

Preventing Market Abuse: The Role of RegTech and SupTech

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EBI Academic Conference – 9 November 2022

RegTech, SupTech and market abuse: overview

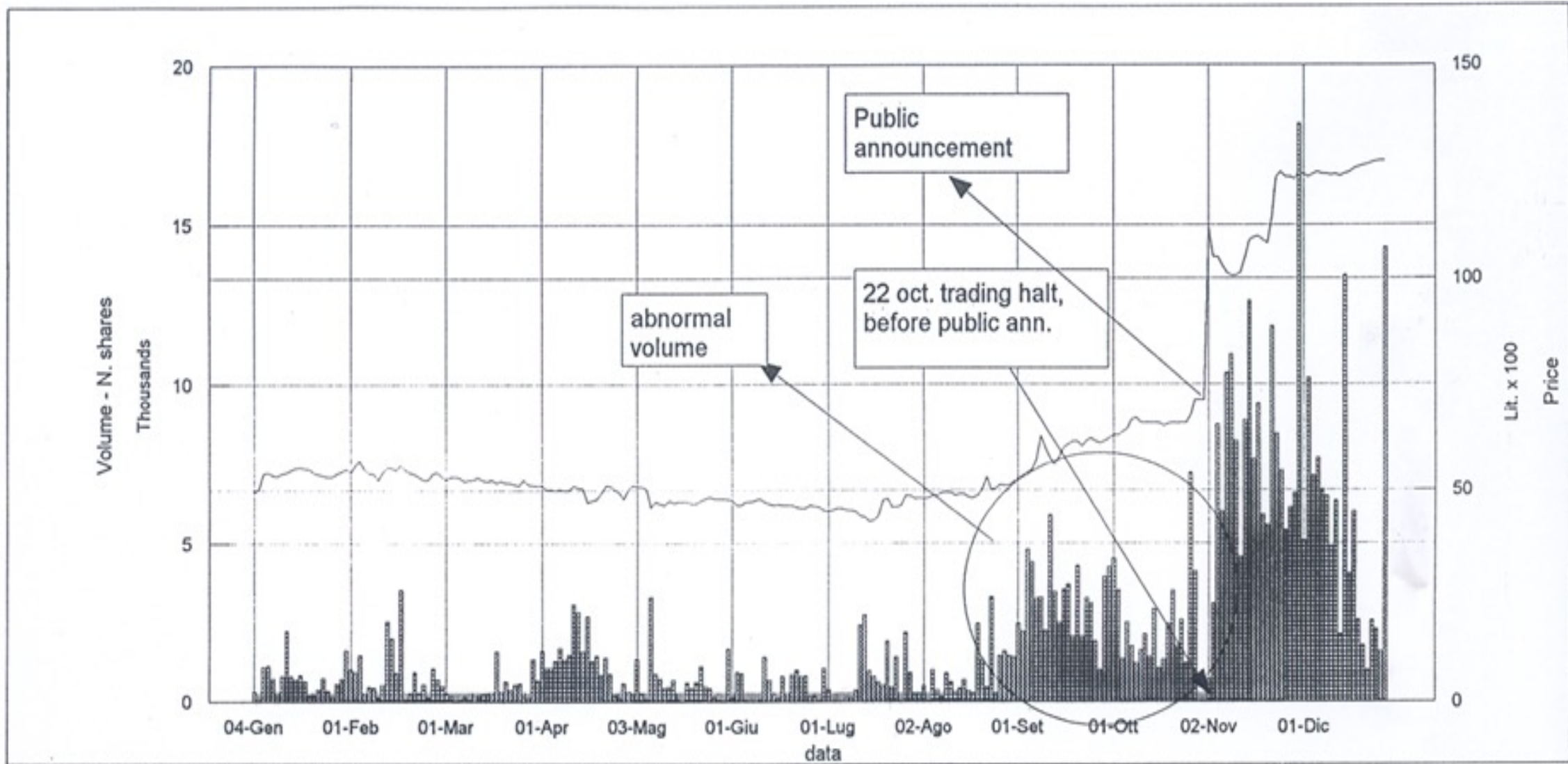
- RegTech and SupTech (collectively: **RegTech**) not new in market abuse (MA)
 - They have been there **since the start** of MA supervision and compliance
 - However, **new technologies** raise new problems and offer new solutions
- Outline of the analysis:
 - 1) MA and RegTech: a **snapshot** of EU securities law
 - 2) Regulatory questions:
 - a. What does **effective** market abuse detection require, from a regulatory perspective?
 - b. What is **missing** in this regard?
 - c. How can we **achieve** the things we are missing?

