

Trade Surveillance Market Review

Rising Alerts, Rising Complexity

IN ASSOCIATION WITH



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Introduction

This year's Acuiti Trade Surveillance Market Review, commissioned by Eventus, asks where senior executives are facing the biggest challenges amid a rise in trading volumes alongside increasing market complexity.

As the number of trading venues across asset classes and geographies multiplies and volumes grow, it is not only compliance departments that face monitoring challenges. Regulators are also working to keep up with many disparate data sources and to discern the best systems and methodologies for capturing them.

The inaugural Acuiti Trade Surveillance Market Review, published last year, found a sector that often struggled to keep on top of the volume of alerts that were generated and operational efficiency held back by an over-reliance on manual processes.

The market structure and conditions that created these trends are only increasing in complexity. Most respondents to this survey anticipate that the number of alerts will continue to grow over the coming five years. Concerningly, the biggest increases are expected in the hardest to detect abuses.

To explore these challenges and how firms are meeting them, Acuiti gathered qualitative and quantitative data through an industry survey and series of interviews covering 64 senior trade surveillance and compliance executives across a diverse range of global firms.

This report presents the findings of the study. In addition, we profile views of key industry executives on the challenges they have faced in their career and on what they think constitutes best practice in trade surveillance today.

The key findings are:

- The past five years have seen a notable rise in alerts, a trend that most respondents expect to continue over the next five years for price manipulation, market disruption, and other alert types
- Finding skilled staff remains a critical challenge for many respondents and is becoming a persistent drag for the trade surveillance sector
- The number of false positives that trade surveillance executives deal with is increasing alongside the rise in alerts, with most teams spending time analysing alerts that were eventually discarded
- Order book manipulation is emerging as a major challenge to detect, with the highest reported percentage of false positives and the alert type that takes the longest to investigate
- Despite the need for greater automation, firms are still struggling to implement effective solutions and say that software flexibility was the most challenging feature to improve
- The majority of respondents were either considering or had advanced plans to upgrade or change their trade surveillance systems in the next 12 to 18 months

The pace of change



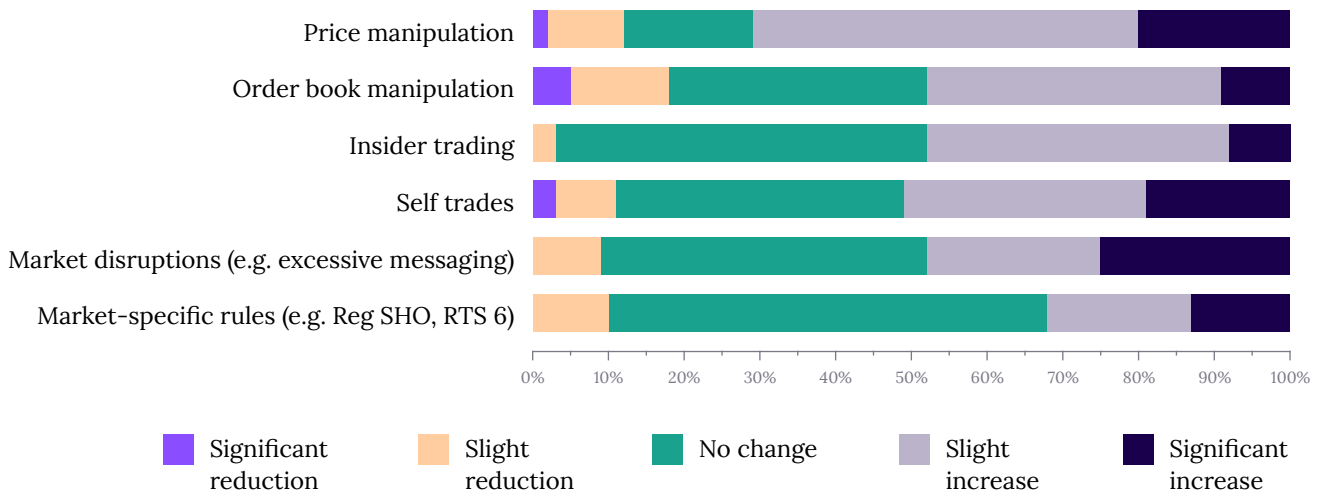
The past five years have seen significant disruptions in capital markets. Not only has this period included the rise of new asset classes such as cryptocurrencies and carbon, but also the market turmoil of Covid-19, the Russian invasion of Ukraine and rising interest rates and inflation.

These combined factors have sent trade volumes and volatility surging. FIA data for listed derivatives alone shows that volumes

have risen every year from 2017 to 2022, with 2023 volumes surpassing the previous year by the end of Q3.

In tandem with the growing volumes, trade surveillance executives across the market are reporting a rise in the number of alerts they must deal with. This rise has been a trend across all surveillance categories. However, it has been particularly pronounced in market disruptions, price manipulation, and self-trades.

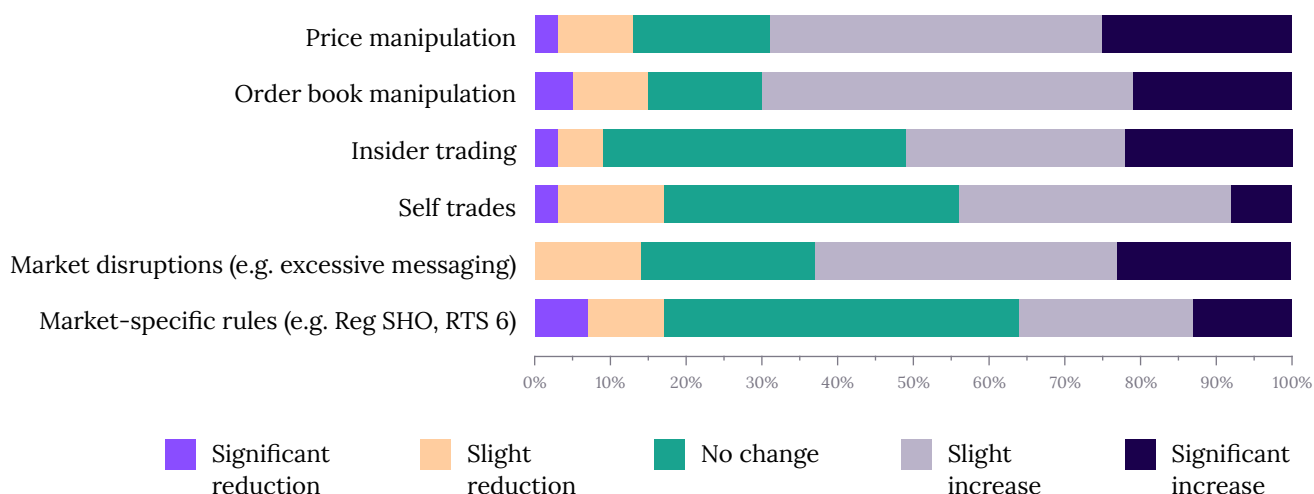
Over the past five years, have you seen changes in the volumes of alerts in the following areas?



