optiver INSIGHTS

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CLEARING

PORTFOLIO COMPRESSION IN CENTRALLY CLEARED MARKETS

CURRENT STATE AND IMPROVEMENTS

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Global capital charge regimes are accelerating the need for investment firms to compress their derivative portfolios, thereby creating an opportunity for exchange operators to help their client's trade in a more capital-efficient manner.

Portfolio compression is a post-trade balance sheet reduction technique in which two or more counterparties terminate some (or all) of their open interest in derivative contracts, simplifying the management of positions. This frees up valuable capital that would otherwise be held unnecessarily against offsetting positions that could be compressed. The end goal of compression is a cleaner portfolio, with less complexity and enhanced capital efficiencies, allowing for healthier and safer derivative markets.

Benefits from adoption of compression services, in the centrally cleared space:

- *Improved balance sheet and capital efficiencies*
- *Managing exposures in a cost-efficient manner*
- *Reduction of operational risk*
- *Ability to provide more robust liquidity*

Improvements needed in the existing centrally cleared compression landscape:

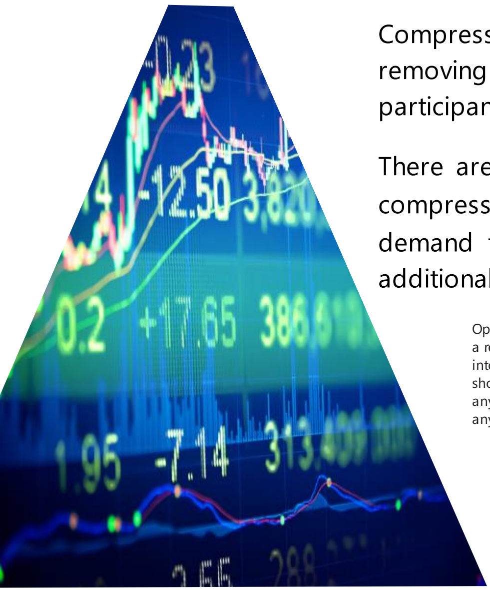
- *Further adoption of compression solutions*
- *Outreach by exchanges to market participants on compression needs*
- *Increased participation in existing compression solutions*

BACKGROUND

WHAT IS PORTFOLIO COMPRESSION?

Compression is designed to increase liquidity across the derivatives complex by removing excess gross risk and reducing the amount of open interest held by market participants.

There are two forms of compression: bi-lateral and multi-lateral compression. A compression cycle involves two or more parties, and the frequency is based on demand from participants and the ability of compression providers to support additional cycles.



This industry utility provides market participants and their Clearing Members ("CMs") capital relief without materially changing the risk exposure of a submitted portfolio. The design and implementation of compression allows for improved liquidity and contributes to greater market health and stability by allowing market makers ("MMers") the opportunity to provide more robust forms of liquidity.

MMers, like Optiver, use portfolio compression to reduce the number of positions in a portfolio that need to be managed. This lowers the overall operational risk of the portfolio through decreasing the gross notional outstanding.

WHY IS COMPRESSION IMPORTANT TO THE BROADER MARKET?

Capital regimes and their requirements are one of the many provisions that contribute to a healthy market. They serve as a means of preserving the systemic integrity of markets by ensuring participants maintain adequate levels of liquidity and available capital to weather increases in volatility. The successful completion of a compression cycle serves as a complement to these capital regimes; contributing to the overall safety and health of markets in addition to providing broad benefits to financial industry participants, and ultimately end investors.

Compression allows for participants to actively deploy capital more efficiently by providing a utility to manage legacy positions more effectively. Should markets become more volatile, liquidity providers would be able to meet temporary margin increases as well as maintain their ability to provide robust liquidity when markets need it most.

Some of the most tangible benefits of compression include, but are not limited to:

- Increasing available capital [1]
- Reduction of gross risk and notional exposure
- Reduced complexity of existing positions through line item reduction, reducing operational risk
- Reduction of liquidation cost (due to fewer contracts) in a default auction event.

In the absence of compression services, MMers face higher capital requirements due to large gross notional positions. As a result, they may unnecessarily be forced to re-allocate capital to fund their margin account resulting in wider spreads and reduced liquidity.

