ATOTI FOR xVA

Redefining enterprise-wide real-time credit risk strategies
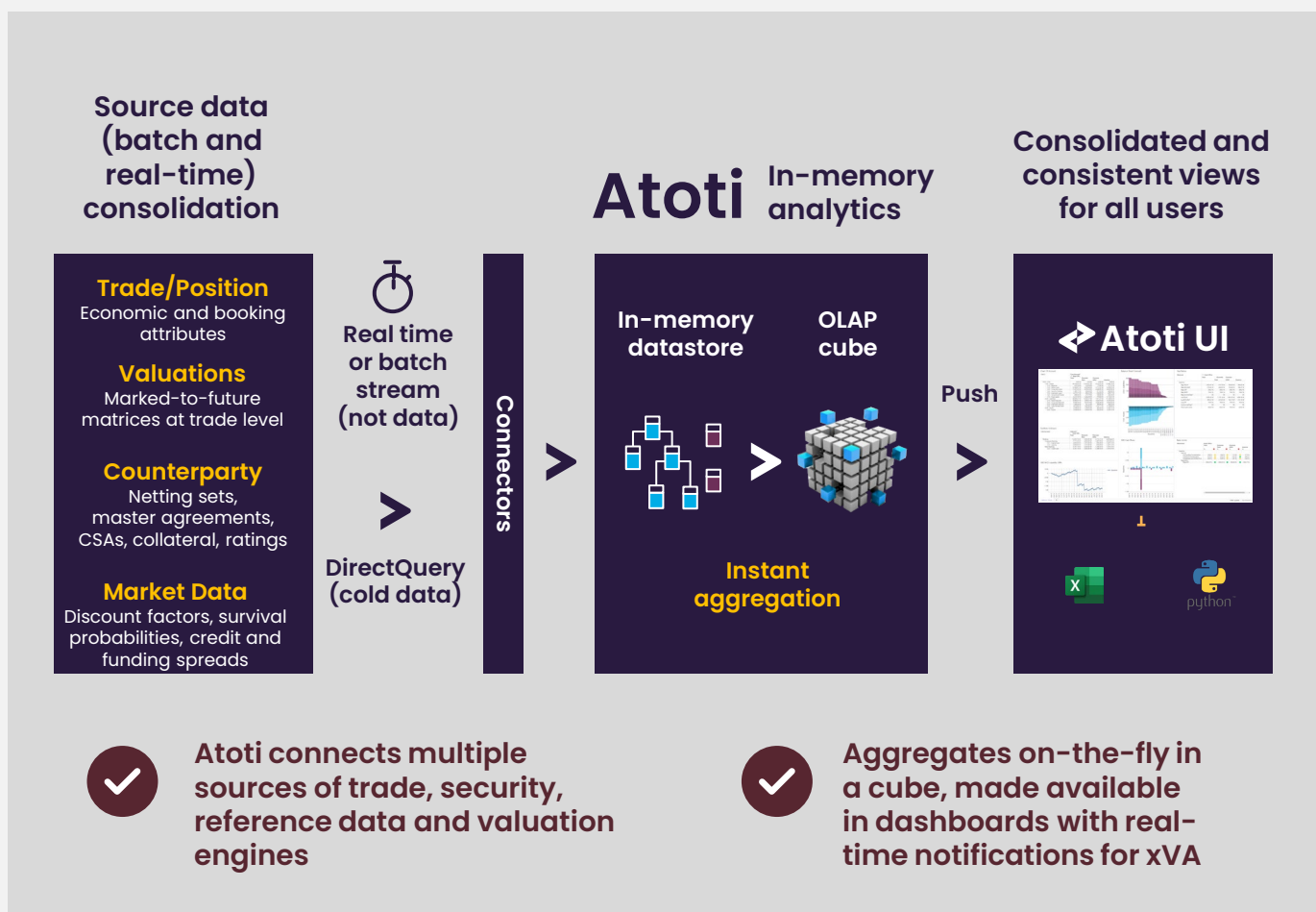
Unlock the power of on-the-fly consolidated analytics across
your counterparty credit risk management framework

ActiveViam

A day in the life of the xVA desk

Redefining enterprise-wide valuation adjustment strategies

Atoti consumes cross-asset positions, valuations and sensitivities from your booking and risk engines in real time and aggregates them on the fly. It allows you to define customized aggregation rules so that you can look at your risk according to the way you trade and the market conventions for your desk.