The majority of survey respondents expect that this rise in alerts will only increase over the next five years. Elevated interest rates and geopolitical uncertainty still loom large over markets. Structural trends, such

as the fragmentation of liquidity across trading platforms and algorithmic execution across asset classes, which is increasingly incorporating AI, are also set to accelerate as markets grow in speed and size.

Over the next five years, do you expect changes in the volumes of alerts in the following areas?



Algorithmic trading has changed the speed and efficiency of financial markets. Despite some improvement, trade surveillance experts are still struggling to obtain the same benefits of speed and efficiency from algorithmic and automated surveillance methodologies.

A consistent message from the experts interviewed for this report was that the fundamental principles of a successful trade surveillance operation have largely held true throughout the recent evolution of financial markets. What has changed during that time is the complexity and depth of markets. To keep pace with these changes and apply those fundamental principles effectively, technology has been essential.

Trade surveillance started as a largely manual function, where teams would look for patterns

using paper entries. As the era of electronic trading began, compliance teams moved to using Bloomberg and other terminals to sift through and visualise the data.

As the amount of data became too much for teams to analyse alone, firms moved to using software to detect patterns of market manipulation. Since then, a major component of effective trade surveillance has been upgrading this software to align with market developments as efficiently as possible.

As the complexity and sophistication of market structure has increased, the ability to adapt trade surveillance software to those changes has become more challenging. Frequent recalibration is needed as surveillance teams integrate new patterns of market abuse, or the lessons of enforcement cases into their systems.

“You have to have the fundamentals in place before you even start looking at anything else. You have to know that your core is operating as it should and you have a good grasp on it. But once you have that you should always look at innovations. Innovations are there to help enhance what you currently have. It’s also there to make things more efficient. And if you’re not looking at innovation, then you’re stale. You have to keep up with new environments, both regulatory and technological, just to make sure that you’re current and to ensure the most efficient way of conducting your business.”

Martina Rejsjö, Director of Product Management Strategy, Eventus

The challenges of trade surveillance

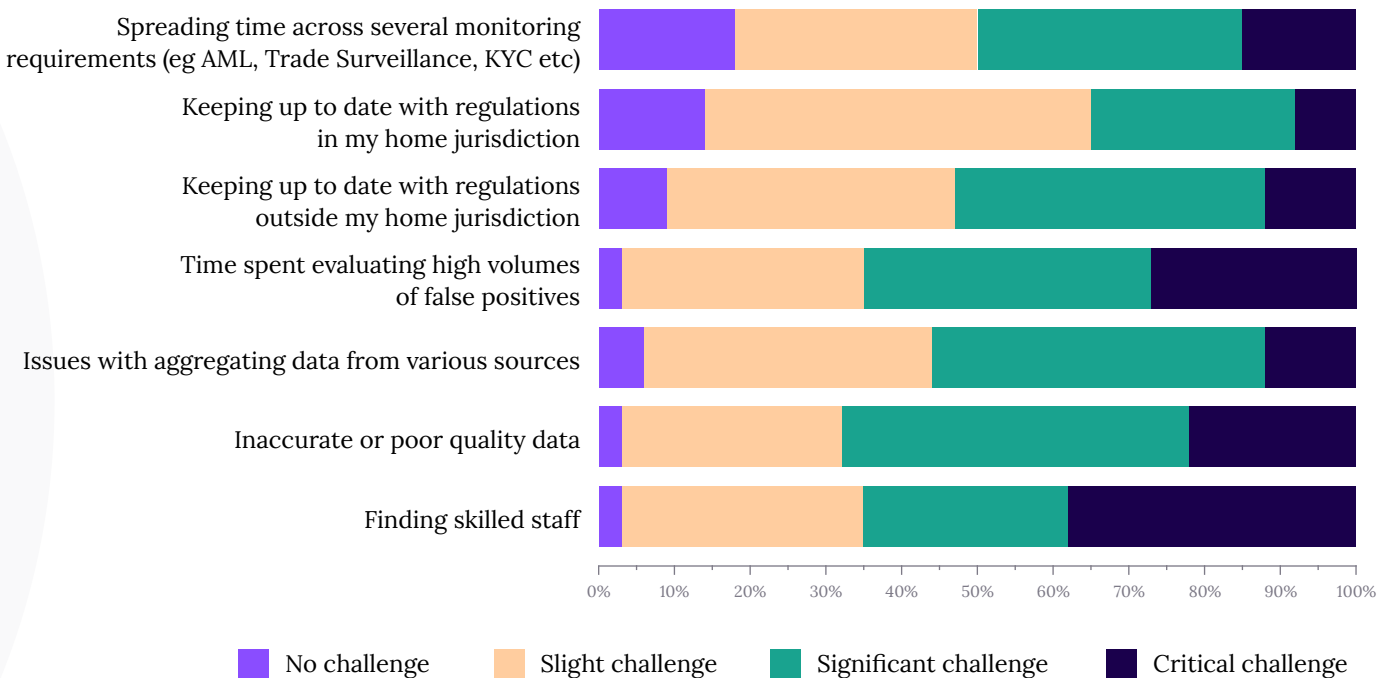
While the fundamentals of effectively detecting market abuse are well-known by trade surveillance experts, the conditions of modern markets still poses significant day-to-day challenges.

