European Securities and Markets Authority

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SECURITIES AND MARKETS STAKEHOLDER GROUP

Position paper

ESMA's Consultation on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities

1. The members of the Working Group welcome the opportunity to comment on the establishment of guidelines on systems and controls in a highly automated trading environment. However, before answering to the ESMA's consultation paper, the Working Group believes it necessary to place the key issues around high frequency trading (HFT) in the wider context. This position paper aims at representing the position of the group and on occasion includes the diverging opinions of its members. The impact of HFT has given rise to heated debates also among members of the Stakeholder Group. Some members consider that the increased prevalence of HFT is a worrying signal for the stability of Europe's capital markets and strongly recommend that its impact be studied decisively.

2. The rise of HFT has been driven mainly:

   By opening the trading landscape to competition, which has led to a greater fragmentation of volumes across trading venues, favouring the emergence of arbitrage strategies

   By a lack of proper regulation and supervision of the so-called highly automated trading environment.

   By the fact that certain trading venues have accepted excessive transaction speeds while having failed to introduce limitations, in the form of higher costs for example, to the number of orders that can be introduced in a certain period of time.

   By the perverse effect brought about by competition among different trading venues. This increased competition has contributed to the use of activities such as HFT.

3. The Group overall believes that competition is essential to markets, and therefore fragmentation, is here to stay, and that technology will continue to adapt to this increasingly complex trading environment. However, we also believe that regulation should address some of the risks associated with the increase in HFT, in order to ensure the level playing field and ultimately to better protect the investors. We therefore would like to subscribe to the efforts of ESMA to provide guidelines on safeguards and controls in a proactive manner, in order to set a framework and pave the way further for European regulation, especially in regards to the Markets in Financial Instruments Directive (MiFID) and the Market Abuse Directive (MAD).

4. This paper will therefore first define HFT (1). The drivers that have been behind its development and other facilitating factors will then be analysed (2), as well as the benefits and risks associated

with this activity (3). Finally, the different options for regulating HFT will be assessed in light of these different elements (4).

I. Definition of HFT

5. In order to better understand HFT, it is crucial to define it. Although defining HFT is a difficult task, HFT can be characterised, first, as a sub-group of algorithmic trading, that is to say as a technology (and not a strategy), that is used mainly by three types of actors: proprietary trading units of investment firms, some hedge funds and proprietary trading firms. It usually involves trading in a very short time span with small price differences, with a predominant focus on highly-liquid instruments and aims at ending the day with closed positions. HFT players are usually different from the typical investor since they have no real interest in the underlying they trade in. The most significant strategic advantage for HFT players is related to their velocity. Usually, HFT involves no conventional or traditional traders but rather mathematically and/or technically oriented staff.

6. The members of the Group agreed that the most appropriate definition would be the following:

"Automated trading, also known as algorithmic trading, can be defined as the use of computer programs to enter trading orders where the computer algorithmic decides on aspects of execution of the order such as timing, quantity and price of the order. A specific type of automated or algorithmic trading is known as high frequency trading (HFT). HFT is typically not a strategy in itself but corresponds to trading activities that employ sophisticated, algorithmic technologies to interpret signals from the market and, in response, implement trading strategies that generally involve the high frequency generation of orders and a low latency transmission of these orders to the market. Trading strategies of HFT can be non-directional (quasi market-making and arbitrage) and directional (mean-reverting, trend-following). They usually involve the execution of trades on own account (rather than for a client) and positions usually being closed out at the end of the day."

II. Main drivers and factors

7. The trading strategies described above have always been part of the markets; however, technological progress and reduction in IT costs has lead to increased adoption and "excessive" use of these activities. HFT emerged at the end of the 1990s in the derivatives market in the United States and since then has rapidly increased, especially in the most developed markets. The rise of HFT has been driven by the technological developments that have increased the capacity to access, process, and transfer information and to implement automated decision-making capabilities. However, while being an important driver, technology on its own cannot explain the rise of HFT to the levels that we observe today.

8. In fact, regulation has played a major role in the development of this activity. In Europe, regulation has favoured a greater competition between trading platforms. While having had significant benefits, this competition has led to an increased fragmentation of trading volumes between venues, which created the premises for arbitrage between them. We believe that HFT could exist without fragmentation, but fragmentation has nevertheless been the strongest driver behind the rise of HFT.

9. The third driver directly relates from the competitive advantage that HFT firms have over more traditional intermediaries since there is no real-time monitoring of their risk exposure and their positions are usually being closed out at the end of the day. HFT firms do not need as high a level of capital (as intermediaries) to cover the positions they take on an intra-day basis since they only pro-

vide collateral for their own transactions. In general, HFT are concerned with maintaining a low cost base, but invest into technology and rely on reliable and readily available data information for their models, which in turn they seek from liquid and transparent markets.

