

April 18, 2022

VIA [online submission](#)

European Securities and Markets Authority (ESMA)
201-203 Rue de Bercy,
75012 Paris, France

**Re: Your input – Consultations (ESMA70-156-4978)
On ESMA’s Opinion on the Trading Venue Perimeter¹**

Dear Madam or Sir,

On behalf of Data Boiler Technologies, I am pleased to provide the European Securities and Markets Authority (ESMA) with our comments on the captioned consultation paper concerning trading venue perimeter.¹ Data Boiler is a pioneer in patented trade processing and analytic solutions. We have engaged with regulatory agencies in the U.S. and in Europe regarding market data, market structure, and trade surveillance matters. Followings are our responses to Questions 1-9 in the Consultation Paper. Please also see our related comment letter to the SEC at:

https://www.DataBoiler.com/index_hm_files/DataBoiler%20SEC%20ATS%2020220418.pdf

Q1: Do you agree with the interpretation of the definition of multilateral systems?

The ESMA’s opinion on the trading venue perimeter in Europe and the SEC’s proposed amendments² in the US are quite different. The Rules, despite the policy objectives and their unpopularity, are about the same. **Usually regime differences are over “subjective” matters.** Such as **how much discretion or rights** that one should have or is entitled to, and they bear the corresponding obligations and/or regulatory burden. **The difference this time, however, pertain to the characteristics or principles in determining when a “subject” or “object” meeting certain condition(s) would be considered “what”.**

We understand that differences in regulatory policies across countries are non-novel (e.g., proprietary trading rules for banks – Volcker in the US, Liikanen for German and France, and Vickers in the UK). Market data reform³ is an example of divergent policy directions for the US (competing consolidators) and the EU (single consolidated tape for each asset class). The ESMA 34-pages consultation paper is short and precise from the standpoint of “definition” of a “subject” or an “object”. Comparatively, the 591-pages SEC proposed amendments look blurry and cumbersome. **We dislike both** the US and EU policies that **brought too many entities within scope.** It increases costs to connect with additional venues for BestEx compliance when those additional venues may add little or no real benefit.

The capital markets never lack competition. Indeed, we have more than enough markets but insufficient “Farmers” (see this value chain smile curve⁴) and diversity to work in the field to bear fruits. Healthy markets need both “Hunters” (Performance Optimizers and Asset Gathering) and “Farmers” (Asset Maximizers and Customer Service); don’t shoot the messengers⁵ (Principal Trading Firms). Market operators make more money selling “opioids” (tools to fabricate fragmented markets are like addictive drugs) than “fruits”. It is the Rulers’ job to draw the line between permissible and prohibited activities. People may as well self-govern if they are left to read the small print and take their own risks of being

¹ https://www.esma.europa.eu/system/files_force/library/esma70-156-4978_consultation_paper_on_the_opinion_on_trading_venue_perimeter.pdf

² <https://www.sec.gov/rules/proposed/2022/34-94062.pdf>

³ <https://www.linkedin.com/pulse/market-data-lot-going-anywhere-kelvin-to/>

⁴ <https://www.linkedin.com/pulse/smile-curve-changes-securities-value-chain-evolves-kelvin-to/>

⁵ <https://www.economist.com/finance-and-economics/2003/02/27/dont-shoot-the-messenger>



scammed in the markets. Rulers should refrain from playing the role of field supervisors to micromanage others. Instead mandate the proper Police enforcement (Exchanges) to guard against misbehaviors. No presence or use of authorities by the police unless there are illicit or suspicious activities. Being nose-y may create resentments, discomfort feelings, and civic concerns about massive government surveillance⁶. Orderly function of a market is when hunters and farmers got pay for the food they brought to the markets via “equivalent exchange”.⁷ Market operators should earn more by attracting more people to shop comfortably at their markets. Not everyone can be a market, externalities and Pareto improvements⁸ are keys to drive sustainable market growths.

