in limiting market disruptions and protecting markets.

Presenters

Host:

Doanh Le Ngoc, Senior Director of CCP Risk and Bank Capital, FIA

Speakers:

John Scheerer, Executive Director of Global Operations at CME
Chris McDermott, Head of Market Regulation at ICE Futures Europe
John Cockcroft, Director of Market Supervision, ICE Futures Europe

Presentation prepared by CME Group ICE

Reminders

- The webinar will be recorded and posted to the FIA website within 24 hours of the live webinar.

- Please use the "question" function on your webinar control panel to ask a question to the moderator or speakers.

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John Scheerer, Executive Director of Global Operations at CME

CME Group Market Integrity Controls

Price Banding

- *A mechanism which subjects all orders to price validation and rejects orders outside the given band to maintain orderly markets.*
- *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.*

EX: Crude Oil Price Bands: $0.50

Corn Price Bands: $0.0975

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 on the number of Velocity Logic events.*
- *2 iterations of Velocity Logic (narrow / wide)*

Ex: Crude Oil: VLn = $0.50 (1 milli)   VLw = $1.50 (1 sec)

Corn: VLn = $0.0975 (1 milli) VLw = $0.20 (1 sec)

CME Group Market Integrity Controls

Daily Price Limits

- *Maximum price range permitted for a futures contract. Anchored to prior day's settlement.*
- *Unique to agricultural markets and the overnight session for equity futures.*
- *When at limit, the market remains open but trading is not allowed outside the high/low limit.*

EX: Corn Daily Limits: $0.45

Soybean Daily Limits: $1.00

Wheat Daily Limit: $0.65

Market Wide Circuit Breakers

- *Coordinated with cash equity markets during regular trading hours.*
- *Triggering levels of 7%,13%, and 20% to the downside.*
- *7% and 13% - equity futures halt (pre-open state) for 10 minutes, cash markets halt for 15 minutes.*
- *20% - Market closes for the day.*

Dynamic Circuit Breakers

- *Price variation measured across a rolling one-hour window.*
- *The value is primarily % based and calculated off prior day settlement.*
- *When triggered, the market transitions to a 2-minute pre-open (no matching but order entry is 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.*

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Q&A

Chris McDermott, Head of Market Regulation at ICE Futures Europe

John Cockcroft, Director of Market Supervision, ICE Futures Europe

Price and Volatility Controls

No Cancellation Range (NCR)

- Soft limit above and below the exchange's 'anchor' price.

- Trades executed on the central order book at a price outside of the NCR will be investigated and may be subject to a price adjustment or cancellation, in accordance with the exchange's error trade policy

- Example: Brent Crude Futures NCR = $0.50 (50 ticks)

Reasonability Limit (RL)

- Hard limit above and below the anchor price to prevent orders at unrepresentative prices (e.g. fat-finger errors).

- Bids priced above the upper RL or offers priced below the lower RL are prevented.

- Wider limits may be applied during periods of heightened volatility and in market pre-open periods.

- Example: Brent Crude Futures RL = $0.75

Interval Price Limit (IPL)

- Hard limit above and below the anchor price which acts as a volatility control to limit large price movements in a short period of time.

- Limit prices update at set time intervals (recalculation time).

- If IPL is triggered, market holds in that direction for pre-defined period of time (hold period); market can continue trading in opposite direction during hold period.

- Wider limits may be applied during periods of heightened volatility.

