

European equities consolidated tape

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Plato Partnership is a consortium of European buy-side and sell-side firms committed to improving markets, so they can more efficiently serve society. Plato Partnership's Market Innovator Group (MI3) engages with its network of senior academics globally and sponsors independent academic research to identify better ways of executing trades, lowering the cost of trading, and improving the quality of processes that support the execution lifecycle.

Plato Partnership and its network of senior academics note the recent focus from European policy makers and market participants regarding a consolidated tape for European equities. We strongly believe European policymakers should focus on improving transparency for all market participants through establishing regulations to ensure the creation of a **real-time, post-trade consolidated tape ("CT") for European equities at an affordable user price.**

In summary –

A real-time post-trade CT for European equity and equity-like instruments (including ETFs) covering equity markets within the European Economic Area, Switzerland and the United Kingdom that provides a consolidated view of prices and volumes of executed trades will enable a comprehensive and standardised view of liquidity across European markets to ensure a level playing field for all market participants. It would form a key part of European institutional investors assessment of best execution and would enable lower transaction costs for European institutional and retail investors through enabling more informed execution decisions based on real-time trade data. A real-time post-trade CT will enable improved fund liquidity risk management and help mitigate systemic market risk by enabling firms to truly gauge executable liquidity and their ability to invest and return assets to clients in an orderly manner. The provision of a real-time post-trade CT to retail investors at a very low, or no cost will also improve retail investor protections and encourage retail investor participation in Europe's equity markets that are key objectives of the capital markets union project. A post-trade CT would also contribute to more academic researchers studying European markets that is a key Plato Partnership aim and would make valuable contributions to inform future policy debates.

The standardisation of trade data across the industry is a key challenge to ensure a post-trade CT contains consistent identifiable trade data and is as close to real-time as possible. Policy makers must mandate the industry developed Market Model Typology ("MMT") for use by all market participants to enforce data standardisation including consistent trade flagging across all trading venues (including RMs, MTFs) and off-venue trading (including OTC and Systematic Internaliser trades). This must also include requiring all market participants to classify addressable and non-addressable liquidity in post-trade reporting based on clear policy definitions in order for a post-trade CT to provide the maximum benefit. The ability to leverage and enforce the already well-

established MMT to achieve data standardisation will help ensure the successful implementation of a real-time post trade CT. It is critical that access fees for professional investors are affordable. We believe that an affordable access fee for professional investors to access a real-time post-trade CT via a user interface should be priced at no more than EUR50 per user per calendar month with separate fees for direct access feeds for firms. We also believe access for retail investors should be provided free of charge to encourage retail investors to access the service and improve their participation in European equity markets. A single CT provider for an Equities post-trade CT is likely to be the most viable model from commercial, consistent standards and enforcement perspectives. We also believe some latency in a real-time post-trade CT will not be an issue as end use cases are primarily for display purposes and systems that do not require ultra-low latency data.

We do not agree with the argument from some market participants and consultants that an end of day tape of records or even a 15-minute delayed tape would be sufficient. These proposals would provide stale information that does not allow for real time information to inform decisions and would not level the playing field for market participants or facilitate the majority of benefits and use cases we outline in this letter. European policy makers should set high standards to ensure European securities markets are competitive with global markets.

In detail –

Equities post-trade consolidated tape benefits and use cases

- A real-time post-trade CT will significantly improve transparency for European institutional and retail investors and ensure a level playing field for all market participants. The proliferation of trading venues under MiFID has created much-needed competition in Europe's equity markets, but has made it very difficult for investors to obtain a comprehensive and consistent view of executed prices and volumes of trades despite policymakers efforts to improve transparency under MiFID II. Full transparency of market liquidity is only available to those few firms with the technical and financial ability to internally consolidate market data themselves leaving some smaller brokers, most institutional investors, and all retail investors at a significant competitive disadvantage. Why should a holistic view of liquidity and its resulting competitive advantage reside with only a few market participants? A real-time post-trade CT will provide all market participants with access to a real time view of equity market liquidity at a low cost to ensure a level playing field for all market participants.
- There is considerable academic research focused on US market data transparency that highlights the benefits of providing more equal access to market data for all investors. An important theme in much of this recent work is that “levelling the playing field” between different market participants in terms of access to market data is highly beneficial to market function. Cespa and Foucault (2014)⁽¹⁾ find that higher fees for market data can reduce price discovery and increase transfers from traders who require immediacy to those that provide it. Easley, O'Hara, and Yang (2016)⁽²⁾ find that differential access to market data between “price-informed” and “price-uninformed” investors not only benefit the former at the expense of the latter but can

