



Response to the ESMA consultation on the cost of market data and consolidated tape

Brussels, 6th September 2019

General introduction

FESE welcomes the opportunity to provide input to ESMA on the development in prices-for pre-and post-trade data and the consolidated tape (CT) for equity instruments.

Development in prices for pre- and post-trade data

FESE's response underlines that increases in securities market data fees have been reasonable and competitive, and emphasises the importance of a holistic approach towards assessing prices of market data. The production and dissemination of market data is an intrinsic part of the operation of fair and orderly markets and for this reason cannot be viewed as a standalone activity. Put differently, given the structure of electronic order books, it is not possible to generate pre-, and post-trade data without also supplying a trade execution service. Market data is the outcome of a dynamic price formation process and is a joint product with trade execution. Furthermore, data redistributors and intermediaries play an important role in the value chain of market data, thus reinforcing the necessity of a holistic approach recognising the full scale and nature of the market data value chain.

Consolidated tape for equity instruments.

FESE believes, first and foremost, that the inconsistent trade reporting behaviours of systematic internalisers (SIs) and over-the-counter (OTC) trades at the source must be fully considered in the consolidated tape debate. Guaranteeing high quality, reliable and consistent flagging of SI and OTC trades is key to delivering a CT that can be considered meaningful. FESE's response stresses that all trading mechanisms (including SIs and OTC) should be required to use the MMT model, among other measures. Provided that there is a strong use case and adequate compensation to Exchanges for the use of their data, FESE believes that a "Tape of Record" covering all execution venues would best meet the needs of users and the market. A convincing use case is particularly important to ensure that the tape does not add cost (i.e. infrastructure and maintenance costs) without any clear benefits, which would make it a disproportionate and discriminatory intervention. Such a tape should be aligned with the particularities of the EU market structure and provide a complete overview of volumes traded over the day.

Links between market data and market structure.

Over the years, clients of exchanges - i.e. banks and brokers - have been increasingly competing with exchanges for the provision of liquidity to the market. With MIFID I, alternative trading venues, such as Multilateral Trading Facilities (MTFs), and over-the-counter (OTC) trading were set-up, in a way mirroring exchanges, on the basis of the availability of cheap technology and high-quality exchange data. New start-ups in this space were backed and funded by banks and brokers, reducing explicit transaction cost but at the cost of rising implicit transaction cost and fragmenting markets (the EU market is now set to be more fragmented than the US or the Asian markets) which is not always to the benefit

of investors. In addition, while MIFID II was meant to increase transparency, it has resulted in the development of SIs.

Investors are at risk in a market structure that does not manage the inherent conflict of interests between financial intermediaries and their clients (i.e. the investors). This allows exploitation of information asymmetries between informed and less-informed players. In order to increase their profits and compete more aggressively with Exchanges, MTFs, SIs and OTC trading seek to obtain the prices for free (i.e. market data) formed by the Exchanges with which they compete. While competition has reduced the explicit costs of transacting, fragmentation has increased the implicit costs that investors bear to access liquidity. This situation is detrimental for investors.

While competition is at the heart of the EU, it should always be conducted in a fair way. This needs to be considered for both topics discussed in this paper, reasonable commercial basis (RCB) as well as the CT.

A well-functioning market structure supports a robust price formation process and delivers market data to the benefit of investors. Above all, market data is the outcome of a dynamic price formation process and is a joint product with trade execution – i.e. it is not possible to generate one without the other, and most activities undertaken by a stock exchange deliver both trading and price formation. Market data has to be priced reasonably to ensure competition can exist, which the current high number of trading venues and execution mechanisms proves. However, price controls on market data or mandating exchanges to contribute their data to a consolidated tape without reasonable compensation threatens to severely handicap Exchanges. This would disturb the role of Exchanges as a source of finance to the economy. Regulators may be tempted to believe that a consolidated tape, by increasing transparency, will fix the current market structure issues, but this is unlikely because transparency is only as good as the data submitted by those executing transactions in SIs and OTC. A consolidated tape is no substitute for adequate market structure and rigorous enforcement of rules.

With regards to RCB, price regulation is not justified as there is neither a market failure, nor would we expect any positive impact on investors, if Exchanges become further regulated. With regards to the CTP, and in the absence of a regulatory use case similar to the one in the US (with mandatory use as well as mandatory funding by users), the current proposals resemble an indirect price regulation, which is questionable. FESE proposes instead a Tape of Record (TOR) which would be a significantly less complex and costly technical set-up, providing a comprehensive overview of overall liquidity within the EU on an instrument level. In either case, a pre-condition for a reliable CT is an improvement of off-venue data quality.

Q1: Have prices of market data increased or decreased since the application of MiFID II/MiFIR? Please provide quantitative evidence to support your answer and specify whether you are referring to equity and/or non-equity instruments.

MiFID II/MiFIR has resulted in some price adjustments, with price increases but also price decreases. However, the changes in Exchanges' securities market data revenues have, on average, been small. Aggregate securities market data revenues (of Exchanges that are members of FESE) amounted to approximately €245m in 2018 and increased in recent years by approximately (only) 1% per year in real terms¹. Thus, the overall cost of Exchanges' securities market data for market participants remains stable.

Empirical analysis further shows that average increases in the individual fees for securities market data have been very moderate overall (e.g. pre- and post-trade data Level 1 and Level 2 data, on average less than around 1.5% per year in real terms²; and non-display fees for pre- and post-trade Level 1 and Level 2 data on average less than around 4.5% in real terms).

The data above emphasises the importance of a holistic approach towards assessing prices of market data. Evaluating the price of market data based on individual fees for market data or a single (or only a few) market participants can result in a biased view. Individual fees for market data or a single (or only a few) market participants does not represent the development of the overall cost of market data for market participants.

FESE highlights the need to proceed with caution when assessing increases based on information on single individual license fees for specific, selected products as they could present a biased view and distort the reality of the situation. In order to evaluate the changes in overall costs of market data without risk of bias, it is important to look at the overall revenues obtained by the Exchanges from market data (which remained relatively stable overall) as well as the joint costs for price formation (as market data is the outcome of a dynamic price formation a process and a joint product with trade execution).

Q2: If you are of the view that prices have increased, what are the underlying reasons for this development?

As mentioned above, market data is the outcome of a dynamic price formation process and is a joint product with trade execution - i.e. it is not possible to generate one without the other, and most activities undertaken by Exchanges deliver both trading and price formation. The economics literature explains that, in the case of joint products, it is efficient to generate revenues through fees from both products³. Subject to individual pricing policies this can be observed in practice: joint costs are recovered through a combination of market data fees and trade execution fees.

Changes in costs attributable to market data production and distribution, including both the direct costs of market data dissemination and the changes to the appropriate share of joint costs can lead to price changes.

Following the application of MiFID II/MiFIR, Exchanges have had to adapt to regulatory requirements affecting the provision of market data. This has led to cost increases at the

¹ Oxera (2019), 'The design of equity trading markets in Europe', 21 March, p. 71

² Oxera (2019), 'The design of equity trading markets in Europe', 21 March, p.73

³ Marshall, A. (1920), *Principles of Economics*, Book V, Chapter VI, London: Macmillan

Exchange level and may be one of the relevant considerations to explain certain price adaptations.

Additional costs linked to data disaggregation is one such example. MiFIR requires that all trading venues provide pre-trade and post-trade data in a disaggregated fashion with the aim to reduce costs for market participants. As such, trading venues are required to disaggregate their data by the criteria documented in RTS 14. Furthermore, it is also required that data be broken down by asset class, country of issue, currency and trading mode on request by customers. This splitting out of data packages by the criteria set out in the legislation drastically increases the number of data products to be offered by trading venues thus increasing both technical and administrative costs. In this context, while accessing selected data might become cheaper, the overall cost of producing and providing market data may have increased across Europe.

Furthermore, it is important to note that price increases can legitimately occur for different reasons. For instance, price adaptations may relate to new services, new content, added value provided to market data users, or the need to reflect structural changes within the industry in the license structure as well as a rebalancing of fees in accordance with new insights and market developments. For example, clock synchronisation has also led to an increase in market data related costs. MiFID II requires that all trading venues and their members or participants synchronise the business clocks they use to record the date and time of any reportable event. Business clocks must be synched to Coordinated Universal Time (UTC) and venues and their members or participants need to establish a system of traceability to UTC. This enhancement in market data quality comes at a cost.

Finally, it must be noted that data redistributors and intermediaries play an important role in the value chain of market data. For this reason, it is not possible to undertake an assessment of the price of market data without looking at the role of data redistributors and intermediaries.

Q3: Following the application of MiFID II/MiFIR, are there any market data services for which new fees have been introduced (i.e. either data services that were free of charge until the application of MiFID II or any new types of market data services)?

Following the introduction of disaggregation requirements by MiFIR, many Exchanges adjusted their pricing strategy to provide more granularity. This particularly benefits smaller users which now have the option to pay only for the data they are using. The number of products offered by Exchanges increased but also had costs implications which may, depending on individual pricing strategy and customer profile, have an impact on the prices' charged to specific customers.

Q4: Do you observe other practices that may directly or indirectly impact the price for market data (e.g. complex market data policies, use of non-disclosure agreements)? Please explain and provide evidence.

