

RepoClear

Interface Specification

MT518 SWIFT Trade Feed

Service: RepoClear Ltd

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06/04/00	2.1	External members	RepoClear cash bonds
15/12/00	3.1		Explanation and Excel spreadsheet documents merged for clarity.
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22/08/07	3.7		€GC
21/09/09	3.8		Trade Bundles
20/06/11	3.9		French Clearing Requirements
28/06/11	3.91		
19/04/11	4.0		Variable Rate Repos
24/10/17	4.1		PREP and TRAD field in MT518 should contain only 98C and not 98A
09/02/21	4.2	External Members	UTC Time zone for Timestamp related Swift tags. And Bundle trades are retired in Repoclear

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1. Introduction

This document provides a specification for the RepoClear SWIFT MT518 message interface used to send details of classic repos, buy/sell repos, cash bond, Sterling GC (£GC) and Euro denominated GC (€GC) trades traded on other systems to the RepoClear clearing and settlement service. In addition to trades the interface can also be used to notify RepoClear of trade bundles (independent series of overnight trades) in fixed rate classic repos, £GC and €GC products.

This document should be read in conjunction with the MT518 description provided in the “SWIFT User Handbook - Category 5, Securities Messages” document from SWIFT. It covers the use of the SWIFT MT518, Market Side Securities Trade Confirmation, message as a vehicle for an external trading system to inform RepoClear of a new trade or trade bundle.

2. Changes to Repoclear Service

Bundle trades are no longer accepted for business within Repoclear space and is retired for Clearing/Settlements activities.

3. MT518 Structure

The structure of the MT518 message sent from an external trading system to RepoClear is as specified in this section.

The key to the MT518 table presented below is as follows:

- **Shaded rows** – are MT518 tag fields. These fields of the message exist to delineate message blocks that are present in the structure of the MT518 SWIFT message. The presence of these fields is required if the data block is required in the message even though no business data resides in the field itself.
- **Field format (*)** – each field of the SWIFT MT518 message contains its own format to which the data items in that field must adhere. This is expressed using the following key:
a = alpha-numeric character c = alphabetic character d = decimal number ([0-9] + “.”) x = any printable ASCII symbol s = space
- **M/O/C (**)** – not all fields need to reside in every MT518 message depending on the type of trade being sent. This is shown through the M/O/C flag:

M = Mandatory

O = Optional

C = Conditional (depending on context)

The structure of the SWIFT MT518 message that will be accepted by RepoClear is shown on the next page.

Tag	Qualifier	Subqualifier/ Option	Field description	Field data format (*)	M / O / C (**)	Remark
16R	GENL		Start block: General Information		M	
20C	:SEME//		Identifier for the message on SWIFT	16a	M	Not used.
23G	NEWM		Function of the message		M	Not used.
98a	:PREP//		Message preparation date & time.		M	See note 1.
22F	:TRTR/	/TRAD LCHL/TRRC LCHL/REPO	Trade type. = Classic Repo (trade)			Value determines sequences & fields required in the remainder of the message. The codes TRGC, TRAL, TRRO & TRRB are no longer valid trade types in use by RepoClear.
		LCHL/TRCS LCHL/TRRB LCHL/CASH	= Cash Bond (trade)			
		LCHL/TRBS	= Buy Sell Repo (trade)			
		LCHL/TRDV	= £GC or €GC (trade)			
		LCHL/BNRC	= Classic Repo (bundle)			
		LCHL/BNDV	= £GC or €GC (bundle)	4a	M	
16R	LINK		Start block: Linkages		M	

20C	:MAST//		The trading system's unique identifier for the trade	16x	M	See note 2.
16S	LINK		End block: Linkages		M	
16S	GENL		End block: General Information		M	
16R	CONFDET		Start block: Confirmation Details		M	

