

Position Paper

MiFID 2 – Algorithmic & High Frequency Trading

April 2012

Executive Summary

AFME welcomes the attention the European Commission (“the Commission”) has devoted to algorithmic and high frequency trading in its review of MiFID. The last few years have witnessed significant change in the trading of financial instruments as this has become increasingly automated. This automation presents benefits and opportunities for market participants but also potential risks that need to be dealt with appropriately.

This note presents AFME’s position on the proposals to regulate high frequency trading. In summary:

- Algorithms should (and do) operate in a controlled environment with strict and robust risk controls
- High order to trade ratios may be a cause for concern and venues should have the discretion to place a limit on them
- Circuit Breakers are a useful mechanism to allow participants and algorithms the time to ‘pause for breath’ during times of stress
- Direct Market Access and venue-approved Sponsored Access are well regulated market activities that serve a variety of market participants including smaller brokers and retail investors, and should not be banned
- Algorithms cannot be expected to be in continuous operation, or provide constant liquidity regardless of prevailing market conditions; this is contrary to effective risk management
- The most appropriate place to address concerns of potential market abuse involving algorithmic trading are within the framework of The Market Abuse Directive and Regulation, rather than within MiFID and MiFIR

How is the Commission proposing to regulate algorithmic and high frequency trading?

The Commission recognizes that trading technology has provided a range of benefits to the market such as wider participation, increased liquidity, narrower spreads, reduced short term volatility and the means to obtain better execution of orders for clients.

However, the Commission also identifies a number of risks that are presented (MiFID Recital, 46) which includes:

- an increased risk of the overloading of the systems of trading venues due to large volumes of orders;

- risks of algorithmic trading generating duplicative or erroneous orders or otherwise malfunctioning in a way that may create a disorderly market;
- risks of algorithmic trading systems overreacting to other market events which can exacerbate volatility if there is a pre-existing market problem;
- a risk that algorithmic trading or high frequency trading could lend itself to certain forms of abusive behaviour if misused.

The Commission therefore proposes to regulate in a revised MiFID algorithmic and high frequency trading as follows:

- All direct members of trading venues (incl. HFT firms) must be authorised and therefore subject to organisational requirements and regulatory supervision (Art.2);
- Investment firms, trading venues and direct electronic access providers should have in place sufficient risk controls to ensure that automated trading does not create a disorderly market and cannot be used for abusive purposes (Recital 47)
- Regulated markets should be able to temporarily halt trading if there is a significant price movement in a financial instrument during a short period (Art.50.2)
- Regulated markets shall have systems in place to limit the ratio of unexecuted orders to transactions (Art. 51.3)
- Investment firms engaging in algorithmic trading shall provide to their regulator at least annually a description of the nature of their algorithms (Art.17.2)
- Algorithms shall be in continuous operation during the trading hours of the trading venue to which it sends orders with the result being continuous liquidity provision, regardless of prevailing market conditions (Art.17.3)

Additional regulatory measures have also been proposed in the draft ECON report on MiFID; notably a ban on direct electronic access, a minimum resting period for orders of 500 milliseconds, higher fees for cancelled orders and a definition of 'high frequency trading' and 'high frequency trading strategy'.

AFME's position

AFME recognises that certain negative outcomes may arise from certain abusive or erroneous forms of algorithmic and high frequency trading. We deal below with each of the regulatory proposals and explain how they would address the risks that have been identified.

Throughout, we refer to the conclusions that have been reached by other regulators. These are; the Final Report of IOSCO on the Impact of Technological Changes on Market Integrity and Efficiency (October 2011), ESMA's Guidelines on Systems and Controls in a Highly Automated Trading Environment (December 2011) and the SEC/CFTC Report following the Flash Crash of 6 May 2010.

- **Authorisation and risk controls**

We agree with the Commission that all direct members of trading venues (inc. HFT firms) should be authorised. This will serve to increase the regulatory oversight of an important set of participants in the market.