Effective practice can be hard to implement. Interviews for this report indicate that these problems can often be amplified at larger organisations, where multiple sign-offs from a range of internal stakeholders are needed to implement change. In these cases, trade surveillance desks have to contend with

technology and compliance teams that often have different resources, ideas and beliefs on how to make their surveillance systems both accurate and efficient over time.

These problems can also intertwine with the more complicated budgetary considerations that large firms face. This can make it hard for trade surveillance teams to hire for, and then maintain, effective teams, especially at times when bank chiefs are under pressure to deliver large scale job cuts, or restructure the wider organisation.

How much of a challenge do the following factors pose to you in your day-to-day surveillance operations?



Respondents to this survey cited finding skilled staff as the greatest challenge they faced in their day-to-day operations. This is a long-standing problem for the sector and one that has got worse since 2022 (see chart on next page).

Surveillance teams have often reported the strenuous effects that resignations or job cuts can have on their team's day-to-day operations, as they deal with the high number of alerts. With respondents expecting ever expanding alert numbers, especially ones that are hard to deal with, the risk of overload is increasing.

Survey respondents also reported significant and critical challenges from the amount of time spent evaluating high volumes of false positives. Inaccurate or poor-quality data was a major challenge, although it seems to have improved slightly from last year as firms invested in data

harmonisation across their organisations. Keeping up to date with regulations outside of a firm's home jurisdictions was a also major challenge, although one that has receded since 2022.

Since last year, the level of false positives has noticeably increased as a critical challenge. This indicates that current systems at many firms have struggled under the rise in volatility and surging trading volumes that defined market conditions in 2022.

Firms also noted an increase in the challenge of spreading time across several monitoring requirements, such as AML, trade surveillance and KYC. This may be a reflection of the increasing difficulties of managing global exposures at a time of heightened geopolitical tensions, with more jurisdictions expanding their sanctions lists.

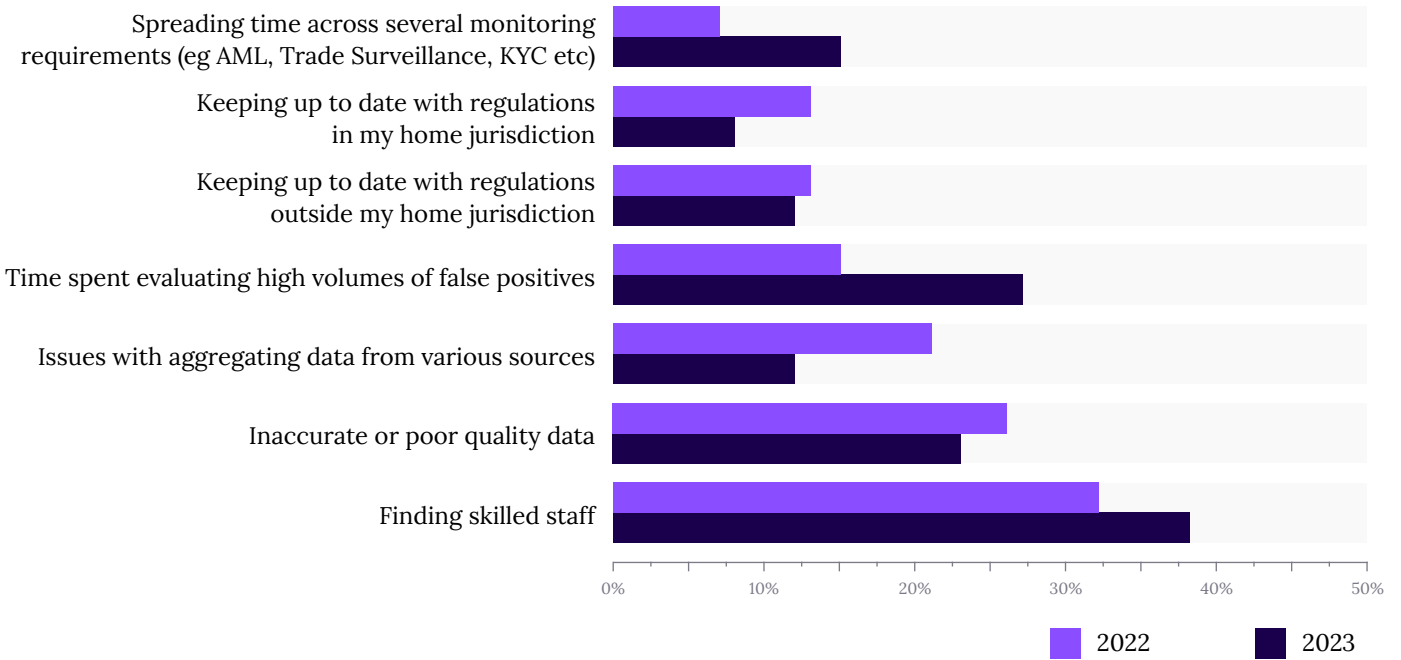
“Our surveillance system once flagged a gold and silver futures trader flashing orders on one side of the market and then trading on the opposite side of the market, triggering alerts for variations of spoofing and layering. An analyst that was on my team had expanded the alert search to a six month period, but only came up with three similar alerts.

“We then isolated all of the trader's activity and went through anything that looked like an attempt to manipulate the market. What we found was an overwhelming pattern (over 100 incidents) where the trader was attempting to trigger the execution their orders on the opposite side of the market. You don't need 3D graphics and bi-directional processing for an effective trade surveillance system. There are lots of rigid trade surveillance vendor tools that are a pain to deal with. There is a major advantage to flexibility, but equally important is keeping the surveillance logic simple. Simplicity means that you can be quick to put needed changes into production as well as (in addition to catching bad people) clearly explaining to your surveillance logic to regulators. Unfortunately, sometimes people lose sight of this and are expecting trade surveillance to be more like the movie *Minority Report*, producing only true violation alerts using very complex algorithms and models. It's not, it's a balance of keeping logic simple while having quality red flags.

“I refer to the car radio & equaliser analogy. With your car radio, you have a couple of preset buttons, your volume and tuner - that's basically all that you need. You don't need an array of dials like a graphic equalizer has to fine tune trade surveillance alerts to the Nth degree because all it does is complicate things. So like with the car radio & equaliser, trade surveillance tool users just end up really using the couple of key parameters and ignoring (or turning off) the other parameters to keep it running properly.”

