



Resources for European Institutional Investors

Connecticut Avenue Securities® (CAS) to ESMA Mapping Files

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CAS to ESMA Annex 2 Mapping

Explanatory Notes:

- The table below maps CAS data fields to ESMA data fields where relevant CAS data fields exist.
- The CAS files (“At-Issuance Data” and “Ongoing (Monthly) Data”) for each transaction can be accessed via our [Transactions](#) page. For help with the files, see:
 - [Credit Risk Transfer File Layout](#)
 - [Credit Risk Transfer Glossary](#)
- In some cases the relevant ESMA field can be populated by a transformation of one or more CAS fields, which is outlined in the column "Input for ESMA field and Explanations".
- Some ESMA fields can be populated based on CAS Reference Pool Eligibility Criteria - these might change going forward and users should check the applicability of the mapping below for individual CAS transactions.
- Note that in selected cases there can be some approximations, specifically for list fields.

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL1	Unique Identifier	NO	NO	See "Input for ESMA" fields		<p>Fannie Mae does not produce a Unique Identifier based on EU guidelines. Users can construe such an ID for a CAS transaction by:</p> <p>In sequential order:</p> <p>a) The reporting entity LEI - B1V7KEBTPIMZEU4LTD58</p> <p>b) The letter N, as the securitisation is non-ABCP</p> <p>c) Four-digit year that the first securities of the securitisation were issued</p> <p>d) A two digit number corresponding to the number order in which securitisations with the same identifier according to items a) to c) of this list</p>	RREL1: B1V7KEBTPIMZEU4LTD58NYYYYXX
RREL2	Original Underlying Exposure Identifier	NO	NO	2	LOAN IDENTIFIER	CAS 2 in "At-Issuance Data" file	CAS 2: 91672351 TO RREL2: 91672351

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL3	New Underlying Exposure Identifier	NO	NO	2	LOAN IDENTIFIER	CAS 2 in latest "Ongoing (Monthly) Data" file	CAS 2: 91672351 TO RREL2: 91672351
RREL4	Original Obligor Identifier	NO	NO	N/A		Not available Fannie Mae does not provide individual obligor IDs for its reference portfolios given certain legal restrictions as well as the high granularity of the reference portfolios	
RREL5	New Obligor Identifier	NO	NO	N/A		Not available Fannie Mae does not provide individual obligor IDs for its reference portfolios given certain legal restrictions as well as the high granularity of the reference portfolios	
RREL6	Data Cut-Off Date	NO	NO	3	MONTHLY REPORTING PERIOD	- CAS 3 includes the year and month of the relevant monthly reporting period date in the format MMYYYY - Report RREL6 as YYYY-MM-DD, where DD equals last day of the month	CAS 3: 062018 TO RREL6: 2018-06-30
RREL7	Pool Addition Date	NO	YES	See "Input for ESMA" fields		- Populate as the closing date for the relevant CAS transaction. - Report RREL7 as YYYY-MM-DD	CAS : 062018 TO RREL7: 2018-06-30

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL8	Date Of Repurchase	NO	YES	44	ZERO BALANCE CODE	<p>IF CAS 44 is equal to "06" in latest "Ongoing (Monthly) Data" files:</p> <p>IF TRUE:</p> <ul style="list-style-type: none"> - In the first "Ongoing Monthly Data" file in which CAS 44 is "06" - CAS 82 includes the year and month of the repurchase in the format MMYYYY - Report RREL8 as YYYY-MM-DD, where DD equals last day of the month of the relevant reporting period, not actual date of event <p>IF FALSE:</p> <ul style="list-style-type: none"> - Report RREL8 as "ND5" 	<p>CAS 82: 062018</p> <p>TO</p> <p>RREL8: 2018-06-30</p>
RREL9	Redemption Date	NO	YES	44 and 45	<p>ZERO BALANCE CODE</p> <p>ZERO BALANCE EFFECTIVE DATE</p>	<p>IF CAS 44 is NOT BLANK in latest "Ongoing (Monthly) Data" files:</p> <p>IF TRUE:</p> <ul style="list-style-type: none"> - In the first "Ongoing Monthly Data" file in which CAS 44 is NOT BLANK - CAS 45 includes the year and month of the redemption in the format MMYYYY - Report RREL9 as YYYY-MM-DD, where DD equals last day of the month of the relevant reporting period, not actual date of event <p>IF FALSE:</p> <ul style="list-style-type: none"> - Report RREL 9 as "ND5" 	<p>CAS 45: 062018</p> <p>TO</p> <p>RREL9 : 2018-06-01</p>

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL10	Resident	YES	NO	"ND3"		Always "ND3" NOTE: There may be selected cases where borrowers are non-US residents	ND3
RREL11	Geographic Region - Obligor	YES	NO	"ND3"		Always "ND3" NOTE: There may be selected cases where borrowers are non-US residents	ND3
RREL12	Geographic Region Classification	YES	NO	"ND1"		Always "ND1" NOTE: Not applicable for non-EU jurisdictions	ND1
RREL13	Employment Status	YES	NO	"ND3"		Always "ND3"	ND3
RREL14	Credit Impaired Obligor	NO	YES	"ND5"		Always "ND5"	ND5
RREL15	Customer Type	YES	NO	"ND3"		Always "ND3"	ND3
RREL16	Primary Income	YES	NO	"ND3"		Always "ND3"	ND3
RREL17	Primary Income Type	YES	NO	"ND3"		Always "ND3"	ND3
RREL18	Primary Income Currency	YES	NO	"ND3"		Always "ND3"	ND3
RREL19	Primary Income Verification	YES	NO	"ND3"		Always "ND3"	ND3
RREL20	Secondary Income	YES	YES	"ND3"		Always "ND3"	ND3
RREL21	Secondary Income Verification	YES	YES	"ND3"		Always "ND3"	ND3
RREL22	Special Scheme	YES	YES	"ND5"		Always "ND5"	ND5
RREL23	Origination Date	YES	NO	14	ORIGINATION DATE	- CAS 14 includes the year and month of the relevant origination date in the format MMYYYY - Report RREL23 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event	CAS 14: 062018 TO RREL23: 2018-06-30