It's time to know your risks for certain.

Atoti connects multiple sources of trade, security, reference data and valuation engines

Aggregates on-the-fly in a cube, made available in dashboards with real-time notifications for xVA

Atoti consumes marked-to-future valuation matrices from your pricing engines, in real time or batch, and aggregates them by netting set on the fly. Atoti enables instant computation of EE and PFE from netting set vectors.

Subsequently the survival probability and discount factors are applied to derive the comprehensive range of xVA metrics. Customized aggregation rules can be created on interactive dashboards so that you can look at your xVA risks any way you want to.

Atoti is great for reconciliation, lineage and data quality checks and compliance with BCBS 239.
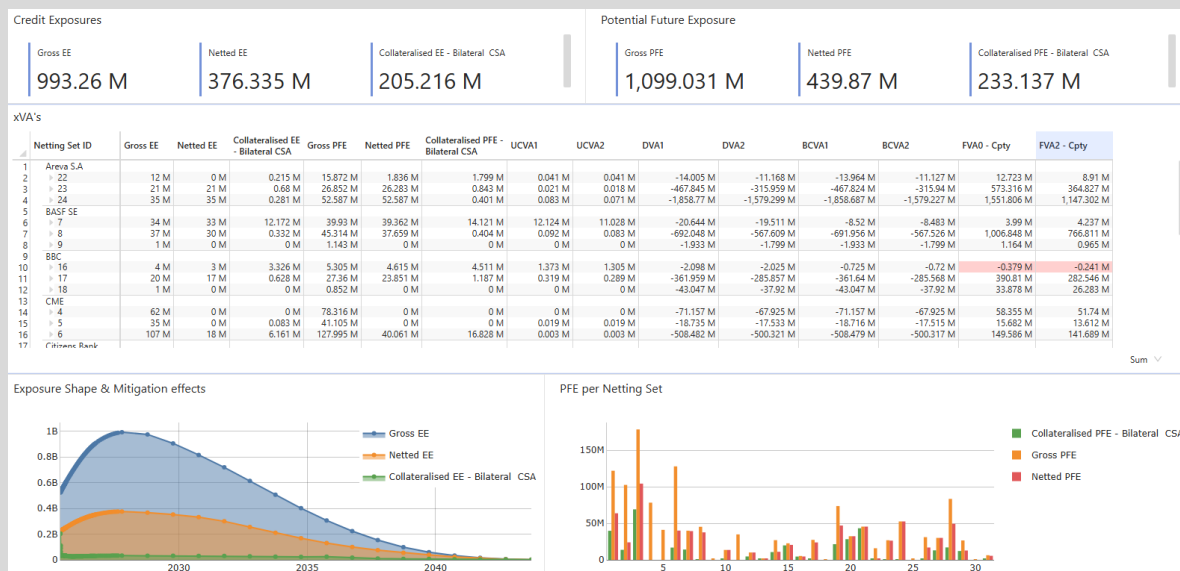
Know your start-of-day positions

Compare your start-of-day positions and exposures with the previous close and understand your starting point. Be confident that the valuation systems have provided everything needed. With Atoti it is easy to check that discontinuities, such as rating changes and defaults, have been applied correctly and that all the required data has been delivered.

Atoti enables you to see aggregated xVA, EE, EEE and PFE numbers across your organization and asset classes. It also provides drill-down to the most granular data such as trade, instrument, or position level on the fly for troubleshooting and correction of misaligned data.

Atoti evaluates and recalibrates with markets in real time while you concentrate on your job.

Consolidated view of the credit and potential future exposures

Dashboard showing start-of-day positions and xVA explainers by netting set

Disparate data sources delay risk consolidation but Atoti enables swift identification of missing or incorrect data. Corrections and adjustments can be applied and checked on the fly. Multi-asset netting sets can be supported because Atoti combines underlying inputs as part of the aggregation and calculation process.

Once the data quality is correct you can identify large swings and movements compared to the previous day and use xVA explainers to understand and explain the reasons.

Reconciling and monitoring xVA can be complex and error prone. It is not enough to aggregate; you need your data to react to market events and trade events that both affect your xVA.