Senior sell-side compliance executive

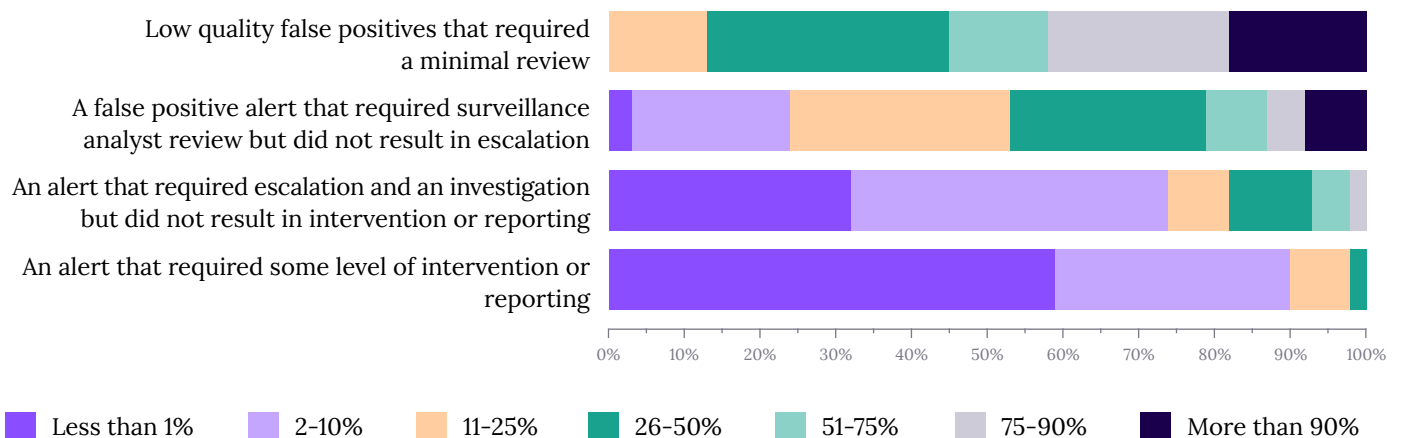
How have surveillance challenges changed from 2022 (% of respondents citing critical challenges in each category)?



The challenge of false positives stands out. As the chart below shows, the majority of alerts that firms receive are low quality false positives. While these require minimal review, the levels still speak to the difficulty that firms face in creating parameters that efficiently filter out false positives, as well as the constant efforts required to recalibrate systems.

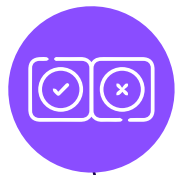
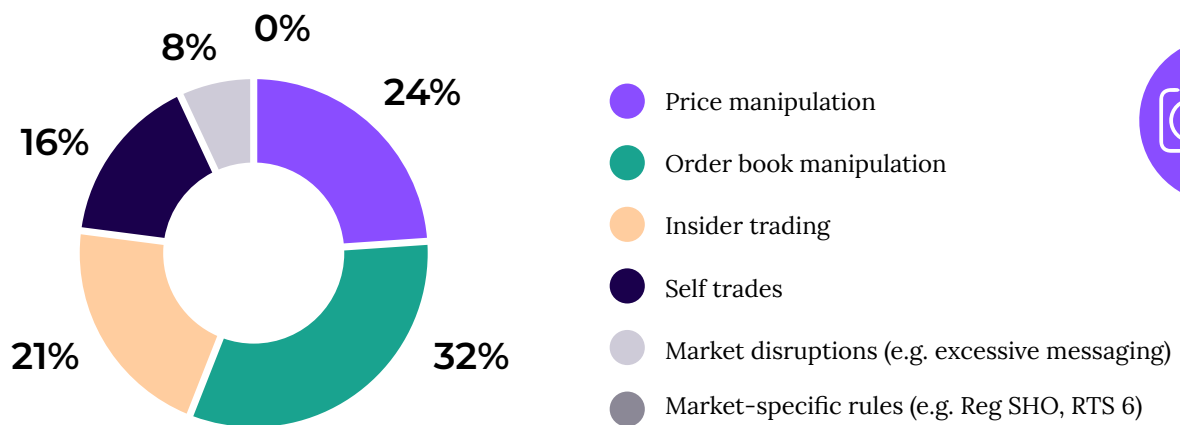
More than half of respondents reported that over 50% of the alerts they received were low quality. Over 60% said that they were spending time reviewing alerts that ultimately turned out to be false positives, while most respondents saw under 10% of their alerts result in escalation or intervention.

Out of the total number of alerts that you receive, what approximate percentage fits these categories?



Survey respondents reported seeing the highest number of false positives in order book manipulation cases. Price manipulation and insider trading also ranked highly.

In which of the following areas do you see the highest percentage of false positives?



“The goal of effective trade surveillance is to tailor controls in a holistic and sensible way to identify true market abuse and limit the number of false positives.

“On one occasion, we were analysing a portfolio valuation system where traders had the ability to update market data within set parameters while valuing their trades. There are issues with market data on a day-to-day basis and you don’t want to run all the calculations only to find out that the inputs were wrong. Thus, it was a system designed with the right goal.

“However, one particular trader started manipulating the market data in a way that would benefit the mark-to-market of their portfolio, often to the detriment of the client. The actual curve changes were small and well within the allowed parameters, but given the very large size of trades the mark-to-market impact ran into millions of dollars.

“Since the market data updates were within the control parameters this did not get caught until years later. Had the firm applied additional controls, such as conducting more granular P&L trending analyses for individual traders during the period when the traders entered their own market data, the firm may have flagged this activity earlier. The lesson from that and other episodes is that it is not any one control, but a holistic set of controls that help us identify these issues over time.”

