



2025/1155

3.11.2025

COMMISSION DELEGATED REGULATION (EU) 2025/1155

of 12 June 2025

supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council with regard to regulatory technical standards specifying the input and output data of consolidated tapes, the synchronisation of business clocks and the revenue redistribution by the consolidated tape provider for shares and ETFs, and repealing Commission Delegated Regulation (EU) 2017/574

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 ⁽¹⁾, and in particular Article 22b(3), Article 22c(2), and Article 27h(8) thereof,

Whereas:

- (1) Clear and harmonised reporting instructions for data to be transmitted to and disseminated by consolidated tape providers ('CTPs') is a key element for the orderly functioning of CTPs and effective and reliable data consolidation.
- (2) To achieve fast, secure and high-quality data transmission to CTPs, the transmission protocols used by data contributors should fulfil certain minimum requirements in terms of performance, security, reliability, and compatibility with other systems and applications supporting the reporting process. Upholding those standards is necessary to guarantee the integrity, accuracy, and timeliness of market data disseminated by CTPs.
- (3) To ensure timely availability of consolidated market data to investors, data contributors should be subject to strict submission latency requirements. Such requirements should however be calibrated to reflect the varying degrees of time-sensitivity in market data. In particular, pre- and post-trade data for equities require tighter latency standards compared to bonds and derivatives, given higher time-sensitivity of equities data. Furthermore, the latency thresholds should represent the maximum allowed limits, which means that a faster latency should be used whenever achievable. To meet the requirement to transmit the data as close to real time as technically possible, data should be transmitted to the data centres of CTPs without artificial delays compared to data transmission by data contributors for other purposes, including transmission of proprietary data feeds.
- (4) Harmonisation of data formats for the transmission of data to CTPs facilitates efficient reception and processing of input data. Harmonisation of data formats for the data transmission also streamlines the operations of CTPs in consolidating and disseminating data in a cost-efficient manner, reducing complexity, enhancing overall operational effectiveness and ensuring the consistency and quality of data for the users of a CTP. The ISO 20022 standard sets out a methodology that provides for harmonisation at three levels: the conceptual level specifying the semantics of data, the logical level specifying the message model without regard to technology, and the physical level describing the syntax of the message in a technology that is used for the transmission of data. Given the broad adoption of ISO 20022 by markets participants in the context of regulatory reporting, the use of that standard should facilitate the consistency and comparability of data. Therefore, any format used by data contributors for reporting under Article 22a of Regulation (EU) No 600/2014 should adhere to the methodology laid down in that ISO standard. However, given the varying market practices and their level of maturity across different asset classes, adherence to a single syntax at a third level is not necessary where well-established market practice already exists, including in the case of the equity asset class. Adherence to the methodology laid down in the ISO 20022 standard is ensured where a mapping is provided between a data format and the ISO 20022 model at the conceptual and logical levels.

⁽¹⁾ OJ L 173, 12.6.2014, p. 84, ELI: <http://data.europa.eu/eli/reg/2014/600/oj>.

- (5) When determining the content of the data to be transmitted to CTPs, regard should be had to the aim of minimising reporting burden for data contributors while facilitating the dissemination of data essential for investors. Furthermore, when determining the input data fields necessary for the production of core market data, consistency should be ensured with the existing pre- and post-trade transparency requirements laid down in Commission Delegated Regulation (EU) 2017/587⁽⁷⁾ for equity instruments and Commission Delegated Regulation (EU) 2017/583⁽⁸⁾ for non-equity instruments.
- (6) To enable investors to be informed about the status of individual financial instruments traded on a given trading venue, the regulatory data to be transmitted to the CTPs should include information on trading suspensions, removals and halts and on the type of trading system on which the instrument is traded. Additionally, to enable investors to make well informed decisions in varying market conditions, the regulatory data to be transmitted to the CTPs should include information on the status of systems matching orders, in particular information on outages or normal trading phases.
- (7) The dissemination of output data should occur through presentation methods that ensure both machine and human readability, as required under Article 27h(1), point (e) of Regulation (EU) No 600/2014. To cater for diverse user needs, the dissemination of output data should be provided in multiple formats, including at least a format that adheres to the ISO 20022 methodology, a format for advanced analysis, the Comma-separated values format for less advanced users, and a graphical user interface to allow for human readability.
- (8) Article 27h(1), point (f) of Regulation (EU) No 600/2014 requires CTPs to have systems in place that can effectively check the completeness of the data transmitted by data contributors, identify obvious errors, and request the re-submission of data. That requirement should entail the obligation for CTPs to flag potential data quality issues to data users and to communicate with data contributors to facilitate the resubmission of corrected trade reports. To ensure data quality, CTPs should put in place mechanisms to confirm to data contributors that they have received the input data. A CTP should not be required to confirm receipt in real time. In the event of serious data quality breaches, CTPs should be able to apply enforcement standards in a non-discriminatory manner. Enforcement measures that CTPs should be able to take include the suspension of revenue redistribution to data contributors and the notification of data quality issues to competent authorities. Additionally, CTPs should perform regular checks on the quality of output data, ensuring periodic reconciliation with the input data.
- (9) To avoid unnecessary operational costs on the entities subject to the requirement to synchronise their business clocks, it is necessary to calibrate the expected level of accuracy to the type of activities that such entities perform, and to the latency levels of the systems that they operate.
- (10) The number of orders that operators of trading venues and systematic internalisers receive every second can be very high and be much higher than that of executed transactions. Especially when using high-frequency trading techniques, the number of orders may extend to several thousands per second, depending on the trading venue, the systematic internaliser, the type of members, participants, or users and clients, and the financial instruments' volatility and liquidity. The minimum granularity requirements for recording the date and time of reportable events by operators of trading venues and systematic internalisers should therefore be proportionate to the speed at which they process and acknowledge orders.

⁽⁷⁾ Commission Delegated Regulation (EU) 2017/587 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards on transparency requirements for trading venues and investment firms in respect of shares, depositary receipts, exchange-traded funds, certificates and other similar financial instruments and on transaction execution obligations in respect of certain shares on a trading venue or by a systematic internaliser (OJ L 87, 31.3.2017, p. 387, ELI: http://data.europa.eu/eli/reg_del/2017/587/oj).

⁽⁸⁾ Commission Delegated Regulation (EU) 2017/583 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards on transparency requirements for trading venues and investment firms in respect of bonds, structured finance products, emission allowances and derivatives (OJ L 87, 31.3.2017, p. 229, ELI: http://data.europa.eu/eli/reg_del/2017/583/oj).

- (11) Members, participants, or users of trading venues operate systems that tend to match the nature and complexity of the trading activity that they perform on a given trading venue. The applicable accuracy levels to which business clocks are to be synchronised should therefore be commensurate to the type of trading activity.
- (12) For certain trading models, increased accuracy to which business clocks are to be synchronised might not be relevant or feasible. Voice trading systems or request for quote trading systems, where the response requires human intervention or does not allow algorithmic trading, or systems which are used for concluding negotiated transactions, should thus be subject to different accuracy standards. Trading venues operating those trading systems are not typically susceptible to the high volume of events that can happen within the same second. Since it is less likely that there are multiple events occurring at the same time, it is not necessary to impose a finer granularity to time stamping of those events. In addition, trades on those trading venues may be agreed using manual methods which can take time. On those trading venues there is also an inherent delay between the moment the trade is executed and the moment the trade is recorded in the trading system. Imposing more stringent accuracy requirements would therefore not necessarily lead to more meaningful and accurate record keeping by the operator of the trading venue, its members, participants or users.
- (13) Approved publication arrangements ('APAs'), designated publishing entities ('DPEs') and CTPs operate systems for data reporting, publication, consolidation and dissemination, and they have a weaker link to the origination of the order and to the transaction data they process. APAs, DPEs and CTPs should therefore be subject to absolute accuracy requirements.
- (14) Because of the complexity of the different systems and the number of alternative methods that can be used to synchronise to Coordinated Universal Time ('UTC'), competent authorities need to understand how trading venues and their members, participants, or users ensure their traceability to the UTC. Therefore, trading venues and their members, participants or users should be able to demonstrate traceability to UTC by documenting the system design, functioning and specifications, to identify the exact point at which a timestamp is applied and to demonstrate that the point within the system where the timestamp is applied remains consistent. Given that clock drift can be affected by many different elements, it is also appropriate to determine an acceptance level for the maximum divergence from UTC.
- (15) The receipt of high-quality data is of the utmost importance for the functioning of the consolidated tapes and requires all data contributors and CTPs to timestamp their data in a synchronised manner. Regulation (EU) 2024/791 of the European Parliament and of the Council ^(*) therefore amended Regulation (EU) No 600/2014 to extend the requirement to synchronise business clocks to DPEs, to APAs and to CTPs. Since that requirement is now laid down in Article 22c of Regulation (EU) No 600/2014, Directive (EU) 2024/790 of the European Parliament and of the Council ^(*) deleted Article 50 of Directive 2014/65/EU of the European Parliament and of the Council ^(*). Commission Delegated Regulation (EU) 2017/574 ^(*) was adopted based on the empowerment set out in Article 50 of Directive 2014/65/EU. Following the deletion of that Article and the establishment of clock synchronisation requirements in Article 22c of Regulation (EU) No 600/2014, it is necessary to update the regulatory framework to reflect that legislative change. Consequently, Delegated Regulation (EU) 2017/574 should be repealed, and references to that Regulation should be understood as references to this Regulation.