Compression played a valuable role during extreme market volatility in Q1 2020. As an example, Optiver US participated in a total of nine multi-lateral cycles on CME during this time period. The increased frequency of compression cycles, from one

[1] "For example, the CFTC estimates, the CME's equity index option compressions from October 2018 to February 2019 reduced the capital requirement of clearing members by more than $200 million."
Source: "When the Leverage Ratio Meets Derivatives: Running Out Of Options?"
https://www.cftc.gov/sites/default/files/2019-05/oce_leverage_and_options_ada.pdf

cycle per month to three, allowed compression participants to reduce gross risk and notional exposure during this period of prolonged of market volatility.

During times of prolonged market volatility, an absence of compression services would require MMers to have elevated capital limits and higher utilization of trading limits at their respective CMs. A potential side effect is that CMs place restrictions on the size of the clearing limits with their existing market maker clients. These restrictions on risk warehousing capacity, generally applied to multiple MMers, leads to an erosion of market liquidity. This illiquidity will contribute to further increased market volatility, creating greater risks for central counterparties ("CCPs") and market participants.

CURRENT STATE

Optiver is an active participant in numerous CCP-sponsored compression solutions globally. We believe that the need for compression services will continue to grow. We encourage those CCPs that do not currently support compression to adopt the service as part of their post-trade offering.

Compression has only recently migrated to centrally clearing, after many years of adoption and growth adoption in the over-the-counter ("OTC') markets. Many of the same benefits of centrally cleared compression can be found in OTC compression; such as enhanced capital efficiency, reduced operational risk, and the ability to proactively manage risk without fundamentally changing participant's market position.

Several CCPs, such as CME and SGX, currently offer multi-lateral monthly post-trade compression services for centrally cleared derivatives. Other exchanges, mostly notably Chicago Board Options Exchange ("CBOE") and Eurex, intend to go live with a multi-lateral compression service later this year, pending regulatory approval. These services provide market participants and their CMs with a scalable capital relief solution without materially changing the risk exposure of a given participant's centrally cleared portfolio.

COST/INCENTIVE STRUCTURE

Optiver encourages CCPs to adopt compression services as a complement to their existing post-trade services.

Balance sheet constraints and the lack of compressions serves as an impediment for transitioning more OTC derivative products to central clearing. A number of post-financial crisis reforms are, directly or indirectly, relevant to incentives to centrally clear including: mandatory clearing requirements.

We support CCP-sponsored compression services and encourage further expansion in the space. When implementing compression services, soliciting feedback on the cost to compress positions is vital. Growing the pool of potential participants in a multi-lateral solution allows exchange compression to grow exchange volumes, and allows for a greater number of positions to be potentially offset.

An important aspect of implementation is understanding the cost-benefit analysis of participants involved in the forum. Implementation of a compression solution with a high exchange fee per contract structure will disincentivize to participation.

Optiver welcomes dialogue with CCPs interested in offering compression in the future, and the opportunity to engage on innovative cost structures for compression that allows for robust participation.

REGULATORY IMPLICATIONS

The usefulness of compression services has been acknowledged widely by financial regulators. During the 2009 G20 summit, policy makers suggested development of "tools and frameworks for the effective resolution of financial groups to help mitigate the disruption of financial institution failures and reduce moral hazard in the future," compression has been in focus.

The President's Working Group on Financial Market Policy Objectives for OTC Derivatives Markets stated that frequent compression is a key policy objective for the swaps markets[2], as did the Financial Stability Board[3] and the Federal Reserve Bank of New York[4].

CCP compression services allow for greater market stability and health through increasing available capital for both CMs and MMers. CMs are subject to the Basel capital rules (III/IV) through their respective jurisdictions; namely, Dodd-Frank in the US, and CRR in the Europe. Furthermore, decreasing gross notional exposure in centrally cleared portfolios counts towards regulatory requirements such as the leverage ratio. For a CM, the exposure measure calculated as the amount of eligible Tier 1 capital divided by the leverage ratio requirement. The CMs subsequently divides the total exposure amongst its clients in the form of an exposure measure limit. Exceeding this limit is not allowed under the clearing agreement between clients and their CM, as this would mean a breach of the leverage ratio requirement by the CM towards their respective regulator.