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL24	Maturity Date	NO	YES	19	MATURITY DATE	- CAS 19 includes the year and month of the relevant maturity date in the format MMYYYY - Report RREL24 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event	CAS 19: 062029 TO RREL24: 2029-06-30
RREL25	Original Term	YES	YES	13	ORIGINAL LOAN TERM	CAS 13 in latest "Ongoing (Monthly) Data" file	CAS 13: 360 TO RREL25: 360
RREL26	Origination Channel	YES	YES	4	ORIGINATION CHANNEL	- IF CAS 4 is "R", then RREL26 is "BRAN" - IF CAS 4 is "C", then RREL26 is "TPTC" - IF CAS 4 is "B", then RREL26 is "BROK"	CAS 4: B TO RREL26: "BROK"
RREL27	Purpose	YES	NO	27	LOAN PURPOSE	- IF CAS 27 is "CASH OUT REFINANCE", then RREL27 is "RMEQ" - IF CAS 27 is "NO CASH-OUT REFINANCE", then RREL27 is "RMRT" - IF CAS 27 is "PURCHASE", then RREL27 is "PURC" - OTHERWISE, RREL27 is "RMRT"	CAS 27: PURCHASE TO RREL27: "PURC"
RREL28	Currency Denomination	NO	NO	"USD"		Always "USD"	USD
RREL29	Original Principal Balance	YES	YES	10	ORIGINAL UPB	Report RREL29 as "USD" [space] CAS 10 in latest "Ongoing (Monthly) Data" file	CAS 10: 80000.50 TO RREL29: USD 80000.50

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL30	Current Principal Balance	NO	YES	12	CURRENT ACTUAL UPB	Report RREL 30 as "USD" [space] CAS 12 in latest "Ongoing (Monthly) Data" file	CAS 12: 45000.23 TO RREL30: USD 45000.23
RREL31	Prior Principal Balances	YES	YES	"USD 0.00"		Always "USD 0.00" NOTE: All CAS mortgages are first-lien according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	USD 0.00
RREL32	Pari Passu Underlying Exposures	YES	YES	"USD 0.00"		Always "USD 0.00" There are no cases of pari-passu loans	USD 0.00
RREL33	Total Credit Limit	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are never "flexible" according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL34	Purchase Price	NO	YES	"ND5"		Always "ND5" NOTE: Not applicable to synthetic securitizations	ND5
RREL35	Amortisation Type	YES	NO	102	FORBEARANCE INDICATOR	- IF CAS 102 in "Ongoing (Monthly) Data" file is "Y", then RREL35 is "BLLT" - OTHERWISE, RREL35 is "FRXX" NOTE: All loans are French amortisation except in forbearance cases. Subject to changes in CAS Reference Pool Eligibility Criteria.	CAS 102: Null TO RREL35: FRXX

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL36	Principal Grace Period End Date	NO	YES	37 and 38	INTEREST ONLY INDICATOR FIRST PRINCIPAL AND INTEREST PAYMENT DATE FOR INTEREST ONLY PRODUCTS	IF CAS 37 is "Y": - CAS 38 includes the year and month of the Principal Grace Period End Date in the format MMYYYY. - Report RREL36 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event OTHERWISE, RREL36 is "ND5"	CAS 37: Y CAS 38: 062018 TO RREL36: 2018-06-30
RREL37	Scheduled Principal Payment Frequency	NO	YES	"Mnth"		Always "Mnth"	Mnth
RREL38	Scheduled Interest Payment Frequency	NO	YES	"Mnth"		Always "Mnth"	Mnth
RREL39	Payment Due	NO	YES	48	SCHEDULED PRINCIPAL CURRENT	Report RREL 39 as "USD" [space] CAS 48 in latest "Ongoing (Monthly) Data" file	CAS 48: 1000 TO RREL39: USD 1000
RREL40	Debt To Income Ratio	YES	YES	"ND3"		Always "ND3" NOTE: Fannie Mae provides CAS 23, a separate measure of a debt-to-income ratio to give an indication of affordability	ND3
RREL41	Balloon Amount	YES	YES	"ND5"		Always "ND5" NOTE: CAS mortgages always fully amortize according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL42	Interest Rate Type	NO	YES	"FXRL"		Always "FXRL" NOTE: CAS mortgages are always fixed-rate for life mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	FXRL

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL43	Current Interest Rate	NO	YES	9	CURRENT INTEREST RATE	CAS 9 in latest "Ongoing (Monthly) Data" file	CAS 9: 4.75 TO RREL43: 4.75
RREL44	Current Interest Rate Index	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL45	Current Interest Rate Index Tenor	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL46	Current Interest Rate Margin	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL47	Interest Rate Reset Interval	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL48	Interest Rate Cap	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL49	Interest Rate Floor	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL50	Revision Margin 1	YES	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL51	Interest Revision Date 1	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL52	Revision Margin 2	YES	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL53	Interest Revision Date 2	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL54	Revision Margin 3	YES	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL55	Interest Revision Date 3	NO	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL56	Revised Interest Rate Index	YES	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL57	Revised Interest Rate Index Tenor	YES	YES	"ND5"		Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL58	Number Of Payments Before Securitisation	YES	NO	15	FIRST PAYMENT DATE	Difference between CAS Closing Date and CAS 15 of latest "Ongoing (Monthly) Data" file, in months (always rounded down)	CAS Closing Date "110718" minus CAS 15 "092018" (equals to 2 months) TO RREL58: 2
RREL59	Percentage Of Prepayments Allowed Per Year	YES	YES	"100"		Always "100"	100
RREL60	Prepayment Lock-Out End Date	YES	YES	"ND5"		Always "ND5" NOTE: Not relevant as borrower can always prepay	ND5
RREL61	Prepayment Fee	NO	YES	"USD 0"		Always "USD 0"	USD 0
RREL62	Prepayment Fee End Date	YES	YES	"ND5"		Always "ND5"	ND5

