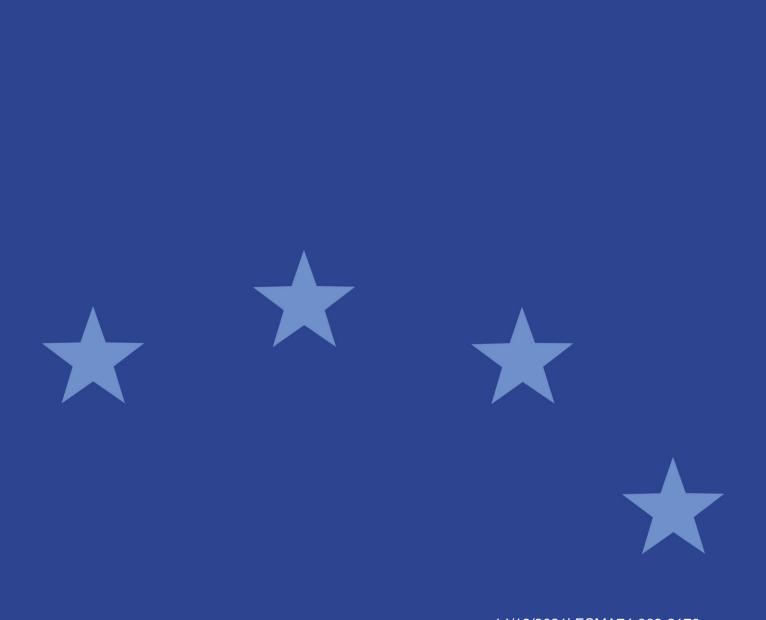# Guidelines

on calculation of positions in SFTs by Trade Repositories [Amended 17.11.2021]

1 Scope

Who?

These Guidelines will apply to Trade Repositories as defined in Article 3(1) of SFTR and registered under Chapter III of SFTR.

What?

The Guidelines apply in relation to:

a) the calculations carried out by TRs and the format of provision of access to data pursuant to Article 80(4) of EMIR as referred to in Article 5(2) of SFTR and detailed under Article 5 of RTS on data aggregation

b) the level of access to positions provided by TRs to the entities included in Article 12(2) of SFTR with access to positions in line with Article 3 of RTS on data access.

When?

To ensure a smooth implementation of the Guidelines ESMA expects that TRs calculate positions in accordance with these Guidelines from 31 January 2022 onwards.

2 Legislative references, abbreviations and glossary of concepts and terms

Legislative references

SFTR	Regulation (EU) 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[1]
EMIR	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[2]
ESMA Regulation	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[3]
SFTR Reporting Guidelines	Guidelines on Reporting under Articles 4 and 12 SFTR[4]
Guidelines on position calculation (EMIR)	Guidelines on position calculation by trade repositories under EMIR[5]
RTS on data aggregation	Commission Delegated Regulation (EU) 2019/358 of 13 December 2018 supplementing Regulation (EU) 2015/2365 of the European Parliament and of the Council with regard to regulatory technical standards on the collection, verification, aggregation, comparison and publication of data on securities financing transactions (SFTs) by trade repositories[6]
RTS on reporting	Commission Delegated Regulation (EU) 2019/356 of 13 December 2018 supplementing Regulation (EU) 2015/2365 of the European Parliament and of the Council with regard to regulatory technical standards specifying the details of

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[1] OJ L 337, 23.12.2015, p. 1
[2] OJ L 201, 27.7.2012, p. 1
[3] OJ L 331, 15.12.2010, p. 84.
[4] ESMA70-151-2838 available at: https://www.esma.europa.eu/sites/default/files/library/esma70-151-2838_guidelines_on_reporting_under_sftr.pdf
[5] ESMA70-151-1350 available at: https://www.esma.europa.eu/document/guidelines-position-calculation-trade-repositories-under-emir
[6] OJ L 81, 22.3.2019, p. 30

	securities financing transactions (SFTs) to be reported to trade repositories[7]
ITS on reporting	Commission Implementing Regulation (EU) 2019/363 of 13 December 2018 laying down implementing technical standards with regard to the format and frequency of reports on the details of securities financing transactions (SFTs) to trade repositories in accordance with Regulation (EU) 2015/2365 of the European Parliament and of the Council and amending Commission Implementing Regulation (EU) No 1247/2012 with regard to the use of reporting codes in the reporting of derivative contracts[8]
RTS on registration	Commission Delegated Regulation (EU) 2019/359 of 13 December 2018 supplementing Regulation (EU) 2015/2365 of the European Parliament and of the Council with regard to regulatory technical standards specifying the details of the application for registration and extension of registration as a trade repository[9]
RTS on data access	Commission Delegated Regulation (EU) No 2019/357 of 13 December 2018 supplementing Regulation (EU) 2015/2365 of the European Parliament and of the Council with regard to regulatory technical standards on access to details of securities financing transactions (SFTs) held in trade repositories[10]