^(*) Regulation (EU) 2024/791 of the European Parliament and of the Council of 28 February 2024 amending Regulation (EU) No 600/2014 as regards enhancing data transparency, removing obstacles to the emergence of consolidated tapes, optimising the trading obligations and prohibiting receiving payment for order flow (OJ L, 2024/791, 8.3.2024, ELI: <http://data.europa.eu/eli/reg/2024/791/oj>).

^(*) Directive (EU) 2024/790 of the European Parliament and of the Council of 28 February 2024 amending Directive 2014/65/EU on markets in financial instruments (OJ L, 2024/790, 8.3.2024, ELI: <http://data.europa.eu/eli/dir/2024/790/oj>).

^(*) Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (OJ L 173, 12.6.2014, p. 349, ELI: <http://data.europa.eu/eli/dir/2014/65/oj>).

^(*) Commission Delegated Regulation (EU) 2017/574 of 7 June 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council with regard to regulatory technical standards for the level of accuracy of business clocks (OJ L 87, 31.3.2017, p. 148, ELI: http://data.europa.eu/eli/reg_del/2017/574/oj).

- (16) To ensure the fair treatment of all trading venues across the Union that contribute data to the CTP for shares and exchange traded funds ('ETFs'), it is crucial to clearly specify the method that the CTP for shares and ETFs should apply when calculating the amount of its revenue to be redistributed to data contributors. It is therefore necessary to further specify the minimum frequency at which the CTP for shares and ETFs should determine the relative share of, or percentage of, revenue to be redistributed per eligible trading venue. The CTP for shares and ETFs should redistribute revenues at least annually, although it may opt for a more frequent redistribution.
- (17) To maximise the revenue for trading venues fulfilling all the criteria laid down in Article 27h(6) of Regulation (EU) No 600/2014, and the revenue for trading venues that opt-in, pursuant to Article 22a(3) of that Regulation, and to ensure that the weightings assigned to each criterion laid down in Article 27h(6) of that Regulation sum up to 10, with 10 being the equivalent of 100 %, those weightings should be 4,5 for the criterion laid down in Article 27h(6), point (a), of Regulation (EU) No 600/2014, 4,0 for the criterion laid down in Article 27h(6), point (b), of that Regulation, and 1,5 for the criterion laid down in Article 27h(6), point (c), of that Regulation.
- (18) To deter serious and repeated breaches of the data requirements laid down in Articles 22a, 22b, and 22c of Regulation (EU) No 600/2014, it is necessary to ensure that, when taking a decision on the suspension of the revenue redistribution scheme, the CTP for shares and ETFs acts in an equitable manner. For that reason, the CTP for shares and ETFs should ensure that the decision to suspend the participation of a data contributor in the revenue redistribution scheme and the decision on the duration of that suspension take into consideration the seriousness of the breach, its impact on the revenue redistribution scheme, and any corrective actions put in place by the data contributor.
- (19) In order for the revenue redistribution scheme to foster an on-going dialogue between the CTP for shares and ETFs and each data contributor on the quality of data submitted, and thus to ensure that the suspension of the participation of a data contributor in that scheme is used as a measure of last resort, it is necessary to specify minimum requirements that ensure that the process for suspending a data contributor from that scheme is transparent, non-discriminatory, fair and efficient. In particular, to avoid that such a suspension decision is taken on the basis of incomplete or inaccurate information, the CTP for shares and ETFs should share with suspended data contributors the information supporting the decision on the suspension and allow data contributors to submit additional information both prior to and after the decision has been taken.
- (20) Where the CTP for shares and ETFs confirms its decision to suspend a data contributor from the revenue redistribution scheme, it should be able to redistribute the retained revenue to the other eligible data contributors in the redistribution window, either following the suspension decision or, where a review process is initiated, following the final suspension decision.
- (21) Where the CTP for shares and ETFs, based on the additional information shared by a data contributor, revises its decision to suspend a data contributor from the revenue redistribution scheme, it should redistribute retained revenue to that data contributor in the next redistribution window and within two weeks following the final decision, with interest corresponding to the average rate of the European Central Bank's deposit facility during the suspension period.
- (22) To provide market participants with sufficient time to prepare for the new requirements, the application of the requirements on the synchronisation of business clocks should be deferred.
- (23) This Regulation is based on the draft regulatory technical standards submitted by the European Securities and Markets Authority (ESMA) to the Commission.

- (24) In accordance with Article 10 of Regulation (EU) No 1095/2010 of the European Parliament and of the Council ⁽⁸⁾, ESMA has conducted open public consultations on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the advice of the Securities and Markets Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1095/2010.
- (25) ESMA has taken into account the advice of the expert stakeholder group as required by Article 22b(3) of Regulation (EU) No 600/2014.
- (26) The draft regulatory technical standards to be adopted on the basis of the empowerments laid down in Articles 22b(3), 22c(2) and 27h(8) of Regulation (EU) No 600/2014 contain provisions that are substantively linked to each other, as they are all necessary to ensure the successful establishment and operation of the consolidated tapes. These regulatory technical standards should therefore be bundled into a single Commission Delegated Regulation,

HAS ADOPTED THIS REGULATION:

CHAPTER I

DEFINITIONS

Article 1

Definitions

For the purposes of this Regulation, the following definitions shall apply:

- (a) 'input data' means data transmitted by data contributors to the CTP, in accordance with Article 22a(1) of Regulation (EU) No 600/2014;
- (b) 'output data' means data disseminated by the CTP, in accordance with Article 27h(1), point (d), of Regulation (EU) No 600/2014.

CHAPTER II

INPUT AND OUTPUT DATA OF CONSOLIDATED TAPES

Article 2

Minimum requirements for the quality of transmission protocols

(Article 22a(1) of Regulation (EU) No 600/2014)

1. For the transmission of input data, data contributors shall offer CTPs at least one transmission protocol that complies with the minimum requirements for the quality of transmission protocols specified in Tables 1 to 4 of Annex I.
2. Upon agreement on the selected transmission protocol for the transmission of input data, CTPs and data contributors shall ensure that the minimum requirements referred to in paragraph 1 are consistently met without interruption.

⁽⁸⁾ Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC (OJ L 331, 15.12.2010, p. 84, ELI: <http://data.europa.eu/eli/reg/2010/1095/oj>).

*Article 3***Real time transmission of data**

(Article 22a(1) of Regulation (EU) No 600/2014)

1. Data contributors shall transmit input data to the data centres of the CTPs as close to real time as technically possible and without artificial delays.
2. Data contributors shall transmit to the CTP for shares and ETFs pre-trade input data as close to real time as is technically possible and in any case no later than 50 milliseconds after the timestamp of the order with a 95 % of confidence interval measured on a daily basis.
3. Data contributors shall transmit to the CTP for shares and ETFs post-trade input data related to transactions executed on a trading venue as close to real time as is technically possible and in any case no later than 50 milliseconds after the timestamp of the transaction with a 95 % of confidence interval measured on a daily basis.
4. Data contributors shall transmit to the CTP for shares and ETFs post-trade input data related to transactions executed outside of a trading venue as close to real time as is technically possible and in any case within 50 milliseconds after the timestamp of the reception of the trade report from the investment firm or DPE with a 95 % of confidence interval measured on a daily basis.
5. Data contributors shall transmit to the CTP for bonds and to the CTP for OTC derivatives post-trade input data related to transactions executed on a trading venue as close to real time as is technically possible and in any case within 500 milliseconds after the timestamp of the execution of the relevant transaction.
6. Data contributors shall transmit to the CTP for bonds and to the CTP for OTC derivatives post-trade input data related to transactions executed outside of a trading venue as close to real time as is technically possible and in any case within 500 milliseconds after the timestamp of the reception of the trade report from the investment firm or DPE.