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL63	Prepayment Date	YES	YES	"ND3"		Always "ND3"	ND3
RREL64	Cumulative Prepayments	YES	YES	"ND3"		Always "ND3"	ND3
RREL65	Date Of Restructuring	YES	YES	3 and 42	MONTHLY REPORTING PERIOD MODIFICATION FLAG	IF CAS 42 is "Y" in latest "Ongoing (Monthly) Data" files, report as: a) In the earliest "Ongoing (Monthly) Data" file in which CAS 42 is "Y" b) CAS 3 includes the year and month of the relevant monthly reporting period date in the format MMYYYY c) Report RREL65 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event OTHERWISE, RREL65 is "ND5"	CAS 42: Y CAS 3: 062018 TO RREL65: 2018-06-30
RREL66	Date Last In Arrears	YES	YES	3 and 14 and 41	MONTHLY REPORTING PERIOD LOAN PAYMENT HISTORY ORIGINATION DATE	- IF last two digits of CAS41 are NOT equal to "00", then report RREL66 as CAS3 - IF any previous digits of CAS41 are NOT equal to "00", then report RREL66 as CAS3 of that CAS41 period - OTHERWISE, IF (CAS3-CAS14)/30 <= 24, report RREL66 as "ND5" - OTHERWISE, take the closest report older than 24m and restart the routine to check for potential dates older than 24 months - CAS 3 includes the year and month of the relevant monthly reporting period date in the format MMYYYY - Report RREL 66 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event	CAS 41: XXXX01 CAS3: 062018 TO RREL66: 2018-06-30
RREL67	Arrears Balance	NO	NO	N/A		Not available	

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL68	Number Of Days In Arrears	NO	NO	40	CURRENT LOAN DELINQUENCY STATUS	The Number of Days in Arrears is not available. Fannie Mae reports the number of months the obligor is delinquent Report RREL68 as CAS 40 * 30	CAS 40: 3 TO RREL68: 90
RREL69	Account Status	NO	NO	41 and 42 and 44 and 52	LOAN PAYMENT HISTORY MODIFICATION FLAG ZERO BALANCE CODE FORECLOSURE DATE	In "Ongoing (Monthly) Data" File: - IF CAS 52 is NOT "BLANK", then RREL69 is "DADB" - IF CAS 44 is "06", then RREL69 is "REOT" - IF CAS 44 is "01" OR "02" OR "03" OR "09" OR "15" OR "16" OR "96", then RREL69: "RDMD" - IF CAS 42 is "Y" AND two right-most digits of CAS 41 are NOT "00", then RREL69 is "RARR" - IF CAS 42 is "Y" AND two right-most digits of CAS 41 are "00", then RREL69 is "RNAR" - IF two right-most digits of CAS 41 are NOT "00", then RREL69 is "ARRE" - OTHERWISE, RREL69 is "PERF"	CAS 52: blank or null CAS 44: blank or null CAS 42: "Y" CAS 41: XXX00 TO RREL69: "RNAR"
RREL70	Reason for Default or Foreclosure	YES	YES	"ND5"		Always "ND5"	ND5
RREL71	Default Amount	NO	YES	12 and 52	CURRENT ACTUAL UPB FORECLOSURE DATE	- IF CAS 52 is NOT BLANK, then RREL71 is "USD" [space] CAS 12 - OTHERWISE, RREL71 is "ND5" CAS 12 stays constant after the Foreclosure Date (CAS 52) until a loss determination is made	CAS 52: 03/01/2018 CAS 12: 12000 TO RREL71: USD 12000

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL72	Default Date	NO	YES	52	FORECLOSURE DATE	<p>From "Ongoing (Monthly) Data" file:</p> <ul style="list-style-type: none"> - IF CAS 52 is BLANK, then RREL72 is "ND5" - IF CAS 52 is NOT BLANK, CAS 52 includes the year and month of the redemption in the format MM/01/YYYY, so report RREL72 as YYYY-MM-01 <p>NOTE: The reported DD ("01" in MM/01/YYYY) is the first day of the month in which the event occurred, not the actual date of the event</p>	CAS 52: 03/01/2018 TO RREL72: 2018-03-01
RREL73	Allocated Losses	NO	YES	76 and 78	CUMULATIVE MODIFICATION LOSS AMOUNT CUMULATIVE CREDIT EVENT NET GAIN OR LOSS	<p>Report RREL73 as "USD" [space] CAS 76 + CAS 78</p> <p>NOTE: Allocated losses as sum of CAS 76 and 78 will include calculation of delinquent interest and costs (net amounts)</p>	CAS 76: 10000 CAS 78: -1000 TO RREL73: USD 9000
RREL74	Cumulative Recoveries	NO	YES	N/A		<p>Not available</p> <p>There are various recovery and cost fields in the CAS loan-level data but the aggregation will be different to the ESMA definition</p>	
RREL75	Litigation	NO	YES	N/A		<p>Not available</p> <p>While there are some relevant CAS fields, they do not meet the ESMA definition</p>	
RREL76	Recourse	YES	YES	"ND3"		Always "ND3"	ND3
RREL77	Deposit Amount	NO	YES	"ND5"		Always "ND5"	ND5
RREL78	Insurance Or Investment Provider	YES	YES	"ND5"		Always "ND5"	ND5

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL79	Original Lender Name	YES	YES	5	SELLER NAME	CAS 5 in "At-Issuance Data" file NOTE: This field does not account for M&A activity or the sale and purchase of mortgage notes by lenders	
RREL80	Original Lender Legal Entity Identifier	YES	YES	"ND1"		Always "ND1"	ND1
RREL81	Original Lender Establishment Country	YES	YES	"US"		Always "US"	US
RREL82	Originator Name	NO	NO	5	SELLER NAME	CAS 5 in "At-Issuance Data" file NOTE: This field does not account for M&A activity or the sale and purchase of mortgage notes by lenders	
RREL83	Originator Legal Entity Identifier	NO	NO	N/A		Not available	
RREL84	Originator Establishment Country	NO	NO	"US"		Always "US"	US

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
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Collateral-level information section

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREC1	Unique Identifier	NO	NO	See "Input for ESMA" fields		<p>Identical to RREL1.</p> <p>Fannie Mae does not produce a Unique Identifier based on EU guidelines. Users can construe such an ID for a CAS transaction by:</p> <p>In sequential order:</p> <p>a) The reporting entity LEI - B1V7KEBTPIMZEU4LTD58</p> <p>b) The letter N, as the securitisation is non-ABCP</p> <p>c) Four-digit year that the first securities of the securitisation were issued</p> <p>d) A two digit number corresponding to the number order in which securitisations with the same identifier according to items a) to c) of this list</p>	RREL1: B1V7KEBTPIMZEU4LTD58NYYYYXX
RREC2	Underlying Exposure Identifier	NO	NO	2	LOAN IDENTIFIER	<p>Identical to RREL2</p> <p>CAS 2 in "At-Issuance Data" file</p>	CAS 2: 91672351 TO RREL2: 91672351
RREC3	Original Collateral Identifier	NO	NO	N/A		<p>Not available</p> <p>Note that there cannot be a loan secured by more than one property; therefore Original Underlying Exposure Identifier could be used</p>	

