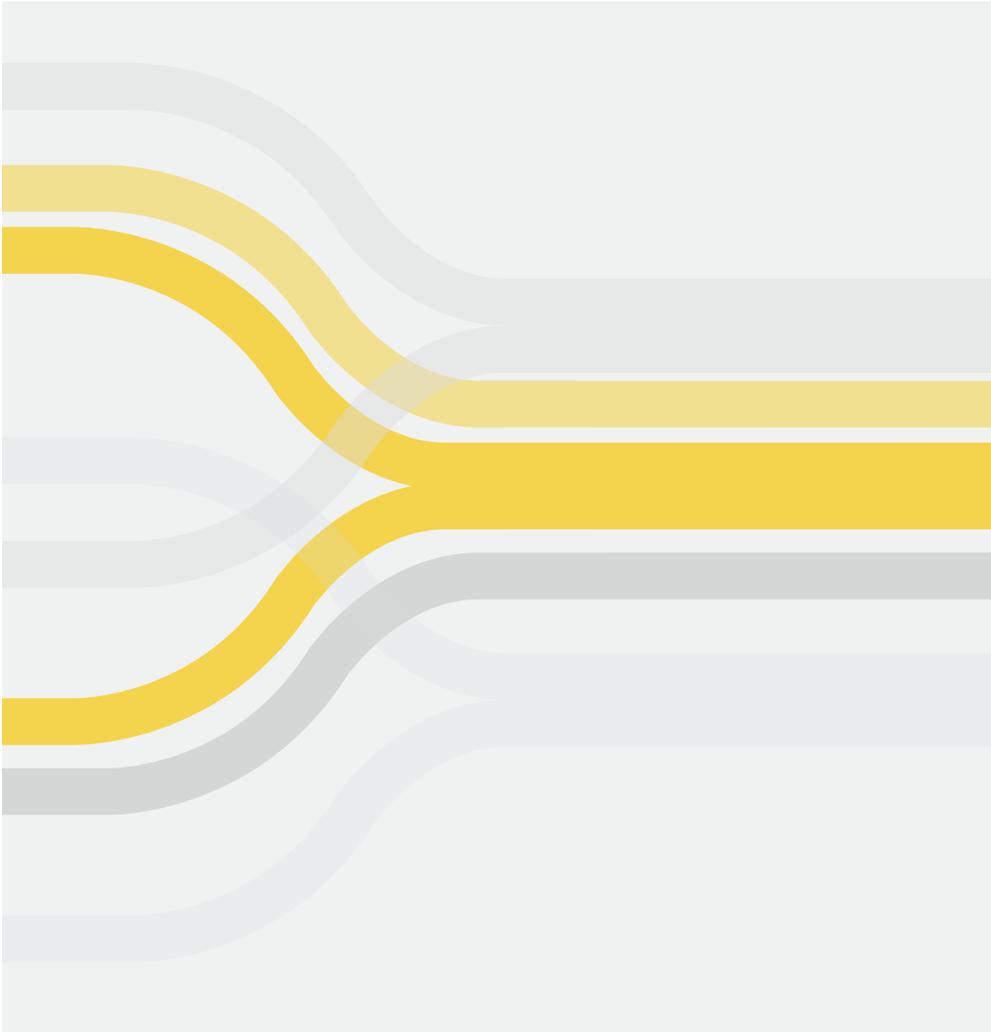


Compression with SwapClear

Unmatched Efficiency and Freedom

LCH The Markets'
Partner

SwapClear



SwapClear delivers
unmatched efficiencies while
protecting the integrity of
the marketplace.

Compress, Terminate, Net, Tear Up

There are a number of words used in association with trade compression. All mean essentially the same thing. Members and buy-side clients can “terminate,” “net” or “tear up” trades to reduce the overall notional and number of line items in a portfolio.

Compression Delivers Significant Capital and Operational Benefits

Since its inception, we’ve designed and refined SwapClear to empower both buy-side and sell-side participants. Our compression offering is a prime example of this relentless innovation. With the introduction of blended rate compression, the benefits are even greater — ensuring you are better able to manage your market, operational, capital and legal exposure.

