



European Securities and
Markets Authority

Consultation Paper

ESMA's Guidelines on position calculation under EMIR



Responding to this paper

ESMA invites comments on all matters in this paper and in particular on the specific questions summarised in Annex 1. Comments are most helpful if they:

1. respond to the question stated;
2. indicate the specific question to which the comment relates;
3. contain a clear rationale; and
4. describe any alternatives ESMA should consider.

ESMA will consider all comments received by **15 January 2018**

All contributions should be submitted online at www.esma.europa.eu under the heading 'Your input - Consultations'.

Publication of responses

All contributions received will be published following the close of the consultation, unless you request otherwise. Please clearly and prominently indicate in your submission any part you do not wish to be publically disclosed. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure. A confidential response may be requested from us in accordance with ESMA's rules on access to documents. We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by ESMA's Board of Appeal and the European Ombudsman.

Data protection

Information on data protection can be found at www.esma.europa.eu under the heading [Legal Notice](#).

Who should read this paper

This consultation paper may be specifically of interest to trade repositories (TRs), trade associations and relevant entities defined in Article 81(3) of Regulation (EU) No 648/2012¹.

¹ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories OJ L 201 4.7.2012 p. 1-59
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1 Executive Summary

Reasons for publication

The purpose of these Guidelines is to ensure that TRs calculate positions in derivatives in a harmonised and consistent manner in accordance with Article 80(4) of EMIR. High-quality position data is necessary for the assessment of systemic risks to financial stability by the relevant authorities. The Guidelines will provide specific information on the aggregation of certain data fields and how those should be calculated by TRs prior to the provision of the data to relevant authorities.

ESMA has observed divergent and inconsistent approaches to position calculations by TRs, which hinder the successful aggregation of data across repositories for the purposes of monitoring of systemic risks to financial stability.

The aim of the guidelines is to ensure consistency of position calculation across TRs, with regards to the time of calculations, the scope of the data to be used in calculations and the calculation methodologies. In addition these guidelines will ensure a consistent methodology is used to calculate collateral relating to positions.

Contents

This paper begins by explaining the scope of the position calculation Guidelines. Section 2 then refers to the scope of the Guidelines. Section 3, the Glossary and Legislative References section then explains the terms used in this paper. The Purpose of the Guidelines is then explained in Section 4. Section 5 explains the overall Guidelines TRs should follow when calculating positions. Section 6 explains the specific aspects which relate to the calculations carried out by TRs to create position sets and Section 7 explains the aspects that are relevant to collateral sets TRs should produce. Section 8 relates to the approach TRs should take when calculating currency position sets and Section 9 refers to the Guidelines for currency collateral position sets.

Next Steps

ESMA will consider the feedback to this consultation and expects to publish a final report of these Guidelines during H1-2018.



2 Scope

Who?

5. The adopted guidelines will apply to TRs that are registered or recognised by ESMA in accordance with Articles 55 and 77 of EMIR respectively.

What?

6. The adopted guidelines will provide information to ensure harmonisation and consistency in relation to:
 - a) the calculations carried out by TRs pursuant to Article 80(4) of Regulation (EU) No 648/2012 (EMIR)¹;
 - b) the level of access to positions provided by TRs to the entities included in Article 81(3) of EMIR with access to positions in line with Article 2 of Regulation (EU) No 151/2013², and
 - c) the operational aspects for access to position data by the entities included in Article 81(3) of EMIR.

When?

7. The **adopted** guidelines will apply from [...].

3 Glossary and legislative references

8. Unless otherwise specified, terms used in EMIR have the same meaning in these guidelines. In addition the following concepts and terms apply:

3.1 Legislative references and abbreviations

EMIR	European Market Infrastructures Regulation – Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories– also referred to as “the Regulation”
ISO	International Organization for Standardization
OTC	Over-the-counter

² Commission Delegated Regulation (EU) No 151/2013 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories with regard to regulatory technical standards on the minimum details of the data to be reported to trade repositories and operational standards for aggregating, comparing and accessing the data, OJ L52, 23.2.2013, p.33-36



Q&A	Questions and Answers
SFTR	Regulation (EU) No 2015/2365 of the European Parliament and of the Council of 25 November 2015 on transparency of securities financing transactions and of reuse and amending Regulation (EU) No 648/2012
TR	A Trade Repository within the meaning of Article 2(2) of EMIR that has been registered or recognised by ESMA in accordance with Articles 55 and 77 of EMIR respectively
XML	Extensible Mark-up Language

3.2 Glossary of concepts and terms

9. "Positions" means the representation of exposures between a pair of counterparties that comprise positions sets, collateral sets, currency positions sets and currency position collateral sets.
10. "Outstanding Trades" or "Outstanding Derivatives" are those derivatives, including CCP-cleared derivatives, which are reported to a TR and have not matured or which have not been the subject of a report with action types "E", "C", "P" or "Z" as referred to in Field 93 in Table 2 of Commission Implementing Regulation (EU) No 2017/105³
11. "Trade State" means the end of day state of an outstanding derivative reported under EMIR for a particular entity and which forms part of that entity's outstanding derivatives vis-à-vis another entity for a particular moment in time.
12. "Variables" are those values taken either directly from the EMIR reporting fields or derived from those fields which will be used by TRs to calculate positions.
13. "Authority" means one of the entities referred to in Article 81(3) of Regulation (EU) No 648/2012¹
14. "Metrics" are variables that include the quantitative information that populates the position calculations. The fields used to define metrics (and dimensions) follow the nomenclature as per the Commission Implementing Regulation (EU) No 2017/105³. For instance T1F17 means field 17 of table 1.
15. "Dimensions" are variables that include qualitative information about the derivative. They are used to group together derivatives into position sets and collateral sets.
16. "Position Set" means (a set of) outstanding derivatives that are considered to be economically related according to their dimensions for a pair of counterparties. Position sets will contain derivatives that are mutually fungible and also those which are not mutually fungible yet have similar economic characteristics.

³ Commission Implementing Regulation (EU) 2017/105 of 19 October 2016 amending Implementing Regulation (EU) No 1247/2012 laying down implementing technical standards with regard to the format and frequency of trade reports to trade repositories according to Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade L17 OJ 21.1.2017 p.17-41

17. “Collateral Set” means a set of collateral that has equal values for the relevant dimensions.
18. “Currency Position Set” is a set of derivatives that have the same currency reported in the relevant dimensions.
19. “Currency Position Collateral Set” is a set of collateral that has equal values for specific dimensions, specifically the dimensions which relate to currency.

Question 1. Are there any other definitions related to the reporting of derivatives under Article 9 of EMIR that need to be taken into account to ensure the guidelines are clear? Please can you elaborate on the reasons for your answer.

4 Purpose

4.1 Legal Provisions

20. Article 81(1) of EMIR provides that a TR shall regularly, and in an easily accessible way, publish aggregate positions by class of derivatives on the contracts reported to it. In accordance with Article 16(1) of Regulation (EU) No 1095/2010⁴, the objectives of these proposed guidelines are to establish consistent, efficient and effective supervisory practices within the European System of Financial Supervision and to ensure the common, uniform and consistent application of the following EMIR provisions:

- a) Article 80(4) of EMIR which provides that TRs shall calculate positions by class of derivative and by reporting entity based on the details of the derivative contracts reported in accordance with Article 9 of EMIR; and,
- b) Article 81(3) of EMIR which provides that a TR shall make the necessary information available to authorities to enable them to fulfil their respective responsibilities and mandates.

4.2 Current situation

21. The existing data TRs make available includes inconsistent calculations of positions across TRs, thus making the aggregation of multiple positions not possible. This prevents authorities from being able to swiftly assess systemic risks to financial stability and being able to quickly react in the case of a crisis.
22. The possibility for reporting counterparties to report their various trades to diverse TRs poses a particular challenge for the establishment of a set of entity-level positions that is consistent, complete and coherent across entities and derivatives.
23. Specifically, each individual TR may only hold partial information on an entity’s exposure with respect to any product and each of its counterparties. Hence, TRs can only calculate a partial *TR-level position* for any entity.

⁴ 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. 84–119.

24. Therefore, the determination of an *overall entity-level position* requires an aggregation of the TR-level positions. Overall entity-level positions should be determined by authorities and based on TR-level positions. It follows that consistency in TR-level position calculation is essential, requiring TRs to agree on common conventions, rules, and methodologies for their EMIR trade reporting data-based determinations and calculations.