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREC4	New Collateral Identifier	NO	NO	N/A		Not available Note that there cannot be a loan secured by more than one property; therefore Original Underlying Exposure Identifier could be used	
RREC5	Collateral Type	NO	NO	"RBLD"		Always "RBLD"	RBLD
RREC6	Geographic Region - Collateral	YES	YES	"USZZZ"		Always "USZZZ"	USZZZ
RREC7	Occupancy Type	YES	YES	30	OCCUPANCY TYPE	- IF CAS 30 is equal to "Investor", then RREC 7 is "TLET" - IF CAS 30 is equal to "Principal", then RREC 7 is "FOWN" - IF CAS 30 is equal to "Second", then RREC 7 is "HOLD"	CAS30: "Principal" TO RREC7: "FOWN"
RREC8	Lien	YES	YES	"1"		Always "1" NOTE: Subject to changes in CAS Reference Pool Eligibility Criteria	1
RREC9	Property Type	NO	YES	28	PROPERTY TYPE	IF CAS 28 in "Ongoing (Monthly) Data" file is: - "Condo", then RREC9 is "RFLT" - "Co-op", then RREC9 is "RFLT" - "PUD", then RREC9 is "OTHR" - "MH", then RREC9 is "OTHR" - "SF", then RREC9 is "RHOS"	CAS 28: "PUD" TO RREC9: "OTHR"
RREC10	Energy Performance Certificate Value	YES	YES	"ND5"		Always "ND5"	ND5
RREC11	Energy Performance Certificate Provider Name	YES	YES	"ND5"		Always "ND5"	ND5
RREC12	Current Loan-To-Value	YES	YES	"ND3"		Always "ND3"	ND3
RREC13	Current Valuation Amount	YES	YES	"ND3"		Always "ND3"	ND3
RREC14	Current Valuation Method	YES	NO	"ND3"		Always "ND3"	ND3
RREC15	Current Valuation Date	YES	YES	"ND3"		Always "ND3"	ND3

ESMA - Field Code	ESMA - Field Name	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	Input for ESMA field and Explanations	Input for ESMA field - Example
RREC16	Original Loan-To-Value	YES	YES	20	ORIGINAL LOAN TO VALUE RATIO (LTV)	CAS 20 in "Ongoing (Monthly) Data" file	CAS 20: 75 TO RREC16: 75
RREC17	Original Valuation Amount	YES	NO	"ND3"		Always "ND3"	ND3
RREC18	Original Valuation Method	YES	NO	"ND3"		Always "ND3"	ND3
RREC19	Original Valuation Date	YES	NO	"ND3"		Always "ND3"	ND3
RREC20	Date Of Sale	YES	YES	53	DISPOSITION DATE	- CAS 53 includes the year and month of the date of sale in the format MM/01/YYYY - Report RREC 20 as YYYY-MM-01 NOTE: The reported DD ("01" in MM/01/YYYY) is the first day of the month in which the event occurred, not the actual date of the event	CAS 53: 06/01/2018 TO RREC20: 2018-06-01
RREC21	Sale Price	NO	YES	59	NET SALES PROCEEDS	The following transformation provides an approximation of RREC21, as CAS 59 is net of applicable selling expenses From "Ongoing (Monthly) Data" file, report RREC21 as "USD" [space] CAS 59	CAS 59: 90000 TO RREC21: USD 90000
RREC22	Collateral Currency	NO	YES	"USD"		Always "USD"	USD
RREC23	Guarantor Type	YES	NO	"NGUA"		Always "NGUA"	NGUA

CAS to ESMA Annex 2 Mapping - Extended
Explanatory Notes:

- This sheet contains the same information as the sheet "CAS to ESMA Annex 2" but includes fields from the ESMA template and Credit Risk Transfer Glossary for ease of reference.

- The table below maps CAS data fields to ESMA data fields where relevant CAS data fields exist.

- The CAS files ("At-Issuance Data" and "Ongoing (Monthly) Data") for each transaction can be accessed via our [Transactions](#) page. For help with the files, see:

[Credit Risk Transfer File Layout](#)

[Credit Risk Transfer Glossary](#)

- In some cases the relevant ESMA field can be populated by a transformation of one or more CAS fields, which is outlined in the column "Input for ESMA field and Explanations".

- Some ESMA fields can be populated based on CAS Reference Pool Eligibility Criteria - these might change going forward and users should check the applicability of the mapping below for individual CAS transactions.

- Note that in selected cases there can be some approximations, specifically for list fields.

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL1	Unique Identifier	{ALPHANUM-28}	The unique identifier assigned by the reporting entity according to Article 11(1) of the Commission Delegated Regulation (EU) .../... [include full reference to the disclosure RTS].	NO	NO	See "Input for ESMA" fields				Fannie Mae does not produce a Unique Identifier based on EU guidelines. Users can construe such an ID for a CAS transaction by: In sequential order: a) The reporting entity LEI - B1V7KEBTPIMZEU4LTD58 b) The letter N, as the securitisation is non-ABCP c) Four-digit year that the first securities of the securitisation were issued d) A two digit number corresponding to the number order in which securitisations with the same identifier according to items a) to c) of this list	RREL1: B1V7KEBTPIMZEU4LTD58NYYYYX X
RREL2	Original Underlying Exposure Identifier	{ALPHANUM-1000}	Unique underlying exposure identifier. The identifier must be different from any external identification number, in order to ensure anonymity of the obligor. The reporting entity shall not amend this unique identifier.	NO	NO	2	LOAN IDENTIFIER	A unique identifier for the mortgage loan	The Loan Identifier does not correspond to other mortgage loan identifiers found in existing Fannie Mae disclosures.	CAS 2 in "At-Issuance Data" file	CAS 2: 91672351 TO RREL2: 91672351
RREL3	New Underlying Exposure Identifier	{ALPHANUM-1000}	If the original identifier in field RREL2 cannot be maintained in this field enter the new identifier here. If there has been no change in the identifier, enter the same identifier as in RREL2. The reporting entity shall not amend this unique identifier.	NO	NO	2	LOAN IDENTIFIER	A unique identifier for the mortgage loan	The Loan Identifier does not correspond to other mortgage loan identifiers found in existing Fannie Mae disclosures.	CAS 2 in latest "Ongoing (Monthly) Data" file	CAS 2: 91672351 TO RREL2: 91672351
RREL4	Original Obligor Identifier	{ALPHANUM-1000}	Original unique obligor identifier. The identifier must be different from any external identification number, in order to ensure anonymity of the obligor. The reporting entity shall not amend this unique identifier.	NO	NO	N/A				Not available Fannie Mae does not provide individual obligor IDs for its reference portfolios given certain legal restrictions as well as the high granularity of the reference portfolios	
RREL5	New Obligor Identifier	{ALPHANUM-1000}	If the original identifier in field RREL4 cannot be maintained in this field enter the new identifier here. If there has been no change in the identifier, enter the same identifier as in RREL4. The reporting entity shall not amend this unique identifier.	NO	NO	N/A				Not available Fannie Mae does not provide individual obligor IDs for its reference portfolios given certain legal restrictions as well as the high granularity of the reference portfolios	
RREL6	Data Cut-Off Date	{DATEFORMAT}	The data cut-off date for this data submission.	NO	NO	3	MONTHLY REPORTING PERIOD	The month and year that pertains to the servicer's cut-off period for mortgage loan information.		- CAS 3 includes the year and month of the relevant monthly reporting period date in the format MMYYYY - Report RREL6 as YYYY-MM-DD, where DD equals last day of the month	CAS 3: 062018 TO RREL6: 2018-06-30
RREL7	Pool Addition Date	{DATEFORMAT}	The date that the underlying exposure was transferred to the SSPE. For all underlying exposures in the pool as at the cut-off date in the first report submitted to the securitisation repository, if this information is not available then enter the later of: (i) the closing date of the securitisation, and (ii) the origination date of the underlying exposure.	NO	YES	See "Input for ESMA" fields				- Populate as the closing date for the relevant CAS transaction. - Report RREL7 as YYYY-MM-DD	CAS : 062018 TO RREL7: 2018-06-30

