Trader surveillance

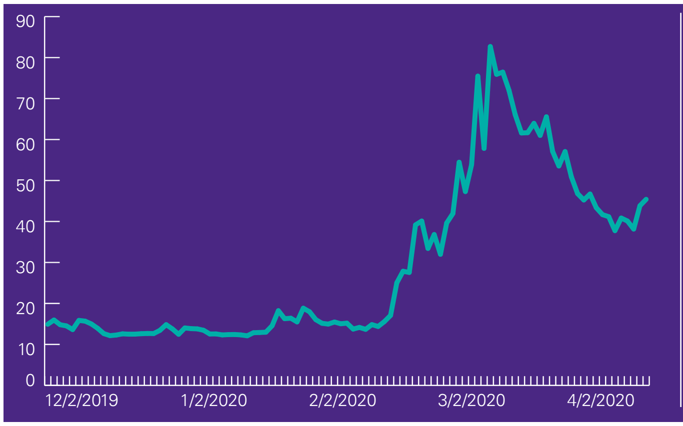
Dealing with the challenges of COVID-19

May 20, 2020

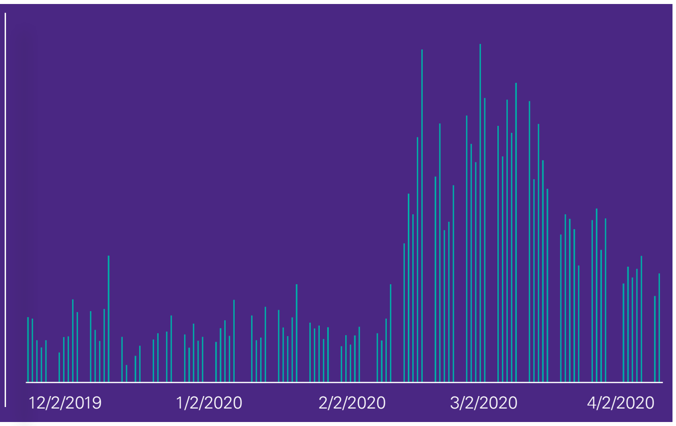
Heightened regulatory expectations and focus coupled with an increasingly complex operating environment strain the capabilities of surveillance programs under the best of circumstances. These challenges have been exacerbated by the COVID-19 pandemic where:

- Rapid market dislocations drive volatility and volumes across FX, commodities, credit and interest rate products, and equities, increasing the overall volume of surveillance alerts
- Traders are dispersed across multiple remote locations, hampering supervisory and surveillance efforts, particularly the ability to monitor for off-grid activity
- Data disruptions, predominantly driven by increased trading volumes, are causing a backlog in the surveillance monitoring processes and workflow
- The relationships between certain parameters that calibrate surveillance patterns are exceeding the boundaries within which correlations would be expected to hold, potentially increasing the volume of alerts and decreasing accuracy.

Volatility Index



Volume



Source: Yahoo Finance

These pressures shine a glaring spotlight on the weaknesses embedded within many surveillance programs even before the crisis. Examples include:

Governance Gaps – Multiple stakeholders with overlapping mandates complicate workflows and impede accountability. This situation is exacerbated by the line of sight issues between traders and supervisory personnel during the COVID 19 outbreak. Key weaknesses include:

- Missing or poorly enforced policies and procedures that govern the surveillance lifecycle where a lack of proximity between traders, supervisors, and compliance personnel may impair communication and connectivity
- Gaps in risk or regulatory coverage that leave the business exposed, such as an inability to record telephone conversations between traders working remotely and their counterparties as required by statute.

Data Disconnects – Data quality and availability challenges dramatically impact the integrity of trade surveillances and the corresponding volume and integrity of the resulting alerts. The dispersion of traders across remote locations, working through home networks and less than optimal infrastructure, increases the risk that data quality and availability may be adversely impacted by:

- Dropped feeds/missing feeds that trigger surveillances or result in coverage gaps exacerbated by high volumes
- Poor change management protocols that result in unintended downstream impacts
- Distribution channels that have not been on-boarded into the surveillance architecture (e.g., personal phone lines, home networks, etc.)
- The lack of cross product surveillance and increased volatility, which may intensify the risk of cross-product manipulation.

High Alert Volumes – Rules-based surveillance patterns tend to generate an unmanageable volume of alerts that require manual follow up and disposition. This "white noise" can not only make it very difficult to properly flag suspicious trading activity, but also mask emerging threats. This issue is compounded by the extreme volumes and volatility caused by the COVID-19 outbreak and the ensuing market dislocations. Across many of our capital markets clients, we've seen:

- Low yield rates on individual surveillance patterns or suites of surveillance (e.g., > 0.3 percent)
- Limited ability to risk rank alerts and prioritize those that are most critical
- High occurrences of Type I errors (False Positives) with limited structured linkage in the tuning and calibration process
- Limited testing around potential type II errors (False Negatives).