The precise and absolute terms in the **European version** may sound appealing to those who do not operate close to the edge (grey areas). Yet, the requirements come along with clear definitions that can hurt the industry negatively. For example, the requirements might be **too strict or rigid** that an Organised Trading Facility (OTF) operator, which is usually a broker-dealer, would be **prevented from trading against its capital**.⁹ To some extent, it leads to **drying up of market liquidity**, a detriment to institutional investors. ESMA seems to be not proposing to establish a **threshold-based regime** for OTFs,¹⁰ while the US proposed rules afford such leeway.

The blurriness of the **US proposed rules** may be seen as a positive among Too Big To Fail (**TBTF**) **elites**. They have wider shoulders to bear the compliance burden than smaller firms. The US requirements largely focus on written policies and standards, usually those **victimless cases** end up in settlements. A “toothless rule” won’t bite; it will not help prosecute wrongdoers in recouping losses for the harmed victims. In turn, TBTF elites may **factor in such regulatory fines and settlements as part of their costs in doing business**. We despise self-serving rules benefiting a government agency more than serving the public’s best interest.

A jurisdiction or sovereign state may apply judgements for the most suitable, efficient, and effective ways to govern and regulate the orderly functions of society. We are good with these kinds of differences that promote healthy competition across nations and/or regions. However, both the US and EU’s changes are **between a rock and a hard place**. There is no point in picking the ‘pros’ and the ‘cons’ between the two bad policies. For the most part, we do not disagree with the interpretation of the definition of multilateral systems. We do urge policy makers to consider alternative solutions to tackle the issue.

We attribute the phenomenon of **proliferation in “communication protocol systems”** (CPS) to the fact that competition is intense to find natural liquidity in the fragmented markets. If a pond is overcrowded with fishing boats and it **costs almost nothing to throw bait, then the pond may be polluted with too much bait and no fish**. Reaching out to other clients to find a potential match when receiving an initial buying or selling interest is like throwing bait. Let those who want to throw bait in catching fish **own up to the relevant costs**.

Sending out a request for quotes or streaming market data technically costs little to almost nothing. Yet, one ought to pay for royalties in streaming copyrighted materials published by others. There is tremendous value in composing trades and publishing trade algorithms. Allowing it to **stream freely at no cost is like a pirate copy of an MP3 song**. We recommend

⁶ <https://cs.stanford.edu/people/eroberts/cs181/projects/ethics-of-surveillance/ethics.html>

⁷ <https://www.urbandictionary.com/define.php?term=equivalent%20exchange>

⁸ <https://ecampusontario.pressbooks.pub/uvicmicroeconomics/chapter/5-1-externalities/>

⁹ <https://www.opalesque.com/industry-updates/2933/greenwich-associates-survey-shows-institutional-investors-remain-frustrated.html>

¹⁰ https://www.esma.europa.eu/sites/default/files/library/esma70-156-2013_consultation_paper_on_the_functioning_of_organised_trading_facilities.pdf



using interactive versus non-interactive subscription services to differentiate between dark and lit venues. Per our whitepaper – “**Values of composing trades**”¹¹, instead of having over-prescriptive rule(s) over order types, we think **market data** transmissions should be classified according to whether they are:

- a) **Interactive services** - transmit digital trade strategy recordings at a user’s request (dark pools, internalizers and other non-lit venues where members of such trading and investment communities may choose to interact with whose order flows through OMS, EMS, smart order router, and other order entry methods). These services are within the voluntary licensing tier; they do not qualify for the equivalent of §114 statutory license¹² in the US that is applicable to the capital markets.
- b) **Non-interactive subscription services** - transmit electronic market data or trade strategy recordings through streaming the market data, but for a fee (Exchanges, ECNs, other market data aggregators/ consolidated tape distributors indicating BBO and EBBO distribution). These non-interactive, subscription transmissions are subject to a statutory (compulsory) licensing fee.
- c) **Non-interactive, non-subscription services** - Market data transmissions often delivered via streaming that should be free to the consumer and the transmitting entity (e.g. traditional over-the-air radio and TV broadcasts and any bona fide news story; “on-hold” internal transmissions; and statutorily exempt performance).