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL8	Date Of Repurchase	{DATEFORMAT}	Date on which the underlying exposure was repurchased from the pool.	NO	YES	44	ZERO BALANCE CODE	A code indicating the reason the loan's balance was reduced to zero or experienced a credit event.	<ul style="list-style-type: none"> •01 = Prepaid or Matured •02 = Third Party Sale •03 = Short Sale •06 = Repurchased •09 = Deed-in-Lieu, REO Disposition •15 = Note Sale •16 = Reperforming Loan Sale •96 = Removal (non-credit event) •97 = Delinquency (credit event due to D180) •98 = Other Credit Event Applies to all CAS deals prior to and including 2015-C03:	IF CAS 44 is equal to "06" in latest "Ongoing (Monthly) Data" files: IF TRUE: - In the first "Ongoing Monthly Data" file in which CAS 44 is "06" - CAS 82 includes the year and month of the repurchase in the format MMYYYY - Report RREL8 as YYYY-MM-DD, where DD equals last day of the month of the relevant reporting period, not actual date of event IF FALSE: - Report RREL8 as "ND5"	CAS 82: 062018 TO RREL8: 2018-06-30
RREL9	Redemption Date	{DATEFORMAT}	Date on which account redeemed or (for defaulted underlying exposures) the date that the recovery process was completed.	NO	YES	44 and 45	ZERO BALANCE CODE ZERO BALANCE EFFECTIVE DATE	A code indicating the reason the loan's balance was reduced to zero or experienced a credit event. Date on which the mortgage loan balance was reduced to zero	<ul style="list-style-type: none"> •01 = Prepaid or Matured •02 = Third Party Sale •03 = Short Sale •06 = Repurchased •09 = Deed-in-Lieu, REO Disposition •15 = Note Sale •16 = Reperforming Loan Sale •96 = Removal (non-credit event) •97 = Delinquency (credit event due to D180) •98 = Other Credit Event Applies to all CAS deals prior to and including 2015-C03:	IF CAS 44 is NOT BLANK in latest "Ongoing (Monthly) Data" files: IF TRUE: - In the first "Ongoing Monthly Data" file in which CAS 44 is NOT BLANK - CAS 45 includes the year and month of the redemption in the format MMYYYY - Report RREL9 as YYYY-MM-DD, where DD equals last day of the month of the relevant reporting period, not actual date of event IF FALSE: - Report RREL 9 as "ND5"	CAS 45: 062018 TO RREL9 : 2018-06-01
RREL10	Resident	{Y/N}	Is the primary obligor a resident of the country in which the collateral and underlying exposure reside?	YES	NO	"ND3"				Always "ND3" NOTE: There may be selected cases where borrowers are non-US residents	ND3
RREL11	Geographic Region - Obligor	{NUTS}	The geographic region (NUTS3 classification) where the obligor is located. Where no NUTS3 classification has been produced by Eurostat (e.g. a non-EU jurisdiction), enter the two-digit country code in {COUNTRYCODE_2} format followed by 'ZZZ'.	YES	NO	"ND3"				Always "ND3" NOTE: There may be selected cases where borrowers are non-US residents	ND3
RREL12	Geographic Region Classification	{YEAR}	Enter the year of the NUTS3 classification used for the Geographic Region fields, e.g. 2013 for NUTS3 2013. All geographic region fields must use the same classification consistently for each underlying exposure and across all underlying exposures in the data submission. For example, reporting using NUTS3 2006 for some geographic fields relating to a given underlying exposure and reporting using NUTS3 2013 for other fields relating to the same exposure is not allowed. In the same way, reporting geographic region fields using NUTS3 2006 for some underlying exposures and reporting geographic region fields using NUTS3 2013 for other underlying exposures in the same data submission is not allowed.	YES	NO	"ND1"				Always "ND1" NOTE: Not applicable for non-EU jurisdictions	ND1
RREL13	Employment Status	{LIST}	Employment status of the primary obligor: Employed - Private Sector (EMRS) Employed - Public Sector (EMBL) Employed - Sector Unknown (EMUK) Unemployed (UNEM) Self-employed (SFEM) No Employment, Obligor is Legal Entity (NOEM) Student (STNT) Pensioner (PNNR) Other (OTHR)	YES	NO	"ND3"				Always "ND3"	ND3

