

Introduction

Collateral management transformation is still top of the priority list for Financial Institutions. Such transformation is driven mainly by regulatory compliance, sustainable efficiency and adoption of transformative IT architecture. It also requires firms to assess their end-to-end operating model across processes, technology and data.

At VERMEG, we keep investing in COLLINE, our collateral solution, to assist and guide financial institutions in their compliance and transformation journeys. Recent enhancements are focused on extending features coverage in the following key areas:

- ✓ **Consolidation** of collateral management across bilateral and cleared OTC derivatives, Exchange Traded derivatives, To Be Announced and Securities Finance transactions.
- ✓ **Standardization and automation** of margin calls workflow, communication and settlement with potential cross margining capabilities where possible.
- ✓ **Centralization of a real time enterprise inventory to optimize collateral allocations** (Cheapest to Deliver) and to automate deliveries allocations with eligibility schedules, haircuts, wrong way risks and concentration limits checks.
- ✓ **Digitization** of legal agreements and eligibility schedules to achieve greater interoperability with market utilities.
- ✓ **Control of Data Quality** to make sure that inputs (Trades, prices, inventories, SSIs, etc...) are exhaustive and good enough to avoid interrupting the automation of the margining workflow.

COLLINE Web Portal: A new experience

The new generation of COLLINE V21 was released in Q1 with a new front end that is completely decoupled from the back end of the application with an extensive list of APIs.

COLLINE web portal leverages all those APIs to provide a variety of services that Funds and Assets Servicers as well as Sell side banks can offer to their clients and counterparts. This could help 'on demand' data viewing to provide real time data, or approvals of certain steps of the margin workflow such as Agreeing or disputing margin call amounts, or the margin call settlement, for example, approving margin payments and SSIs before releasing instructions to the payment agents or custodians.

These features can be used directly in COLLINE portal or in the clients' portals through APIs. Web services can also be exposed to provide integration with external and legacy systems.

Simplex algorithm becomes a must have

During this quarter, we have seen a higher interest within our client community in automating optimal collateral allocations. The purpose is not only to achieve the Cheapest to Deliver but also to reach a higher efficiency in the collateral allocation process. The challenge is to have a holistic view on the available, held and pledged assets across business lines and apply holistically the constraints in terms of eligibility schedules, appropriate haircuts, concentration limits, wrong way risk, regulatory checks, etc....

Manual allocation is not an option anymore due to the related inefficiency and the need to potentially use multiple asset types as collateral. Automation through a greedy algorithm (optimal allocation of each margin call separately in a waterfall way) is a better approach but it's not enough to achieve the most optimal allocations because it doesn't take a holistic view of all the margin calls to allocate, all the assets and all the constraints simultaneously. Simplex algorithm is the best approach to achieve an overall assessment of all those parameters to provide the most optimal choice of collateral to deliver.

At VERMEG, we have been investing for many years in the COLLINE Optimizer as a standalone module, deployable on the cloud or on-premise. It can be 'plugged' on the top of existing systems with an extensive set of APIs to receive the inventories, the constraints and send the optimal allocations to downstream systems.

Artificial Intelligence Use Case: Margin Messaging & Communication

Most collateral management systems generate emails for margin communication and messaging. Emails are widely used in the buy side community and are deemed to remain unless there is an efficient solution to automate the process at an acceptable cost.

In COLLINE we offer the option to use a digital component, called Email Processor, pluggable on existing legacy systems, that consumes emails, parses them and interprets the content (the email meta data: Subject, Body, attached files) to launch in the appropriate margin workflow in real time.

This solution doesn't rely on pre-formatted emails but rather on an intelligent way to read system or human content through a mechanism of Tokens (or key words). This solution is being enhanced to enrich its Natural Language Programming capabilities to completely automate its learning mechanism without any human intervention.

The next steps consists in adopting the usage of this task basket component in all MEGARA modules.