Atoti computes all impacted metrics on the fly and re-evaluates all risk metrics based on real-time trade updates and amendments. Other reference data related to ratings and collateral are real-time drivers too which means you get real-time visibility to credit exposures and dynamic market scenarios.

Atoti tracks xVA against limits eliminating repetitive manual tasks.

Consolidate and monitor xVA from multiple drivers and sources as your portfolio grows.

Rebucket your risk to optimize hedging strategies.

Take a more holistic view of CCR exposures

- Looking across aspects such as country, sector, credit rating, counterparty group and any combination of those and more.

- Understand exposure concentrations better.

- Formalize the way you track concentration limits.

Atoti UI is designed to access the results with predefined and reconfigurable dashboards in Active UI. They are a starting point for more interactive analytics.

Use intuitive dashboards to investigate the data

Atoti UI investigations connect dashboards, streamlining navigation and optimizing the user experience.
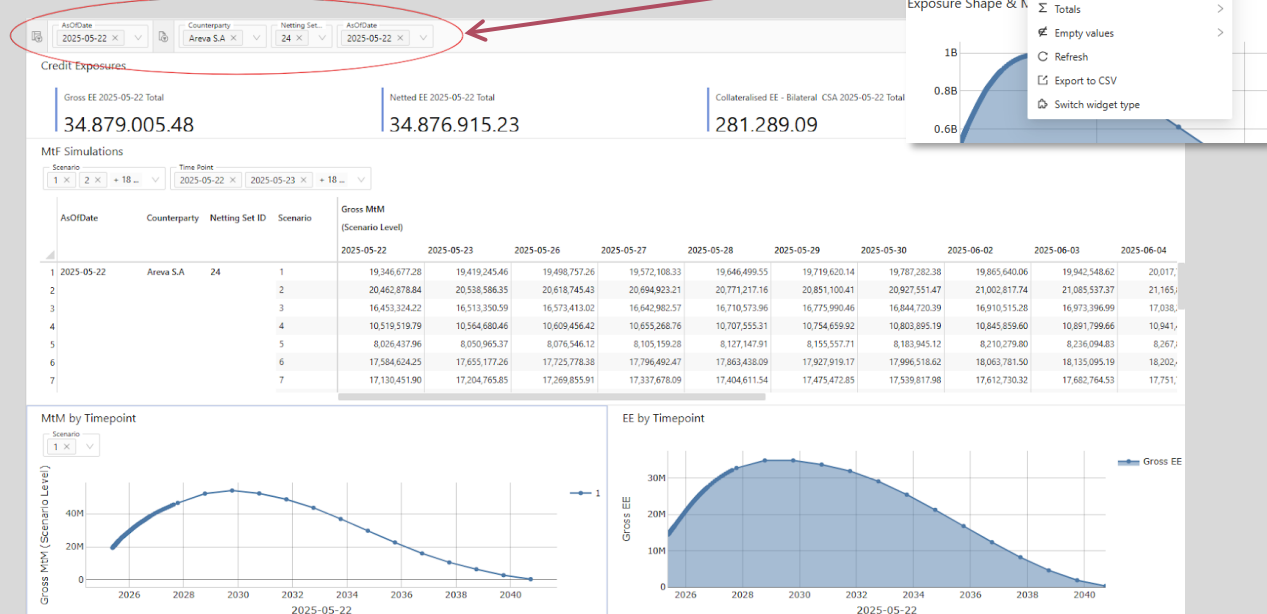
Atoti UI context sensitive menus provide single-click investigation

Deal with the unexpected: limit and breach monitoring

Atoti monitors limits continuously. It gives you early warning of problems as metrics approach thresholds and exceed limits.

Apply a limit to any business metric from a simple aggregate of valuations to a complex derived value such as an PFE or change in CVA from one day to the next.

Atoti not only allows you to slice, dice and filter the data anyway you want, it also enables you to step through each stage of the calculation logic.

Warning! It looks like you might breach some limits.

Identify outliers and breaches

Make better decisions about trading strategies in-line with your firm's risk appetite.

