

Cboe Europe

Window of Opportunity

The Case for a European Consolidated Tape

Cboe Europe is one of the largest pan-European equities exchanges by market share and value traded. We operate lit and dark venues, a periodic auctions book, a large-in-scale trading service and an Approved Publication Arrangement (APA). Since launching our business in 2008 we have sought to bring choice, open access and competition to participants in Europe's equity market. While these principles have been introduced to trading and clearing services, market data remains the missing piece of the puzzle. We have long advocated a European consolidated tape (CT) to encourage a more competitive market for data services, support new trading venues and innovation by giving all platforms a shop window for their services, and making data more accessible to a much wider range of investors, particularly retail. The views presented here are based on our experiences in the U.S., and as both a significant producer and consumer of market data in Europe. The US CT model serves the US market well; however, it is also important to recognise that the European regulatory framework is different, and that, in the absence of any CT at present, Europe should make different design choices for its CT that will meet European needs and support the development of a Capital Markets Union (CMU).

A consolidated tape (CT) has been a desired feature of European equity market structure for well over a decade, and is finally beginning to move from a vision to reality. European regulators have signalled their intention to press forward with the initiative, following the lack of an industry-led solution under MiFID II.

While there is widespread support across the industry behind the principle of a CT, input costs and differing views on both the content and timeliness of data on the tape have hindered its development to date.

With the momentum that now exists to deliver a workable solution, this paper offers a proposed model for a CT that we believe would offer the most benefit to market participants. If designed appropriately, the tape would also provide an important boost to Europe's Capital Markets Union (CMU) initiative. By making real-time market data accessible to all types of investors, both within Europe and internationally, it can encourage bigger and more open capital markets in Europe – and be ready to serve the next generation of savers and investors.

With that in mind, we believe the key features of a European consolidated tape are as follows:

- Real-time post trade feed – aggregating transactions from all markets
- Real-time pre-trade feed – aggregating the top five best bids and offers from all markets aggregated into a central pre-trade feed
- A limited number of competing consolidated tape providers to inform pricing and establish a technical framework that best suits the nuances of the European market
- All venues and APAs to provide data to consolidated tape providers free of charge
- A revenue-sharing model for contributing venues based on market share

WHY DO EUROPE'S EQUITY MARKETS NEED A CONSOLIDATED TAPE?

The proliferation of trading venues under MiFID I and MiFID II has injected much-needed competition into Europe's equity markets, but has made it difficult to obtain a single, reliable view of quotes and completed transactions. Given the lack of a CT, transparency is only available to those firms with the technical and financial ability to aggregate the data themselves.

The cost to consolidate market data has been the prohibitive factor in the creation of a CT to date. If created appropriately, a CT would serve as a low cost alternative for everyday investors, as well as an incentive for data providers to both lower core data costs and innovate in their non-core data offerings to the benefit of all market participants.

That said, we believe the benefits of a consolidated tape go well beyond impacting data costs, and include the following:

- It would provide a low-cost and straightforward way for participants to view pan-European consolidated liquidity in real-time. This would drive participation, particularly from retail investors, and enhance price formation.
- It would offer a common reference point for best execution monitoring and transaction cost analysis, providing a reasonably priced market data feed for retail brokers and other customers, thereby

encouraging broader dissemination of market data and better execution quality. Furthermore, by making data from a broader range of execution venues available, it will encourage broader access to the liquidity that those venues make available, increasing the probability of better execution.

- It would offer a common source for regulators to monitor cross-market activity and allow for market-wide control measures such as circuit breakers, therefore materially improving the stability of the European market.
- It represents a better alternative than more intrusive regulation of market data pricing. There is considerable disagreement about whether market data is currently provided on a reasonable commercial basis, indeed there is considerable disagreement on how to even define that term. A well-designed CT would reduce focus on that issue.
- It would broaden distribution of data for all European companies to the rest of the world – including small and medium-sized enterprises (SMEs) – in a consistent format, helping to encourage further financing and growth.
- It would help to ensure Europe's market structure is keeping pace with changes in the way people are investing, such as apps over mobile internet-enabled devices which thrive on near-real time data.
- Finally, a CT would also help boost competition among trading venues, as it would provide new and smaller platforms with the ability to earn revenues from market data as soon as they gain market share and produce data.
- Cboe Europe's own experience of breaking into new markets has shown that even when, through good design and appropriate fees, a venue has good tradeable prices available, that trading does not immediately follow as traders and investors are simply not aware of the prices available. A CT will provide the new and innovative venues of the future with a shop window in which to demonstrate their competitiveness to investors and traders across Europe.

WHAT ARE THE KEY FEATURES OF A CONSOLIDATED TAPE IN EUROPE?

We believe that an optimal structure for an equities CT should take into account the following:

Pre and Post-trade Scope: All Regulated Markets, MTFs, SIs and APAs should be required to provide data to the chosen CT provider(s). A post-trade trade tape should include data from all markets, whilst the pre-trade feed include top five price level data from all central limit order books with “like” transparency. If SI pre-trade data is also deemed necessary, this should be added as a separate channel in a second phase, as the SI regime is not an equivalent transparency regime to central limit order books.