All streaming platforms, including “**Bulletin board**”, “**Inward looking OMS**”, “**general-purpose communication system**”, “**extension of the trading venue**” for formalize negotiated or pre-arranged transactions benefit from Article 4¹³ waivers, etc., would have to **bear royalties payments and earn appropriate subscription fees to cover their cost**. Hence, there will **no longer be the issues of regulatory arbitrage** or MTFs / OTFs at competitive disadvantage compared to other interactives streaming platforms, such as Systemic Internalisers and CPSs as they do not fall within the definition of “Regulated Market” (RM).

Under our recommended scheme, order flow would be like “songs” streaming on different platforms. Broker-dealers would earn **royalties** on top of their trading revenue. Additionally, algo wheels that are no longer in use may be able to earn a “**second profit**”. These royalties may be a small amount per “song”, but it will be substantial for a hit song that is played many times. More importantly, picture the cost structure of a broker-dealer where **traders and algorithm developers** usually attributed to a significant portion of all costs. What if some or all of these “**featured artists**” costs may be off-loaded and paid for directly by the copyright licensing royalty scheme?

In turn, the definition of “**professional**” versus “**non-professional**” would be better delineated as – those who are able to compose a full song versus those who play only a few single notes. For the “featured artists” wanting to earn the royalties, they will identify themselves and bear their **fair share of responsibilities** (profit/ liabilities). Imagine how much easier it would be to identify the bad actor if the composed trades end up causing market chaos/ manipulation.

Each streaming platform, regardless of “interactive” or “non-interactive” subscription services and including CPSs, would craft their own space according to segment(s) or niche(s) they served. Some broker-dealers may want their order flows to be exclusively played on an interactive platform. Others may want to trade cross-asset classes and/or cross-regions. **Trading platforms would be based on who they want to serve, how many subscriptions they are going to get and determine whether to carry a broader or narrower “catalog”.**

¹¹ https://www.databoiler.com/index_htm_files/DataBoiler%20Copyright%20Licensing.pdf

¹² <https://www.law.cornell.edu/uscode/text/17/114>

¹³ <https://www.esma.europa.eu/databases-library/interactive-single-rulebook/clone-mifir/article-4>

The broader the “catalog”, the platform would **pay a wider range of broker-dealers**, featured traders, algo developers in royalties. Using **Disney+** as an **analogy** for an established Bulge Bracket that also owns an MTF; they have their own Disney, Pixar, Marvel, Star Wars, and National Geographic contents for interactive streaming. Using **Showtime** as **another analogy**, they are a competitive interactive streaming platform. Their crafted niche is different compared to Disney+. Equity securities that are not NMS stocks, corporate bonds, or municipal securities may just need specialized streaming platform(s) like Showtime.

For a **third analogy**, there are the “non-interactive” platforms such as **online radios or cable TVs**, which we refer to them as the “Exchanges”. In contrast to Disney+ and Showtime which are interactive, they serve the broadest audience while not having a “catalog”. They **may pay a substantial portion of all royalties, yet they represent the biggest liquidity pool in all markets**. Participants would not see “cyberpunk” or any “obscene, indecent and profane” content given these non-interactive platforms are intensely regulated. Their contents include “timeless classics” rather than new first run blockbusters; they continue to be profitable.

Besides, Viacom CBS does have MTV, Comedy Central, Paramount Network and other interactive platforms under their group. This **crossover of “non-interactive” with interactive” approach**, or the earlier mentioned analogies have illustrated that existing vested interests, other encumbrances, and new entrants **can all flourish** under our recommended scheme. **Viewers (investors) get more choices and better contents**. This is a **Pareto Improvements**⁸ (someone better off without anybody worst off or win-win for all)!

Learning from the music industry, record labels were initially opposed to MP3, Napster, and other streaming platforms. Although we would not say today’s copyright licensing system for the music industry is perfect, at least it achieved a healthy equilibrium. Music has **reached more people through streaming, and it grows the overall pie**, and every contributing practitioner is enjoying a bigger piece. In terms of what is driving growth of the overall pie for our capital markets, it is about leveraging the “crowd” to help **reduce the amount of “unknown unknowns”**¹⁴ in the market. We envisage creating a “sound library”. Unlike deep learning and sophisticated models, which are expensive and hard-to-learn tools, it would enable anyone to derive new algorithms and discover alpha, toxic risks, potential flash crash, etc.