We also agree with the Commission that all firms and venues should have sufficient risk controls in place. In our view, all order flow of trading participants, irrespective of whether

they are direct venue members or accessing a venue using “direct electronic access”, must be subject to appropriate controls, including robust pre-trade controls. The recent ESMA Guidelines clarified this to be a requirement of MiFID; that no participant should be accessing the market without their orders being subject to pre trade checks. In practice this means all orders should be subject to checks in relation to their price and size, which ensures that those which are clearly erroneous do not enter the market.

However, we do not think that an investment firm providing direct electronic access to a trading venue should retain legal *responsibility* for ensuring trading using that service complies with the requirements of the market abuse directive (Art.17.4), other than the obligations already arising from the current Market Abuse Directive (Art.6.9) and from its level 2 implementation Directive 2004/72 (Art.7). Legal responsibility should reside with the end client. Whilst it is reasonable for an investment firm to *monitor* for market abuse by its clients, in accordance with the aforementioned provisions, it should not be held responsible for the actions of its client.

AFME however is in favour of further developments and enhancements of ESMA’s Transaction Reporting Exchange Mechanism in order to build a proper and fully accurate audit trail for orders and transactions across Europe

- **Direct Electronic Access**

The draft ECON report on MiFIR suggests that the practice of “direct electronic access” should be banned. Direct electronic access is a broad regulatory term that encompasses a number of different activities:

Direct Market Access (DMA) which is defined by ESMA as: "An arrangement through which an investment firm that is a member/ participant or user of a trading platform permits specified clients (including eligible counterparties) to transmit orders electronically to the investment firm’s internal electronic trading systems for automatic onward transmission under the investment firm’s trading ID to a specified trading platform"

Sponsored Access (SA) which is defined by ESMA as: "An arrangement through which an investment firm that is a member/ participant or user of a trading platform permits specified clients (including eligible counterparties) to transmit orders electronically and directly to a specified trading platform under the investment firm’s trading ID without the orders being routed through the investment firm’s internal electronic trading systems"

Naked Sponsored Access is described by ESMA as follows: “‘Naked’ or ‘unfiltered’ access to a regulated market or MTF, where a client’s orders do not pass through pre-trade controls before being sent to a regulated market or MTF, is prohibited under MiFID. Therefore, an SA client should never be able to send an order to a trading platform without the order passing through pre-trade controls of the investment firm”.

AFME does not support a ban on direct electronic access because this would include a ban on the legitimate market practices of direct market access and sponsored access. Naked sponsored access, where a client’s orders are not subject to pre trade risk checks is already prohibited under MiFID and should remain as such.

Direct Market Access has been a longstanding market practice – pre dating much of the recent growth in high frequency trading. Many DMA users are smaller brokers and retail investors. Smaller brokers use the service as it is a more cost efficient model than being a direct member of a venue, particularly important given the increase in the number of

European trading venues since the introduction of MiFID in 2007. A ban on DEA would result in a reduction of choice for the end investor as smaller brokers would not be able to offer such broad or cost-effective market access.

DMA is also used by more sophisticated retail investors to access markets directly. Investors are able to directly place orders to buy and sell into the order book for a particular stock.

The benefits this presents to retail investors includes the speed of execution and the potential for better pricing than investors may otherwise receive by using a third-party broker/dealer, as well as a likely reduction in transactional fees. Without DMA, retail orders would either have to be executed via sales traders (resulting in increased costs) or via SI / market makers which would result in more executions taking place off exchange; potentially harming price formation.

HFT firms tend to be direct members of the venues on which they have significant activity. This means that going forward they will be fully authorised under MiFID; it also means that they are unlikely to be the focus of any ban on DEA.

- **Order-to-Trade Ratios**

AFME are supportive of order-to-trade ratios, provided that limits on message traffic are transparent, pre-determined and are set at the discretion of the venue.

The Commission seems to be addressing two concerns by requiring a limit on order to trade ratios: that the systems of trading platforms may become overloaded, and that market abuse may be possible.

Overloading of systems

In response to the first concern, this issue has been noted by ESMA in its guidelines which require trading platforms to have arrangements in place to prevent excessive flooding of an order book, notably through limits per participant on order entry capacity. AFME is supportive of the ESMA guidelines in this regard, and believes the same approach should be followed in MiFID 2 by allowing limits to be set at the discretion of the venue, not by regulation, pursuant to the principle that trading venues should ensure a proper and orderly market and prevent an overloading of their systems.