Sudhir Jain, Head of New York Office and Managing Director , Patomak Global Partners

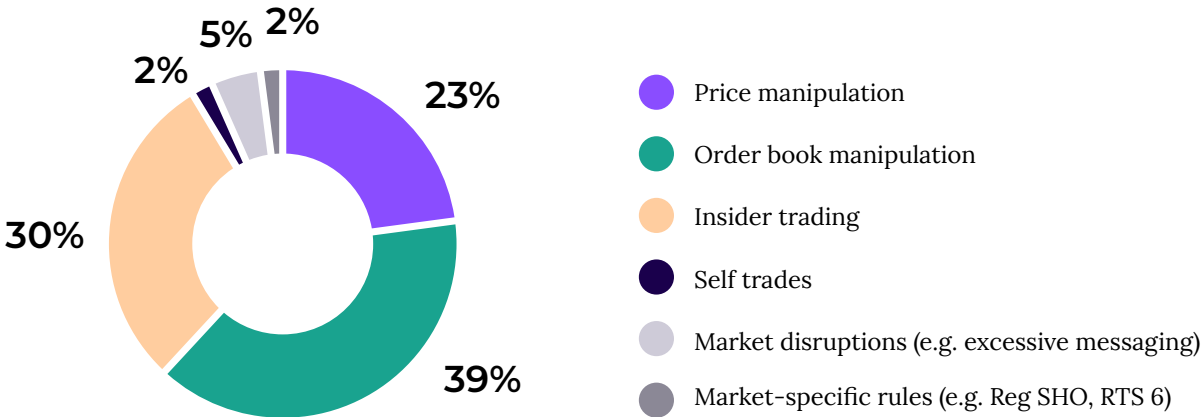
Order book manipulation was cited as the hardest pattern of market abuse to correctly detect (see chart on next page), as well as the type of alert that takes the most time to investigate and with the highest percentage of false positives. Price manipulation was marked as the easiest to detect, although it still takes a substantial amount of time for many to investigate

Order book manipulation has always presented a challenge for trade surveillance teams. This has been elevated in recent times by the large increase in the amount of data to sift through, a rise in two-way quoting models and the speed of current algorithms.

Firms also have to contend with a lack of sufficient market order data against which to conduct investigations. While most firms have their own order data, gaining access to market order data from multiple trading venues is an increasingly expensive and cumbersome challenge.

Firms can monitor for cancelled orders amid their own trading activity. However, to better monitor for abuse such as spoofing and layering, they will need to review their orders in comparison to other market orders. For this, more market order data is needed, and the difficulties of obtaining that create issues for surveillance teams.

Which type of alert typically takes the most time to investigate?



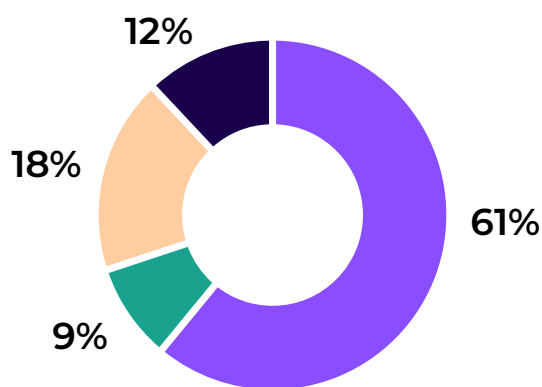
“When I returned to Australia in 2009 after a period in London, trade surveillance for the domestic market was moving to its next stage, where exchanges heavily relied upon the liquidity provided by algorithms used by the classic proprietary trading firms, the so called HFTs. We wanted to know more about what they were doing on our market than anybody else. Not necessarily so that we could charge along and say we’re going to get you and prosecute you: a main purpose of trade surveillance is being able to identify and understand what the market is doing and any potentially problematic narratives that may be raised. With the right tools a market surveillance team can work on those potentially problematic narratives and how they are addressed by genuine liquidity. That is the stage we are at now and where our current tools, including Eventus, have helped us get those results.”

Michael Somes, General Counsel, Cboe Australia

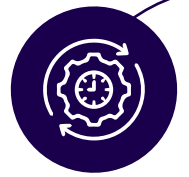
Despite most firms reporting price manipulation as the easiest pattern of market abuse to detect, a significant number admitted running into problems identifying it. Complexity created by variations in systems and regulations among different jurisdictions and asset classes may

contribute to the difficulties with order and price manipulation. Market data may also contribute with factors like data ingestion, volume and access. Varying regulations and market structure require constant vigilance in maintaining effective surveillance and compliance procedures.

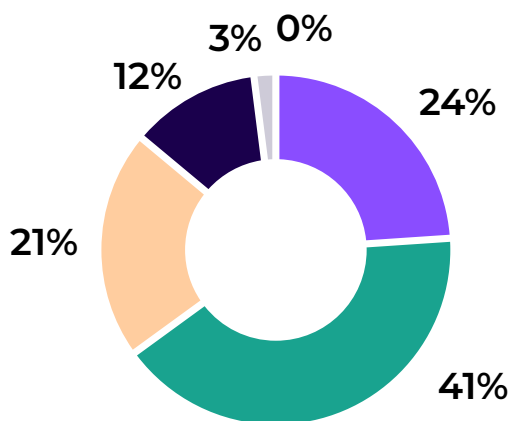
Which of the following types of market abuse do you think you can most effectively detect?



- Price manipulation
- Order book manipulation
- Insider trading
- Self trades
- Market disruptions (e.g. excessive messaging) 0%
- Market-specific rules (e.g. Reg SHO, RTS 6) 0%



Which of the following types of market abuse do you think are most difficult to detect?



- Price manipulation
- Order book manipulation
- Insider trading
- Self trades
- Market disruptions (e.g. excessive messaging)
- Market-specific rules (e.g. Reg SHO, RTS 6) 0%



This dynamic can be seen in some of the new asset classes that have risen in popularity in recent years. The most prominent example is the cryptocurrency market, which is

global, spans multiple digital assets and has a very nascent regulatory framework – with significant variance between regions.