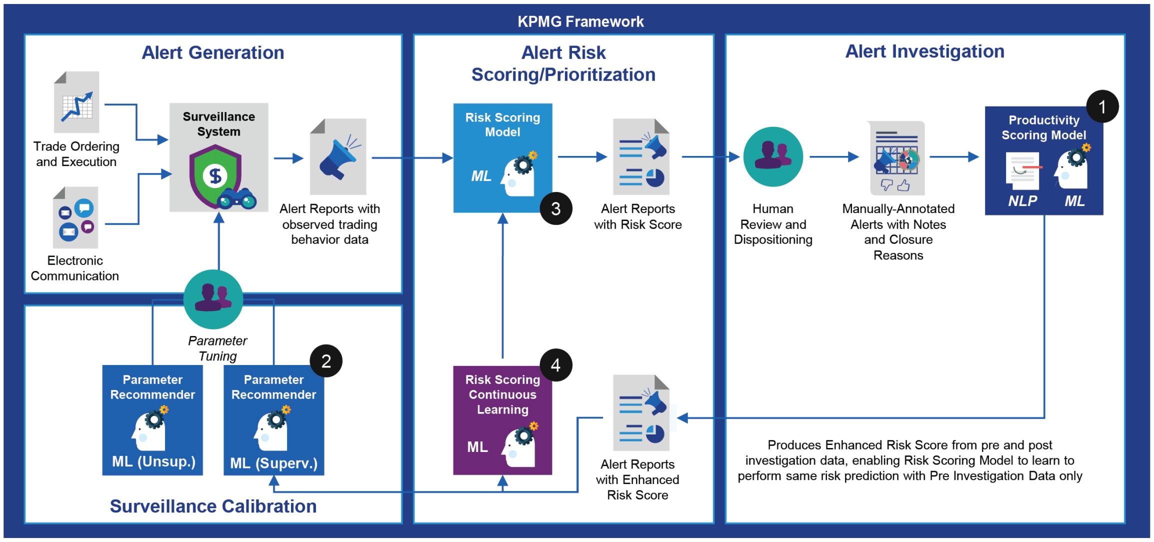
In the short term, KPMG can help to relieve the immediate pressure on the surveillance program

KPMG can provide surge support to help your surveillance program work through the backlog of surveillance alerts driven by the COVID-19 pandemic. Across our clients, we have seen a spike in alerts, particularly around market manipulation (spoofing, layering, etc.) and insider trading. In addition, we see increased risks associated with unauthorized trading and or mismarking illiquid positions as traders may attempt to mask P&L losses:

- KPMG teams can work alongside your alert remediation experts to close out alerts. Our trained alert remediation specialists, working offshore, can provide the additional capacity required to address the backlog.
- KPMG can deploy analytic resources to help you systematically prioritize specific alerts within the backlog for remediation by assessing the probability of classes of alerts being true positives or identifying false positives for close.

Over the longer term, KPMG can deploy its proprietary machine learning tools and techniques to uplift your surveillance program

KPMG can work with the your team to define what a "good" alert looks like and build a series of machine learning-enabled modules to assess the productivity of alerts, tune and optimize surveillance patterns, and score outgoing alerts based on the following framework:



1. KPMG analyzes the disposition text, disposition codes, and environmental data around **historical alerts** leveraging natural language processing and machine learning to profile "high-quality" versus "poor-quality" alerts for tuning purposes.
2. KPMG feeds alert profiles into customized machine learning models to **tune and optimize surveillance parameters** to help minimize "poor quality" alerts and help maximize alert yield.
3. KPMG risk scores **live alerts** leveraging machine learning models that prioritize high-quality alerts for manual disposition by compliance analysts within their workflow engine.
4. KPMG leverages machine learning tools to continually monitor the ongoing health and quality of alerts. This creates a constant feedback loop that constantly improves the surveillance tuning and risk scoring engines.

Our results speak for themselves. Comparison of alerts generated before and after threshold changes proposed by KPMG indicate a reduction in number of alerts by approximately 36 percent, accompanied by an increased perception of alert quality by the analysts of approximately 44 percent, as illustrated below.

	Market Manipulation Surveillance			
	Before Tuning		After Tuning	
	Volume (Alerts/Year)	Productivity Alert Ratio (%)	Volume (Alerts/Year)	Productivity Alert Ratio (%)
# of Alerts	**80,156**		**51,300**	
Productive Alerts	36,231	45.2%	33,242	64.8%
Not Productive Alerts	43,925	54.8%	18,058	35.2%

36% reduction
in alert volume per day

44% increase
in productive alerts ratio

Source: The data is representative data from KPMG clients.

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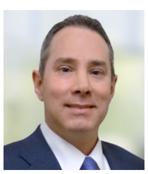
Contact us



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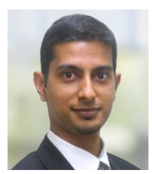

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