4.3 Objectives

25. The proposed guidelines will ensure TRs provide these calculations in an appropriate format and following a consistent methodology and timeline.

26. The purpose of these guidelines is as follows:

- a) Ensure that relevant authorities are provided with consistent and harmonised positions in relation to derivatives; and
- b) Ensure that data made available to authorities in the form of aggregations carried out by TRs is of a high standard.

27. These guidelines also leverage on the requirement under Article 9 of EMIR, “*Counterparties and CCPs shall ensure that the details of their derivatives are reported without duplication*”, and on the fact that reporting of CCP-cleared positions by counterparties follows Q&A TR 17 and that there is no double-counting between trade and position reports.

28. Having considered the purpose of position calculations, ESMA propose four output calculations - the “Position Set”, the “Collateral Set”, the “Currency Position Set” and the “Currency Position Collateral Set”. The Currency Position Set and the Currency Position Collateral Set will be produced for the relevant central banks of issue which should have access to data at position level under their mandates as issuers of relevant currencies.

29. The guidelines establish high-level principles that should be followed by the TRs. Those principles are complemented by specific procedures to be followed in order to ensure the timely and accurate reporting of positions by TRs.

4.4 ESMA Simulation

30. As part of the preparatory work related to this proposal, ESMA conducted a simulation exercise, using one day’s historical trade state data from 2017 (which followed the existing Commission Delegated Regulation⁵) to establish the size of the calculations TRs would produce using different dimensions to calculate positions.

31. This exercise allowed ESMA to better understand the approaches for aggregating derivatives using dimensions similar to those proposed in this paper. The simulations showed ESMA how the data could be condensed into useful aggregations which could then be analysed by users looking to achieve the objectives of the calculations.

⁵ Commission Delegated Regulation (EU) No 148/2013 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories with regard to regulatory technical standards on the minimum details of the data to be reported to trade repositories, OJ L52, 23.2.2013, p.1-10

5 Guidelines on position calculation

32. The TRs are the market infrastructures which underpin the EMIR reporting and have a central function in ensuring accurate record-keeping under EMIR as well as the calculation of positions for authorities.
33. To ensure the achievement of the objectives outlined in this consultation there is a need to establish a controlled and consistent process.
34. When calculating positions it is essential that information used is up to date and relevant. The information to be used for calculations is based only on the information available in Trade State reports on outstanding derivatives.
35. All values reported in all the EMIR reporting fields for derivatives should be as up to date as possible.

Guideline 1. TRs should calculate positions taking into account the latest trade state of the outstanding derivatives reported to them.

Question 2. Do you agree that using trade state reports is the most effective way of ensuring that the information used to aggregate derivatives is current and useful for authorities? Please can you elaborate on the reasons for your answer.

5.1 Calculating positions

36. The size of the positions produced by TRs is important as it directly relates to how useful the position calculations are. The goal is to produce a calculation, which can be processed with ease and which is also granular enough to enable authorities to assess risks on an ad-hoc basis.
37. To formulate a position set, derivatives with corresponding dimensions should be aggregated as explained later in this section.
38. The data fields and derived dimensions which are considered to be most appropriate to group derivatives into sets with similar characteristics are noted in the below guidelines.
39. The Regulations (EU) No 2017/104⁶ and No 2017/105³ define and specify the fields to be reported to TRs for trades. Position data is derived from these fields. Further clarification on the reporting requirements under EMIR is provided by ESMA's Q&A⁷.
40. The variables used to determine the position sets are either the fields specified in the Regulations (EU) No 2017/104⁶ and No 2017/105³ or variables derived directly from those fields (defined in the relevant section below). The position calculation guidance does not

⁶ Commission Delegated Regulation (EU) 2017/104 of 19 October 2016 amending Delegated Regulation (EU) No 148/2013 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories with regard to regulatory technical standards on the minimum details of the data to be reported to trade repositories L17 OJ 21.1.2017 p.1-16

⁷ Questions and Answer - Implementation of the Regulation (EU) No 648/2012 on OTC derivatives, central counterparties and trade repositories (EMIR) and updated on a regular basis.

consider the use of other external information, but in the possible use of the reconciliation status.

41. ESMA expects that the positions calculated by the TR are pertaining only to the derivatives reported to the TR. A position calculated by each TR, i.e. a TR-level position, reflects values that a TR derives from the trade state, i.e. the latest state, of outstanding derivatives reported under EMIR for a particular entity and which form part of that entity's outstanding derivatives vis-à-vis another entity for a particular moment in time and for a particular *position set*. Entities are identified as the 'Reporting counterparty' or the 'Other counterparty' reported under EMIR.
42. In order for authorities to develop meaningful position databases and analysis, consistency among TR methodologies to calculate positions is critical while granularity should be retained as feasible.
43. At the level of TRs the position should pertain to obligations between counterparty pairs within specific instrument categories and other factors. The other factors are detailed in the guidelines.
44. A unique value should be calculated for each counterparty pair (E_i, E_j) , where $i \neq j$, and set of dimensions Z_k at time t , where t is a specific (business) day.
45. It is important to ensure that TRs complete calculations in a consistent manner regardless of the manner in which the derivative to be included in the calculation is reported to the TR.
46. Calculations should not be influenced by whether the derivative reported is single or dual-sided or by the reconciliation status of the report.

Guideline 2. TRs should calculate positions consistently irrespective of whether the derivative reported is single or dual-sided and also consistent irrespective of the reconciliation status of the report.

47. It is important to ensure that TRs include all derivatives in positions they calculate on an accurate basis.
48. This requires TRs to first determine the counterparties of each derivative, then all activity to create the trade state data and then to consider the dimensions appropriate to a position calculation to calculate the position.
49. It is also important to ensure that derivatives included in calculations are those which have not reached maturity, and are effective. Therefore, effective date should be used to capture the derivatives in calculations for authorities.
50. When calculating positions TRs should include all information available on the date of the calculation, whether the derivative has been reconciled or not. This approach will ensure that calculations are up to date with as much information for authorities as possible.

Guideline 3. TRs should determine outstanding derivatives, including (i) the counterparties to a trade and (ii) the most current values reported for a trade (the trade state) in order to calculate the set of outstanding derivatives pertaining to a position.

Guideline 4. TRs should include all relevant derivatives reports held by a TR pertinent to a position of a particular Reporting counterparty ID (T1F2) in the relevant position calculation. TRs should include derivatives in the position calculation if the calculation is on or after the Effective date as referred to in Field 26 in Table 2 of Regulation (EU) No 2017/104⁶ (T2F26). TRs should include derivatives whether they are or are not reconciled, paired or matched.

Guideline 5. TRs should calculate positions on a “best available information” basis. TRs should include all information (as available at the date of the position calculation) conforming to common validation rules in the position calculation, irrespective of the reconciliation state.

Question 3. Do you agree with Guideline 4 and the use of Effective date (T2F26) to determine which derivatives should be included in a calculation? Do you see there being an alternative approach to better ensure that relevant derivatives which are effective are those included in a calculation. Please can you elaborate on the reasons for your answer.

51. Rather than calculating TR-level positions by aggregating both buy side positions and sell side positions in one calculation, TR level positions should be calculated separately based on the buy or sell position of counterparties in each derivative.

52. This approach will ensure that the authorities are able to calculate exposures for each party.

Guideline 6. TRs should calculate positions separately based on the buy or sell position of counterparties in each derivative in order to ensure the authority is able to calculate exposures for each party.

Guideline 7. TRs should calculate and make available two figures in each calculation, one figure derived from a) the notional amounts of the individual derivatives, and another figure derived from b) the market or model-based valuations of the derivatives. Thus, TRs’ position-level data should be constructed in such a manner that authorities can map and analyse entities’ exposures, including aggregation of TR-level positions across TRs to obtain an overall entity level position.

Question 4. Do you agree that the proposed Guideline 6 and Guideline 7 will ensure consistent reports are made available by TRs? Please can you elaborate on the reasons for your answer.