PFE v MTM

ALL
⊈ Trade ID ▼

	Counterparty	Netting Set ID	2025-05-22 Collateralised PFE - Bilateral CSA	MtM	PFE Exception Status
1	Total		88,814,880.28	26,810,188	●
2	CME	Total	17,038,745.43	-57,721,511.9	●
3		4	0.00	-45,122,531.09	●
4		5	0.00	-22,021,548.76	●
5		6	16,828,485.34	9,422,567.96	●
6	Citizens Bank	Total	23,379,789.82	19,783,892.39	●
7		28	17,031,718.36	10,631,556.6	●
8		29	12,102,762.36	11,549,834	●
9		30	0.00	-2,397,498.21	●
10	The Monsanto Compa...	Total	66,521,287.62	64,747,807.51	●
11		19	21,483,632.81	15,621,710.94	●
12		20	28,298,619.00	28,350,993.19	▲
13		21	43,244,617.79	20,775,103.38	●

**Atoti highlights netting set 20 showing a breach on the PFE.**

Explain the explainers

The explanation of differences can be buried in an early part of the calculation; the path to xVA metrics can be traced through the gross, netted and collateralized exposures as shown in this Atoti UI dashboard which illustrates the combination effect of the mitigants.

What once took hours or days can now be done in seconds.

Expected exposures (EE) viewed over the timepoints
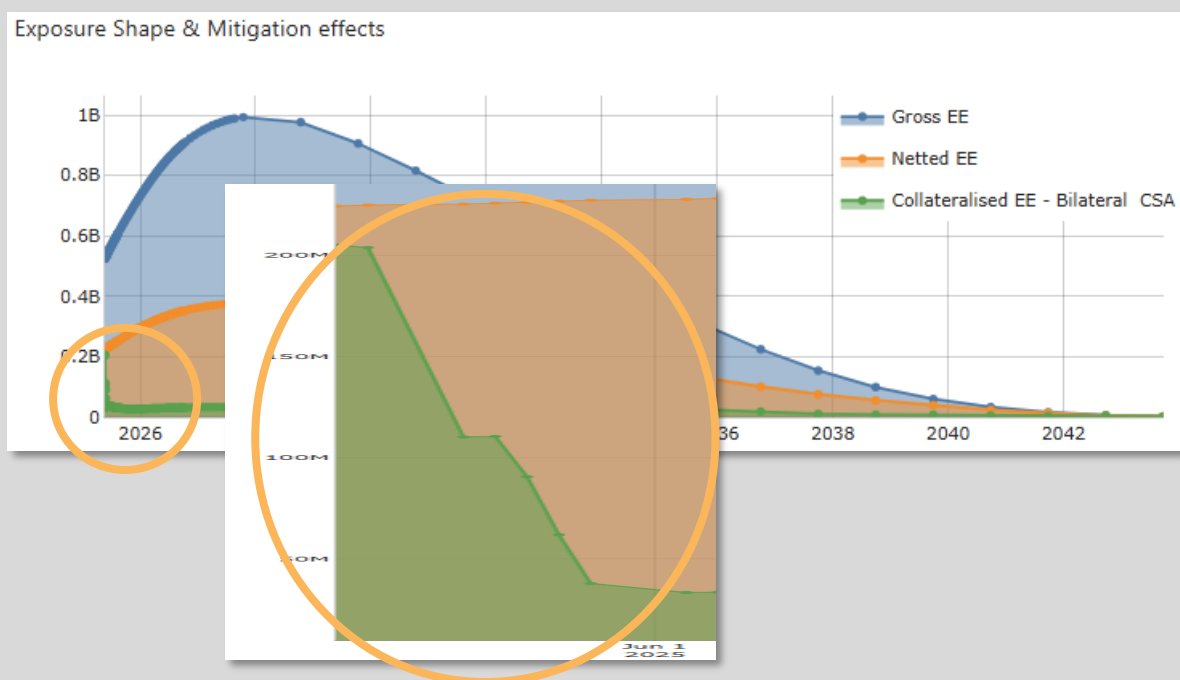
The effect of collateralization over the first 19 days

The gross expected exposure (EE) is mitigated by netting and collateralization effects.   Note the early days impact as collateralization does not take effect instantly.

Support sales, structuring and credit teams

Respond to internal requests for ad hoc xVA support. With flexible dashboards you can respond to new initiatives making sure that business events such as a new customer, or trading a new product or deal, does not impact the firm's risk negatively. Atoti's what-if is designed to enable the impact of new data or transactions to be evaluated.