- Example: Brent Crude Futures IPL = $1.00
  Recalculation time = 3 seconds
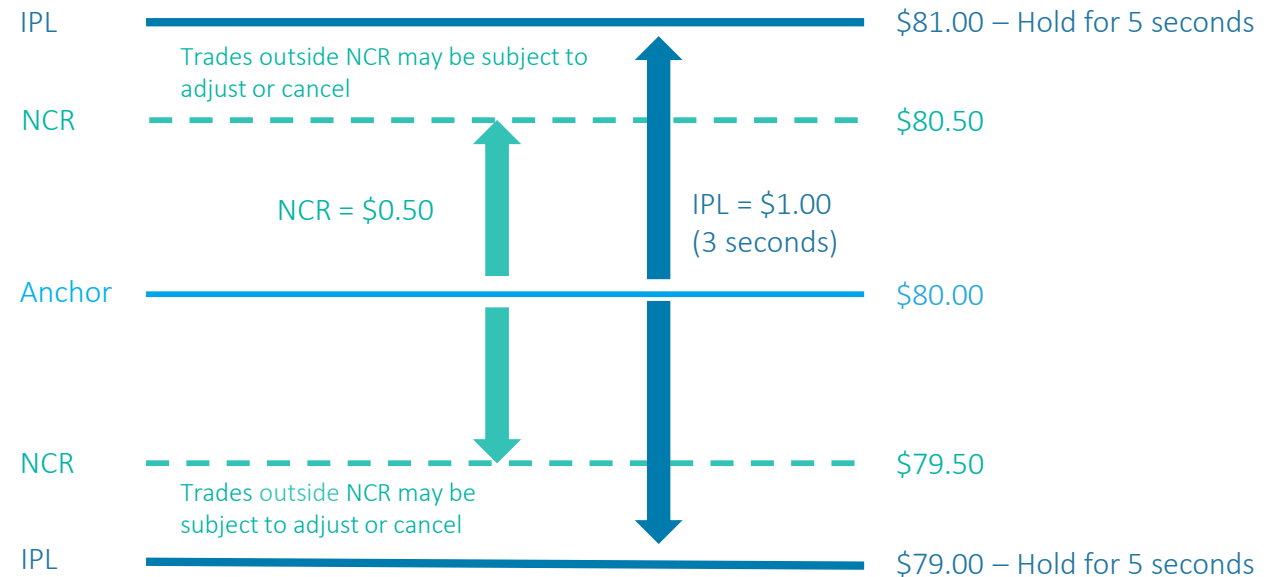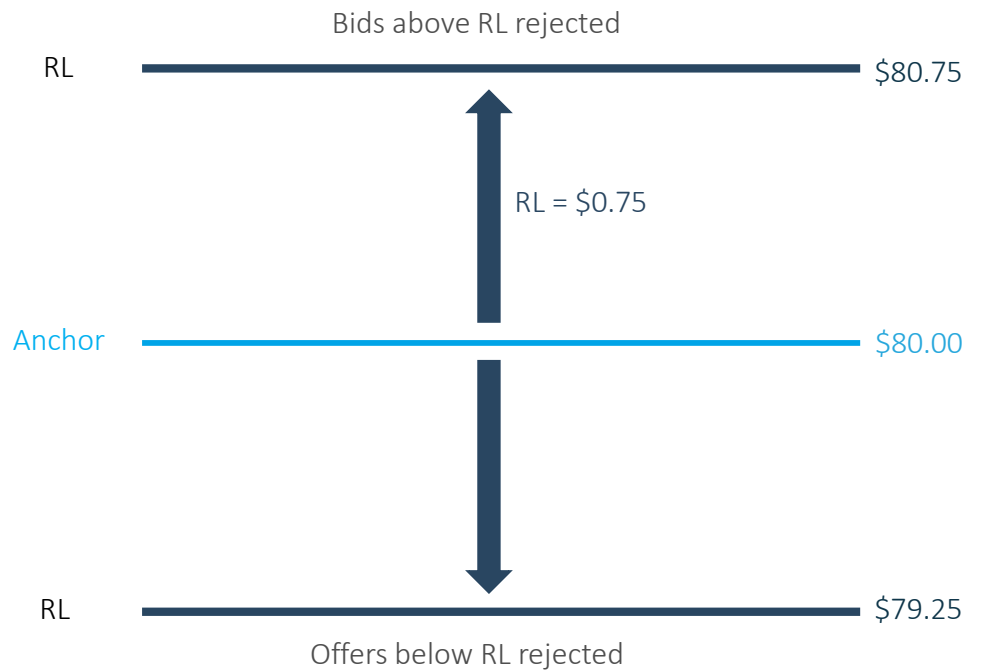 Hold period = 5 seconds

Daily Price Limit (DPL)

- Hard limit above and below previous day settlement price beyond which the market cannot trade.

- Applicable to IFUS Cotton, FCOJ and Canola Futures.