5.2 Reporting timeline

53. It is important that calculations are carried out according to a timeline which provides authorities with up to date information.
54. To achieve this objective, TRs should ensure that data used in calculations relates to trade state data on the same day as the day the calculation is carried out.
55. TRs should complete those calculations on the same day to ensure that authorities are able to access data swiftly in the event of a crisis when the information to potential exposures would be of use.

Guideline 8. TRs should ensure that the position relates to the trade state data of that same day. TRs should also make the position available to authorities on that day. All calculations should be updated on each business day according to the guidelines.

Question 5. Do you agree with the proposed frequency for updating position calculations and making them available to authorities? Please can you elaborate on the reasons for your answer.

5.3 Format of the data

56. ESMA has undertaken substantial work to ensure the harmonisation and standardisation of the reporting requirements by counterparties and the provision of data to authorities for EMIR, MIFID II/MIFIR, SFTR and MAR.
57. ISO 20022 is widely used for other reporting regimes such as MiFID II/R, SFTR and MAR and for provision of access to data under EMIR.
58. By the time the Guidelines on calculation of positions will become applicable, the TRs and authorities would also have gained very valuable experience in working with ISO 20022.
59. Furthermore, ESMA understands that in order to use pre—existing channels and infrastructures and minimise the impact on TRs, the rest of the specificities related to the operational aspects of access to data that are defined in Articles 4 and 5 of Commission Delegated Regulation (EU) No 151/2013² should also be applicable for the provision of position data to authorities.
60. XML templates are already used for access to data through ESMA's TRACE project. Their use would:
 - a) Ensure consistent and harmonised provision of the data and eliminate any potential barriers to entry stemming from the use of proprietary formats;
 - b) Reduce processing costs for both the old and the new TR, and
 - c) Preserve the quality of the data subject to transfer.

61. As a result, ESMA proposes that the format of the files to transfer data from the TR to the relevant authority should be the XML format and template defined in the amended RTS on operational standards for data access².

Guideline 9. TRs should provide access to positions to the relevant authorities by using an ISO 20022 XML template and following the operational standards defined in Articles 4 and 5 of Commission Delegated Regulation (EU) No 151/2013², as amended by CDR (EU) 2017/1800⁸.

Question 6. Do you agree with Guideline 9 and the use of the ISO 20022 XML template and these standards for TRs providing access to positions? Please can you elaborate on the reasons for your answer.

5.4 Sets TRs should produce for authorities

62. ESMA assessed the extent to which the various sets discussed in this paper should be merged in a single set. One of the benefits of having a single calculation would be that an authority would have an immediate view of the exposures between a pair of counterparties. Nevertheless, ESMA is aware of the following:

- a) Counterparties can collateralise on a portfolio level, i.e. the information for one collateral would be relevant for many derivatives;
- b) Counterparties may not report the collateral information together with the rest of characteristics of the derivative, and
- c) The currency positions might not be covered by the same collateral portfolio.

63. As a result, to ensure that authorities have access to data that can be analysed in an effective manner TRs should calculate different positions which include different information.

Guideline 10. TRs should structure position data and make it available in four separate reports (Position Set, Collateral Set, Currency Position Set and Collateral Currency Position Set). Reports should be uniquely identifiable and labelled with the date of the relevant data calculation.

Question 7. Do you agree TRs making four reports available as described in Guideline 10 is the most effective way to ensure authorities receive information that can be used to achieve the objectives of position calculations? Please can you elaborate on the reasons for your answer.

Question 8. Please can you provide estimates of the potential monetary costs for a TR producing the sets, in accordance with all the specificities that are proposed in this paper? Please can you elaborate on the reasons for you answer.

⁸ Commission Delegated Regulation (EU) 2017/1800 of 29 June 2017 amending Delegated Regulation (EU) No 151/2013 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council OJ L259 7.10.2017 p. 14-17

5.5 Errors by TR when providing access to data

64. TRs should ensure that they are providing access to positions in a consistent manner, following the format laid out in the guidelines so that authorities are able to analyse data that is accurate and presented in a consistent fashion.
65. When a mistake has been made by a TR in calculating positions, the TR should ensure that subsequent calculations do not contain the same error.
66. To ensure that errors are addressed appropriately. TRs should ensure that corrections are made to historical calculations when errors are detected, and these corrections are then made available at the next opportunity when the subsequent calculation is made available.
67. If access to data is provided incorrectly by a TR to an authority, it is important that subsequent data access is provided in the correct format.

Guideline 11. When TRs provide access to erroneous data to an authority, the next time the TR makes data available, the previously erroneous data should be corrected.

Question 9. Do you agree with the Guideline 11 for ensuring that historical errors are remediated in future? Please can you elaborate on the reasons for your answer.

Question 10. Do you see a need for any additional Guidelines to ensure that historical errors are remediated in future data made available by TRs? For example in relation to the maintenance by TRs of records of historical position sets.

5.6 Currency used to present Value of Contract value positions

68. Derivatives exist in multiple currencies. To ensure that the information that is made available to authorities is useful and the potential risks are straightforward for users to quantify, where derivatives included in a position set are valued (field value of contract (T1F17)) in different currencies, the TR should convert the values of the derivatives to one currency. In that case the EURO should be used as the currency that represents that set.
69. To ensure that the same exchange rate is used for these conversions, TRs should use the foreign exchange reference rate found on the ECB website on the day of the calculation at 17:00 CET to calculate the value of the derivative that is being included in a report.

Guideline 12. Only where the field value of contract (T1F17) pertaining to a derivative included in the Position Set is reported in different currency, the TR should convert the values reported in the field value of the contract (T1F17) to a single currency. The value of the position should be converted to Euros by the TR by using the relevant foreign exchange rate published on the ECB website at 17:00 CET on the day to which the calculation refers.

Question 11. Do you agree with this method proposed in Guideline 12, designed to ensure that derivatives in different currencies do not lead to authorities receiving

inconsistent data that is arduous to analyse. Please can you elaborate on the reasons for your answer.

5.7 Identification and treatment of outliers

70. TRs should ensure that the data they aggregate is of sufficient quality to allow for useful analysis by authorities. As part of the obligations to ensure accuracy of data and compliance with the reporting requirements under Article 19 of Commission Delegated Regulation (EU) No 150/2013⁹ a TR should require the reporting counterparties to amend data which is incorrect.
71. For instance, the TRs should put in place soft checks for identifying outliers. The soft checks could be calibrated for specific asset classes.
72. A possible approach to identify outliers could be to use a method which calculates the standard deviation for certain data fields, such as notional values, and then considers any values which fell outside four standard deviations of the median value to be an outlier. In any case, as this procedure would require calibration. ESMA would need to see both the cleansed and the raw data aggregates.
73. Identifying outliers is not a straightforward task hence ESMA would welcome any specific feedback on this approach.
74. When counterparties report derivatives to TRs which TRs recognise as outliers it is important that TRs have a consistent procedure to follow to address these mistaken derivative reports. The following guideline will ensure that the usability of the calculations is not impacted by outliers.

Guideline 13. A TR should have in place a procedure to identify abnormal values relating to the derivative it receives from counterparties. For a given position, a TR should provide one resulting calculation including the outlying derivatives and another one excluding the outlying derivatives.

Question 12. Do you agree with the approach in Guideline 13 for how TRs should treat abnormal values in the derivative data they receive when producing calculations? Are there any potential methods you see as appropriate for detecting outliers in a consistent manner? Please can you elaborate on the reasons for your answer.

5.7.1 Erroneous reporting by counterparties to TRs

75. There will be occasions when counterparties misreport to TRs and the data that TRs should use to calculate positions is inconsistent and therefore not useful for authorities. These derivatives may have been in line with the validations rules, however if they are still missing information then there is a risk that including the derivatives in a calculation will create

⁹ Commission Delegated Regulation (EU) No 150/2013 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories with regard to regulatory technical standards specifying the details of the application for registration as a trade repository OJ L52 223.2.2013 p.25-32

inaccurate position sets. This is particularly problematic in the case of the metrics where a missing value would not allow the calculation of a given aggregate value.

76. In such an event, when a counterparty has provided information relating to a derivative to a TR which for example does not include an entry in a required data field the TR should exclude that derivative from all the position calculations which the derivative would normally be included in. This exclusion should be done regardless of whether the derivative reported to the TR has passed the validation rules.
77. This approach will ensure that the calculations available to authorities include all the information relevant to those derivatives in the position. If missing values are still in line with validation rules we should still ask TRs to exclude from the position sets

Guideline 14. A TR should exclude derivatives which have missing data for one of the metrics or dimensions from all relevant position calculations. TRs should do this even in instances where the reported derivative is in line with the validation rules.