98a	:TRAD//		Trade date & time.		M	See notes 1 & 3.
98A	:SETT//		Settlement date.		M	See notes 1 & 4.
90A	:DEAL/	/PRCT/	Deal Price	15d	M	See note 5 & 10.
19A	:SETT//		Settlement currency & amount	3c15d	M	See note 6.
22H	:BUSE/	/BUYI	Buy/Sell Indicator		M	Not used.
22H	:PAYM/	/APMT	Payment Indicator		M	Not used.
16R	CONFPRTY		Start block: Confirmation Parties		M	
95a	:SELL/	LCHL/	Selling party. = LCH Dealer Code (:95R:)	34c	M	See note 7.
			= LCH Dealer Code (:95Q:)	4*35x		
		/	= BIC Code (:95P:)	4a2a2c[3c]		
20C	:PROC//		Seller's reference	16x	M	See note 8.
16S	CONFPRTY		End block: Confirmation Parties		M	
16R	CONFPRTY		Start block: Confirmation Parties		M	

95a	:BUYR/	LCHL/	Buying party. = LCH Dealer Code (:95R:)	34c	M	See note 7.
			= LCH Dealer Code (:95Q:)	4*35x		
		/	= BIC Code (:95P:)	4a2a2c[3c]		
20C	:PROC//		Buyer's reference	16x	M	See note 8.
16S	CONFPRTY		End block: Confirmation Parties		M	
36B	:CONF/	/FAMT/	Nominal of securities	15d	M	See note 9.
35B	ISIN		ISIN of security	1s12c	M	
16S	CONFDET		End block: Confirmation Details		M	
16R	SETDET		Start block: Settlement Details		O	

22F	:SETR/	/TRAD	Settlement type.		M	
16R	SETPRTY		Start block: Settlement Parties		O	<p>All fields within the SETPRTY subsequences will be ignored by RepoClear. The sequence is maintained for backward compatibility only.</p> <p>RepoClear no longer allows the optional specification of settlement depots on a per trade basis. Settlement depots are maintained within RepoClear reference</p>
95R	DEAG/	LCHL/ER	Seller's depot = EuroClear	34x		
		LCHL/CL	= Cedel			
		LCHL/DC	= DB Clearing			
		LCHL/DM	= Domestic			
16S	SETPRTY		End block: Settlement Parties			
16R	SETPRTY		Start block: Settlement Parties			

95R	REAG/	LCHL/ER	Buyer's depot = EuroClear	34x		data on a member or dealer (as appropriate) per market basis.
		LCHL/CL	= Cedel			
		LCHL/DC	= DB Clearing			
		LCHL/DM	= Domestic			
16S	SETPRTY		End block: Settlement Parties			
16R	AMT		Start block: Amounts		O	
19A	:ACRU//		Accrued interest amount	[N]3c15d	O	
16S	AMT		End block: Amounts		O	RepoClear Paris only. See note 5.
16S	SETDET		End block: Settlement Details		O	
16R	REPO		Start block: Repo Details		C	See note 10 & 11.
98A	:TERM//		Closing leg settlement date.		C	See note 1, 4 & 10.
22F	:RERT//	FIXE VARI	Repo rate type: <ul style="list-style-type: none"> • FIXE = Fixed • VARI = Variable Rate • FORF = BSB 		C	
92A	:REPO//		REPO - Fixed repo rate (numeric)	[N]15d	C	
92C	:VASU//		VASU – variable repo rate (name)	24x		
92A	:RSPR//		Floating rate spread	[N]15d	O	See notes 10 & 11.

19A	:TRTE// --- :REPP//		Closing leg currency & settlement amount (for TRRC, TRBS, TRDV, BNRC & BNDV) --- Coupon payment adjustment (forfeit amount) (for TRBS)	3c15d	C	See notes 6, 10 & 11.
16S	REPO		End block: Repo Details		C	See note 10 & 11.

