

Financial Crime and Compliance Management

SPARK Matrix™ : Trade Surveillance and Monitoring, 2024

November 2024

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Executive Overview

This research service includes a detailed analysis of global Trade Surveillance & Monitoring solution market dynamics, major trends, vendor landscape, and competitive positioning analysis. The study provides competition analysis and ranking of the leading Trade Surveillance & Monitoring vendors in the form of the SPARK Matrix™. This research provides strategic information for technology vendors to better understand the market supporting their growth strategies and for users to evaluate different vendors' capabilities, competitive differentiation, and market positions.

Market Definition and Overview

QKS Group defines a Trade Surveillance and Monitoring solution as “a software that identifies and prevents abusive trading practices by monitoring market manipulation, fraud, and illicit trading behavior.” A trade surveillance and monitoring solution should cover all asset classes and geographies to identify threats from any trading transaction. The software protects organizations from reputational risk and losses from penalty and fraud while ensuring regulatory compliance.”

A trade surveillance and monitoring solution offers comprehensive capabilities for pre-trade, post-trade, and market surveillance, aimed at identifying market abuse practices and trading violations. These solutions provide in-depth analysis of the order book, track complete audit trails of orders and trades, and monitor cross-market and cross-asset trades to mitigate illegal trading practices. By safeguarding firms from losses, fraud, and penalties, such systems enhance consumer trust and ensure regulatory compliance. This is critical in light of increasingly stringent global regulations and the need for financial markets to operate transparently and efficiently.

In recent years, financial markets have faced substantial losses due to trading failures, prompting the creation of regulatory frameworks like Reg BI, MAR, MiFID II, Dodd-Frank, and national guidelines across various countries. Regulatory bodies such as the CFTC, SEC, FINRA, and ESMA have played significant roles in enforcing these standards. As regulatory scrutiny intensifies, financial institutions are investing heavily in trade surveillance and monitoring systems to detect unlawful trading behaviors and comply with a broader range of global regulations. These solutions are particularly vital in identifying complex trading patterns and curbing market abuse, which is detrimental to public confidence.

Trade surveillance systems have become increasingly essential in managing cross-asset and cross-market transactions. They aim to restrain market manipulation, including practices like wash trades, portfolio pumping, insider trading, and rogue trading, which can cause significant reputational damage to financial institutions. Both buy-side and sell-side firms in the capital markets are adopting these systems, recognizing the importance of transparency and compliance in ensuring market integrity. Pre-trade surveillance helps validate trade instructions and prevent breaches, while post-trade surveillance tracks front-running, suitability, and best-execution practices to meet regulatory reporting requirements.

Advanced trade surveillance and monitoring solutions integrate cutting-edge technologies such as big data analytics, real-time data access, and robust business rules engines to monitor trading activities more effectively. Customizable dashboards enable efficient workflow management, while the systems generate alerts for suspicious trading behavior, improving the agility and responsiveness of financial institutions. A critical component of these solutions is their capability to detect trading anomalies and manage cases through behavioral pattern analysis and streamlined reporting mechanisms.

The integration of communication surveillance with trade monitoring solutions has become increasingly important, especially as financial institutions adopt hybrid work models. The rise in remote communication via platforms like Microsoft Teams, mobile, and video calls has increased the demand for monitoring and analyzing these channels. Vendors are leveraging advanced technologies to capture, transcribe, and analyze these interactions, thereby reducing risk and ensuring compliance with regulatory standards. Accurate voice transcriptions play a crucial role in regulatory investigations, often serving as key evidence in compliance cases.

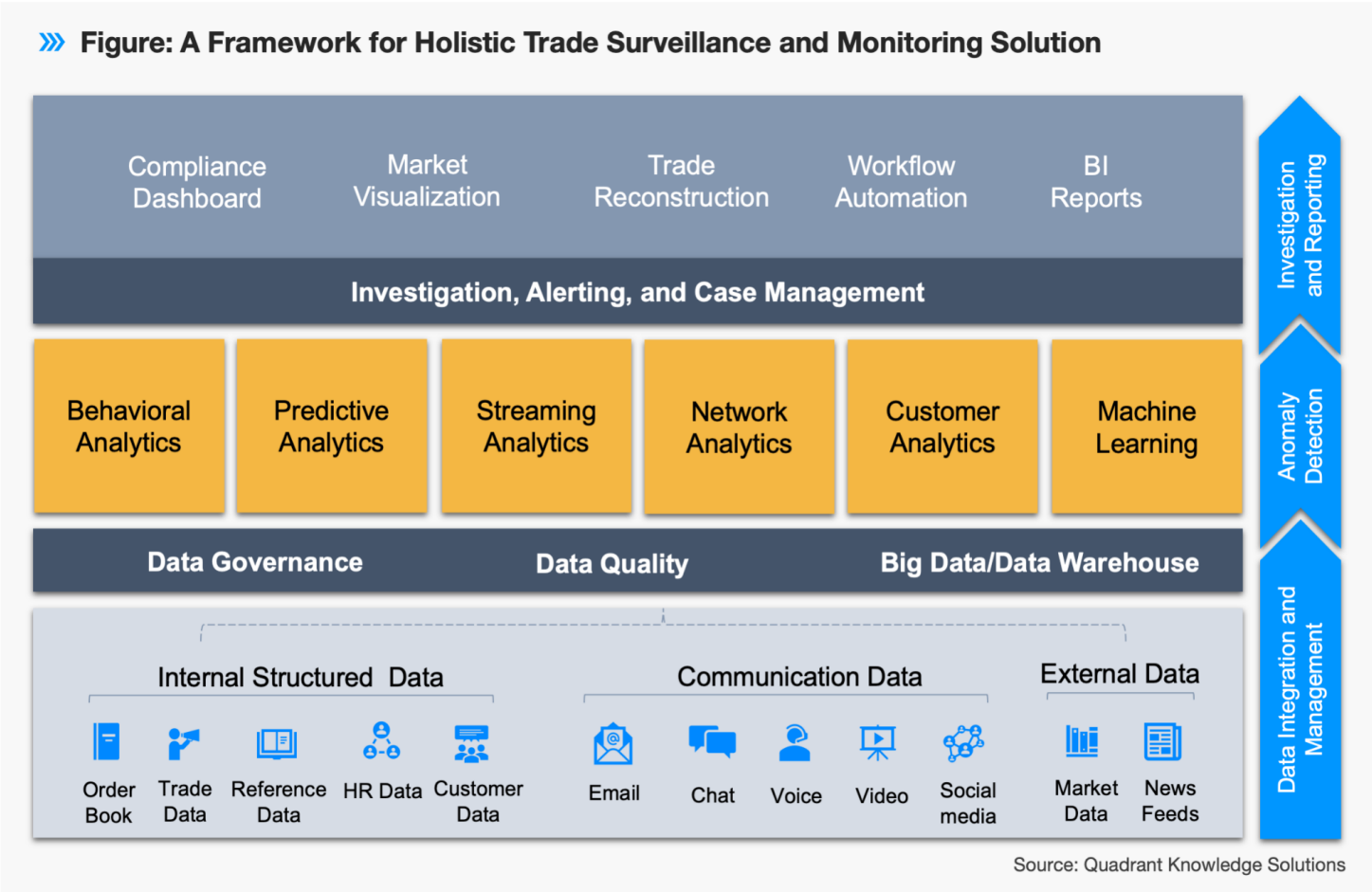
Following are the key capabilities of trade surveillance & monitoring solutions:

- ◆ **Real-Time Data Integration:** A trade surveillance and monitoring solution integrates data from a wide variety of sources to support seamless surveillance. This includes both in-house and external trading data across structured and unstructured formats, encompassing trade, market, written and voice communications, and third-party data sources. The solution should handle historical transaction data, manage large datasets across asset classes and geographical regions, and provide in-memory storage for efficient processing. Its real-time capabilities enable continuous decision-making and detection of complex trading patterns, providing comprehensive surveillance across global markets.
- ◆ **Cross-Asset, Cross-Market Surveillance:** Trade Surveillance and Monitoring solutions offer consistent, robust surveillance across multiple venues, asset classes, and jurisdictions, supporting regulatory compliance and enhancing risk management across markets. With the ability to prevent sophisticated trade abuse, this solution provides continuous surveillance that maximizes trading efficiency while mitigating reputational risks. The system is equipped to handle the demands of multi-venue, multi-asset class environments and meets stringent global regulatory requirements.

- ◆ **Advanced Analytics:** Leveraging cutting-edge analytics, trade surveillance solutions detect abnormal trading patterns, facilitate trade reconstruction, and enable risk-based discovery. These solutions employ a range of advanced analytics techniques, including predictive analytics, sentiment analytics, behavioral analytics, and entity network analysis. Real-time streaming and big data analytics are employed to analyze vast amounts of data, allowing for real-time fraud detection and market behavior analysis across different asset classes and markets.
- ◆ **Trade Regulatory Compliance:** The increasing complexity of regulatory frameworks, such as Reg BI, MAR, MiFID II, Dodd-Frank, and others, requires robust surveillance systems to ensure compliance. Trade surveillance solutions are designed to meet both global and country-specific regulations, identifying non-compliant activities across various asset classes and markets. These systems prevent regulatory violations by actively monitoring trades, ensuring alignment with market abuse guidelines, and mitigating the risk of incurring penalties or fines.
- ◆ **Dynamic Workflow Engine:** To keep pace with the evolving trading environment, trade surveillance solutions must offer dynamic workflow capabilities. These models are continuously reviewed and updated to improve integration, agility, and responsiveness. The dynamic workflow engine enhances the system's flexibility in addressing new compliance challenges and adapting to regulatory changes, ensuring that surveillance remains effective in rapidly changing market conditions.
- ◆ **Investigation & Case Management:** A key feature of trade surveillance solutions is their integrated, configurable case management capability, which streamlines the investigation of alerts and trading scenarios. These solutions offer a centralized interface for capturing alerts, modifying operations, and conducting investigations. Advanced analytics and automation are employed to reduce false positives, streamline compliance workflows, maintain a detailed audit trail, and manage regulatory risks, ensuring efficient handling of alerts and escalations.
- ◆ **Abuse Detection:** Leveraging advanced analytics, these solutions effectively detect trading anomalies and support cross-asset, cross-market surveillance. Tools such as machine learning (ML) and predictive analytics enable the

detection of abusive trading behaviors. Modern solutions employ self-learning ML models to adapt to evolving market conditions, improving real-time fraud detection and mitigating compliance risks.

Figure: A Framework for Holistic Trade Surveillance and Monitoring Solution



Competitive Landscape and Analysis

QKS Group conducted an in-depth analysis of the major trade surveillance and monitoring vendors by evaluating their products, market presence, and value proposition. The evaluation is based on primary research with expert interviews, analysis of use cases, and QKS Group's internal analysis of the overall trade surveillance and monitoring market. This study includes an analysis of key vendors, including ACA, b-next, Bloomberg L.P., Eventus, Features Analytics, Intellect Design Arena, List (An ION Company), LSEG, MCO (MyComplianceOffice), Nasdaq, NICE Actimize, OneTick (OneMarketData), S3, Scila, SteelEye, Trading Technologies, and Trillium Surveyor.

NICE Actimize, LSEG, SteelEye, LIST, Eventus, Trading Technologies, Nasdaq, and b-next are the top performers in the global Trade Surveillance and Monitoring market and have been positioned as the top technology and emerging leaders in the 2024 SPARK Matrix™ analysis of the Trade Surveillance and Monitoring market.

NICE Actimize offers a holistic conduct and trade surveillance solution titled SURVEIL-X. This platform integrates extensive market data feeds with wide analytics coverage through out-of-the-box (OOTB) models and self-service analytics. SURVEIL-X employs AI-driven analytics and advanced machine learning techniques to generate precise alerts, helping organizations reduce false positives significantly. The platform efficiently analyzes trade, communication, and surveillance data, enabling proactive detection and management of suspicious activities while ensuring compliance with stringent financial regulations.

LSEG provides the Millennium Surveillance platform, a multi-asset, multi-market surveillance solution. Designed for scalability and flexibility, Millennium Surveillance adapts easily to evolving regulatory demands and provides real-time and offline analysis features. Its powerful analytical tools enhance the detection and reporting of suspicious behaviors, enabling quicker and more efficient market abuse investigations. The platform's robust market replay capabilities and compliance with regulatory changes help ensure that financial institutions remain compliant on any trading platform.

SteelEye offers an advanced trade surveillance platform known as SteelEye Trade Surveillance, which integrates large volumes of trade data with external data sources such as market data, news, and social media. This solution uses advanced automation techniques to monitor market abuse requirements across asset classes efficiently. SteelEye's asset class-agnostic platform aggregates trade and order data to provide organizations with a unified view of their trading activities, improving both accuracy and compliance.

LIST provides the LookOut system, a data-centric and multi-asset trade surveillance solution designed for market surveillance, regulatory reporting, and business analytics. LookOut is highly scalable and processes large datasets to comply with MiFID II and other regulatory requirements globally. The system supports cross-asset surveillance, record-keeping, and FX Global Code compliance, detecting patterns of insider trading, market manipulation, and foreign exchange-specific abuses.

Eventus delivers a comprehensive trade surveillance platform titled Validus. This solution addresses regulatory, operational, financial, and technological risks, leveraging robotic process automation (RPA) and machine learning (ML) capabilities for alert and workflow management. Validus supports rapid customization through enhanced Python scripting and offers an audit trail to improve the oversight of surveillance analysts, enhancing overall compliance operations.