Question 13. Do you agree that the approach described in Guideline 14 is the most effective way to make available useful information for authorities? Are there any alternative approaches for dealing with erroneous reports which you think could help produce useful calculations? Do you think that this approach is appropriate for derivatives reported before 1 December 2014? Please can you elaborate on the reasons for your answer.

5.8 Procedure followed by a TR for calculations

78. It is important that TRs are consistent in their approach to creating position calculations and that the guidelines for position calculations are interpreted in the correct manner.
79. A harmonised approach to the calculation of positions is integral to the usefulness of position calculations for authorities monitoring systemic risks to the financial markets.
80. To achieve this objective, ESMA should at all times be able to easily access the actual procedures followed by TRs when calculating positions. This will help ESMA quickly understand any potential inconsistencies or significant outliers in overall position calculations.
81. It is therefore necessary for TRs to be able to provide upon request a version to ESMA of the procedures and relevant algorithms used to create the position calculations described in these guidelines.

Guideline 15. Upon request from ESMA, a TR should have available at all times the position calculation algorithms they use as well as the procedure(s) which they follow to produce each of the four position calculations described in these Guidelines.

Question 14. Do you agree with that the proposed Guideline 15 is the most effective way for ESMA to ensure that they can quickly access the procedures and relevant algorithms a TR follows to calculate positions? Please can you elaborate on the reasons for your answer.

5.9 Timeframe for Implementation

82. As explained in Section 4.2 of this paper, ESMA recognises that TRs do not currently produce calculations in a consistent manner, hence the purpose of the guidelines. ESMA recognises that system changes will need to be completed by TRs to ensure that the guidelines are followed as defined in this document in H2 2018. When determining the final implementation date, ESMA will take into account the needed time for TRs to put in place the relevant internal processes, as well as the urgency to access position data by the authorities listed in Article 81(3) of EMIR.

Question 15. Do you foresee any difficulties with complying with these guidelines in line with the H2 2018 implementation timeframe? Please provide rationale to support and explain your answer by detailing the specific aspects of the implementation process that would impact the total implementation timeline.

6 Position Set

83. This section provides information on the specific dimensions and metrics that should be used to create Position Sets.

84. Regarding the information to be used and the timeline for making the calculations available, the same provisions apply for each of the calculations, however each set uses different dimensions and metrics.

6.1 Metrics used to calculate positions

85. Metrics are the variables used to quantify the exposures that exist as a result of derivatives between counterparties. As previously explained each metric in these guidelines is an EMIR reporting field.

86. Metrics are quantitative measures which allow for the aggregation of different exposures to counterparties.

87. In contrast to the approach required under MiFID II/R to calculate position limits, position calculations with regards to options are not based on delta-adjusted notional values. Rather, the relevant gross notional values that are reported under EMIR are used. The difference resides in the fact that under EMIR the gross notional is understood as a better

estimate of the systemic risk borne by the counterparties, while the position reporting under MiFID serves to enable supervision of compliance with position limits where the actual, in the case of options, delta-adjusted size of the position held at a given point in time is the relevant parameter. The position limits under MiFID II/R are set at the level of the underlying commodity derivative and the limit applies to the aggregation of futures and options positions. ESMA's proposal for calculation of positions by TRs that is detailed in the following sections however requires separate positions per derivative contract types, e.g. options and futures are part of separate positions.

88. Derivatives grouped in sets because they have the same dimensions will still have different valuations. There is a possibility that derivatives which have matching dimensions have different values and also different signs, i.e. one derivative has a negative mark to market value and it is captured in the same set as another derivative with a positive mark to market valuation.
89. ESMA therefore propose that TRs make available calculations, on a gross basis, the derivatives which have a negative value, and separately those with a positive value for both the buy side and the sell side of a derivative.
90. End users of the calculations then may aggregate the calculations if they wish to.

Guideline 16. The TRs should calculate positions by aggregating according to the following quantitative metrics:

- a) **Number of trades used for calculating the Buy-Side position:** This refers to the number of trades contained in the position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14);
- b) **Number of trades used for calculating the Sell-Side position:** This refers to the number of trades contained in the position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14);
- c) **Buy-Side Negative Notional:** Aggregations of all Negative values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);
- d) **Buy-Side Positive Notional:** Aggregations of all Positive values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);
- e) **Sell-Side Negative Notional:** Aggregations of all Negative values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);
- f) **Sell-Side Positive Notional:** Aggregations of all Positive values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);
- g) **When Asset Class (T2F2) is “Credit”,** then the notional amount metric should be multiplied by the Index Factor (T2F89);
- h) **Buy-Side Negative Value:** Aggregations of all Negative Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18);

- i) **Sell-Side Negative Value:** Aggregations of all Negative Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18);

- j) **Buy-Side Positive Value:** Aggregations of all Positive Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18), and

- k) **Sell-Side Positive Value:** Aggregations of all Positive Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18).

Question 16. Do you agree that the metrics included in Guideline 16 are the most appropriate for quantifying the exposures of the different derivatives? Do you consider necessary and essential for the accurate assessment of exposures between counterparties to include separate metrics for positive and for negative values of fields Notional and Values of contract? Are there any other more efficient, still accurate ways to represent this? Would the dimension “Master agreement type (T2F30) be relevant in this case? Please can you elaborate on the reasons for your answers.

6.2 Dimensions used to calculate positions across asset classes and contract types

91. When calculating position sets, it is necessary to consider all the dimensions for each position set, so that the reports which TRs produce for authorities reflect all relevant derivatives.

Guideline 17. All derivatives reported to TRs should be aggregated with derivatives with identical entries in the following fields representing dimensions of the derivatives grouped together in position sets to specify counterparties to derivatives:

- a) Reporting counterparty ID (T1F2)**
- b) ID of the other Counterparty (T1F4)**
- c) Master agreement type (T2F30)**
- d) Master agreement version (T2F31)**
- e) Collateralization (T1F21)**
- f) Collateral portfolio code (T1F23), if applicable**
- g) Cleared (T2F35).**

Question 17. Do you consider that the inclusion of the field Intragroup (T2F38) is required as an additional dimension? Please can you elaborate on the reasons for your answer.

92. It is important that authorities are able to distinguish between the different derivative types in existence between counterparties on an asset class basis. For instance, authorities using the calculations need to be able to distinguish between commodity derivatives and interest rate derivatives.
93. Therefore ESMA proposes that TRs aggregate derivatives with asset type as one of the dimensions. Then, depending upon the asset class of the derivatives which are aggregated together, different dimensions (specifically relevant to the specific asset class) will be used to further aggregate the derivatives.
94. Given the specific characteristics of different asset classes and contract types, ESMA proposes to also include in the guidelines the dimensions which are particular to the type of derivative. Where the dimensions are not relevant to the asset class being reported, the fields will be empty and therefore authorities will be able to disregard those trades in the calculations.

Guideline 18. All derivatives reported to TRs should be aggregated with derivatives with the same entries in the following fields (dimensions) grouped together and aggregated in position reports:

- a) Asset class (T2F2);**
- b) Contract type (T2F1);**
- c) Underlying identification type (T2F7);**
- d) Underlying identification (T2F8), and**
- e) Option type (T2F78), when applicable.**

Guideline 19. In addition to the Guidelines referred to in Guideline 18, TRs should group together similar currency derivatives with the same entries for all of the following dimensions:

- a) Notional currency 1 (T2F9);**
- b) Notional currency 2 (T2F10), when applicable;**
- c) Deliverable currency (T2F11);**
- d) Delivery currency 2 (T2F61), when applicable;**
- e) Exchange rate basis (T2F64), and**
- f) Currency of the value (T1F18).**

Question 18. Would a further aggregation of derivatives with position sets created using the dimensions in Guideline 18 and Guideline 19 allow authorities to achieve a useful overview of potential systemic risks that may arise in financial markets? Please can you elaborate on the reasons for your answer.

6.2.1 Aggregating derivatives with similar times to maturity

95. In addition to the above data fields, the EMIR reporting data field which relates to 'Value of Time to maturity' should also be used to derive a set of 'buckets/dimension values' within which derivatives with similar times left to maturity should be grouped.