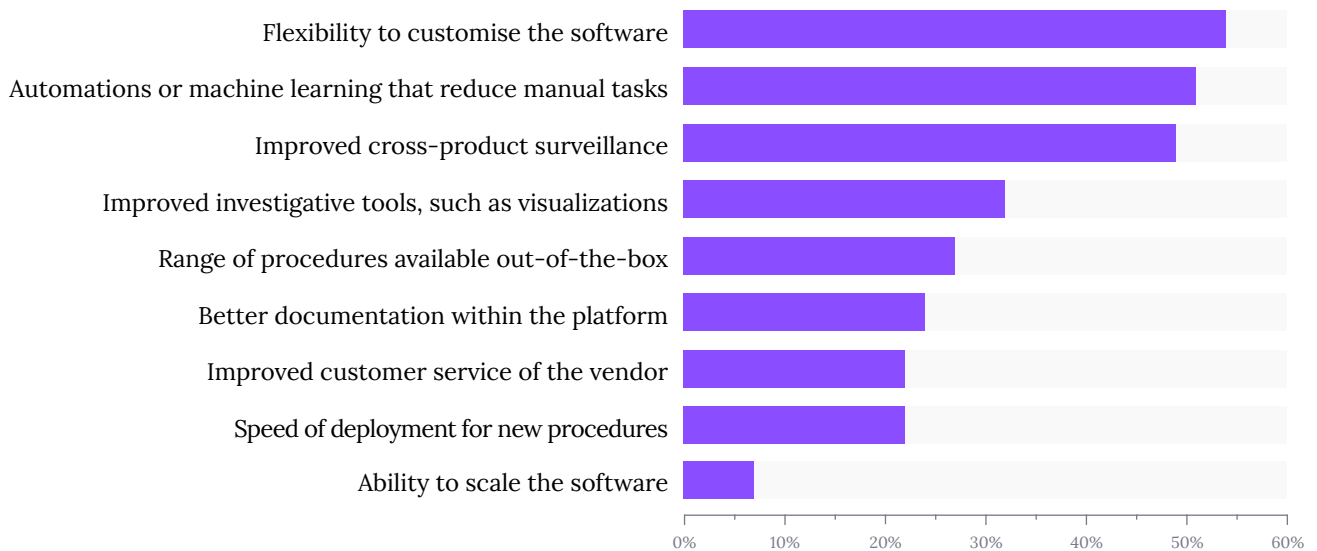
Ensuring the right infrastructure



Advances in the quality and sophistication of trade surveillance software have been essential in allowing compliance teams to keep up with the development of modern markets. However, firms face daily challenges in calibrating these systems to effectively capture the warning signs of market abuse. Gaining the flexibility to customise this software, as new case studies, asset classes or market behaviours emerge, was cited as the major challenge when dealing with these platforms' features.

Respondents also reported notable challenges with using automation or machine learning to reduce manual tasks. The amount of time that trade surveillance teams spend manually resolving alerts has been a major and long-standing challenge for the sector. So far though, it has not been easy to solve, even with technology. Firms also reported cross-product surveillance as a challenging feature to improve.

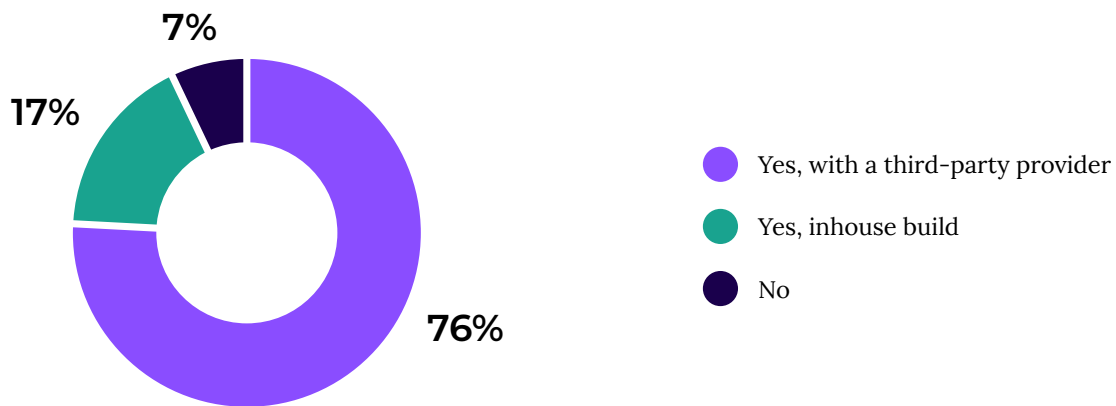
What are the top trade surveillance software features you find the most challenging to improve?



With the volume and complexity of financial markets only set to grow in the coming years and trade surveillance executives expecting the number of alerts to increase correspondingly, firms have been investing to make sure that their trade surveillance

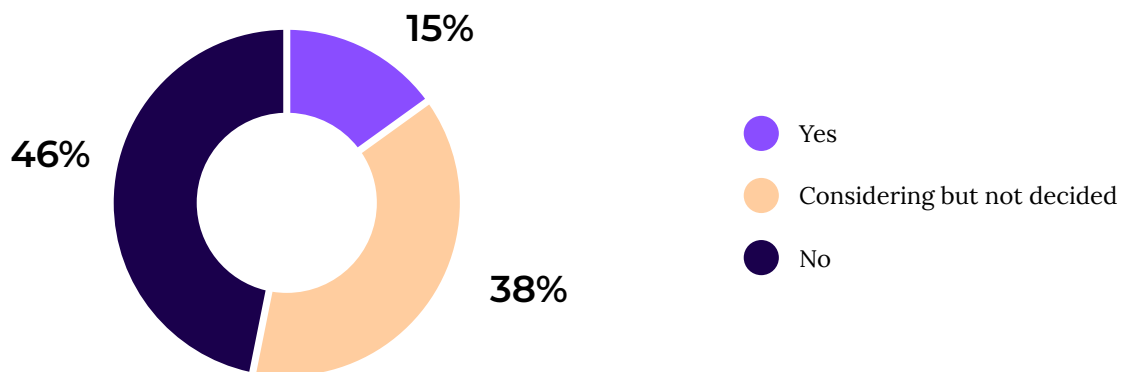
systems can meet these challenges. The overwhelming majority of respondents had invested in trade surveillance software in the past three years. Within that amount, just over three quarters had done so with a third-party provider versus building in-house.

Has your organisation invested in trade surveillance software over the past three years?



Investment is an ongoing process, with a majority of respondents either considering or in advanced plans to upgrade or change their systems in the next 12 to 18 months.

Are you planning to change or upgrade your trade surveillance systems within the next 12-18 months?



