



**Fragmos Chain** is a multi-party platform that streamlines interactions between financial institutions to reinvent the post-trade processing of capital markets transactions. Currently being trialed by several major banks, the solution is opening up a faster, more efficient and lower-risk future for post-trade operations in over-the-counter (OTC) derivatives.

Estimated savings of up to 80% of post-trade costs and 50% of capital charge

Reduced operational losses and risks, with elimination of manual processes

Improved client service and higher revenues, with traders more able to focus on value-adding activities

Product-agnostic and extendable across all classes of derivatives

**Platform: Corda**

Fragmos Chain is built on R3's trust technology, powered by its enterprise-grade distributed ledger technology (DLT) platform, **Corda**.

## Challenge

OTC derivatives are a large and vibrant area of global capital markets, with turnover totaling **\$600 trillion a year**. It's also highly complex, with several participants involved, including investment banks, asset managers, hedge funds, insurance companies, brokers and asset servicers. The complexity extends to the trades themselves, which commonly contain about 150 datapoints, all needing to be reconciled between the counterparties. Yet post-trade processing of OTC derivatives remains largely manual, making it slow, cumbersome, costly, error-prone, and highly capital- and labor-intensive.

The current process underlies the challenge. Once the trader books the trade, the middle office enters the details into a spreadsheet and sends it to the counterparty for matching, a task that's complicated by every bank having its own data model. If any discrepancies are found, the middle office has to go back to the trader before moving into legal confirmation. This process is repeated for every event—periodic cashflows, increases, option exercises, and so on—during the term, which could be several years. To manage all this, participants either use matching platforms—automated for the trade, but not for the subsequent events—or manual PDF files, spreadsheets and phone correspondence.

**\$20B** of total annual spending on post-trade processes

**80%** estimated cost savings

Source: **Barclays**

## Solution

When Fragmos Chain set out to build a solution for post-trade processing, they knew their solution needed to be built on a technology that would enable the collaboration of untrusting participants with absolute privacy and immutability of transactions. Blockchain was selected because, unlike traditional databases, distributed ledger technology does not require the trust of a central operator with sensitive transaction data.

Fragmos Chain chose Corda for its private peer-to-peer transactions, high security and legal certainty using ISDA's Common Domain Model (CDM). Corda's transaction model provides access to data on a strict need-to-know basis—even Fragmos Chain itself can't see any of the related information. Corda is also secure by default, having been designed specifically for financial markets, and ensures the secure sharing of immutable transactions. Finally, to support a global platform operating in multiple jurisdictions, Corda provides legal certainty supported by **ISDA research**, stating that trade data documented in a permissioned blockchain such as Corda is admissible in court proceedings.

How does it work? First, the trader books the trade into their chosen trading system. The trade data then flows to Fragmos Chain, where it's translated into ISDA's CDM. The CDM trade data from both counterparties then flows automatically to the matching engine, which compares the data on both sides, and instantly flags each trade as either complete or having a discrepancy requiring further investigation. Interactions are then managed through Fragmos Chain where discrepancies can be amended with the counterparty in near-real time via APIs.

Daniel Ivanier, Founder & CEO of Fragmos Chain, explains:

**“Corda's private, permissioned blockchain was the optimal choice for us because it offers both the best technology and the best privacy. It also brings commercial advantages as part of a wider ecosystem of financial firms and is aligned with ISDA's CDM. Finally, our solution requires very complex smart contracts, and the fluidity offered by Corda in this area is ideal.”**

## Results

Now being trialed with several banks, Fragmos Chain will move into live production in the next few months. Experience to date shows the solution delivers major reductions in time, cost and effort, potentially saving each bank several million dollars a year, while also dramatically cutting the risks of errors or missed bookings. The automated identification and resolution of discrepancies further reduce the workload for the middle office and ease the administrative burden on traders, who have more time and bandwidth for selling products. And importantly, the decentralized clearing solution based on Fragmos Chain platform allows it to free 30% to 60% of capital related to counterparty risk.

While the Fragmos Chain solution is focused initially on equity and interest rate products, it's designed to be cross-asset and plans to extend to more asset classes over time. The future roadmap of products to be incorporated includes foreign exchange (FX), commodities, credit, structured products, repos, securities lending and crypto derivatives—the last of which is an area where Fragmos Chain anticipates rapid growth. The message is clear: with Fragmos Chain and Corda, OTC derivatives post-trade processing has entered the digital age. And it's never going back.

## About R3

R3 is a leading provider of enterprise technology and services for the development of multi-party solutions that enable direct, digital collaboration in regulated industries where trust is critical.

Learn more at [www.r3.com](http://www.r3.com) and [www.corda.net](http://www.corda.net).