96. A derived variable (dimension) will be used called 'Time to maturity' which will be calculated according to the number of days between the calculation date and the field Maturity Date

(T2F27). When Maturity date is not populated in a derivative reported to a TR or is populated with an invalid value, the value of Time to maturity is set to NA. ESMA proposes that this approach is used to create a set of buckets.

97. Derivatives with similar times left to maturity will be grouped in each bucket and calculations made accordingly.

Guideline 20. TRs should use the following buckets to aggregate derivatives with similar values for ‘Time to Maturity’. Time to Maturity should be calculated as the difference between a derivative’s Maturity Date and the calculations date in days (based on a 30/360 calendar).

Difference between Maturity Date and calculation date in days (30/360)	Value of Time to maturity
[0,30]	“T01_00M_01M”
[30,90]	“T02_01M_03M”
[90,180]	“T03_03M_06M”
[180,360]	“T04_06M_12M”
[360,720]	“T05_01Y_02Y”
....	
18000 or more	“T20_50Y_XX_Y”

Question 19. Do you believe that the approach included in Guideline 20 for grouping derivatives with similar times to maturity is appropriate? Do you think that a more granular approach to the grouping of derivatives with similar time to maturity would be more useful? Please can you elaborate on the reasons for your answer.

Question 20. Do you agree that the dimensions included in Guideline 17 to Guideline 20 are the most appropriate for grouping derivatives into reports for analysis by authorities? Please can you elaborate on the reasons for your answer.

6.3 Dimensions specific to asset classes

98. The following section of the consultation paper specifies the dimensions specific to different derivative asset classes.

99. Where the following dimensions are not relevant to the asset class being reported, the field will be empty and therefore authorities will be able to disregard those derivatives.

6.3.1 Dimensions specific to interest rate derivatives

100. ‘Type of IRS’ is a derived variable that uses the reported values according to the specifications below based on the information provided in the fields Fixed rate of leg 1

(T2F39), Fixed rate of leg 2 (T2F40), Floating rate of leg 1 (T2F55) and Floating rate of leg 2 (T2F58).

101. The table below explains the value of variables which should be used to group similar derivatives in the position sets.
102. The column entitled 'Value of variable Type of IRS' shows the different values for dimensions to be used for the interest rate swaps.
103. If there is a mistake in the counterparty's reporting of fixed/float then TRs should enter NA as the value of the variable.

Guideline 21. In addition to the use of the dimensions referred to in Guideline 17 to Guideline 20, IRS derivatives should also be grouped together according to their type. With reference to whether Leg 1 and Leg 2 are fixed or floating, the below table explains how 'type of IRS' should be discerned and how IRS derivatives should be grouped:

Fixed rate of leg 1	Fixed rate of leg 2	Floating rate of leg 1	Floating rate of leg 2	Value of variable Type of IRS ¹⁰
P	B	B	B	FIX-BLANK
B	B	P	B	FLOAT-BLANK
P	B	B	P	FIX-FLOAT
B	P	P	B	FIX-FLOAT
P	P	B	B	FIX-FIX
B	B	P	P	BASIS
B	B	B	B	Blank value
Other	B	B	B	NA

P= Populated, B=Blank

Question 21. Do you believe that Guideline 21 which defines an additional dimension for grouping IRS derivatives is appropriate? Do you believe there is an alternative way to group similar IRS? Please can you elaborate on the reasons for your answer.

6.3.2 Dimensions relating to credit derivatives

104. The following dimensions are appropriate for calculating positions in credit derivatives reported to TRs.
105. The dimensions are taken directly from the reporting fields and will be populated when a credit derivative is reported to a TR. Aggregating credit derivatives in line with these

¹⁰ In the event that Fixed rate of leg 1 is populated with the value 1.00 and the Floating rate of leg 1 is populated with the value "EURI", the variable Type of IRS will be populated with the value "FIX_EURI". In the case that fixed legs are not populated but in Floating rate of leg 1 the value "LIBO" is provided and in the Floating rate of leg 2 the value "EURI" is provided, the variable Type of IRS will be populated with the value "EURI_LIBO"

additional dimensions will ensure that derivatives with similar characteristics are included in the same position sets, providing authorities with useful data for further analysis.

106. Guideline 22 confirms the additional dimensions to be used which are specific to credit derivatives.

Guideline 22. For credit derivatives, TRs should use the following dimensions to group together derivatives for position calculations in addition to those dimensions referred to in Guideline 17 to Guideline 20:

- a) Seniority (T2F83), when reference entity is populated in field 'Reference entity';**
- b) CDS Underlying, derived by TRs based on Underlying Identification field (T2F7) and grouped according to index/basket/single name underlying;**
- c) Tranche (T2F90), when index is populated in field 'Underlying', and**
- d) Collateral portfolio code (T1F23).**

Question 22. Would an aggregation of credit derivatives with position sets created using the dimensions in Guideline 22 allow authorities to achieve a useful overview of potential systemic risks that may arise in financial markets? Please can you elaborate on the reasons for your answer.

6.3.3 Dimensions relating to commodity derivatives

107. Commodity derivatives require counterparties to report commodity base and commodity details.

108. The variable can be left blank (when non applicable) or it can have a value for Other when the information cannot be classified.

109. The values of Commodity are listed in Guideline 23 which describes the additional dimensions that should be used for positions in commodity derivatives.

Guideline 23. For commodity derivatives, a TR should aggregate data on volumes for classes of commodity derivatives in accordance with the dimensions referred to in Guideline 17 to Guideline 20 of this paper as per each of the following details reported in T2F65 and T2F66 of the amended Commission Implementing Regulation (EU) No 2017/105³

- a) metals – “commodity base” field reported as ‘ME’.
- b) oil products – “commodity details” reported with ‘OI’
- c) coal – “commodity details” reported with ‘CO’
- d) gas – “commodity details” reported with ‘NG’
- e) power – “commodity details” reported with ‘EL’ or ‘IE’
- f) agricultural products – “commodity base” reported with ‘AG’
- g) other commodities including freight and C10 – “commodity base” reported with ‘FR’ or ‘IN’ or ‘EX’ or ‘OT’ or “commodity details” reported with ‘WE’
- h) derivatives on emission allowances – “commodity details” reported with ‘EM’
- i) not specified - when the derivative is a commodity under Asset Class (T2F2) but does not follow the previous extractions
- j) blank, when the derivative is not within the commodity Asset Class (T2F2)

Question 23. Do you agree that the additional dimension for grouping commodity derivatives included in Guideline 23 will create more useful information for authorities? Please can you elaborate on the reasons for your answer.

7 The Collateral Set

110. The purpose of creating the Collateral Set is to allow authorities to assess the extent to which derivatives represented in position sets produced by TRs are collateralised.

111. This calculation aims specifically to establish the value of the collateral exchanged between the different counterparties and provide the necessary information to link this information to the information available in the Position Set, so authorities can infer the net credit risk among different counterparties.

112. Indeed, collateral may be posted or received by counterparties to cover:

- a) Net rather than gross positions, and
- b) Securities may moreover be used to collateralise one or more derivative or
- c) Securities might be used to collateralise different types of transactions, such as derivatives, SFTs and cash transactions.

113. For that reason, a further calculation of net collateral positions might need to be carried out by authorities in order to obtain a more accurate representation of counterparty credit risk.

114. ESMA proposes to use the same metrics and dimensions for collateral sets as those proposed in the guidelines in this paper for Position Sets.

Guideline 24. TRs should provide a report to authorities which aggregates collateral sets related to position sets reported to TRs on a daily basis.

115. There are two possible methods to populate the fields related to the value of the collateral exchanged between counterparties. The two approaches have been analysed with the following summaries.

116. When collateralisation is performed on a portfolio basis (T1F22), the variables that represent the value of the collateral are provided at portfolio level so the total value is provided once with the relevant portfolio code or the same total value appears in multiple reports each time sharing the same portfolio code (T1F23).

117. Therefore, aggregation of those values will not provide a useful indicator. If multiple collateral reports are submitted for the same portfolio and for different reports the collateral value differs despite the reports having the same collateral portfolio code, ESMA proposes that TRs take the median¹¹ of the values across the reports sharing a portfolio code. This should be used as the value of the collateral displayed in the Collateral Set.

