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Algorithmic trading and DEA provisions

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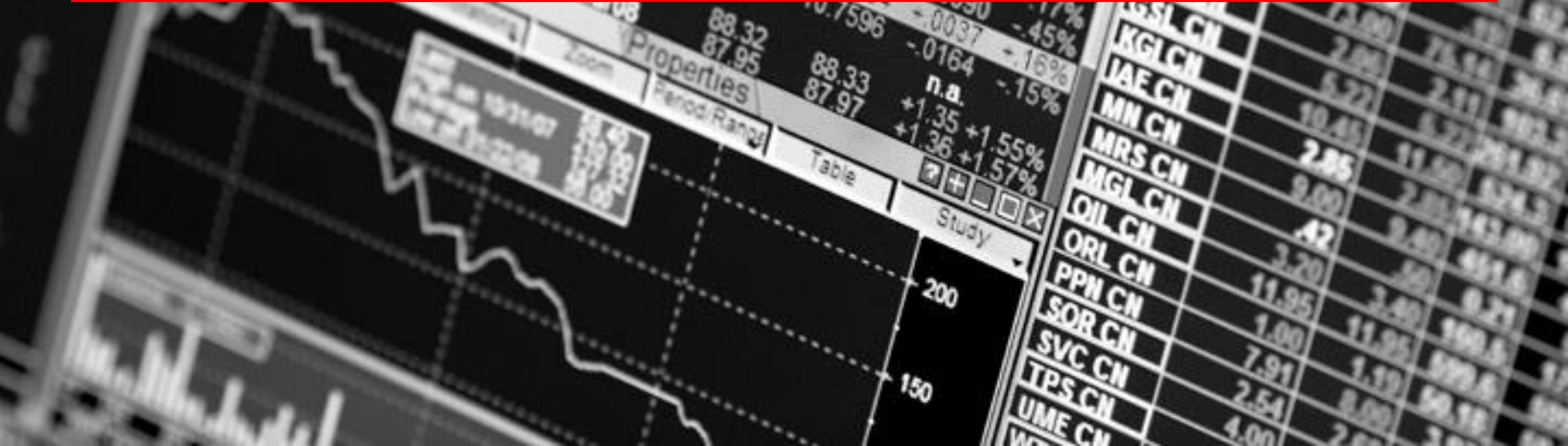

Background to MiFID II, MiFIR provisions

HFT – A MiFID political priority

- Ensure all market participants are regulated
- Address fears of ‘flash crashes’, ‘ghost liquidity’ and sophisticated manipulation
- Keep liquidity providers in the market during periods of price volatility
- Regulate market making

Practical effects

- Article 1(5) MiFID II extends main provisions to unregulated market participants
- Article 2(1) MiFID II changes mean broader authorisation requirement
- Article 17 MiFID II requirements for all members / participants of RMs, MTFs
- Article 48 MiFID II sets out corresponding requirements for trading venues
- Article 26 MiFIR additional ‘orders’ requirement for persons engaging in HFATT

Algorithmic trading

"trading where a computer algorithm automatically determines … parameters of orders such as whether to initiate the order, the timing, price or quantity … or how to manage the order after submission, with limited or no human intervention"

It does not include a system only used to:

- route orders to trading venue(s)
- order processing where there is no determination of parameters other than venue
- order confirmation or post-trade processing of transactions

It includes:

- automated trading decisions and optimisation of order execution by automated means
- systems that make independent decisions at any stage – e.g. on initiating, generating, routing or executing orders

Algorithmic trading: obligations on investment firms

Internal systems and controls requirements	• Trading systems must: – be resilient and have enough capacity – be subject to appropriate trading thresholds and limits – prevent the sending of erroneous orders – not function in a way that contributes to a disorderly market – not be able to be used for any purpose that is contrary to the rules of the relevant trading venue • Must have effective business continuity arrangements to deal with system failure • Ensure trading systems are tested and monitored • Records sufficient for competent authority to monitor compliance and kept at least 5 years
Regulatory requirements	• Notify competent authority of home member state and trading venue • Competent authority can require details of algorithmic trading strategies (and above systems and controls), and any other relevant information
Final draft RTS highlights	• Governance and decision making framework for developing and monitoring trading systems and algorithms • Adequate staff (including Compliance) with necessary skills and technical knowledge – and tailored training • Firms are responsible and must have necessary knowledge and documentation for any outsourced hardware or software • Detailed testing and deployment requirements for algorithms leading to order execution with limited or no human intervention • Annual self-assessment and validation including at least specified parameters – Risk Management to create, Compliance to be made aware of any issues and senior management to approve • Appropriate annual stress tests to include high message volume and high trade volume • Ability to cancel unexecuted orders from any trader, desk or client and all outstanding orders • Surveillance systems to monitor orders and transactions and generate alerts and reports capable of replay and ex-post analysis, covering firm's full range of trading and cross check suspicions between different activities – to be reviewed at least annually – and reconciliation of trading logs with others' records • Real time monitoring of all algorithmic trading activity including cross market, cross asset class and cross product by trader and independent Risk control function – alerts within 5 seconds of event • Pre-trade controls and procedures to deal with blocked trades and post-trade controls including continuous assessment of market and credit risk and reconciliations • Business continuity, clear and tested communication channels, IT security • Better recognition of proportionality to nature, scale and complexity of firms' businesses than previous draft but detailed and comprehensive minimum standards

Algorithmic trading sub-set 1: high frequency

High frequency algorithmic trading technique (HFT)

