

Insights



SCILA RISK INSIGHTS

Risk modernised: Continuous, real-time risk management built for scale

Monitor. Identify. Act.

SCILA



Highlights



Shift from reactive to proactive, real-time risk management.



Unify risk visibility across assets, markets, and portfolios.



Scale seamlessly with automated infrastructure for 24/7 trading.



Continuous, real-time risk management built for scale

In today's global financial markets - where the trading day routinely spans 16 to 18 hours or operates continuously around the clock - treating risk management as a post-trade regulatory exercise is no longer sufficient.

To limit potential financial losses, mitigate reputational impact, and protect firm capital, risk leaders must move beyond passive compliance to proactive, continuous risk discovery. Yet, most existing systems continue to rely heavily on manual intervention. Very few risk managers have access to an enterprise-wide, research-based, pinpoint-accurate ability to identify potential risks across multiple operational levels in sub-millisecond real-time.

Historically, each client, counterparty, or market participant was identified and monitored as an isolated source of risk. Today, at every level of business and across every type of institution, each unique risk profile must be evaluated - whether it is isolated within a single portfolio or spread thinly across thousands of portfolios where a shift in interest rates or dynamic margin requirements could expose the broker to unmanageable risk.

The primary objective for risk managers and firm leaders today is gaining the immediate ability to assess whether an instrument, asset class, or marketplace presents a damaging risk profile - both right now and in the future.



Removing intraday blindspots: Unifying surveillance and market risk

In institutional risk management, surprises translate directly into unquantified exposure. Risk managers are accustomed to expecting the unexpected and require the ability to instantly understand how sudden market shifts impact intraday P&L and overall trading outcomes.

Bridging the operational gap between trade surveillance and market risk management onto a single, unified platform significantly enhances a risk manager's ability to detect abnormal market behavior, position accumulation, and systemic risk much earlier in the trading lifecycle.

Breaking asset-class silos for cross-asset visibility

Many financial institutions continue to manage their operations within functional silos. However, heightened market volatility is driving the removal of traditional barriers across asset classes - spanning physical energy and commodities to digital assets, FX swaps, and structured equity derivatives - as well as across geographic regions. Breaking down these silos enables on-demand aggregation and risk analysis across all firm branches, accounts, and client groups.

Overcoming legacy cost and friction in 24/7 markets

The operational demand for systems capable of continuous 24/7 processing is accelerating. Legacy systems designed solely for traditional aftermarket batch processing no longer meet the needs of fast-moving trading environments.

Furthermore, across the financial industry, system implementation costs consistently outpace software licensing costs due to monolithic legacy architectures, complex data engineering, and custom integration friction. With new exchanges and trading venues emerging constantly, risk infrastructure must remain agile enough to handle new instrument characteristics without requiring costly, major software upgrades.

Elastic microservices architecture: Built for unlimited scale

Most conventional risk management solutions operate in near real-time, but many lack processing capability at unlimited scale. As institutions add new venues and messaging volumes grow exponentially, Chief Risk Officers (CROs) and desk heads require absolute confidence that their systems will not buckle under sudden activity peaks.

By deploying cloud-native microservices backed by an elastic computation grid and active real-time monitoring, modern risk platforms scale dynamically - increasing computing power on demand to handle high-throughput message bursts seamlessly.



Automated instrument and market onboarding

Modern technical standards require risk engines to update automatically. Modern systems must load new markets, products, and instruments accurately and immediately upon listing without human intervention or costly software rewrites, using open APIs and microservices architectures.

When an instrument is traded for the first time, the system automatically recognises its characteristics and initiates a market data subscription. For illiquid or infrequently quoted markets, the engine calculates a fair derived value. Furthermore, the pricing model dynamically accounts for position size, applying mid-prices for smaller positions and liquidity-adjusted bid-ask estimates for larger orders.

Continuous margin calculations and real-time alerts

Continuous 24/7 coverage is vital as global trading operates continuously across time zones. While active trading hours vary geographically, a major market event in one region quickly creates knock-on effects across interconnected global venues.

To remain effective, a risk platform must continuously calculate clearing house and OTC Initial Margins (IM), allowing dynamic adjustments from exchange minimums to custom multipliers based on clearing house rules, asset type, or client profile. Additionally, the system must accurately and swiftly update Variation Margin (VM) or intraday P&L. To maintain collateral ratios and position limits, for example, real-time alerts trigger instantly if an account with significant IM experiences negative P&L movement.

