# ESMA Consultation Paper MiFID II/MiFIR Review Report on algorithmic trading. International Bulletin, March 2021.

Article 90 of MiFID II establishes that the European Commission (EC) must present a report to the European Parliament and the Council on a number of matters that are regulated in this Directive before 3 March 2020. In this case, ESMA submits 54 questions to public consultation on the impact of the requirements related to algorithmic trading, including high-frequency algorithmic trading (Article 90.1.c). Both the effects of COVID-19 and Brexit have altered the priorities of the EC and ESMA, delaying the delivery of the ESMA report to the EC on this matter. However, ESMA has already sent the EC various final reports on other sections of Article 90.1 that have been the subject of different reviews in this International Bulletin.In this Consultation, ESMA adopts a holistic approach to algorithmic trading and incorporates other aspects related to this phenomenon, such as direct electronic access to the market, tick sizes, market making agreements, restrictions on the speed of trading (speedbumps) and the asymmetries in access to the communication networks of orders and executions, both private and public. In essence, the consultation asks whether the regulations on algorithmic trading should be extended to other types of algorithms, beyond those that apply exclusively to order execution, and whether the EU clients of a direct market access provider should have the status of investment firm when they operate only on their own account and do not have the status of high-frequency trader. Currently, this requirement does not apply to customers of direct electronic market access providers when these customers are located in third countries.
To carry out this public consultation, ESMA has requested prior information from its members and from the European trading platforms on different aspects in order to have a first frame of reference with which to focus the public consultation on the areas for improvement detected by market participants in the field of algorithmic trading. One of the most striking pieces of information offered by the consultation is that, in 2019, the CNMV was the EU national competent authority with the second largest number of market members that carry out electronic trading (31 members) and the third largest number of high-frequency traders carrying out this activity (74 entities). It should be borne in mind that the UK no longer forms part of EU statistics.

The public consultation was open until 12 March 2021 in order for ESMA to deliver a final report to the EC in July 2021.

Continuing with the numerical framework that ESMA includes in its public consultation, the CNMV supervises 20 entities that offer direct electronic access to the markets (DEA), with 35 members offering this possibility to their clients in trading venues supervised by the CNMV. The CNMV is the EU national authority with the second largest number of providers of DEA. ESMA does not report on the level of algorithmic trading activity by jurisdictions and notes that this concept applies only to liquid instruments. ESMA offers a breakdown of algorithmic trading, differentiating between orders and transactions and among instruments (equities, fixed income and derivatives traded in the EU).Specifically, in the 2018-2019 period, orders originated by high-frequency trading represented between 50% and 70% of the total volume of equity orders. Approximately 80% of transactions originated from algorithmic trading, of which 60% came from high-frequency trading and 20% from trading carried out through algorithms other than high-frequency trading algorithms. The remaining 20% derived from other types of trading. Regarding fixed income, and only in liquid instruments, 80% of the transactions were executed through high-frequency trading (it must be borne in mind that only about 5% of fixed income instruments are considered liquid). In the case of derivatives, high-frequency trading accounts for only 30% of the volume traded, although in terms of orders, most of these are entered by high-frequency traders.
**Scope of regulation on high-frequency trading (OTC trading, systematic internalisers and DEA)**

The importance of high frequency algorithmic trading (HFT) in both derivatives and fixed income markets allows ESMA to initiate the consultation requesting an assessment of the HFT and DEA framework and whether regulation should also apply to OTC trading (especially in fixed income and derivatives) including HFT activity in systematic internalisers (SIs). ESMA suggests that the application of some of the regulatory requirements of the

