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INVESTMENT MANAGEMENT

European Securities and Markets Authority
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RE: Consultation on the development in prices for pre- and post-trade data and on the consolidated tape for equity instruments

Norges Bank Investment Management ("NBIM") appreciates the initiative by the European Securities and Markets Authority ("ESMA") to open a consultation on the development in prices for pre- and post-trade data and on the consolidated tape ("CT") for equity instruments, in preparation for the MiFID II/MiFIR review report. As an active participant in European and global markets, we welcome this opportunity to share our experience with ESMA.

NBIM is the investment management division of the Norwegian Central Bank ("Norges Bank") and is responsible for investing the Norwegian Government Pension Fund Global. NBIM is a globally diversified investment manager with assets valued at NOK 9 162 billion as of 30 June 2019, of which NOK 2 119 billion was invested in European equities and NOK 897 billion in bonds from European issuers. We have a vested interest in a regulatory environment that yields well-functioning markets in financial instruments, facilitates the efficient allocation of capital and risk and promotes long-term economic growth. Such an environment requires balancing the interests and incentives of various types of market participants, ensuring a level playing field in financial markets.

Financial market data is particularly important for well-functioning markets. Efficient price discovery and dissemination are vital ingredients of financial markets globally. However, market data is challenging to price – it has relatively low marginal cost to produce, but its importance means that demand is price inelastic. We are concerned that increases in the cost of market data will impact the viability of marginal buyers of market data – be they asset managers, brokers or market makers. We view this as potentially harmful to the robustness of well-functioning equity markets.

The market of financial market data

Exchanges play a central role in financial markets.[1] They fulfil a number of functions, from the provision of listing services to trade facilitation and the dissemination of data on price and

[1] See Norges Bank Investment Management. 2015. *Role of exchanges in well-functioning markets*, Asset Manager Perspective, 02/2015.

trading activity on their platform. This information includes pre-trade quotes as well as data on executed trades.

Availability of good quality market data is crucial for market participants. Investors use real-time as well as historical information on quotes, prices and quantities to make investment decisions, execute trades, and monitor implementation, among others. Market data plays a key role in best execution analysis covered under MiFID II. It is also used for back-testing, risk-management and compliance reasons as well as for research purposes. Brokers need the same data to plan their execution strategies for client orders. Liquidity providers and market makers need this data as well to be able to effectively provide liquidity to the market place.

Market data is difficult to substitute, especially when trading is concentrated in few venues. As a result, the demand for market data tends to exhibit price inelasticity. The more dominant the market share of a trading venue is, the more inelastic the demand for its data becomes. Healthy competition among trading venues and data vendors is therefore necessary to ensure that market data is easily accessed at competitive prices.

Exchanges have developed advanced technology stacks to support both the trade matching process and the production and distribution of market data. This evolution has contributed significantly to the well-functioning of modern financial markets – investors have benefited from greater trading efficiency and capacity, as well as innovative product offerings. Exchanges recover the cost of building and running this infrastructure through several fee channels. Some of these fees are a function of the volume transacted – such as trading fees – while others are subscription fees such as listing and data fees. An ongoing global trend for trading venues is the increasing share of revenues from selling market data subscriptions, which is considered a more stable stream of revenue.[2]

There is an active debate about the pricing of market data. We acknowledge that setting the price of market data is a challenging balancing act. On the one hand, data fees should compensate exchanges for offering their services and incentivise them to continue innovating their products. On the other hand, rising data fees will have an impact on the marginal buyer of such data. Over time, this will lead to less heterogeneity in market participants – for example, by pricing smaller brokers and asset managers out of the market.

Limiting access to market data can have a detrimental effect on market liquidity and price discovery, while increasing the cost of capital and market volatility.[3] In general, there is evidence that pre- and post-trade price transparency is beneficial to market quality.[4]

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[2] See Cespa, G. and Foucault, T., 2013. *Sale of price information by exchanges: does it promote price discovery?* Management Science, 60(1), pp.148-165. for the economics behind this trend.

[3] See Easley, D., O'Hara, M. and Yang, L., 2016. *Differential access to price information in financial markets*. Journal of Financial and Quantitative Analysis, 51(4), pp.1071-1110; and O'Hara, M., Yao, C. and Ye, M., 2014. *What's not there: Odd lots and market data*. The Journal of Finance, 69(5), pp.2199-2236.