Changing Use Cases

Exchanges observed a big shift in consumption of data from display to non-display activities reflecting the ongoing automation of activities using market data, including algorithmic trading, driven through technological developments. As an example of the dramatic impact of technology, and specifically trade automation from algo, quant and robotic trading on today's capital markets has had, consider Goldman's cash equities trading floor at the firm's headquarters. According to the MIT Tech Review, they employed 600 traders at their height back in 2000, buying and selling stocks for Goldman's institutional clients.

Today there are just two equity traders left. Complex trading algorithms, some with machine-learning capabilities, first replaced trades where the price of what was being sold was easy to determine on the market, including the stocks traded by Goldman's old 600.⁴ These new data users (e.g. quant, robotic and AI systems) require constant investment in hardware and software by data providers in order to keep up with the new technologies used by these systems. The industry is currently in a transition period from a human driven world (terminal use of data) into a more digital driven world (electronic use of data). Due to this swift, the data license structures of Exchanges are being adapted.

More generally, best practices are still emerging and therefore FESE believes that issuing further detailed guidance would be premature at this stage. Should the industry see merits in developing further guidance, FESE stands ready to consider collective industry initiatives as a better way to address the concerns and allow industry players to identify the scope for harmonisation.

The scale and nature of the market data value chain

It is important to recognise the scale and nature of the market data value chain when considering the price of market data. Market structure and the value chain in which market data is produced and consumed are complex, making it challenging to assess the role and impact of regulation. MiFID II/MiFIR introduced rules on the provision and pricing of market data by trading venues, approved publication arrangements (APAs) and CTPs. Trading venues are however only a small part of a longer value chain which includes data redistributors and other intermediaries' data analytics services. Indeed, it is estimated that the contribution of market data provided by European stock Exchanges only represents around 15% of the total European spending on market data and analysis.⁵ As ESMA rightly acknowledged, in its 2014 *Technical Advice to the Commission on MiFID II and MiFIR*, there is a risk that any cost reduction at the trading venue level will not be passed on to the end users, and intermediaries and third party providers are not within the scope of MiFID/MiFIR.⁶ The situation remains very much the same today.

The key question is whether criticism regarding Exchanges fees are valid or whether there are other market data costs driving the debate (such as user in-house costs and/or costs by third party providers) that have a significant impact on those targeting Exchanges' fees. The analysis developed by Burton Taylor⁷ shows that the strongest growth during the last few years was in the Portfolio Management & Analytics Area, Pricing, Reference & Valuation Data, and Research. This space is not predominantly covered by Exchanges; to the contrary, those services are being provided by other market data providers.

Criticisms of the costs of Exchange-generate market data is often generic, lacking concrete evidence. The Exchanges have observed that when other market participants debate this point, they do so without distinguishing between the market data fees levied by Exchanges and published on their homepages, versus the overall market data cost paid by users and which may include multiple data redistributors/intermediaries and/or third party providers. Across the market data value chain, Exchanges are not "the last mile" of market data distribution: changes in market data costs are therefore not necessarily due to Exchanges, which are not responsible for mark-ups and/or other fees charged by other participants in the value chain.

⁴ ZeroHedge.com

⁵ Oxera (2019), 'The design of equity trading markets in Europe', 21 March, Section 4.4

⁶ ESMA (2014), Final Report, Technical Advice to the Commission on MiFID II and MiFIR, 19 December, p. 267, para.10

⁷ Burton Taylor, Financial Market Data/ Analysis Global Share & Segment Sizing 2019

We believe it is critical, when assessing the impact of MiFID II/MiFIR on market data prices, that policymakers consider the overall data value chain as it is the end investor that counts. Any regulatory intervention cannot be discriminatory and distort competition.⁸ Market data fees charged by trading venues (including RMs) are just one part of the data procurement costs for users including end investors. In most cases, costs related to data will encompass not only trading venue market data costs but also charges by third parties in one way or another. As such, a review of the development in prices for pre-and post-trade data that is restricted to Exchanges, will have limited to no effect on the ‘overall cost of data’ to the end investor and could distort the market ecosystem due to its narrow and discriminatory focus. In contrast, the starting point of any review should be a comprehensive review of the market data value chain with a view to informing potential changes to the scope of the regulation particularly in terms of transparency.

Q5: Do you agree that trading venues/APAs/SIs comply with the requirement of making available the information with respect to the RCB provisions? If not, please explain which information is missing in your view and for what type of entity.

Trading venues provide a high level of the RCB disclosures, in line with the regulation. Today, the vast majority of trading venues comply with the transparency requirements and disclose necessary information. This is a very positive step and demonstrates the clear merits of the transparency plus approach (i.e. enhancing the public transparency of pricing and of market data related policies) put forward by ESMA in its Technical Advice provided to the European Commission in December 2014, as referred to above.

There is, however, only very limited information available regarding the application of the RCB provisions by SIs, there is a lack of disclosure regarding SIs (further explanation is included below).

Q6: Do you share ESMA’s assessment on the quality of the RCB information disclosed by trading venues, APAs and SIs? If there are areas in which you disagree with ESMA’s assessment, please explain.

FESE believes that the quality of the RCB information disclosed by Exchanges is good and has further improved since the introduction of MiFID II/MiFIR.

Significant efforts have been made, and continue to be made, to put in place the necessary mechanisms to disclose relevant information and ensure compliance with the various requirements set out in the legislation. Best practices are still emerging and therefore FESE believes that issuing any further guidance would be premature.

ESMA’s consultation paper notes that some of the RCB disclosure requirement practices across trading venues and APAs differ significantly, thus making it difficult for users to compare the information. Exchanges develop and produce diverse market data offerings and products which, in part, explain such differences. They work hard to develop competitive, innovative and unique market data offerings.

⁸ See Judgment in *Ruckdeschel v Council*, Joined Cases 117/76 and 16/77, ECLI:EU:C:1977:160, para. 7 (“*This does not alter the fact that the prohibition of discrimination laid down in the aforesaid provision is merely a specific enunciation of the general principle of equality which is one of the fundamental principles of Community law*”). See also Judgment in *Akzo Nobel v Commission*, Case C-550/07P, ECLI:EU:C:2010:512, para. 55 (“*It must be recalled that the principle of equal treatment is a general principle of European Union law, enshrined in Articles 20 and 21 of the Charter of Fundamental Rights of the European Union.*”). See also Protocol 27 on the internal market and competition annexed to the Lisbon Treaty (former Article 3(1)(g) EC).

Diversity in product design also reflects the competitiveness of the market. This undoubtedly has an impact on the comparability of these offerings across venues and in turn on the comparability of information disclosed.

ESMA also asserts that in some areas the information currently provided by many trading venues and APAs does not empower users to determine how the price for market data was set. In response to this, some information remains very sensitive and trading venues may legitimately feel uneasy about full disclosure in this area. This information goes to the heart of competition between trading venues for both transactions and market data. Sharing of this information would result in the opening up of an Exchanges' entire business model and compelling the disclosure of such information would restrain competition between trading venues. Furthermore, provisions under the current regulation already enable active supervision in this area since Exchanges are required to provide further information to NCAs and ESMA on request.

ESMA notes that most respondents allocate joint costs based on the revenues generated by the provision of market data and other services provided, and comments that this approach does not appear to be fully in line with the requirement to provide market data on the basis of costs (Article 7 of Commission Delegated Regulation 2017/567) and makes it difficult for users to fully understand how the price for market data is set. FESE is not privy to the allocation of costs but would like to add that paragraph 2 of Article 7 on the obligation to provide market data on the basis of cost clearly states that "the cost of producing and disseminating market data may include an appropriate share of joint costs for other services provided by market operators (...)".

It is important to remember that market data is the outcome of a dynamic price formation process, and is a joint product with trade execution - i.e. it is not possible to generate one without the other, and most activities undertaken by an Exchange deliver both trading and price formation. The economics literature confirms that, in such cases, it is efficient to generate revenues through fees from both products.⁹ Indeed, this is what Exchanges do in practice.

The joint product nature of trade execution and market data services has important economic implications. With joint products, the production costs of the outputs (market data and trading) cannot be fully separated - i.e. some, if not all, costs are joint costs. Indeed, joint costs are incurred when production facilities simultaneously produce two or more products, this is clearly the case of trade execution and market data services where there are fixed costs that have to be incurred to produce either product. Secondly, this means that whether the recovery of costs by a trading venue is appropriate or not cannot be assessed effectively by the independent analysis of either trade execution services or market data services. This is something that FESE urges ESMA and the Commission to keep in mind when assessing the development in prices for pre-trade and post-trade data. FESE wishes to underline that the appropriate frame of reference for the analysis of the economically efficient recovery of the costs of the secondary market activities of trading venues is at the level of combined transaction revenues and market data revenues.

ESMA also asserts that a high percentage of trading venues and APAs charging for the provision of market data charge different prices to different categories of customers and that this may hinder the overall quality of information disclosure.

⁹ Marshall, A. (1920), *Principles of Economics*, Book V, Chapter VI, London: Macmillan

ESMA further asserts that an excessively granular approach for categorising customers may be contradictory to the obligation to provide market data on a non-discriminatory basis. FESE would respond that differentiated pricing does not necessarily mean that there is a discrimination. Exchanges can make market data available at the same price to all customers falling within the same category in accordance with published objective criteria and that any differentials in prices charged to different categories of customers are proportionate to the value which the market data represents to those customers in line with Article 8 of Commission Delegated Regulation 2017/567 on the obligation to provide market data on a non-discriminatory basis. Exchanges' approaches of categorising customers can aim to ensure broad access to market data (including for retail investors), and therefore the markets, at a reasonable and fair price considering the value the market data represents to those customers. This diversity and granularity is reflective of competitive commercial conditions. Competition law precedents also recognise that product differentiation is reflective of competition on the market¹⁰ and that even dominant undertakings can apply different commercial conditions to their customers (and are even required to do so if there are different objective circumstances).¹¹

Overall, FESE believes that issuing further guidance setting out ESMA's expectations on the content and format of the RCB disclosure requirements would be counterproductive at this stage. The current legal framework already contains an ample selection of requirements and key principles regarding the provision of market data and the disclosure of RCB information.