*Article 4***Data standards and format for the transmission of input data**

(Article 22a(1) and Article 22b(3), point (d), of Regulation (EU) No 600/2014)

Data contributors shall transmit to the data centres of CTPs input data in a format that adheres to the ISO 20022 methodology.

*Article 5***Data to be transmitted to the CTP for bonds**

(Article 22b(1) and Article 22b(3), point(d), of Regulation (EU) No 600/2014)

1. With regard to core market data for a given bond, data contributors shall transmit to the data centre of the CTP, by reference to each transaction, the details set out in Table 6 of Annex II that are flagged as 'input' or 'both' in the last column of Table 6.
2. With regard to regulatory data, data contributors shall transmit to the data centre of the CTP, by reference to each financial instrument, the details set out in Table 2 of Annex II that are flagged as 'both' in the last column of Table 2.
3. With regard to regulatory data, data contributors shall transmit to the data centre of the CTP, by reference to each trading system, the details set out in Table 3 of Annex II that are flagged as 'both' in the last column of Table 3.

*Article 6***Data to be transmitted to the CTP for shares and ETFs**

(Article 22b(1) and Article 22b(3), point (d), of Regulation (EU) No 600/2014)

1. With regard to post-trade core market data for a given share or ETF, data contributors shall transmit to the data centre of the CTP all of the following:
 - (a) by reference to each transaction, the details set out in Table 7 of Annex II that are flagged as 'input' or 'both' in the last column of Table 7;
 - (b) on the first day of each month (n), the list of transactions which were executed in the month prior to that ($n-1$) in accordance with Article 4(1), point (c), of Regulation (EU) No 600/2014.
2. With regard to pre-trade core market data for a given share or ETF, data contributors shall transmit to the data centre of the CTP, by reference to each best bid and offer and each price at which the auction system would best satisfy its trading algorithm, the details set out in Table 2 of Annex III.
3. With regard to regulatory data, data contributors shall transmit to the data centre of the CTP, by reference to each financial instrument, the details set out in Table 4 of Annex II that are flagged as 'both' in the last column of Table 4.
4. With regard to regulatory data, data contributors shall transmit to the data centre of the CTP, by reference to each trading system, the details set out in Table 5 of Annex II that are flagged as 'both' in the last column of Table 5.

*Article 7***Data to be disseminated by the CTP for bonds**

(Article 22b(1) and Article 22b(3), point (b), of Regulation (EU) No 600/2014)

1. With regard to core market data for a given bond, the CTP shall disseminate, by reference to each transaction, the details set out in Table 6 of Annex II that are flagged as 'output' or 'both' in the last column of Table 6.
2. With regard to regulatory data relating to bonds, the CTP shall disseminate:
 - (a) by reference to each financial instrument, the details set out in Table 2 of Annex II that are flagged as 'output' or 'both' in the last column of Table 2;
 - (b) by reference to each trading system, the details set out in Table 3 of Annex II that are flagged as 'output' or 'both' in the last column of Table 3.

*Article 8***Data to be disseminated by the CTP for shares and ETFs**

(Article 22b(1) and Article 22b(3), point (b), of Regulation (EU) No 600/2014)

1. With regard to post-trade core market data for a given share or ETF, the CTP shall disseminate, by reference to each transaction, the details set out in Table 7 of Annex II that are flagged as 'output' or 'both' in the last column of Table 7.
2. With regard to pre-trade core market data for a given share or ETF, the CTP shall disseminate, by reference to the European best bid and offer or the price at which the auction system would best satisfy its trading algorithm, the details set out in Tables 3, 4 and 5 of Annex III.
3. With regard to regulatory data relating to shares and ETFs, the CTP shall disseminate all of the following:
 - (a) by reference to each financial instrument, the details set out in Table 4 of Annex II that are flagged as 'output' or 'both' in the last column of that Table;
 - (b) by reference to each trading system, the details set out in Table 5 of Annex II that are flagged as 'output' or 'both' in the last column of Table 5.

*Article 9***Dissemination of output data to ensure machine-readability and human-readability**

(Article 22b(3)(b) and Article 27h(1), point (e), of Regulation (EU) No 600/2014)

1. CTPs shall disseminate the output data in a Graphical User Interface to ensure human readability.
2. CTPs shall also disseminate the output data in at least the following two formats simultaneously:
 - (a) Comma-Separated Values;
 - (b) a format that adheres to the ISO 20022 methodology.
3. CTPs shall:
 - (a) make instructions available to the public, explaining how and where to easily access and use the data, including the identification of the electronic format;
 - (b) make public any changes to the instructions referred to in point (a) at least three months before they come into effect, unless there is an urgent and duly justified need for changes in instructions to take effect more quickly;
 - (c) include on the homepage of their website a link to the instructions referred to in point (a).

*Article 10***Management of incomplete or potentially erroneous information by CTPs**

(Article 22b(3), Article 27h(1), points (a), (d) and (f), and Article 27h(3) of Regulation (EU) No 600/2014)

1. CTPs shall set up and maintain appropriate arrangements that ensure that they accurately collect, consolidate and publish the information received from data contributors and do not introduce any errors or omit information. CTPs shall correct the information where they have themselves caused the error or omission.
2. CTPs shall continuously monitor in real-time the performance of their IT systems to ensure that the input data they have received are successfully consolidated and published.
3. CTPs shall perform periodic reconciliations between the input data they receive and the output data they publish to verify whether the output data have been correctly published.
4. CTPs shall put in place mechanisms to confirm to data contributors that they have received the input data and shall assign a transaction identification code to each input data message they receive. CTPs shall refer to the transaction identification code in any subsequent communication with the data contributor in relation to a specific set of information reported.
5. CTPs shall set up and maintain arrangements to identify received input data that are incomplete, do not fulfil the requirements laid down in Articles 5 and 6, or contain information that is likely to be erroneous. Those arrangements shall include automated price and volume alerts, taking into account:
 - (a) the sector and the segment in which the financial instrument is traded;
 - (b) liquidity levels, including historical trading levels;
 - (c) appropriate price and volume benchmarks;
 - (d) where needed, other parameters that are proper for the characteristics of the financial instrument.
6. CTPs that find out that the input data they received are incomplete or do not fulfil any other reporting requirements in this Regulation shall not publish those input data and shall promptly alert the data contributor submitting those input data.

7. CTPs that find out that the input data they received are likely to be erroneous shall disseminate the corresponding output data and shall promptly flag the potential data quality issue both to the public and to the data contributor.
8. Upon receiving a notification of a data quality issue, data contributors shall acknowledge the issue and, where necessary, initiate the process of resubmitting corrected data.
9. CTPs shall monitor the timeliness of input data received from data contributors for the identification of serious and repeated breaches of the requirements laid down in Article 3.
10. CTPs shall delete and amend information in a trade report upon request from the data contributor providing the information where that data contributor cannot delete or amend its own information for technical reasons.
11. CTPs shall communicate with their clients via formalised interactive communication mechanisms through which data users may flag to the CTP any potential inaccuracies in the dissemination of output data.
12. CTPs shall publish non-discretionary policies describing the measures to enforce data quality and how those measures are applied. Those policies shall contain clear guidance on the application of such measures, ensuring adherence to non-discretionary application, proportionality, timeliness, consistency, and transparency.

CHAPTER III

SYNCHRONISATION OF BUSINESS CLOCKS

Article 11

Reference time

(Article 22c(1) of Regulation (EU) No 600/2014)

Operators of trading venues and their members, participants or users, systematic internalisers, DPEs, APAs and CTPs shall synchronise the business clocks they use to record the date and time of any reportable event with the Coordinated Universal Time ('UTC') issued and maintained by the timing centres listed in the database maintained by the Bureau international des poids et mesures. Operators of trading venues and their members, participants or users, systematic internalisers, DPEs, APAs and CTPs may also synchronise the business clocks they use to record the date and time of any reportable event with UTC disseminated by a satellite system, provided that any offset from UTC is accounted for and removed from the timestamp.