Guideline 25. When collateralisation is performed on a portfolio basis (and derivatives share a portfolio code (T1F23)), TRs should aggregate collateral by taking the median of all the collateral values across the reports which share the code, as the value of that collateral for the purpose of the collateral set.

Question 24. Do you agree that the method described in Guideline 25 is the most effective way of determining a useful indicator when collateralisation of derivatives is performed on a portfolio basis? Please can you elaborate on the reasons for your answer.

¹¹ Median is proposed instead of mean as the median is less likely to be affected than the mean by reporting mistakes.

Guideline 26. When collateralisation is not performed on a portfolio basis, the variables that represent the value of the collateral only apply to an individual derivative and so where possible TRs should provide an aggregation of those values in the Collateral Set.

Question 25. Do you agree that the aggregation of these values in line with Guideline 26 is the most appropriate way to provide authorities with a view of collateral positions? Please can you elaborate on the reasons for your answer.

7.1 Metrics and dimensions to be used for quantifying collateral in collateral calculations

118. As with the Position Sets, different metrics will be used to quantify collateral positions. ESMA proposes the inclusion in the guidelines the following metrics which are taken from the EMIR reporting fields. These metrics will be relevant to all derivatives. Information should be expressed in the original currency reported under the relevant field.

Guideline 27. The following metrics should be used to quantify collateral sets:

- a) Number of reports used for calculating the collateral set.**
- b) Initial margin posted (T1F24).**
- c) Variation margin posted (T1F26).**
- d) Excess collateral posted (T1F32).**
- e) Initial margin received (T1F28).**
- f) Variation margin received (T1F30).**
- g) Excess collateral received (T1F34).**

119. The Collateral Set should be based on a set of dimensions that group together derivative reports with similar characteristics in relation to collateral used for that derivative.

Guideline 28. The following dimensions should be used by TRs to group together derivatives using the same collateral. When each of the below dimensions match for two or more derivatives, those derivatives should be grouped together as a collateral set:

- a) Reporting Counterparty ID (T1F2)**
- b) ID of the other counterparty (T1F4)**
- c) Collateralisation (T1F21), and**
- d) Collateral Portfolio (T1F22)**
- e) Currency of the initial margin posted (T1F25)**
- f) Currency of the variation margin posted (T1F27)**
- g) Currency of the initial margin received (T1F29)**
- h) Currency of the variation margin received (T1F31)**
- i) Currency of the excess collateral posted (T1F33)**
- j) Currency of the excess collateral received (T1F35)**

Question 26. Do you agree with the proposed Guideline 28 for aggregating collateral sets and representing the data for authorities? Please can you elaborate on the reasons for your answer.

Question 27. For the calculation of positions, is it more appropriate that the currency of the collateral is the same as the currency of the field Value of the Contract (T1F17)? In case they are not, should they all be converted to the same currency, e.g. EUR? Should, alternatively the currency of the Value of the contract and the collateral be always the currency of the notional of the derivatives? Please can you elaborate on the reasons for your answer.

8 Currency Position Set

120. EMIR requires TRs to make available information on derivative positions to the ECB and other members of the ESCB in the currency that they issue in line with their mandate as central banks of issue.

121. ESMA proposes that a single report is made available to each central bank of issue with a calculation of the Currency Position Set for all derivatives where the currency of that

issuing bank is referred to in the dimensions mentioned below of a reported derivative contract.

122. Given that this information could be different from the information included in the trade state report for the given member of ESCB, the TRs should filter out the additional transactions to calculate the currency positions from the full trade state report, i.e. the one available to ESMA and ESRB.
123. A calculation produced for the ECB and other members of ESCB on a daily basis will provide an aggregated view of potential exposures in specific currencies relevant to the central bank of issue.

8.1 Dimensions and metrics for Currency Position Sets

124. To ensure that Currency Position Sets provide the authorities with useful information the dimensions used to scope the relevant derivatives will differ to those used in other position calculations.

Guideline 29. TRs should determine the relevant currency position sets for authorities where the counterparties have reported the currency of issue of that authority for one of the below dimensions.

- a) Notional Currency 1 (T2F9);**
- b) Notional Currency 2 (T2F10), and**
- c) Deliverable Currency (T2F11),**
- d) Delivery currency 2 (T2F61), when applicable.**

Guideline 30. TRs should provide a currency position set to authorities determined in accordance with Guideline 29 and including all the dimensions included in Guideline 17 to Guideline 22.

125. For Currency Position Sets the following metrics should be used by TRs to provide reports to the members of the ESCB on currency exposures.

Guideline 31. TRs should use the following metrics to aggregate currency positions which should be made available to the central bank issuing that currency.

- a) **Number of trades used for calculating the position (Buy-side):** This refers to the number of trades contained in the currency position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14);
- b) **Number of trades used for calculating the position (Sell-side):** This refers to the number of trades contained in the currency position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14);
- c) **Buy-Side Negative Notional:** Aggregations of all Negative values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);
- d) **Buy-Side Positive Notional:** Aggregations of all Positive values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);
- e) **Sell-Side Negative Notional:** Aggregations of all Negative values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);
- f) **Sell-Side Positive Notional:** Aggregations of all Positive values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);
- g) **When Asset Class (T2F2) is “Credit”,** then the notional amount metric should be multiplied by the Index Factor (T2F89);
- h) **Negative Value (Buy-side):** Aggregations of all Negative Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18);

- i) **Negative Value (Sell-side):** Aggregations of all Negative Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18);
- j) **Positive Value (Buy-side):** Aggregations of all Positive Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18), and
- k) **Positive Value (Sell-side):** Aggregations of all Positive Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18).

Question 28. Do you agree with the proposal to use the dimensions and metrics included in Guideline 29 and Guideline 31 to aggregate derivatives to provide information on specific currencies to central banks of issue? Please elaborate on the reasons for your answer.

9 Currency Position Collateral Sets

126. As mentioned earlier in the paper it is also important that TRs calculate collateral for the derivatives included in the relevant currency position sets. This section includes the relevant guidelines for these calculations.

127. These calculations will be useful for central banks looking to understand the approach to collateralisation taken by counterparties to different derivatives, as well as the level of collateralisation of these currency positions. This is essential in order to allow the central banks to monitor any potential risks stemming from under or non-collateralisation of positions in their currency of issue.

Guideline 32. TRs should aggregate the collateral pertaining to the currency position sets determined in accordance with Guideline 29 and using the dimensions referred to in Guideline 28 and the metrics referred to in Guideline 27.

Question 29. Do you agree that Guideline 32 includes the appropriate metrics and dimensions for calculating collateral held in specific currencies for derivatives? Please elaborate on the reasons for your answer.

10 Guidelines

Guideline 1. TRs should calculate positions taking into account the latest trade state of the outstanding derivatives reported to them.

Guideline 2. TRs should calculate positions consistently irrespective of whether the derivative reported is single or dual-sided and also consistent irrespective of the reconciliation status of the report.

Guideline 3. TRs should determine outstanding derivatives, including (i) the counterparties to a trade and (ii) the most current values reported for a trade (the trade state) in order to calculate the set of outstanding derivatives pertaining to a position.

Guideline 4. TRs should include all relevant derivatives reports held by a TR pertinent to a position of a particular Reporting counterparty ID (T1F2) in the relevant position calculation. TRs should include derivatives in the position calculation if the calculation is on or after the Effective date as referred to in Field 26 in Table 2 of Regulation (EU) No 2017/104 (T2F26). TRs should include derivatives whether they are or are not reconciled, paired or matched.

Guideline 5. TRs should calculate positions on a “best available information” basis. TRs should include all information (as available at the date of the position calculation) conforming to common validation rules in the position calculation, irrespective of the reconciliation state.

Guideline 6. TRs should calculate positions separately based on the buy or sell position of counterparties in each derivative in order to ensure the authority is able to calculate exposures for each party.

Guideline 7. TRs should calculate and make available two figures in each calculation, one figure derived from a) the notional amounts of the individual derivatives, and another figure derived from b) the market or model-based valuations of the derivatives. Thus, TRs’ position-level data should be constructed in such a manner that authorities can map and analyse entities’ exposures, including aggregation of TR-level positions across TRs to obtain an overall entity level position.