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL14	Credit Impaired Obligor	{Y/N}	<p>Confirm that, pursuant to Article 20(11) of Regulation (EU) 2017/2402, at the time that this underlying exposure was selected for transfer to the SSPE, the exposure was neither in default within the meaning of Article 178(1) of Regulation (EU) No 575/2013 nor constituted an exposure to a credit-impaired debtor or guarantor, who, to the best of the originator's or original lender's knowledge:</p> <p>(a) has been declared insolvent or had a court grant his creditors a final non-appealable right of enforcement or material damages as a result of a missed payment within three years prior to the date of origination or has undergone a debt restructuring process with regard to his non-performing exposures within three years prior to the date of transfer or assignment of the underlying exposures to the SSPE, except if:</p> <p>(i) a restructured underlying exposure has not presented new arrears since the date of the restructuring, which must have taken place at least one year prior to the date of transfer or assignment of the underlying exposures to the SSPE; and</p> <p>(ii) the information provided by the originator, sponsor and SSPE in accordance with points (a) and (e)(i) of the first subparagraph of Article 7(1) explicitly sets out the proportion of restructured underlying exposures, the time and details of the restructuring as well as their performance since the date of the restructuring;</p> <p>(b) was, at the time of origination, where applicable, on a public credit registry of persons with adverse credit history or, where there is no such public credit registry, another credit registry that is available to the originator or original lender; or</p>	NO	YES	"ND5"				Always "ND5"	ND5
RREL15	Customer Type	{LIST}	<p>Customer type at origination:</p> <p>New customer and not an employee/affiliated with the originator's group (CNEO)</p> <p>New customer and an employee/affiliated with the originator's group (CEMO)</p> <p>New customer and employee/affiliation not recorded (CNRO)</p> <p>Existing customer and not an employee/affiliated with the originator's group (ENEO)</p> <p>Existing customer and an employee/affiliated with the originator's group (EEMO)</p> <p>Existing customer and employee/affiliation not recorded (ENRO)</p> <p>Other (OTHR)</p>	YES	NO	"ND3"				Always "ND3"	ND3
RREL16	Primary Income	{MONETARY}	<p>Primary obligor annual income used to underwrite the underlying exposure at the time of origination. Where the primary obligor is a legal person/entity, enter in that obligor's annual revenue.</p> <p>Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.</p>	YES	NO	"ND3"				Always "ND3"	ND3

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL17	Primary Income Type	{LIST}	Indicate what income in RREL16 is displayed: Gross annual income (GRAN) Net annual income (net of tax and social security) (NITS) Net annual income (net of tax only) (NITX) Net annual income (net of social security only) (NTIN) Estimated net annual income (net of tax and social security) (ENIS) Estimated net annual income (net of tax only) (EITX) Estimated net annual income (net of social security only) (EISS) Disposable Income (DSPL) Borrower is legal entity (CORP) Other (OTHR)	YES	NO	"ND3"				Always "ND3"	ND3
RREL18	Primary Income Currency	{CURRENCYCODE_3}	Currency in which the primary obligor's income or revenue is paid.	YES	NO	"ND3"				Always "ND3"	ND3
RREL19	Primary Income Verification	{LIST}	Primary Income Verification: Self-certified no Checks (SCRT) Self-certified with Affordability Confirmation (SCNF) Verified (VRFD) Non-Verified Income or Fast Track (NVRF) Credit Bureau Information or Scoring (SCRG) Other (OTHR)	YES	NO	"ND3"				Always "ND3"	ND3
RREL20	Secondary Income	{MONETARY}	Secondary obligor annual income used to underwrite the underlying exposure at the time of origination. Where the secondary obligor is a legal person/entity, enter in that obligor's annual revenue. When there are more than two obligors in this underlying exposure, indicate total annual combined income across all obligors in this field. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES	"ND3"				Always "ND3"	ND3
RREL21	Secondary Income Verification	{LIST}	Income verification for secondary income: Self-certified no Checks (SCRT) Self-certified with Affordability Confirmation (SCNF) Verified (VRFD) Non-Verified Income or Fast Track (NVRF) Credit Bureau Information or Scoring (SCRG) Other (OTHR)	YES	YES	"ND3"				Always "ND3"	ND3
RREL22	Special Scheme	{ALPHANUM-10000}	If the underlying exposure is governed by any special public sector arrangement, enter the full name (without abbreviations) of the arrangement here.	YES	YES	"ND5"				Always "ND5"	ND5
RREL23	Origination Date	{DATEFORMAT}	Date of original underlying exposure advance.	YES	NO	14	ORIGINATION DATE	The date of the note.		- CAS 14 includes the year and month of the relevant origination date in the format MMYYYY - Report RREL23 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event	CAS 14: 062018 TO RREL23: 2018-06-30
RREL24	Maturity Date	{DATEFORMAT}	The date of maturity of the underlying exposure or expiry of the lease.	NO	YES	19	MATURITY DATE	The month and year in which a mortgage loan is scheduled to be paid in full as defined in the mortgage loan documents.	For a mortgage loan that has been modified, the maturity date will be updated to reflect the modified terms, if applicable.	- CAS 19 includes the year and month of the relevant maturity date in the format MMYYYY - Report RREL24 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event	CAS 19: 062029 TO RREL24: 2029-06-30
RREL25	Original Term	{INTEGER-9999}	Original contractual term (number of months) at the origination date.	YES	YES	13	ORIGINAL LOAN TERM	The number of months in which regularly scheduled borrower payments are due under the terms of the related mortgage documents.		CAS 13 in latest "Ongoing (Monthly) Data" file	CAS 13: 360 TO RREL25: 360