DODD-FRANK IMPLICATIONS/RULES

One of the important outcomes of the financial crisis was the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act, which was introduced to

[2] President's Working Group on Financial Markets Policy Objectives for the OTC Derivatives Markets, found at https://www.treasury.gov/resource-center/fin-mkts/Documents/policyobjectives.pdf ("Prudential supervisors should continue their cooperative efforts to improve the operational infrastructure for all OTC derivatives, including encouraging further improvements to post-trade automation, frequent portfolio compression for outstanding trades and enhancing standardized documentation."

[3] Financial Stability Board report entitled, "Implementing OTC Derivatives Market Reforms (October 25, 2010).

[4] Federal Reserve Bank of New York Staff Report no. 424, entitled "Policy Perspectives on OTC Derivatives Market Infrastructure. (March 2010)

improve financial stability and derivative market participants have adequate capital reserves on hand to cover their exposures.

One of the capital charges implemented by Dodd-Frank is based on the aggregate notional value of short positions regardless of offsets. As an options liquidity provider, it is common to generate large portfolios of positions with relatively little unhedged market exposure. While there are changes to the capital charges as currently implemented which will alleviate some of the current distortions, global capital charge regimes continue to evolve and Optiver expects these distortions to persist for years to come.

EU INVESTMENT FIRM REGULATION/DIRECTIVE (IFR/D)

Beginning in 2021, there is a new capital requirements regime for investment firms in the EU under the Investment Firm Regulation (IFR) and Directive (IFD). It will focus on the new classification criteria of investment firms for IFR/D purposes and the impact on capital requirements for in-scope firms, including specific impacts for cleared derivatives. As part of the new IFD/R capital requirements regulations, investment firms will be classified into four different categories.

EU regulations will classify investment firms as "Class 1"[5], "Class 1 minus"[6], "Class 2"[7], or a "Class 3"[8]. Each category will be directly determined by the size of its associated balance sheet.

Of these categories, Class 2 firms will be most heavily impacted by the new prudential regime set out in the IFR/IFD. For the other firms, there will be fewer new obligations to comply with, although all in-scope investment firms will be required to measure and report against the new thresholds for each category of investment firm.

By participating in compression forums, investment firms will be able to decrease gross notional exposure and thereby more efficiently manage their balance sheet. This could positively affect which category they are classified under IFR/D. As a result, many investment firms could become subject to the same regulations, thereby creating a more level playing field for the broader industry.

CONCLUSION

Optiver supports transparent, and healthy capital markets. We expect that compression services will continue to serve as an important industry utility in the

[5] Class 1: Systematically Important Investment Firms, would bring into scope all CRD5/CRR2 capital rules applicable to banks. Class 1 regulated by the ECB-led Single Supervisory Mechanism (SSM)

[6] Class 1 minus: Systematically Important Investment Firms, would bring into scope all CRD5/CRR2 capital rules applicable to banks. Class 1 minus regulated by national regulator

[7] Class 2: does not satisfy certain criteria established by national regulator as systematically important; are considered Non-systemically Important. CRD5/CRR2 not applicable

[8] Class 3: Small and non-interconnected investment firms – often referred to as 'Class 3 firms' these are very small investment firms with 'non-interconnected' services. This class of firms is subject to a more 'light touch' regime under the IFR/IFD which is proportionate to the risks that the firms pose to the public and the financial markets.

future by reducing the gross notional exposure of MMers and CMs. We expect this to facilitate growth in exchange-traded products.

We encourage CCPs to adopt post-trade compression services for listed derivatives and encourage further innovation in the space. Managing capital requirements and exposure limits allow MMers to provide superior liquidity to the markets, especially in times of heightened volatility.

Exchange operators that do not offer compression solutions currently can either build an in-house compression solutions or partnership with a third-party vendor. When considering which option to choose, CCPs should consider things like: time to market, cost, and scalability of participation when designing and implementing a scalable compression solution.

As additional CCPs continue to evaluate compression needs, Optiver stands ready to help advise and support new and existing compression services for these important industry utilities.

Optiver is a leading global market maker with over 1200 employees working from offices in Amsterdam, Chicago, Sydney, Shanghai, Hong Kong, Taipei and London. Through pricing, execution and risk management, the firm provides liquidity to financial markets using its own capital, at its own risk, trading a wide range of products: listed derivatives, cash equities, ETFs, bonds and foreign currencies. Its independence allows it to objectively improve the markets by pioneering its own trading strategies and systems using sophisticated technology.