10. In addition to these three drivers, other factors have further facilitated the development of HFT. In particular, competition between trading platforms has led to the implementation of aggressive pricing strategies (maker-taker and market-making schemes) favourable to HFT firms who are able to earn maker rebates from trading venues. The decrease in tick sizes has also contributed to the development of HFT. Co-location services, while accessible to any market participant who is willing to pay an extra fee, is essential in helping co-located users to get a time advantage over non co-located participants.

III. Benefits and risks

11. As stated above, the impact of HFT has given rise to heated debates amongst market participants and regulators and also amongst members of the Stakeholder Group.

12. Some members consider that the increased prevalence of HFT is a worrying signal that should be studied decisively. The fact that an activity such as HFT, which can represent a sizable amount of transactions with respect to the most liquid financial instruments, can exist without regulation is disturbing. These group members are of the opinion that HFT should be regulated and perhaps even prohibited, at least in the form that is taking place at the present time. These same group members have serious doubts about whether HFT makes sense at all from an economic point of view and about what the social utility of such activity is. They are also very much concerned about what the effects of HFT are in terms of market functioning, investor protection and even financial stability. Other group members acknowledge that technological advances cannot be undone and recognise that HFT has had some benefits.

13. Recent studies have assessed the benefits and risks of this activity. One of the main findings is that in a context characterised by a high level of fragmentation, HFT may play, to some extent, valuable role. First, because, at least for a part, this activity consists in the implementation of arbitrage strategies, it reduces short-term price variations between trading venues, stocks, asset classes, regions and historical patterns. In Europe, it is HFT that ensures the synchronisation of the prices on the different trading venues trading the same financial instruments. However, if HFT was not existing, arbitrage between venues would still be achieved due to the requirement for best execution of clients orders but with significantly more frictions and with less efficiency.

14. In addition to this role regarding the efficiency of the price formation process, the size of individual trades has decreased. As some academic studies demonstrate HFT contributes to increased trading volumes, market depth and eventually liquidity, even if, contrary to typical market-makers, HFT players do not commit capital to this end. As such, HFT has favoured a decrease in bid-ask spreads (even if this decrease should be analysed in light of the overall dynamics of the markets and the reduction of tick size), and therefore to lower transaction costs for all market participants, while absorbing to some extent liquidity risks. On the other hand one can raise the question of the quality of a price which reflect only a minority of the orders.

15. The impact of HFT on market transparency is more controversial. Most HFT firms heavily rely on transparent and liquid markets. Since price formation takes place at a public order-book, HFTs can receive the crucial information to calibrate the models and hence better estimate risk exposures and

positions they can take on for mostly a low risk endeavour. Usually they also seek trade venues with robust technological services, safeguards and controls since their reliance on technology demands highly resilient infrastructures, to minimise their risks. HFTs also use block trading facilities which are sometimes summarised under dark pools, to improve prices, but usually these venues are associated to price ranges of lit markets.

16. HFT firms are strong proponents of lit markets, and mostly avoid OTC markets where little to no information is available to them. An observation made in studies is the use of OTC markets by various market participants in equities markets who are seeking darkness, although these transactions could have been handled in lit markets[1]. A similar depiction is found in European options markets where there is very low liquidity on public order books, since price formation is away from public markets, and crucial investor information is not made public. Hence, the vast majority of trading is dark, and HFT firms hardly engage in these markets because the lack of price information bears the risk for HFT firms to provide prices too far from prices formed in OTC markets. For HFTs it is vital to have access to fairly liquid and transparent markets. With increased HFT activities liquidity is further increased. However, HFT may give an incentive to other market participants to trade outside of lit markets. The ratio of orders to executions if uncontrolled and not proportionate to the activity of the security, could reduce substantially the pre-trade transparency and may give rise to market abuse practices.

17. While, as we have seen above, HFT may result in benefits, it also gives rise to certain risks. HFT may increase volatility in times of market stress. On one hand, studies demonstrate that HFT firms are also active during times of crises, but on the other hand, they also found that when volatility is rising, HFTs increase their demand for liquidity, while decreasing their supply of liquidity. HFT may also lead to a form of "privatisation" of retail flow, through the setting-up of platforms where uninformed flows are systematically matched against a HFT firm. This result in a kind could be analyzed as a form of front running.

18. Furthermore, HFT can result in significant intraday risks. In fact, HFTs can create significant risk exposures within seconds, especially in derivatives, in comparison to their levels of capital, since there is no real-time monitoring of their leverage. Usually, because HFTs aim at ending the day in a flat position (resulting in no security delivery instructions towards the CCP), HFT does not lead to increased settlement failures. However, if an event such as the Flash Crash were to take place at the end of the trading day, HFTs may not have the opportunity to close their positions, and this could negatively impact the whole market. In addition, in markets where there is no CCP and the securities transfers and/or the funds transfers are settled on a gross basis (i.e. trade by trade), HFTs may face settlement risks, which could adversely affect their counterparties.