During 2015, our members and their clients compressed a record \$328 trillion in notional at SwapClear, resulting in a year-on-year reduction in notional outstanding of \$111 trillion. This generated a marked improvement in the capital efficiency of the world’s major financial institutions, while allowing all participants to enjoy significant operational benefits.

Our enhancements to compression continue today, delivering unmatched freedom, flexibility and choice, as together we meet the evolving demands of global regulation. It’s a level of service you should rightly expect from the clear industry leader.

What Is Compression?

Compression is the process by which swap market participants can reduce the number of individual positions and overall notional value of a portfolio by combining or offsetting trades with compatible characteristics.

WHY IT IS IMPORTANT

Regulations require members to hold capital against their interest rate swap positions. These capital requirements are usually calculated based on a number of factors, including the gross notional outstanding of the portfolio. So reducing the overall gross notional through compression may yield capital requirement relief. In addition, there are substantial operational benefits.

By participating in compression, firms can benefit from significant efficiencies, including:

01. Reduction of operational risks
02. Simplified portfolio management due to fewer trades
03. Easier default management
04. More efficient portfolio transfers
05. Less cash flow needed and fewer reconciliations
06. Speed to auction in the event of a default
07. Capital savings in light of Basel III leverage ratios, as well as capital surcharges applied to G-SIBs

01.

A trade is agreed upon between two counterparties and then cleared by the clearinghouse.



02.

These positions then form a cleared swap portfolio.



03.

If a financial institution wants to reduce the number of line items in its portfolio, it can use SwapClear's compression offering to tear up a trade by partially or wholly offsetting positions against other positions held by that financial institution or those of another financial institution.

SwapClear's Compression Choices

You're in control with SwapClear's compression options. You choose what, when and how you compress your trades. In order to give you maximum freedom and flexibility, we offer different proprietary styles of compression, as well as access via an Approved Compression Service Provider (ACSP).

SOLO COMPRESSION

Enables a party to tear up its own eligible trades independent of their counterparty.

SOLO WITH BLENDED RATE COMPRESSION

Enables two SwapClear Members to compress trades together. Members will have the opportunity to reduce their portfolio of trades with a smaller number of standardised risk replacement trades.

DUO COMPRESSION

A risk-constrained form of compression that enables two members to compress their trades together. Through the SwapClear Portal, members may increase their overall compression opportunity by partnering with other counterparties who have similar offsetting positions. Members will have the opportunity to reduce their portfolio of trades with a smaller number of standardised risk replacement trades.

MULTI COMPRESSION

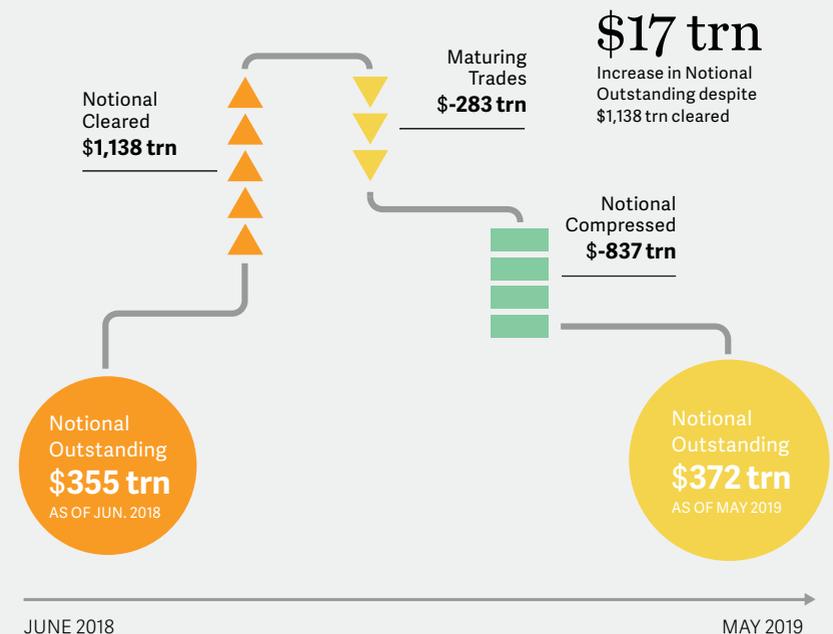
Enables two or more parties to compress trades together. Members and clients have the option of reducing their portfolio of trades with a smaller number of risk replacement trades. Also available through ACSPs is the added benefit of allowing clearing members and clients the ability to apply individual risk tolerances to achieve the most effective compression result.