Notes:

1. 98a date fields may be either :98A: or :98C:. 98A fields specify only a date where 98C specify a date and time. I.e.:

:98A::SETT//YYYYMMDD
or
:98C::PREP//YYYYMMDDHHMMSS

For PREP and TRAD field only 98C should be used. For SETT & TERM fields (i.e. settlement dates) then 98A should be used.

All dates should be valid RepoClear business days and timestamp should match UTC Time zone.

2. The trading system's master reference (":20C::MAST//") is the trading system's identifier for the matched trade. This must be unique within the trading day. RepoClear will reject a trade that repeats a trade reference already seen for a particular trade date.
3. Trade date must be a valid RepoClear business day less than or equal to the current business day, and the timestamp should match the UTC Time zone.
4. Settlement dates must be valid RepoClear business days. The exact business level validations of settlement dates vary by market and trade type – these are available in the RepoClear service description document.

In the case of a cash bond field "98a::SETT//" is the settlement date of the trade. In the case of a repo it is the settlement date of the trade's opening leg. For a trade bundle it is the start date of the first overnight trade in the bundle.

The closing leg settlement date of the repo is given in field ":98a::TERM//" in the MT518 REPO sequence E. In the case of a bundle this is the closing date of the last overnight trade in the bundle. A cash bond trade has no sequence E REPO structure and the field is not present in the message.

5. Deal prices are specified as a percentage.

For MT518's sent to the London RepoClear instance:

A clean price must be specified for cash bond trades. A dirty price must be specified for a classic repo. RepoClear London expects the following to be true of the settlement cash amounts:

Trade's Dirty Price = Trade's Clean Price + Bond's Accrued Interest
Cash Amount = Trade's Dirty Price * Nominal

In all cases RepoClear London records the price for reporting purposes only and DOES NOT use it for generating an opening settlement cash value.

RepoClear London does not currently accept Buy/Sell repos.

For Sterling and Euro denominated GC trades the price is expected to be "100". This means that the opening cash settlement amount should equal the nominal. The closing cash amount is expected to be the opening cash + repo. interest.

For MT518's sent to the Paris RepoClear instance:

All prices sent to RepoClear Paris are clean prices. Accrued interest on the opening leg cash values can be specified separately in field 19A of MT518 sub-sequence AMT. RepoClear Paris will use the clean price and accrued interest as required to validate the given opening leg cash value.

Note:

This difference in interface between London and Paris systems has been introduced into RepoClear as a by-product of merging French business onto a common clearing engine internal to LCH.Clearnet without impacting existing interfaces with upstream ATS systems. In the longer term the RepoClear will be migrating to the London interface when this can occur at a mutually convenient time.

6. Currency must correspond to that in which the issue is denominated (i.e. cross currency repos will not be accepted). For cash bond trades the ":19A::SETT/" field is the settlement amount for the trade. In the case of a repo then this is the settlement amount of the opening leg and the currency must match that of ":19A::TRTE/" in sequence E. For a bundle of trades this is the opening leg cash value of every trade in the bundle.

RepoClear will reject trades containing negative cash amounts.

For Sterling and Euro denominated GC trades the cash amounts are expected to be based on a trade price of 100. See note 5 & 11.

7. Buyers and sellers may be specified in one of two ways – via LCH dealer codes or BIC addresses. Using a 95R or 95Q field will specify LCH dealer codes. I.e.

:95R::SELL/LCHL/RDXXX

where RDXXX is the dealer code to be transmitted. Use of a BIC code to identify the party would use a 95P field. I.e.

:95P::BUYR//LCHLGB2X

This can be either a BIC8 or a BIC11 (BIC8 + branch code) as required.

In the case of a repo the buyer indicates the buyer of the securities on the opening leg. Therefore, the named seller (selling on the opening leg) will be the buyer of the securities on the closing leg.