Article 12

Level of accuracy for operators of trading venues and systematic internalisers

(Article 22c(1) of Regulation (EU) No 600/2014)

1. Operators of trading venues and systematic internalisers shall ensure that their business clocks adhere to the levels of accuracy specified in Table 1 of Annex IV according to the gateway-to-gateway latency of each of their trading systems. Gateway-to-gateway latency shall be the time measured from the moment a message is received by an outer gateway of the trading venue's system, sent through the order submission protocol, processed by the matching engine, and then sent back until an acknowledgement is sent from the gateway.
2. By way of derogation from paragraph 1, operators of trading venues and systematic internalisers that operate a voice trading system, or a request for quote trading system where the response requires human intervention or does not allow for algorithmic trading, or a system that formalises negotiated transactions in accordance with Article 4(1), point (b), of Regulation (EU) No 600/2014, shall ensure that their business clocks do not diverge by more than one second from UTC referred to in Article 11. The operator of the trading venue or systematic internaliser shall ensure that times are recorded to at least a one second granularity.

3. Operators of trading venues and systematic internalisers that operate multiple types of trading systems shall ensure that each system adheres to the level of accuracy applicable to that system in accordance with paragraphs 1 and 2.

Article 13

Level of accuracy for members, participants or users of a trading venue

(Article 22c(1) of Regulation (EU) No 600/2014)

1. Members, participants, or users of trading venues shall ensure that their business clocks used to record the time of reportable events adhere to the level of accuracy specified in Table 2 of Annex IV.
2. Members, participants or users of trading venues that engage in multiple types of trading activities shall ensure that the systems that they use to record the time of reportable events adhere to the level of accuracy applicable to each of those trading activities in accordance with the requirements set out in Table 2 of Annex IV.

Article 14

Level of accuracy for DPEs

(Article 22c(1) of Regulation (EU) No 600/2014)

1. DPEs shall record the date and time of reportable events up to one millisecond or better.
2. DPEs shall ensure that their business clocks used to record the time of reportable events do not diverge by more than one millisecond from the reference time laid down in Article 11.
3. By way of derogation from paragraphs 1 and 2, DPEs that have also acquired the status of systematic internaliser shall comply with Article 12.

Article 15

Level of accuracy for APAs and CTPs

(Article 22c(1) of Regulation (EU) No 600/2014)

1. APAs and CTPs shall record the date and time of reportable events up to one millisecond or better.
2. APAs and CTPs shall ensure that their business clocks used to record the time of reportable events do not diverge by more than one millisecond from the reference time laid down in Article 11.

Article 16

Compliance with the maximum divergence requirements

(Article 22c(1) of Regulation (EU) No 600/2014)

Operators of trading venues and their members, participants, or users shall establish a system of traceability to UTC. They shall be able to demonstrate traceability to UTC by documenting the system design, functioning and specifications. They shall be able to identify the exact point at which a timestamp is applied and to demonstrate that the point within the system where the timestamp is applied remains consistent. They shall review the compliance of the system of traceability to UTC with this Regulation at least once a year.

CHAPTER IV

REVENUE REDISTRIBUTION SCHEME

Article 17

Determination of the amount of the revenue to be redistributed, of the eligible data contributors, and the relevant assessment periods

(Article 27h(6) and (7) of Regulation (EU) No 600/2014)

1. For the purposes of redistributing part of the revenue generated by the consolidated tape to data contributors that meet one or more of the criteria laid down in Article 27h(6) of Regulation (EU) No 600/2014, the CTP for shares and ETFs shall determine:
 - (a) the amount of the revenue to be redistributed, based on the total revenue generated by the consolidated tape over the calculation window, as specified by the CTP; and
 - (b) the list of regulated markets, MTFs, and SME growth markets that transmitted input data over the assessment period, either for the full period or for part of it (the 'eligible data contributors').
2. After having determined the amount of revenue to be redistributed and the list of eligible data contributors in accordance with paragraph 1, the CTP for shares and ETFs shall perform the calculations set out in Articles 18 to 21. The CTP for shares and ETFs shall perform such calculations at least on an annual basis and, in any case, before the twentieth day of the month following the calculation window, using the trades recorded by each data contributor over the assessment period. The CTP for shares and ETFs shall apply the resulting percentages of such calculations retroactively over the latest calculation window.
3. For the purposes of paragraphs 1 and 2, the calculation window shall correspond to each individual period over which part of the revenue of the consolidated tape is redistributed.
4. For the purposes of paragraph 2, the assessment period shall correspond to the 12 months over which the relevant trading volume to be multiplied by each individual weighting is considered.

Article 18

Methodology for calculating the amount of the revenue to be redistributed to eligible data contributors meeting the criterion under Article 27h(6), point (a), of Regulation (EU) No 600/2014

(Article 27h(6), point (a), (7), point (a), and (8), points (a) and (b), of Regulation (EU) No 600/2014)

1. To calculate the amount of the revenue to be redistributed to eligible data contributors that meet the criterion under Article 27h(6), point (a), of Regulation (EU) No 600/2014, the CTP for shares and ETFs shall determine the total annual trading volume generated in shares for each eligible data contributor that is a regulated market or an SME growth market by summing each transaction record received by that data contributor.
2. The CTP for shares and ETFs shall determine the total annual trading volume in shares in the Union by summing all transaction records received by all data contributors.
3. For the purposes of the calculations referred to in paragraphs 1 and 2, transactions shall be single counted.
4. To determine whether an eligible data contributor meets the criterion laid down in Article 27h(6), point (a), of Regulation (EU) No 600/2014, the CTP for shares and ETFs shall divide the amount determined under paragraph 1 by the amount determined under paragraph 2 for each regulated market and SME growth market, identified by operating Market Identifier Code ('MIC'), as specified in ISO 10383.

5. For each eligible data contributor meeting the criterion laid down in Article 27h(6), point (a), of Regulation (EU) No 600/2014, identified by segment MIC, as specified in ISO 10383, or by operating MIC, whenever there is no segment MIC, the CTP for shares and ETFs shall multiply the relevant trading volume generated by that MIC, as determined under paragraph 1, by a weighting of 4,5.

Article 19

Methodology for calculating the amount of revenues to be redistributed to eligible data contributors meeting the criterion under Article 27h(6), point (b), of Regulation (EU) No 600/2014

(Article 27h(6), point (b), (7), point (b), and (8), points (a) and (b), of Regulation (EU) No 600/2014)

1. To determine whether an eligible data contributor meets the criterion laid down in Article 27h(6), point (b), of Regulation (EU) No 600/2014, the CTP for shares and ETFs shall, for each eligible data contributor, assess whether such data contributor provided initial admission to trading of shares or ETFs on 27 March 2019 or thereafter. That assessment shall be based on the information published by ESMA in accordance with Article 7(6) of Commission Delegated Regulation (EU) 2017/585 ⁽⁹⁾.

The CTP for shares and ETFs shall determine:

- (a) for each eligible data contributor meeting the criterion laid down in Article 27h(6), point (a), of Regulation (EU) No 600/2014, the total annual trading volume generated in shares and ETFs, by summing each transaction record received by that data contributor;
- (b) for each eligible data contributor not meeting the criterion laid down in Article 27h(6), point (a), of Regulation (EU) No 600/2014, the total annual trading volume pertaining to the shares and ETFs that were initially admitted to trading on 27 March 2019 or thereafter, by summing each relevant transaction record received by that data contributor.

For the purposes of the calculations referred to in points (a) and (b), transactions shall be single counted.

2. For each eligible data contributor meeting the criterion laid down in Article 27h(6), point (b), of Regulation (EU) No 600/2014, identified by segment MIC, as specified in ISO 10383, or by operating MIC, whenever there is no segment MIC, the CTP for shares and ETFs shall multiply the relevant trading volume generated by that MIC, as determined under paragraph 1, second subparagraph, by a weighting of 4,0.

Article 20

Methodology for calculating the amount of revenues to be redistributed to eligible data contributors meeting the criterion under Article 27h(6), point (c), of Regulation (EU) No 600/2014

(Article 27h(6), point (c), (7), point (c), and (8), points (a) and (b), of Regulation (EU) No 600/2014)

1. To determine whether an eligible data contributor meets the criterion laid down in Article 27h(6), point (c), of Regulation (EU) No 600/2014, the CTP for shares and ETFs shall, for each eligible data contributor, determine the total annual pre-trade transparent trading volume generated in shares and ETFs.

⁽⁹⁾ Commission Delegated Regulation (EU) 2017/585 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council with regard to regulatory technical standards for the data standards and formats for financial instrument reference data and technical measures in relation to arrangements to be made by the European Securities and Markets Authority and competent authorities (OJ L 87, 31.3.2017, p. 368, ELI: http://data.europa.eu/eli/reg_del/2017/585/oj).