All trades cleared using SwapClear are now unlinked. Unlinked trades do not need the involvement of a counterparty to be compressed.

DELIVERING REAL EFFICIENCIES TODAY

Thanks to the array of options available to members and clients, compression at SwapClear contributed to a \$280 trillion fall in notional outstanding over two years. This reduction helped members better manage their capital requirements under Basel III, as well as generated significant operational efficiencies for all participants.

COMPRESSION ACTIVITY (to May 2019, in Trillions)





Solo Compression

SwapClear's Solo compression is an extremely flexible option because a member or client can terminate their offsetting trades, regardless of counterparties.

With the addition of Solo compression with blended rate, participants can now compress much more than they were previously able to.

The core Solo offering works for all unlinked trades but requires the economics of the trades to be identical. The addition of future cash-flow netting increases the efficiency of Solo by allowing trades with different start dates but the same future cash-flow characteristics to compress.

Solo compression is a fully automated process and does not need to be orchestrated as an event. To date, SwapClear has compressed more than \$1,031* trillion through its Solo compression offering.

*As of January 2018

01.

Trades are agreed by a number of counterparties' then submitted for clearing.



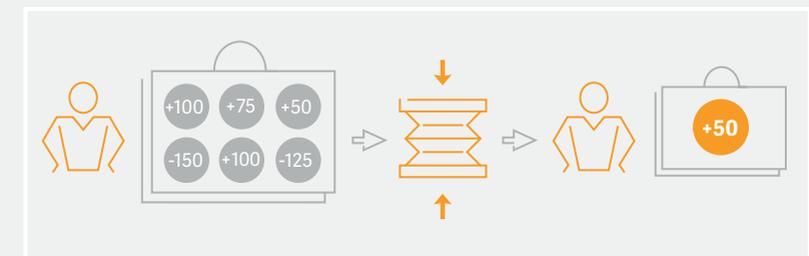
02.

Each side of the trade is registered and cleared as separate trades by SwapClear.



03.

This position then becomes part of your cleared swap portfolio.



04.

To create optimal efficiency, the counterparty may then compress a group of trades. This lowers the number of line items, reduces operational risk and streamlines portfolio maintenance.



Solo with Blended Rate Compression

While Solo provides significant operational and capital benefits to participants, the option of blended rate compression enhances these benefits, enabling institutions to compress any trade with different interest rates but the same remaining cash-flow dates. This significantly expands the universe of eligible trades and the opportunity for portfolio efficiency. It also demonstrates how SwapClear works harder to make sure that you don't have to.

The key attributes of Solo with blended rate compression are:

- 01. Trades will be terminated and/or replaced at a weighted average replacement rate
- 02. Replacement trades can be calculated to 6 decimal places
- 03. Reducing the number of open trades and corresponding notional helps meet investor preferences
- 04. Daily compression runs

SMART FOR COMPRESSION

SwapClear has harnessed its award-winning margin simulation technology, SMART, to provide similar capabilities for compression. This enables firms to more accurately and quickly determine their compression options.

COMPRESSION KEY FEATURES

Feature	Solo	Solo with Blended Rate Compression
Eligible Trades	Any trade with the same fixed rate and identical remaining cash flows	Any trade with identical remaining cash-flow dates
Eligible Products	Inflation, IRS, OIS, Basis, FRA & VNS	IRS, OIS & FRAs
Compression Run Frequency	Daily	Daily runs
Reporting	Comprehensive reporting available	Comprehensive reporting available
SMART for Compression	N.A.	Available to buy- and sell-side users