8. The seller's and buyer's references are those numbers used to identify the transaction on the dealer's systems – that is, the reference of the parties who are transacting the trade. RepoClear will store these references as an aid to member's reconciliation. If the originator of the MT518 does not have a dealer reference (or if the field is omitted or sent to RepoClear without a value) RepoClear will use the ATS's trade reference (LINK subsequence, field ":20C::MAST/") as the seller's and/or buyer's reference.

9. The nominal amount of the security must be a positive *integer* amount – floating point nominals are not allowed. The nominal is a monetary value (face amount) and does not refer to “units” of the listed security.

The ISIN code must be presented in the message with a space before the security. I.e. the field should be in the form “:35B:ISIN DE0001141141”. The ISIN code will be used to derive the market issuer of the security (not explicitly stated in the message).

In the case of a Sterling or Euro denominated GC trade the ISIN code will refer to the basket in which the trade has been done (i.e. not the ISIN of an actual underlying security). The current list of valid basket ISINs and the bonds contained in those baskets can be obtained from the RepoClear Operations team. Allocations against £GC and €GC trades is performed at the settlement depots.

10. The entire REPO sequence E structure is conditional on the trade type specified in sequence A field “:22F::TRTR/”. A cash bond trade will not require closing leg information and, therefore, sequence E must not be present in the incoming message. The sequence is required for all types of repo trades and all forms of bundles. A table summarising these requirements is shown below:

Trade	Trade Type (GENL :22F:)	Price (CONFDET :90A:)	Sequence E Fields Required	Note
Fixed Rate Classic Repo (Closing cash specified)	:22F::TRTR//TRRC	London: Dirty (see note 5) Paris: Clean	:98A::TERM// :22F::RERT//FIXE :92A::REPO// :19A::TRTE//	A
Fixed Rate Classic Repo (Repo rate specified)	:22F::TRTR//TRRC	London: N/A (cash specified) Paris: Clean	:98A::TERM// :22F::RERT//FIXE :92A::REPO//	B
Variable Rate Classic Repo	:22F::TRTR//TRRC	London: N/A (no variable rate) Paris: Clean	:98A::TERM// :22F::RERT//VARI :92A::VASU// :92A::RSPR// - spread value is optional	C
Buy / Sell Repo (Closing Cash Specified)	:22F::TRTR//TRBS Or :22F::TRTR//TRRC (with FORF in Seq. E)	London: N/A (no buy/sell) Paris: Clean	:98A::TERM// :22F::RERT//FIXE (or FORF for Paris) :92A::REPO// :19A::TRTE//	D
Buy / Sell Repo (Repo rate specified)	Or As backwardly compatible with Paris interfaces	London: N/A (no buy/sell) Paris: Clean	:98A::TERM// :22F::RERT//FIXE (or FORF for Paris) :92A::REPO// :19A::REPP//	
Cash Trade (Outright Bond Purchase)	:22F::TRTR//TRCS	London: Clean Paris: Clean	No REPO sequence E	
Sterling GC Trades	:22F::TRTR//TRDV	London: value must be 100	:98A::TERM// :22F::RERT//FIXE	
Euro GC Trade	:22F::TRTR//TRDV	Paris: N/A (no GC)	:92A::REPO// :19A::TRTE//	

Notes:

A & B:

The repo rate (:92A::REPO//) and the closing leg cash amount (:19A::TRTE//) are mutually exclusive options for notifying RepoClear of the closing leg settlement amount.

- If :19A::TRTE// is present in the MT518 sequence E then this cash value will be used as the closing leg settlement amount. In this case, any supplied repo rate will be recorded against the trade but will not be used to calculate a closing leg cash value.
- If :19A::TRTE// is omitted from the MT518 sequence E then a repo rate (:92A::REPO//) is mandatory. In this case RepoClear will calculate the closing cash value from the supplied rate.