Trading Technologies' hybrid surveillance solution, TT Trade Surveillance, incorporates a combination of out-of-the-box (OOTB) machine learning models and configurable user-defined models, offering a dynamic approach to managing market surveillance. The system generates risk scores for flagged activities, which minimizes false positives and aids compliance teams in identifying actionable alerts more effectively. Additionally, TT Trade Surveillance supports workflow prioritization to enhance compliance team efficiency. Leveraging a robust global distribution network, the platform caters to diverse financial market participants, including global banks, brokers, asset managers, hedge funds, proprietary traders, Commodity Trading Advisors (CTAs), commercial hedgers, and risk managers.

Nasdaq, through its Nasdaq Trade Surveillance solution, provides a holistic, industry-leading SaaS-hosted platform for real-time and T+1 surveillance. The platform supports cross-market, cross-asset class trade surveillance, enabling the detection, investigation, and mitigation of market abuse practices. Nasdaq's solution sets the industry benchmark for trade surveillance, offering comprehensive coverage and advanced analytics for financial institutions worldwide.

b-next offers the CMC Suite, a capital markets compliance solution designed to protect organizations from market abuse and reputational damage. The suite includes the CMC: Market Abuse module for automated surveillance of market manipulation and the CMC: Insider Compliance module, which tracks proprietary, customer, and staff trading activities. These tools provide a comprehensive view of organizational trading activities, enhancing compliance with market abuse regulations.

Vendors such as Bloomberg L.P., ACA, OneTick (OneMarketData), and MCO (MyComplianceOffice) are positioned as strong contenders. These companies provide comprehensive service capabilities and are rapidly gaining market traction across

industries and geographical regions. These businesses are also aware of upcoming market trends and have developed a comprehensive roadmap to capitalize on future growth opportunities. Furthermore, these businesses are primarily concerned with catering to large and complex organizations.

Bloomberg L.P. delivers the Vault solution, an integrated compliance and surveillance system for financial institutions. Vault captures, controls, and archives trade, e-communication, and voice data across the full trading lifecycle, providing real-time and historical analysis capabilities. It also strengthens compliance by leveraging Bloomberg's proprietary e-communications and trading data for better surveillance and reporting.

ACA offers ComplianceAlpha, an abuse surveillance solution formerly known as Decryptex. This platform automates trade surveillance and helps financial organizations identify non-compliant trading and investment activity through advanced analytics, reducing the risk of penalties while ensuring adherence to regulatory standards.

OneTick (OneMarketData) provides a trade surveillance solution built on its proprietary database and stream processing platform. This solution offers built-in configurable alerts, enabling brokers and compliance teams to detect and investigate behaviors such as quote stuffing, layering, spoofing, wash trading, and other market manipulations in real-time.

MCO (MyComplianceOffice) offers a compliance management software suite, including trade surveillance capabilities. This integrated platform enables firms to monitor trading activities across a wide range of financial products, identifying risks related to market manipulation, insider trading, and product suitability. It provides organizations with a broad set of monitoring rules for effective compliance.

Vendors such as Intellect Design Arena and Features Analytics are positioned as contenders while Scila, S3, and Trillium Surveyor are positioned as emerging aspirants. These companies provide comprehensive service capabilities and are rapidly gaining market traction across industries and geographical regions. These businesses are also aware of upcoming market trends and have developed a comprehensive roadmap to capitalize on future growth opportunities. Furthermore, these businesses are primarily concerned with catering to large and complex organizations.

Intellect Design Arena, through its flagship CapitalAlpha platform, offers multi-asset, multi-channel, and multilingual trade surveillance. CapitalAlpha provides real-time, contextual trading data and AI-driven analytics to monitor exchange-traded and distributed trades. The solution supports pre- and post-trade risk management, enabling organizations to adjust risk and compliance rules based on real-time market dynamics.

Features Analytics offers eyeDES, an AI-powered trade surveillance solution that reduces false positives and identifies both known market abuse scenarios and emerging patterns. The solution is configurable to monitor abuse at granular levels, such as trader, trading desk, and beneficial owner, and supports both on-premise and cloud deployment options.

Scila offers Scila Surveillance, a turnkey solution for exchanges, trading participants, and regulators. This multi-asset, multi-market surveillance platform enables early detection of market abuse and is designed to comply with global regulatory requirements. Scila Surveillance covers all asset classes and market models, making it a versatile solution for financial organizations worldwide.

S3 provides the Trade Surveillance Software, which monitors trading behaviors across asset classes to ensure compliance with supervisory requirements. The suite is pre-configured to track various market manipulation activities, such as spoofing and layering, and includes automated audit trails for comprehensive documentation and analysis of trading activities.

Trillium Surveyor offers the Surveyor platform, a trade surveillance system that leverages full-depth-of-book market data to detect market manipulation while reducing false positives. The platform's workflow functionality expedites the resolution of compliance issues, and its accurate filtering capabilities help detect critical market abuses, such as wash trading and spoofing.

Trade Surveillance and monitoring vendors are focusing on improving their technology value proposition to prevent market abuse through timely detection and advanced trade surveillance and monitoring solutions. The vendors are increasingly incorporating machine learning and artificial intelligence technology to improve the accuracy, speed, and scalability of their Trade Surveillance and Monitoring solutions. Vendors' continued efforts in enhancing the awareness and overall value proposition in terms of implementing or enhancing Trade Surveillance and Monitoring functionalities to prevent market abuse and hefty regulatory fines for non-compliance are driving the adoption amongst small, mid-sized, and large enterprise organizations for a broad range of asset classes.

A majority of the Trade Surveillance and Monitoring vendors are specialized in providing purpose-built cloud-based trade surveillance and monitoring solutions. Considering the rapid market growth and adoption of cloud-based trade surveillance and monitoring solutions, Trade Surveillance and Monitoring solution providers have either built capabilities or are partnering with cloud-based service providers for integrated offerings to support hybrid deployments.

Key Competitive Factors and Technology Differentiators

The following are the key competitive factors and differentiators for the evaluation of trade surveillance & monitoring solutions and vendors. While a majority of trade surveillance & monitoring solutions may provide all the core functionalities, the breadth and depth of functionalities may differ by different vendors' offerings. Driven by increasing competition, vendors are increasingly looking at improving their technology capabilities and overall value proposition to remain competitive. The vendor's ability to accommodate following emerging technology trends is increasingly becoming a key differentiator for selecting the trade surveillance & monitoring solution:

- ◆ **The Sophistication of Technology Capabilities:** Users should prioritize trade surveillance and monitoring platforms that encompass robust technological functionalities. These include comprehensive data ingestion from both internal and external sources, advanced user and entity behavior analytics, automated trade reconstruction, intuitive visualization tools, real-time anomaly detection, integrated case management, sophisticated modeling and rule engines, and scalable architecture. Vendors should offer a competitive value proposition with ease of deployment, user-friendliness, optimal price/performance ratio, broad support for market and communication surveillance use cases, and comprehensive global support services.
- ◆ **Maturity of Emerging Technologies:** In light of the rapid digital transformation in the financial sector, vendors are incorporating advanced technologies like AI, ML, RPA, behavioral modeling, and NLP to enhance trade surveillance systems. These emerging technologies help tackle the complexity of legacy systems and evolving regulatory environments. The integration of RPA with AI and ML can streamline workflows by automating rule-based tasks, performing detailed investigations on large datasets, issuing intelligent alerts, and utilizing bots like task bots and IQ bots. Behavioral analytics and NLP aid in understanding text-based communications and preventing trading misconduct. Vendors such as Nasdaq, NICE Actimize, and SteelEye are investing heavily in these technologies.
- ◆ **Support for Meeting Changing Regulatory Requirements:** Shifting trade patterns and increasing regulations have intensified the compliance burden on capital firms, hedge funds, and conventional asset managers. Users should evaluate vendors whose trade surveillance solutions support several revised

regulations in financial instruments, such as Reg BI, MiFID II, MAR, and Dodd-Frank. Furthermore, guidelines from regulatory agencies, such as CFTC, SEC, FINRA in the US and ESMA, FCA & other regulators in the European economies, are further driving the adoption of trade surveillance solutions by financial institutions. While compliance with the trade regulations helps enable protection from trading risks, safeguard an organization's reputation, restore the investors' trust, and sustain the business, non-compliance means a higher risk of market abuse, huge penalties, negative publicity, and such other disadvantages.

- ◆ **360-Degrees Trade Surveillance:** To manage the complexity of modern trading and regulatory requirements, organizations should opt for vendors that offer 360-degree surveillance capabilities. This involves monitoring transactions, communications, and behavior to increase true positives, reduce false positives, and identify suspicious trading patterns. A robust solution should incorporate data from various sources like trading data, social media, voice communications, and behavioral patterns to provide real-time insights into market activity, sentiment, and trading behavior throughout the client lifecycle.
- ◆ **Cloud-Based Trade Surveillance Deployment:** Organizations should assess potential cloud-based deployment vendors due to the notable benefits in scalability and cost-efficiency. Moreover, cloud providers ensure that user organizations retain access to the latest solution versions through regular updates, maintenance, and support services. Additionally, small and mid-sized businesses (SMBs) frequently lack the resources to implement advanced technologies and face similar operational challenges as larger entities. As a result, SMBs typically favor cloud-based deployments to reduce operational expenses and meet their unmet requirements through economical monthly or yearly fees.
- ◆ **Comprehensive Trade Surveillance:** Organizations should consider evaluating trade surveillance and monitoring solutions that provide comprehensive capabilities in trade surveillance. These capabilities should encompass cross-market monitoring, equity market surveillance, and monitoring of over-the-counter (OTC) traded derivatives. It's crucial for these solutions to be able to identify market abuse practices and trade violations, such as wash trades, portfolio pumping, insider trading, rogue trading, and others. Moreover, a trade surveillance solution should offer features for accessing complete historical and real-time data, robust big data analytics, and an extensive business rule engine. It should also provide efficient workflow management through customizable dashboards and a strong reporting capability. In addition, trade surveillance must focus on identifying irregularities in trading activities and performing behavioral pattern analysis, all while streamlining case management. These trade surveillance and monitoring solutions ultimately serve as essential tools for

ongoing monitoring of trading activities, triggering alerts when suspicious transactions are identified. This, in turn, boosts the agility and efficiency of financial institutions in their efforts to enforce compliance and preventing financial misconduct.

- ◆ **Comprehensive Data Integration Capability:** The ability of vendors to offer extensive data integration is crucial for enhancing the efficiency of analytics engines and ML models. Some vendors might assist in ingesting data from sources like transactional records, account details, basic customer profiles, few communication channels, and such others. To address this limitation, numerous organizations are collaborating with third-party data providers to bolster their surveillance capabilities. A trade surveillance and monitoring platform should provide robust data integration capabilities, accommodating substantial data volumes in various formats from diverse contextual sources, including transaction data, reference data, behavioral data, communication data, and external sources.
- ◆ **Model Performance:** Model performance plays a pivotal role in distinguishing between various trade surveillance solutions, as they often exhibit notable variations in their effectiveness. The conventional reliance on rule-based systems for trade surveillance is no longer sufficient for promptly detecting emerging cases of misconduct and averting market manipulation. Furthermore, relying solely on periodic refreshes of traditional machine learning models is insufficient in the face of increasingly sophisticated tactics employed by malicious actors. Continuous monitoring and regular updates of machine learning models are imperative to stay ahead of evolving abuse patterns and the ever-changing threat landscape. Therefore, organizations should assess model performance based on the speed and accuracy of abuse detection while minimizing false positives.
- ◆ **Custom Model Development and Deployment:** Global financial institutions typically maintain internal data science teams and tend to leverage their in-house machine learning models. However, some vendors may exert pressure on these organizations' internal data scientists to adopt the vendor's proprietary ML models, programming languages, tools, and libraries. Furthermore, these institutions may find themselves compelled to use the vendor's professional services for the customization and implementation of models tailored to specific use cases. Such integrations with proprietary technologies often result in additional costs and delays in the overall implementation process. To tackle these issues, a trade surveillance and monitoring platform should support an open system framework that facilitates the smooth integration of third-party models developed in any programming language, on any platform, and utilizing any library. Leading vendors in this space also offer support for custom model development, testing, and deployment across a range of trade surveillance and monitoring scenarios.

- ◆ **Integrated Communication Surveillance:** More number of vendors are integrating e-communication surveillance with their trade surveillance and monitoring solutions instead of providing separate communication surveillance systems. This type of surveillance involves monitoring and analyzing all forms of voice and written communication by traders to identify behavioral patterns. Communication Surveillance collects all forms of communication data, including email, messages, text, voice, and others. Integrating communication surveillance with comprehensive trade monitoring systems ensures a more thorough investigation, reduces false positives, and enhances compliance. Given the growing risks in the trade environment and the imposition of detailed regulations, the integration of communication surveillance with comprehensive trade monitoring systems is becoming a key distinguishing feature of vendor solutions. This integration is particularly significant for buy-side firms aiming to prevent insider trading.
- ◆ **Support for a Wide Range of Use Cases:** Trade surveillance platforms should address multiple use cases such as spoofing detection, front-running, off-market trading, and pump-and-dump schemes. Additionally, platforms must enable comprehensive surveillance across various activities, including trades, voice communications, and other relevant operations.
- ◆ **Comprehensive Coverage for Asset Classes:** Organizations should assess solutions that offer surveillance capabilities spanning all asset classes to identify instances of market abuse. Moreover, these solutions should possess the capability to deliver compliance coverage across a diverse range of asset classes and markets. This comprehensive coverage is instrumental in enabling organizations to effectively manage risk, maintain fair trading standards, prevent trade misconduct, and safeguard against potential damage to their reputation in a multi-venue, multi-asset class environment.
- ◆ **AI-Driven Behavioral Analytics:** Advanced trade surveillance systems differentiate themselves through the use of AI-driven behavioral analytics. These systems leverage artificial intelligence and machine learning to analyze trading patterns and behaviors, identifying potential anomalies or misconduct that might go unnoticed with traditional rule-based systems. By learning from historical data, these models can adapt to new patterns and continuously refine their detection capabilities. Behavioral analytics enhances surveillance accuracy, reduces false positives, and ensures quicker identification of market abuse like insider trading, spoofing, or front-running.