Duo Compression

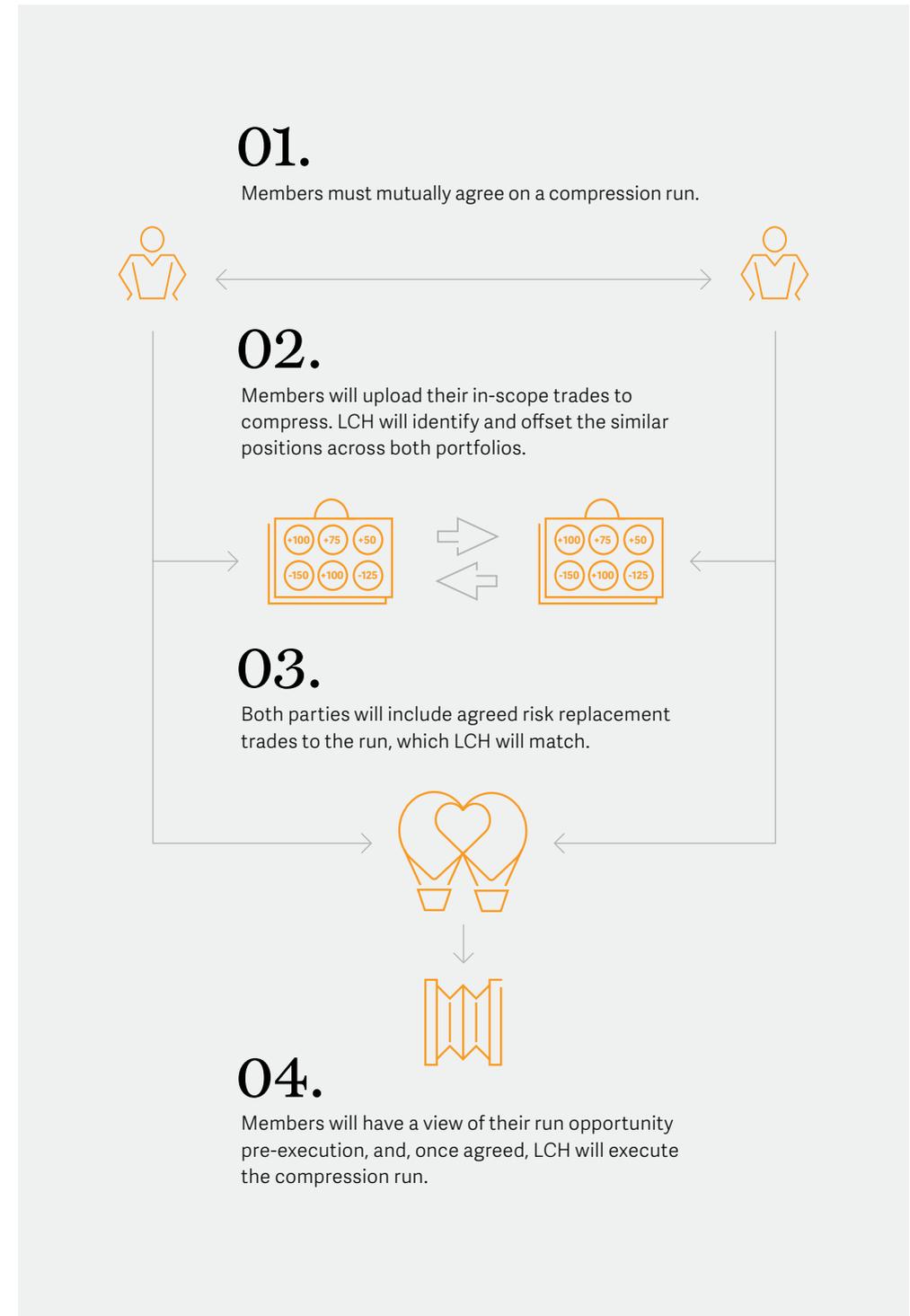
SwapClear's Duo compression offering enables members to compress their portfolio by partnering with other members who have offsetting positions.

Through partnering with other counterparties who have similar offsetting positions, members may increase the universe of eligible trades and their overall compression opportunity.

Once an opportunity is identified over the SwapClear Portal, the two members may build a compression event where they agree to flatten their offsetting positions as well as using standardised trades to replicate their risk.