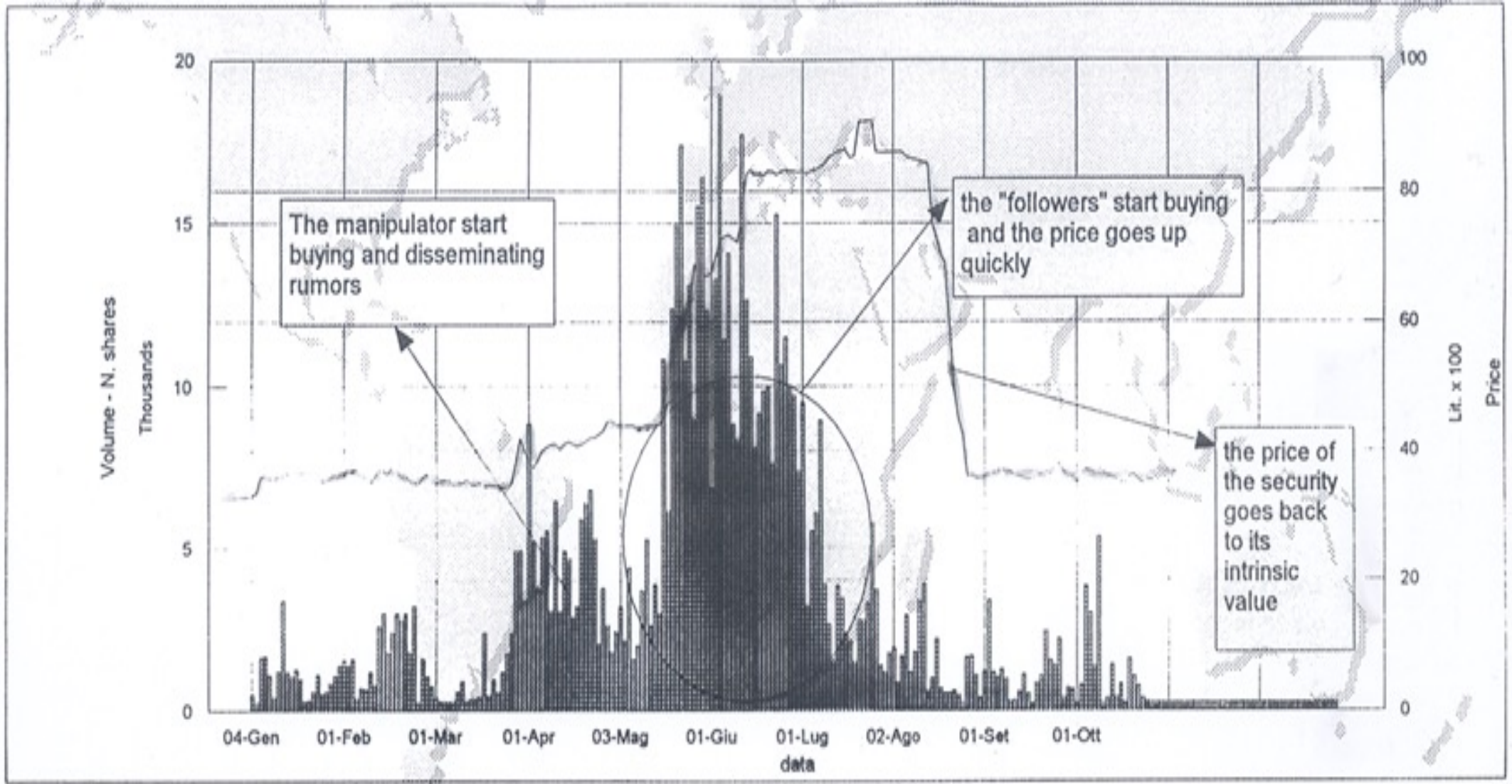
MA and RegTech in EU securities law: highlights