Abbreviations

CP	Consultation Paper
ECB	European Central Bank
EEA	European Economic Area
ESMA	European Securities and Markets Authority
EU	European Union

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[7] OJ L 81, 22.3.2019, p. 1
[8] OJ L 81, 22.3.2019, p. 85
[9] OJ L 81, 22.3.2019, p. 45
[10] OJ L 81, 22.3.2019, p. 22

FSB	Financial Stability Board
ISO	International Organization for Standardization
ITS	Implementing Technical Standards
LEI	Legal Entity Identifier
NCA	National Competent Authority
NCB	National Central Bank
Q&A	Questions and Answers
RTS	Regulatory Technical Standards
SFTP	SSH File Transfer Protocol
SLA	Service Level Agreement
TR	Trade Repository
TRACE	System for single access to TR data
XML	Extensible Mark-up Language

Glossary of concepts and terms

1. "Positions" means the representation of exposures between a pair of counterparties that comprise the following sets defined under Named positions: Overview report, Loan Position Set, Collateral Position Set, Margin Set and Reuse Set.

2. "Outstanding SFTs" means those SFTs that have not matured or which have not been the subject of reports with action types 'Error', 'Termination/Early termination', or 'Position component' as referred to in Field 98 of Table 2 of Annex I to ITS on reporting.

3. "Variables" are those values either taken directly from the SFTR reporting fields or derived from those fields that will be used by TRs to calculate positions.

4. "Authority" means one of the entities referred to in Article 12(2) of SFTR.

5. "Metrics" are variables used to quantify the different calculations. The fields used to define metrics (and dimensions) follow the nomenclature as per the RTS and ITS on reporting. For instance, 1.17 means field 17 of table 1.

6. "Dimensions" are variables related to SFTs that are used to group SFTs together into positions.

7. "Reference Date" means the date the calculation refers to.

3 Purpose

8. These Guidelines are based on Article 16(1) of the ESMA Regulation. In line with that provision, they aim at "establishing consistent, efficient and effective supervisory practices within the ESFS, and to ensuring the common, uniform and consistent application of Union law" with regard to the requirements referred to in Section 1 under the heading 'What?' for the calculation of positions in SFTs by TRs. The Guidelines establish high-level principles that should be followed by the TRs for their position calculations. Those principles are complemented by specific procedures to be followed to ensure the timely and accurate reporting of positions by TRs.

9. These Guidelines also leverage on the requirement under Article 1(1) of RTS on reporting, according to which: "[a] report made pursuant to Article 4(1) of Regulation (EU) 2015/2365 shall include the complete and accurate details set out in Tables 1, 2, 3 and 4 of the Annex that pertain to the SFT concerned". They also build upon Section 4.9. of the SFTR Reporting Guidelines, on timely reporting of the conclusion, modification and termination of an SFT, and on Section 4.3 of the same Guidelines, on the correct reporting of CCP-cleared positions by counterparties so that there is no double-counting between trade and position.

10. In order to promptly assess systemic risks to financial stability and quickly react in a crisis event, NCAs should be able to have an overview of entity level SFT exposures. However, the large volumes of data that ESMA expects to be reported will make it challenging for many authorities to swiftly process and analyse this data, preventing authorities from being able to evaluate risks.

11. In addition, the possibility for reporting counterparties to report their trades to different TRs poses a particular challenge for the establishment of a set of entity-level positions that is consistent, complete, and coherent across entities and SFTs.

12. 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, in some cases TRs can only calculate a partial TR-level position for any entity.

13. Therefore, the determination of an overall entity-level position requires an aggregation of the TR-level positions across several TRs. Overall entity-level positions should be determined by authorities and based on an aggregation of TR-level positions. Therefore, consistency in TR-level position calculation is essential. TRs should use common conventions, rules, and methodologies for their SFTR trade reporting determinations and calculations. It is worth noting that ESMA expects the application of the Guidelines to result in the following benefits:

   - reduce efforts to request this information sporadically and ensure that no information is omitted;

   - reduce processing time of information received;

   - ensure a level-playing field in term of information to be provided by all TRs by establishing harmonised reporting;

- ensure consistent, harmonised and high standard of aggregate position data made available to relevant authorities;

- ensure complete information that is necessary for ESMA's risk-based supervision.