Q7: Do you agree that the usability and comparability of the RCB information disclosed could be improved by issuing supervisory guidance? If yes, please specify in which areas you would consider further guidance most useful, including possible solutions to improve the usability and comparability of the information.

Some market data users have complained that usability and comparability of the information is limited in that each entity uses its own terminology. FESE believes that this is a direct consequence of fragmentation of capital markets in Europe, which is, in itself, also a consequence of MiFID II/MiFIR which has allowed for a further diversification of the relevant market players.

In a competitive market, market data offerings may not necessarily be fully comparable since the various market data products available throughout the EU are not identical. Exchanges develop and produce diverse products in order to develop innovative and unique market data offerings. For this reason, it is important that any future development of standardised templates does not hinder the development of new products and innovation in this area or be discriminatory for certain market players compared to others.

¹⁰ See [Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings](#), OJ C 31, 5.2.2004, para. 45. (*"It is also easier to coordinate on a price for a single, homogeneous product, than on hundreds of prices in a market with many differentiated products"*). See also [Communication of the Commission - Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings](#), OJ C 45 of 24.2.2009, para. 13 (*"the Commission will interpret market shares in the light of the relevant market conditions, and in particular of the dynamics of the market and of the extent to which products are differentiated."*)

¹¹ See for example [Judgment in AKZO Chemie v Commission](#), Case C-62/86, ECLI:EU:C:1991:286, paras. 119-120 (*"It should next be pointed out that there was no abusive policy of discrimination between the individual mills in the Allied group and the 'large independents', as these two categories of customers are not comparable"*). See also [Judgment in United Brands v Commission](#), Case C-27/76, ECLI:EU:C:1978:22, para. 228 (*"differences in transport costs, taxation, customs duties, the wages of the labour force, the conditions of marketing, the differences in the parity of currencies, the density of competition may eventually culminate in different retail selling price levels according to the Member States"*) and [Judgment in Clearstream v Commission](#), Case T-301/04, ECLI:EU:T:2009:317, paras. 172 and 179.

Best practices are still emerging and therefore FESE believes that issuing further detailed guidance would be premature at this stage. Should the industry see merits in developing further guidance, FESE stands ready to consider collective industry initiatives as a better way to address the concerns and allow industry players to identify the scope for harmonisation.

Q8: Do you think that the current RCB approach (transparency plus) can deliver on the objective to reduce the price of market data or should it be replaced by an alternative approach such as a revenue cap or LRIC+ model? Please justify your position and provide examples of possible alternatives.

Yes, the current RCB approach (transparency plus) is sufficient and should not be replaced.

The development in prices for pre and post trade data is, as far as FESE can comment and observe, in line with the obligation to make data available on a reasonable commercial basis.

With respect to Exchanges, the development in prices for pre and post trade data overall is, as far as FESE can comment and observe, consistent with the notion of what constitutes a reasonable commercial basis. For most Exchanges, average increases in market data revenues over time have been small, with fee reductions as well as fee increases. FESE understands that when price adaptations do occur, they can be justified by a number of considerations including increase in costs attributable to market data distribution, such as both the direct costs of market data dissemination and the changes to the appropriate share of joint costs with trading in line with the legislation on market data. In such a context, it is not necessary to rethink the current RCB approach.

When assessing different potential approaches, it is crucial that the complexity of market data be taken into account. Exchanges acknowledge that knowing what characterises reasonable commercial terms for the provision of market data is not a simple question. The wide range in the value of the market data between different market participants means that a single price is unlikely to be considered reasonable and fair for all users. For example, technological advances have facilitated the development of new high-frequency trading strategies, increasing the value of very low-latency trading data. At the same time, retail investors are not able to take full advantage of low-latency direct feeds. Article 8(1) of Commission Delegated Regulation 2017/567 acknowledges the range in the value of the market data between different market participants by allowing for differentials in prices charged to different categories of customers as long as the differential is proportionate to the value which the market data represents to those customers, taking into account the scope and scale of the market data as well as the use made by the customer of the market data (e.g. is it for the customer's own trading, for on-selling, or for creating value added data products).

The idea that a single price cannot be considered reasonable for all users due to the wide range in the value users derive from market data services is generally well established. Suppliers can offer the same prices, and other terms and conditions, to all customers who are in the same position according to their published, objective criteria. In turn, Exchanges should remain free to charge different prices to different categories of customers where it is reasonable to do so. For example, an Exchange might charge one set of prices for its trading data to data vendors and other entities who are going to sell it on or re-use it to create derived data services and products and another set of prices for other clients who will not sell or re-use the market data.

Exchanges are prone to significant investments, in order to provide stable, transparent and resilient markets at all times. The aforementioned Article 8(1) implies that (high-quality low latency) Exchange market data is of significant commercial value to many of its various customers. Complete business models are based on the valuable reference price data which is provided by Exchanges on a non-discriminatory basis. The rise of new successful trading venues as well as investment firm bilateral trading (SIs) is clear proof of this. Exchange data fees represent production costs for third parties' business models, rather than a regulatory requirement as often presented.

The current structure is unlikely to negatively affect market outcomes

Exchange market data accounts for a small proportion of fund managers' overall costs. Therefore, the current observed pricing practice, which appears commercially reasonable does not, overall, have a negative impact on end-investors. Furthermore, trends over the past decade suggest that entry of alternative trading venues and the resulting competition for order flow have not been constrained by Exchanges' market data fees. The economic analysis of the current market for market data services and trading services does not provide evidence of market failure. There is therefore no need to clarify or justify any regulation of the pricing of market data services. FESE also refers to the principle of proportionality¹² and the fundamental freedom to conduct a business¹³ which form the basis of the regulatory and economic architecture in the EU and opposes a pricing regulation which should only be considered if there is a clear evidence of a structural market failure.

Current charging structures for market data are unlikely to have significant detrimental effects on market outcomes for investors. Fees charged by fund managers to end-investors typically range between 0,3 to 1,5% of assets under management whereas the portion of such fees attributed to market data only represent 0,001 to 0,005%. Fees ultimately charged by large brokers to end investors represent 2bp of value of trading, market data fees represents 1,2% of such fees charges to end investors.¹⁴ From a public policy and consumer welfare perspective, the key question to ask is whether the current pricing practices have, as outlined above, had negative implications for the functioning of equity markets and their end-users – i.e. investors and companies that are raising capital.

Changes to the current RCB framework would not be justified

Comprehensive regulatory provisions already exist to ensure that prices are transparent, reasonable, commercial and non-discriminatory. Indeed, the current legal framework already contains an ample selection of requirements and key principles regarding the provision of market data by Exchanges. MiFID II/MiFIR obliges trading venues, APAs and SIs to make data available on a reasonable commercial basis. Furthermore, Commission Delegated Regulation 2017/567 introduces the obligation to provide market data on the basis of cost (and a reasonable margin), the obligation to provide market data on a non-discriminatory basis, the obligation to charge for market data on a 'per user basis', the

¹² See Article 5(4) TFEU and the case law of the Court of Justice of the European Union. For instance, Judgment in *The Queen v Ministry of Agriculture, Fisheries and Food, ex parte FEDESA and Others*, C-331/88, ECLI:EU:C:1990:391, para. 13: "the lawfulness of the prohibition of an economic activity is subject to the condition that the prohibitory measures are appropriate and necessary in order to achieve the objectives legitimately pursued by the legislation in question; when there is a choice between several appropriate measures recourse must be had to the least onerous, and the disadvantages caused must not be disproportionate to the aims pursued."

¹³ Article 16 of the EU Charter of Fundamental Rights recognises the freedom to conduct a business. According to the Court of Justice of the European Union, "[t]he protection afforded by Article 16 of the Charter covers the freedom to exercise an economic or commercial activity, the freedom of contract and free competition" (Judgment in *Schaible*, C-102/12, ECLI:EU:C:2013:661, para. 25; see also Judgment in *Sky Österreich*, C-283/11, EU:C:2013:28, para. 42).

¹⁴ Oxera (2019), 'The design of equity trading markets in Europe', 21 March, p.80

obligation to disaggregate market data, the obligation to provide free access to delayed market data to end investors 15 minutes after publication, and the obligation to disclose the price and other terms and conditions for the provision of the market data in a manner which is easily accessible to the public. All this provides for cost reduction possibilities, especially for end investors. It is worth noting that stakeholders such as data vendors who generate a very large majority of the market data procurement costs are not subject to these obligations which results in less transparency and an opaque operating environment.

In addition, European competition policy principles already provide useful guidance on upper and lower boundaries of prices that, in general, will not be considered reasonable - any prices within these boundaries can be considered reasonable¹⁵. Given that competition forces are at work in the market data space and that there is no economic justification for regulating the prices of market data services, there is no need to clarify, nor go beyond the existing framework.