- ◆ **Vendor's Expertise and Domain Knowledge:** Organizations should evaluate vendors' expertise and domain knowledge in understanding their unique business problems, use cases, and industry-specific requirements. Organizations are advised to conduct a comprehensive evaluation of different trade surveillance solutions and vendors before making a purchasing decision. Users should employ a weighted analysis of the several factors critical to their specific organization's use cases and industry-specific requirements. Users should also look for trade surveillance and monitoring solutions with a history of successful large-scale deployments and carefully analyze the existing case studies of those deployments. This should form the basis for preparing best practices for trade surveillance and monitoring solution deployments.
- ◆ **Technology Vision and Roadmap:** The financial crime and risk management market is continuously experiencing constant evolution. The rapid technological progress and regulatory advancements have created important changes in the trade and security market framework, owing to which advanced financial crime and compliance technology has become one of the key decisions in most firms' technology investment roadmaps. Trade surveillance and monitoring solution providers are continuously improving their technology value proposition in terms of providing a holistic surveillance solution with comprehensive data integration, sophisticated analytics suite powered by advanced analytics and machine learning, custom model development, robust investigation and case management, advanced visualization tools, incorporation of workflow and process automation, and such others. Organizations should carefully evaluate vendors' existing technology capabilities along with their technology vision and roadmap to improve overall satisfaction and customer ownership experience for long-term success.

SPARK Matrix™: Strategic Performance Assessment and Ranking

QKS Group’s SPARK Matrix™ provides a snapshot of the market positioning of the key market participants. The SPARK Matrix™ provides a visual representation of market participants and provides strategic insights on how each supplier ranks related to their competitors concerning various performance parameters based on the category of technology excellence and customer impact. QKS Group's Competitive Landscape Analysis is a useful planning guide for strategic decision-making, such as finding M&A prospects, partnerships, geographical expansion, portfolio expansion, and similar others.

Each market participant is analyzed against several parameters of Technology Excellence and Customer Impact. In each of the parameters (see charts), an index is assigned to each supplier from 1 (lowest) to 10 (highest). These ratings are designated to each market participant based on the research findings. Based on the individual participant ratings, X and Y coordinate values are calculated. These coordinates are finally used to make the SPARK Matrix™.

Technology Excellence	Weightage
Real-time data integration	15%
Multi-asset, markets and compliance coverage	15%
Abuse Detection	30%
Investigation and case management	15%
Reporting and Compliance	5%
Competitive Differentiation Strategy	8%
Integration & Interoperability	5%
Vision & Roadmap	7%

Customer Impact	Weightage
Product Strategy & Performance	20%
Market Presence	20%
Proven Record	15%
Ease of Deployment & Use	15%
Customer Service Excellence	15%
Unique Value Proposition	15%

Evaluation Criteria: Technology Excellence

- ◆ **Real-time Data Integration:** The ability to provide comprehensive data coverage including internal data, communication data and external data and usage through hosting and 3rd party partnerships.
- ◆ **Multi-Asset, Markets and Compliance Coverage:** The ability to provide sophisticated technology for consistent surveillance coverage of all asset classes, markets, venues in various geographies and coverage of global compliance.
- ◆ **Abuse Detection:** The ability to provide accuracy in abuse detection using sophisticated technology, AI-enabled automation, matured ML model for better performance, and advanced analytics.
- ◆ **Investigation and Case Management:** The ability to provide advanced case management and automated alert management and remediation, comprehensive dashboarding for investigation with the use of sophisticated technology and automation to reduce false positives.
- ◆ **Reporting and Compliance:** The ability to provide automated trade reconstruction techniques for seamless reporting and compliance.
- ◆ **Competitive Differentiation Strategy:** The ability to differentiate from competitors through functional capabilities and/or innovations and/or GTM strategy, customer value proposition, and such others.
- ◆ **Integration & Interoperability:** The ability to offer products and technology platform that supports integration with multiple best-of-breed technologies, provides prebuilt out-of-the-box integrations, and open API support and services.
- ◆ **Vision & Roadmap:** Evaluation of the vendor's product strategy and roadmap with the analysis of key planned enhancements to offer superior products/technology and improve the customer ownership experience.

Evaluation Criteria: Customer Impact

- ◆ **Product Strategy & Performance:** Evaluation of multiple aspects of product strategy and performance in terms of product availability, price-to-performance ratio, excellence in GTM strategy, and other product-specific parameters.

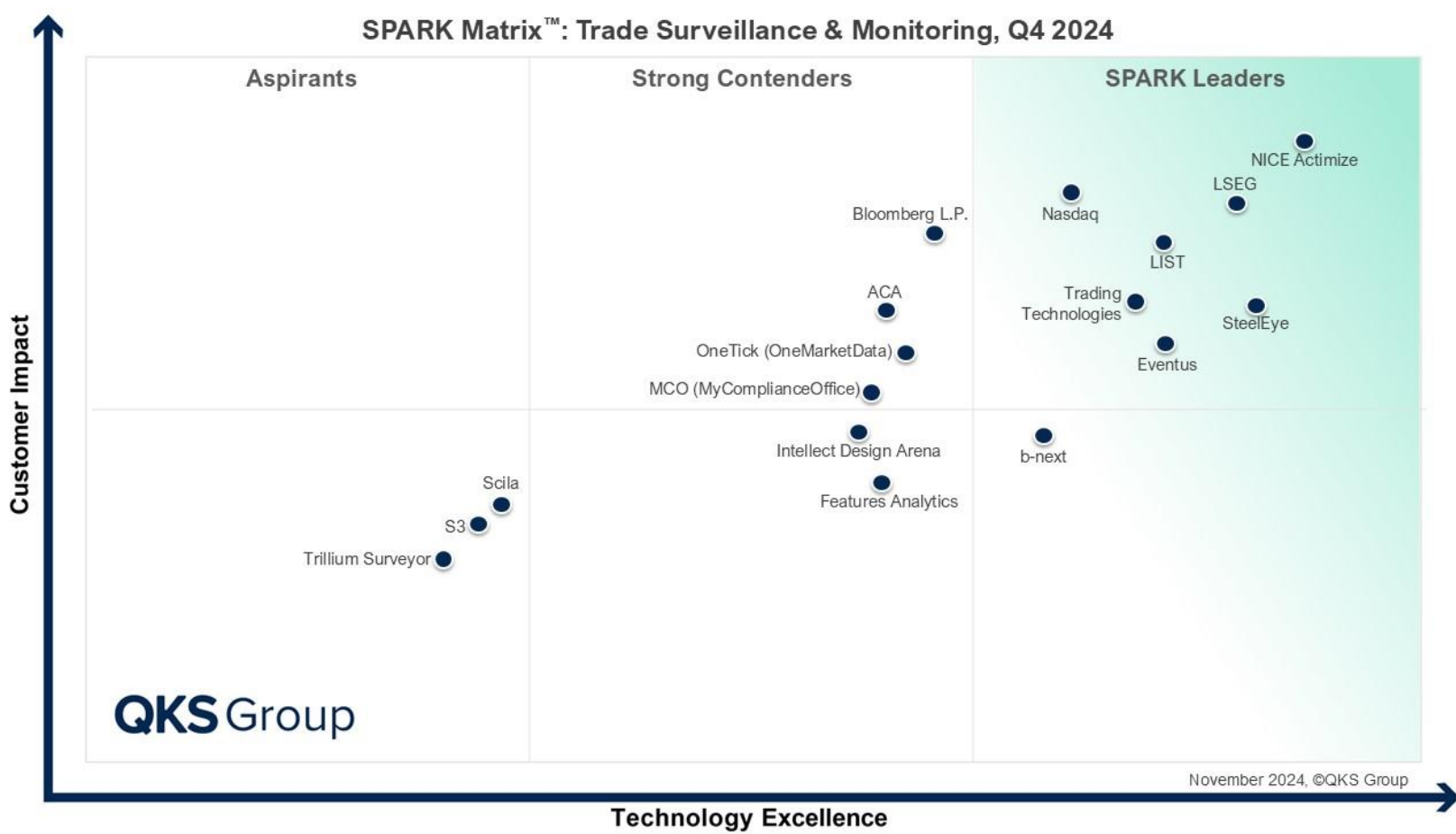
- ◆ **Market Presence:** The ability to demonstrate revenue, client base, and market growth along with a presence in various geographical regions and industry verticals.
- ◆ **Proven Record:** Evaluation of the existing client base from SMB, mid-market and large enterprise segments, growth rate, and analysis of the customer case studies.
- ◆ **Ease of Deployment & Use:** The ability to provide superior deployment experience to clients supporting flexible deployment or demonstrate superior purchase, implementation, and usage experience. Additionally, vendors' products are analyzed to offer a user-friendly UI and ownership experience.
- ◆ **Customer Service Excellence:** The ability to demonstrate vendors' capability to provide a range of professional services from consulting, training, and support. Additionally, the company's service partner strategy or system integration capability across geographical regions is also considered.
- ◆ **Unique Value Proposition:** The ability to demonstrate unique differentiators driven by ongoing industry trends, industry convergence, technology innovation, and such others.

SPARK Matrix™:

Trade Surveillance and Monitoring

Strategic Performance Assessment and Ranking

Figure: 2024 SPARK Matrix™
(Strategic Performance Assessment and Ranking)
Trade Surveillance and Monitoring Market



Vendors Profile

Following are the profiles of the leading Trade Surveillance and Monitoring Solution vendors with a global impact. The following vendor profiles are written based on the information provided by the vendor's executives as part of the research process. The QKS Group's research team has also referred to the company's website, whitepapers, blogs, and other sources for writing the profile. A detailed vendor profile and analysis of all the vendors, along with various competitive scenarios, are available as a custom research deliverable to our clients. Users are advised to directly speak to respective vendors for a more comprehensive understanding of their technology capabilities. Users are advised to consult QKS Group before making any purchase decisions regarding software composition analysis technology and vendor selection based on research findings included in this research service.

NICE Actimize

URL: <https://www.niceactimize.com>

Founded in 1999 and headquartered in Hoboken, New Jersey, NICE Actimize is a provider of financial crime, risk, and compliance management solutions for global financial services organizations. The company provides the SURVEIL-X Holistic Surveillance Suite, which offers comprehensive surveillance and behavioral monitoring for diverse sectors, including online brokers, buy-side and sell-side firms, insurance companies, crypto exchanges, and regulators. SURVEIL-X analyzes and correlates trade-related data to detect all forms of risky behavior, ensuring adherence to regulatory compliance standards. SURVEIL-X delivers extensive surveillance capabilities through features such as real-time data integration from multiple sources, comprehensive communication surveillance, AI-powered analytics, customizable tuning and threshold management, automated alert generation with scoring, advanced workflow and case management, and robust reporting with interactive dashboards. This technology-driven approach enables firms to manage risk effectively and maintain compliance within complex trading environments.

Analyst Perspectives

Following is the analysis of NICE Actimize's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ NICE Actimize's SURVEIL-X Holistic Surveillance Suite provides comprehensive trade surveillance, offering integration with extensive market data feeds, analytics through over 150+ OOTB models, and automated trade reconstruction. These features help organizations to efficiently monitor trade activities and detect irregularities.
- ◆ The SURVEIL-X platform analyzes trade, communications, and surveillance data using AI-powered analytics. This results in precise alert generation while significantly reducing false positives. In its latest version, the platform offers enhanced risk detection, scalability, expanded detection coverage, and AI-driven capabilities to reduce false positives.
- ◆ SURVEIL-X Behavior, an employee monitoring solution, leverages behavioral science and multi-factor detection to proactively identify risks. The system integrates trading data, communications, sentiment analysis, and employee information to generate an employee risk score, enhancing compliance and risk management.

- ◆ The SURVEIL-X solution supports real-time data integration, enabling organizations to ingest data from multiple sources via OOTB connectors. This real-time integration allows the analysis of daily trading patterns against historical data, facilitating the detection of market abuse behaviors and reducing organizational risks.
- ◆ With comprehensive surveillance across all asset classes, SURVEIL-X utilizes customizable OOTB market abuse detection models. These models provide broad market and product coverage, helping organizations in detecting and investigating market abuse, inappropriate sales practices, and compliance risks across sectors, including buy-side and sell-side firms, insurance companies, and crypto exchanges.
- ◆ The SURVEIL-X Studio enables organizations to develop custom risk detection models using a drag-and-drop interface, selecting from an extensive library of customizable templates for efficient creation, testing, and deployment of new models.
- ◆ Natural language processing (NLP) based analytics within SURVEIL-X reduce false positives by understanding the context and meaning of text. It leverages trained machine learning based models to detect anomalies and optimize surveillance for more effective risk detection, while allowing organizations to create bespoke models and visualizations to address specific business needs.
- ◆ The solution's custom tuning and threshold management features allow compliance teams to trigger and adjust detection models based on business and jurisdictional requirements. This configurable system enables organizations to fine-tune detection logic through table-driven settings and scoring mechanisms.
- ◆ SURVEIL-X offers automated alert generation and predictive scoring to streamline case management. Alerts are forwarded to relevant users according to predefined rules for efficient investigation, with each alert assigned a severity score to ensure effective prioritization.
- ◆ The integrated web-based case management system offers workflow capabilities, intelligent automation, and visualization of relationships between entities, alerts, and cases. Additionally, SURVEIL-X provides cloud-based dashboards and reporting capabilities, allowing organizations to monitor work progress and generate custom reports as needed.
- ◆ Some of the key differentiators of the SURVEIL-X platform include its AI-driven holistic surveillance, offering precise alerting and integrated visualization

capabilities. Its simplified client data integration allows seamless surveillance for both trade and communications data. With access to over 750+ exchange and venue market data sources, SURVEIL-X enhances its surveillance capabilities by integrating conduct risk scores, which help build risk profiles based on customizable behavioral risk factors. The platform also features a robust case management tool with advanced workflow functionality, providing comprehensive surveillance and risk management capabilities. SURVEIL-X Studio Analytics Development is a cloud-based platform that enables organizations to build custom detection models, focusing on self-development for surveillance analytics. Additionally, the platform's ComplianceCentral solution offers end-to-end monitoring of employee communications and transactions, supporting trade and communication compliance by capturing, archiving, and surveilling all communications of regulated employees.

