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Insights

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Market Structure

Protecting liquidity in options markets

In a series of articles, we're exploring liquidity protection – the measures offered by exchanges to ensure that market makers are able to quote without taking excessive risk. Effective liquidity protection is, in our view, fundamental for facilitating price discovery in liquid, electronic options markets.

Interest in options has rarely been as high as it is today. Volumes in single-stock and index contracts continue to soar in parts of the world, while new options products are rolled out regularly. An often-overlooked reason for this is the liquidity that's available to options traders, which has allowed these instruments to become global barometers for investor sentiment.

This liquidity doesn't happen by magic. Market makers in options post consistent two-sided quotes in thousands of instruments, an effort that involves considerable investment in technology, pricing capabilities and thorough risk management, as well as the liquidity protection mechanisms available at exchanges.

In a series of articles, we'll explore the different types of liquidity protection offered by exchanges to market makers, with the goal of educating market participants about these measures. We conclude that liquidity protection improves options markets – and that a combination of these measures is the most effective way to ensure our markets continue to function smoothly for the benefit of all.

What is liquidity protection?

Liquidity protection aims to address the structural disadvantages faced by liquidity providers in the options market. It does so by safeguarding market makers against excessive risk. Because liquidity providers maintain hundreds of quotes on a given underlying at any one time, a sudden market move can leave them vulnerable to showing stale, or outdated, quotes. So-called liquidity takers can target stale quotes via multiple paths, with limited risk should they fail. Liquidity providers on the other hand can often send only a single cancel or amend message at a time, putting them at a disadvantage and exposing them to potentially major losses if they're unable to amend or cancel quotes before they get executed.

Without robust liquidity protection mechanisms to protect against these risks, market makers may be forced to widen their spreads, show less liquidity or simply exit the market. Overall market quality can deteriorate as a result, and investors suffer when it becomes too expensive to transact or they're prevented from transacting altogether. In sum, liquidity protection mechanisms are vital for achieving a healthy balance between liquidity providers and liquidity takers in the options market.

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What tools are available?

Many options exchanges have already responded to this situation by putting in place market maker protections for post-trade risk management. **Market maker protections** (MMPs) allow liquidity providers to set limits on the amount of executions they receive as a way to help them manage the aggregate risk of their positions. In addition to MMPs, there are a handful of complementary measures that we believe to be effective at levelling the playing field between liquidity takers and liquidity providers:

- **Mass cancellations**, which allow liquidity providers to simultaneously cancel (a subset of) resting orders, which we believe should apply across sessions
- **Purge ports**, which physically provide a dedicated path to the matching engine to simultaneously cancel resting orders
- **Asymmetric speed bumps**, or a defined time delay on all aggressive orders, which in certain contexts or markets can prove effective

In October 2022 we wrote in support of Eurex's passive liquidity protection (PLP) mechanism in EURO STOXX 50 Index Options. Since then, PLP has been shown to improve price setting competition and top of book liquidity at the exchange. PLP and similar liquidity protection measures are being more widely embraced, as demonstrated in Acuiti's Proprietary Trading Report.

Effective liquidity protection is, in our view, fundamental for facilitating price discovery in liquid, electronic options markets. We believe a combination of these measures – including MMPs, purge ports and mass cancellations, and in specific cases asymmetric speed bumps– will help ensure that options markets remain healthy and liquid on screen.

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About Optiver

Optiver is a global market maker with offices in Amsterdam, London, Chicago, Austin, Sydney, Shanghai, Hong Kong, Singapore and Taipei. Founded in 1986, today we are a leading liquidity provider with close to 2,000 employees in offices around the world, united in our commitment to improve the market by competitive pricing, execution and thorough risk management. By providing liquidity on multiple exchanges across the world in various financial instruments we participate in the safeguarding of healthy and efficient markets. We provide liquidity to financial markets using our own capital, at our own risk, trading a wide range of products: listed derivatives, cash equities, ETFs, bonds and foreign currencies.