Guideline 8. TRs should ensure that the position relates to the trade state data of that same day. TRs should also make the position available to authorities on that day. All calculations should be updated on each business day according to the guidelines.

Guideline 9. TRs should provide access to positions to the relevant authorities by using an ISO 20022 XML template and following the operational standards defined in Articles 4 and 5 of Commission Delegated Regulation (EU) No 151/2013, as amended by CDR (EU) 2017/1800.

Guideline 10. TRs should structure position data and make it available in four separate reports (Position Set, Collateral Set, Currency Position Set and Collateral Currency Position Set). Reports should be uniquely identifiable and labelled with the date of the relevant data calculation.

Guideline 11. When TRs provide access to erroneous data to an authority, the next time the TR makes data available, the previously erroneous data should be corrected.

Guideline 12. *Only where the field value of contract (T1F17) pertaining to a derivative included in the Position Set is reported in different currency, the TR should convert the values reported in the field value of the contract (T1F17) to a single currency. The value of the position should be converted to Euros by the TR by using the relevant foreign exchange rate published on the ECB website at 17:00 CET on the day to which the calculation refers.*

Guideline 13. *A TR should have in place a procedure to identify abnormal values relating to the derivative it receives from counterparties. For a given position, a TR should provide one resulting calculation including the outlying derivatives and another one excluding the outlying derivatives.*

Guideline 14. *A TR should exclude derivatives which have missing data for one of the metrics or dimensions from all relevant position calculations. TRs should do this even in instances where the reported derivative is in line with the validation rules.*

Guideline 15. *Upon request from ESMA, a TR should have available at all times the position calculation algorithms they use as well as the procedure(s) which they follow to produce each of the four position calculations described in these Guidelines.*

Guideline 16. *The TRs should calculate positions by aggregating according to the following quantitative metrics:*

- a)** *Number of trades used for calculating the Buy-Side position: This refers to the number of trades contained in the position set for which the Reporting Counterparty ID (T1F2) has reported "B" in the field Counterparty Side (T1F14);*
- b)** *Number of trades used for calculating the Sell-Side position: This refers to the number of trades contained in the position set for which the Reporting Counterparty ID (T1F2) has reported "S" in the field Counterparty Side (T1F14);*
- c)** *Buy-Side Negative Notional: Aggregations of all Negative values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported "B" in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);*
- d)** *Buy-Side Positive Notional: Aggregations of all Positive values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported "B" in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);*
- e)** *Sell-Side Negative Notional: Aggregations of all Negative values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported "S" in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);*
- f)** *Sell-Side Positive Notional: Aggregations of all Positive values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported "S" in the field Counterparty Side (T1F14). The*

notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);

g) When Asset Class (T2F2) is “Credit”, then the notional amount metric should be multiplied by the Index Factor (T2F89);

h) Buy-Side Negative Value: Aggregations of all Negative Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18);

i) Sell-Side Negative Value: Aggregations of all Negative Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18);

j) Buy-Side Positive Value: Aggregations of all Positive Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18), and

k) Sell-Side Positive Value: Aggregations of all Positive Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18).

Guideline 17. All derivatives reported to TRs should be aggregated with derivatives with identical entries in the following fields representing dimensions of the derivatives grouped together in position sets to specify counterparties to derivatives:

- a) Reporting counterparty ID (T1F2)*
- b) ID of the other Counterparty (T1F4)*
- c) Master agreement type (T2F30)*
- d) Master agreement version (T2F31)*
- e) Collateralization (T1F21)*
- f) Collateral portfolio code (T1F23), if applicable*
- g) Cleared (T2F35).*

Guideline 18. All derivatives reported to TRs should be aggregated with derivatives with the same entries in the following fields (dimensions) grouped together and aggregated in position reports:

- a) Asset class (T2F2);*
- b) Contract type (T2F1);*
- c) Underlying identification type (T2F7);*

- d) *Underlying identification (T2F8), and*
- e) *Option type (T2F78), when applicable.*

Guideline 19. *In addition to the Guidelines referred to in Guideline 18, TRs should group together similar currency derivatives with the same entries for all of the following dimensions:*

- a) *Notional currency 1 (T2F9);*
- b) *Notional currency 2 (T2F10), when applicable;*
- c) *Deliverable currency (T2F11);*
- d) *Delivery currency 2 (T2F61), when applicable;*
- e) *Exchange rate basis (T2F64), and*
- f) *Currency of the value (T1F18).*

Guideline 20. *TRs should use the following buckets to aggregate derivatives with similar values for ‘Time to Maturity’. Time to Maturity should be calculated as the difference between a derivative’s Maturity Date and the calculations date in days (based on a 30/360 calendar).*

Guideline 21. *In addition to the use of the dimensions referred to in Guideline 17 to Guideline 20, IRS derivatives should also be grouped together according to their type. With reference to whether Leg 1 and Leg 2 are fixed or floating, the below table explains how ‘type of IRS’ should be discerned and how IRS derivatives should be grouped:*

Guideline 22. *For credit derivatives, TRs should use the following dimensions to group together derivatives for position calculations in addition to those dimensions referred to in Guideline 17 to Guideline 20:*

- a) *Seniority (T2F83), when reference entity is populated in field ‘Reference entity’;*
- b) *CDS Underlying, derived by TRs based on Underlying Identification field (T2F7) and grouped according to index/basket/single name underlying;*
- c) *Tranche (T2F90), when index is populated in field ‘Underlying’, and*
- d) *Collateral portfolio code (T1F23).*

Guideline 23. *For commodity derivatives, a TR should aggregate data on volumes for classes of commodity derivatives in accordance with the dimensions referred to in Guideline 17 to Guideline 20 of this paper as per each of the following details reported in T2F65 and T2F66 of the amended Commission Implementing Regulation (EU) No 2017/105*

- a) *metals – “commodity base” field reported as ‘ME’.*
- b) *oil products – “commodity details” reported with ‘OI’*
- c) *coal – “commodity details” reported with ‘CO’*
- d) *gas – “commodity details” reported with ‘NG’*
- e) *power – “commodity details” reported with ‘EL’ or ‘IE’*

- f) agricultural products – “commodity base” reported with ‘AG’**
- g) other commodities including freight and C10 – “commodity base” reported with ‘FR’ or ‘IN’ or ‘EX’ or ‘OT’ or “commodity details” reported with ‘WE’**
- h) derivatives on emission allowances – “commodity details” reported with ‘EM’**
- i) not specified - when the derivative is a commodity under Asset Class (T2F2) but does not follow the previous extractions**
- j) blank, when the derivative is not within the commodity Asset Class (T2F2)**

Guideline 24. TRs should provide a report to authorities which aggregates collateral sets related to position sets reported to TRs on a daily basis.

Guideline 25. When collateralisation is performed on a portfolio basis (and derivatives share a portfolio code (T1F23)), TRs should aggregate collateral by taking the median of all the collateral values across the reports which share the code, as the value of that collateral for the purpose of the collateral set.

Guideline 26. When collateralisation is not performed on a portfolio basis, the variables that represent the value of the collateral only apply to an individual derivative and so where possible TRs should provide an aggregation of those values in the Collateral Set.

Guideline 27. The following metrics should be used to quantify collateral sets:

- a) Number of reports used for calculating the collateral set.**
- b) Initial margin posted (T1F24).**
- c) Variation margin posted (T1F26).**
- d) Excess collateral posted (T1F32).**
- e) Initial margin received (T1F28).**
- f) Variation margin received (T1F30).**
- g) Excess collateral received (T1F34).**

Guideline 28. The following dimensions should be used by TRs to group together derivatives using the same collateral. When each of the below dimensions match for two or more derivatives, those derivatives should be grouped together as a collateral set:

- a) Reporting Counterparty ID (T1F2)**
- b) ID of the other counterparty (T1F4)**
- c) Collateralisation (T1F21), and**
- d) Collateral Portfolio (T1F22)**
- e) Currency of the initial margin posted (T1F25)**
- f) Currency of the variation margin posted (T1F27)**
- g) Currency of the initial margin received (T1F29)**
- h) Currency of the variation margin received (T1F31)**

i) Currency of the excess collateral posted (T1F33)

j) Currency of the excess collateral received (T1F35)

Guideline 29. TRs should determine the relevant currency position sets for authorities where the counterparties have reported the currency of issue of that authority for one of the below dimensions.

a) Notional Currency 1 (T2F9);

b) Notional Currency 2 (T2F10), and

c) Deliverable Currency (T2F11),

d) Delivery currency 2 (T2F61), when applicable.