Traditional approaches are slow, manual, and reactive. Model specific events on the fly and see the results instantly.

Pre-deal check

Atoti can connect to any source for pre-deal simulation or previews. You can create a trade and its mark to future matrix across scenarios to see its impact on one or more netting sets and you can remove that What-if trade when the deal has been fully processed in the booking system.

Because Atoti has access to the granular data that comprises a netting set, you can see not only the incremental impact of the proposed trade on the portfolio, but also the marginal impact of the trade in the netting set. This class of analysis is not possible when data is pre-aggregated at a netting set;

Atoti's set of marginal analytics are unrivaled due to the accessibility of the granular data.

Cheapest to counterparty to deal

The impact of a trade on the Expected Exposure varies from one counterparty to another because the xVA calculations are non linear. The same trade will impact counterparties in different ways. A useful extension to the pre-trade What-if is to see the impact of a trade against several alternative counterparties so that the most cost effective can be chosen.

Atoti enables you to see counterparties side by side along with the impact of the trade on all xVA metrics including gross, net and collateralized exposures, and the status of those values against their limits.

Counterparty Limits dashboard - cheapest to deal dashboard

Counterparty Limits

	AsOfDate	Counterparty	Counterparty Gros...		Cpty Gross EE Util. %		Counterparty Gross EE Status	
			WhatIf Trade - Cur...	pre-deal-check	WhatIf Trade - Curr...	pre-deal-check	WhatIf Trade - Current	pre-deal-check
1	2025-05-22	Orbis Hotel Gro...	40.802 M	43.295 M	74.19%	78.72%	🟢	🟢
2		The Monsanto ...	117.871 M	119.616 M	79.64%	80.82%	🟢	🟧
3		ISCAS	44.481 M	44.796 M	88.96%	89.59%	🟧	🟧

Counterparty Limits

	AsOfDate	Counterparty	Counterparty Nett...		Cpty Netted Util. %		Counterparty Netted EE Sta...	
			WhatIf Trade - Cur...	pre-deal-check	WhatIf Trade - Cur...	pre-deal-check	WhatIf Trade - Current	pre-deal-check
1	2025-05-22	Orbis Hotel Gro...	20.044 M	20.044 M	77.09%	77.09%	🟢	🟢
2		The Monsanto ...	87.548 M	89.584 M	70.04%	71.67%	🟢	🟢
3		ISCAS	28.624 M	29.017 M	79.51%	80.6%	🟢	🟧

Counterparty Limits

	AsOfDate	Counterparty	Counterparty Coll...		Cpty Collateralised...		Counterparty Collateralised...	
			WhatIf Trade - Cur...	pre-deal-check	WhatIf Trade - Cur...	pre-deal-check	WhatIf Trade - Current	pre-deal-check
1	2025-05-22	Orbis Hotel Gro...	19,175.22 K	19,175.22 K	76.7%	76.7%	🟢	🟢
2		The Monsanto ...	56,303.686 K	56,357.366 K	62.56%	62.62%	🟢	🟢
3		ISCAS	8,168.078 K	8,186.012 K	74.26%	74.42%	🟢	🟢

**The proposed trade is tested against three counterparties.
Only one: Orbis can absorb this trade without violating any limits**

Market and reference data impacts

Counterparty CSA parameters such as minimum transfer amounts can be adjusted to see the impact on the xVA

Adjust the margin period of risk (MPOR) for one or more CSAs and see the impact and delta to the originals.

Examine the impact of exercising break date options looking at the impact. Particularly useful for long maturity dates.

Change the Survival Probability and see the effect on impact on CVA levels

Adjust Funding Rate(s) and see the impact on FVA levels

Atoti's set of What-if features are extensible – you can add new, customized features.

Atoti helps you understand and sign-off end-of-day reports

Firms must deploy a robust workflow for daily xVA adjustment, approval and sign off. Atoti enables anomalies to be identified, investigated and corrected with adjustments.

Everything is audited and checked. When it all looks good, the results can be signed off.

The approval process and risk validation are configurable at every level to align with your firm's hierarchies and approval workflow.

Regulators are assured that the firm complies with policy and regulation.