For the purposes of the calculation referred to in the first subparagraph, the CTP for shares and ETFs shall include all transaction records received from the eligible data contributors which are not flagged as negotiated transactions subject to conditions other than the current market price ('PRIC flag'), reference price transactions ('RFPT flag'), negotiated transactions in liquid financial instruments ('NLIQ flag'), negotiated transactions in illiquid financial instruments ('OILQ flag') as set out in Table 4 of Annex I to Delegated Regulation (EU) 2017/587, or as transactions subject to the pre-trade large in scale waiver as set out in Article 6(1), point (b). Transactions shall in all cases be single counted.

2. For each eligible data contributor meeting the criterion laid down in Article 27h(6), point (c), of Regulation (EU) No 600/2014, identified by segment MIC, as specified in ISO 10383, or by operating MIC whenever there is no segment MIC, the CTP for shares and ETFs shall multiply the relevant trading volume generated by that MIC, as determined under paragraph 1 of this Article, by a weighting of 1,5.

Article 21

Methodology for determining the amount of revenue to be redistributed

(Article 27h(7) and (8), point (b), of Regulation (EU) No 600/2014)

1. For each eligible data contributor, the CTP for shares and ETFs shall sum up the results of the multiplications of the weightings by the trading volumes, as set out in Articles 18 to 20.
2. The CTP for shares and ETFs shall determine the total sum of the results of the calculations under paragraph 1 for all eligible data contributors.
3. The CTP for shares and ETFs shall divide the sum per data contributor, as set out in paragraph 1, by the total sum, as set out in paragraph 2. The resulting percentages for each data contributor shall be multiplied by the total amount of the revenue to be redistributed.

Article 22

Criteria for the temporary suspension of the participation in the revenue redistribution scheme

(Article 27h(8), point (c), of Regulation (EU) No 600/2014)

1. When deciding whether to suspend the participation of a data contributor in the revenue redistribution scheme as laid down in Article 27h(8), point (c), of Regulation (EU) No 600/2014, the CTP for shares and ETFs shall take into account whether any of the following criteria is met:
 - (a) for three consecutive days, the data contributor has failed to submit trade reports or order reports or has submitted more than three trade reports or order reports later than as close to real time as is technically possible, as laid down in Article 3, and those trade reports or order reports account for at least a volume of transactions or orders that in a percentage is not lower than 10 % of the total volume of transactions or orders submitted in a single day;
 - (b) for three consecutive days, the data contributor has submitted more than three trade reports or order reports that are incomplete or contain potentially erroneous data, as laid down in Article 10, and those trade reports or order reports account for at least a volume of transactions or orders that in percentage is not lower than 10 % of the total volume of transactions or orders submitted in a single day;
 - (c) the data contributor no longer meets the minimum requirements for the quality of the transmission protocols set out in Article 2;
 - (d) the data contributor no longer meets the requirements on the level of accuracy to which business clocks are to be synchronised, as set out in Chapter III.

2. The CTP for shares and ETFs may decide not to suspend the participation of a data contributor in the revenue redistribution scheme where the situations set out in paragraph 1 occurred due to circumstances that were out of the ordinary, unavoidable, or unexpected.

Article 23

Procedure for the temporary suspension of the participation in the revenue redistribution scheme

(Article 27h(8), point (c), of Regulation (EU) No 600/2014)

1. Where the CTP for shares and ETFs has found a repeated and serious breach by a data contributor of the criteria set out in Article 22(1), points (a) and (b), it shall inform the data contributor thereof as soon as possible and, in any case, within two business days from the moment it has found the repeated and serious breach. In the notification to the data contributor, the CTP shall:

- (a) identify the trade reports or order reports in relation to which the data contributor is deemed in breach and the number of days for which the revenue redistribution may be suspended;
- (b) provide information to the data contributor supporting its assessment.

Within one week from the notification referred to in the first subparagraph, the data contributor may provide additional information to the CTP seeking to prove that the data requirements were not breached, or that an exceptional circumstance, as referred to in Article 22(2), occurred, and request that the CTP reviews its assessment based on the additional information.

The CTP shall review its assessment taking into account the additional information provided by the data contributor and, where it considers the information not to be complete, set a deadline by which the data contributor is to provide additional information.

2. On the last day of the period in relation to which the revenue is redistributed, the CTP shall draw up its final assessment on whether the criteria for the temporary suspension of the participation of a data contributor in the revenue redistribution scheme, in accordance with Article 22(1), are met.

The CTP shall inform the data contributor of its final assessment within two business days after the last day of the period in relation to which revenue is redistributed. The CTP shall inform the data contributor of the reasons for its final assessment, including the data requirements deemed in breach, and specify the amount of revenue that may be retained.

Within one week from receipt of the information referred to in the second subparagraph of this paragraph, the data contributor may provide additional information to the CTP proving that the data requirements referred to in Article 22a, 22b and 22c of Regulation (EU) No 600/2014 were not breached, or that an exceptional circumstance, as referred to in Article 22(2), occurred, and request that the CTP reviews its final assessment based on the additional information.

The CTP shall review its final assessment taking into account the additional information provided by the data contributor and, where it considers the information not to be complete, set a deadline by which the data contributor is to provide additional information.

3. The CTP shall inform the data contributor concerned of its final decision on the suspension of the participation in the revenue redistribution scheme no later than two weeks after informing the data contributor of the final assessment referred to in the second subparagraph of paragraph 2.

Where the CTP takes a final decision to suspend a data contributor from the revenue redistribution scheme it may redistribute the retained revenue to the other eligible data contributors in the redistribution window following that decision.

Article 24

Conditions for the resumption of revenue redistribution and for the provision of revenue retained plus interest

(Article 27h(8) point (c), of Regulation (EU) No 600/2014)

1. Where the CTP for shares and ETFs finds, on the basis of the additional information provided by the data contributor in accordance with Article 23(1), second subparagraph, and Article 23(2), third subparagraph, that the data requirements referred to in Articles 22a, 22b and 22c of Regulation (EU) No 600/2014 have not been breached, it shall redistribute the revenue retained, with interest, no later than two weeks after the final decision referred to in Article 23(3).
2. For the purposes of the calculation of the interest referred to in paragraph 1, the CTP shall take into account the average rate of the European Central Bank's deposit facility, or where the CTP is established in a Member State whose currency is not the euro, the official interest rate for overnight credit charged by the central bank of the Member State where the CTP is established, over the period of the suspension of the revenue redistribution scheme.

CHAPTER V

FINAL PROVISIONS

Article 25

Repeal

Delegated Regulation (EU) 2017/574 is repealed with effect from 2 March 2026.

References to the repealed Delegated Regulation shall be construed as references to this Regulation and shall be read in accordance with the correlation table set out in Annex V.

Article 26

Entry into force and application

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Articles 11 to 16 shall apply from 2 March 2026.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 12 June 2025.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX I

Minimum requirements for the quality of the transmission protocols referred to in Article 2

Table 1

Performance requirements

Metrics/features	Minimum requirements	Primary OSI Layers
Latency	Latency shall be maintained below 50 milliseconds for the transmission of data to the CTP for shares and ETFs. Latency shall be maintained below 500 milliseconds for the transmission of data to the CTP for bonds. Latency shall be maintained below 500 milliseconds for the transmission of data to the CTP for derivatives.	Layer 3 (Network)
Throughput	Throughput shall exceed 100 Megabits per second (Mbps).	Layer 1 (Physical), Layer 2 (Data link)
Connection setup time	Round Trip Time (RTT) for connection setup shall be less than 500 milliseconds.	Layer 4 (Transport)
Scalability	The protocol shall support operation in clustered or load-balanced environments.	Layer 2 (Data link), Layer 3 (Network), Layer 4 (Transport) and Layer 7 (Application)

Table 2

Reliability requirements

Metrics/features	Minimum requirements	Primary OSI Layers
Error detection mechanism	The protocol shall include error detection mechanisms to ensure accurate identification of data transmission errors.	Layer 2 (Data link), or Layer 4 (Transport), or Layer 7 (Application)
Error correction mechanism	The protocol shall incorporate error correction mechanisms to automatically rectify detected errors.	Layer 2 (Data link), or Layer 4 (Transport), or Layer 7 (Application)
Recovery mechanism	The protocol shall feature recovery mechanisms to swiftly recover from transmission failures or interruptions, ensuring seamless continuity of data transmission operations.	Layer 4 (Transport), or Layer 5 (Session), or Layer 7 (Application)

