Algo Trading Controls and Governance

Working Group Q3: Thursday, 22nd September 2022

Minutes

greyspark partners

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Armstrong Wolfe Moderation and Facilitation

Attendees:

Objective:

The Algorithmic Trading Controls Working Group is holding three sessions to discuss various aspects of algorithmic trading. The outcome will be the delivery of a whitepaper in the early part of 2023. These are the minutes for the second of the three sessions.

Assessing Time and Cost of RSCA

- There are implications of where the funding is drawn to conduct the Risk Controls Self Assessment (RCSA). If drawn from the change-the-bank (CTB) budget, the implication is that RCSA is seen as a project. However, if it is drawn from the run-the-bank (RTB) budget, then it is seen as an operational exercise with a baked in cost.
- All banks who commented on this point said that the funding for conducting the RSCA came from a RTB budget.
- One bank is transitioning the ownership of the tooling to conduct RCSA from the first line of defence to the second line.
- The RSCA process can take as much as six months so that each of the areas can contribute their respective parts of the process.

Frequency of the RCSA

- The frequency of undertaking the RCSA is always annual with several of the banks also undertaking the assessment on a quarterly basis.
- For those that do the assessment quarterly, the Q4 assessment is a ‘deep dive’ that uses the quarterly assessment as a baseline to assess any changes.
- Quarterly assessments help banks address any identified issues more dynamically.
- One bank commented that it has built an application for the RSCA application, specifically. The application is deliberately easy to use to encourage more buy-in and ownership from the business and ensure they complete the process.
- The Q4 assessment is the material RCSA that is submitted to regulators. The first line and business controls group populate the RCSA. Any material risk is reported to the business head to ensure consistency.

Extracting Business Value From RSCA

- In the past, self-assessments were seen as tick-in-the-box exercises, and one bank commented that it still is.
- Rather than extracting business value from a new process, one bank commented that it is leveraging existing processes to incorporate RCSA requirements.
- Echoing this point, another bank commented that financial, regulatory and operational risk are all already embedded within its risk assessments.
- There is a crossover in the demands of the annual RTS 6 self-assessment and the RSCA. So, some factors gathered on an ongoing basis for the RTS 6 self-assessment can feed into the RCSA.
- Most banks will have their RCSA process, but when it comes to specifically to Algo Trading an adjustment to this process may be needed because the way risks are assessed may be different to risk assessment of other types of trading.

The Business and Operational Risk Profiles

- At one bank, there is a significant focus on enabling and encouraging internal management to develop a good understanding of key risks. The ‘business’ must be able to talk effectively and coherently to their risk profiles. This requires a cultural shift.
- Business heads must be able to articulate clearly and understand the profile of their non-financial risk operational respects.

1.5 in the Three Lines of Defence Model

- In the three lines of defence model, the business must be able to speak to the operational risks, but the Head of Compliance should be involved early in the process.
- It is really powerful if 1.5 line of defence can speak coherently to all business risks, however, the business head must also support their view.
- The 1.5 line of defence can take some responsibilities from desk heads. Even so, regulators will want to speak to the desk head themselves to ensure they are aligned with the risk perspective.
- Coming up with the right framework can take some time as a consequence of the audit approval process.
- Another challenge is the definition of the roles and responsibilities of the different participants; determining who performs the self-assessment, the review and the validation.
- Not all banks have the concept of a 1.5 line of defence, as it is not compatible with their set-up and structure - making defining the right person with the right skillset challenging for those banks.
- Not all asset classes are set up the same way, and so the RSCA process can be slightly different as a result.

Comprehensive Assessment or Risk-based Assessment

- A comprehensive approach can be a cumbersome exercise, which requires mobilisation of significant resources to effectively run. The alternative is a risk-based approach.
- In the risk-based approach, any open issues will be cross referenced and are included if they are related to any of the controls and the risk control self-assessment.
- One bank that undertakes a comprehensive assessment commented that it goes back to first principles, which is very time and cost intensive, is considering taking an incremental approach, where the bank looks at the delta between the current and previous data.
- BAU governance team assesses incidents and issues on a monthly basis, which is important to ensure that staff are reminded of their current risk profile in relation to their previous profile.
- Risk profile should be a living, breathing, up-to-date document embedded with the first line, which is ready for a second line and third line challenge on an annual basis.

Part 1: Emerging Technology

The evolution of emerging technology in the Algo Trading space was discussed, along with the challenges around the algo code development and approval process and approaches to measuring risk.

Algo Development

A few approaches were discussed relating to the roles and teams that can develop algos:

- **Approach 1:** A centralised team of quants and technologists that undertakes all product and algo development, with an approval process that involves both the first line risk team and the second line.
- **Approach 2:** Development that depends on the type of the offerings:
- More advanced offerings, such as those that include AI, are developed by a dedicated quant group embedded in front office and close to the actual trading desks themselves.
- Basic offerings are provided by a vendor and white-labelled - or used a third-party technology platform.
- Intermediate offerings are developed by the technology team.
- **Approach 3:** Development and testing split between IT infrastructure teams and front office developers.
- The quant responsibilities and the business logic are delegated to the front office, while deployment and testing are retained by the technology team, which also manages market connectivity, piping, messaging and the functional aspects of the front office.
- **Approach 4:** Pods within desks setting up as hybrid quant-algo trader-developer team.
- In this case the team is provided with tools to build and develop their own algorithms.
- **Key challenge: To provide structure that allows rapid development but ensure sufficient controls are in place.**

Fostering innovation within Limits

- Typically, teams that want to develop algos are au fait with regulatory requirements, with the operational risk sensibilities around development techniques, software development lifecycle. They are well aware of the risks that they are running and how you can mitigate it.
- To ensure good governance of this model it is important for the lines of defence to have a good relationship and are educated on the risks.
- Test scripts are shared with the governance group and validated, and technology teams execute the script. Any failure to comply with the expected test outcome results in the script being reviewed by the governance group.
- **Key challenge: Being prepared for new risks in light of rapid change.**

Skillsets for the Future

- There is a challenge in terms of ensuring that people with the right skill sets participate in the risk assessments.
- The solution has a cultural change aspect. Banks have silos of expertise; trading silos, quants building models, technology managing system development, risk managers and other second line defence roles.
- More nimble firms, particularly in the principal trading space, have the technology, trading and risk all aligned, and work in an integrated manner.
- If banks begin to operate a hybrid model - where the desk is developing, other functions in the bank must adjust to that.
- The software development framework used by technology teams must also apply to quants on the desk.
- Risk managers must adjust to think in a more agile way, such that checking of risks does not slow down development and deployment. The business has employed Model 4 to overcome the long release cycles and give risk managers plenty of time to review.
- GreySpark is publishing in Q4 an independent technology buyer's guides on Intelligent Automation Solutions which will provide a high level of assessment of different vendor capabilities.
- There is a trend of banks engaging vendors with no code / low code offerings - a framework for software development. A lot of developers are moving into FinTechs themselves. So, no code / low code providers are enabling business users and product managers to build out applications within these frameworks.
- **Key challenge: Ensuring that all the controls are in place, that there are qualified people to maintain the framework and adapting to the constant evolution of your algorithmic components.**

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