Real-time: The CT must be a real-time product to maximise its usefulness to market participants. As explained above, the main benefits of a CT include better enabling investors and financial intermediaries to view pan-European liquidity, as well as assisting regulators for surveillance purposes. Latency should not be a significant issue as these end use cases are primarily for display purposes and systems that do not require ultra-low latency data, rather than to facilitate low latency trading. A real-time tape would also be a viable alternative to the direct market data feeds offered by exchanges.

Competing providers: Although the U.S. has a single provider model that functions well, we believe, in the absence of any CT at present, the development of a tailored offering in Europe would be better served, at least initially, by multiple providers to inform pricing and establish a technical framework that best suits the nuances of the European market. We believe that the European Securities and Markets Authority (ESMA) should offer up to three or four Consolidated Tape Provider (CTP) licences, and that these should be issued with staggered overlapping tenors of five years each. The CTPs would have to adhere to regulatory, commercial and technical standards. There should be positive obligation on venues, APAs and SIs to connect to at least one CTP. This would prevent venues from having to connect to multiple CTPs and would allow CTPs to source data from one another for free to ensure that each has a complete picture.

Business Model: All venues and APAs should be required to provide their data to the CTPs for free. The CTPs should then be required to provide a fixed percentage – e.g. 75% – of revenue received for the core tape provider back to contributors based on their market share. This would then create an obligation on

the CTPs to come up with a price point that produced sufficient revenue for contributors, and attractive enough to compete against the other providers.

CT providers should be free to develop other products (e.g. TCA, full book depth, trade data and market impact analysis) beyond the tape product itself. These additional products would not be subject to the same revenue sharing obligations, but would instead be subject to preferential licensing arrangements with data contributors.

Regulatory integration: : In order to support viability and encourage the use of a CT, Europe should follow elements of the U.S. model where regulation supports the use of the consolidated tapes for certain functions. MiFID II could be adapted to mandate the use of (a sufficiently low latency) consolidated tape data for the reference price waiver. This would help to correct the competitive distortion created by the current requirement to use listing market data and provide a more comprehensive BBO reference. MiFID could also mandate its use for market controls such as price banding, and regulators could use it to trigger market wide suspensions.

DEBUNKING SOME COMMONLY CITED CONSOLIDATED TAPE OBSTACLES

Common obstacles cited by participants to creation of a CT can be grouped in two buckets: data quality on the one hand; and latency and product scope on the other.

Doesn't poor data quality make consolidation impossible?

We believe data is already of a sufficiently high quality to allow for consolidation, with non-regulated vendors consolidating data to the extent that it is commercially attractive to do so. One of the genuine successes of MiFID II has been the introduction of a consistent classification for trade data, through the formalisation of the industry developed Market Model Typology (MMT). From Cboe's perspective - as the largest OTC trade reporting mechanism in Europe - we have seen that OTC data is being consistently flagged and accurately reported by most firms. Where disagreements arise, ESMA is well positioned to issue guidance to clarify the use of the RTS 1 and 2 flags. It is a fact that most trade data is produced electronically, so once rules and interpretations

are understood and coded for, the data produced is of consistently high quality. In short, the data model already exists, it is just clarification and consistent guidance and enforcement that is required, meaning that a tape can be produced and incremental improvements in data quality made during and after deployment.

Isn't latency an obstacle to a real-time tape?

Physical latency is a fact of European markets given the large size of the continent. However, this does not stop data vendors and end users today from consolidating data from across multiple geographical markets, and using this consolidated data for a variety of purposes including in smart order routers to drive electronic trading decisions. These physical distances will always be a fact of life. However, the end use case for CT should be primarily for display purposes and systems that do not require ultra-low latency data. Such a tape would give a complete view of European markets, not only the trades done, but also the liquidity that is available on those venues.

Wouldn't an end-of-day tape of record suffice?

There is clearly demand for real time, consolidated and normalised viewable data or exchanges would not be able to charge for anything other than non-display feeds and data vendors would have a significantly reduced business model. A real-time feed, as opposed to an end-of-day tape of record, would maximise the potential benefits of a CT, such as encouraging participation, better execution outcomes and supporting price formation.

Is a pre-trade tape really necessary?

While we realise the inclusion of both pre- and post-trade data is a heavier lift, we believe the end product will be significantly more valuable to the market and including pre-trade data should be an objective from the outset of the creation of a CT. Launching with reduced scope (e.g. post trade only) would create additional costs - and therefore increased barriers - to adding other data at a later date. From a European perspective, it is clear that inclusion of pre trade data is vital for the tape to be useful to provide reference prices for use under reference price waivers and to facilitate delivery of best execution. Pre-trade data is also useful for instruments (equities and ETFs) that trade infrequently as a key source of price discovery.