[4] See Bessembinder, H., Maxwell, W. and Venkataraman, K., 2006. *Market transparency, liquidity externalities, and institutional trading costs in corporate bonds*. Journal of Financial Economics, 82(2), pp.251-288; Boehmer, E., Saar, G. and Yu, L., 2005. *Lifting the veil: An analysis of pre-trade*

In tandem with exchanges' greater reliance on data fees as a revenue source, we also observe an increase in the complexity of their data policies and auditing practices. The limited transparency of these policies increases uncertainty about the pricing of market data and can undermine the trust between the contracting parties, as well as creating substantial administrative burden for data users.

The European market data landscape (Questions 1-7, 10, 14-16, 19-20, 29-30)

MiFID II has laid the framework for the functioning of the European market of financial market data. As noted in ESMA's report, a key objective of MiFID II was to make market data available to a wide range of investors in "an easily accessible, fair and non-discriminatory manner." It also introduced the requirement to price such data on a reasonable commercial basis ("RCB"), i.e., based on the costs of producing and disseminating such data and a reasonable margin.[5]

Other provisions in MiFID II/MiFIR introduce the requirement to provide data on a disaggregated basis; to make pre-trade and post-trade data available separately; and to make available data free of charge 15 minutes after publication. It also introduced a framework for a CT for equity instruments.

We welcomed the MiFID II provisions for enhanced transparency in the pricing of market data. Although the RCB disclosures by trading venues have increased transparency of data policies, there is ample room for improvement in the usability and comparability of the provided information. Our experience suggests that it remains difficult to keep track of data costs over time for the same exchange, let alone across different venues.[6]

Our experience is broadly in line with the feedback from other data users as reported in ESMA's consultation paper, and is summarised below:

- The pricing of market data products is typically based on distribution and consumption (e.g. 'display' vs 'non-display'). Pricing is a function of the perceived value generated for data users, rather than strictly on the cost of producing and disseminating the data.
- Market data costs have increased globally in recent years, not just in Europe. There are multiple drivers, chiefly among them an increase in the price of existing fees and the introduction of new fees (such as more granular types of non-display fees).
- There is a marked variation both in the price of market data and in the terms and conditions of the data policies across the different European trading venues. Global investors typically require data from multiple sources to gain sufficient coverage across

transparency at the NYSE. The Journal of Finance, 60(2), pp.783-815; Green, R.C., Hollifield, B. and Schürhoff, N., 2006. *Financial intermediation and the costs of trading in an opaque market*. The Review of Financial Studies, 20(2), pp.275-314; and Hendershott, T. and Jones, C.M., 2005. *Island goes dark: Transparency, fragmentation, and regulation*. The Review of Financial Studies, 18(3), pp.743-793, among others.

[5] See Article 85 of CRD2017/565 and Article 7 of CRD 2017/567.

[6] The difficulty in assessing and comparing data policies might explain the contrasting views on the levels of prices for European data. See for example the analysis in Copenhagen Economics, November 2018. *Pricing of market data*; and Oxera. March 2019. *The design of equity trading markets in Europe*.

multiple European markets. The variation in data products and policies offered leads to significant administrative burden for such investors.

- Innovation in market data products has been rapid in recent years. This has led to complexity and frequent changes in market data policies, including ambiguity in some of the terms and expressions in these policies. Such complexity in both policies and contract termination terms increases the administrative burden for data users as they need to allocate more resources to deal with data management and compliance.
- Market data auditing practices have also become more stringent and broader in scope. In some cases, this has increased uncertainty about the final cost of data. Another source of difficulty can be the outsourcing of data audits to external parties and the limited transparency on the contractual terms between exchanges and these parties.
- The fragmentation of the European equity market in conjunction with the absence of standardized market data feed formats means that accessing market data via direct connections is costly and complicated. Because of this, investors typically rely on data vendors to access normalised and enriched consolidated data at a significant charge.
- We broadly agree with the reasons for the lack of a CT as outlined in Section 4.2 of the ESMA report. In particular, the provision of functionally similar services by data vendors and technical challenges related to latency in fragmented European markets suggest a real-time CT too costly to be commercially viable. A more detailed cost-benefit analysis in consultation with market participants is necessary to arrive at the specifications of a CT service.