In looking to take its assessment forward on the prices of pre- and post-trade data, FESE believes it is important that ESMA also take a step back to review the structure and dynamics of the entire market data value chain. Exchanges fulfil an important role in the current market structure. Through their significant investments in price formation they provide a high-quality reference price that the market can use. If there is no incentive to invest in high quality reference price which negatively affects the quality of the market and the growth of the Capital Market Union (CMU) due to decreased transparency.

Q9: Do you consider that a revenue cap model as presented above might be a feasible approach to reduce the cost of market data? Which elements would be key for successfully implementing such a model?

Exchanges encourage ESMA to reject more intrusive approaches such as implementing a revenue share limitation or limiting market data charges by reference to costs, such as a LRIC+ or revenue cap model. FESE calls for the current RCB approach to be maintained. The current approach is more proportionate and feasible and best suited to the reality and complexity of the market data environment, value chain and entire financial markets.

The introduction of a revenue cap model would be disproportionate and unjustified

Market structure and the value chain in which market data is produced and consumed is complex, making it challenging to assess the role and impact of regulation and/or identify a clear need for further regulation. It is not possible to determine whether an Exchange has “substantial market power” by evaluating whether any single market data fee is above the “competitive level” or has increased above average. Overall evidence shows that competition is working (both in the trading and the market data space), and new venues thrive on the basis of Exchange market data. The rise of new trading venues is clear evidence

¹⁵ Oxera (2014), ‘Reasonable commercial terms for market data services - response to ESMA consultation’, 4 September, p. 17 [According to the Court of Justice of the European Union, a price is excessive when “it has no reasonable relation to the economic value of the product supplied” \(Judgment in General Motors, 26/75, ECLI:EU:C:1975:150, para. 12; Judgment in United Brands v Commission, Case C-27/76, ECLI:EU:C:1978:22, para. 250\). In United Brands, the Court formulated the analytical framework for excessive pricing and laid down a two-fold test: “the questions therefore to be determined are whether the difference between the costs actually incurred and the price actually charged is excessive, and, if the answer to this question is in the affirmative, whether a price has been imposed which is either unfair in itself or when compared to other products” \(Judgment in United Brands v Commission, Case C-27/76, ECLI:EU:C:1978:22, para. 252\). Accordingly, in the case of market data, the definition of what constitutes a reasonable commercial basis should be based not on a pure mathematical formula but rather on the economic value of market data. In that regard, it is critical to take into account value-added downstream services that can be offered on the basis of the data services provided by data vendors and other operators which resell data to end-customers. FESE notes that in any case however, it would not be concerned by rules on excessive pricing since neither FESE nor any of its Members are dominant on any relevant market that they are active on.](#)

of this. There is no evidence that would point to market failure or barrier to entry for new trading venues. On the contrary, new entrants take and use Exchange data for commercial purposes and compete at lower cost with Exchanges.

FESE believes that any changes to RCB would be discriminatory disproportionate and unjustified, especially as there is no evidence of market failure to justify stricter regulation and nothing indicating the existence of barriers to entry for competitors. Moreover, a revenue cap or other forms of price control would create strong disincentives to investment in producing ever improved high quality reference price and enhancing the functioning of capital markets in Europe. Furthermore, the introduction of a revenue cap model would be infinitely complicated to apply in practice and is unlikely to be effective in the context of market data pricing. Instead, regulators and policymakers should look adopt a comprehensive approach to assess the development in prices for market data and in doing so consider the scale and nature of the value chain for market data as well as recognise the importance of the price formation process and creation of a reference price for the market.

Recognising the scale and nature of the market data value chain

Across the market data value chain, Exchanges are not “the last mile” of market data distribution: changes in market data costs are therefore not necessarily due to Exchanges, which are not responsible for mark-ups charged by other participants in the value chain and/or data industry.

Exchange market data is often aggregated and complemented by other sources of market data and value-added services. As such, ESMA rightly acknowledged in its 2014 *Technical Advice to the Commission on MiFID II and MiFIR*, that there is a risk that any price reduction at trading venue level will not be passed on to the end users and noted that data vendors and connectivity providers are not within the scope of MiFID/MiFIR.¹⁶ The situation remains very much the same today, with Exchange market data revenues accounting for around 15% of the total value chain. In this context, there is a risk that any price reduction of a revenue cap model would not be passed on to the end users.

It is critical, when considering moving away from the current model, that policymakers consider the overall market data value chain. Market data fees charged by trading venues (including RMs) are just one part of the market data procurement costs for users including end investors. As previously suggested, a review of the development in prices for pre- and post-trade data restricted to Exchanges only will have a limited to no effect on the ‘overall cost of market data’ of the end investor. In contrast, the starting point of any review should focus on a comprehensive review of the market data value chain with a view to informing potential changes to the scope of the regulation.

Recognising the importance of price formation

Lastly, when reflecting upon changes to the current RCB framework, it is paramount that policymakers and the market as a whole do not overlook the key role of reference price formation in equity trading markets.

A substantial part of the activities undertaken by Exchanges contributes to the delivery of a reliable price formation process. This process allows investors to know that the prices at which they buy and sell at are fair and accurate. In order to deliver reliable and quality price formation and market data services in line with client demand. Exchanges invest in hardware

¹⁶ ESMA (2014), Final Report, Technical Advice to the Commission on MiFID II and MiFIR, 19 December, p. 267, para. 10

and networks, developing and implementing market models, setting trading rules, and monitoring and enforcing compliance with these rules in adherence to regulatory requirements. Most of these activities are undertaken to deliver both trading and price formation. Market data is the outcome of the price formation process. The value of the price formation process, and consequently Exchange market data, derives from the quality of liquidity pooling and liquidity incentivisation on the one hand and from the speed at which it occurs and is distributed (latency of roundtrip) as well as its quality and reliability on the other hand. Exchanges have made continuous investments to excel in this respect making exchange market data extremely valuable for a wide variety of market participants.

There is a risk moving forward that the quality of Exchange market data may be negatively affected as a result of regulatory intervention. The quality of Exchange market data (i.e. the reference price) would be affected if Exchanges are limited in their ability to benefit from their effort in providing a reference price to the market. In such a scenario, there would be less of an incentive for Exchanges to further invest in the quality of the reference price. A lower quality reference price, or even lack of reference price in the market, would result in a strong lack of transparency for the end investor as it would make it more difficult for the end investor to benchmark a price in a fragmented market. Furthermore, alternative venues are using the reference price to run their markets. Overall, the quality of the reference price diminishing goes hand in hand with the quality of the entire market and, as a result, the CMU will not achieve its overall objectives.

Q10: Did data disaggregation result in lower costs for market data for data users? If not, please explain why?

Trading venues, as well as other industry stakeholders (i.e. data vendors) have registered very little demand for disaggregated market data. This indicates that the appetite for disaggregated market data is quite small. Furthermore, while trading venues have borne the costs of implementing these requirements, it is important to note that the benefits will not necessarily flow to end users unless all key participants in the value chain, including those outside of the regulatory scope, adapt their infrastructure and pricing models to support disaggregation.

Exchanges note that disaggregation presents a cost reduction potential that all Exchanges have implemented. Disaggregated market data is however not currently being used by market participants.

Q11: Why has there been only little demand in disaggregated data?

Exchanges have noted that there has been barely any demand for disaggregated data overall.

There have been complaints from market data users that market data policies have become too complex, more granular, and difficult to understand. In such a context, it is important to note that the obligation to provide market data in disaggregated formats has inevitably considerably contributed to increasing the complexity and granularity of data fee grids and costs to maintain them.

Q12: Do trading venues and APAs comply with the requirement to make available data free of charge 15 minutes after publication? If not, please explain in which areas you have identified deficiencies

Exchanges have made significant efforts to comply with the requirement to make data available free of charge 15 minutes after publication. A common approach to the requirements set out in Q&A 10, and taking into account the current industry structure,

seems to have emerged in order to allow for the provision of 15-minute delayed data. Access to data by an average investor is generally done through a website and the machine-readable requirement should be considered to be met when the data is downloadable. Exchanges consider that such an approach guarantees a smooth and homogenous implementation of the Q&A across the industry.

Articulation of ESMA Q&A 10 with ESMA Q&A 9 (b)

FESE believes that Q&A 10 needs to be read in parallel with Q&A 9. Indeed, Q&A 10 clearly states that “(...) *This is without prejudice to Q&A 9 (b) which allows, in certain cases, to charge fees or other similar restrictions on data*”. The fact that Q&A 10 is without prejudice to Q&A 9 (b) means that the intention of Q&A 10 is not to hinder Exchanges obtaining some return on the investments that they make with respect to market data. Exchanges therefore consider that professional users accessing the data for use in relation to their business inevitably charge customers one way or another for such data. Consequently, Exchanges make data available against a fee to professionals who provide services against a fee, even if the fee does not directly relate to the data.

Q&A 10 should not be indented to apply to professional users of data

The Q&A clearly states that the data published is supposed to ensure that the information published by APAs and trading venues “*can be effectively and efficiently used by the public*”. This wording targets the average investor rather than professionals. Furthermore, the Q&A also states that APAs, CTPs and trading venues should provide the data “*in a format that can be understood by an average reader*”. This wording also reflects the fact that the Q&A targets delayed data intended for the general public. Exchanges understand that the scope of the Q&A is limited to the provision of delayed data that is intended for non-commercial use. Furthermore, something aimed at a non-professional and for non-commercial use could still be used for professional use. Exchanges should not have to invest in products of other commercial companies.