Predictive simulations, open API models, and historical replays

Intelligent portfolio testing is essential for modern risk control. Institutions must frequently conduct tailored stress tests across specific market segments, sub-categories, and complex mixed portfolios. Interactive 'what-if' simulations enable traders and risk professionals to evaluate the exact impact of proposed trades, market shifts, or parameter changes prior to execution. Furthermore, open APIs allow seamless integration of industry-standard metrics - such as Monte Carlo simulations and Value at Risk (VaR) - alongside proprietary risk models.

Re-running these tests follows a logical, event-driven framework: active portfolios featuring specific product characteristics automatically trigger re-examination and generate alerts for outlier results before market shifts occur. Using historical 'time warp' replay capabilities, risk managers can instantly evaluate current or historical portfolios against past market shocks to validate model assumptions under actual historical stress conditions.

Firm-wide exposure monitoring and broker cost optimisation

Risk evaluation must extend beyond individual accounts to reveal the firm's total net and gross exposure by instrument group or class. Because exposure to carrying brokers, initial margin requirements, and market risk represent substantial operational costs, continuous statistical analysis is essential. This analytical approach identifies measurable cost savings across differing broker margin models.

Real-time position monitoring forms the foundation of effective risk control. By establishing firm-specific limits, the system automatically alerts risk managers to breaches and records every event in a comprehensive audit trail. This internal monitoring aligns with global regulatory standards and exchange rules designed to prevent market cornering.

By aggregating diverse positions from multiple marketplaces into common underlying groups, firms gain complete transparency into trader risk - even when positions are distributed across multiple accounts. This aggregation uncovers hidden risk concentrations that might otherwise go unnoticed.

Additionally, early warning alerts for global net or gross position exposures prove invaluable as contracts approach maturity and regulatory limits shift dynamically based on settlement dates. Aggregating risk across interconnected marketplaces - such as bond basis trading or energy and power exposure - surfaces key opportunities to rebalance risk during volatile periods. As institutional priorities shift toward trading enablement and execution performance, adopting elastic, real-time risk infrastructure ensures firms remain both resilient and competitive.



Real-world application: Transforming multi-asset risk - a customer case study

The challenge: modernising the risk infrastructure of a top-tier, multi-asset broker serving institutional, professional and individual clients across diverse markets.

Like many international institutions, the firm needed to manage risk in a unified, real-time manner across equities, derivatives, and Spot FX.

By replacing disparate legacy systems with a consolidated, modern multi-asset platform, the institution achieved three critical operational breakthroughs:

- **Collateral optimisation:** By obtaining an accurate, real-time assessment of cross-asset risk, the firm successfully optimised client collateral requirements. This precision freed up capital previously tied up unnecessarily, allowing clients to pursue additional trading opportunities and improving overall capital returns.
- **Pre-trade and historical simulation:** The firm deployed 'what-if' simulations to test the potential impact of new trades on portfolio risk prior to execution, paired with 'time warp' functionality to analyse historical market events and evaluate portfolio performance under severe past stress scenarios.
- **Unprecedented transparency:** Using advanced drill-down functionality, risk managers gained immediate visibility into the underlying drivers of risk, enabling swift, strategic responses to market dynamics before issues could escalate.



"With Scila Risk, we've gained a consolidated real-time view of our risk exposure, optimized our collateral utilization, and unlocked new levels of trading capacity. This directly translates to improved collateral efficiency, freeing up capital for trading, and reduced costs, and ultimately, greater potential for revenue generation. The collaboration with Scila's expert team and their cutting-edge technology has been exceptional."

Ken Ong | CEO, KGI Securities Singapore



About Scila

Scila is a leading provider of innovative trade surveillance and risk management solutions for market participants, marketplaces, and regulators.

Founded in Stockholm in 2008, we have a proven track record of delivering high-performance technology that empowers clients to ensure market integrity, manage risk effectively, and maintain a competitive edge.

We offer two flagship solutions: Scila Surveillance, a globally renowned market sur-

veillance offering, and Scila Risk, a modern multi-asset risk management platform. Both solutions are built on a foundation of trust, agility, and a commitment to continuous innovation.

A core value, present from the very start of Scila, is to partner with our clients. We always aim to deliver solutions tailored to their specific needs, fostering long-lasting relationships built on mutual success.

This has resulted in a strong and growing customer base, counting a wide range of firms,

including prominent names, such as Deutsche Börse, Erste Bank, Glencore, the Central Bank of Ireland, EEX, KGI Securities, Statkraft, and Capital.com.

Scila is headquartered in Stockholm, Sweden, with a global presence and boots on the ground in Chicago, London, Paris, and Singapore.

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