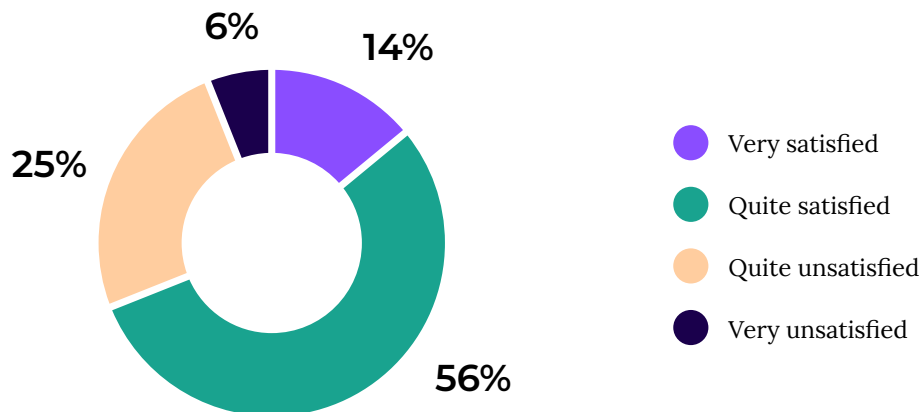
“When I was starting up a new, regulated crypto exchange in Abu Dhabi, the expectation was that I would build a market surveillance system from scratch. I had the developers in place, but it was a very big challenge. Eventually, I thought why reinvent the wheel? So, we acquired a market surveillance vendor, which was key. Creating the correct rules for the right market abuse behaviours is quite difficult without having the proper knowledge and understanding. Therefore, the relationship with the vendor is key and makes it easier to get approval. If you get a recognised vendor it will be easier to get a licence.”

Vladimir Contreras, Market Surveillance Expert

For those respondents that had invested in the last three years, most were satisfied with the results. The most common benefit cited was lower regulatory risk, followed by greater satisfaction among both compliance staff and

senior management. This is an advantage that is particularly pronounced with third-party surveillance systems over in-house developed systems, which generally had a lower level of satisfaction than third-party builds.

Overall, how satisfied were you with the results of the investment?



What were the main benefits from that investment?



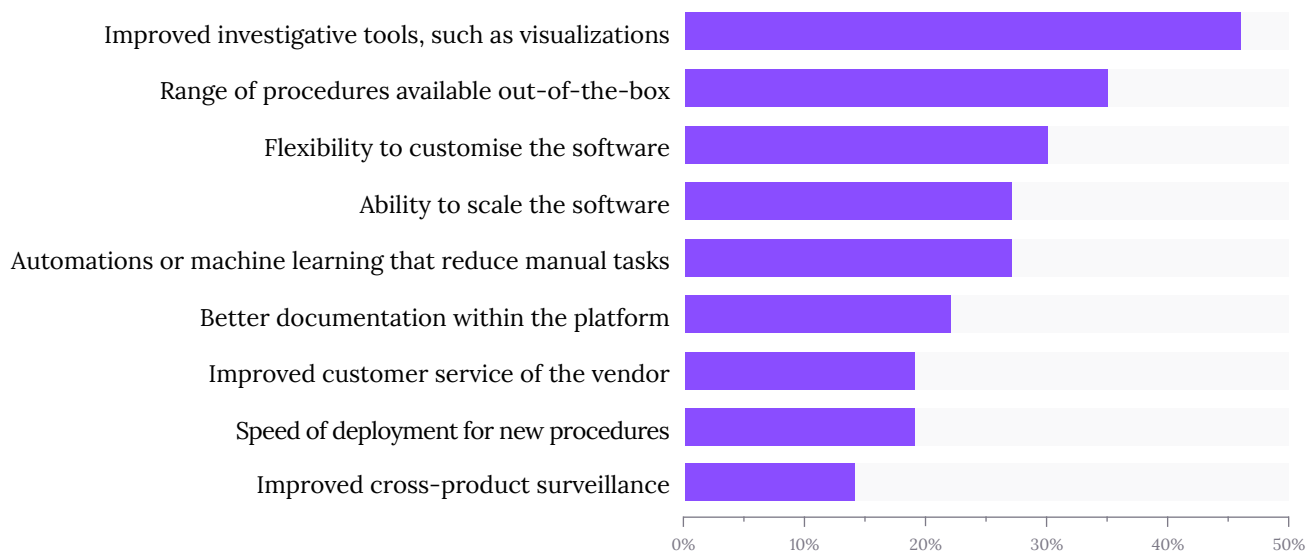
“We made a decision to voluntarily become regulated as an exchange and clearing house because we knew it would bring that additional layer of integrity to carbon markets, which are necessary to transition to the net zero economy that we need. Because we chose to bring that level of sophistication and surveillance to the carbon markets for the first time, it has enabled new participants to enter the markets, because they have a confidence that they’re protected against market abuse, financial crime and money laundering. That is because we have sophisticated market surveillance processes in place.”

Tim Alltimes, Chief Compliance Officer & MLRO, ACX (AirCarbon)

Regulators have long shown a preference for dealing with third-party systems due to familiarity. After the experience of attempting in-house builds, many firms have concluded that this path is open to cost overruns and delays due to dealing with a greater number of internal stakeholders (such as technology

departments). Regulators also face a steep challenge keeping on top of both market abuse and the technology used to monitor it. This augments the attraction of working with systems that are transparent and able to consolidate market data across different sources.

What were the main feature improvements in the technology from the investment?



