

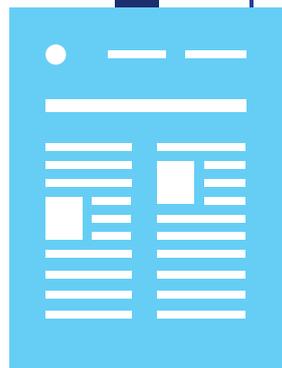
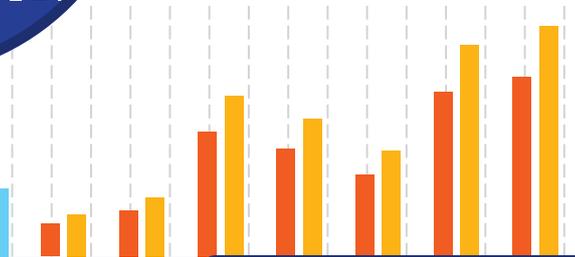


ACTIVEVIAM

Analyzing data. Empowering the future.

Collateral Optimization

WHITE PAPER



Achieving a Competitive Advantage with Collateral Optimization

Collateral optimization has taken centre stage in the OTC derivatives market, as new regulations such as Dodd-Frank and EMIR continue to drive reforms, and have generated a new central clearing model. As higher collateral requirements impact financial institutions, eligible assets will be in shorter supply. This means that the ability to optimize existing collateral will quickly become a highly valued and sought-after service, helping companies to reduce their funding costs. Those financial institutions that offer a bespoke collateral optimization service will be able to optimize client assets more efficiently, ultimately differentiating themselves against competitors.

Breaking down your silos

Many financial institutions have already invested heavily in IT systems to automate individual elements of their collateral management process such as inventories, collateral eligibility, reference data, or trading systems.

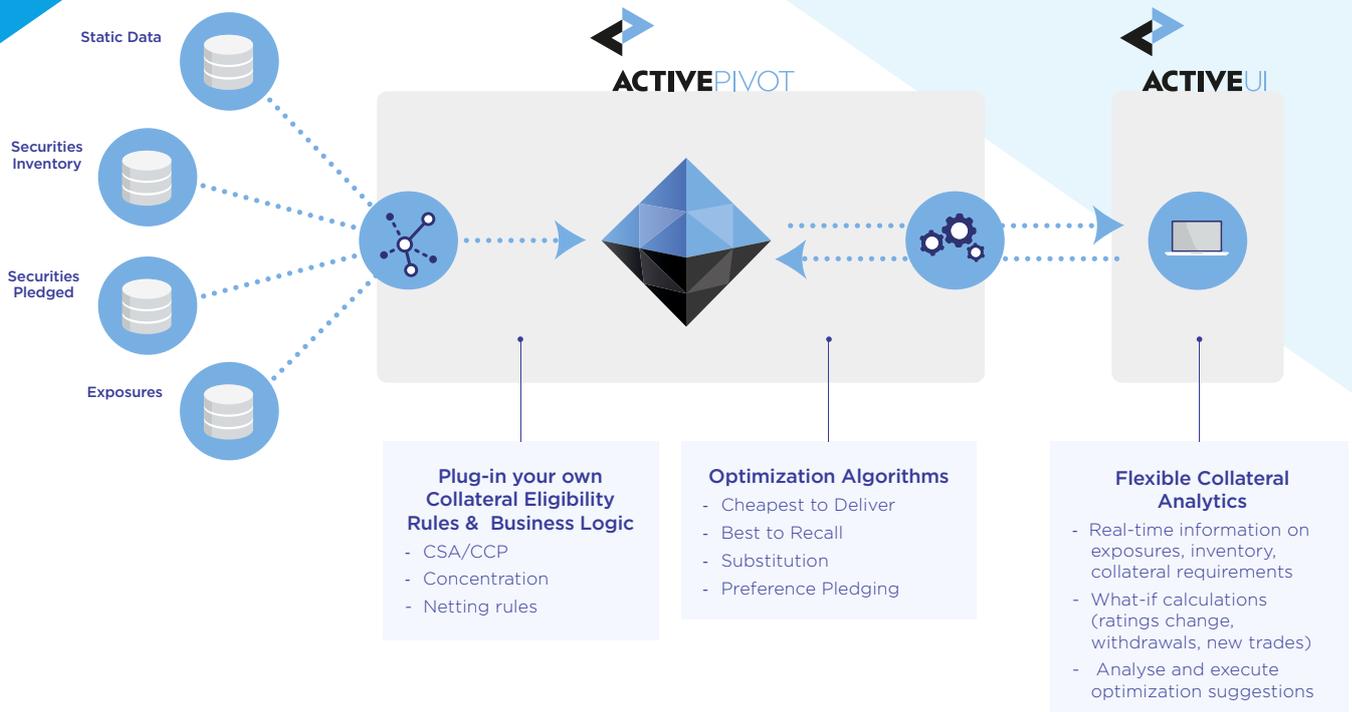
Regulations are now introducing new timing complexities when fulfilling margin calls, making it important that the optimization function also be operated by the front-office. The existing siloed collateral management systems, often located in the back-office are now proving inadequate to the task of delivering effective and efficient collateral optimization.