- ◆ NICE Actimize's customers recognize the SURVEIL-X platform for its ease of deployment, integration, interoperability, and overall technical experience. The platform's strong customization capabilities allow it to meet specific business needs. Its holistic market surveillance approach, supported by advanced market visualization and OOTB coverage, along with advanced analytics, ensures comprehensive and efficient risk detection across multiple channels.
- ◆ Geographically, NICE Actimize maintains a significant presence across North America, EMEA, and APAC, with a focus on the US. The company serves a wide array of financial institutions from both sell-side and buy-side, spanning verticals such as investment banking, global banks, wealth management, asset management, insurance, cryptocurrency, utilities, and brokerage sectors. It addresses various use cases, including compliance with suitability regulations in cloud environments, reduction of false positives, broad coverage across asset classes (including FX and cryptocurrencies), and comprehensive wealth surveillance. The SURVEIL-X solution also supports the monitoring of voice and electronic communications and ensures compliance automation for regulatory requirements.
- ◆ NICE Actimize's roadmap for SURVEIL-X involves the expansion of OOTB models, particularly for OTC fixed-income and swaps areas. NICE Actimize aims to improve its SURVEIL-X Studio self-development solution by supporting the ingestion of unstructured data, including voice, chat, and emails to enhance detection accuracy and market/trade surveillance alert generation.
- ◆ NICE Actimize continues to refine its analytics based on regulatory, client, and subject matter expert (SME) feedback. Additionally, the company is working on enriching its market data sources and broadening market coverage as it currently exceeds 730+ exchanges/venues. The enhancement focus extends to specific

areas in asset management, including fair allocation of assets and enhanced portfolio surveillance. This roadmap ensures robust and evolving compliance and surveillance capabilities aligned with evolving market demands.

London Stock Exchange Group (LSEG)

URL: <https://www.lseg.com>

Founded over 300 years ago and headquartered in London, UK, LSEG is a global financial markets infrastructure and data provider. LSEG offers solutions right from trading, market surveillance to wealth solutions and more. LSEG offers a trade surveillance platform titled Millennium Surveillance for improving the efficiency of market abuse investigations.

Analyst Perspectives

Following is the analysis of LSEG's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ LSEG's Millennium Surveillance platform delivers comprehensive trade surveillance by supporting multiple markets and asset classes within a single system. It utilizes a distributed process architecture, breaking down large system functionalities into smaller, manageable processes that are deployed on off-the-shelf servers and high-bandwidth networks. This architecture optimizes infrastructure utilization by allowing the trade surveillance data analytics framework to be reused for multiple business use cases, effectively reducing costs across business units.
- ◆ Millennium Surveillance is part of the broader Millennium Trading suite, which includes Millennium Exchange, Millennium Smart Order Router (SOR), and Millennium Market Data. Key differentiators include its advanced data analytics framework, enhanced collaboration tools, and self-service capabilities for configuring alerts.
- ◆ The platform provides real-time alerting and investigative features designed to detect market abuse and manipulation attempts, ensuring prompt corrective actions for maintaining market integrity. It incorporates machine learning-based anomaly detection and outlier calibration and offers tools like Python and Scala for customizable alert configuration.
- ◆ The platform enhances the investigative process by allowing users to leverage preferred data visualization and analytics tools, creating interactive dashboards that consolidate surveillance data with external sources to provide a holistic view of trades. It also supports multi-asset class surveillance, including equities, fixed income, currencies, commodities, and derivatives, while optimizing alert workflows through an alert ingestion gateway that integrates alerts from external

systems. This versatile platform facilitates user-defined alerts, reports, and dashboards, enabling in-depth surveillance capabilities with a reduced rate of false positives.

- ◆ Geographically, LSEG has a presence in EMEA and APAC. The major use cases of LSEG's trade surveillance & monitoring solution include compliance/self-regulation, market replay, visualization tools, reporting, configurability, and multi-asset.
- ◆ The company may face challenges from several small and large vendors who are competing in terms of technology excellence to offer competitive solutions. LSEG faces competition from the emerging vendors offering innovative trade surveillance solutions as well as well-established trade surveillance vendors. However, with its sophisticated technology platform, comprehensive functional capabilities, and strong industry expertise, LSEG is well-positioned to maintain and grow its market share in the trade surveillance & monitoring market.
- ◆ In terms of roadmap, the company is continuously improving integration and interoperability for a range of systems and data sources. The company is also enhancing its abuse detection capabilities to further augment its trade surveillance and monitoring performance.

SteelEye

URL: <https://www.steel-eye.com>

Founded in 2017 and headquartered in London, the UK, SteelEye provides a holistic compliance platform offering trade and communication oversights, regulatory reporting and best execution solution to the financial markets. The company offers trade surveillance and monitoring capability through Trade Surveillance solution, which provides advanced and AI-driven market abuse detection. The solution offers comprehensive capabilities spanning data capture, search and filtering, backtesting, and case management.

Analyst Perspectives

Following is the analysis of SteelEye's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ SteelEye's SaaS-based Trade Surveillance platform delivers advanced market abuse detection by integrating large volumes of data across asset classes, supported by automation. Its multi-asset class solution consolidates trade and order data with market data, news, and social media sources to enhance organizations' ability to monitor and manage market abuse risks. The platform supports FX, fixed income, equity, swaps, and futures, enabling comprehensive surveillance across diverse asset types.
- ◆ The solution provides organizations with a suite of intelligent trade surveillance tools designed to identify and mitigate a wide range of market abuse behaviors. It enhances risk detection, oversight, and compliance while adding automation, allowing analysts to focus on higher-priority tasks and increase efficiency. SteelEye's data capture capabilities allow seamless integration of structured and unstructured data, aggregating them with market information from global exchanges and news sources for context and benchmarking to enable more accurate market abuse detection.
- ◆ Key features include customized search and advanced filtering tools, which streamline investigations by allowing users to create, refine, and retrieve datasets easily. The platform also supports the configuration of alerts using various parameters to reduce false positives and adapt to market conditions. SteelEye's backtesting capability allows firms to evaluate new alert parameters against historical data, further minimizing false positives. Its case management system facilitates investigation, escalation, and complete trade reconstruction, leveraging advanced visualization tools to aggregate relevant data across markets and

instruments. The cases can be built to include both communications and trade data for full trade reconstruction. SteelEye is also cloud-agnostic and supports both private and public cloud deployments.

- ◆ Some of the key differentiators of SteelEye's solution include its capability to consolidate both structured and unstructured data from diverse sources, providing organizations with actionable, insightful data. The platform automatically aggregates communications and trade data, offering a unified view to enhance decision-making. Leveraging ElasticSearch technology, it enables fast, efficient searches, sorting, filtering, and viewing of large datasets. The solution's market abuse module allows organizations to monitor trading risks across different regulatory jurisdictions, using detailed market abuse analysis. Pre-calibrated algorithms generate customizable alerts based on region, asset class, liquidity, and even specific traders or clients, ensuring comprehensive risk management. The platform's modern user interface (UI) offers a user-friendly experience with powerful visualization tools, providing interactive dashboards, graphs, and charts to aid organizations in data analysis. The secured, browser-based UI further enhances accessibility while maintaining high security standards.
- ◆ Geographically, SteelEye's strong presence spans Europe, North America, and APAC, with a wide range of clients including asset and wealth managers, banks, brokers, and hedge funds. SteelEye supports various use cases for detecting market manipulation, including wash trading, front running, insider trading, spoofing, parking, and painting the tape, addressing compliance needs across industries and geographies.
- ◆ The company may face certain challenges like competition from other well-established players in the trade surveillance and monitoring market. The company needs to stay competitive in providing an advanced and unique solution with robust capabilities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.
- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection.

List (An ION Company)

URL: <https://www.list-group.com>

Founded in 1985 and headquartered in Pisa, Italy, List (An ION Company) is a financial technology solutions and services provider to the global trading market and trading community, including trading venues, market makers, brokers, asset managers, risk managers, and compliance officers. The company provides a multi-compliance solution titled LookOut for trade and market surveillance, regulatory reporting, and business analysis. The solution has been specially designed for investment firms for both buy-side and sell-side and Trading Venues. LookOut's module titled FX Global Code also extends its data-centric surveillance system support to the foreign exchange domain. The LookOut solution offers comprehensive capabilities, including data quality management, surveillance engine, case management, and data analysis.

Analyst Perspectives

Following is the analysis of List's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ List's LookOut platform is a comprehensive, data-centric, multi-asset trade surveillance system designed to facilitate record-keeping, market surveillance, regulatory reporting, and business analytics. Tailored for buy-side and sell-side firms, as well as trading venues, the solution offers high scalability and reliability while maintaining compliance with global regulatory frameworks such as MiFID II, MAD/MAR, MiFIR, SFTR, and Dodd-Frank. LookOut leverages the Cassandra Hadoop noSQL database for its backend, ensuring efficient processing, fault tolerance, and scalability when managing large volumes of historical data.
- ◆ LookOut's key capabilities include data quality management for seamless data ingestion and quality enforcement, ensuring compliance with regulatory requirements. Its advanced cross-product pattern recognition surveillance engine analyzes orders, trades, quotes, and public market data, both in real-time and batch mode, to detect market manipulation and insider trading. The system enhances operational efficiency with automated surveillance, supporting policy management, trading obligations, and best execution rules. LookOut further integrates what-if analysis and threshold validation to simulate surveillance scenarios and calibrate system settings.
- ◆ The platform's web-based case management system leverages NLP and process automation to streamline investigations. Its rich dashboards consolidate data

needed for thorough case analysis, enabling powerful tabular and graphical data navigation. Furthermore, LookOut's noSQL-based data analysis engine supports rapid processing of large datasets, enabling organizations to build custom analysis tools and implement dashboard monitoring. The system extends to the foreign exchange domain via its FX Global Code module, detecting patterns of market manipulation and insider trading specific to FX markets, supporting both on-premises and cloud deployment models.

- ◆ Some of the key differentiators of List lie in its advanced pattern recognition surveillance engine, which enables organizations to autonomously configure and adjust pattern thresholds, as well as initiate surveillance runs throughout the trading day. This flexibility allows users to simulate specific production scenarios, enhancing the system's adaptability. During case analysis, the platform provides comprehensive dashboards that present a holistic view of trading and related market data, utilizing detailed charts and tables for deeper investigation and decision-making.
- ◆ Geographically, List has a robust presence in Europe, with expanding operations in North America and APAC. Its surveillance solution caters to various use cases, including brokers monitoring clients for market manipulation across asset classes like equities and bonds, asset managers overseeing portfolio managers and traders for insider trading or price manipulation, and dealers and banks ensuring compliance on proprietary trading desks. Additionally, List supports service bureaus providing surveillance to a broad network of clients and exchange surveillance for market integrity. This versatility positions List as a key player across multiple sectors, such as investment firms, asset managers, trading venues, and service bureaus.
- ◆ The company may face key challenges in surveillance space, primarily increasing solution efficiency and minimizing false positives. This requires the continuous exploration of advanced techniques to improve market abuse detection accuracy. Additionally, the rising cost of data remains a significant challenge. However, List's robust product strategy and roadmap position the company to address these obstacles effectively.
- ◆ In terms of roadmap, List will prioritize the adoption of innovative technologies, refining pattern detection, and enhancing overall product usability. Continued investment in new ML and AI algorithms is set to improve insider trading detection and alerting. The company is also working on incorporating detection models for cryptocurrency monitoring, particularly in compliance with the new MICA regulations, and enhancing the FX Global Code module for expanded crypto surveillance. Strategically, List plans to integrate its LookOut solution with the Fidessa trading platform, aligning with its parent company ION to create Fidessa

Surveillance. This integration will consolidate data sources and leverage synergies within the ION group. Furthermore, List aims to strengthen its presence in EMEA and expand into North America and APAC markets, aligning with ION's global strategy. Additionally, there is a focus on providing communication surveillance through third-party partnerships as part of its holistic trade surveillance approach.

Eventus

URL: <https://www.eventus.com>

Founded in 2015 and headquartered in Austin, TX, Eventus is a global provider of multi-asset class trade surveillance and market risk solutions. The company provides a comprehensive platform, Validus, that combines surveillance, market risk, algo monitoring, and AML/transaction monitoring to maximize the efficiency of regulatory operations. Its Validus solution is designed for both traditional and digital assets, including equities, futures, options, foreign exchange (FX), fixed income, and cryptocurrencies.