In this context, Exchanges are of the opinion that the publication of data on a trading venue’s website required by the regulation, requires limited clarification.

Q13: Do you consider it necessary to provide further supervisory guidance in this area (for instance by reviewing Q&As 9 and/or 10) Please justify your position and explain in which area further guidance may be needed? Please differentiate between pre- and post-trade data.

FESE believes that ESMA should provide some clarification regarding the requirement to make data available free of charge 15 minutes after publication. Specifically, FESE believes that the Q&A should also ensure the capability of Exchanges to monitor users accessing Exchange data in order to verify that they do not redistribute the data. This is essential to ensure the level playing field of such data users with Exchanges’ clients who obtain data for redistribution purposes.

It is important to note that professional users accessing the data for uses that relate to their business activities will in some way or another charge customers for such data. Exchanges’ data is an input for such business activities, and it would be discriminatory and disproportionate to mandate that such input is provided for free to those professional users. Consequently, trading venues will make data available for a fee to professionals who provide services for a fee.

In order to monitor, track and control the use of delayed data and allow that the use for commercial purposes can be identified, trading venues generally need to have a minimum degree of interaction with users. Control of data access should not be prohibited in the Q&A since it would have the effect of creating an un-level playing field between data sources and those redistributing the data on a commercial basis against the spirit of Level 1 and/or Level 2.

Q&A 10 should be adjusted to ensure that it is fully consistent with Q&A 9a in that “The information should be made available directly to end users. Where the trading venues makes data available via third parties, this should not impose restrictions on access to that data to end users.”

For pre-trade data, FESE believes that a snapshot approach is much more useful for the average user than a full file service.

Most importantly, FESE believes that the requirement to make the data available for 24 hours is disproportionate and strongly suggests limiting the availability of data for the current day. Feedback received suggests that NCAs also subscribe to this logic. 24-hour data consists in historical data and therefore can be charged for as provided in Q&A 9b. Further editing Q&A 10 to limit the availability of data to the “whole trading day” would ensure that the inconsistencies between Q&A 9 and Q&A 10 are definitively addressed and in doing so guarantee smooth and homogenous implementation of the Q&A across the industry. Indeed, current uncertainty surrounding Q&A 10 currently has inevitably resulted in difficulties regarding the implementation of the Q&A by trading venues.

Q14: Do you agree that the identified reasons, in particular the regulatory framework and competition by non-regulated entities, make it unattractive to operate an equity CT?

In assessing the case for an EU MiFID II Consolidated Post-Trade Tape Provider (CTP) and the reasons why one is yet to emerge, it is worth beginning by reviewing the main arguments advanced in this debate by the proponents of the consolidated tape’s (CT) introduction. In general, it has been suggested that an EU ‘MiFID II’ CT is required to:

- 1) Aggregate market data into a clean and comprehensive consolidated tape;
- 2) Provide a high level of post-trade transparency around trading activity across all venues (lit and dark alike); and
- 3) Improve disclosure of volumes and prices in a timely manner after transactions occur in order to increase transparency, strengthen best execution and generally improve competitiveness in Europe.

While this question addresses the multi-faceted proposals why an equity CT has not yet emerged, we believe the focus should rather be on its intended objectives, purpose and role within the European market structure framework.

In this regard, we have the following views which interlink with ESMA’s analysis but are placed in a forward-looking perspective. As a general starting point, we believe there are two fundamental issues to be addressed:

- **Specificities of the European market:** third country CT models should not simply be replicated as their specificities do not apply to European financial markets;
- **Brexit:** the impact of the UK’s departure must be factored into the assessment at this stage. In our view, the quality of a CT without UK data is questionable. As ESMA itself

notes; however, it appears difficult to conceive of mechanisms to include UK data, notably via voluntary mechanisms, post Brexit and, as such, the value of an EU27 CT, particularly real-time, would be weakened.

Beyond these issues, and in respect of the consideration of potential approaches on the CT, we believe the following issues need to be addressed:

- **Scope:** it is critical that all execution venues (trading venues, APAs and SIs) be covered in order to deliver comprehensive consolidated data, either by existing data vendors or a future CT; it is the non-exchange data which is currently not consolidated and where transparency lacks. This is critical to the delivery of *comprehensive* post-trade data;
- **Data consistency and quality of SI and OTC:** requires significant improvement by investment firms for the data to be *consolidatable*, either by existing data vendors or a future CT;
- **Data vendors:**
 - Careful consideration should be given to the fact that market participants would most likely want to access data vendor products in addition to having access to a CT, for the purposes of, *inter alia*, data analytics. Data vendors have unparalleled expertise in the area of providing comprehensive services that go well beyond the sphere of data aggregation (i.e. news, reference data, historical data and analysis tools). A desire on the part of market participants to access such added value services provided by data vendors probably means that ultimately investors would connect to data vendors as well as CT(s);
 - Moreover, *data vendors would be in a position to consolidate* a broader range of data than they do today in the event that data quality, consistency and reliability of SI and OTC were improved;
- **Use-case for a CT:**
 - The viability and potential attractiveness of a CT depends on the regulatory use case ultimately attributed to it. The assessment should include the users (i.e. market participants, regulators or others) and the roles it is intended to serve within the overall market (taking into account structural issues related to the number of trading venues and technology issues around latency);
 - While ESMA favours the development of a *real-time CT* in line with the current MiFID II requirements, it appears to accept that such a CT would be limited in its use for trading purposes, given ‘inevitable latency’ issues and instead would help data users ‘using the data for valuation purposes, risk management or back office activities’ (para 118 of the CP);
 - It seems clear that, under the scenario of the creation of real-time CT, market participants would still access market data via current sources, either directly from venues or indirectly from data vendors. Policymakers must carefully assess whether the benefits of such a development would be balanced by the costs that market participants would incur, notably due to any mandatory use of a CT;
 - In our view, and as acknowledged by ESMA in the CP, the creation of an *end-of-day tape of record* (TOR) would represent a more cost effective solution, avoid latency issues and deliver clear value to the market and investors: notably, a means for them to analyse execution quality. This option would, however, require an amendment to MiFID II.

While we do not wish to comment in detail on the reasons for the lack of an emergence of an equity CT, we would like to comment on the analysis of the costs of post-trade market data from trading venues and APAs as outlined in paragraphs 114 and 115. FESE would recommend that ESMA first assesses the reasons behind the relatively huge outlying figures.

Q15: Do you consider that further elements hinder the establishment of an equity CT? If yes, please explain which elements are missing and why they matter.

The concept of commercial competing EU CTs was introduced in MiFID II/MiFIR in order to re-aggregate a fragmented post-trade market data space. However, today it can be observed that the industry that SI and OTC data quality, reliability and consistency is not fit for that purpose.

Most sources of reliable data, such as exchange data, are aggregated by market data vendors and made available to users. However, there is a lack of non-trading venue data in the data vendor offerings. This is because low levels of off-venue post-trade data quality, reliability and consistency of SI and OTC transactions hampers data consolidation by data vendors and/or the emergence of CT providers. This concerns both the timeliness and content of the data, as well as the inconsistent approaches in respect of flagging trades.

In the current landscape, neither an APA nor a CT (nor a market data vendor already aggregating the data) is in a position to solve data quality, reliability and consistency issues downstream which originate from inconsistent trade reporting behaviours at the source. Without improvements to data quality at the source first, an EU CT or data vendor will never be in a position to increase reliable and trustworthy transparency in the market: the quality, reliability and consistency of output data generated by a CT can only be as good as that of its input data.

In this context, FESE believes that quality, consistency and completeness of non-trading venue data is the main obstacle to the provision of a 100% view of the market. Addressing these issues first would allow for a data vendor and/or a CTP to consolidate the data. Without this, any data consolidated, either by a data vendor or via a CT and distributed is unlikely to be of value for potential clients as it will not offer an increased transparent view of trading in the EU.

Therefore, FESE believes that prior to the appointment of a single EU CT by the EU authorities, it is necessary, as a prerequisite, that the industry, policymakers and regulators solve structural issues regarding the quality, reliability and consistency of trade data.

It is also worth noting that unfortunately elements of regulation cement some unlevelled data quality. We pinpoint in particular RTS 25 which allows different latency standards and different timestamp granularity. As such, it is difficult to see how market data under such different requirements can be consolidated in a meaningful fashion.

Q16: Please explain what CTP would best meet the needs of users and the market?

First, as noted under Q15 issues with *non-trading venue data quality, consistency and reliability need to be resolved* before any CT is created. Resolution of these issues is a precondition to a consolidated view of the entire market, which is what we understand market participants want as a priority. It would also allow existing data vendors to provide commercial solutions meeting the required objectives.

Beyond this, a strong use-case and mandatory consumption would be required in the event of the EU launching a tender to appoint a single commercial CTP.

In our view, there is a fundamental issue of latency in respect of the *real-time CT*. As ESMA itself highlights, there are currently 170 trading venues in Europe: real-time aggregation of data from these venues plus SIs and OTC (from APAs) into a single tape would not be easy and would inevitably come at a *higher latency*, arising from the sourcing of the data and the mechanics of consolidation and redistribution. We note that ESMA itself recognises these latency issues (para 118 in the CP).