Price and Volatility Controls

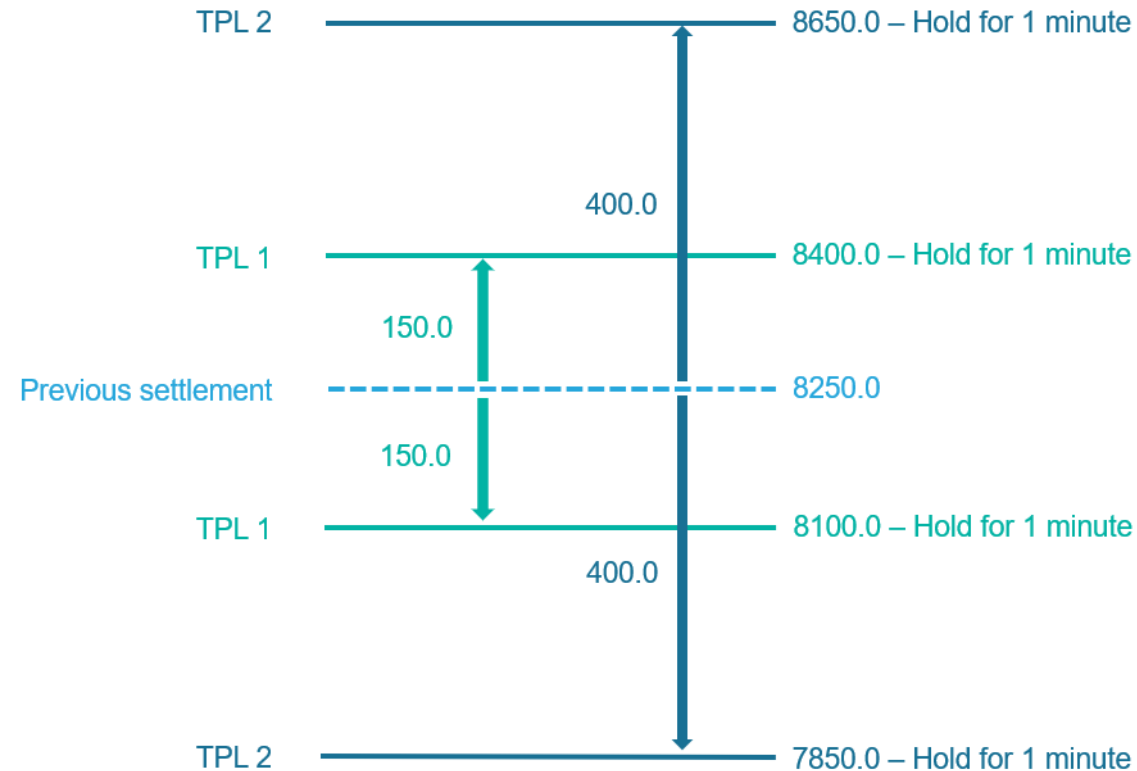## Reasonability Limits, No Cancellation Ranges and Interval Price Limits

Example: Brent Crude Futures Mar25 – anchor price $80.00

Bids above RL rejected

RL		$80.75

RL = $0.75

Anchor		$80.00

RL		$79.25

Offers below RL rejected

IPL		$81.00 – Hold for 5 seconds

Trades outside NCR may be subject to adjust or cancel

NCR		$80.50

NCR = $0.50

IPL = $1.00 (3 seconds)

Anchor		$80.00

NCR		$79.50

Trades outside NCR may be subject to adjust or cancel

IPL		$79.00 – Hold for 5 seconds

Price and Volatility Controls

Tiered Price Limits

- In September 2024, Tiered Price Limits (TPL) were enabled in Three Month Euribor Futures and FTSE 100 Index Futures

- Additional layer of protection to reduce the risk of excessive volatility and significant price movements

- Initially, the TPL functionality will be operational between 01:00 and 07:00 LLT

- Hierarchical tiers that apply a limit to the previous session's settlement price outside of which trading cannot occur on the order book

- When a TPL has been breached, the ensuing hold period (1 minute) will provide participants with the opportunity to react and adjust positions accordingly

- Once a TPL hold period has ended, trading can resume within the new applicable price limits enforced with the next elected tier

- Example: FTSE 100 Index Futures
  - TPL 1 = 150.0
  - TPL 2 = 400.0
  - TPL Hold = 1 minute

TPL 2		8650.0 – Hold for 1 minute
	400.0	
TPL 1		8400.0 – Hold for 1 minute
	150.0	
Previous settlement		8250.0
	150.0	
TPL 1		8100.0 – Hold for 1 minute
	400.0	
TPL 2		7850.0 – Hold for 1 minute

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Other Risk Controls

- Order quantity limits

- Net long/short limits, absolute long/short limits

- Margin limits

- Kill switch

- Order cancel on disconnect

- Message throttling

- Self-trade prevention functionality

- Position limits

- Order and trade drop copy reconciliations

- Error trade policies

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Resources

Price Control Parameters:
ICE Futures Europe
ICE Futures US (NCR and RL) ; ICE Futures US (IPL)
ICE Endex
ICE Futures Abu Dhabi
ICE Futures Singapore (NCR and RL); ICE Futures Singapore (IPL)

Error Trade Policies:
ICE Futures Europe
ICE Futures US
ICE Endex
ICE Futures Abu Dhabi
ICE Futures Singapore

Additional Resources:
ICE Futures Europe
ICE Futures US
ICE Endex
ICE Futures Abu Dhabi
ICE Futures Singapore

Q&A

Thank you for joining us today!

Upcoming Webinar:

JAN
23

Tokenization in 2025
10:00 – 11:00 AM ET

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