Analyst Perspectives

Following is the analysis of Eventus' capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ Eventus' Validus offers a sophisticated alert workflow management system that supports comprehensive workflow processes, including custom alert actions, escalations, and tagging with comments for efficient tracking. The platform provides capabilities for recalling alerts when necessary, ensuring that the workflow is intuitive and adaptable to business needs. This alert workflow system integrates advanced automation techniques, utilizing Robotic Process Automation (RPA) and supervised Machine Learning (ML) to deliver more actionable insights. Through pattern and practice analysis, the system enhances alert quality, resulting in more accurate detection of risks and irregularities.
- ◆ Additionally, Validus provides advanced analysis features through deep investigative tools and rich visualization engines. These tools allow organizations to quickly assess and resolve issues by presenting detailed views of the order lifecycle and relevant market data. With more than 150 out-of-the-box procedures derived from industry expertise and customer feedback, Validus offers flexible coverage that can be further personalized to fit specific operational needs. The integration with third-party data sources, coupled with a straightforward approach to ingest customer data, ensures seamless and broad-based market coverage for a wide range of financial instruments and markets.
- ◆ The platform's centralized reporting interface, Compliance Home, serves as a powerful reporting hub, offering access to both preferred and custom reports. The risk controls feature enables post-trade reviews of compliance with financial limits and supervisory procedures. Validus also supports real-time algorithmic trading flow monitoring, enabling businesses to maintain oversight of complex

trading strategies. The combination of customizable procedures, real-time monitoring, and comprehensive data integration makes Validus a robust and adaptable solution for modern trade surveillance and compliance.

- ◆ Validus integrates an advanced backend infrastructure with a modern, intuitive front-end interface to deliver a streamlined and user-friendly experience. The platform leverages RPA, ML, and procedural automation to drive sophisticated anomaly detection and pattern matching, ensuring that the most critical and actionable alerts are escalated for timely response. The company supports clients with a predictable and reliable implementation process that simplifies the complexities of data ingestion. This efficient delivery model allows clients to focus on their core business operations without the burden of managing data integration. The approach is rooted in ongoing collaboration with clients, ensuring continuous optimization and alignment with their evolving needs.
- ◆ Some of the key differentiators of Validus platform include its flexibility and responsiveness to meet the demands of the firm's business needs. The platform allows compliance leaders to meet their specific surveillance requirements. Validus delivers advanced trade surveillance, compliance, and market risk solutions tailored for highly complex, high-volume, and real-time financial environments. The platform's core technology is designed for scalability and precision, enabling real-time data processing that supports surveillance teams in rapidly escalating and managing actionable alerts. By leveraging real-time insights, Validus enhances the firm's ability to detect, assess, and mitigate potential risks, ensuring robust protection and compliance across multiple trading and communication channels.
- ◆ Geographically, Eventus has a strong presence in North America and is currently expanding across several geographical regions. The company covers a variety of functions, including surveillance for market abuse and fraud, staying compliant with regulations in regions across the globe, fulfilling regulatory requirements to do business, management reporting, behavioral analytics and signaling, and risk and position monitoring.
- ◆ The company may face challenges in competing with larger, well-established players in EMEA and APAC region. The company may consider tapping the growth opportunities across these regions and other geographies to further improve its market penetration. However, with the robust product strategy and roadmap, the company is well-positioned to overcome the challenges and increase its share in the trade surveillance market.
- ◆ In terms of roadmap, the company is constantly expanding its partner ecosystem, improving integration and interoperability for a range of systems and data

sources. The company is also enhancing its data integration and abuse detection capabilities to further augment its trade surveillance and monitoring performance.

Trading Technologies

URL: <https://www.tradingtechnologies.com>

Founded in 1994 and headquartered in Chicago, IL, Trading Technologies is a Software-as-a-Service (SaaS) technology platform provider that develops and delivers professional trading software to the global capital markets industry. In November of 2023, Trading Technologies acquired Abel Noser Solutions, a transaction cost analysis (TCA) and compliance technology provider that offers a trade surveillance and regulatory reporting system, Compliance+, for equities and fixed income. The company offers trade surveillance software, TT Score, that leverages ML to identify and score trading patterns that pose the highest regulatory risk. In 2024, TT Score expanded into multi-asset class coverage and was rebranded TT Trade Surveillance. The alerts and other key regulatory reporting features included in the Compliance+ system will be integrated into the TT Trade Surveillance system throughout the course of 2025.

Analyst Perspectives

Following is the analysis of Trading Technologies' capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ Trading Technologies offers a hybrid surveillance system, TT Trade Surveillance that leverages a combination of OOTB machine learning (ML) surveillance models, as well as user-configurable models to provide users with a risk score to reduce false positives. The solution also provides an option to prioritize the workflow to increase the efficiency of compliance team. The company has a global distribution network, and its platform is used by global banks, brokers, money managers, hedge funds, proprietary traders, Commodity Trading Advisors (CTAs), commercial hedgers, and risk managers. The company offers a ML-powered spoofing model that is trained using regulatory case data and provides users with a risk score that assesses the mathematical similarity between current alerts and prior regulatory cases, enabling compliance teams to prioritize potential spoofing events based on their historical relevance and regulatory alignment.
- ◆ The newly introduced cross-product surveillance models by TT enable users to input correlated instruments directly into the user interface to construct synthetic instruments for multi-order book surveillance. Using these synthetic instruments alongside ML-driven spoofing models, the solution efficiently detects spoofing activity patterns across multiple markets. This platform integrates real-time

trading data via FIX protocol for all futures trading activities and provides Level II market data globally for nearly every futures market. As a SaaS-based product, it offers immediate onboarding for TT platform users without the need for deployment, and features a comprehensive, integrated case management system for internal investigations, escalation, attachment management, and a "forever" audit trail, ensuring thorough, long-term tracking and compliance management.

- ◆ Abel Noser Solutions' Compliance+ provides a sophisticated and comprehensive solution for trade surveillance, offering financial institutions real-time monitoring and customizable alerts.
- ◆ Geographically, Trading Technologies has a strong presence in North America followed by EMEA and focus on expanding in APAC. The solution serves various industry verticals, including global banks, brokers, money managers, hedge funds, proprietary traders, Commodity Trading Advisors (CTAs), commercial hedgers, and risk managers. The solution supports a wide range of use cases related to various market abuse patterns including spoofing, cross-product spoofing, marking the close, insider trading, front-running, and momentum ignition.
- ◆ The company may face certain challenges from the larger and well-established players in the trade surveillance and monitoring market. The company needs to move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.
- ◆ In terms of roadmap, the company continues to focus on expanding its cross-product surveillance capabilities including equities vs equity options and ETFs. The company will continue to focus on developing advanced visualization tools, add real-time alerting capabilities, and ML-powered trader analytics alerts. The company will also be focusing on integrating the Compliance+ features into the TT Trade Surveillance system.

Nasdaq

URL: <https://www.nasdaq.com>

Founded in 1971 and headquartered in New York, US, Nasdaq is a global provider of trading, clearing, listing, information, exchange technology, and public company services. The company offers trade surveillance and monitoring through its solution titled SMARTS to provide enhanced surveillance and market abuse detection for financial institutions, including banks, brokers, and exchanges. The solution offers comprehensive capabilities, including data ingestion, alerting and case management, advanced analytics, and market replay.

Analyst Perspectives

Following is the analysis of Nasdaq's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ Nasdaq's SMARTS trade monitoring and crime detection solution is designed to help organizations effectively track suspicious trading patterns across multiple asset classes and markets. By enhancing data sorting, detection, and investigation processes, the solution allows firms to prioritize critical alerts, making compliance and regulatory monitoring more efficient. SMARTS provides a robust environment for identifying market abuse and manipulation, using intuitive visualizations to track violations across different markets. The platform supports compliance by monitoring trades in real-time, detecting irregular behaviors, and ensuring adherence to various regional and global regulatory frameworks.
- ◆ The SMARTS solution is highly comprehensive, featuring hundreds of pre-configured alert scenarios that allow organizations to meet the demands of multiple regulatory requirements, including MAR, MiFID II, Dodd-Frank, and the FX Code of Conduct. Its expansive capabilities streamline the process of trade surveillance, reducing the operational complexity associated with monitoring large volumes of transactions across diverse asset classes. This helps organizations focus on more critical investigations, making it easier to maintain regulatory compliance while simultaneously improving overall surveillance efficiency.
- ◆ One of the key features of SMARTS is its robust data ingestion capabilities, which leverage Nasdaq market data to ensure quick and accurate transaction processing. This capability enables organizations to automate software updates

and maintain a seamless, secure experience while also receiving tailored alerts for more effective market monitoring. By providing actionable, customized alerts that align with specific market conditions, the solution allows firms to evaluate cross-market issues efficiently and make faster, more informed decisions.

- ◆ The solution also integrates AI and advanced analytics to help firms detect emergent market manipulation methods. This functionality enables continuous learning, allowing firms to adapt to new threats and suspicious behaviors in real-time. The market replay capability adds an extra layer of precision to investigations, enabling organizations to reconstruct transactions down to the order book level for detailed analysis. This function ensures that firms can thoroughly examine any suspicious transaction and quickly respond to potential regulatory violations with accuracy.
- ◆ The key differentiators of the solution include its comprehensiveness, coverage of a wide range of asset classes and markets, hundreds of alert scenarios, and the company's own market data offering.
- ◆ In terms of geographical presence, Nasdaq has a strong presence in North America, EMEA, and APAC. The solution serves a variety of industries, including asset and wealth managers, banks, brokers, exchanges, ETFs, and more.
- ◆ The company may face competition from the larger and well-established players in the trade surveillance and monitoring market. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, Nasdaq is well-positioned to retain its market share in the global trade surveillance and monitoring market.
- ◆ In terms of the roadmap perspective, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing its technology to improve predictive pattern detection.

b-next

URL: <https://www.b-next.com>

Founded in 1989 and headquartered in Herford, Germany, b-next is a provider of corporate software in the capital markets trading surveillance and compliance sector. b-next offers trade surveillance and monitoring through its product suite Capital Markets Compliance (CMC) which comprises modules, including CMC:eMarket Abuse, CMC:eCompliance, CMC:TradeS to monitor trades and violations across asset classes and trading venues.

Analyst Perspectives

Following is the analysis of b-next's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ b-next offers an advanced trade surveillance and monitoring solution through its Capital Markets Compliance (CMC) suite, aimed at detecting market abuse across multiple asset classes and trading venues. The product suite includes various modules such as CMC:eMarket Abuse, CMC:eCompliance, CMC:TradeS, and, each designed to monitor different aspects of market abuse and suspicious activities. These modules provide a comprehensive solution for both sell-side and buy-side firms, regulatory bodies, and trading venue operators, helping them to manage risk, ensure regulatory compliance, and improve trading efficiencies through advanced surveillance and reporting capabilities.
- ◆ The CMC:eSuite is a multi-language, multi-tenant configuration platform offering configurable features for enhanced surveillance across asset classes. Integrated workflows, robust security functions, and report repositories are built into the platform to meet the specific needs of each organization. Additionally, the CMC:eSuite ensures a tamper-proof audit trail that allows firms to archive historical data and monitor their compliance status with ease. Its configurability enables seamless adaptation to different markets and regulatory environments, making it a flexible solution for global financial institutions.
- ◆ At the core of its trade surveillance functionality, b-next's CMC:eMarket Abuse module provides sophisticated automated tools for identifying and monitoring complex market abuse patterns. By leveraging market, instrument, and employee data, the system performs cross-market and asset-class comparisons, utilizing trend analysis to detect abusive trading behaviors. The module issues early warning alerts, allowing compliance teams to quickly investigate suspicious

activity with the aid of tick-by-tick market replay. The integration of machine learning algorithms further refines the detection process, ensuring more accurate identification of abusive behaviors.

- ◆ b-next's CMC:eCompliance module is designed to track insider trading by monitoring proprietary, customer, and employee trading activities. This solution gives compliance teams visibility into all trading activities within the organization, thereby helping firms comply with insider trading regulations. The module also features a Pre-Clearing capability, which automates the approval process for employee personal transactions by checking against predefined criteria such as holding periods and transaction amounts, ensuring that all necessary compliance checks are completed efficiently.
- ◆ For effective price surveillance, b-next offers the CMC:TradeS module, which monitors prices across a broad range of securities, money markets, FX, and listed derivatives. This module automates price surveillance for customer, proprietary, and staff trades, ensuring compliance with internal and regulatory standards. By automating this process, firms can more effectively detect price manipulation and other market abuses, safeguarding the integrity of their trading operations.
- ◆ Geographically, b-next has a strong presence in Europe, North America, and APAC. The product serves a variety of industries, including banks, brokerage firms, asset managers, regulators, exchanges, and energy firms.
- ◆ In terms of challenges, the company may face competition from the larger and well-established players in the trade surveillance and monitoring market. The company needs to move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.
- ◆ As part of its strategic roadmap, b-next aims to leverage its expertise in data analytics to build the next generation of intelligent data solutions. The company has been a pioneer in applying AI and machine learning to compliance. Its AI-powered solution, CMC:Forest, showcases this innovation. The tool helps Compliance Officers prioritize alerts, reduce false positives, and optimize efficiency, leading to significant time and cost savings. It achieves this by constantly learning from them how cases are scored and disposed of. Hence, it will quickly learn to predict with very high accuracy how a new case might be resolved. Because CMC:Forest learns from the bank or broker's own compliance team it will become finely tuned to the company's risk profile, policies, and practice. Looking ahead, b-next plans to enhance its AI-driven surveillance to address challenges like AI-based market abuse in Algorithmic-Trading. It also

intends to expand its AI offerings to trading operations, focusing on tools that boost profitability for trading desks.

Bloomberg L.P.

URL: <https://www.bloomberg.com/company>

Founded in 1981 and headquartered in New York, NY, Bloomberg L.P. provides financial data, software, and media services. The company specializes in providing real-time and historical data, analytics, and news to financial institutions and enterprises through its flagship platform, the Bloomberg Terminal. Bloomberg caters to professionals in sectors such as investment banking, asset management, trading, and risk management. The firm leverages its deep expertise in data aggregation and analytics to deliver cutting-edge solutions, including financial market data, portfolio analytics, trading solutions, and compliance tools. Bloomberg also offers advanced solutions in market intelligence, helping organizations make informed decisions in real-time.

