



## ActiveViam's Market Risk Accelerator

Take Control of Enterprise Risk

- ▶ Speed up market risk projects and manage enterprise-wide risk
- ▶ Consolidate across risk engines, business lines, product types
- ▶ Create a global view of closing and intraday risk

## Introduction

Quantitative easing. Rumbling oil prices. Tariff fatigue. Currency de-couplings.

Managing market risk as an endless cacophony of potential pitfalls ceaselessly pile up remains a quandary for many organizations.

ActiveViam's Market Risk Accelerator is an add-on to the flagship ActivePivot in-memory data analytics and aggregation engine that provides financial institutions with the ability to calculate risk measures and perform train-of-thought analysis on very large datasets across hundreds of dimensions – at scale.

## Market Risk, Accelerated

The Market Risk Accelerator consumes data from clients' existing risk engines, valuation engines, OMS/EMS systems, transaction processing systems and aggregates it on the fly. As data is queried, calculations are performed on the aggregate data sets facilitating speed-of-thought analysis and providing an immediate response. The solution readily accepts real-time, incremental updates and only those metrics that are impacted are recalculated.

Results are available on ActiveUI as a set of predefined but configurable dashboards, which serve as a starting point to do more interactive analysis, or to design and save as

customized dashboards. ActiveUI also affords the user the ability to generate and email reports automatically at predefined times.

## Slice 'N Dice Your Market Risk

The Market Risk Accelerator allows a risk analyst to drill down and examine the impact of a sharp jump in VaR from one day to the next. VaR and historical VaR can be measured over any given time period provided the set of data has been loaded into the ActivePivot datastore. Besides the ability to examine VaR-related measures, users can slice-and-dice risk sensitivities (including exotic sensitivities such as theta, volga, vanna and gamma) and aggregate them on the fly.

Risk managers and analysts can drill down to PnL from one business day to the next and see all of the inputs that have created any metrics. The PnL Explain process allows a user to quantify the changes in the PnL from one business day to the next, based on the closing prices for each day and show the impact of each input. For example, if the underlying interest rate in a swap changed overnight, the risk analyst can drill down to that one piece of data to confirm where the change came from, then aggregate the sensitivities and interpret the change using the actual day-over-day shift in market data.

PnL Explain becomes an easy task with a tool that provides the ability to drill down and examine granular level data.

### SEAMLESS IMPLEMENTATION

The software is delivered with a core and a reference implementation. The core provides risk calculations such as VaR/SVaR, Component/Incremental VaR and Expected Shortfall on top of the basic aggregation (e.g. net sum) of the primary inputs (e.g. PnL simulations, sensitivities) loaded into the solution.

The reference implementation provides an ETL format, sample set of bookmarks and predefined measures. Customizations can also be made to conform to client data models, workflows, and structures, etc.



## Run What If Scenarios...

The Market Risk Accelerator uses native ActivePivot What-If capabilities to, for example, allow a user to simulate the impact of a negative earnings report on a large equity position at the book or desk level. The user can add or subtract the equity position from the portfolio or desk and instantaneously see the results. This analysis can be applied across jurisdictions and legal entities to create a full picture of enterprise risk.

The What-If functionality also allows a user to make a change to any piece of data fed into the ActivePivot cube and immediately see the results. For example, a user can replace and scale the sensitivities' data providing the ability to navigate maximum control over any relatable (or unthinkable) scenario. One scenario can be kept, and the others discarded.

Permitting the movement of positions from one portfolio to another to interactively compare the impacts on risk and performance assists with optimizing returns.

ActiveMonitor, part of the ActiveViam Platform, allows users to define KPIs and limits and manage by exception for approaching or actual breaches of calculated measures.

## ...Then Sign Off

Additionally, the "Sign-Off" functionality has been configured for market risk as a tool to allow the user more control to audit and verify the business and manage the daily product control function.

A user can create a "mandate" (a collection of trades) that needs to be signed off, (i.e. all trades in a particular book; all portfolios within a particular fund). While checking a trade, if a risk manager spots an anomalous movement in PnL from one day to the next, he or she can use the Sign-Off module to drill down to lower level data (such as new or amended trades), investigate the cause, make the necessary adjustments to reflect the correct data and bring it back into line in real time and submit for approval. An audit trail is maintained to capture all changes.

The Sign-Off handles the end-of-day approval process and risk mandate validation steps and, like any ActiveViam Accelerator, is configurable at any level to align with an organization's structure.

## Market Risk Accelerator Benefits:

Off-the-shelf but configurable data model, calculators and business process



Support growth at scale with highly optimized calculations



Cost-effective, seamless solution that adheres to an organization's hierarchies



Monitor incremental intraday risk



Guarantee user experience without compromising future upgrades



Create What-If simulations to facilitate the decision-making process



# About ActiveViam

## LONDON

6th floor, Shaftesbury House  
151 Shaftesbury Avenue  
London WC2H 8AL  
Tel: +44 20 7836 8820

## NEW YORK

1412 Broadway Suite 2300  
New York, NY 10018 USA  
Tel: +1 646 688 4442

## PARIS

46 rue de l'Arbre Sec  
75001 Paris, France  
Tel: +33 1 40 13 91 00

## SINGAPORE

80 Amoy Street #02-01  
Singapore 069899  
Tel: +65 6816 4988

## HONG KONG

21/F On Hing Building  
1 On Hing Terrace  
Central, Hong Kong  
Tel: +852 3971 9154

ActiveViam provides precision data analytics tools to help organizations 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 organizations 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](http://www.activeviam.com)**