This is because the system capacity of different trading venues may vary to a large degree. We note that some venues (Borsa Italiana, Deutsche Borse, London Stock Exchange, Nasdaq OMX, NYSE Euronext, etc.) do already have disincentives in place to limit high order to trade ratios through their trading tariffs. The ratios on each venue differ to take account of differences in system capacity. We also note that in the United States - in anticipation of penalties by exchanges for high order-to-trade ratios - the average daily level of quotes with no trades dropped to 3m per day over the last two weeks of March 2012 from average levels of 11.7m quotes over the past year.

AFME would therefore support the draft ECON amendment which requires regulated markets to impose a higher fee on participants placing a high ratio of cancelled to executed orders. However, the threshold at which an additional fee is triggered should be set at the discretion of the venue; AFME would therefore not support the draft ECON amendment on the market abuse regulation which mandates a fee must take effect for ratios above 250:1. AFME would also be concerned about the proposal to impose a higher fee for placing an

order that is subsequently cancelled than an order which is executed; as this would penalize legitimate order management that may not be high frequency in nature.

Market Abuse

In response to the Commission's concern in relation to market abuse – we would urge policymakers to focus on preventing abusive practices, rather than the method through which they may be deployed.

It is clear that market abuse may take place through a range of different mechanisms. However, AFME acknowledges that that automated trading may present certain challenges in terms of the detection of market abuse; in particular due to the associated scope for high order volumes and messaging traffic. ESMA's guidelines aim to address this, and regulators need to ensure that they have the appropriate systems in place to monitor markets effectively. AFME notes that IOSCO will consider the issue of market surveillance for regulators in its 2012 workplan.

In Europe AFME is in favour of further developments and enhancements of ESMA's Transaction Reporting Exchange Mechanism in order to build a proper and fully accurate audit trail for orders and transactions across Europe.

- **Circuit Breakers (otherwise known as “trading halts”)**

There has been a regulatory consensus globally that circuit breakers are a useful mechanism for dealing with market volatility. These types of controls mean that when stocks experience significant price changes, trading is halted for 5 minutes to allow participants time to 'pause for breath', and for algorithms to be reset.

Both IOSCO and ESMA have concluded that trading venues should have in place suitable trading control mechanisms (such as trading halts and volatility interruptions) to deal with volatile market conditions. The SEC/CFTC agreed with this, but went on to state the importance of volatility interruptions being coordinated between different venues, given the high degree of interconnectedness between markets. AFME would support a clarification in the revised MiFID so as to clarify that circuit breakers or other such mechanisms should be harmonised between venues. Further to the 6 May 2010 'flash crash', the SEC concluded that the imposition of disparate volatility rules may have had the effect of exacerbating, rather than dampening, price volatility.

- **Annual Disclosure:** In our view, the requirement for firms to disclose on an annual basis “a description of the nature of its algorithms, details of the trading parameters or limits to which the system is subject and the key compliance and risk controls” that it has in place would potentially result in a large amount of meaningless information being disclosed to regulators. It would be more appropriate for firms to disclose information about algorithms upon the request of the regulator.
- **Minimum Resting Time:** AFME notes that the draft ECON MiFID report contains a requirement that orders should have a minimum validity period of 500 milliseconds. AFME does not think that this requirement would be helpful for the market. It would likely favour high frequency trading activity by creating an additional arbitrage opportunity
- **Continuous operation requirement:** The requirement for algorithms to be in continuous operation with the effect of firms having to post firm quotes at competitive prices for the duration of the trading day is an unrealistic expectation and contrary to other regulatory requirements. Firstly, the scope of the requirement is too broad. As drafted by the

Commission, the requirement applies to all algorithms (including those which are used only to execute client orders – see below). In addition, the continuous operation requirement is unworkable for the following reasons:

- If an algorithm is not operating as it was intended, it is better that it is shut off and withdrawn from the market. This is a regulatory requirement that has been codified by ESMA.
- It is also unrealistic to require algorithms or “high frequency trading strategies” to continually provide liquidity “regardless of prevailing market conditions”. Market makers should be able to withdraw from the market during periods of market volatility, in accordance with the proper risk management of their positions. This is also currently the case under the market making arrangements set by trading venues and agreed by market makers.
- It is also important to distinguish between the broad types of high frequency trading strategies, many of which are not designed to operate in a ‘market making’ capacity, and are not compatible with being in continuous operation; below we lay out some of the key differences.