- **Algorithm** governance in MiFID II (and Reg. 2017/584 and 2017/589)
 - Methodology to develop and test algos to ensure these do not behave in an unintended manner (**black box**)
 - Testing environment separate from production environment (actual use) (Aggarwal et al 2020) and **stress testing**
 - **Embedded** pre-trade limits, real-time monitoring, post-trade controls
- MAR STOR (suspicious transaction and order reporting) (+ MiFID; Reg. 2017/589)
 - **TV** have automated systems to prevent and detect MA
 - “Persons professionally **arranging/executing transactions**” have automated systems to detect and report STORs
- MiFIR + EMIR reporting obligations (and NCA duty to monitor)

RegTech in MAR: what can regulation do?

- Detecting MA (whether insider dealing or market manipulation) requires the identification of **anomalies** in the trading conduct of market participants
 - a) **Definition** of which patterns can be regarded as “normal” and “abnormal”
 - b) Information (**data**) to spot anomalies in trading patterns
- **Challenges** from (a) and (b) for machine learning processes:
 - Small number of real-life events → **simulation** needed (feedback-loop)
 - “**Cat and mouse**” where AI allows to conceal anomalies or spot loopholes
 - Over time, concealing strategies reduce manipulation returns, but evidence refers to single modeling mechanism (Wang et al 2020)





Supporting RegTech: definition of MA

- The longstanding problems in the definition of market manipulation
 - Telling manipulative strategy from **aggressive trading** may prove impossible (Fischel and Ross 1991)
 - Anomalies are **contextual** and **collective** (Khodabandehlou et al 2022): same conduct may be MA or not depending on context and interactions
- **Principle-based** vs **rule-based** approach
 - Clear-cut definitions help **machine learning** (and foster legal certainty)
 - But flexibility through general principles reduces **concept drift** (and fosters market integrity)
 - Principles 12(1) MAR; specific prohibitions 12(2) MAR; indicators Annex I MAR; practices and their indicators Annex II Reg 2016/522 (Coulmas and Veil 2022)

Supporting RegTech: quality of data

- **STORs** (16 MAR) inevitably rely on specific TV or IF data – spotting network and multi-system schemes may be difficult (Nylén 2020)
 - Only NCAs have access to full picture on transactions, but:
- No reporting of **orders** – only recorded (25 MiFIR; Reg. 2017/580)
 - Availability “on demand” assumes suspect, however
 - Naked open-market manipulation alone is rarely profitable (Fox et al 2019): orders essential to spot MA (e.g. layering/spoofing)
- **Suboptimal quality** of transaction reporting (26 MiFIR; Reg. 2017/590) (EMIR)
 - Issues with **matching** reports on same transaction
 - Commission Fitness Check; ESMA Report on Transaction Reporting; ESMA MAR Review Report

Calibrating the approach to RegTech

- A “chicken and egg” problem:
 - How much should regulation **push** financial innovation?
 - Compliance requirements drive RegTech innovation
 - Digital Regulatory Reporting may improve quality of data through “pull” technology (FSB 2020; ISDA 2022)
 - How much should regulation **reflect** innovation, instead?
 - Too ambitious a plan may increase compliance costs
 - Risk of concentration in financial and software industry →
- **Economies of scale** in the production of software (**concentration risk**):
 - **Conflicts of interest** of suppliers of both traders and supervisors
 - Increased **systemic impact** of loopholes exploitation

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