HFT to SIs would help to prevent disruptions in the prices displayed by SIs becoming a source of risk for the SI itself or of misleading, breakdown or domino effect in other trading venues. Specifically, ESMA proposes that SIs be subject to governance requirements of trading and algorithmic trading systems, controls on the execution of algorithms, the function of instantaneous interruption of the actions of HFTs through the SI and others risk controls.One of the most significant sections of this public consultation, as mentioned in the introduction, is the question of whether MiFID II should be amended to exempt firms from the obligation to acquire an investment firm licence when they are customers of a DEA provider (both direct and indirect customers – participants who access the market through a direct customer of a DEA provider) if they operate only on their own account (this exception would not be applicable if the direct or indirect customer were an HFT). This would avoid an imbalance between clients from the EU and third countries, since it would be difficult to ensure that the latter have the status of investment firms in their jurisdictions of origin. In addition, the current rules require direct clients of a DEA provider to re-offer these services to their own clients, controls that are equivalent to those required of investment firms.
Another matter on which ESMA seeks the opinion of market participants is whether some type of regulation should be imposed on other types of algorithms that do not include the HFT part insofar as they may also be a cause of market disruption and generators of anomalous situations in price formation.

Next, the public consultation addresses possible amendments applicable to HFTs that would affect the organisational requirements of investment firms and trading venues, as well as some more specific aspects such as sudden sharp fluctuations in market prices, reducing the speed of trading, the creation of markets and the distribution of information on orders and transactions through public or private channels.

**New organisational requirements for investment firms regarding their HFT activity**

In this section, ESMA analyses the requirements stipulated in Article 17 of MiFID II and in the supplementing Commission Delegated Regulation (EU) 2017/589 of 19 July 2016 (also known as RTS 6). Based on the responses of the national competent authorities (NCAs), ESMA proposes a harmonisation, through a template, of the notification of the use of algorithms, including the content of the form, as well as the time and frequency of its submission. This template would include information on the control over compliance with the regulations by the algorithms notified, especially on the existence of effective risk control systems. All these requirements are aimed at ensuring the proper functioning of the markets and compliance with the regulations on market abuse. ESMA has found that NCAs could improve their exchange of information regarding market members using HFT strategies by also using a template in this regard.Another matter deriving from the analysis of RTS 6 on which ESMA seeks the opinion of market participants is whether some type of regulation should be established to cover other types of algorithms that do not include the HFT part insofar as they may also be a cause of market disruption and generators of anomalous situations in price formation. RTS 6 also develops the obligation of investment firms to carry out tests on the operation of algorithms before using them in the market to avoid generating conditions that could lead to disorderly trading. In this regard, ESMA asks about the experience in this area: whether the definition of disorderly trading should be improved, whether ESMA should promote additional guidelines on the calibration and testing of algorithms, and in particular the performance of tests in scenarios that incorporate stressful situations and disorderly trading. Article 9 of the RTS establishes that investment firms must carry out a self-assessment of the application of Article 17 of MiFID II to the algorithms used. ESMA has offered to prepare a template in this regard that includes the most specific aspects of the tests to be carried out and their submission to the NCAs.

**Organisational requirements for trading venues**

Trading venues, in accordance with Article 48 of MiFID II and RTS 7, must have organisational requirements that ensure that algorithmic trading does not generate disorders in the markets or cases of market abuse. For this purpose, trading venues are required to carry out an annual self-assessment of the capacity and resilience of their computer systems, which should include correct due diligence on the trading venue's systems and controls. To facilitate and harmonise these self-assessments, ESMA offers to provide a template that should be sent to the NCAs every two years.There may be areas where the obligations of investment firms and trading venues overlap with respect to the integrity of the market related to high-frequency trading, for which reason ESMA suggests issuing guidelines to clarify these aspects if market participants think this necessary, as well as possibly providing more robust scenarios to carry out the performance tests of an algorithm.
One of the instruments that trading venues must apply to facilitate orderly trading is that of stopping trading in a security for a certain period (volatility auctions in the Spanish equity market, circuit breakers more generically). Although the events of March 2020 have shown that these systems are adequate and ESMA regulations and guidelines in this regard appear to be sufficient, ESMA consults with market participants on whether any improvement to these systems is necessary.

