

Algorithmic Trading

Enhancing your governance, systems and controls

Keeping pace with the algorithmic trading revolution

A greater reliance on electronic execution and trading algorithms over the past decade has resulted in increased risks and challenges for many market participants. Many incidents and 'flash crashes' in various asset classes have drawn the attention of regulators across the globe. By the end of 2020, investment banks are expected to perform their third annual self-assessment of trading algorithms systems and, given the pace of change, now is the time to re-assess the challenges and associated risks.

What are the key challenges?

Preventing financial losses

Firms need to ensure their systems are robust and resilient, support effective functioning of markets and prevent financial losses.

Past events that led to market flash crashes or bankruptcy are driving risk management priorities across the industry.

Evolving Market Standards

Firms need to stay on top of fast evolving industry standards on managing risk in algorithmic trading environment.

Immature risk management practices are still catching up with the fast pace of developments in algorithmic trading.

Managing Conduct Risk

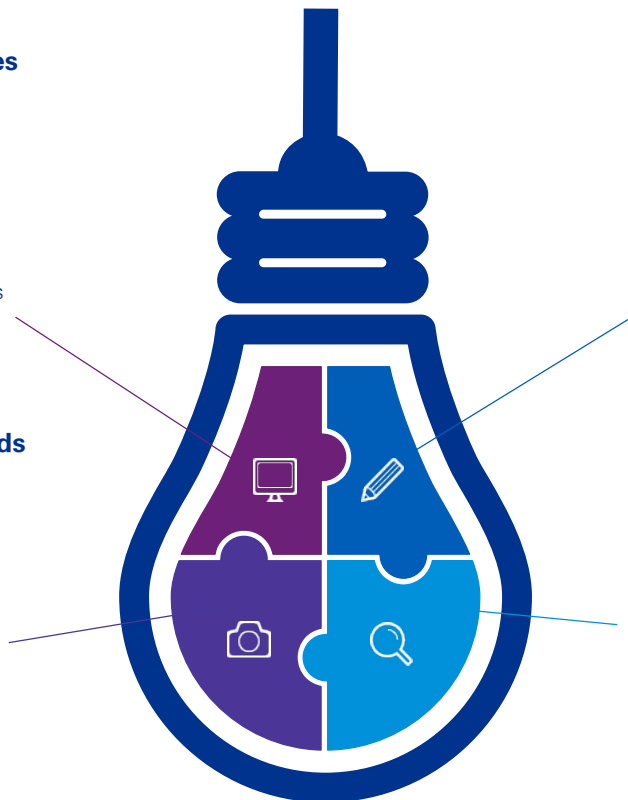
Firms need to adapt and enhance their conduct risk frameworks to provide effective controls for algorithmic trading business.

Example of higher risk features include coding resulting in market abuse (e.g. spoofing or layering the market)

Evolving Regulation

Firms must adhere to a growing number of global regulatory requirements for algorithmic and high frequency trading.

With continued focus on regulatory expectations across different regions (MiFID II, US SEC Market Access Rules, PRA Supervisory Statement) firms are considering how best to enhance their governance, polices and controls.



Algorithmic trading control framework

To satisfy MiFID II requirements, along with FCA and PRA recommendations, firms need to develop a comprehensive control framework to identify, measure and control exposure to risk associated with algorithmic trading. Firms should assess the effectiveness of these arrangements within each of the following areas:

Algo development

Establish an algo development lifecycle to test, approve and deploy software, as well as maintain transparent records.

Pre-trade checks

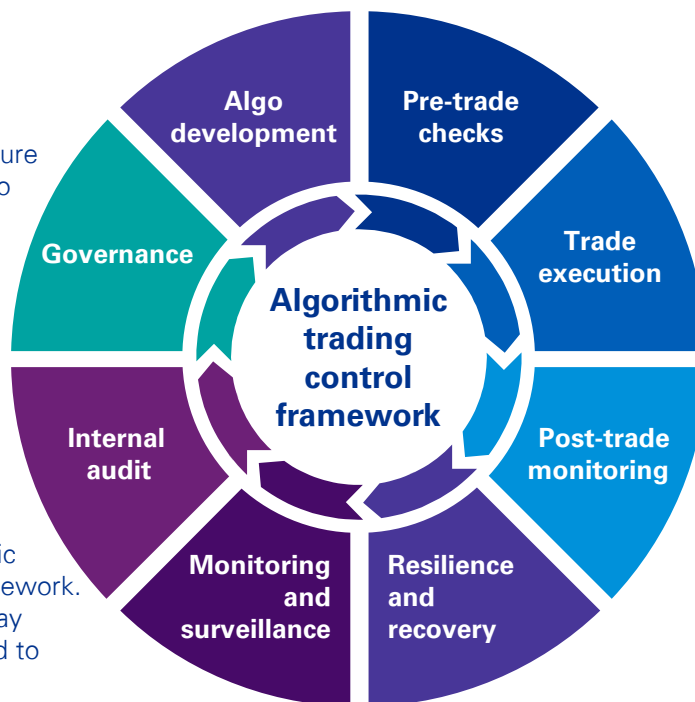
Strong pre-trade controls to manage orders within pre-defined risk limits.

Governance

Accountability and effective oversight arrangements to ensure ongoing adherence to the requirements.