19. Another controversial aspect of HFT relates to its impact on the fragmentation of liquidity. On the other hand, as we have seen above, fragmentation of trading, favoured by the opening to competition of the trading landscape, is the strongest driver behind the rise of HFT.

20. In addition, HFT may pose a risk to the stability of the markets in times of market stress, but this risk can be prevented through the adoption of strict safeguards by all trading venues and investment firms, along the lines of those implemented by European regulated markets. While not being abusive in nature, HFT may enable the implementation of fraudulent strategies (such as quote stuffing). It is important, to counter market abusive behaviour by any market participant. In Europe, it is un-

[1] See e.g. P. Gomber and A. Pierron, MiFID: Spirit and Reality of a European Financial Markets Directive, 2010.

derstood that the Market Abuse Directive addresses these crucial topics, however structural measures would help in preventing market abuse behaviours. IT resources for monitoring and surveillance need to be adapted to better control/detect potential market abuse.

21. Finally HFT has created a very major problem of surveillance of the market by the regulators. Given the extremely large number of orders introduced in the trading venues, to be able to discover market abuses or even light manipulations is like searching a needle in a haystack for the best equipped regulator. And it is only possible if the regulator has access to all orders introduced in all trading venues, which is not the case today. Giving to the regulators access to the algorithms is necessary but not sufficient.

IV. Regulating HFT

22. Regulation should aim at mitigating the above mentioned risks related to HFT while not undermining the role that this activity performs in a context characterised by a high degree of fragmentation.

IV.I. Scope

23. In order to avoid any distortion, the rules should be the same on all trading platforms and investment firms, including OTC. In the absence of such a comprehensive coverage, regulation would be ineffective it would only encourage HFT to shift to other jurisdictions.

24. In addition, regulation should be harmonised at the European level, in this respect, ESMA should have a particular role, through, notably, the adoption of legally binding standards.

25. We therefore support the introduction of guidelines on systems and controls in a highly automated trading. These guidelines have to be seen in context of further European legislation, namely the MiFID review and the Market Abuse Directive review.

IV.II. Potential requirements

26. First, along the lines of the European Union's suggestions in its Consultation on the Review of MiFID, HFT firms, or at least those accessing trading platforms directly, could be required to be authorised as investment firms are.

27. In addition, HFT firms should be subject to the same scrutiny as other market participants and investors. The positions HFT firms take in comparison to the amount of capital they own should be monitored in real-time, either by the clearing member or, in the case of HFT firms acting as self-clearing members, by the CCP. Such monitoring would ensure that HFT firms have the ability to settle, both in terms of available capital and titles. Furthermore, algorithmic trading strategies (including HFT being a subset of algorithmic trading) used to send orders to the markets could be identified, through a flagging of the related orders, so as to facilitate the conduct of ex-post investigations by regulators. This is even more necessary in case of Sponsored Access, when the "sponsoring" investment firm cannot monitor the orders being transmitted to the trading platform by the HFT.

28. All execution venues and investment firms should also be required to have strict control mechanisms, in the form, notably, of circuit breakers and gateways (whereby the broker offering direct electronic access can disconnect its client). European regulated markets already have such safe-

guards and controls in place. The Group therefore supports the guidelines for trading platforms and investment firms provided by ESMA to provide unified framework for Europe.

29. In addition, co-location services offered by trading venues should be granted on a non-discriminatory basis, to ensure a level playing field among trading participants.

30. Other measures for regulators to consider to regulate HFT with the objective to create of frictions are:

    Minimum tick sizes could be set and implemented consistently on all European trading platforms (including OTC) under the authority of ESMA. Another option consists in the setting-up of order-to-trade thresholds, whereby firms, when reaching a certain threshold, are either constrained to wait for a certain amount of time before continuing trading or are charged a fee on each additional order sent (as currently done on most European regulated markets). However, to be really efficient, such a measure should be implemented across all execution venues, including OTC, and be based on carefully designed thresholds adapted to the different financial instruments.

    Another option would consist in slowing down the speed of orders artificially, through the implementation of a minimum resting time. However, such an option would give rise to important side-effects, since it would basically give a free option to trade for other participants during this increased resting time. In addition, careful consideration should be given so that trading does not migrate from lit to dark pools. Same rules should apply to all trading venues, including OTC.Another measure often discussed consists in requiring HFT to bear market-making obligations, that is to say to commit capital. This appears unfeasible in the current context. No actor would be willing to increase its risk exposure.