Table 3

Security requirements

Metrics/features	Minimum requirements	Primary OSI Layers
Secure transport layer	The protocol shall support a secure transport layer to ensure the confidentiality of data during transmission.	Layer 4 (Transport), Layer 7 (Application)
Authentication	The protocol shall support credentials-based or certificate-based authentication mechanisms to verify the identity of communicating parties.	Layer 7 (Application)

Metrics/features	Minimum requirements	Primary OSI Layers
Authorisation	The protocol shall implement authorisation mechanisms to control access to specific resources or functionalities based on user roles or permissions.	Layer 7 (Application)
Non-repudiation	The protocol shall incorporate non-repudiation mechanisms to ensure that the originator of a message cannot deny sending it.	Layer 7 (Application)

Table 4

Compatibility requirements

Metrics/features	Minimum requirements	Primary OSI Layers
Open solution	The implementation of the protocols shall adhere to non-proprietary standards.	Layer 7 (Application)
Interoperability	The protocol shall support at least one widely recognised internet standard.	Layer 7 (Application)
Backward compatibility	The protocol shall be capable to work with older versions of itself or previous technologies.	Layer 7 (Application)

ANNEX II

Regulatory data and post-trade core market data to be transmitted to and disseminated by the CTP for bonds, and the CTP for shares and ETFs according to Articles 5, 6, 7 and 8

Table 1

Symbols used in Tables 2, 3, 4, 5, 6 and 7

Symbol	Data Type	Definition
{DATE_TIME_FORMAT}	ISO 8601 date and time format	Date and time in the following format: YYYY-MM-DDThh:mm:ss.dddZ. — 'YYYY' is the year; — 'MM' is the month; — 'DD' is the day; — 'T' – means that the letter 'T' shall be used — 'hh' is the hour; — 'mm' is the minute; — 'ss.ddd' is the second and its fraction of a second; — 'Z' is UTC time. Dates and times shall be reported in UTC.
{ISIN}	12 alphanumeric characters	ISIN code, as defined in ISO 6166
{MIC}	4 alphanumeric characters	Market identifier as defined in ISO 10383
{CURRENCYCODE_3}	3 alphanumeric characters	3-letter currency code, as defined by ISO 4217 currency codes

Table 2

Regulatory data for bonds, per instrument

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
1	Instrument identification code	Code used to identify the financial instrument.	{ISIN}	Both
2	Instrument status start date and time	Date and time from which the instrument status is valid. The level of granularity shall be in accordance with the requirements set out in Article 12.	{DATE_TIME_FORMAT}	Both
3	Currency	Major currency in which the instrument is traded.	{CURRENCYCODE_3}	Both
4	Dissemination date and time	Date and time when the instrument status is disseminated by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	{DATE_TIME_FORMAT}	Output

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
5	Instrument status	Description of the status of the financial instrument. The status of the financial instrument shall be one of the following: (1) suspended from trading, on the trading venue identified in the field 'Trading venue', in accordance with Articles 32 and 52 of Directive 2014/65/EU; (2) removed from trading, on the trading venue identified in the field 'Trading venue', in accordance with Articles 32 and 52 of Directive 2014/65/EU; (3) subject to a trading halt, on the trading venue identified in the field 'Trading venue', in accordance with Articles 18(5) and 48(5) of Directive 2014/65/EU; (4) available for trading after a suspension, removal or halt.	'SUSP' – the instrument is suspended 'RMOV' – the instrument is removed 'HALT' – the instrument is subject to a trading halt 'ACTV' – the instrument is available for trading after a suspension, removal or halt	Both
6	Trading venue	Identification of the trading venue on which the instrument status is valid (segment MIC where available, otherwise operating MIC). The trading venue is a regulated market, an MTF or an OTF.	{MIC}	Both
7	Trading system	Type of trading system on which the instrument is traded	'CLOB' – Central Limit Order Book 'QDTS' – Quote Driven Market 'PATS' – Periodic Auction 'RFQT' Request for Quotes 'VOIC' – Voice trading system 'HYBR' – Hybrid System 'OTHR' – Other	Both

Table 3

Regulatory data for bonds, per order matching system

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
1	Trading venue	Identification of the trading venue on which the order matching system status is valid (segment MIC, where available, otherwise operating MIC). The trading venue is a regulated market, an MTF or an OTF.	{MIC}	Both

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
2	Trading system	Type of trading system on which the system status is provided	'CLOB' – Central Limit Order Book 'QDTS' – Quote Driven Market 'PATS' – Periodic Auction 'RFQT' – Request for Quotes 'VOIC' – Voice trading system 'HYBR' – Hybrid System 'OTHR' – Other	Both
3	System status start date and time	Date and time from which the system status is valid The level of granularity shall be in accordance with the requirements set out in Article 12.	{DATE_TIME_FORMAT}	Both
4	Dissemination date and time	Date and time on which the system status is disseminated by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	{DATE_TIME_FORMAT}	Output
5	Trading system status	Status of the trading system on which the instrument is traded.	'ACTV' – Active System 'OTAG' – Outage of the trading system 'POTG' – Partial outage of the trading system	Both

Table 4

Regulatory data for shares and ETFs, per instrument

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
1	Instrument identification code	Code used to identify the financial instrument.	{ISIN}	Both
2	Instrument status start date and time	Date and time from which the instrument status is valid. The level of granularity shall be in accordance with the requirements set out in Article 12.	{DATE_TIME_FORMAT}	Both
3	Currency	Major currency in which the instrument trades.	{CURRENCYCODE_3}	Both

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
4	Dissemination date and time	Date and time on which the regulatory data is disseminated by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	{DATE_TIME_FORMAT}	Output
5	Instrument status	Description of the status of the financial instrument. The status of the financial instrument shall be one of the following: (1) suspended from trading, on the trading venue identified in the field 'Trading venue', in accordance with Articles 32 and 52 of Directive 2014/65/EU; (2) removed from trading, on the trading venue identified in the field 'Trading venue', in accordance with Articles 32 and 52 of Directive 2014/65/EU; (3) subject to a trading halt, on the trading venue identified in the field 'Trading venue', in accordance with Articles 18(5) and 48(5) of Directive 2014/65/EU; (4) available for trading after a suspension, removal or halt.	'SUSP' – the instrument is suspended 'RMOV' – the instrument is removed 'HALT' – the instrument is subject to a trading halt 'ACTV' – the instrument is available for trading after a suspension, removal or halt	Both
6	Trading venue	Identification of the trading venue on which the instrument status is valid (segment MIC where available, otherwise operating MIC). The trading venue is a regulated market or an MTF.	{MIC}	Both
7	Trading system	Type of trading system on which the instrument is traded.	'CLOB' – Central Limit Order Book 'QDTS' – Quote Driven Market 'PATS' – Periodic Auction 'RFQT' – Request for Quotes 'HYBR' – Hybrid System 'OTHR' – Other	Both
8	Trading system phase	Type of trading phase of the trading system on which the instrument is traded.	'UDUC' – Undefined Auction 'SOAU' – Scheduled Opening Auction 'SCAU' – Scheduled Closing Auction 'SIAU' – Scheduled Intraday Auction 'UAUC' – Unscheduled Auction 'ODAU' – On Demand Auction (Frequent Batch Auction) 'COTR' – Continuous Trading	Both

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
			'MACT' – At Market Close Trading 'OMST' – Out of Main Session Trading 'TROE' – Trade Reporting (On Exchange) 'TROF' – Trade Reporting (Off Exchange) 'TRSI' – Trade Reporting (Systematic Internaliser) 'OTSP' – Other	
9	Most Relevant Market in terms of liquidity	Whether the trading venue in Field 6 is the most relevant market in terms of liquidity.	TRUE – Yes FALSE – No	Output

Table 5

Regulatory data for shares and ETFs, per order matching system

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
1	Trading venue	Identification of the trading venue on which the order matching system status is valid (segment MIC where available, otherwise operating MIC). The trading venue is a regulated market or an MTF.	{MIC}	Both
2	Trading system	Type of trading system on which the system status is provided.	'CLOB' – Central Limit Order Book 'QDTS' – Quote Driven Market 'PATs' – Periodic Auction 'RFQT' – Request for Quotes 'HYBR' – Hybrid System 'OTHR' – Other	Both
3	System status start date and time	Date and time from which the system status is valid. The level of granularity shall be in accordance with the requirements set out in Article 12.	{DATE_TIME_FORMAT}	Both
4	System status dissemination date and time	Date and time on which the system status is disseminated by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	{DATE_TIME_FORMAT}	Output