Analyst Perspectives

Following is the analysis of Bloomberg's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ Bloomberg offers a comprehensive Trade Surveillance Solution designed to help financial institutions meet regulatory compliance requirements and detect market abuse. Leveraging the Bloomberg Terminal and other proprietary platforms, the solution integrates vast volumes of market, trade, and communications data, enabling firms to monitor suspicious trading activity across multiple asset classes. The platform utilizes Bloomberg Vault to store, analyze, and retrieve communications and trade data in real time, providing firms with actionable insights into their trading patterns. Bloomberg's trade surveillance system also features customizable alerting mechanisms, allowing compliance teams to identify potential market manipulation, insider trading, and other illicit activities. The system is scalable and adapts to global regulatory standards, including MiFID II, Dodd-Frank, and MAR, ensuring that firms can operate in full compliance.
- ◆ Bloomberg's Trade Surveillance Solution offers robust integration with the Bloomberg Terminal and Vault, providing a holistic approach to data management and compliance monitoring. Its combination of real-time trade data, customizable alerting, and advanced analytics makes it a crucial tool for institutions aiming to stay compliant with global regulations while minimizing the risks of market abuse.
- ◆ Bloomberg Vault enables organizations to store and manage vast volumes of communications and trade data for compliance and analysis. Vault offers advanced tools for monitoring communication and trading activities to detect

anomalies and market abuse in real time. It helps institutions generate regulatory reports and meet requirements for global regulations like MiFID II and Dodd-Frank. Bloomberg Vault ensures tamper-proof and secure storage of all sensitive communications and trading data, ensuring a robust audit trail.

- ◆ Some of the key differentiators of Bloomberg's solution include its capability to seamlessly integrate with the Bloomberg Terminal, which offers users access to real-time market data, news, and analytics. This integration enhances the effectiveness of trade surveillance by providing deep insights into market behavior, helping compliance teams to quickly detect suspicious activities. This also ensures that users can cross-reference trade and communication data with live market feeds to investigate anomalies in a timely manner. Bloomberg's Trade Surveillance Solution provides highly customizable alerting mechanisms. Users can define alert thresholds, calibrate their risk detection parameters, and create tailored reports to monitor specific trading activities. The solution also supports ML algorithms to detect outlier behavior and patterns, which continuously adapt to evolving market conditions. This flexibility allows firms to enhance the accuracy of their surveillance while reducing false positives.
- ◆ Geographically, Bloomberg has a strong presence in North America followed by Europe and APAC. The company caters to various industries such as investment banking, asset management, and hedge funds. The company supports a wide range of use cases, including insider trading detection and other forms of market abuse such as spoofing, front running, and wash trading.
- ◆ The company may face competition from other well-established players in the trade surveillance and monitoring market. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, Bloomberg is well-positioned to retain its market share in the global trade surveillance and monitoring market.
- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection.

ACA Group

URL: <https://www.acaglobal.com>

Founded in 2002 and headquartered in New York, NY, ACA Group is a provider of governance, risk, and compliance (GRC) solutions for financial services firms. The company specializes in delivering integrated risk and compliance management services, combining expert consulting with advanced technology platforms to support asset managers, private equity firms, broker-dealers, and investment banks. ACA Group's offerings span regulatory compliance, cybersecurity, performance analytics, and trade surveillance. With a deep understanding of global financial regulations, ACA helps firms navigate complex compliance requirements through tailored solutions that reduce operational risk and enhance compliance capabilities.

Analyst Perspectives

Following is the analysis of ACA Group's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ ACA Group's Trade Surveillance Solution is designed to monitor trading activities and detect potential market manipulation, fraud, and other suspicious behaviors within financial institutions. The solution integrates ACA's ComplianceAlpha® platform, which combines trade surveillance, communications monitoring, and regulatory reporting into a single, comprehensive platform. Leveraging advanced data analytics and ML, ACA's solution helps firms comply with regulations such as MiFID II, MAR, and Dodd-Frank by detecting unusual trading patterns, spoofing, insider trading, and wash trading. The platform is highly customizable, allowing firms to set specific parameters based on their risk appetite and regulatory obligations. It also integrates structured and unstructured data, providing real-time insights into market activities. The system offers firms the ability to reduce false positives and streamline compliance workflows, ensuring more accurate and efficient investigations.
- ◆ ACA Group's Trade Surveillance Solution offers financial institutions a robust, technology-driven approach to regulatory compliance. Its integration with ComplianceAlpha®, coupled with advanced data analytics and machine learning capabilities, allows firms to detect market abuse efficiently while minimizing false positives. With a focus on customization, real-time surveillance, and regulatory reporting, the solution empowers institutions to meet global regulatory standards while maintaining operational efficiency.

- ◆ The solution detects and flags suspicious market activities in real-time, including spoofing, wash trades, and insider trading. It leverages machine learning and data analytics to identify complex trading patterns and reduce false positives. Users can set risk thresholds and customize alert parameters based on specific regulatory requirements or firm-specific policies. The solution combines trade surveillance with communications monitoring and reporting features, creating a seamless compliance workflow for financial institutions.
- ◆ Some of the key differentiators of ACA Group's Trade Surveillance solution include its integration with ComplianceAlpha® platform which provides a unified approach to regulatory compliance. By integrating trade surveillance with communication monitoring and regulatory reporting, firms can achieve a more holistic view of their risk management practices. This integrated approach simplifies compliance workflows, reduces manual effort, and ensures seamless data aggregation across different compliance functions. The use of advanced algorithms helps institutions reduce the number of false positives, thereby allowing compliance teams to focus on critical alerts. The system continuously learns from new data inputs, refining its alerting mechanisms to improve detection accuracy. The scalability and customizability of ACA's Trade Surveillance Solution makes it highly adaptable to firms of varying sizes and risk profiles. Institutions can configure their surveillance settings based on specific market regulations, such as MiFID II or Dodd-Frank, and adjust alert thresholds to match their risk management needs. The platform's flexibility ensures that it can be easily tailored to meet the unique compliance challenges of different financial institutions.
- ◆ Geographically, ACA Group has a strong presence in North America followed by Europe and APAC. The solution serves various industries, including asset management, hedge funds, private equity, broker-dealers, and investment banks. The solution supports a wide range of use cases, including insider trading detection and other forms of market abuse such as spoofing, wash trading, and front running.
- ◆ The company may face certain challenges from the larger and well-established players in the trade surveillance and monitoring market. The company needs to move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.
- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection. The company is also

focusing on enhancing its capabilities for cryptocurrency and digital asset markets as these emerging asset classes are gaining traction and regulatory oversight is becoming more defined.

OneTick (OneMarketData)

URL: <https://www.onetick.com>

Founded in 2005 and headquartered in New York, OneMarketData is a leading provider of time-series data management and analytics solutions for the financial industry. Its flagship platform, OneTick, is a high-performance tick data management solution, designed to handle and process vast amounts of historical and real-time data. OneTick's core strength lies in its ability to deliver a unified platform for data collection, storage, and analysis, offering firms seamless access to deep data analytics for trading, compliance, and risk management applications. The platform is built to support complex, high-frequency trading environments, providing financial institutions, hedge funds, and trading firms with the tools they need for sophisticated analytics and historical data research. OneMarketData specializes in delivering solutions tailored to the specific needs of its clients, ensuring optimized data integration, superior performance, and scalability for financial data analysis.

Analyst Perspectives

Following is the analysis of OneTick (OneMarketData)'s capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ OneTick's Trade Surveillance Solution offers financial institutions a powerful tool for navigating the complexities of modern market compliance. Its multi-asset class capabilities, coupled with its high-performance data analytics engine, allow firms to streamline their compliance workflows while improving the accuracy of market abuse detection. As regulatory requirements evolve and market dynamics become more complex, OneTick's advanced use of AI and ML keeps it at the forefront of trade surveillance solutions, making it a reliable partner for financial institutions globally.
- ◆ The OneTick Trade Surveillance Solution is a comprehensive platform designed to help financial institutions monitor trading activities and ensure compliance with market regulations. Leveraging the capabilities of the OneTick platform, it provides firms with a robust environment for detecting market abuse, manipulative behaviors, and insider trading. OneTick's trade surveillance capabilities include real-time and historical data analysis, offering a powerful tool for uncovering irregular trading patterns and alerting compliance teams to potential misconduct. The solution supports multi-asset class surveillance, allowing firms to monitor equities, fixed income, FX, commodities, and derivatives within a unified framework.

- ◆ OneTick integrates seamlessly with existing trading infrastructures and external market data providers, offering enriched analytics and visualization tools. By utilizing cloud and on-premise deployment options, OneTick caters to a broad range of financial institutions, from hedge funds and proprietary trading firms to large banks and asset managers. Its machine learning (ML) and artificial intelligence (AI) capabilities further enhance the platform's ability to identify complex patterns of behavior, minimizing false positives while maintaining high detection rates. With a strong focus on compliance with global regulatory standards such as MiFID II, Dodd-Frank, and MAR, OneTick ensures that firms can meet their regulatory obligations in a cost-efficient and scalable manner.
- ◆ The platform provides extensive support for equities, fixed income, FX, commodities, and derivatives, offering firms a unified system to monitor and manage risks across various asset classes. Firms can perform both real-time and historical analysis of trades, uncovering patterns of potential misconduct and maintaining compliance with global regulatory standards. OneTick's integrated AI and ML capabilities help reduce false positives, enhancing the accuracy of alerts and streamlining the compliance process. The solution supports both on-premise and cloud-based deployments, catering to the varying infrastructure needs of different financial institutions.
- ◆ One of the key differentiators of OneTick Trade Surveillance is its highly scalable time-series data processing engine. Built specifically for financial institutions, the platform can ingest and analyze vast volumes of both real-time and historical trade data. By offering seamless integration with internal and external data sources, including market data providers, OneTick enables firms to monitor their trading activity with precision and scalability, regardless of their size or trading volumes.
- ◆ The integration of ML and AI into OneTick's surveillance solution allows it to intelligently analyze trading patterns and detect abnormal behaviors with minimal false positives. This significantly enhances the accuracy of its market abuse detection mechanisms. The platform's ability to adapt to evolving trading patterns ensures that financial institutions remain compliant with changing regulatory environments, reducing manual intervention in the surveillance process.
- ◆ OneTick offers highly flexible deployment options, supporting both cloud and on-premise installations. This adaptability allows the platform to cater to a wide range of financial institutions, from small trading firms to large multinational banks. The platform also offers extensive customization capabilities, allowing firms to tailor surveillance procedures to their specific regulatory needs and business models.

- ◆ OneTick has a strong presence in North America and has been expanding its footprint into Europe and Asia-Pacific (APAC) markets to serve the growing demand for advanced trade surveillance solutions. OneTick is heavily focused on serving financial institutions across a range of industries, including investment banks, hedge funds, asset managers, broker-dealers, and exchanges.
- ◆ In terms of roadmap, for vertical expansion, OneTick plans to enhance its offering to cater to the cryptocurrency and digital asset sectors, aligning with the growing interest in digital trading platforms and blockchain technology. By expanding its capabilities in these areas, including support for crypto exchanges and decentralized finance (DeFi) platforms, OneTick aims to capture new market opportunities while remaining at the forefront of regulatory compliance and market surveillance across traditional and emerging asset classes.

MCO (MyComplianceOffice)

URL: <https://mco.mycomplianceoffice.com>

Founded in 2005 and headquartered in New York, NY, MCO (MyComplianceOffice) provides cloud-based compliance management software solutions designed to help organizations meet global regulatory requirements. MCO specializes in providing an integrated compliance platform that automates key compliance tasks, including managing conflicts of interest, personal account dealing, third-party risk, and trade surveillance. The company's primary focus is on delivering compliance solutions that enhance transparency and minimize risk, while allowing financial institutions and corporations to meet complex regulatory standards efficiently. MCO is known for its emphasis on scalability, allowing organizations to manage their compliance operations across jurisdictions and different business lines.

Analyst Perspectives

Following is the analysis of MCO (MyComplianceOffice)'s capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ MCO's Trade Surveillance Solution, known as the Trade Surveillance Manager (TSM), is designed to help financial institutions monitor and detect potentially suspicious trading activities that may indicate market manipulation, insider trading, or other regulatory breaches. This solution integrates seamlessly with other platforms used by financial institutions and leverages automated data analysis and pattern recognition to ensure compliance with regulations such as MiFID II, MAR, and Dodd-Frank. TSM provides real-time monitoring capabilities, allowing firms to detect anomalies across different asset classes, trades, and orders. The platform is equipped with customizable alert systems and advanced reporting features that allow compliance officers to manage risk effectively, streamline investigations, and meet regulatory obligations.
- ◆ MCO's Trade Surveillance Manager offers a robust, highly customizable solution for financial institutions aiming to meet stringent regulatory standards while effectively managing market abuse risk. The platform's ability to integrate with existing data and compliance systems ensures seamless implementation. It provides real-time monitoring, customizable alert systems, and a wide array of reporting tools, making it ideal for firms dealing with complex trading operations. Its scalability and flexibility allow institutions to tailor the platform to their specific requirements, ensuring continuous regulatory compliance.