lead to increased volatility and cost of capital. Brogaard, Brugler and Rösch (2021)⁽³⁾ studied the introduction of fees for market data on US exchanges and found that restricting access to market data (even at the venue level) can have market-wide effects on volatility and price efficiency. The potential benefits of increased market data transparency across market participants go beyond market quality in the secondary market and have also been causally linked to improved outcomes for companies raising capital in equity (Brugler, Comerton-Forde and Hendershott, 2021)⁽⁴⁾ and bond markets (Brugler, Comerton-Forde and Martin, 2021)⁽⁵⁾.

(1) Cespa, G. and T. Foucault (2014). Sale of price information by exchanges: Does it promote price discovery? *Management Science* 60(1), 148–165

(2) Easley, D., M. O'Hara, and L. Yang (2016). Differential access to price information in financial markets. *Journal of Financial and Quantitative Analysis* 51(4), 1071–1110.

(3) Brogaard, J., Brugler, J., & Rösch, D. (2020). Competition and Exchange Data Fees. Available at SSRN 3703431.

(4) Brugler, J., Comerton-Forde, C., & Hendershott, T. (2021). Does Financial Market Structure Affect the Cost of Raising Capital?. *Journal of Financial and Quantitative Analysis*, 56(5), 1771-1808.

(5) Brugler, J., Comerton-Forde, C., & Martin, J. (2021). Secondary market transparency and corporate bond issuing costs. *Review of Finance* (forthcoming).

- A real-time post-trade CT will lower transaction costs for European institutional and retail investors through enabling more informed execution decisions. It is clear from the many studies of US transparency, including Bessembinder (2017) and Angel (2018)⁽⁶⁾, that transparency of trade information significantly enhances execution quality and reduces transaction costs. Angel found that without trade information, transactions costs for all US investors would increase significantly.

(6) Angel, James J. (2018). Retail investors get a sweet deal: The cost of a SIP of stock market data <https://ssrn.com/abstract=3268916>

- The availability of a comprehensive and consistent real-time post-trade CT will provide a significant contribution to post trade analysis that is a critical part of European institutional investors' best execution trading governance and would be used in transaction cost analysis for assessment of order routing effectiveness to provide input into real-time trading decisions. This will allow market participants to make more informed investment and trading decisions to improve the overall implementation process and allow for enhanced governance, improved execution, and improved compliance oversight.
- A real-time post-trade CT that identifies addressable liquidity will enable improved fund liquidity risk management for institutional investors and help mitigate systemic market risk by enabling these firms to truly gauge their ability to invest and return assets to clients in an orderly manner. It will also provide a key source of liquidity information for those equity and equity like instruments that trade infrequently.

We believe it is critical that a post-trade CT is able to identify addressable and non-addressable liquidity for all market participants in order that the full value of the benefits we outline can be achieved. All market participants want to understand and quantify addressable liquidity to ensure more accurate assessment of market conditions. The ability to identify addressable liquidity open to be accessed by all market participants that can be used for benchmark and reference price calculations

is a significant challenge, even for those with the most advanced technical and financial ability, due to the lack of appropriate trade flagging by market participants. Addressable liquidity must be identified and separated from non-addressable liquidity (i.e. technical trades and other trades that are not part of the price forming process or not open to general market participants, for example, inter-affiliate trades undertaken for operational purposes). This will require clear definitions from policymakers, with input from market participants, and enforcement of appropriate trade flagging in MMT post-trade reporting by all market participants.