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL26	Origination Channel	{LIST}	Origination channel of the underlying exposure: Office or Branch Network (BRAN) Central or Direct (DRCT) Broker (BROK) Internet (WEBI) Package (TPAC) Third Party Channel but Underwriting Performed Entirely by the Originator (TPTC) Other (OTHR)	YES	YES	4	ORIGINATION CHANNEL	Channel refers to the three options listed below: • Retail (R) • Correspondent (C) • Broker (B)		- IF CAS 4 is "R", then RREL26 is "BRAN" - IF CAS 4 is "C", then RREL26 is "TPTC" - IF CAS 4 is "B", then RREL26 is "BROK"	CAS 4: B TO RREL26: "BROK"
RREL27	Purpose	{LIST}	The reason for the obligor taking out the loan: Purchase (PURC) Remortgage (RMRT) Renovation (RENV) Equity Release (EQRE) Construction (CSTR) Debt Consolidation (DCON) Remortgage with Equity Release (RMEQ) Business Funding (BSFN) Combination Mortgage (CMRT) Investment Mortgage (IMRT) Right to Buy (RGBY) Government Sponsored Loan (GSPL) Other (OTHR)	YES	NO	27	LOAN PURPOSE	An indicator that denotes whether the mortgage loan is either a refinance mortgage or a purchase money mortgage. Purpose may be the purchase of a new property or refinance of an existing lien (with cash out or with no cash out).	• Cash-out Refinance • No Cash-out Refinance • Purchase • Refinance-Not specified	- IF CAS 27 is "CASH OUT REFINANCE", then RREL27 is "RMEQ" - IF CAS 27 is "NO CASH-OUT REFINANCE", then RREL27 is "RMRT" - IF CAS 27 is "PURCHASE", then RREL27 is "PURC" - OTHERWISE, RREL27 is "RMRT"	CAS 27: PURCHASE TO RREL27: "PURC"
RREL28	Currency Denomination	{CURRENCYCODE_3}	The underlying exposure currency denomination.	NO	NO	"USD"				Always "USD"	USD
RREL29	Original Principal Balance	{MONETARY}	Original underlying exposure balance (inclusive of fees). This is referring to the balance of the underlying exposure at the underlying exposure origination date, not the date of the underlying exposure's sale to the SSPE or the closing date of the securitisation. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES	10	ORIGINAL UPB	The original amount of the mortgage loan as indicated by the mortgage documents.	Values disclosed will be rounded	Report RREL29 as "USD" [space] CAS 10 in latest "Ongoing (Monthly) Data" file	CAS 10: 80000.50 TO RREL29: USD 80000.50
RREL30	Current Principal Balance	{MONETARY}	Amount of underlying exposure outstanding as of the data cut-off date. This shall include any amounts that are secured by the mortgage and will be classed as principal in the securitisation. For example if fees have been added to the underlying exposure balance and are part of the principal in the securitisation these shall be added. It shall exclude any interest arrears or penalty amounts. Current balance shall include the principal arrears. However, savings amount shall be deducted if a subparticipation exists. (i.e. underlying exposure balance = underlying exposure +/- subparticipation; +/- 0 if no subparticipation). Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	12	CURRENT ACTUAL UPB	The current actual outstanding unpaid principal balance of a mortgage loan as it contributes to the current outstanding balance of the Reference Pool.	For a mortgage loan that has been modified, the current actual UPB will be updated to reflect the modified terms, including principal forgiveness, if applicable. The current actual UPB will be reduced to zero in the month in which the loan is removed from the Reference Pool. Due to borrower privacy considerations, this value will be rounded to the nearest \$1,000 for the first six months of the life of the loan	Report RREL 30 as "USD" [space] CAS 12 in latest "Ongoing (Monthly) Data" file	CAS 12: 45000.23 TO RREL30: USD 45000.23
RREL31	Prior Principal Balances	{MONETARY}	Total balances ranking prior to this underlying exposure (including those held with other lenders). If there are no prior balances, enter 0. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES	"USD 0.00"				Always "USD 0.00" NOTE: All CAS mortgages are first-lien according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	USD 0.00

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL32	Pari Passu Underlying Exposures	{MONETARY}	Total value of underlying exposures to this obligor ranking pari passu with this underlying exposure (regardless of whether or not they are included in this pool). If there are no balances ranking pari passu, enter 0. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES	"USD 0.00"				Always "USD 0.00" There are no cases of pari-passu loans	USD 0.00
RREL33	Total Credit Limit	{MONETARY}	For underlying exposures with flexible re-draw facilities (including revolving characteristics) or where the maximum underlying exposure amount hasn't been withdrawn in full – the maximum underlying exposure amount that could potentially be outstanding. This field shall only be populated for underlying exposures that have flexible or further drawing characteristics. This is not intended to capture instances where the obligor may renegotiate an increased underlying exposure balance but rather where there is currently the contractual ability for the obligor to do this and for the lender to provide the additional funding. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are never "flexible" according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL34	Purchase Price	{PERCENTAGE}	Enter in the price, relative to par, at which the underlying exposure was purchased by the SSPE. Enter in 100 if no discounting was applied.	NO	YES	"ND5"				Always "ND5" NOTE: Not applicable to synthetic securitizations	ND5
RREL35	Amortisation Type	{LIST}	Type of amortisation of the underlying exposure including principal and interest. French - i.e. Amortisation in which the total amount — principal plus interest — repaid in each instalment is the same. (FRXX) German - i.e. Amortisation in which the first instalment is interest-only and the remaining instalments are constant, including capital amortisation and interest. (DEXX) Fixed amortisation schedule - i.e. Amortisation in which the principal amount repaid in each instalment is the same. (FIXE) Bullet - i.e. Amortisation in which the full principal amount is repaid in the last instalment. (BLLT) Other (OTHR)	YES	NO	102	FORBEARANCE INDICATOR	An indicator that denotes that the mortgage loan has been granted, as per the terms of Fannie Mae's Servicing Guide, a forbearance period as a result of a borrower experiencing a temporary hardship, such as a natural disaster, death of a borrower, or for other similar such eligible life event.		- IF CAS 102 in "Ongoing (Monthly) Data" file is "Y", then RREL35 is "BLLT" - OTHERWISE, RREL35 is "FRXX" NOTE: All loans are French amortisation except in forbearance cases. Subject to changes in CAS Reference Pool Eligibility Criteria.	CAS 102: Null TO RREL35: FRXX
RREL36	Principal Grace Period End Date	{DATEFORMAT}	If applicable as at the data cut-off date, indicate the principal grace period end date.	NO	YES	37 and 38	INTEREST ONLY INDICATOR FIRST PRINCIPAL AND INTEREST PAYMENT DATE FOR INTEREST ONLY PRODUCTS	An indicator that denotes if the mortgage loan is an interest only loan, in which during an initial period of time, no scheduled principal payment is due on the mortgage loan, and the borrower's required monthly payment is set at an amount sufficient to pay only the interest due. For an interest-only mortgage loan, the due date of the first monthly scheduled amortizing principal and interest (P&I) payment.		IF CAS 37 is "Y": - CAS 38 includes the year and month of the Principal Grace Period End Date in the format MMYYYY. - Report RREL36 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event OTHERWISE, RREL36 is "ND5"	CAS 37: Y CAS 38: 062018 TO RREL36: 2018-06-30
RREL37	Scheduled Principal Payment Frequency	{LIST}	Frequency of principal payments due, i.e. period between payments: Monthly (MNTH) Quarterly (QTR) Semi Annual (SEMI) Annual (YEAR) Other (OTHR)	NO	YES	"MNTH"				Always "MNTH"	MNTH

