Aurexia

Aurexia Institute

AI Use Cases Surveillance

Rogue Trading & Fraud

April 2024

Understanding “Rogue trading"

What is « Rogue trading » ?

3 main conditions must be met for a fraud to qualify as "Rogue trading"

1. Knowingly undertaking unauthorized trading activities with regard to the trading/desk mandates and the market risks limits in place
2. The unauthorized trading activities have been concealed from the Management
3. The trader had the objective of generating a profit, dissimulating a financial loss or hiding an unauthorized position

Examples of frauds

SGCIB

- 2005 - 2008
- 4.9 Bn €
- Transactions with differed dates ; internal counterparties; trades on futures with a “pending” counterparty; forward contracts with fictitious counterparties; self-approval of his trades

UBS

- 2010 - 2011
- > 2Bn $
- Transactions with differed dates ; internal counterparties; Amend & Cancel trades

AIB

- 1997 - 2002
- 0,7Bn $
- Fictitious Option Trades not confirmed, Prime Brokerage account, Zero premium option, VaR manipulation, Options for sale

Where AI and Innovation can help

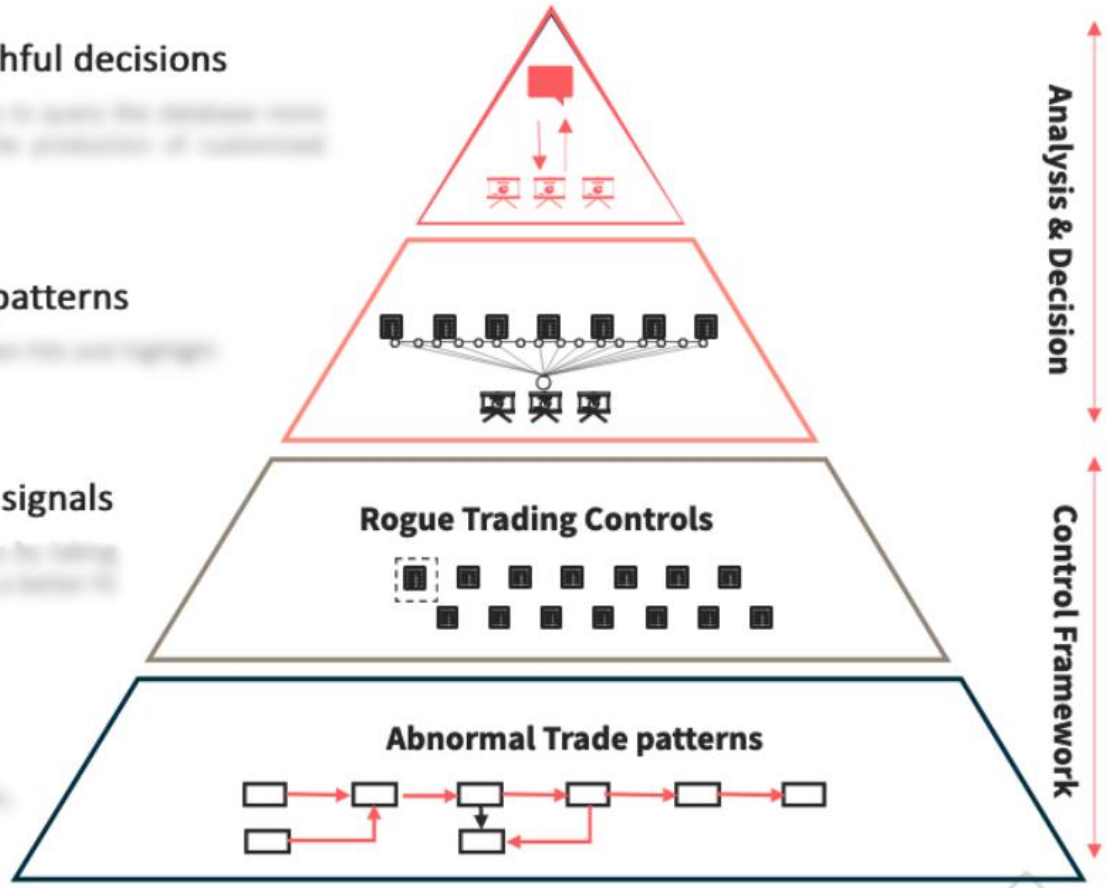
AI can operate at various levels to help capture, detect and qualify rogue trading patterns

Query in an easy and smart manner for insighful decisions

Link up controls to better detect rogue trading patterns

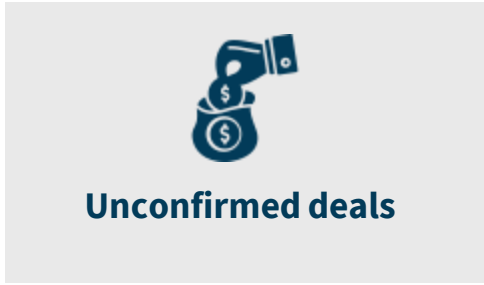
Enhance individual controls to better capture weak signals

Track and visualize abnormal trade patterns



Enhance individual controls to better capture weak signals

Overview of Rogue Trading Controls



Enhance individual controls to better capture weak signals

Deferred deals control

Process:

- Measure for detecting "Rogue trading" by verifying the validity of deferred deals, which involve an offset occurring more than 5 days later.
- If they are not confirmed (nil), a control is triggered and forwarded to the Front Office Manager for confirmation.

Issues:

- Control relying on the Back Office affirmation process
- Analysis of affirmation timelines reveals significant variations in the time required for deal confirmation (based on the "products," "underlying," and "client classification").

Solutions:

- Implementing data science methodologies will enable to reassess the timeline for deferred deal.
- By leveraging historical affirmation data, such as a one-year history, the typical time required to obtain affirmation for each product/underlying asset/client type can be estimated.

Brokers fees control

Process:

- Identifying potential collusion between a broker and a trader.
- Identifying any fraudulent activities involving a substantial increase in transaction volumes through a single broker.

Issues:

- Control operated on a limited statistical model
- Cases triggering the control include situations where a desk is associated with only one broker or when monthly fees amount to 10,000 € or more.
- Approach lacking short in detecting abnormal behaviour as it feeds the Front Office Controller with excessive non-targeted statistical data.

Solutions:

- Leveraging data science will enable the identification of high-risk profiles exhibiting structural and/or atypical changes in trading activity within a specific population of traders and brokers over a defined period.

Communications recording & monitoring

Process:

- Monitoring written and voice communications to identify potential violations of rules.
- Analysing and investigating surveillance alerts to strengthen the controls across each business line in relation to potential misconduct.

Issues:

- Thousands of textuals classified in several categories (rogue trading, fraud, client interactions, market manipulations, avoidance and secrecy...) and applied to each specific language.
- Low performance on current applications.
- Duplication of alerts due to lack of specific functionalities.

Solutions:

- Implementing AI tools to identify patterns increase detection capabilities and improve performance.
- Data science will help implement a larger set of controls to improve overall effectiveness and efficiency of the market abuse surveillance process.

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