- A real-time post-trade CT that is available to retail investors at a very low, or no cost will encourage retail investor participation in Europe's equity markets and improve retail investor protection. Retail investors do not have access to comprehensive and independent data that informs them of best execution and a real-time post trade CT will provide transparency to these investors to assist them in sourcing best execution. European policymakers have stated in recent times that flaws in the availability, quality and consistency of the EU's trading data are hindering retail investor participation that is a key objective of the capital markets union project and leaves Europe's industry trailing the US.
- A real-time post-trade CT (with sufficient low latency) will also offer a common data source for EU 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 equity market.
- A post-trade CT would also contribute to more academic researchers studying European markets that is a key Plato Partnership aim, particularly if historical information is also able to be accessed, and would make valuable contributions to future policy debates. There is a lack of academic research on European markets largely because there is very limited access to reliable and affordable order and trade data. The US equity markets have benefitted from a long history of rigorous academic research on microstructure issues facilitated by the CT that has often informed regulatory policy and market structure changes. Researchers globally access these data sources because they are standardised and easy to access at an affordable cost.

Equities post-trade consolidated tape model considerations

Data standardisation

- It is key for policymakers to regulate and enforce the standardisation of executed trade data reporting across all equity trading venues (RMs, MTFs) and APAs reporting OTC and Systematic Internaliser ("SI") trades (the "CT data providers") and across all market participants including those that report their trades to APAs. This is essential for a CT Provider ("CTP") to provide consistent and reliable data and efficiently process trade data from various sources with the lowest possible latency.
- One of the genuine successes of MiFID II has been the introduction of a consistent classification for post trade data reporting, through the formalisation of the FIX and industry developed Market Model Typology ("MMT"). However, while MMT

standards have been adopted by major European Exchanges, data providers and a number of brokers, there are still many market participants that do not currently conform to MMT standards and in particular this results in poor quality of OTC and SI trade data reported to APAs. We believe MMT must be mandated in regulations for adoption by all market participants including trading venues, APAs and brokers and in particular for OTC and SI data provided to APAs for a CTP to be successful. Policymakers must ensure a set of post-trade reporting standards including consistent application of time stamps, trade flags and condition codes and requiring all market participants to classify what is addressable and non-addressable liquidity based on clear definitions.

These factors should be synchronized across the market to ensure accurate and consistent reporting of trade data as a CTP will not be able to perform data cleansing and standardisation in a real-time environment. Policymakers should also consider enforcement regulations that includes penalties for CT data providers and market participants (for OTC and SI trades) that do not consistently meet post-trade CT reporting standards.

Pricing

- While potential CTP's and the CT data providers would clearly need to provide input regarding the appropriate level of access fees, it is critical that access fees for professional users are affordable. We believe that an affordable access fee could be priced around EUR50 per user per calendar month for unlimited access to a real-time post-trade CT user interface but that this fee should reduce on a sliding scale the more users a firm has in a similar way to the US CT subscriber model for "Network A Last Sale". For firms requiring a direct access data feed into their systems, monthly fees should be fixed. For reference, the charges for a direct access feed for the US "Network A Last Sale" are approximately US\$1,250 per month. Alternatively, an enterprise license for large firms could be issued at a fixed monthly or annual cost that would include unlimited users and direct access feeds that should result in a significantly lower per user cost.
- We believe access to a CT for retail investors should be provided free of charge to encourage retail investors to access the service to improve their protections and participation in European equity markets. We also believe academics should be able to access a CT at a lower cost than professional users in order to enable academic research to help inform policy and improve market structure.

Single CT provider versus Multiple CT provider model

- Policymakers and regulators must consider if legislation should mandate a single CTP or multiple CTPs under a competing model for an Equities real-time post-trade CT.
- A single CTP model with regular competitive re-tendering for periods that balance the need to promote investment with the need to encourage innovation and competition amongst potential providers would require greater regulatory controls and oversight

in regard to revenue share models with CT data providers. However, we believe a single CTP is the best approach to ensure potential providers step forward and it is also the optimal setup to enforce operating standards across the market and to enforce data standardisation. A single CTP, depending on the chosen provider, could also be mandated to be a self-regulatory organisation (“SRO”) with authorisation to sanction CT data providers and market participants if they do not follow the contribution rules. Multiple CTPs may leave CT market data regulations open to different interpretation by each CTP and may be more difficult to enforce standards.