In all cases RepoClear will calculate an implied repo rate for the trade. This will be worked out from the cash values. In the case that the closing leg cash is advised as a rate RepoClear will backwardly work out an implied rate from the cash derived from the given rate. For a trade bundle RepoClear will calculate its own implied repo rate(s) from the cash values for each overnight trade in the bundle. *The implied rate is purely for reporting purposes and will not be used by the RepoClear system.*

In case A above: Closing leg settlement will be based on the cash value given in field :19A::TRTE, the repo rate is taken by RepoClear taken for information only

In case B above: closing leg cash value will be calculated by RepoClear based on the fixed repo rate given in field :92A::REPO

C – No closing cash can be given as the trade is a variable rate repo. Closing leg cash will be calculated in the future based on the index given in field :92A::VASU and the option spread from that index specified in field :92A::RSPR

D – If sequence E field 22F::RERT reads FORF then RepoClear will interpret the trade to be of trade type TRBS (buy/sell) irrespective of the value :22F::TRTR in sequence A GENL.

If sequence E field :19A:REPP is present then RepoClear will interpret the trade to be of trade type TRBS (buy/sell) irrespective of the value :22F::TRTR in sequence A GENL.

Both of these are to maintain backwards compatibility and will be phased out in due course. **For new implementations of this interface a code of FORF should never be used in REPO sequence E field 22F::RERT**

In addition:

- Where a Buy/Sell trade specifies :19A::TRTE in sequence E then this cash value will be the closing cash value of the trade.
- Where a Buy/Sell trade specifies :19A::REPP in sequence E then the closing cash value of the trade will be calculated. The value in field :19A::REPP is the forfeit amount (which can be positive or negative but is typically related to coupon payments during the term of the repo) to be applied to the classic repo closing cash value. The classic repo closing cash value is calculated from the repo rate in exactly the same manner as specified in note B.

11. Notifying RepoClear of a BNRC/BNDV is **not** the same as notifying RepoClear of a TRRC/TRDV. TRXX is a single trade while BNXX is a collection (bundle) of overnight trades.

Trades (TRRC/TRDV) are distinct transactions having the details given on the remainder of the MT518 (i.e. opening/closing cash values, nominal, start & end dates etc.)

Bundles (BNRC/BNDV) are a series of independent overnight trades (based on the RepoClear operational calendar for the relevant market) which begin on the given start date [:98A:SETT/] and continue through to the given closing date [:98A:TERM/].

The remaining details for each of the overnight trades contained in a bundle are taken directly from the corresponding value in the MT518 bundle message with the exception of the closing settlement leg amount. For each overnight trade, closing leg settlement amount will be calculated as follows:

$$\begin{aligned} \text{Closing leg settlement amount} &= \text{Opening settlement amount [19A:SETT/]} \\ &+ \\ &\text{Daily Repo Interest Amount} \end{aligned}$$

The Daily Repo Interest Amount will be proportionate to the term of the individual “overnight” trades i.e. all true overnight trades will have one consistent end cash amount (subject to rounding rules), weekend “overnight” trades will have a different consistent end cash amount (again, subject to rounding rules). The calculation of the individual Daily Repo Interest Amounts will be such that the overall repo interest payable in the bundle of overnight trades will equal the repo interest notified to RepoClear in the MT518 bundle message (i.e. closing cash[:19A:TRTE/] – start cash[:19A:SETT/]). Each trade in the bundle will independently debit or credit repo interest to the trade’s participants daily.

Bundled trades are only valid in RepoClear London.

4. Example Messages

The following are sample MT518 messages which would be accepted by RepoClear. The header and trailer information before the first “:16R:GENL” and after the final “:16S:SETDET” field is required by RepoClear but should be generated by the software used to connect to the SWIFT network itself. These headers and trailers are standard to all SWIFT message types.