AFME believes that a better solution would exist around the use of venue market making schemes. Exchanges would be able to put in place a realistic set of obligations and incentives around market making. *For example:* requiring market makers to post liquidity for a portion of the trading day, in minimum size and with a certain distance from the best bid and offer. In return, market makers would receive certain incentives for this. In this context, market participants would continue to have an appropriate choice as to whether or not to become a formal market maker.

Algorithmic and High Frequency Trading explained

The terms algorithmic trading and high frequency trading are frequently mixed up in the public debate, and furthermore, high frequency trading itself is a broad term covering various different types of activity. We believe a distinction needs to be made between client-driven algorithmic trading strategies and high frequency trading, and then various types within high frequency trading.

- Client-driven algorithmic trading strategies are typically aimed at reducing the adverse market impact of large-sized, institutional orders and are deployed by either buy-side trading desks or agency brokers. Algorithms are typically used to determine the timing, price, quantity and routing of orders.
- There is no generally agreed definition of high frequency trading but is instead a term which simply refers to a set of existing market practices and strategies (statistical arbitrage, liquidity detection, market making) which have been carried out by traders for many years; technological and regulatory change have simply provided new opportunities to conduct this trading in different ways and in more rapid fashion. Some of these strategies are suited to market-making activity, some are not – please see below.
- We note that the ECON draft report on MiFIR has proposed a definition of high frequency trading. AFME welcomes the intent to identify and classify the activity given its importance to the market. However, we would caution against having strict volume thresholds set at Level 1 which could not be amended to reflect changing market conditions.

Examples of high frequency trading strategies

High frequency traders may deploy a range of different types of strategies. These include:

- **Statistical Arbitrage Strategies:** Traders seek to exploit differentials in prices between financial instruments whose prices are correlated with each other. This may include exploiting differentials between the same share trading on different venues, or between a share and a related derivative. The strategy is economically useful as it serves to keep prices aligned between venues and asset classes. The activity level of such strategies is driven by the extent to which such price differentials are present in the market; they are not designed for continual operation if no such arbitrage opportunities are observed.
- **Liquidity Providing Strategies:** This strategy aims at mimicking the role of traditional market makers – however they may not have any formal market making obligation. They post orders on both the bid and offer sides of the market with a view to capturing the spread (difference between the buy and sell price). It is only these types of strategy that might be suitable for posting liquidity in the role of a market-maker.

It seems that the market making obligation for algorithms is directed at this latter category of liquidity providing strategies.

What impact have these strategies had on the market?

The view of the *majority* of the academic research into the activities of HFTs is that market efficiency has been improved, through tighter spreads and increased liquidity.

The Final Report from IOSCO on this topic presents a balanced assessment. It identifies some *potential* risks that may arise, but points out the difficulties in defining HFT and isolating its impact. The report states that the available evidence '*fails to find a consistent and negative effect of HFT on liquidity*'.

AFME notes the publication in February 2012 of a research report into HFT by the Swedish Financial Supervisory Authority. The report concludes that the harmful effects from high frequency and algorithmic trading are less extensive than many feared, but also notes that the concern for increased market abuse must be taken seriously. The Authority states that supervisors must have the systems in place to monitor and detect market abuse, as well as the ability to share information with each other. AFME notes that IOSCO's future workplan includes the development of recommendations on market surveillance.

Conclusions

As in many other sectors and industries, the role and influence of technology in financial markets has grown and will continue to do so. Our role as participants is to ensure that our systems are resilient to cope with any associated risks that may arise, and that supervisors have the appropriate tools in place to monitor markets effectively. We support the work which IOSCO and ESMA will do in this area.