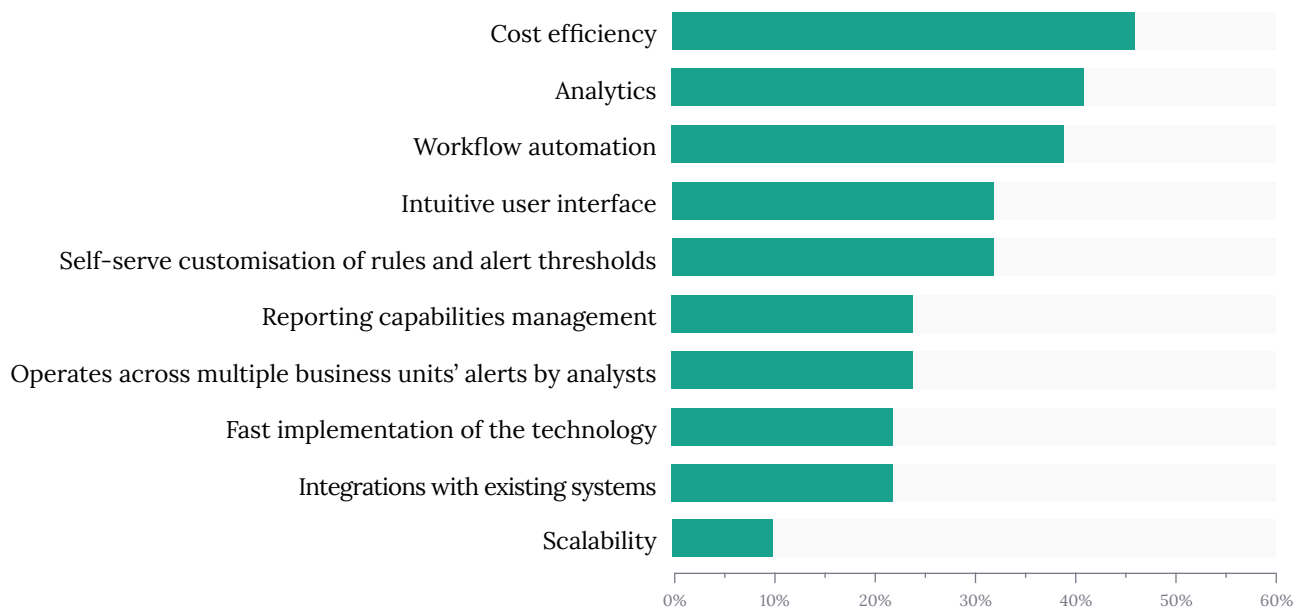
The greatest improvements that respondents cited from technology were improved investigative tools, such as visualizations. The popularity of such tools shows the power of innovation, when applied correctly, to sort through and make sense of the large amounts of data that analysts have to examine. Such

advances help the analysts to identify and capture market abuse risk faster. However, some experts interviewed for this report warned of the dangers of overly technological approaches to trade surveillance – trying to create algorithms that predict market abuse before it happens, for example.

“Regulators are experiencing the same challenges as firms – operating a surveillance program while innovating in an ever-changing environment. There are lots of challenges to getting the fundamentals right while trying to deploy the latest technology. It is clear from Acuiti’s survey that surveillance teams struggle with false positives and specific typologies and seek specific feature improvements of their legacy systems – while striving to lower cost and regulatory risk.”

Joe Schifano, Global Head of Regulatory Affairs, Eventus

When evaluating trade surveillance solutions, what are your main considerations when deciding which to choose?



However, the popularity of investigative technology shows the place that innovation has in trade surveillance systems in terms of improving workflows for users. Given the enormous amounts of data moving through firms' workflows on a daily basis, the need for tools that make greater sense of patterns is rising.

This was reinforced by respondents' answers to what they considered important for evaluating

trade surveillance solutions. Cost efficiency was the most important input, but analytics and workflow automation ranked closely to it.

This again reflects the desire for technology that both reduces the need for manual intervention and helps analysts to map patterns of abuse in complex markets. In the case of analytics, the expected rise of harder to detect trades will give rise to more powerful detection tools.

“Cryptocurrencies are a global asset class, simultaneously traded on hundreds of different trading platforms. This leads to a new class of market manipulation, utilising different platforms (some of which may be licensed, and some not). Cross-manipulation might become difficult to detect. An exchange operator might only see one leg of the manipulative trade on their marketplace, but they might not be seeing the complete manipulation. Also, from an enforcement perspective, how would a regulator in one jurisdiction, say in London, take enforcement action if part of the manipulation is done in another jurisdiction, say in Venezuela?”

Donald Day, Chief Operating Officer, VDX

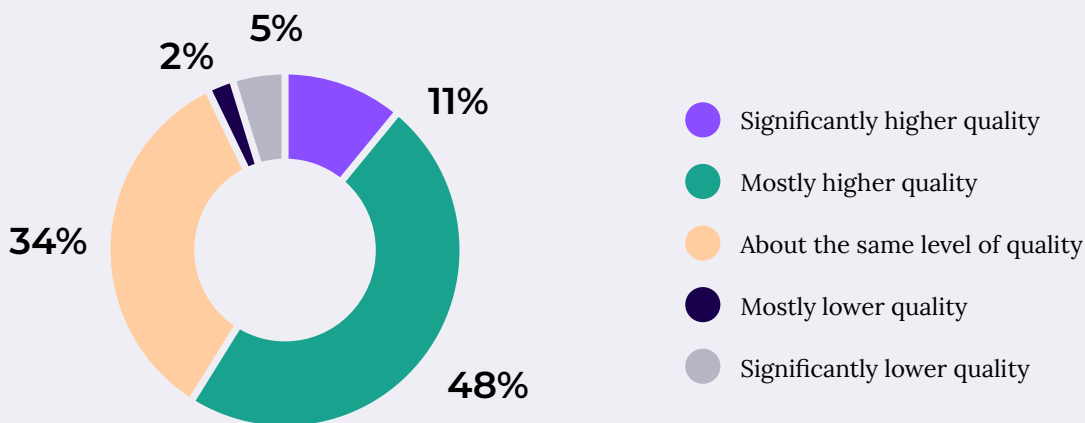


Conclusion

Keeping on top of the challenges facing the trade surveillance sector is a constant requirement to make sure both that staff are informed, and systems reflect current market conditions. There have been tangible signs of improvement

in the sector. While firms are dealing with high numbers of false positives, the amount of time that trade surveillance teams are spending analysing them is falling. The quality of alerts was also said to be improving.

Over the past five years, how would you describe the change of quality of alerts in helping you identify compliance problems?



However, the process of improving systems must keep pace with the rising trading volumes. Increased market complexity and change will also make sure that trade surveillance teams face a constant challenge of

updating their systems to reflect those realities. Automation will have to play a much bigger role too, in order to allow analysts the time to focus on the rise in more complex cases that is anticipated by the market.



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