Any market participant seeking to use real-time data for trading purposes would still seek to access market data from the *lowest latency sources*. Alongside this, market participants will also, in our view, continue to access real-time market data solutions from data vendors given the range of additional services such vendors provide, notably data analytics. We believe it is likely that all (especially large) market participants will continue to rely on services provided by data vendors in the event of a CT emerging. Data vendors have unparalleled expertise in the area of providing comprehensive services that go well beyond the sphere of data aggregation (i.e. news, reference data, historical data and analysis tools).

A real-time CT *designed for trading purposes* would therefore likely fail and lead to an increase in overall costs to the market, particularly since, it would, for economic reasons, probably have to be funded by mandatory contribution and use. This means market participants would have to pay a high price while not obtaining the service they need. Consequently, unless the CT fulfils a strong use case at reasonable cost, the CT will increase the overall costs of market data for market participants.

Assuming a strong use case and adequate compensation to Exchanges for the use of their data (see Q25), an end-of-day tape of record (TOR) covering all execution venues (trading venues, APAs and SIs) would best meet the needs of users and the market.

Such a delayed tape of record (TOR) would, based on enhanced data quality and consistency, deliver an exhaustive view of trade execution, covering Regulated Markets, MTFs, SIs and OTC transactions and would involve cheaper technological infrastructure. We provide more details on how such a TOR could function, and the benefits it would bring, under Q21.

Alongside this, provisions in MiFIR governing deferred publication increase the challenges of consolidate all data sources in a synchronised and reliable way.

On a separate note, Exchanges believe that there could be merit in considering that what becomes the norm for equity and equity-like instruments should potentially become the norm for fixed income too. Enhanced transparency and competition in European Bond markets could be instrumental in attracting non-European investors to the EU, fostering CMU and making the euro more attractive.

Q17: Do you agree that real-time post-trade data is available from both trading venues and APAs as well as data vendors and that the data is currently not covering 100% of the market, i.e. including all equity trading venues in the EU and all APAs reporting transactions in equity instruments? If not, please explain.

Yes, FESE agrees. However, the real issue is the quality of the data. Market data vendors currently consolidate Exchange market data, since it is of high quality and fully reliable. But they do not currently consolidate SI and OTC transaction data, the quality of which is very

low. The aim should be the provision, by a CTP and/or data vendor, of a comprehensive view of EU liquidity by including data from all trading venues, SIs, and APAs.

Improving data quality and consistency could also result in enhanced data vendors solutions since data vendors will likely develop consolidated data products including SI and OTC transactions if it is possible to obtain reliable and consistent SI and OTC data from data sources.

Q18: Do you agree that post-trade data is provided on a timely basis and meets the requirements set out in MiFID II/MiFIR and in the level 2 provisions? If not, please explain.

FESE agrees that trading venue post-trade data is made available in a timely manner in line with the requirements set out in MiFID II/MiFIR and in the Level 2 provisions. This is not necessarily the case of transaction data emanating from SIs and OTC, which creates issues for consolidating and having a full view of the entire market.

In some cases, it has been reported that investment firms maintain a manual process, i.e. have a natural person at a desk, for reporting OTC trades to their APA. There are legitimate concerns whether such trades get reported within in one minute of such trade as required by MiFID II for equity and equity-like products (RTS1) on a structural basis. In addition, for non-liquid instruments, it can take up to 5 days for an instrument to appear in the FIRDS database. The trade cannot be reported to the APA until this is available. Furthermore, and although it is in line with MiFID II/MiFIR, significant publication delays in off-venue transactions do not support high quality consolidated data either.

The structural issues around the reliability and timeliness of trade reporting should be solved first, enabling and requiring SIs and OTC to report in a timely manner, before addressing a CT. Data quality for some parts of the reporting can only be achieved at the source. A downstream consolidated tape cannot perform data cleansing because it will not have the necessary insight over the (nature of the) order/transaction lifecycle. It can therefore not have any strong view over the overall data quality.

Q19: Do you agree with the issues on the content of data and the use of different data standards identified or do you consider that important issues are missing and/or not correctly presented?

FESE agrees with the issues underlined in the consultation paper regarding the shortcomings of the content of market data and quality, reliability and consistency of trade reports, in particular for OTC transactions in shares. FESE also agrees with ESMA's assessment that a first and indispensable step is to ensure a high degree of data quality and consistency across the industry.

In terms of market data quality and reliability, FESE particularly refers to the timeliness with which OTC trades are reported (see Q18), but also inconsistencies in the content are not uncommon, including:

- Data fields being filled incorrectly by the investment firm. Example: Investment firms including the operating MIC of a regulated market in the trading venue field of their reported trade, rather than reporting it as an off-exchange trade.
- Investment firms not completing all required data fields. Example: RTS 2 requires the nominal value of a trade to be reported. In some cases, investment firms fail to submit all required information to their APA when reporting a trade.

- A trade is not reported or two investment firms report the same trade (i.e. duplication of the trade). Example: particularly when one SI trades against another SI there can be confusion about which of the SIs should report the trade.

In terms of consistency, FESE particularly refers to inconsistencies in practices around the flagging of trades and suggests that standardising the flagging of trades, in accordance with MMT, could resolve such inconsistencies.

FESE does not agree with ESMA however, that Exchanges need to be further regulated as regards providing data in a machine-readable format, as data is already machine-readable in exchange feeds. We are aware that there is a request by investment firms that Exchanges should adapt their market data feeds. Again, this would burden Exchanges significantly, not only in respect to cost of creating new data feeds, but also by reducing their ability to compete on the issue of timely execution (one variable of MiFID's best execution). Exchanges fine tune their digital feeds in order to shorten round-trip times (time elapsed between customer sent order and received execution confirmation by the exchange). Furthermore, as of today, exchange data is already being consolidated by market data vendors, it is the off-venue data that is missing on vendors screens.

FESE is mindful that MMT is a useful toolbox, broadly and consistently applied by trading venues. The industry needs in addition an enforceable user manual for broader and more consistent implementation of MMT across SI/OTC trade reporting. Preferably this user manual should include a broad list of trade reporting scenarios and their corresponding trading flagging solution.

Q20: Do you agree that the observed deficiencies make it challenging to consolidate data in a real-time data feed? If yes, how could those deficiencies best be tackled in your view?

As noted in our responses to earlier questions, FESE believes that the pre-requisite to the development of a CT is: (i) resolution of non-trading venue data quality, consistency and reliability issues, and (ii) the application of MMT to all market participants. However, while these changes would alleviate many of the obstacles impeding the delivery of an aggregated and comprehensive view of the market by either existing data vendors and/or a potential CT, significant issues would remain in respect of consolidating data in a real-time data feed.

In our view, there is a fundamental issue of latency in respect of the real-time CT. As ESMA itself highlights, there are currently 170 trading venues in Europe: real-time aggregation of data from these venues plus SIs and OTC (from APAs) into a single tape would not be easy and would inevitably come at a **higher latency**, arising from the sourcing of the data and the mechanics of consolidation and redistribution.

Any market participant seeking to use real-time data for trading purposes would still seek to access market data from the **lowest latency sources**. Alongside this, market participants will also, in our view, continue to access real-time market data solutions from data vendors given the range of additional services such vendors provide, notably data analytics. We believe it is likely that all (especially large) market participants will continue to rely on services provided by data vendors in the event a CT emerges. Data vendors have unparalleled expertise in the area of providing comprehensive services that go well beyond the sphere of data aggregation (i.e. news, reference data, historical data and analysis tools).

A real-time CT *designed for trading purposes* would most likely fail and lead to an increase in overall costs to the market, particularly since, to be successful, it would have to benefit from mandatory contribution and use.

Q21: What are the risks of not having a CTP and the benefits of having one?

In our view, the real question is not so much the benefits / risks of having a CTP, but rather whether the fundamental goals and objectives are secured. It is worth reiterating the objectives generally put forward by the proponents of a tape, as outlined in our response to Q14:

- 1) Aggregate market data into a clean and comprehensive consolidated tape;
- 2) Provide a high level of post-trade transparency around trading activity across all venues (lit and dark alike); and
- 3) Improve disclosure of volumes and prices in a timely manner after transactions occur in order to increase transparency, strengthen best execution and generally improve competitiveness in Europe.

In terms of the analysis in the CP, we disagree with the contention in the CP (para 156) that a CTP would invest *'in improving the quality of the data reported in order to provide meaningful information to market participants*. As outlined above in earlier responses, and in line with ESMA's own analysis, the pre-requisite for a CT of any kind is resolution of data quality, consistency and reliability issues in respect of SI and OTC transactions. Neither an APA (today) or (potentially in the future) a CTP can resolve these issues.

In addition, trading venues need to be able to compete on roundtrip times (time needed to send an order, get it executed and be informed about the trade price) as they are competing for trading business. Here, proprietary formats are used as a means to compete for order flow by using formats that minimize latency. Requiring an open source format for trading venue feeds would impact competition and therefore is not imposed by MiFID II/MiFIR. Furthermore, it is important to note that consolidation of Exchange market data is already being provided by market data vendors.

The divergence may to a certain be over-stated. The differentiation is also a logical consequence of the greater diversity/fragmentation of capital markets in Europe (compared to other markets such as the US), which is, in itself, a consequence of MiFID II/MiFIR and a reflection of the European situation.

Competition is by itself a process which leads to diversity which may not have the benefit of simplicity but offers a wider choice and induces innovation. In a competitive market, market data offerings may not necessarily be fully comparable since the various market data products available throughout the EU are not identical. Indeed, Exchanges develop and produce diverse products in order to develop innovative and unique market data offerings. For this reason, it is important that any future development of standardised templates not hinder the development of new products and innovation in this area.