4 Compliance and reporting obligations

Status of the guidelines

14. In accordance with Article 16(3) of the ESMA Regulation, TRs must make every effort to comply with these guidelines.

15. ESMA will assess the application of these guidelines by TRs through its ongoing direct supervision.

Reporting requirements

16. TRs are not required to report whether they comply with these guidelines.

5   Guidelines on calculation of positions in SFTs by Trade Repositories

I. Reporting timeline

Guideline 1.   TRs should include SFTs in the relevant position aggregate(s) from the moment in which they are reported, even though settlement might only take place in the future. This includes both the loan side and the collateral side of the trade, regardless of the respective value dates.

Guideline 2.   TRs should ensure that the calculations relate to the most recent full day's set of trade state data, considering the Event date reported by the counterparties in accordance with the SFTR Reporting Guidelines and following the requirements under Article 5(1) of ITS on reporting. Calculations should be updated on each business day, by clearly identifying the applicable reference date for each calculation. TRs should also make the position available to authorities on the day of the calculation in line with the following steps:

Table 1 - Timeline		
#	**Event**	**Day/time**
1	End of Event date T	Day T
2	Retrieve appropriate FX reference rates on day T for purposes of converting SFTs where T2F57 (Market value) and T2F88 (Collateral market value) should be converted, to be applied when calculation is performed on day T+2.	Day T 16:00 UTC (17:00 CET)
3	Reporting entities to submit SFT reports to TRs relating to event date T	From Day T - Day T+1 23:59 (counterparty local time)
4	Deadline for submitting SFT reports to TRs relating to event day T	Day T+1 23:59 (counterparty local time)
5	TR calculation of positions based on the latest trade state of outstanding SFTs as of end of Event date T+1	Day T+2 00:00 – 23:59 UTC
6	Position reports based on Event date T are made available by the TR to the relevant authorities.	Day T+2 00:00 – 23:59 UTC

II. Missing data for fields which are metrics or dimensions

Guideline 3.   For SFTs missing data for one or more of the required metric or dimensions, TRs should include the SFTs with those missing values in a separate position. However, TRs should exclude from all relevant calculations the SFTs missing data for the "Reporting counterparty", "Other counterparty" and "Type of SFT" dimensions.

III. Identification and treatment of outliers

Guideline 4.   A TR should have in place a robust procedure to identify abnormal values, i.e. outliers, relating to the SFTs it receives from counterparties. For a given position, a TR should calculate positions according to the metrics which exclude reports with outliers, and also the metrics which include all reports which meet the dimensions for each calculation. Both calculations should be included into a single report. The TR should flag which positions include abnormal values. TRs should identify abnormal values in absolute terms and should not offset between positive and negative values.

IV Algorithms used in calculations

Guideline 5.   Upon request from ESMA, a TR should have available at all times the calculation algorithms they use as well as the procedure(s) which they follow to produce each of the five datasets relating to the position calculations described in these Guidelines.

Guideline 6.   When TRs provide an authority with access to erroneous data, and the TR has caused the error itself, the data should be updated by the TR so that it is corrected as soon as it is possible and the erroneous calculations for the previous two years, as of the last working day of each week, should be re-reported correctly. When a mistake by a reporting counterparty, rather than the TR, has led to an incorrect calculation by a TR, all authorities should be notified, and given the opportunity to request an amended version of each calculation that was incorrect from the relevant TR. Where part or all the data subject to corrections is being ported, only the TR to which the data was ported should perform the calculations following the corrections

Guideline 7.   TRs should maintain a record of all the position calculations which they have calculated for at least two years.

Guideline 8.   TRs which receive data transferred from another TR should keep the previously calculated positions transferred from the old TR for at least two years and follow Guideline 7 prospectively.

V. Named positions

Guideline 9.   When performing positions calculation identifying the counterparties to SFTs, the TRs should generate five separate positions reports. These reports are an overview report, a loan position report; a collateral position report; a margin report and a reuse report. These datasets should be uniquely identifiable and labelled with the relevant reference date. These reports should include the data referred to in Table 4.