Time for a fresh approach: Non-disruptive optimization with a small footprint

So what are the options available? Throwing away existing systems to start from scratch with the purchase of a new packaged application that claims to have enterprise-wide optimization capabilities? What would be the cost of such a huge project and would it be available in time?

At ActiveViam, we propose a different approach to taking full ownership of collateral optimization models, which takes into account your time-to-market objectives, cost constraints and future requirements.

The ActiveViam Eco-system for Collateral Optimization



Enterprise-wide collateral optimization framework

With our in-memory aggregation and analytics framework 'ActivePivot', IT teams can build a bespoke and dynamic collateral optimization layer that complements existing underlying systems, providing users with a common analytics platform- whether in the back, middle or front-office. Using ActivePivot as the backbone to collateral optimization efforts provides a range of business benefits:

▶ Cross-silo collateral optimization

ActivePivot provides agnostic, firm-wide cross-asset aggregation, ensuring users have a real-time, consolidated view of collateral exposure, inventory and collateral. Information is updated incrementally as soon as underlying data changes (new trades, FX rate change etc) and available to multiple users who can access this data simultaneously.

▶ Instant 'What-if' Analysis

The front-office needs to assess on an intraday basis different data sets to then be able to evaluate and improve the optimized configuration and inventory of collateral.

ActivePivot allows users to interrogate collateral data at any level and perform instant 'What-if' analysis to evaluate alternative optimization scenarios.

Examples include:

- Cherry-picking assets, excluding portfolios
- Ratings changes and market shift analysis
- Re-running optimization across parameters
- Setting priorities between different portfolios/inventory
- Strategic asset withdrawal

▶ Leverage existing investments

With ActivePivot, you do not need to reinvent the wheel and rip out existing systems. ActivePivot seamlessly integrates with underlying systems in a fast and non-intrusive manner.

▶ Aggregation, optimization and analytics

Existing collateral systems were built for operational workflow processes, and lack the intelligence to aggregate and optimize large volumes of complex and dynamic data. The cutting-edge technology underpinning ActivePivot pulls data from multiple data sources, in any format, plugs in your business logic as well as optimization algorithms, and then builds a bespoke, powerful, future-proof, optimization framework.

▶ Achieve a short time-to-market

ActivePivot is a flexible framework that comes with pre-built optimization algorithms (such as "CTD", Cheapest to Deliver) to help ensure the deployment of collateral optimization applications in a matter of months. Over time, your business and IT teams can enhance it with their own algorithms as collateral strategies evolve. This is a significant advantage compared to packaged software solutions, whose algorithms are set in stone.

▶ Real-time alerts and monitoring

ActiveMonitor is ActiveViam's intelligent module for monitoring the real-time data in ActivePivot. ActiveMonitor provides value-added monitoring and event-based decision-making in real-time. It goes beyond traditional CEP (Complex Event Processing) software, as it is fully integrated with ActivePivot, ensuring better informed decisions through more advanced business logic. ActiveMonitor manages rules that trigger specific actions. An example of this would be rules that exclude certain assets when clearing cut-off times are reached, ensuring maximum optimization efficiency.

▶ Full ownership and control

You can plug in your own rules and logic to build a bespoke solution: collateral eligibility, haircuts, substitution rules and concentration limits. As a result, the optimization layer is 100% tailored to your specific requirements - this level of customization cannot be achieved with packaged solutions.

Frequently Asked Questions

How does ActivePivot's technology approach differ from packaged solutions?