- A multiple CTP model could result in more investment in speed and analytics that offer a wider variety of tools to market participants. However, assuming user pricing was standard for all CTPs, there is a risk that the provider with the lowest latency would be the dominant provider and other providers may not be used and would therefore not be commercially sustainable. As a CT would require a significant outlay in upfront infrastructure costs, a multiple provider model may therefore not attract many, if any, interested providers. Multiple CTPs would also either require trading venues and APAs to connect to multiple CTPs or alternatively require CTP interoperability to enable CTPs to source data from one another for free to ensure that each has a complete picture that would require further investment from a CTP. A multiple competing CTP model may therefore not be considered financially viable and could discourage potential providers to step forward.
- However, a multiple CTP model would be feasible for different CT’s such as a Fixed Income post-trade CT or an Equities pre-trade CT once an Equities post-trade CT has been established and has been operating successfully.

Governance

- A single CTP model must be overseen by an independent governance board comprised of representatives across the CTP, trading venues, APAs, institutional investors, retail investors, brokers, academics, and regulators to ensure a balanced view of interests. The governance board would be responsible for overseeing industry standards in regard to CT regulations including monitoring and enforcing technology, latency and data standards, oversight of the revenue share model, and addressing significant issues.

Commercial

- All CT data providers should be required to provide all executed trade data to the CTP free of charge. The majority of CT revenues generated from CT user fees would go to the CT data providers based on their proportion of addressable volume contributions (excluding non-addressable volumes). However, we believe the CTP must be able to make a reasonable commercial gain rather than only operate as a not for profit covering upfront investment costs and annual operational costs otherwise it is unlikely commercial firms with the relevant expertise will be interested in becoming a CTP. If policymakers are concerned by CTP conflicts with profit objectives they could set a revenue ceiling for the CTP to ensure the majority of revenues are received by CT data providers.

- A CTP should also be free to develop other products (e.g. TCA, market impact analysis) beyond the core CT product itself utilising CT data. These additional products could be subject to the same revenue sharing obligations with CT data providers, or could instead be subject to preferential licensing arrangements with CT data providers with no limitations.

Latency

- It must be noted that a CTP will unlikely achieve the same ultra-low latency in an equities real-time post-trade CT that some data providers and brokers can achieve through significant investment in their data aggregation and co-location capabilities.
- However, some small amount of latency that is as close to real-time as possible should not be a significant issue as use cases we have outlined are primarily for display purposes and systems that do not require ultra-low latency data rather than to facilitate low latency trading. Low-latency automated trading platforms would not leverage this data as firms operating these platforms already have their own consolidated data and would continue to leverage these. A real-time post-trade CT with a small amount of latency would still enable a much clearer view of liquidity than investors have today and would be a significant benefit to the market place. It should also be noted that latency is prevalent in the market place as for example many small and mid-sized brokers do not have aggregation and co-location capabilities and therefore a close to real-time post-trade CT would benefit a significant majority of market participants to help ensure a level playing field.
- The expectations for technological requirements of CT data providers including trading venues and APAs regarding the speed that their systems make trade data available to the CTP must be clearly defined in regulations and governed to ensure timely delivery of post-trade data to the CTP.

Plato Partnership and its network of senior academics strongly believe the implementation of a real-time post-trade consolidated tape for European equity and equity-like instruments will significantly improve transparency and create a level playing field for all market participants. Intervention from policymakers that addresses and regulates the considerations we have outlined can help ensure a consolidated tape is finally available in European markets.

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About Plato Partnership Limited

Plato Partnership Limited, a not-for-profit company comprising European buy-side and sell-side member firms, was formed in September 2016 with a vision of bringing creative solutions and efficiencies to today's equity marketplace. The group's key aims are to reduce trading costs and simplify market structure for the benefit of all market participants, and to act as a champion for end investors. Central to this vision is Plato Partnership's Market Innovator Group (MI3) that sponsors independent academic research to identify better ways of executing trades, lowering the cost of trading, and improving the quality of processes that support the execution lifecycle. Plato Partnership co-operates with industry providers to implement its research findings into solutions for all market participants.

For more information, please visit www.platopartnership.com