Guideline 10. With regards to the overview report, the loan position report, the collateral position report and the margin report, a unique value should be calculated for each unique counterparty pair (Ei, Ej), where i ≠ j, and set of dimensions Zk at time t, where t is a specific event date. Where both counterparties have reported to the same TR, the TR should calculate position for each of the two counterparties.

Guideline 11. TRs should only include in the calculations SFTs which are subject to the reporting obligation under Article 4 SFTR. In case Article 4 SFTR does not apply to one of the reporting counterparties, its SFT reports should be excluded from the position calculation.

VI Metrics

Guideline 12. TRs should calculate the metrics included in Table 2 - Metrics for positions. The price metrics should be calculated as weighted-averages, whereas the volume metrics should be calculated as a count of the number of UTIs and as a sum for each exposure variable and currency.

Table 2 - Metrics for positions		
Dataset	**Volume metrics**	**Price metrics**
Overview Report	<u>Number of transactions:</u> UTI (2.1) [11] <u>Exposure:</u> Principal amount on value date (2.37) Principal amount on maturity date (2.38) Loan Value (2.56) Market value (2.57) Outstanding margin loan (2.69) Cash collateral amount (2.76) Collateral market value (2.88)	
Loan Report	<u>Number of transactions:</u>	<u>Rates:</u>

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[11] Unique Trade Identifiers (UTIs) are used to compute the number of transactions for repos and securities lending, and the number of existing bilateral margin lending relationships. This is not relevant for collateral reuse.

Table 2 - Metrics for positions		
Dataset	**Volume metrics**	**Price metrics**
	UTI (2.1)[12] Exposure: Repos: Principal amount on value date (2.37) BSB: Principal amount on value date (2.37) SLB: Loan Value (2.56) SLB: Market value (2.57) ML: Outstanding margin loan (2.69) + Short market value (2.71)	Repos: Fixed rate (2.23 weighted by 2.37); Floating rate (2.32 weighted by 2.37)[13] BSB: Principal amount on maturity date (2.38) divided by Principal amount on value date (2.37) minus 1, adjusted by the duration of the SFT with basis 365 (365 divided by date difference between value date 2.13 and maturity date 2.14) and weighted by 2.37 ML: Fixed rate (2.23 weighted by 2.69 and 2.71); Floating rate (2.32 weighted by 2.69 + 2.71 for margin loans) [2] Fees: SLB: Lending fee (2.67 weighted by 2.57)
Collateral Report	Exposure: Collateral quantity or nominal amount (2.83)[14] Collateral market value (2.88)[15] Cash collateral amount (2.76)	Haircut: Haircut or margin (2.89 weighted by 2.83 and/or 2.76)[16] [3]
Margin report	Exposure: Initial margin posted (3.8) Variation margin posted (3.10) Excess collateral posted (3.16)	
Collateral reuse	Non-cash: Value of reused collateral (4.8) Estimated reuse of collateral (4.9) Cash: Reinvested cash amount (4.13)	Rate: Reinvestment rate (4.11 weighted by 4.13)

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[12] Idem.
[13] Floating rates should be calculated only for the main reference market rates (see below).
[14] Taking into account the sign
[15] Taking into account the sign
[16] Haircut or margin shall be weighted by collateral quantity or nominal amount (2.83) when non-cash collateral is used, otherwise by cash collateral amount (2.76). For SFT portfolios, since only one haircut value will be reported, the sum of cash and non-cash collateral should be used as weight.

Guideline 13. Where for the same position a TR receives collateral messages featuring both positive and negative values, it should include them into separate positions, one for positive and one for negative sign collateral.

Guideline 14. The figures included in calculations should not be rounded, but the calculated position should be rounded to an appropriate figure.

VII Currency of metrics

Guideline 15. TRs should calculate positions in the currency the SFT was denominated in for all currencies issued by EEA Member States; for GBP, CHF, USD and JPY; and an EUR equivalent value based on the ECB reference rate for the given event date for all the aforementioned currencies. In addition, the TRs should calculate the EUR equivalent value of a bucket, including AUD, CAD, HKD, NZD, SGD and TWD and of a bucket of all the remaining currencies.

VIII Dimensions

Guideline 16. TRs should use the fields included in Table 3 - Dimensions for position reports under SFTR (including the currencies of metrics) to calculate the respective position reports, namely the overview report, the loan report, the collateral report, the margin report and the reuse report. TRs should follow Guideline 17 to Guideline 23 for detailed instructions on the inclusion of the different dimensions. For the rest of dimensions for which the calculation is not otherwise specified, the data should be grouped in accordance with the reported values.