Guideline 30. TRs should provide a currency position set to authorities determined in accordance with Guideline 29 and including all the dimensions included in Guideline 17 to Guideline 22.

Guideline 31. TRs should use the following metrics to aggregate currency positions which should be made available to the central bank issuing that currency.

a) Number of trades used for calculating the position (Buy-side): This refers to the number of trades contained in the currency position set for which the Reporting Counterparty ID (T1F2) has reported "B" in the field Counterparty Side (T1F14);

b) Number of trades used for calculating the position (Sell-side): This refers to the number of trades contained in the currency position set for which the Reporting Counterparty ID (T1F2) has reported "S" in the field Counterparty Side (T1F14);

c) Buy-Side Negative Notional: Aggregations of all Negative values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported "B" in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);

d) Buy-Side Positive Notional: Aggregations of all Positive values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported "B" in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);

e) Sell-Side Negative Notional: Aggregations of all Negative values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported "S" in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);

f) Sell-Side Positive Notional: Aggregations of all Positive values in the field Notional (T2F20) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported "S" in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Notional Currency 1 (T2F9);

g) When Asset Class (T2F2) is “Credit”, then the notional amount metric should be multiplied by the Index Factor (T2F89);

h) Negative Value (Buy-side): Aggregations of all Negative Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18);

i) Negative Value (Sell-side): Aggregations of all Negative Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18);

j) Positive Value (Buy-side): Aggregations of all Positive Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “B” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18), and

k) Positive Value (Sell-side): Aggregations of all Positive Values of the derivative (T1F17) for all derivatives pertaining to a position set for which the Reporting Counterparty ID (T1F2) has reported “S” in the field Counterparty Side (T1F14). The notional amount shall be expressed in terms of amount and in the reported Currency of the value (T1F18).

Guideline 32. TRs should aggregate the collateral pertaining to the currency position sets determined in accordance with Guideline 29 and using the dimensions referred to in Guideline 28 and the metrics referred to in Guideline 27.

11 Summary of questions

Question 1. Are there any other definitions related to the reporting of derivatives under Article 9 of EMIR that need to be taken into account to ensure the guidelines are clear? Please can you elaborate on the reasons for your answer.

Question 2. Do you agree that using trade state reports is the most effective way of ensuring that the information used to aggregate derivatives is current and useful for authorities? Please can you elaborate on the reasons for your answer.

Question 3. Do you agree with Guideline 4 and the use of Effective date (T2F26) to determine which derivatives should be included in a calculation? Do you see there being an alternative approach to better ensure that relevant derivatives which are effective are those included in a calculation. Please can you elaborate on the reasons for your answer.

Question 4. Do you agree that the proposed Guideline 6 and Guideline 7 will ensure consistent reports are made available by TRs? Please can you elaborate on the reasons for your answer.

Question 5. Do you agree with the proposed frequency for updating position calculations and making them available to authorities? Please can you elaborate on the reasons for your answer.

Question 6. Do you agree with Guideline 9 and the use of the ISO 20022 XML template and these standards for TRs providing access to positions? Please can you elaborate on the reasons for your answer.

Question 7. Do you agree TRs making four reports available as described in Guideline 10 is the most effective way to ensure authorities receive information that can be used to achieve the objectives of position calculations? Please can you elaborate on the reasons for your answer.

Question 8. Please can you provide estimates of the potential monetary costs for a TR producing the sets, in accordance with all the specificities that are proposed in this paper? Please can you elaborate on the reasons for your answer.

Question 9. Do you agree with the Guideline 11 for ensuring that historical errors are remediated in future? Please can you elaborate on the reasons for your answer.

Question 10... Do you see a need for any additional Guidelines to ensure that historical errors are remediated in future data made available by TRs? For example in relation to the maintenance by TRs of records of historical position sets.

Question 11..... Do you agree with this method proposed in Guideline 12, designed to ensure that derivatives in different currencies do not lead to authorities receiving inconsistent data that is arduous to analyse. Please can you elaborate on the reasons for your answer.

Question 12.. Do you agree with the approach in Guideline 13 for how TRs should treat abnormal values in the derivative data they receive when producing calculations? Are there any potential methods you see as appropriate for detecting outliers in a consistent manner? Please can you elaborate on the reasons for your answer.

Question 13..... Do you agree that the approach described in Guideline 14 is the most effective way to make available useful information for authorities? Are there any alternative approaches for dealing with erroneous reports which you think could help produce useful calculations? Do you think that this approach is appropriate for derivatives reported before 1 December 2014? Please can you elaborate on the reasons for your answer.

Question 14..... Do you agree with that the proposed Guideline 15 is the most effective way for ESMA to ensure that they can quickly access the procedures and relevant algorithms a TR follows to calculate positions? Please can you elaborate on the reasons for your answer.

Question 15..... Do you foresee any difficulties with complying with these guidelines in line with the H2 2018 implementation timeframe? Please provide rationale to support and explain your answer by detailing the specific aspects of the implementation process that would impact the total implementation timeline.

Question 16..... Do you agree that the metrics included in Guideline 16 are the most appropriate for quantifying the exposures of the different derivatives? Do you consider necessary and essential for the accurate assessment of exposures between counterparties to include separate metrics for positive and for negative values of fields Notional and Values of contract? Are there any other more efficient, still accurate ways to represent this? Would the dimension “Master agreement type (T2F30) be relevant in this case? Please can you elaborate on the reasons for your answers.

Question 17..... Do you consider that the inclusion of the field Intragroup (T2F38) is required as an additional dimension? Please can you elaborate on the reasons for your answer.

Question 18..... Would a further aggregation of derivatives with position sets created using the dimensions in Guideline 18 and Guideline 19 allow authorities to achieve a useful overview of potential systemic risks that may arise in financial markets? Please can you elaborate on the reasons for your answer.

Question 19..... Do you believe that the approach included in Guideline 20 for grouping derivatives with similar times to maturity is appropriate? Do you think that a more granular approach to the grouping of derivatives with similar time to maturity would be more useful? Please can you elaborate on the reasons for your answer.

Question 20..... Do you agree that the dimensions included in Guideline 17 to Guideline 20 are the most appropriate for grouping derivatives into reports for analysis by authorities? Please can you elaborate on the reasons for your answer.

Question 21..... Do you believe that Guideline 21 which defines an additional dimension for grouping IRS derivatives is appropriate? Do you believe there is an alternative way to group similar IRS? Please can you elaborate on the reasons for your answer.

Question 22..... Would an aggregation of credit derivatives with position sets created using the dimensions in Guideline 22 allow authorities to achieve a useful overview of potential systemic risks that may arise in financial markets? Please can you elaborate on the reasons for your answer.



Question 23..... Do you agree that the additional dimension for grouping commodity derivatives included in Guideline 23 will create more useful information for authorities? Please can you elaborate on the reasons for your answer.

Question 24..... Do you agree that the method described in Guideline 25 is the most effective way of determining a useful indicator when collateralisation of derivatives is performed on a portfolio basis? Please can you elaborate on the reasons for your answer.

Question 25.....Do you agree that the aggregation of these values in line with Guideline 26 is the most appropriate way to provide authorities with a view of collateral positions? Please can you elaborate on the reasons for your answer.

Question 26..... Do you agree with the proposed Guideline 28 for aggregating collateral sets and representing the data for authorities? Please can you elaborate on the reasons for your answer.

Question 27.For the calculation of positions, is it more appropriate that the currency of the collateral is the same as the currency of the field Value of the Contract (T1F17)? In case they are not, should they all be converted to the same currency, e.g. EUR? Should, alternatively the currency of the Value of the contract and the collateral be always the currency of the notional of the derivatives? Please can you elaborate on the reasons for your answer.

Question 28..... Do you agree with the proposal to use the dimensions and metrics included in Guideline 29 and Guideline 31 to aggregate derivatives to provide information on specific currencies to central banks of issue? Please elaborate on the reasons for your answer.

Question 29..... Do you agree that Guideline 32 includes the appropriate metrics and dimensions for calculating collateral held in specific currencies for derivatives? Please elaborate on the reasons for your answer.