The key attributes of Duo compression are:

01. Members can view a daily, anonymised update of compression opportunities with other members
02. Initiating, building and agreeing a compression event is performed over the SwapClear Portal
03. An on-demand service where members initiate and progress compression runs on a daily basis
04. All approved trade events, terminations and replacements are created directly within SwapClear
05. Risk replacement trade templates are based on standardised trades so members may replace their risk with a smaller number of risk replacement trades





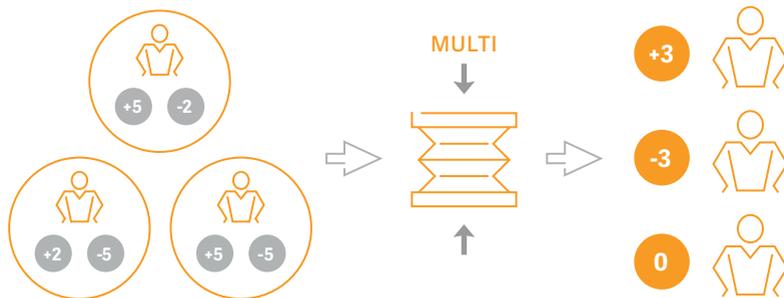
Multi Compression

When clearing with SwapClear, members and clients may also choose third-party multilateral compression through ACSPs.

It is a highly efficient option because a larger number of parties can participate to create a bigger pool with more opportunity for compression.

In addition, members and clients have the option of replacing the compressed trades with a smaller number of risk replacement trades.

SwapClear conducts weekly runs, with a single currency per cycle selected by the approved third-party provider.



ABOUT LCH AND SWAPCLEAR

LCH has always endeavoured to build strong relationships with partners across the global markets to deliver best-in-class risk management. With our accumulated experience and expertise, we are uniquely positioned to help participants increase capital and operational efficiency, while adhering to an expanding and complex set of cross-border regulations. Working together with our stakeholders, we have helped the market transition to central clearing by introducing an array of innovative enhancements. These include solo compression with blended rate, an expanded set of customer protection options, and the launch of LCH Spider, our portfolio margining tool. When combined with an uncompromising commitment to service delivery, it's no surprise that LCH is the natural choice of the world's leading market participants.

SwapClear, the world's leading OTC interest rates derivatives clearing service, provides access to the deepest pool of dealer liquidity, with more than 225 market makers clearing in 21 currencies across 9 major products. Since the introduction of buy-side clearing, nearly \$840* trillion notional has been cleared using SwapClear, more than four times that of the nearest competitor.

LCH works across a range of execution venues and is majority-owned by London Stock Exchange Group (LSEG), a diversified international exchange group that sits at the heart of the world's financial community.

DISCLAIMER

This document has been provided to you for informational purposes only and is intended as an overview of certain aspects of, or proposed changes to, services provided by LCH Group Holdings Limited, LCH Limited, SwapAgent Limited, LCH S.A. or LCH.Clearnet LLC (each an, "LCH Company"). This document does not, and does not purport to, contain a detailed description of any aspect of an LCH Company service or any other matter set out in this document, and it has not been prepared for any specific person. This document does not, and does not seek to, constitute advice of any nature. You may not rely upon the contents of this document under any circumstance and should seek your own independent legal, investment, tax and other advice. The information contained in this document does not constitute a recommendation or offer with respect to any derivative contract, financial instrument, security or service. No LCH Company makes any representation, warranty, condition or guarantee (express or implied) that the contents of this document are accurate, complete or up-to-date, and no LCH Company makes any commitment to offer any particular product or service. No LCH Company shall have any liability for any losses, claims, demands, actions, proceedings, damages, costs or expenses arising out of, or in any way connected with, the information contained in this document, except that each LCH Company accepts liability for personal injury or death caused by its negligence, for its fraud or wilful misrepresentation, and for any other liability which cannot be excluded by applicable law. Copyright © LCH Limited 2018. All rights reserved. SwapClear, ForexClear and SwapAgent are registered trademarks of LCH. The information contained in this document is confidential. By reading this document, each recipient agrees to treat it in a confidential manner and will not, directly or indirectly, disclose or permit the disclosure of any information in this document to any other person (other than its regulators or professional advisers who have been informed of the confidential nature of the information) without the prior written consent of an LCH Company.

*As of October 31, 2018

Contact Us

For more information on SwapClear, please contact your sales team representative, email lchsales@lch.com, or visit lch.com.

For more information on our compression offering, please contact us at:

EUROPE

+44 20 7426 7543

SwapClearInformation@lch.com

AMERICAS

+1 212 513 8282

USSwapClearSales@lch.com

ASIA-PACIFIC

+61 2 8259 4109

AsiaPacinfo@lch.com

lch.com