Table 3 - Dimensions for position reports under SFTR (including the currencies of metrics)					
Dimensions[17]	**Overview**	**Loan**	**Collateral**	**Margin**	**Reuse**
Reporting counterparty (1.3), (3.4), (4.3)	x	x	x	x	x
Other counterparty (1.11), (3.6)	x	x	x	x	
Counterparty side (1.9)[18]	x	x	x		

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[17] Including also the currencies of the metrics
[18] Only for SFTs collateralised at transaction level

Table 3 - Dimensions for position reports under SFTR (including the currencies of metrics)					
Dimensions[17]	Overview	Loan	Collateral	Margin	Reuse
Tri-party agent (1.14)[19]		x	x		
Agent lender (1.15)[20]		x	x		
Type of SFT (2.4)	x	x	x		
Cleared (2.5)		x	x		
Trading venue (2.8)	x	x	x		
Master agreement type (2.9)	x	x	x		
Maturity date (2.14)		x	x		
General collateral indicator (2.18)		x	x		
Open term (2.21)		x	x		
Rates - Fixed (2.23) - Floating (2.25)		x x			
Principal amount currency (2.39)		x			
Price currency (2.50)		x			
Security quality (2.51)		x			
Security type (2.55)	x	x			
Base currency of outstanding margin loan (2.70)		x			
Collateralisation of net exposure (2.73)		x	x		

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[19] True/False indicator
[20] True/False indicator

Table 3 - Dimensions for position reports under SFTR (including the currencies of metrics)					
Dimensions[17]	Overview	Loan	Collateral	Margin	Reuse
Type of collateral component (2.75), (4.6)	x		x		x
Cash collateral currency (2.77), (4.14)			x		x
Price currency (2.86, 4.10)			x		x
Collateral quality (2.90)			x		
Maturity date of the security (2.91)			x		
Jurisdiction of the issuer (2.92)			x		
Collateral type (2.94)	x		x		
TR to which the other counterparty reported[21]	x	x	x		
Reconciliation status		x	x		
Type of re-invested cash investment (4.12)					x

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[21] Generated by the TRs

Guideline 17. TRs should include the information about the jurisdiction of the issuer by including the following country code information: (a) for each EEA Member State; (b) for the United Kingdom, (c) for Switzerland, (d) for the United States, (e) for Japan, (f) a bucket for European, non-EEA jurisdictions (Russia, Ukraine, Turkey), (g) a bucket of other advanced jurisdictions such as Australia, Canada, China, New Zealand, Singapore and Taiwan and (h) a bucket of the rest of the world.

Guideline 18. TRs should flag with TRUE or FALSE the participation of a Tri-party agent and an agent lender in the SFT.

Guideline 19. TRs should calculate separate positions for fixed-rate SFTs and for floating-rate ones. When calculating positions in floating-rate SFTs, the TRs should create the following buckets of rates and tenors of those rates:

 a. €STR

 b. Euribor (1M, 3M, 6M, other tenors)

 c. €STR-OIS (Overnight Index Swap 1d, 1w, other tenors)

 d. GBP Libor (1M, 3M, other tenors) and the respective successor rate

 e. USD Libor (1M, 3M, other tenors) and the respective successor rate

 f. SOFR (1M, 3M, other tenors)

 g. USD OIS (Overnight Index Swap 1d, 1w, other tenors)

 h. Other floating rates

Guideline 20. TRs should calculate positions with the following breakdown: (a) EEA on-venue, (b) non-EEA on-venue and (c) off-venue, when field Trading venue is reported with XOFF or XXXX. TRs should consider a transaction as "EEA on venue" if the field Trading venue is reported with a MIC included in ESMA's register of trading venues[22]. TRs should consider a transaction as "non-EEA on venue" if the field Trading venue is reported with a MIC which is not included in ESMA's register of trading venues but it is listed in the database of MIC codes maintained by ISO[23].