A cash bond trade specifying dealers via LCH codes:

```
{1:F01ZYFQGB20AXXX0111000393}{2:O5181039990819LCHLLCHLAXXX0117000612000
3151039N}{3:{108:09908181091000CC}}{4:
:16R:GENL
:20C::SEME//09908181091000CC
:23G:NEWM
:98C::PREP//20000403105057
:22F::TRTR/LCHL/TRCS
:16R:LINK
:20C::MAST//LCH_TestCB00
:16S:LINK
:16S:GENL
:16R:CONFDET
:98C::TRAD//20000403105055
:98A::SETT//20000413
:90A::DEAL//PRCT/102,456000
:19A::SETT//EUR1024560,12
:22H::BUSE//SELL
:22H::PAYM//APMT
:16R:CONFPRTY
:95R::SELL/LCHL/RDBRE
:20C::PROC//BREREF
:16S:CONFPRTY
:16R:CONFPRTY
:95R::BUYR/LCHL/RDNOR
:20C::PROC//NORREF
:16S:CONFPRTY
:36B::CONF//FAMT/1000000,00
:35B:ISIN DE0001141141
:16S:CONFDET
-}{5:{MAC:36A6CD65}{CHK:B0D1E72A8639}{TNG:}}
```

A classic repo, using the old repo type code, BIC's to specify dealers and giving a closing cash value:

```
{1:F01ZYFQGB20AXXX0111000393}{2:O5181039990819LCHLLCHLAXXX0117000612000
3151039N}{3:{108:09908181091000CC}}{4:
:16R:GENL
:20C::SEME//09908181091000CC
:23G:NEWM
:98C::PREP//20000403105550
:22F::TRTR/LCHL/TRRC
:16R:LINK
:20C::MAST//LCH_TestRepo00
:16S:LINK
:16S:GENL
:16R:CONFDET
:98C::TRAD//20000403105547
:98A::SETT//20000413
:90A::DEAL//PRCT/102,456000
:19A::SETT//EUR1024560,00
:22H::BUSE//SELL
:22H::PAYM//APMT
:16R:CONFPRTY
:95P::SELL//ZYEWGB20
:20C::PROC//ZYEW_REF
:16S:CONFPRTY
:16R:CONFPRTY
:95P::BUYR//LCHLGB2X
:20C::PROC//LCHL_REF
:16S:CONFPRTY
:36B::CONF//FAMT/1000000,00
:35B:ISIN DE0001141141
:16S:CONFDET
:16R:REPO
:98A::TERM//20000419
:19A::TRTE//EUR1028115,51
:16S:REPO
```

-}{5:{MAC:36A6CD65}{CHK:B0D1E72A8639}{TNG:}}

A Euro GC / CBwP repo giving the closing cash value via a fixed rate:

{1:F01ZYFQGB20AXXX0111000393}{2:O5181039990819LCHLLCHLAXXX0117000612000
3151039N}{3:{108:09908181091000CC}}{4:
:16R:GENL
:20C::SEME//09908181091000CC
:23G:NEWM
:98C::PREP//20000403105550
:22F::TRTR/LCHL/TRDV
:16R:LINK
:20C::MAST//LCH_TestRepo01
:16S:LINK
:16S:GENL
:16R:CONFDET
:98A::TRAD//20000403
:98A::SETT//20000413
:90A::DEAL//PRCT/100,
:19A::SETT//EUR1000000,
:22H::BUSE//SELL
:22H::PAYM//APMT
:16R:CONFPRTY
:95R::SELL/LCHL/RDDMO
:20C::PROC//DMO_REF
:16S:CONFPRTY
:16R:CONFPRTY
:95P::BUYR//LCHLGB2X
:20C::PROC//LCHL_REF
:16S:CONFPRTY
:36B::CONF//FAMT/1000000,
:35B:ISIN XS0417076584
:16S:CONFDET
:16R:REPO
:98A::TERM//20000419
:22F::RERT//FIXE
:92A::REPO//0,403

:16S:REPO
-}{5:{MAC:36A6CD65}{CHK:B0D1E72A8639}{TNG:}}