**Other requirements**

In this section ESMA deals with various aspects related to high frequency trading. First, it analyses the fees charged by trading platforms to high-frequency traders as well as whether they offer a placement model (proximity to the central computer) of the computer systems of these traders on equal terms. In its analysis, ESMA considers that there is equitable and non-discriminatory treatment but requests confirmation from the participants on these points.Second, ESMA analyses the resilience of the trading venue's computer systems. High-frequency trading involves the submission to the market of a very significant number of orders that end up not being executed. This large number of orders can slow down the computer system of the trading venue. To avoid this potential problem, Article 48.6 of MiFID II requires trading venues to limit the ratio of non-executed orders per executed transaction. ESMA, after consulting with the industry, asks whether this ratio can be harmonised by establishing a different maximum for each asset class; ESMA also seeks the opinion of market participants on whether the current limits have been exceeded and if so whether this has had to any consequences.
In addition to the slowdown of computer systems, other problems may arise which, if they affect trading, must be reported to the NCA, which, in turn, must report them to ESMA. In this area, ESMA is interested in knowing whether the IT incident reporting system should be improved as well as whether the public should be informed and, in the event of a prolonged outage of the IT trading system, whether algorithmic traders could use other trading venues.

**Tick size, market making agreements, asymmetries in slowing down trading and trading fees**

Algorithmic traders often base their business model on making a very small gain on each transaction made, so the smaller the change in the price of a share, the more likely they are to obtain a positive return. The minimum variation in prices (tick size) is a very important characteristic for promoting liquidity in the market and can affect the fees payable to the trading venue. To prevent competition between trading venues, ESMA has published the minimum price variations as a range of share prices. Although the analysis of the impact of this harmonisation seems positive, ESMA asks whether this view is shared or whether there are any aspects that need to be improved, such as, for third-country stocks (which may have a different price variation system in their markets), or for ETFs, or whether a harmonised tick size model should be implemented for instruments other than shares (especially for bonds).

**Market makers**

Market making is also closely related with algorithmic trading as many market makers use algorithms to manage this activity. Article 17 of MiFID II obliges investment firms that, even without deliberately being market makers, operate through algorithms in a similar way to market makers, to request the status of market maker from the trading venue. ESMA established, in accordance with Commission Delegated Regulation (EU) 2017/578 of 13 June 2016, which is covered in Article 48.12.f of MiFID II (hereinafter RTS 8) the activity ratios that an investment firm must have in order to ask the trading venue for market maker status (e.g. when for at least half the trading days in a month a firm simultaneously passes to the trading venue buy and sell orders of a similar size and at competitive prices for at least 50% of the hours of the market). The market making contract will include obligations relating to the submission of orders during at least 50% of the market hours, excluding the opening and closing.The trading venue can offer the market maker incentives in some instruments that have continuous trading and can differentiate schemes in ordinary and extraordinary trading conditions. ESMA, through questions and answers, has specified that monetary and non-monetary incentive systems can be provided on condition that liquidity is provided on a regular and predictable basis, particularly when the market is volatile. The most common incentives are fee rebates. Very few markets offer special incentives in case of stress situations (usually increased fee rebates). Article 5 of the RTS 8 specifies that trading venues are obliged to have market making plans in the case of stocks or funds that are liquid or derivative related to such instruments or to liquid equity indices. These types of participants are referred to as RTS 8 market makers to distinguish them from those who voluntarily apply for market maker status.
ESMA has gathered data on the activity of market makers by type of asset, finding that the volumes traded by them on the equity markets represent less than 5% of the total volume and that they account for just over 15% of the total volume of bonds traded and 25% of that of equity derivatives. RTS 8-type market makers are the most common in regulated markets since these markets are usually traded continuously, unlike trading in multilateral trading facilities or organised trading facilities. From the information obtained by ESMA, it can be observed that during the crisis of March 2020, market makers modified their behaviour in a similar way to other participants (sending orders with a greater difference between the purchase price and the usual sale price, orders with lower volume and less presence in the market). ESMA concludes, and asks market participants to corroborate, that the regulation on market makers is effective under normal conditions but not in exceptional situations. To improve this regulation, ESMA requests the opinion of the participants on whether the monetary incentives should only be

applied to continuous trading markets based on an order book, or to all types of instruments and trading facilities, or restricted to the best providers of liquidity in illiquid instruments and in markets for SMEs. In addition, ESMA requests comments on whether RTS 8 concepts such as competitive pricing, stressed market conditions, or harmonising incentive designs should be specified.