Trade execution

Real-time monitoring of trade execution with reliable system logs, manual override procedures and kill switch functionality.



Internal audit

Conduct periodic reviews of algorithmic trading controls framework. Self assessments may need to be submitted to the regulator.

Post-trade monitoring

Granular post-trade data collection for risk monitoring and reconciliation with third parties.

Monitoring and surveillance

Transaction monitoring and communication surveillance procedures, as well as second line responsibilities should be clearly defined.

Resilience and recovery

Testing the resilience of systems to cyber attacks and internal stress. Ensure prevention of disorderly markets in the event of system failure.

How can KPMG help?

We support firms in their journey to compliance with algorithmic trading regulatory requirements, helping them to reduce exposure to risks and improve business processes. We also perform industry benchmarking to help firms understand their market position.

Design of a governance and controls framework

- Help to design a framework to identify, assess and manage risks arising from algorithmic trading activities.

Implementation support

- SME support with implementation of the algorithmic trading compliance framework.
- Working alongside the business to carry out an assessment of internal risks.
- Designing remediation programmes to enhance culture, governance, policies, procedures and controls.

Risk and controls assessment

- Identification and assessment of inherent risk.
- Control effectiveness review to assess residual risk exposure.

Industry benchmarking and best practice

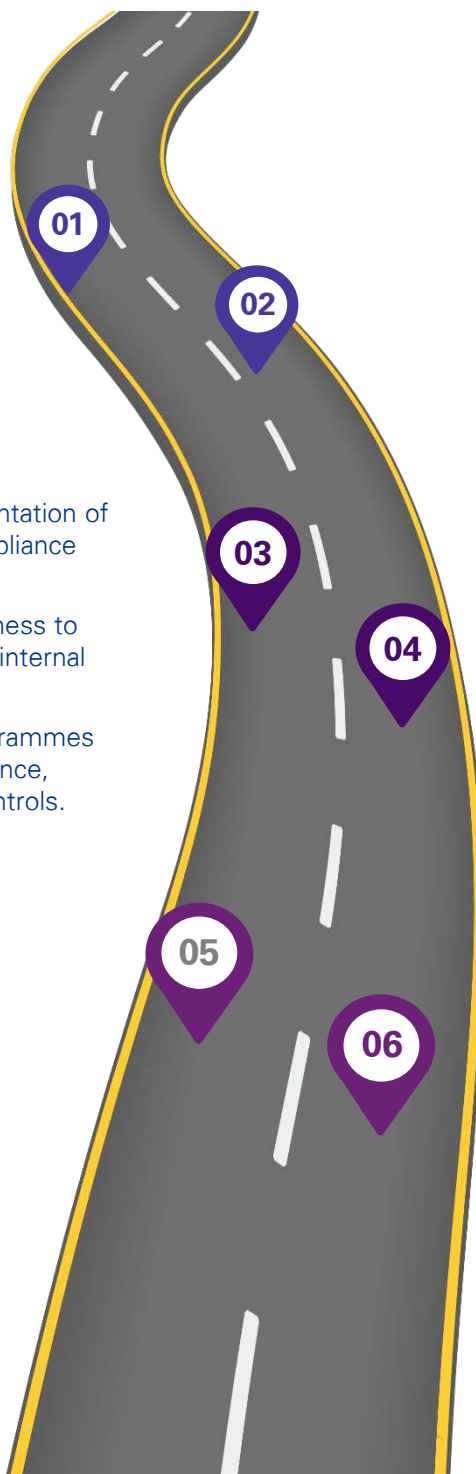
- Insights into industry standards and leading market practice.
- Identification of potential gaps and areas for improvement.

Regulatory impact assessment

- Identification of gaps between existing practices and regulatory expectations.
- Highlighting vulnerabilities and opportunities for improvement.

Assurance review

- Assessment of design effectiveness of key front to back algorithmic trading controls.
- Walkthrough of key controls with control owners to assess implementation effectiveness.
- Testing the operating effectiveness of controls through sampling and identifying areas for improvement.



Key

Design & diagnostics

Implementation

Assurance

KPMG experience and capabilities

Skilled and experienced team



- ✓ Our people have experience delivering a number of algorithmic trading engagements for a range of clients
- ✓ Our team members have been involved in supporting the design and diagnostics of algorithmic trading governance and control frameworks, regulatory impact assessments, implementation and assurance reviews

Strong track record



- ✓ Our team has successfully delivered a wide range of algorithmic trading projects across multiple jurisdictions
- ✓ We have helped firms to meet regulatory requirements and to assess performance against industry standards

Regulatory insight



- ✓ We participate in the FMSB initiative to help establish algorithmic trading standards and have invested in a Risk and Regulatory Insight Centre
- ✓ We have built strong relationships with global regulators, providing us with insights into their expectations

Established frameworks



- ✓ Through our extensive experience in regulatory change and wholesale conduct engagements, we have developed a number of tools, methodologies and reference standards.
- ✓ These capabilities can be deployed on algorithmic trading projects and reflect our view of good market practice and understanding of regulatory standards

Industry comparison



- ✓ We can bring market insight and peer group comparison as part of our review
- ✓ Our reviews not only identify gaps in processes and controls but are also useful to our client's understanding of their position in the wider market

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