CONCLUSION

A CT is both achievable and desirable. MiFID II has led to an improvement of market data across European venues in readiness for consolidation. The technological challenge is straightforward for potential providers. The only remaining barrier is commercial – we firmly believe that the intervention of European legislators and regulators is needed to remove this barrier by introducing the model detailed above.

While a CT won't deliver CMU on its own, it is an important next step to take our markets forward, be ready to serve the new generation of savers and investors and drive access to a truly unified single investable and tradeable market.

ABOUT CBOE EUROPE

Cboe Europe is one of the largest pan-European equities exchange operators by value traded, offering trading products and services across 18 European markets. Cboe Europe supports open competition and strives to drive innovation in European capital markets.

Through its exchanges in the UK and the Netherlands, Cboe UK and Cboe NL, Cboe Europe provides a suite of trading services and solutions to meet the diverse needs of market participants. Cboe Europe operates lit and dark books, a periodic auctions book, and a large in scale service for European equities trading as well as offering market data, indices and trade reporting services.

Cboe Europe is a subsidiary of Cboe Global Markets Inc., which is one of the world's largest exchange holding companies and a leading operator of equity, futures and options, and FX markets in the U.S. and Europe.

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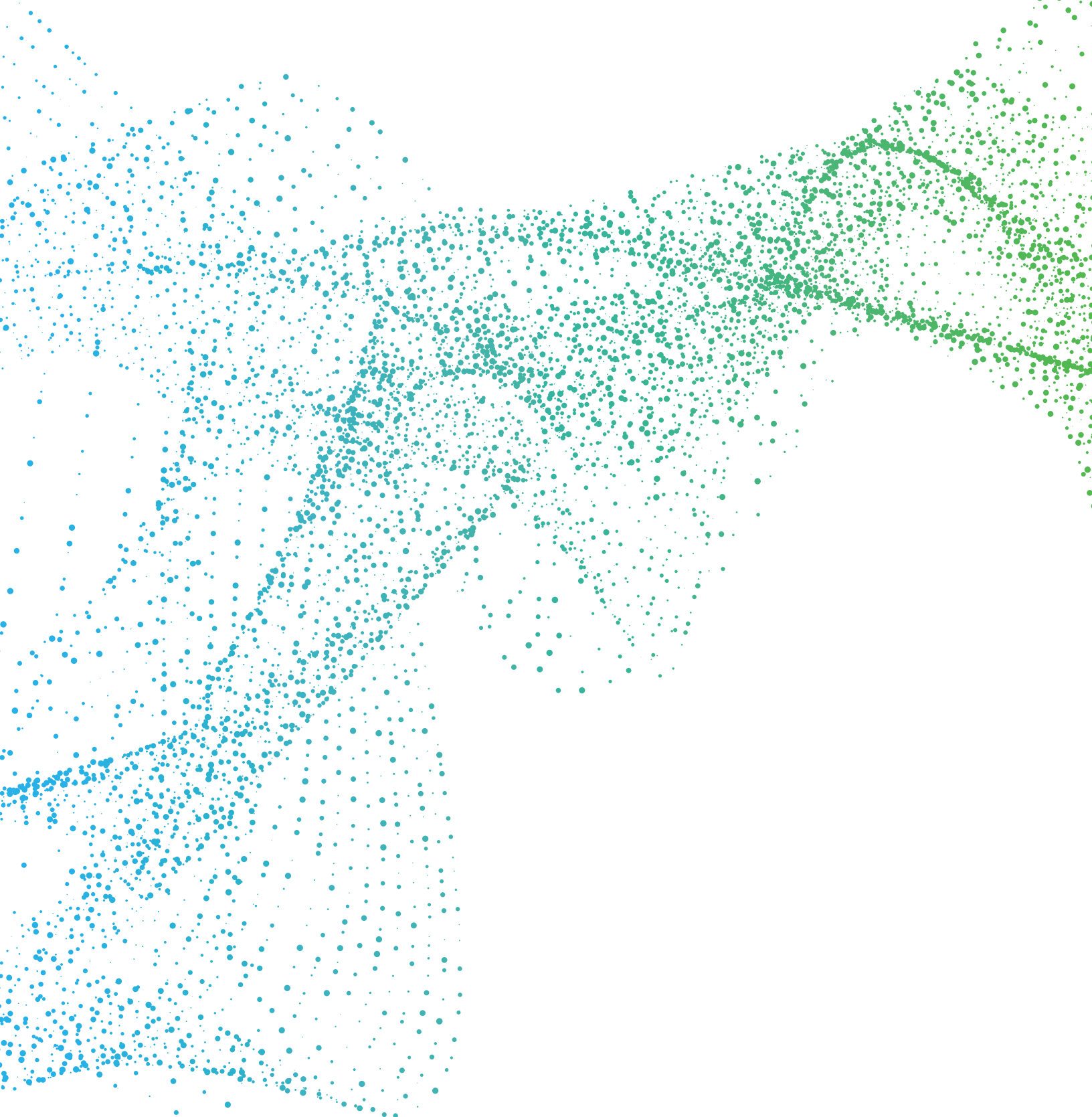
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