Regulators should also welcome this innovation to enact on a copyright licensing scheme applicable to all streaming platforms. It enables market monitoring to be done via a **clean sweep**. To effectively monitor markets in the 21st century, internal recordkeeping may not be as useful as the **intelligence drawn from the crowd** in the field through a whistleblower program and “**catalogs**” of MTFs that showcase order flow interactions and market dynamics. Regulators do not and should not be invasive to gather all data of every market participant and their affiliated tech vendors or CPSs.

To create a catalog, one does not need to reveal its trade strategies in full. Instead, it could use a high-level description of the algorithm (just like a movie trailer preview), or a brief sample where one tested out an algo-wheel. The enabling technology is Data Boiler’s patented invention to transform trades into music. Appropriate **obfuscation to preserve confidentiality of trade strategies** are ensured (US **Regulation ATS – Rule 301(b)(10)(i) compliance**), while rights to claim ownership of data by broker-dealers can be asserted.

¹⁴ <https://www.pmi.org/learning/library/characterizing-unknown-unknowns-6077>



Q2: Are there any other relevant characteristics to a multilateral system that should be taken into consideration when assessing the trading venue authorisation perimeter?

We believe ESMA has covered most if not all the relevant characteristics to today's multilateral systems. Innovations in the future would probably introduce new ways to operate a multilateral system. Attempting to create an exhaustive list of communication tool service that goes beyond providing information and allows trading to take place is impractical or meaningless. Using casino games or sport gambling as an analogy, **there may not be an exhaustive list of new games or new ways to play the old games**. The **list would be outdated by the time** there would ever be an all-inclusive version. The question is what **type** of game(s), policy makers want to regulate and which **scale of game(s)** that is permissible to operate without bureaucratic management.

It makes sense to regulate games like a derby horse race that accepts open betting. It is probably overkill for government to monitor mahjong and card game play with family and friends at home. If using **characteristics such as a "house that customarily books all bets"** to define trading venue requiring authorization, then it would **miss "side-betting"** (a bet made with a player other than a house that customarily books all bets or other than with the shooter). The collapse of Archegos Capital¹⁵ may prompt scrutiny of outsized bets accumulated by family offices. Dysfunctional of security-based swap market¹⁶ and/or the OTC markets¹⁷ may cause a liquidity crunch to the broader financial system.

When accessing the trading venue authorisation perimeter, we want to be practical. There are certain **merits to the threshold approach** for the US Alternative Trading Systems (ATs). No fish would be able to survive in the pond when the water is overly clear. **Rigid rules regardless of "scale of the game" would drain liquidity**. Orderly function of any market requires ample liquidity from diversified sources. Otherwise, there would be no price discovery process and no easy and definitive way to value securities. It is **tricky for regulators to be assertive while not being too rigid to shrink ordinary market activities or to discourage innovations**.

Q3 & Q4: In your experience, is there any communication tool service that goes beyond providing information and allows trading to take place? If so, please describe the systems' characteristics. Are you aware of any EMS or OMS that, considering their functioning, should be subject to trading venue authorisation? If yes, please provide a description.

We agree that those **operate close to the edge** (e.g. EMS that influences the operation of the system and the routing of the orders for the investment firms) may be **subject to a closer scrutiny**, but not necessarily require authorisation as a trading venue. We are concerned that it would be **too strict to completely ban "general-purpose communication system" from reaching out to other clients** to find a potential match when receiving an initial buying or selling interest. Think about it, is it worthwhile to produce a more exhaustive list of "relevant characteristics" when **enforcement agencies do not have resources to sweep the entire universe to check** each system qualifying as "multilateral system" or check if service of a communication tool goes beyond providing information and allows trading to take place? Often, regulators rely on someone filing a complaint to launch an investigation. So, unless policy makers want and can implement some kind of annual "car inspection" system, it is **impractical to administer the enforcement**.