#	Field identifier	Description	Format Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
5	Trading system status	Status of the trading system.	‘ACTV’ – Active System ‘OTAG’ – Outage of the trading system ‘POTG’ – Partial outage of the trading system	Both

Table 6

Post-trade core market data for bonds

#	Field identifier	Description and details to be published	Type of execution or publication venue	Format to be populated as defined in Table 1 Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
1	Trading date and time	Table 2, Field 1, of Annex II to Delegated Regulation (EU) 2017/583.			Both
2	Instrument identification code	Table 2, Field 2, of Annex II to Delegated Regulation (EU) 2017/583.			Both
3	Price	Table 2, Field 3, of Annex II to Delegated Regulation (EU) 2017/583.			Both
4	Missing Price	Table 2, Field 4, of Annex II to Delegated Regulation (EU) 2017/583.			Both
5	Price currency	Table 2, Field 5, of Annex II to Delegated Regulation (EU) 2017/583.			Both
6	Price notation	Table 2, Field 6, of Annex II to Delegated Regulation (EU) 2017/583.			Both
7	Notional amount	Table 2, Field 10, of Annex II to Delegated Regulation (EU) 2017/583.			Both
8	Notional currency	Table 2, Field 11, of Annex II to Delegated Regulation (EU) 2017/583.			Both
9	Venue of execution	Table 2, Field 13, of Annex II to Delegated Regulation (EU) 2017/583.			Both
10	Third-country trading venue of execution	Table 2, Field 14, of Annex II to Delegated Regulation (EU) 2017/583.			Both

#	Field identifier	Description and details to be published	Type of execution or publication venue	Format to be populated as defined in Table 1 Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
11	Date and Time when the data contributor received the data	Date and time when the transaction report was received by an APA. The level of granularity shall be in accordance with the requirements set out in Article 15.	APA	{DATE_TIME_FORMAT}	Input
12	Date and Time when the data contributor published the transaction	Table 2, Field 15, of Annex II to Delegated Regulation (EU) 2017/583.			Both
13	Venue of publication	Table 2, Field 16, of Annex II to Delegated Regulation (EU) 2017/583.			Both
14	Transaction Identification Code	Table 2, Field 17, of Annex II to Delegated Regulation (EU) 2017/583.			Both
15	Date and Time of reception by the CTP	Date and time when the transaction was received by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	CTP	{DATE_TIME_FORMAT}	Output
16	Date and Time of publication by the CTP	Date and time when the transaction was published by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	CTP	{DATE_TIME_FORMAT}	Output
17	Flags	Table 2, Field 19, of Annex II to Delegated Regulation (EU) 2017/583.			Both
18	Suspicious Data Flag	Data quality flag to be populated by the CTP when the APA or the CTP have identified trades that, in their view, might be subject to data quality issues.	CTP	TRUE or FALSE	Output
19	Trading System Type	Table 2, Field 20, of Annex II to Delegated Regulation (EU) 2017/583.			Both
20	Number of transactions	Table 2, Field 21, of Annex II to Delegated Regulation (EU) 2017/583.			Both

Table 7

Post-trade core market data for shares and ETFs

#	Field identifier	Description and details to be published	Type of execution or publication venue	Format to be populated as defined in Table 1 Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
1	Trading date and time	Table 3, Field 1, of Annex I to Delegated Regulation (EU) 2017/587.			Both
2	Instrument identification code	Table 3, Field 2, of Annex I to Delegated Regulation (EU) 2017/587.			Both
3	Price	Table 3, Field 3, of Annex I to Delegated Regulation (EU) 2017/587.			Both
4	Missing Price	Table 3, Field 4, of Annex I to Delegated Regulation (EU) 2017/587.			Both
5	Price currency	Table 3, Field 5, of Annex I to Delegated Regulation (EU) 2017/587.			Both
6	Quantity	Table 3, Field 7, of Annex I to Delegated Regulation (EU) 2017/587.			Both
7	Venue of execution	Table 3, Field 8, of Annex I to Delegated Regulation (EU) 2017/587.			Both
8	Third-country trading venue of execution	Table 3, Field 9, of Annex I to Delegated Regulation (EU) 2017/587.			Both
9	Date and Time when the data contributor received the data	Date and time when the transaction report was received by an APA. The level of granularity shall be in accordance with the requirements set out in Article 15.	APA	{DATE_TIME_FORMAT}	Input
10	Trading system	Table 3, Field 10, of Annex I to Delegated Regulation (EU) 2017/587.			Both
11	Date and Time when the data contributor published the transaction	Table 3, Field 11, of Annex I to Delegated Regulation (EU) 2017/587.			Both
12	Venue of Publication	Table 3, Field 12, of Annex I to Delegated Regulation (EU) 2017/587.			Both

#	Field identifier	Description and details to be published	Type of execution or publication venue	Format to be populated as defined in Table 1 Equivalent formats can be used, depending on the syntax used for data transmission	Input/Output data field
13	Transaction identification code	Table 3, Field 13, of Annex I to Delegated Regulation (EU) 2017/587.			Both
14	Date and Time of reception by the CTP	Date and time when the transaction was received by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	CTP	{DATE_TIME_FORMAT}	Output
15	Date and Time of publication by the CTP	Date and time when the transaction was published by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	CTP	{DATE_TIME_FORMAT}	Output
16	Flags	This field shall be populated with the list of all applicable flags set out in Table 4 of Annex I to Delegated Regulation (EU) 2017/587. Where none of the specified circumstances apply, the transaction shall be published without a flag.	RM, MTF, APA	As per Table 4 of Annex I to Delegated Regulation (EU) 2017/587	Both
17	Suspicious Data Flag	Data quality flag to be populated by the CTP when the APA or the CTP have identified trades that, in their view, might be subject to data quality issues.	CTP	TRUE or FALSE	Output

ANNEX III

Pre-trade data to be transmitted to and disseminated by the CTP for shares and ETFs according to Articles 6 and 8

Table 1

Symbols used in Tables 2, 3 and 4

Symbol	Data Type	Definition
{DATE_TIME_FORMAT}	ISO 8601 date and time format	Date and time in the following format: YYYY-MM-DDThh:mm:ss.dddZ. — 'YYYY' is the year; — 'MM' is the month; — 'DD' is the day; — 'T' – means that the letter 'T' shall be used — 'hh' is the hour; — 'mm' is the minute; — 'ss.ddd' is the second and its fraction of a second; — 'Z' is UTC time. Dates and times shall be reported in UTC.
{ISIN}	12 alphanumeric characters	ISIN code, as defined in ISO 6166
{MIC}	4 alphanumeric characters	Market identifier as defined in ISO 10383
{DECIMAL-n/m}	Decimal number of up to n digits in total of which up to m digits can be fraction digits	Numerical field for both positive and negative values. — decimal separator is '.' (full stop); — negative numbers are prefixed with '-' (minus); Where applicable, values shall be rounded and not truncated.
{CURRENCYCODE_3}	3 alphanumeric characters	3-letter currency code, as defined by ISO 4217 currency codes

Table 2

Pre-trade data to be transmitted to the CTP for shares and ETFs

#	Field identifier	Description and details to be published	Format to be populated as defined in Table 1 Equivalent formats may be used, depending on the syntax used for data transmission
1	Update date and time	For continuous order book trading systems, Table 1b, Field 1, of Annex I to Delegated Regulation (EU) 2017/587. For periodic auction trading systems, Table 1b, Field 1, of Annex I to Delegated Regulation (EU) 2017/587.	

#	Field identifier	Description and details to be published	Format to be populated as defined in Table 1 Equivalent formats may be used, depending on the syntax used for data transmission
		For auction trading systems, the date and time at which the price would best satisfy the trading algorithm and any modification of the price (Field 4) or quantity (Field 6) thereafter. The level of granularity shall be in accordance with the requirements set out in Article 12.	
2	Instrument identification code	Table 1b, Field 2, of Annex I to Delegated Regulation (EU) 2017/587.	
3	Side	Table 1b, Field 3, of Annex I to Delegated Regulation (EU) 2017/587. This field is mandatory only for continuous order book trading systems.	
4	Price	For continuous order book trading systems, Table 1b, Field 5, of Annex I to Delegated Regulation (EU) 2017/587 of the best bid and offer. For periodic auction trading systems, Table 1b, Field 5, of Annex I to Delegated Regulation (EU) 2017/587. For auction trading systems, the price at which the auction trading system would best satisfy its trading algorithm. The price shall be provided in the major currency unit. Where price is currently not available but pending ('PNDG') or not applicable ('NOAP'), this field shall not be populated.	
5	Price currency	Table 1b, Field 6, of Annex I to Delegated Regulation (EU) 2017/587.	
6	Quantity	For continuous order book trading systems, Table 1b, Field 8, of Annex I to Delegated Regulation (EU) 2017/587. For periodic auction trading systems, Table 1b, Field 8, of Annex I to Delegated Regulation (EU) 2017/587. For auction trading systems the aggregated quantity attached to the price that would best satisfying the trading algorithm.	
7	Venue	Table 1b, Field 11, of Annex I to Delegated Regulation (EU) 2017/587.	
8	Trading system	Table 1b, Field 12, of Annex I to Delegated Regulation (EU) 2017/587. This field shall be populated for central limit order book trading systems and periodic auction trading systems.	
9	Trading system phase	Table 1b, Field 13, of Annex I to Delegated Regulation (EU) 2017/587.	
10	Publication date and time	Table 1b, Field 14, of Annex I to Delegated Regulation (EU) 2017/587.	