- ◆ TSM provides real-time surveillance across various asset classes, enabling quick detection of suspicious activities. The solution enables users to set custom alerts to detect specific market abuse patterns, making it adaptable to various regulatory environments. The solution automates regulatory reporting, ensuring timely and accurate submissions to global regulatory bodies. TSM leverages advanced analytics to detect and analyze abnormal trading behaviors, providing firms with insights to mitigate risks. The solution enables organizations to check for violations of their predefined policy-based rules, including checks for trade preclearance, excessive trading, large trades, unusual trading patterns, and hold periods.
- ◆ Some of the key differentiators of MCO's TSM solution include its high degree of customizability. Financial institutions can tailor the alerting system to suit their specific regulatory needs, allowing for the detection of region-specific market manipulation scenarios. This flexibility ensures that the system adapts to the evolving regulatory landscape, making it future-proof. TSM is designed to integrate smoothly with existing compliance management platforms and data sources used by financial institutions. This allows for seamless data flow across various departments, enhancing efficiency in surveillance activities. The ability to aggregate data from different sources and platforms is essential for firms with complex operations and diverse asset classes. MCO's TSM is highly scalable, allowing financial institutions of all sizes to implement the solution, whether they are small firms or large multinational organizations. The cloud-based infrastructure ensures that as firms grow or enter new markets, their surveillance systems can easily scale to meet increased demands without compromising performance or regulatory compliance.
- ◆ Geographically, MCO has a strong presence in North America followed by Europe, and the APAC region. The company continues to steadily grow its client base in emerging markets, particularly in Asia, where regulatory scrutiny is increasing. The solution serves various financial industries, including asset management, investment banking, and brokerage firms. The solution supports a wide range of use cases related to multiple asset classes such as equities, fixed income, and derivatives and use cases involving investment firms that must comply with MiFID II requirements and monitor their portfolio managers' trading activities to detect insider trading or market manipulation.
- ◆ The company may face certain challenges from the larger and well-established players in the trade surveillance and monitoring market. The company needs to move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and strong product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.

- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection.

Intellect Design Arena

URL: <https://www.intellectdesign.com>

Founded in 2014 and headquartered in Chennai, India, Intellect Design Arena specializes in delivering financial technology solutions for the banking, insurance, and financial services sectors. The company is known for offering innovative, AI-driven platforms that cater to a broad range of services, including trading, risk management, and compliance. Their flagship product, Capital Alpha, serves as a comprehensive multi-asset, multi-exchange, and multilingual platform for brokerage services. It provides real-time trading support, research and analytics, as well as a fully integrated back-office solution. The platform is highly modular, allowing firms to deploy solutions based on specific needs while benefiting from advanced analytics and AI-powered tools for decision-making.

Analyst Perspectives

Following is the analysis of Intellect Design Arena's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ Capital Alpha is designed to provide omnichannel trading capabilities, enabling investors to access the platform through various channels, including mobile and web interfaces. The solution offers a seamless trading experience by integrating real-time market data and analytics with risk management tools. One of its key features is the integration of pre- and post-trade risk management, which ensures compliance with regulatory requirements and enhances operational efficiency. The platform supports both domestic and cross-border trading activities, making it an ideal choice for brokerage firms that manage retail and institutional clients. Capital Alpha's robust surveillance capabilities allow for monitoring trading activity at multiple levels—broker firm, investor, and asset class.
- ◆ The platform's modular architecture enables flexibility, allowing firms to deploy specific functionalities based on their requirements, such as back-office operations, risk management, or trade surveillance. It is designed with API-based interfaces for smooth integration with existing IT systems, ensuring scalability and adaptability. One of the differentiators of Capital Alpha is its real-time integration of order and risk management, reducing data imbalance and unnecessary duplication. Additionally, the platform offers low-latency order routing and co-location features, ensuring faster order execution across global markets.
- ◆ Capital Alpha supports a "Broker-In-A-Box" solution that provides end-to-end services, including front-to-back-office integration, enabling brokerage firms to

scale efficiently. Its surveillance module is capable of tracking market activities across various asset classes, including exchange-traded and distributed assets. The platform also provides real-time compliance monitoring, allowing firms to adjust risk limits, margin rules, and exposure levels based on investor trading patterns. This flexibility ensures that firms can meet both internal and external regulatory requirements while maintaining optimal performance.

- ◆ In terms of advanced analytics, Capital Alpha offers AI-driven sentiment analysis and natural language processing (NLP) tools to assist investors in making informed decisions. The platform's real-time analytics provide insights into market trends and trading patterns, backed by comprehensive dashboards for monitoring sector and industry performance. The research module is integrated with market data and news, enabling investors to leverage real-time insights for better alpha generation. The system supports multiple data formats and can be integrated with business intelligence (BI) tools for enhanced decision-making.
- ◆ Capital Alpha also offers flexible deployment options, catering to both on-premise and cloud-based implementations. The platform supports single-tenant or multi-tenant configurations and can be offered as a managed service, combining Infrastructure-as-a-Service (IaaS) and Software-as-a-Service (SaaS) models. These deployment options make it an ideal solution for firms of varying sizes, whether they require on-premise solutions or cloud-based scalability. Additionally, the platform supports various industry-standard protocols like FIX, RESTful APIs, and web services, making it highly interoperable with third-party systems such as exchanges, payment gateways, and market data providers.
- ◆ Geographically, Intellect Design Arena has a strong presence in the APAC region. From an industry vertical perspective, retail brokerage houses in the regions of Colombo, Bangladesh, Philippines, Malaysia, Thailand, and Istanbul form a majority of the customers, followed by stock exchanges. Capital Alpha supports various use cases, including latency optimization, integrated front, mid, and back-office functions, real-time risk monitoring, omnichannel access, and an online bank/depository interface.
- ◆ The company may face certain challenges from the larger and well-established players in the trade surveillance and monitoring market. The company needs to move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.

- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection.

Features Analytics

URL: <https://www.features-analytics.com>

Founded in 2014 and headquartered in Nivelles, Belgium, Features Analytics is a financial technology company that specializes in the development of advanced trade surveillance and anomaly detection systems powered by machine learning (ML) and artificial intelligence (AI). The company's flagship product, eyeDES®, is an AI-driven solution designed to detect complex market manipulation, insider trading, and other types of financial misconduct across various asset classes and trading environments. Features Analytics leverages sophisticated data science methodologies and ML algorithms to deliver real-time, high-precision insights for risk management, regulatory compliance, and market integrity. Without the use of cumbersome parameters and by focusing on precision and explainability the company offers tools that help financial institutions ensure regulatory adherence while identifying potential (or suspicious) market abuse with minimal false positives.

Analyst Perspectives

Following is the analysis of Features Analytics' capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ Features Analytics' trade surveillance solution, eyeDES®, is designed to cater to financial institutions with a focus on providing comprehensive, real-time market surveillance and compliance monitoring. The solution leverages advanced machine learning algorithms to identify potential market abuse, insider trading, and other suspicious activities across a wide range of asset classes. eyeDES® integrates seamlessly with existing IT infrastructures, offering a highly scalable and flexible platform that supports the demands of large financial institutions and trading firms. It provides a fully configurable environment that enables firms to tailor the platform to their specific regulatory and operational needs. eyeDES® not only supports real-time detection but also retroactive analysis, enabling firms to efficiently conduct investigations with robust auditing capabilities. Its modular architecture also allows for easy integration with third-party systems and APIs for data ingestion, reporting, and regulatory compliance.
- ◆ Features Analytics' eyeDES® trade surveillance solution stands out for its precise detection of financial misconduct and its focus on minimizing false positives. By leveraging AI and ML, eyeDES® offers a proactive approach to identifying market manipulation and other anomalies, ensuring regulatory compliance while

reducing operational risk. The solution's real-time monitoring capabilities combined with post-trade analytics make it an indispensable tool for financial institutions that need to safeguard market integrity. Its flexibility and scalability further solidify its value proposition, making it suitable for both large institutions and smaller firms looking to enhance their surveillance capabilities.

- ◆ eyeDES®, contrary to other solutions, does not rely on parameters which require very frequent calibration because they cannot adapt to rapidly changing market dynamics and traders' behavior. Therefore, it brings enormous advantages in terms of efficiency of the operations and reduction of the legacy solutions maintenance cost across all asset classes and geographies covered.
- ◆ eyeDES® utilizes sophisticated ML models to detect subtle and complex patterns of market abuse, including the emerging patterns of abuse, reducing false positives while ensuring high accuracy in detecting financial misconduct. The solution offers real-time surveillance with instant alerts, ensuring that suspicious trading activities are flagged as they occur, allowing for timely intervention. In addition to real-time monitoring, eyeDES® provides robust post-trade analysis tools, enabling firms to investigate historical data and spot trends or violations retroactively. The solution's modular design allows for customization to meet the specific needs of different financial institutions. Its scalable infrastructure supports large data sets and diverse asset classes, ensuring optimal performance for firms of any size.
- ◆ Some of the key differentiators of Features Analytics' eyeDES® solution include the use of advanced ML algorithms that are specifically designed to detect market manipulation and insider trading with a high degree of accuracy. The solution's ability to reduce false positives ensures that compliance teams can focus on truly suspicious activities without being overwhelmed by unnecessary alerts. This precision minimizes the operational burden on financial institutions while enhancing compliance and regulatory oversight. The solution provides comprehensive coverage for both pre-trade and post-trade surveillance. This end-to-end approach ensures that firms can monitor market activities in real-time while also conducting thorough retrospective analysis. eyeDES® integrates seamlessly with front-office systems and supports multi-asset class monitoring, making it highly versatile for a range of financial institutions.
- ◆ Geographically, Features Analytics has a major presence in Europe. The company plans to expand in major financial hubs in the US and APAC. The company serves various industry verticals in financial services such as investment banking, asset management, hedge funds, and brokerage firms. The solution supports a wide range of use cases related to various asset classes and market abuse patterns.

- ◆ The company may face certain challenges from the larger and well-established players in the trade surveillance and monitoring market. The company needs to move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to increase its market share in the global trade surveillance and monitoring market.
- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection.

Scila

URL: <https://scila.se>

Founded in 2008 and headquartered in Stockholm, Sweden, Scila is a technology company specializing in surveillance, risk, and compliance solutions for the global financial markets. Scila provides robust, real-time monitoring and analysis tools tailored for exchanges, regulators, and market participants. Their flagship solution, Scila Surveillance, delivers comprehensive trade surveillance capabilities to ensure market integrity, regulatory compliance, and risk management. The company is known for its user-friendly interface, highly scalable architecture, and ability to customize solutions based on client needs. With its global client base spanning both established and emerging financial markets, Scila caters to stock exchanges, market participants, regulatory authorities, and trading venues.

Analyst Perspectives

Following is the analysis of Scila's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ Scila Surveillance is a comprehensive trade surveillance solution designed to detect market manipulation, insider trading, and other suspicious activities in real-time. Leveraging a flexible and scalable platform, Scila provides advanced monitoring capabilities across multiple asset classes, including equities, fixed income, derivatives, and commodities. The solution offers configurable rule-based surveillance that can adapt to specific regulatory requirements and client needs, allowing financial institutions to stay compliant with evolving market regulations. Scila Surveillance supports integration with various market data sources and transaction systems, ensuring seamless data flow and real-time analytics. The platform is built to handle large data volumes and offers customizable dashboards, advanced alerting, and in-depth reporting, making it ideal for regulatory authorities, exchanges, and financial institutions globally. It also incorporates machine learning capabilities to enhance the detection of complex trading patterns and reduce false positives.
- ◆ Scila's Surveillance platform offers a highly adaptable, scalable, and user-friendly solution for trade surveillance across global financial markets. The platform's ability to monitor a wide range of asset classes and seamlessly integrate with existing systems ensures that financial institutions can meet their regulatory obligations while improving operational efficiency. The inclusion of machine learning and real-time analytics further enhances the detection of market abuse,

making Scila Surveillance a crucial tool for ensuring market integrity. Its customizable and flexible nature positions it as a valuable asset for firms of all sizes, from large multinational financial institutions to regional market participants.

- ◆ Scila Surveillance offers real-time monitoring across multiple asset classes, ensuring immediate detection of suspicious activities and potential market manipulation. The solution provides a fully configurable alert system that allows firms to set up customized rules tailored to their specific regulatory and operational needs. Scila's solution can easily scale to accommodate the data processing needs of large financial institutions, exchanges, and regulators while offering a high degree of flexibility for future upgrades. The solution includes comprehensive reporting tools and dashboards that provide deep insights into trading patterns, compliance status, and potential risks, supporting both real-time and retrospective analysis.
- ◆ Some of the key differentiators of Scila's solution include its ability to provide comprehensive coverage across a wide range of asset classes. The solution supports surveillance for equities, fixed income, commodities, and derivatives, ensuring that institutions can monitor and manage risks across diverse trading environments. Its ability to consolidate data from various sources and offer unified surveillance allows firms to detect suspicious activities and potential regulatory breaches across all assets under management. Scila Surveillance is highly configurable, enabling financial institutions to customize the solution to fit their specific regulatory environments and operational needs. The rule-based alerting system can be tailored to monitor specific behaviors or risks, while the solution's scalable architecture ensures it can handle the growing needs of institutions. This flexibility makes Scila ideal for a range of market participants, from small firms to large multinational exchanges and regulators. Scila incorporates ML capabilities to enhance the detection of complex trading patterns and reduce false positives. By analyzing historical and real-time data, Scila Surveillance can identify anomalies and predict potential violations with higher accuracy. This feature allows compliance teams to focus on genuine risks and improve efficiency in their trade monitoring processes.
- ◆ Geographically, Scila has a strong presence across Europe followed by North America, and Asia, Latin America, and Africa. The solution supports various industry verticals, including stock exchanges, regulatory authorities, and institutional investors. The company supports various use cases related to monitoring trades across multiple asset classes and detect market abuse such as insider trading or manipulation.
- ◆ The company may face certain challenges from the larger and well-established players in the trade surveillance and monitoring market. The company needs to

move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.

- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection.

S3

URL: <https://s3.com>

Founded in 2002 and headquartered in Austin, TX, S3 is a leading provider of compliance and regulatory reporting software solutions for the financial services industry. S3 specializes in delivering analytics platforms that enable financial institutions to meet their regulatory requirements for trade surveillance, best execution, and regulatory reporting across multiple asset classes. The company offers advanced solutions that leverage big data and advanced analytics to provide comprehensive and actionable insights into market activities. S3's services are widely used by institutional investors, broker-dealers, and exchanges to enhance transparency, reduce risk, and ensure compliance with regulatory frameworks such as MiFID II, SEC Rule 606, and FINRA regulations.