More generally, best practices are still emerging and therefore FESE believes that issuing further detailed guidance would be premature at this stage. Should the industry see merits in developing further guidance, FESE stands ready to consider collective industry initiatives as a better way to address the concerns and allow industry players to identify the scope for harmonisation.

A real-time tape is faced with considerable issues as noted above (see Q16&20).

In contrast, an end-of-day “tape of record” (TOR) could be a sensible and an attractive alternative. Such TOR would consolidate and disseminate, after markets close, of the details of all transactions that have taken place in these markets during the trading session.

These details would include, among others: the hour, price and volume of each individual transaction. This information is very useful for investors as it allows them to analyse the performance of each instrument during the trading session and carry out compliance checks. Importantly, it would allow for the assessment of execution quality. As a quick solution to show the full liquidity at the end of the trading day, aggregated volumes per ISIN for equity instruments, calculated on the basis of data under Art 22 MiFIR in conjunction with RTS 1, would be made available to all investors.

The advantages of a TOR versus a real-time or delayed CT are the following:

- Information easily available: this information is already being generated by exchanges, and in most cases, commercialised to clients. It is typically delivered to clients by Exchanges after 18.30 CET, so the CTP could start redistributing the consolidated information at 19.30 CET;
- Infrastructure cost: this information is often generated in plain text files, allowing end users to easily process the contents. The CTP would be able to receive, process and disseminate the information without having to make a large investment in IT infrastructure;
- Maintenance cost: the cost of maintaining an IT infrastructure that receives and processes plain text files once a day is a small fraction of the cost of an IT infrastructure that has to receive and process information on a real-time / delayed basis;
- Compliance checks: the information consolidated by the tape of record may include additional information compared to a real-time / delayed CT (e.g. block trades information, amendments and cancelations, etc.);
- No latency issues: given that the information is provided as a file after markets close, there are no latency issues (e.g. time to process the information by the CTP vs Exchanges’ feeds, distance from the data source to the CTP receiver, etc.).

In line with our earlier responses, the pre-requisite to consolidation of aggregated and comprehensive data by either existing data vendors, such a TOR, or any other CT, is: (i) resolution of non-trading venue data quality, consistency and reliability issues, and (ii) the application of MMT to all market participants.

Q22: Would you be supportive of an industry-led initiative to further improve data quality and the use of harmonised standards or would you prefer ESMA guidance? Please explain.

Exchanges have always been very supportive of industry-led initiatives to further improve data quality and the use of harmonised standards. The consistency of market data provided by Exchanges is itself underpinned by an industry-led initiative which has proved to be very useful: MMT. MMT is an operational solution, that effectively supports trade flagging requirements raised in RTS 1 and RTS 2 and which is fully protocol agnostic. FESE believes that it is necessary to look at broader implementation of MMT as part of a joint industry and regulatory course of action so as to enhance SI and OTC data quality and would support more ESMA guidance on standards in this area. Indeed, its extension to a full range of market participants would deliver greater levels of data consistency overall.

We would caution, however, on expectations. MMT is a tool to make consolidation more efficient. It is not a tool that would deprive regulators from defining what exactly is addressable liquidity and what not.

The current debate raised by investment firms should in our view require regulatory attention and careful consideration to define what qualifies as addressable liquidity and what does not. Before MMT can be applied in this respect, regulators need to clearly address this distinction. In any case, it is important that a consolidated view is comprehensive including 100% of transactions.

Q23: In addition to the standardisation of the reporting and format, as described before, did you identify any further relevant data quality issue to be considered for the successful establishment of CTPs?

Overall, FESE believes that the inconsistent trade reporting behaviours of SIs and OTC trades at the source must be considered in the CT debate. It is key to be able to guarantee high quality, reliability and consistent flagging of SI and OTC trades in order to deliver a CT that can be considered meaningful.

While APAs do provide value as regards standardisation and aggregation of data, and usually have comprehensive data quality checks in place, they cannot prevent all data quality issues once they occur directly at the source and are not detectable even through very comprehensive data checks and validations. Some data quality issues may even occur due to different treatment across member states or allowed for per regulation (extensive delay of data). While current trade flags for on-venue executions are fully consistent, issues can be observed with trade categorisation of OTC/SI trade reports and duplicates of OTC/SI reports. Although APAs contribute to overall efficiency, there still seems to be uncertainty across investment firms in the EU on how to adequately flag executed transactions before submitting them to APAs. While APAs foster consolidation and quality of data to a certain extent, it is not their role to provide legal guidance to investment firms regarding how their transactions may have to be flagged according to the relevant regulatory requirements. APAs are not able to verify these issues or adapt accordingly. Incorrect reference data is also a likely major source of data quality issues, e.g. in case an instrument is wrongly identified as fixed income instead of as an equity-like instrument. Validations as well as delays would consequentially be applied wrongly.

In order to address these issues, FESE believes that all trading mechanisms (including SIs and OTC) should be required to use the MMT model. The benefits of standardised flagging are obvious: there is no need of local re-interpretation of the data at each stage of processing. MMT has the potential to support the mechanical and processing of trade flags along the entire market data value chain. Furthermore, improvement of the FIRDS database would also be very helpful.

Q24: Do you agree that the mandatory contribution from trading venues and APAs to a CTP would favour the establishment of CT?

Yes, requiring mandatory contribution of market data from trading venues and APAs to the CTP, as currently foreseen in the regulation, would favour the establishment of a CT, once a regulatory use case has been established. Exchanges underline the importance of ensuring by regulation that trading venues and APAs are fairly compensated for such mandatory contribution of market data to the CTP. Otherwise, this would play as a disincentive to invest in producing high quality data.

Q25: Do you have preferences between the option of (i) requiring trading venues and APAs to contribute data to the CT, or, in alternative (ii) setting forth criteria to determine the price that CTPs should pay to TVs and APAs for the data? If so, please explain why.

Ideally, a pertinent tape would provide for mandatory use by every trading participant as well as mandatory payment by all trading participants. This would create an incentive for transparency and quality and ensure that the content of the tape be meaningful. Requiring trading venues and APAs to contribute data to the CT free of charge, below cost or at a very unattractive/unreasonable margin risks seriously undermining Exchanges' role in the market, i.e. the investment in and provision of a reference price, and create disincentive for investment allowing the production of such reference price in the market. It will negatively affect the price formation process within the EU, undermining transparent markets to the benefit of dark markets and most importantly to the detriment of investors. It is in fact the financing of the economy by regulated markets which is put at risk here in complete contradiction with the aims of the Capital Markets Union initiative.

When looking into the design of a potential CT, it is crucial to not overlook the important role of the reference price in equity trading markets and understand that price formation, and in turn, market data services, is not delivered incidentally. Indeed, a substantial part of the activities and investments undertaken by Exchanges contribute to the delivery of a reliable price formation process and subsequently reference prices. This process allows investors to know that the prices at which they buy and sell at are fair and accurate. In order to deliver reliable and quality price formation and market data services, Exchanges invest in hardware and networks, developing and implementing market models, setting trading rules, and monitoring and enforcing compliance with these rules in adherence to regulatory requirements. Most of these activities are undertaken to deliver both trading and price formation. Exchanges have made continuous investments making exchange market data very valuable for a wide variety of market participants.

It is important to note that various models of data and consolidation exist, depending on the market microstructure, the jurisdictional basis of financial market regulation (a harmonised basis or a fragmented one like in the EU), and the financial market regulation itself (e.g. Reg NMS vs. MiFID II). Financial market regulations differ across regions, and, in turn, so do the potential requirements and use cases for a consolidated tape. It is therefore important to reflect upon the type of model that would be functional and pertinent in the EU, rather than implementing the models that already exist, but under different conditions/regulations.

Q26: Do you agree that the mandatory consumption could favour the establishment of a CT? If not, please explain your concerns associated with the mandatory consumption.

Exchanges believe that mandatory consumption together with mandatory payment by each market participant would favour the establishment of a CT since it would ensure funding and revenues to the CT. However, in order to ensure that the CT does not only add costs to the industry, the CT must deliver on a regulatory use case as well. When reflecting upon the overall funding structure, mandatory tape fees should reflect the number of data sources and the data fees of the respective data sources plus operational charges for the tape provider. It is important to underline that in the event of an EU CT, the number of data sources would be significantly higher than the number of contributors to the tapes in the US. For this reason, the tape fees that exist in the US can neither be compared nor be used as a benchmark for tape fees in the EU, since they would not reflect the make-up of capital markets in Europe and would misrepresent the number of data sources, as well as the

number of data users, in the EU. Exchanges also wish to underline that the sum of the fees of an EU tape should not also be compared to the US market since the US market has significantly higher economies of scale.

Most importantly, Exchanges underline that the funding model should be aligned with the overall objective of MiFID II. We need to make sure that lit trading remains the norm rather than the exception.

The Tape of Record - as a viable alternative in the current regulatory setting - would provide substantial additional transparency at EU level, at comparably low cost.

Q27: Would mandatory consumption impact other rules in MiFID II and if yes, how?

If there is to be mandatory consumption of the consolidated tape, Exchanges argue that it is absolutely necessary that it is based on a sound regulatory use case. This would ensure that the consolidated tape does not create costs without benefit.

Q28: Do you consider it necessary that the CT covers all trading venues and APAs and the whole scope of equity instruments or would you be supportive of limiting the coverage of the CT? Please provide reasons for your preference and explain your preferred approach.