ESMA has also found a special problem in the public debt market where there may be a contradiction between the requirements of RTS 8 and the agreements between primary dealers and the Debt Management Office (DMO), usually the Treasuries. ESMA has observed that the RTS 8 requirements are more stringent than the demands of DMOs. ESMA requests more information on these types of agreements, whether they should be exempted from the RTS 8 perimeter and, if so, whether this could lead to deficiencies.

**Speedbumps**

ESMA is also interested in speedbumps, which some trading venues are including in their computerised trading systems. These measures that delay the entry of orders in the market for a short period of time (e.g. three microseconds) can affect all kinds of orders or be restricted to specific types of orders (usually aggressive orders, i.e. orders executed automatically at the price of the opposite side of the market) when they are sent by some particular type of member (usually high-frequency traders). The latter type of speedbump is asymmetric since it affects only a certain group of members and/or orders while the former, being applied to all members and types of orders, is symmetric.ESMA considers that asymmetric speedbumps that affect only aggressive orders but not cancellations or modifications could call into question compliance with various principles included in Articles 17, 47 and 48 of MiFID II: continuity in the provision of liquidity, the predictability of liquidity and orderly trading. However, they may comply with the other two principles that inspire these three articles: non-discrimination and fair trading, providing there is transparency and participants who do not have the technological capabilities of high-frequency traders can be sure that their competitive orders will template part of the best buy or sell orders in the market.
ESMA includes in this section a description of the speedbump models prevailing in trading venues in the US, the UK and the EU. In the EU there is a model that affects only aggressive orders and there are also models that, similar to speedbumps, allow passive orders by market makers (buy or sell orders at a limited price) that can be executed only against orders from retail investors. This type of model offers protection to market makers who submit passive orders versus aggressive orders. ESMA considers that it would be necessary to obtain data on the impact of these models on market quality (for example, whether “protected volumes” – those orders that are not going to be executed but are visible to participants – could reduce the veracity of the information of the orders, and therefore, of investors’ intentions). This type of model that favours passive orders could place greater demands on market makers who use these advantages. In this regard, ESMA asks participants whether there is sufficient transparency about these mechanisms, whether these mechanisms should be aimed at facilitating the trading of orders sent by retail investors, or whether the trading venues that include these mechanisms should add new requirements to market makers that make use of these advantages.

In the analysis of the speedbump models in the EU, ESMA held a meeting with members of the industry in which the advantages and disadvantages of these mechanisms were discussed. The most relevant conclusions were that no advantages are observed in applying these systems in the equity markets, especially those that reward passive orders, where, in addition, it is observed that retail investors are the most affected by the advantages offered to market makers. However, these mechanisms are considered useful in derivatives markets and particularly in cases where the underlying is traded in other financial markets. To verify the conclusions of this analysis, ESMA asks market participants whether speedbump systems are inappropriate for equity markets and even whether they should be prohibited in MiFID II, whether these mechanisms should be regulated, and if so what requirements should be made.

Finally, ESMA asks market participants various questions regarding the advantages and disadvantages of informing the parties that have executed an order (partially or totally) prior to the communication of this information to all participants, as well as whether there should be regulations in this regard. Currently, information to counterparties in an execution is based on Articles 47.1.d and 19.3.b of MiFID II, which require trading venues to have effective processes to facilitate the completion of the transaction.

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**Useful link:**

ESMA Public Consultation on algorithmic trading