Table 3

Pre-trade core market data to be disseminated by the CTP for shares and ETFs – EBBO

#	Field identifier	Description	Format as defined in Table 1 Equivalent formats can be used, depending on the syntax used for data transmission
1	Entry date and time	Table 2, Field 1, of Annex III to this Regulation applied to the best bids and offers entered into the order book, as reported by the trading venue. The CTP shall publish the most recent amongst the dates and times of the best bids and offers entered into the order book that participate in the EBBO as reported by the data contributors.	{DATE_TIME_FORMAT}
2	Instrument identification code	Table 2, Field 2, of Annex III to this Regulation.	{ISIN}
3	Currency	Major currency unit in which the European best bid and offer prices are expressed. This corresponds to Table 2, Field 5, of Annex III to this Regulation.	{CURRENCYCODE_3}
4	Best bid	European best bid in continuous order books. This corresponds to Table 2, Field 4, of Annex III to this Regulation.	{DECIMAL-18/13}
5	Best bid volume	The aggregated volume attached to the European best bid. This corresponds to Table 2, Field 6, of Annex III to this Regulation.	{DECIMAL-18/17}
6	EBBO timestamp	Date and time of the calculation of the EBBO. The level of granularity shall be in accordance with the requirements set out in Article 12.	{DATE_TIME_FORMAT}
7	Most Relevant Market in terms of liquidity	Most relevant market in terms of liquidity as laid down in Article 4 of Delegated Regulation (EU) 2017/587.	{MIC}
8	Best offer	European best offer in continuous order books. This corresponds to Table 2, Field 4, of Annex III to this Regulation.	{DECIMAL-18/13}
9	Best offer volume	The aggregated volume attached to the European best offer. This corresponds to Table 2, Field 6, of Annex III to this Regulation.	{DECIMAL-18/17}
10	Dissemination date and time	Date and time when the data related to the order was disseminated by the CTP. The level of granularity shall be in accordance with the requirements set out in Article 15.	{DATE_TIME_FORMAT}
11	Publication date and time	Table 2, Field 10, of Annex III to this Regulation.	{DATE_TIME_FORMAT}

Table 4

Pre-trade core market data to be disseminated by the CTP for shares and ETFs – indicative auction price (except when trading phase is set to ‘ODAU’)

#	Field identifier	Description	Format as defined in Table 1 Equivalent formats can be used, depending on the syntax used for data transmission
1	Indicative date and time	Table 2, Field 1, of Annex III to this Regulation. The CTP shall publish the most recent amongst the dates and times of the prices that participate in the CTP's indicative auction price as reported by the data contributors.	{DATE_TIME_FORMAT}
2	Instrument identification code	Table 2, Field 2, of Annex III to this Regulation.	{ISIN}
3a	Lowest auction price	Table 2, Field 4, of Annex III to this Regulation applied to the lowest auction price.	{DECIMAL-18/17}
3b	Highest auction price	Table 2, Field 4, of Annex III to this Regulation applied to the highest auction price.	{DECIMAL-18/17}
3c	Volume weighted auction price	Volume weighted auction price. This field corresponds to Table 2, Field 4, of Annex III to this Regulation weighted by Table 2, Field 6, of Annex III to this Regulation.	{DECIMAL-18/17}
4	Currency	Major currency unit in which the auction price is expressed. This field corresponds to Table 2, Field 5, of Annex III to this Regulation.	{CURRENCYCODE_3}
5	Auction volume	Total auction volume, where applicable, across venues. This corresponds to Table 2, Field 6, of Annex III to this Regulation.	{DECIMAL-18/13}
6	Dissemination date and time	Date and time when the data related to the indicative auction price and size was disseminated by the CTP to the subscribers. The level of granularity shall be in accordance with the requirements set out in Article 15.	{DATE_TIME_FORMAT}
7	Publication date and time	Table 2, Field 10, of Annex III to this Regulation.	{DATE_TIME_FORMAT}
8	Most Relevant Market in terms of liquidity	Most relevant market in terms of liquidity as laid down in Article 4 of Delegated Regulation (EU) 2017/587.	{MIC}

Table 5

Pre-trade core market data to be disseminated by the CTP for shares and ETFs – indicative auction price when trading phase is set to ‘ODAU’

#	Field identifier	Description	Format as defined in Table 1 Equivalent formats can be used, depending on the syntax used for data transmission
1	Indicative date and time	Table 2, Field 1, of Annex III to this Regulation. The CTP shall publish the most recent amongst the dates and times of the prices that participate in the CTP's indicative auction price as reported by the data contributors.	{DATE_TIME_FORMAT}
2	Instrument identification code	Table 2, Field 2, of Annex III to this Regulation.	{ISIN}
3a	Lowest auction price	Table 2, Field 4, of Annex III to this Regulation applied to the lowest auction price.	{DECIMAL-18/17}
3b	Highest auction price	Table 2, Field 4, of Annex III to this Regulation applied to the highest auction price.	{DECIMAL-18/17}
3c	Volume weighted auction price	Volume weighted auction price. This field corresponds to Table 2, Field 4, of Annex III to this Regulation weighted by Table 2, Field 6, of Annex III to this Regulation.	{DECIMAL-18/17}
4	Currency	Major currency unit in which the auction price is expressed. This field corresponds to Table 2, Field 5, of Annex III to this Regulation.	{CURRENCYCODE_3}
5	Auction volume	Total auction volume, where applicable, across venues. This corresponds to Table 2, Field 6, of Annex III to this Regulation.	{DECIMAL-18/13}
6	Dissemination date and time	Date and time when the data related to the indicative auction price and size was disseminated by the CTP to the subscribers. The level of granularity shall be in accordance with the requirements set out in Article 15.	{DATE_TIME_FORMAT}
7	Publication date and time	Table 2, Field 10, of Annex III to this Regulation.	{DATE_TIME_FORMAT}
8	Most Relevant Market in terms of liquidity	Most relevant market in terms of liquidity as laid down in Article 4 of Delegated Regulation (EU) 2017/587.	{MIC}

ANNEX IV

Level of accuracy of business clocks

Table 1

Level of accuracy for operators of trading venues and systematic internalisers

Gateway-to-gateway latency time of the trading system	Maximum divergence from UTC	Granularity of the timestamp
> 1 millisecond	1 millisecond	1 millisecond or better
≤ 1 millisecond	100 microseconds	Increase granularity to 0,1 microseconds or better

Table 2

Level of accuracy for members, participants or users of a trading venue

Type of trading activity	Description	Maximum divergence from UTC	Granularity of the timestamp
Activity using high frequency algorithmic trading technique	High frequency algorithmic trading technique.	100 microseconds	0,1 microseconds or better
Activity on voice trading systems	Voice trading systems as defined in Table 2 of Annex II to Delegated Regulation (EU) 2017/583.	1 second	1 second or better
Activity on request for quote systems where the response requires human intervention or where the system does not allow algorithmic trading	Request for quotes systems as defined in Table 2 of Annex II to Delegated Regulation (EU) 2017/583.	1 second	1 second or better
Activity of concluding negotiated transactions	Negotiated transaction as set out in Article 4(1)(b) of Regulation (EU) No 600/2014.	1 second	1 second or better

ANNEX V

Correlation table referred to in Article 25

Delegated Regulation (EU) 2017/574	Delegated Regulation (EU) 2025/1155
Article 1	Article 11
Article 2	Article 12
Article 3	Article 13
	Article 14
	Article 15
Article 4	Article 16
Article 5	
Annex	Annex IV