Eliminate spreadsheet risk

Excel has been used by many organizations with an immediate, tactical need to provide intraday xVA and end-of-day reconciliation metrics.

When it comes to cross-asset, enterprise-wide consolidation, spreadsheets reach their limit. They bring their own well-known challenges and difficulties, such as multiplicity of versions and customizations, data lineage and auditability issues, and lack of consolidated views.

Operational risk can create major reputational risk. Atoti's rigorous approach to data security, consistency and integrity makes the Atoti UI a superior solution.

Traders, managers and regulators trust the analytics from Atoti.

What benefits does Atoti bring?

Real-time exposure and CCR analytics
- Instantly track and update xVA without batch-processing delays.
- Combine risk from multiple source systems in real time.
- Support multiple snapshots through the day if needed.

xVA explainers
- Granular breakdown by by netting set, counterparty, sector, country, currency, trade impacts, and market moves.
- Granular breakdown by mitigants: netting and collateralization effects.

Sensitivity aggregation
- Lightning-fast computation.
- Configurable rebucketing according to market conventions.

Dynamic drill-downs
- Instantly investigate and explain right down to the transactions, scenarios and time points at any level of aggregation and filtering.
- Follow the calculation and mitigation effects from raw data through netting and collateralization steps to xVA..

Optimized decision-making
- Real-time insights for better monitoring, understanding and what-if scenarios for new business.
- Create and run scenarios, great for modelling CSA, survival probability and market impacts.
- Real-time monitoring of risk indicators versus risk appetite.

Rigorous approval and reporting
- Be confident that your xVA is correct.
- Know that adjustments have been authorized according to policy.

Eliminate spreadsheet risks
- Demonstrate that the risk is computed rigorously and that decisions are made using complete and correct data.
- Know that the risk is consistent across the firm.
- Improve productivity by providing self-service analytics.

Futureproofs the firm
- Be ready for the unexpected.
- Be ready for new technology infrastructure and new markets, trading conditions, and regulations.
- Be prepared for high data volumes and ready to scale as the business grows.

Do not keep your traders in the dark: make better trading and hedging decisions with Atoti.

How does Atoti do it?

In-memory OLAP cube engine

- Uses an in-memory database with full MVCC model, lockless transactions, and bitemporal (time travel) features.
- Features lightning-fast aggregation, slicing, and drill-down across billions of records.
- Highly scalable elastic architecture

Real-time data ingestion and incremental updates

- Ingests data from multiple sources in real time.
- Supports incremental updates without requiring full reloads.
- Can support intraday full reloads without interruption.

Multidimensional data model

- Uses a flexible, multidimensional schema and semantic layer.
- Enables users to analyze and pivot data by any combination of attributes (e.g. counterparty, rating, sector, country, currency and more).

Dynamic aggregation and on-the-fly calculations

- Recalculates complex measures such as CVA.
- Recomputes xVA instantly using on-the-fly aggregations and built-in formula logic.

Hybrid cloud

- Atoti supports both on-premise and cloud data sources.
- Supports hybrid configurations where some data nodes are deployed on premise and some others on cloud technology.

Embedded governance, audit and limits framework

- Features built-in data lineage, access control, limit monitoring, and audit trails.
- Ensures enterprise-grade data integrity and operational transparency.

Key facts from a Tier 1 deployment

3000 scenarios

150 time points

4000 netting sets

3500 counterparties

750k+ trades

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200m+ data points

400+ measures

200+ dimensions

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1Tb+ dataset per day

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24x6 global operation

30+ desks

200+ traders

Hybrid operation is great for ad hoc historical analytics.

ActiveViam

About ActiveViam

ActiveViam delivers active intelligence for complex financial analytics, providing institutions with precise real-time and deep historical analysis capabilities to inform challenging trading, risk, and treasury management decisions. Clients can use ActiveViam's Atoti platform as their universal semantic layer to build proprietary business solutions or buy pre-packaged solutions for key regulations and risk metrics.

Built for and trusted by finance, ActiveViam combines first hand industry expertise with unrivaled technology, relentless innovation, multi-dimensional analysis capabilities and easy integration with a broad range of data and analytics providers, making it the missing link in financial institutions' existing business intelligence stacks.

For more information please visit activeviam.com

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