¹⁵ <https://www.hedgeweek.com/2021/05/05/299729/archegos-collapse-shows-what-can-happen-when-leverage-misapplied>

¹⁶ <https://www.sec.gov/swaps-chart/swaps-chart.pdf>

¹⁷ <https://www.imf.org/external/pubs/ft/fandd/basics/pdf/dodd-markets.pdf>



Q5 & Q6: Do you agree that Figure 4 as described illustrates the operation of a bilateral system operated by an investment firm that should not require authorisation as a trading venue? Do you agree that a “single-dealer” system operator by a third party, as described in Figure 5, should be considered as a multilateral system? If not, please explain.

We applaud the good intentions of policy makers to bring more entities within scope of “multilateral system” in hope to use, for example, trading suspensions to help **combat fraud** in MTF, OTF, and OTC markets. We understand the rationale of the proposed heightening of ATS disclosures in the US to **deter potential conflicts of interest**. We agree that Figure 4 as described illustrates the operation of a bilateral system operated by an investment firm that should not require authorisation as a trading venue. Also, we do not disagree that a “single-dealer” system operator by a third party, as described in Figure 5, should be considered as a multilateral system. However, there remain other unsettling issues, such as how a **fund manager who operates an internal crossing system** would curb conflicts of interest for funds they manage versus others.

Q7 & Q8: Do you agree that systems pre-arranging transactions that are formalised on a trading venue, even when arranged in a multilateral way, should not be required to be authorised as trading venues? Do you agree with the justification for such approach? Are there any other conditions that should apply to these pre-arranged systems?

We agree that systems pre-arranging transactions that are formalised on a trading venue, even when arranged in a multilateral way, should not be required to be authorised as trading venues. **Off book on venue trading and outsource service could be a complex topic** to delineate who actually carried out or represented to be carried out the pre-arranged trades.¹⁸ Prescribing ever more conditions that apply to pre-arranged systems is meaningless or inefficient. It is not that innovators do not want to work with regulatory authorities in applying for Article 4(1)(b), 4(1)(c), Article 9(1) and/or other waivers if the system is deemed to be an “extension of trading venue” that falls outside scope of Multilateral System. The **waiver application process delays go-to-market timing, increases costs to operate and deters new entrants**.

Q9: Are there in your views any circumstances where it would not be possible for an executing trading venue to sign contractual arrangements with the pre-arranging platforms? If yes, please elaborate.

Asking an extension of a trading venue to sign contractual agreements that bind the vendor to bear burdens of all relevant MiFID II provisions (including rules relating to non-discriminatory access and fees) is too harsh. The requirements might be too strict or rigid that an OTF operator, which is usually a broker-dealer, would be prevented from trading against its capital. We encourage ESMA to consider adopting the US’s fair access **threshold approach**. It offers some leeway to allow smaller ATSs sufficient **nimbleness to reach market segments that would otherwise not be reachable by larger trading venues**, while regulators have the **flexibility to recalibrate** these threshold(s) over time in accordance with financial stability and other conditions if needed.

¹⁸ <https://www.ashurst.com/en/news-and-insights/legal-updates/esma-and-trading-venue-market-structure/>



[Appendix 1](#) is a flow chart on ESMA's Trading Venue Perimeter prepared by us at Data Boiler. We appreciate if the Authority may verify our correct understanding of the matter. Feel free to contact us with any questions. Thank you and we look forward to engaging in any discussions and/or opportunities where our expertise might be helpful.

Sincerely,

Kelvin To

Founder and President

Data Boiler Technologies, LLC

CC: The Honorable Ms. Verena Ross, Chair
The Honorable Mr. Erik Thedéen, Vice Chair
Ms. Natasha Cazenave, Executive Director
Mr. Fabrizio Planta, Head of Markets and Data Reporting Department
Mr. Matteo Rava, Senior Policy Officer, Investor Protection and Intermediaries Team

This letter is also available at:

https://www.DataBoiler.com/index_hm_files/DataBoiler%20ESMA%20Trading%20Venues%20202204.pdf