Addressing calls from the industry for a comprehensive and clean consolidated tape requires a coverage of all execution mechanisms/data sources. This is important in terms of covering both trading on venues as well as SI and OTC trades, particularly given the growth of trading by SIs since the introduction of MiFID II. Having a 100% view of the market - including SIs and OTC - would be critical to ensuring that investors can assess execution quality in a comprehensive manner. It would be nonsensical to establish a CT with limited coverage where SIs and OTCs are dispensed from contributing, as this would perpetuate current data quality and consistency issues and in turn lead to the underlying rationale for a tape being deprived of practical significance. In this context we urge ESMA to ensure that off-venue transparency is also made public comprehensively in order to show the full liquidity of the EU markets (overall turnover per day in instruments/asset classes). The current discussion, thought, as regards addressable and non-addressable liquidity is targeted at limiting transparency of off-venue trades. Regulators should ensure sensible and fair transparency, and note that MMT may identify such differences, but only once regulators have defined the criteria and regulatory basis to do so.

While market data from Exchanges is usually 100% reliable, market data originating from SI and OTC trade reporting still lacks quality and consistency. This issue seems to be especially driven by inconsistent SI and OTC reporting at the source. This is not a new problem: under MiFID I, such inconsistencies lay at the heart of the diverging estimations of the levels of dark trading in the EU. It is only logical therefore, that such shortcomings be addressed as a matter of priority to allow the CT and others to consolidate the entire market. It is important to note that although APAs and ARMs contribute to efficiency (data quality checks/first point of contact for regulators and customers alike), there is still uncertainty across investment firms in the EU on how to adequately flag executed transactions before submitting them to APAs. While APAs foster consolidation and quality of data to a certain extent, it is not their role to provide legal guidance to investment firms regarding how their transactions may have to be flagged according to the relevant regulatory requirements.

There is therefore a necessity to seriously consider how a CT could go about solving data quality issues that originate from inconsistent trade reporting behaviours at the source and

that APAs have been powerless to address. FESE reiterates that MMT would be a useful tool for this very reason. In order to improve SI and OTC trade reporting, an enforceable user guide on how to use these MMT tools could also be necessary. In the current landscape (heterogenous quality of data), neither an APA nor a CT is in a position to solve data quality issues downstream originating for inconsistent trade reporting behaviours at the source (i.e. “garbage in - garbage out”).

Q29: Do you agree with ESMA’s preferred model of real-time CT? If you consider that, on the contrary, the delayed or tape of record CT are preferable, please indicate the reasons of your preference.

In our view, there is a fundamental issue of latency in respect of the real-time CT.

As ESMA itself highlights, there are currently 170 trading venues in Europe: real-time aggregation of data from these venues plus SIs and OTC (from APAs) into a single tape would not be easy and would inevitably come at a **higher latency**, arising from the sourcing of the data and the mechanics of consolidation and redistribution.

Any market participant seeking to use real-time data for trading purposes would still seek to access market data from the **lowest latency sources**.

Alongside this, market participants will also, in our view, continue to access real-time market data solutions from data vendors given the range of additional services such vendors provide, notably data analytics. We believe it is likely that all (especially large) market participants will continue to rely on services provided by data vendors in the event of a CT emerging. Data vendors have unparalleled expertise in the area of providing comprehensive services that go well beyond the sphere of data aggregation (i.e. news, reference data, historical data and analysis tools).

A real-time CT **designed for trading purposes** would most likely fail and lead to an increase in overall costs to the market, particularly since it would, for economic reasons, have to benefit from mandatory contribution and use.

In contrast, an end of day Tape of Record (TOR) would allow for consolidation of data as well as contribute to enhancing data quality and consistency without encountering difficulties linked to clock synchronisation and other challenges.

It would be significantly less costly to build and operate, while being geared towards fulfilling the key aim of delivering on improving data consistency, quality and completeness while showing the overall liquidity in EU markets. Overall cost to the end user (fees for usage) would be significantly reduced compared to a real-time tape.

Q30: Are there any measures (either technical or regulatory) that can be taken in order to mitigate the latency impacts?

Regarding a real-time tape, latency impacts would be challenging to mitigate when looking at the enormity of the task at hand: consolidating data from 170 trading venues and APAs dealing with equity instruments in 28 different jurisdictions. Indeed, the envisaged consolidation is unprecedented and highly ambitious. The reason for this is that trading venues need to be able to compete on roundtrip times (time needed to send an order, get it executed and be informed about the trade price) as they are competing for trading business.

Fundamentally, it is important to be clear on what exactly the CT is designed to achieve.

A CT designed for trading purposes will face considerable burdens arising from latency and data quality impacts meaning it will simply provide a further - and sub-optimal - alternative to existing solutions, while increasing overall costs. Delivery of the objective of aggregating market data into a clean and comprehensive CT will certainly not be met by the introduction of a real-time CT: only an end-of-day TOR can deliver on this objective.

Q31: Do you agree that the CT should be operated on an exclusive basis? To what extent should other entities (e.g. APA or data vendors) be allowed to compete with the CTP?

FESE believes that existing entities, i.e. data vendors, should be allowed to compete with the CTP/CTs. Indeed, services already offered by data vendors will remain attractive to market participants. A tape would therefore complement such offerings, but not replace them. Market participants would likely still want to access data vendor products in addition to having access to an EU CTP, for the purposes of, *inter alia*, data analytics and affiliated news. Exchanges believe that it is likely that many (especially large) market participants will continue to rely on services provided by data vendors after the emergence of an EU CTP. Data vendors have unparalleled expertise in the area of providing comprehensive services that go well beyond the sphere of data aggregation (i.e. news, reference data, historical data and analysis tools).

Q32: Should the contract duration of an appointed CTP be limited? If yes, to how many years?

N/A. FESE will not respond to this question.

Q33: Please indicate what would be, in your view and on the basis of your experience with TVs and data vendors, a fair monthly or annual fee to be charged by a CTP for the real-time consolidation per user?

A fair monthly or annual fee to be charged by a CTP for the consolidation per user would have to be similar to current payment for market data so as not to significantly harm Exchanges and the price formation process. It is crucial to not overlook the important role of price formation in equity trading markets and understand that price formation, and in turn, market data services, is not delivered incidentally but is a joint product together with trade execution. Overall, price formation by Exchanges generates a reference price that supports fair, reliable and transparent markets, and this should not be overlooked.

Q34: Would you agree with the abovementioned model for the CT to charge for the provision of consolidated data and redistribute part of the revenues to contributing entities? If not please explain.

A feasible and workable CT model would have to charge for the provision of consolidated data and redistribute a meaningful part of the revenues to the contributing entities, reference price forming venues especially. Contributors cannot be asked to contribute data for no or limited fees, as this would be a disincentive to investing and operating transparent markets. Mandatory tape fees should reflect the number of data sources and the data fees of the respective data sources. It is important to underline that in the event of an EU CT, the number of data sources would be significantly higher than the number of contributors to the tapes in the US, while the number of users of the tapes would be lower than in the US. Furthermore, markets are more fragmented in the EU, which also means the costs of producing and disseminating market data are higher as there are less economies of scale. The funding model should be aligned with the overall objective of MiFID II and provide incentives to trade lit as opposed to dark and reward price forming venues.

When reflecting upon the funding model for the CT, it is necessary to assess how to best ensure that data quality is preserved and enhanced and not opt for solutions that would lead to a “wealth transfer” with no impact on market quality for investors. Any requirements addressed to Exchanges should be proportionate and non-discriminatory as well.

Q35: How would Brexit impact the establishment of a CT? Would an EU27 CTP consolidating only EU27 transactions be of added value or would a CT that lacks UK data not be perceived as attractive?

It is key to carefully consider implications arising from Brexit when reflecting upon the development of a CT since a lack of UK data could very well question the need for an EU CT. Implications concern, in particular, the scope of an EU CT. While it would be limited under the current provisions, to the consolidation of post-trade data from trading on EU venues, this would exclude any transactions on EU instruments outside the EU, thus undermining the use-case. At the same time, constructing a CT across third countries is not sensible and should be discouraged. As such, we would expect the CT to only cover post-trade data executed within the EU. In such a scenario, one may legitimately question the pertinence and relevance of an EU27 CT.

Q36: In your view, how would an EU27 CT impact the level playing field between the EU27 and the UK? Please explain.

An EU27 CT has the potential to impact the level playing field between the EU27 and the UK as it would without a doubt increase EU venues’ compliance-related costs and potentially have an impact on their revenues whereas venues in the UK would not have to bear such costs. Furthermore, an EU27 CT would be powerless to enhance the quality and consistency of OTC and SI trades in the UK.

About FESE

The Federation of European Securities Exchanges (FESE) represents 36 exchanges in equities, bonds, derivatives and commodities through 19 Full Members from 30 countries, as well as 1 Affiliate Member and 1 Observer Member.

At the end of July FESE members had 8,543 companies listed on their markets, of which 14% are foreign companies contributing towards the European integration and providing broad and liquid access to Europe’s capital markets. Many of our members also organise specialised markets that allow small and medium sized companies across Europe to access the capital markets; 1,337 companies were listed in these specialised markets/segments in equity, increasing choice for investors and issuers. Through their RM and MTF operations, FESE members are keen to support the European Commission’s objective of creating a Capital Markets Union.

FESE is registered in the European Union Transparency Register: 71488206456-23.