- Infrastructure that is intended to minimise latencies, including at least one of:
  - co-location
  - proximity hosting or
  - high-speed direct electronic access
- System determination of order initiation, generating, routing or execution without human intervention for individual trades or orders; and
- High message intraday rates which constitute orders, quotes or cancellations

Extra obligations

- Keep accurate and time sequenced records of orders, cancellations, executions and quotes
- Cannot rely on exemptions so will need to be authorised

ESMA's options on intraday rates:

- **Option 1** – absolute threshold of average at least 2 messages per second for any instrument
- **Option 2** – absolute threshold of average at least 4 messages per second for all instruments across a venue or Option 1
- **Option 3** – relative threshold of daily lifetime of orders modified or cancelled shorter than median on trading venue – threshold between 40th and 20th percentiles

Other technical advice:

- To start, only liquid instruments
- Only proprietary orders – firm can challenge if it thinks client orders had led to an incorrect classification
- Engaging in HFT on one trading venue or through one trading desk may trigger requirements across the EU

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Algorithmic trading sub-set 2: market making strategy

Market making strategy

"as a member of a trading venue, its strategy, when dealing on own account, involves posting firm, simultaneous, two-way quotes of comparable size and at competitive prices relating to financial instruments on trading venues, with the result of providing liquidity on a regular and frequent basis"

Trigger further defined in final draft RTS

- In at least one financial instrument on one trading venue
- For at least 50% of the daily trading hours of continuous trading at that trading venue
- For over half the trading days over a one month period

Obligations in final draft RTS

- Binding agreement with trading venue
- Continuous quoting obligation for no less than 50% of trading hours
- Save in exceptional circumstances – exhaustive list in RTS – to be identified by trading venue

In the final draft RTS, trading venues are only required to have market making schemes for:

- Certain liquid financial instruments
- Traded through a continuous auction order book trading system

Trading venues must:

- Publish terms of market making schemes and firms that have signed up
- Explain the incentives and parameters in normal and stressed market conditions
- Offer the same incentives to persons who perform equally

Direct electronic access

"an arrangement where a member or participant or a client of a trading venue permits a person to use its trading code so the person can electronically transmit orders relating to a financial instrument directly to the trading venue and includes arrangements which involve the use by a person of the infrastructure of the member or participant or client, or any connecting system provided by the member or participant or client, to transmit the orders (direct market access) and arrangements where such infrastructure is not used by a person (sponsored access)"

ESMA's technical advice

- Critical test is ability to exercise discretion regarding exact fraction of second of order entry and lifetime of orders within that timeframe
  - Where an order is effectively intermediated, it should be out – e.g. online brokerage
  - Automated order router (determines trading venue but doesn't change other parameters) – not algorithmic trading and would only be DEA if other elements satisfied
  - Smart order router (determines parameters of order other than trading venues) – algorithmic trading but would not be DEA if orders routed through SOR of market member

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Direct electronic access: the chain

Regulatory status

Main responsibilities

Trading Venue
RM, MTF or OTF

Regulatory status:

- Authorised as RM or investment firm operating MTF or OTF

Main responsibilities:

- Only allow member/participant/client to provide DEA if:
  - they are authorised credit institution or investment firm
  - they retain responsibility for orders and trades in relation to MiFID II

Member
DEA Provider

Regulatory status:

- Must be authorised credit institution or investment firm
- Must be a member or participant of trading venue
- Must notify own competent authority and that of trading venue – they may require information on systems and controls

Main responsibilities:

- Ensure clients using DEA comply with the requirements of MiFID II and rules of trading venue
- Must have an agreement with trading venue setting out rights and obligations but DEA Provider must retain responsibility under MiFID II
- DEA Provider retains responsibility for orders submitted and trades executed through the use of its DEA systems or trading codes
- Monitoring and reporting to competent authority – breach of MiFID II or trading venue rules, disorderly trading, market abuse
- Systems – to ensure suitability of clients, risk controls, thresholds
- Controls in relation to sponsored access to be at least equivalent to direct market access
- Record keeping – to enable competent authority to monitor compliance

Client
DEA User

Underlying Client
DEA User?

Regulatory status:

- Cannot be exempt by Art 2(1)(d) MiFID II but other exemptions may possibly apply e.g. Art 2(1)(j)
- DEA Provider would have to take into account regulatory status of DEA User

Direct electronic access: obligations on investment firms

Internal systems and controls requirements	• Ensure proper assessment and review of suitability of clients using the service • Clients are prevented from exceeding pre-set trading and credit thresholds • Proper monitoring of trading by clients • Appropriate risk controls to prevent: – risks to investment firm – creation or contribution to disorderly markets – breaches of the market abuse regime – breaches of the rules of the trading venue • Records sufficient for competent authority to monitor compliance – at least 5 years
Documentation requirements	• Binding written agreement with the client • Investment firm must retain responsibility for its compliance with MiFID
Regulatory requirements	• Competent authorities of home member state and trading venue • Competent authority can require description of the systems and controls and evidence that they have been applied
Final draft RTS	• DEA providers are responsible for client trading – need procedures to ensure compliance • Undertake due diligence – minimum requirements but as appropriate to risks posed by nature of clients and their activities – annual risk based reassessment of client systems and controls • If user can sub-delegate, provider must ensure user has equivalent due diligence framework • Pre- and post- trade controls including automatic rejection of orders outside certain price and size parameters and ability to stop order flow and monitor on ongoing basis • Ability to identify each DEA user and, where sub-delegated, each order flow

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