Streaming Trade Review

Proactively identify potential obvious errors and analyze execution quality with real-time trade insights

Streaming Trade Review delivers real-time visibility into trading activity, empowering traders, risk managers, and compliance professionals to make data-driven decisions with greater confidence.

Proactively Identify Potential Obvious Errors

Complex trading systems can't be made failure-proof, and rising volumes have multiplied risk exposure. Exchanges require a 30-minute window to request an obvious error review for customers, or a 15-minute window for non-customers. Miss the window and the trade stands.

Streaming Trade Review enables you to quickly identify potential obvious errors and export trade details for submission to the executing exchange.

Analyze Execution Quality

Track key metrics such as effective spread and price improvement near real-time and historically to increase visibility into the quality of your fills.

How it Works

Streaming Trade Review appends comprehensive analytics to each trade, highlighting events that may qualify for obvious error classification or that have experienced significant price slippage.

LiveVol

LiveVol Trade Review has been the official theoretical price generator for obvious error reviews on trades executed across all U.S. options exchanges since 2017.

Key Features

- Identify dollar impact of each trade or event flagged as a potential obvious error
- Analyze the quality of your executions over time
- Leverage Cboe's model-fitted theoretical prices
- Customize alerts to address potential obvious errors and detect poor fills



Share your fill reports via FIX Drop Copy with additional channels to be added



Each fill report is assessed for likelihood of obvious error and enriched with execution quality metrics



All fill reports are returned via FIX and displayed in LiveVol Pro for monitoring with obvious errors flagged



Export execution details to streamline obvious error submission

To learn more about this enterprise-grade solution, contact RMA-Sales@cboe.com

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Streaming Trade Review Field List

Below is the list of fields returned with every execution.

Obvious Error Detection

Field	Description	Sample Value
Potential Obvious Error	Identifies whether trade may qualify for an obvious error per harmonized obvious error rules	Y
Dollar Impact	Dollar value of the potential error if the trade qualifies for an adjustment at the adjusted price	2325
Recommend Review	Flags trades that warrant closer review for potential trading errors	Y
Intrinsic & Intrinsic Side	Intrinsic value and flag indicating whether trade executed at, above, or below intrinsic	9.96, Above
Adjusted Price	Adjusted trade price, subject to exchange review, following determination that the trade qualifies as an obvious error	16.55
Has Legal Market	Indicates whether a valid legal width market exists within the 10-second lookback window prior to the trade (or 10-second lookahead window if trade time is within 10-seconds of the open)	Y
Threshold	Obvious error eligibility threshold based on the theoretical bid price	0.8
Size Adjustment	Multiplier applied to threshold to account for trade size	1

Theoretical Pricing and Analytics

Field	Description	Sample Value
Theo Price	Model-fitted theoretical price from Cboe's Option Analytics	18.048
Theo IV	Theoretical implied volatility of the option, computed utilizing a fully calibrated volatility surface powered by Cboe Hanweck	60.94743
Theo Bid & Ask	Legal width market around the theoretical option price	16.75 x 19.15
Theo Delta	Theoretical delta	-0.60227
Theo Gamma	Theoretical gamma	0.012373
Theo Vega	Theoretical vega	0.197562
Theo Theta	Theoretical theta	-0.7469956
Theo Rho	Theoretical rho	-0.043745
Borrow Rate	Borrow rate applied in the calculation of theoretical value	0.0415
Dividends	Forward value of forecasted dividend amounts accumulated through option expiration	0

Market Context

Field	Description	Sample Value
Market	Market bid and ask at trade time. If participant quotes are removed, adjusted market bid and ask will be displayed.	14.40 x 17.25
Market Condition	Market state at trade time	Wide
Underlying Market	Underlying bid and ask at trade time	339.99 x 340.08
10S Market	Legal width market in the 10-second lookback window prior to the trade (or 10-second lookahead window if trade time is within 10 seconds of the open)	16.00 x 17.50

Trade Details and Analytics

Field	Description	Sample Value
Trade Price	Executed price of the trade	15
Trade Size	Number of contracts executed	15
Exchange	Exchange on which the trade was executed	CBOE
Exchange Seq No	Exchange trade sequence number	557289
Trade Condition	OPRA trade condition associated with the execution	AutoExecution
Mid IV	Implied volatility derived from option mid quote	49.57
Trade IV	Implied volatility at the executed trade price	45.25
Trade Delta	Delta calculated using the trade price and prevailing market inputs	-0.647478
Trade Gamma	Gamma calculated using the trade price and prevailing market inputs	0.0161017
Trade Vega	Vega calculated using the trade price and prevailing market inputs	0.1899133
Trade Theta	Theta calculated using the trade price and prevailing market inputs	-0.5338448
Trade Rho	Rho calculated using the trade price and prevailing market inputs	-0.0437451
Contract Edge	Contract edge of the trade, calculated by (trade price - theo price) × contract multiplier	304.82
Total Edge	Total edge of the trade, calculated by contract edge × trade size	4572.41
Time Value	Extrinsic value component of the option	5.04

Execution Quality Metrics

Field	Description	Sample Value
Price Improvement	Difference between execution price and the NBBO midpoint at the time of fill	0.825
Effective Spread	Realized cost of a trade expressed as the distance between the execution price and the NBBO midpoint at time of fill	1.65
At or Better Than NBBO	Indicates whether the execution occurred at the NBBO or received price improvement inside the spread.	98%
Slippage	Deviation between expected execution price and actual fill price	0.00
Quoted Spread	Difference between the best displayed bid and best displayed offer (NBBO)	2.85
Fill Rate*	Percentage of total order quantity executed at or better than the intended price. Reported in aggregate at the portfolio level.	96%
Routing Order Efficiency*	How effectively an order is routed across exchanges and liquidity venues to achieve best execution. Reported in aggregate at the portfolio level.	99%

* Coming soon

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