- ▶ You have **full ownership** of your ActivePivot project (including the algorithms) so you can easily react to new inhouse, client and regulatory requirements. This means that you are not dependent on your software vendor doing it for you!
- ▶ ActivePivot is a **non-intrusive technology** that fits seamlessly into any infrastructure and connects to all of your existing data sources. This is particularly important because it can be difficult to collect all of the data required for efficient and effective collateral optimization.
- ▶ **In-memory computing** technology allows you to get instantaneous responses, even if you are running optimization across an entire portfolio. Packaged solutions are limited to running optimization at a desk/cost-center level during the day, and rely on cumbersome overnight batch results for enterprise-wide global optimization.
- ▶ ActivePivot does not impose any predefined data model. ActivePivot will perform aggregation across heterogeneous data sources with the guarantee that, if any underlying data is updated, ActivePivot is instantly updated as well. This ensures a true **"Collateral Optimization Service"**.

Why is it more cost-effective to build a collateral optimization layer using ActivePivot?

- ▶ You already have the data required for collateral optimization. However, consolidating this information represents a major challenge, with a high cost attached. For example, trade exposures can come from different sources at different levels of aggregation. ActivePivot is designed to **collect, enrich and aggregate** this data, applying netting at any level, and turns the data into a clean input for the collateral optimization algorithm. Similar problems exist with cross-silo inventories.
- ▶ As a **flexible component**, ActivePivot can provide a collateral optimization service to any existing user interface which communicates via a web portal. Alternatively, you can deploy this service via a simple web browser, integrating our easy-to-use ActiveUI interface; or access the service from Excel.
- ▶ It is a **cost-effective solution**, easy to implement, but also scalable with minimal cost of ownership. ActivePivot is licensed on a CPU core basis, unlimited volume and number of users, which means it scales as a business grows and you only pay for what you need.

What is ActivePivot's unique functionality?

- ▶ **Simulations:** Each user (or each client) can perform their own "What-If" analysis and get results instantly. Simulation results can be shared and analyzed across multiple users because ActivePivot is a true collaborative platform.
- ▶ **Real-time:** ActivePivot is the only incremental aggregation/optimization engine available today, meaning that global portfolio optimization can be run intraday and on-demand.
- ▶ **Ownership:** Fully own, control and adapt optimization frameworks without restraint.

How quickly can a collateral optimization layer be implemented using ActivePivot?

- ▶ Assuming that the necessary underlying data is available, we can build a prototype using your data and our own CTD (cheapest to deliver) algorithm in 2 to 3 weeks. It's important to note that because you have full ownership of this solution, you don't have to go for a 'big-bang' approach - business and IT teams can adopt an **agile release cycle** as optimization knowledge and requirements grow over time but typical project implementations take between 4-12 weeks.

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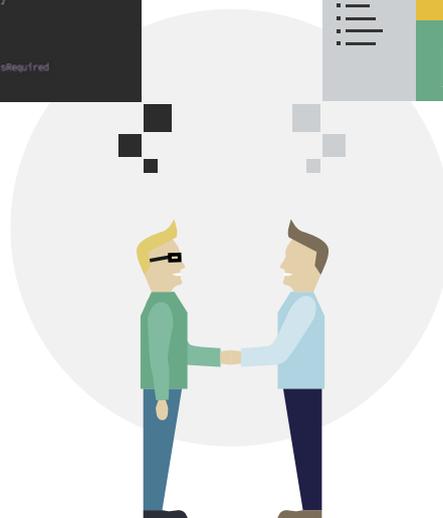
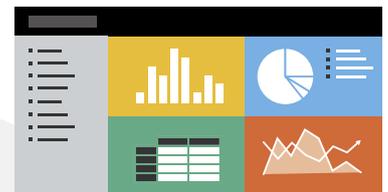
*I would like to speak
to an ActiveViam expert about
ActivePivot and Collateral Optimization.*

Please

Contact me

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35 class RulesActionButton extends React.Component {  
36   render() {  
37     return <IconButton  
38       legendStyle={this.getTheme().rulesEditor.iconbutton.legendStyle}  
39       style={this.getTheme().rulesEditor.iconbutton.style()}  
40       onClick={this.props.clickHandler}  
41       srcKey="button_details"/>;  
42   }  
43 }  
44  
45 RulesActionButton.propTypes = {  
46   clickHandler: React.PropTypes.func.isRequired  
47 };  
48
```



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About ActiveViam

ActiveViam provide precision data analytics tools to help organisations make better decisions faster.

ActiveViam started in 2005 with the vision of leveraging in-memory technology to create an analytics platform where businesses could leverage the largest data sets without restrictions, keep them up-to-date in real time and use them to empower their decision makers.

Our goal at ActiveViam, is to let organisations not only make decisions faster, but better; to not only reach their data, but their potential; to not only see their data, but find their way into the future.

ActiveViam is a privately owned company with offices in Paris, London, New York, Hong Kong and Singapore.

For more information please visit:
www.activeviam.com