We note that NBIM's experience as a market data user as outlined above is not Europe-specific. Many of the observations apply globally. A common denominator is exchanges' preference towards greater reliance on subscription-based fees as a revenue source, and the challenge of how to set these fees.

Strengthening the well-functioning of the market of financial data

We believe that ESMA's "transparency plus" approach can be further improved by implementing changes in the current framework consistent with the suggested guiding principles outlined below. Alternative approaches such as the revenue cap model are likely to experience practical implementation challenges and should only be considered as a last resort and only if the current approach, after given sufficient time to take effect, fails to deliver its objective. (Question 8-9)

Based on our experience as an active user of global market data, we would like to outline principles for the well-functioning of the European market of financial data.

- **In line with the spirit of MiFID II, we support a cost-based pricing of market data in conjunction with a reasonable charging fee**. This is likely to require a thorough definition by ESMA of the costs of producing and disseminating market data, guidelines on what constitutes a reasonable charging fee, and a framework for assessing whether data pricing policies are in line with RCB.
- **The RCB disclosure framework should be standardised**. Data users would benefit from easily accessible, standardised, and readily comparable RCB

information. This could be achieved by requiring this information to be published (for example on a website) using a standardised template consisting of both qualitative and quantitative metrics. (Question 7)

- **The framework for data policies and audit practices should be simple, transparent, and standardised**. A harmonised framework for data policies would reduce administrative costs, increase transparency and certainty about the cost of data, and ensure a level playing field. This framework could include market data and fee types definitions and standards for the practice of data auditing, in addition to provisions for limiting back billing and enabling effective netting of fees. It should also recognise the right to use delayed data, i.e. outside the "embargo time", on a firm-wide basis. (Question 4)
- **The framework for accessing market data should be simplified and standardised.** This will require the specification of a technical process for accessing data of different latency via direct connections with trading venues and a harmonised data feed format. In particular, end-of-day data should be easily accessible to download in a standardised format. We expect such a framework to improve data quality, set the foundations for a cost-efficient process for accessing consolidated data, and promote market data vendor competition. (Questions 19-20, 22-23, 30)
- **An end-of-day consolidated data service at a reasonable price should be encouraged.** We believe that a real-time CT is likely to come at a high cost. Its usefulness relative to current offerings will highly depend on its technical specification including coverage and latency characteristics. A starting point could be to aim for an end-of-day consolidated service offering non-conflated harmonised tick data for a reasonable fee, which should be of interest to market practitioners and researchers alike. Such a service may also increase competition among data vendors and exchanges, hence benefiting data users. (Questions 14-16, 29-30)

We believe that many of these principles and frameworks should be developed through active participation by various stakeholders – exchanges, brokers, asset managers and market makers. However, it is likely that the development will also require guidance and oversight by ESMA (possibly with coordination with regulators in other jurisdictions) to ensure completion within a reasonable time frame.

Conclusion

We welcome this important consultation of ESMA on the development in prices for pre- and post-trade data and on the consolidated tape for equity instruments. NBIM supports regulation that advances well-functioning markets in financial instruments and promotes innovation and efficient trading.

We believe that ESMA's current transparency plus approach can be further enhanced, ensuring that market data is easily accessed at competitive cost-driven prices. Initiatives that can have a positive effect in this direction include the standardisation of the RCB disclosure framework, the simplification and standardisation of data policies and auditing practices, and the harmonisation of data connectivity processes. Although the establishment of a consolidated tape faces practical challenges and competition from other entities, an end-of-day version offered at a reasonable price could be a first step towards easily accessible consolidated data.

The transparency plus model still has the potential to achieve the right balance between offering incentives to trading venues to innovate and improve their technology stacks, while ensuring that market data is offered at competitive prices. Alternative approaches such as the revenue cap model should only be considered if the current approach, after given sufficient time to take effect, fails to deliver its objective.

We appreciate this opportunity to share our perspective, and we remain at your disposal should you wish to discuss these matters further.

Yours sincerely

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