Guideline 21. TRs should use the following buckets to aggregate SFTs with similar values for term of the SFT and for maturity date of the security. All margin lending transaction should be classified as open term. Term of the SFTs and residual maturity of the security should be calculated as the difference between the SFTs Maturity Date and the reference date, based on a Gregorian calendar.

 a. Open term

 b. Overnight (1 working day)

 c. More than one day and up to, and including, one week

 d. More than one week and up to, and including, one month

 e. More than one month and up to, and including, three months

 f. More than three months and up to, and including, six months

g. More than six months and, and including, one year

h. More than one year

Guideline 22. In the event that a SFT (or the security used to collateralise this SFT) has a maturity date which does not exist in the month of the reference date (i.e. 29, 30, 31 month dependent), the decision for which of the maturity buckets listed under Guideline 21 that SFT should be included in should be made by treating that SFT in the same way as if the calculation were being made on the maturity day for the month of the reference date. For example, if a SFT position calculation has a reference date of 31 January and the SFT (or the security used to collateralise this SFT) matures on 28 February, that SFT (or the security used to collateralise this SFT) should be included in the 'One month or less' maturity bucket. If a reference date is on 31 January and the maturity date is 1 March, then that SFT (or the security used to collateralise this SFT) should be included in the 'More than one month but no more than three months' maturity bucket. If a calculation's reference date is on 30 April, and the SFT (or the security used to collateralise this SFT) matures on 31 May then that SFTs (or the security used to collateralise this SFT) should be included in the 'One month or less' maturity bucket.

Guideline 23. TRs should calculate separate positions depending on the reconciliation status of the SFT attributed in accordance with the values included in Table 3 of Annex I of RTS on data aggregation. Where the TR has received the two sides of SFTs that are included in a position, the TR should calculate separate position for each side, even when they are fully reconciled.

V.IX Summary of metrics and dimensions to be included in the position reports

Table 4 - Set of variables for position reports under SFTR					
Variable	**Overview**	**Loan**	**Collateral**	**Margin**	**Reuse**
Reporting counterparty (1.3)	x	x	x	x (3.4)	x (4.3)
Other counterparty (1.11)	x	x	x	x (3.6)	
Counterparty side (1.9)[24]	x	x	x		
Tri-party agent (1.14)		x	x		

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[22] https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_upreg
[23] https://www.iso20022.org/market-identifier-codes
[24] Only for SFTs collateralised at transaction level

Table 4 - Set of variables for position reports under SFTR					
Variable	**Overview**	**Loan**	**Collateral**	**Margin**	**Reuse**
Agent lender (1.15)		x	x		
Count of UTI (2.1)	x	x			
Type of SFT (2.4)	x	x	x		
Cleared (2.5)		x	x		
Trading venue (2.8)	x	x	x		
Master agreement type (2.9)	x	x	x		
Maturity date (2.14)		x	x		
General collateral indicator (2.18)		x	x		
Open term (2.21)		x	x		
Rates - Fixed - Floating - BSB calculated	x x x	x x (Repo, BSB, ML)			
Lending fee (2.67)		x			
Principal amount on value date (2.37)	x	x (Repo and BSB)			
Principal amount currency (2.39)		x			
Price currency (2.50)		x			
Security quality (2.51)		x			
Security type (2.55)	x	x			
Market value (2.57)	x	x (SLB)			

Table 4 - Set of variables for position reports under SFTR					
Variable	**Overview**	**Loan**	**Collateral**	**Margin**	**Reuse**
Outstanding margin loan (2.69)	x	x (ML)			
Base currency of outstanding margin loan (2.70)		x			
Short market value (2.71)		x (ML)			
Collateralisation of net exposure (2.73)		x	x		
Type of collateral component (2.75)	x		x		x (4.6)
Cash collateral amount (2.76)	x		x		
Cash collateral currency (2.77)			x		x (4.14)
Collateral quantity or nominal amount (2.83)		x			
Price currency (2.86)			x		x (4.10)
Collateral market value (2.88)	x		x		
Haircut or margin (2.89 weighted by 2.83 and/or 2.76)			x		
Collateral quality (2.90)			x		
Maturity date of the security (2.91)			x		
Jurisdiction of the issuer (2.92)			x		
Collateral type (2.94)	x		x		
TR to which the other counterparty reported	x	x	x		
Reconciliation status		x	x		
Initial margin posted (3.8)				x	

Table 4 - Set of variables for position reports under SFTR					
Variable	**Overview**	**Loan**	**Collateral**	**Margin**	**Reuse**
Variation margin posted (3.10)				x	
Excess collateral posted (3.16)				x	
Value of reused collateral (4.8)					x
Estimated reuse of collateral (4.9)					x
Reinvestment rate (4.11 weighted by 4.13)					x
Type of re-invested cash investment (4.12)					x
Re-invested cash amount (4.13)					x