Analyst Perspectives

Following is the analysis of S3's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ S3's Trade Surveillance Software is designed to help financial institutions monitor and detect trading activities that may indicate market manipulation, insider trading, or other forms of financial misconduct. The solution provides real-time and historical analysis of trading data across multiple asset classes, including equities, options, and fixed income. S3 integrates seamlessly with existing trading systems and data sources, allowing financial institutions to perform robust trade surveillance without disrupting their operations. The solution is built with advanced analytics and ML capabilities to identify suspicious trading patterns, reduce false positives, and ensure compliance with regulatory requirements. In addition to its core surveillance functionality, S3's software offers customizable alerting, workflow management, and detailed reporting, enabling users to generate audit-ready reports for regulatory bodies such as the SEC and FINRA. With its scalable architecture, S3's Trade Surveillance Solution can support firms of all sizes, from small broker-dealers to large, multi-national financial institutions.
- ◆ S3's Trade Surveillance Software stands out for its ability to provide comprehensive, real-time surveillance across multiple asset classes while ensuring regulatory compliance. The platform's integration of advanced analytics and machine learning helps financial institutions effectively monitor and manage their trading activities, reducing the risk of regulatory violations. With its customizable features, scalability, and ease of integration, S3's trade surveillance solution is well-positioned to meet the needs of both small and large financial

institutions in today's complex regulatory environment. Its strong focus on minimizing false positives and maximizing operational efficiency makes it a powerful tool for maintaining market integrity.

- ◆ S3's solution provides real-time monitoring of trading activities, allowing financial institutions to detect and respond to suspicious activities as they happen. The solution uses sophisticated algorithms and ML to identify complex trading patterns and reduce the number of false positives, enabling compliance teams to focus on genuine threats. S3's Trade Surveillance Software supports monitoring across a wide range of asset classes, including equities, options, and fixed income, ensuring comprehensive coverage. The solution allows users to customize alert thresholds, workflows, and reports to meet specific regulatory and operational requirements, ensuring a tailored surveillance solution.
- ◆ Some of the key differentiators of S3's Trade Surveillance Software include its use of machine learning and advanced analytics to enhance the accuracy of its surveillance capabilities. By leveraging these technologies, S3 reduces the occurrence of false positives, allowing compliance teams to focus on real threats. The system learns from historical data and adapts to changing market conditions, providing institutions with more precise and timely alerts. S3's Trade Surveillance Software is designed to integrate smoothly with existing trading platforms and data sources, minimizing the need for disruptive system overhauls. This flexibility allows financial institutions to deploy the surveillance solution quickly and efficiently, without significant infrastructure changes. The solution's API-driven architecture ensures compatibility with a wide range of data sources, providing firms with the flexibility to incorporate the solution into their current workflows.
- ◆ Geographically, S3 has a strong foothold in the US. The company plans to expand in Europe and APAC. The solution supports various industry verticals of financial markets, including brokers/dealers, exchanges, global trading firms, mutual funds, buy and sell side firms, retail banks, and regulators. The company supports various use cases related to broker-dealer that needs to monitor trading activities across multiple asset classes and detect market abuse such as insider trading or manipulation.
- ◆ The company may face certain challenges from the larger and well-established players in the trade surveillance and monitoring market. The company needs to move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.

- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection.

Trillium Surveyor

URL: <https://trilliumsurveyor.com>

Founded in 2014 and headquartered in New York, NY, Trillium is a financial technology company specializing in market surveillance and proprietary trading solutions for financial institutions. Their flagship product, Surveyor, is an advanced trade surveillance platform designed to monitor, detect, and prevent market manipulation, fraud, and trading anomalies. Trillium leverages its extensive experience in proprietary trading to build a solution that caters to the complex regulatory and operational needs of broker-dealers, exchanges, and other financial firms. Their focus is on creating cutting-edge surveillance technology that provides real-time analytics, customizable alerting systems, and robust reporting tools to ensure compliance with financial regulations. Trillium is known for its emphasis on user-friendly interfaces and quick adaptability to evolving regulatory requirements, helping financial institutions maintain market integrity.

Analyst Perspectives

Following is the analysis of Trillium Surveyor's capabilities in the Trade Surveillance and Monitoring solutions market:

- ◆ Trillium's Surveyor Trade Surveillance Solution is a comprehensive platform designed to assist financial institutions in monitoring and analyzing trading activities to detect market abuse, insider trading, spoofing, layering, and other illicit behaviors. The platform employs sophisticated analytics powered by machine learning and artificial intelligence to identify suspicious trading patterns across multiple asset classes. Surveyor integrates seamlessly with existing trading infrastructures and provides real-time alerts, enabling compliance officers to respond swiftly to potential violations. It also features historical trade analysis, giving users the ability to investigate past transactions for compliance and regulatory purposes. The platform supports both on-premises and cloud-based deployments, offering flexible solutions for firms of all sizes. Additionally, Surveyor provides detailed audit trails and customizable reporting features, ensuring that firms can meet their regulatory obligations, including compliance with SEC, FINRA, and other global regulatory bodies.
- ◆ The Surveyor platform by Trillium is a robust and highly adaptable trade surveillance tool that offers financial institutions an all-encompassing solution for ensuring market integrity. With its ML-driven analytics, real-time monitoring, and customizable workflows, it helps firms detect market abuse, minimize false

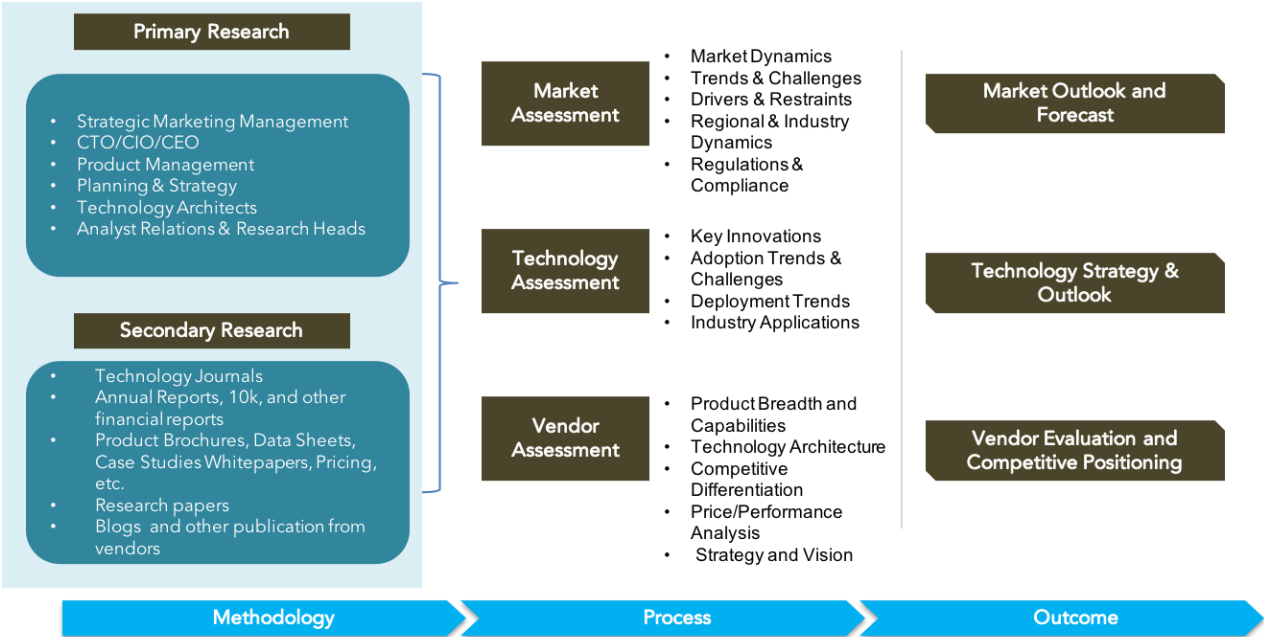
positives, and remain compliant with global regulations. Trillium's strong emphasis on ease of integration and user-friendly design makes it a versatile choice for both small broker-dealers and large institutional traders. In a fast-evolving regulatory landscape, Surveyor's ability to scale and adapt ensures that financial institutions remain compliant while improving operational efficiency.

- ◆ Surveyor provides continuous, real-time surveillance of trading activities across multiple asset classes, enabling institutions to detect suspicious patterns and intervene swiftly. The platform utilizes AI and ML algorithms to enhance the detection of market manipulation, reducing false positives and improving the accuracy of alerts. Surveyor allows users to tailor alert thresholds, workflows, and reporting templates to meet the specific regulatory requirements of their organization. The system provides a full audit trail of all surveillance activities, including the actions taken in response to alerts, ensuring regulatory transparency and accountability.
- ◆ Some of the key differentiators of Trillium Surveyor's solution include its ability to offer both real-time monitoring and detailed historical analysis. Financial institutions can monitor trades as they occur, while simultaneously maintaining comprehensive historical data for forensic investigations and regulatory reporting. This dual capability ensures firms can detect and respond to both immediate threats and historical misconduct, thereby ensuring a more thorough approach to trade surveillance. Trillium's Surveyor platform incorporates advanced machine learning algorithms that not only detect potential market manipulation but also evolve and adapt over time based on trading behavior. This continuous learning capability significantly reduces false positives and enhances the accuracy of surveillance, allowing compliance officers to focus their efforts on genuine risks. The system's ability to adapt to changing market conditions ensures that institutions can maintain effective oversight in a dynamic trading environment. Surveyor is designed for seamless integration with existing trading systems, providing financial institutions with the flexibility to deploy the solution without significant changes to their infrastructure. The platform supports both cloud-based and on-premises deployment models, making it suitable for firms of various sizes and operational needs. This flexibility allows institutions to scale their surveillance capabilities as their needs evolve, ensuring long-term compliance without costly system overhauls.
- ◆ Geographically, Trillium Surveyor has a major presence in North America, followed by Europe, and APC. The solution supports various industry verticals, including broker-dealers, exchanges, and institutional traders. The company supports various use cases related to buy-side/sell-side firms, proprietary trading, and exchanges/ATS.

- ◆ The company may face certain challenges from the larger and well-established players in the trade surveillance and monitoring market. The company needs to move faster in other geographies to leverage growth opportunities. However, with its sophisticated platform capabilities and robust product strategies and roadmaps, the company is well-positioned to retain its market share in the global trade surveillance and monitoring market.
- ◆ In terms of roadmap, the company continues to focus on enhancing its solution to provide a better experience. The company will continue to invest in enhancing AI technology to improve predictive pattern detection.

Research Methodologies

QKS Group uses a comprehensive approach to conduct global market outlook research for various technologies. QKS Group's research approach provides our analysts with the most effective framework to identify market and technology trends and helps in formulating meaningful growth strategies for our clients. All the sections of our research report are prepared with a considerable amount of time and thought process before moving on to the next step. Following is the brief description of the major sections of our research methodologies.



Secondary Research

Following are the major sources of information for conducting secondary research:

QKS Group’s Internal Database

QKS Group maintains a proprietary database in several technology marketplaces. This database provides our analyst with an adequate foundation to kick- start the research project. This database includes information from the following sources:

- Annual reports and other financial reports
- Industry participant lists
- Published secondary data on companies and their products

- Database of market sizes for different market segments
- Major market and technology trends

Literature Research

QKS Group leverages on several magazine subscriptions and other publications that cover a wide range of subjects related to technology research. We also use the extensive library of directories and Journals on various technology domains. Our analysts use blog posts, whitepapers, case studies, and other literature published by major technology vendors, online experts, and industry news publications.

Inputs from Industry Participants

QKS Group's analysts collect relevant documents such as whitepaper, brochures, case studies, price lists, datasheet, and other reports from all major industry participants.

Primary Research

QKS Group's analysts use a two-step process for conducting primary research that helps us in capturing meaningful and most accurate market information. Below is the two-step process of our primary research:

Market Estimation: Based on the top-down and bottom-up approach, our analyst analyses all industry participants to estimate their business in the technology market for various market segments. We also seek information and verification of client business performance as part of our primary research interviews or through a detailed market questionnaire. The QKS Group's research team conducts a detailed analysis of the comments and inputs provided by the industry participants.

Client Interview: QKS Group's analyst team conducts a detailed telephonic interview of all major industry participants to get their perspectives of the current and future market dynamics. Our analyst also gets their first-hand experience with the vendor's product demo to understand their technology capabilities, user experience, product features, and other aspects. Based on the requirements, QKS Group's analysts interview with more than one person from each of the market participants to verify the accuracy of the information provided. We typically engage with client personnel in one of the following functions:

- Strategic Marketing Management
- Product Management
- Product Planning
- Planning & Strategy

Feedback from Channel Partners and End Users

QKS Group's research team researches with various sales channel partners, including distributors, system integrators, and consultants to understand the detailed perspective of the market. Our analysts also get feedback from end-users from multiple industries and geographical regions to understand key issues, technology trends, and supplier capabilities in the technology market.

SPARK Matrix:

Strategic Performance Assessment and Ranking

QKS Group's SPARK Matrix provides a snapshot of the market positioning of the key market participants. SPARK Matrix representation provides a visual representation of market participants and provides strategic insights on how each supplier ranks in comparison to their competitors, concerning various performance parameters based on the category of technology excellence and customer impact.

Final Report Preparation

After finalization of market analysis, our analyst prepares necessary graphs, charts, and table to get further insights and preparation of the final research report. Our final research report includes information including competitive analysis; major market & technology trends; market drivers; vendor profiles, and such others.