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL38	Scheduled Interest Payment Frequency	{LIST}	Frequency of interest payments due, i.e. period between payments: Monthly (MNTH) Quarterly (QTR) Semi Annual (SEMI) Annual (YEAR) Other (OTHR)	NO	YES	"MNTH"				Always "MNTH"	MNTH
RREL39	Payment Due	{MONETARY}	This is the next contractual payment due by the obligor according to the payment frequency of the underlying exposure. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	48	SCHEDULED PRINCIPAL CURRENT	The minimum principal payment the borrower is obligated to pay for the corresponding reporting period, based on the terms provided in the related mortgage loan documents, provided that the payment is collected from the borrower by the servicer and reported to Fannie Mae for the corresponding reporting period.		Report RREL 39 as "USD" [space] CAS 48 in latest "Ongoing (Monthly) Data" file	CAS 48: 1000 TO RREL39: USD 1000
RREL40	Debt To Income Ratio	{PERCENTAGE}	Debt defined as the amount of underlying exposure outstanding as of data cut-off date, this shall include any amounts that are secured by the mortgage and will be classed as principal in the securitisation. For example if fees have been added to the underlying exposure balance and are part of the principal in the securitisation these shall be added. Excluding any interest arrearages or penalty amounts. Income defined as combined income, sum of primary and secondary income fields (field numbers RREL16 and RREL20) and any other income.	YES	YES	"ND3"				Always "ND3" NOTE: Fannie Mae provides CAS 23, a separate measure of a debt-to-income ratio to give an indication of affordability	ND3
RREL41	Balloon Amount	{MONETARY}	Total amount of (securitised) principal repayment to be paid at the maturity date of the underlying exposure. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES	"ND5"				Always "ND5" NOTE: CAS mortgages always fully amortize according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL42	Interest Rate Type	{LIST}	Interest rate type: Floating rate underlying exposure (for life) (FLIF) Floating rate underlying exposure linked to one index that will revert to another index in the future (FINX) Fixed rate underlying exposure (for life) (FXRL) Fixed with future periodic resets (FXPR) Fixed rate underlying exposure with compulsory future switch to floating (FLCF) Floating rate underlying exposure with floor (FLFL) Floating rate underlying exposure with cap (CAPP) Floating rate underlying exposure with both floor and cap (FLCA) Discount (DISC) Switch Optionality (SWIC) Obligor Swapped (OBLS) Modular (MODE) Other (OTHR)	NO	YES	"FXRL"				Always "FXRL" NOTE: CAS mortgages are always fixed-rate for life mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	FXRL
RREL43	Current Interest Rate	{PERCENTAGE}	Gross rate per annum used to calculate the current period scheduled interest on the securitised underlying exposure. Rates calculated on a period-by-period basis must be annualised.	NO	YES	9	CURRENT INTEREST RATE	The rate of interest in effect for the periodic installment due.	For a mortgage loan that has been modified, this value will be updated to reflect the modified terms, if applicable.	CAS 9 in latest "Ongoing (Monthly) Data" file	CAS 9: 4.75 TO RREL43: 4.75

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL44	Current Interest Rate Index	{LIST}	The base reference interest index currently applicable (the reference rate off which the interest rate is set): MuniAAA (MAAA) FutureSWAP (FUSW) LIBID (LIBI) LIBOR (LIBO) SWAP (SWAP) Treasury (TREA) Euribor (EURI) Pfandbriefe (PFAN) EONIA (EONA) EONIASwaps (EONS) EURODOLLAR (EUUS) EuroSwiss (EUCH) TIBOR (TIBO) ISDAFIX (ISDA) GCFRepo (GCFR) STIBOR (STBO) BBSW (BBSW) JIBAR (JIBA) BUBOR (BUBO) CDOR (CDOR) CIBOR (CIBO) MOSPRIM (MOSP) NIBOR (NIBO) PRIBOR (PRBO) TELBOR (TLBO) WIBOR (WIBO) Bank of England Base Rate (BOER) European Central Bank Base Rate (ECBR) Lender's Own Rate (LOR)	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL45	Current Interest Rate Index Tenor	{LIST}	Tenor of the current interest rate index: Overnight (OVNG) IntraDay (INDA) 1 day (DAIL) 1 week (WEEK) 2 week (TOWK) 1 month (MNTH) 2 month (TOMN) 3 month (QUTR) 4 month (FOMN) 6 month (SEMI) 12 month (YEAR) On Demand (ONDE) Other (OTHR)	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL46	Current Interest Rate Margin	{PERCENTAGE}	Current interest rate margin of the floating-rate underlying exposure over (or under, in which case input as a negative) the index rate.	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL47	Interest Rate Reset Interval	{INTEGER-9999}	Number of months between each interest rate reset date on the underlying exposure.	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL48	Interest Rate Cap	{PERCENTAGE}	Maximum rate that the obligor must pay on a floating rate underlying exposure as required under the terms of the underlying exposure agreement.	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL49	Interest Rate Floor	{PERCENTAGE}	Minimum rate that the obligor must pay on a floating rate underlying exposure as required under the terms of the underlying exposure agreement.	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL50	Revision Margin 1	{PERCENTAGE}	The margin for the underlying exposure at the 1st revision date. This refers only to contractual changes in the margin (e.g. from +50bps to +100bps) or the underlying index (e.g. from 3M EUIBOR to 1M EURIBOR) used for the interest calculation. This field does not refer to the date that the index is reset periodically (e.g. resetting 1M EURIBOR each month). The full revised margin must be entered in this field, not the change in the margin.	YES	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL51	Interest Revision Date 1	{DATEFORMAT}	Date interest rate next changes (e.g. discount margin changes, fixed period ends, underlying exposure re-fixed etc. this is not the next LIBOR/EURIBOR/index reset date).	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL52	Revision Margin 2	{PERCENTAGE}	The margin for the underlying exposure at the 2nd revision date. This refers only to contractual changes in the margin (e.g. from +50bps to +100bps) or the underlying index (e.g. from 3M EUIBOR to 1M EURIBOR) used for the interest calculation. This field does not refer to the date that the index is reset periodically (e.g. resetting 1M EURIBOR each month). The full revised margin must be entered in this field, not the change in the margin.	YES	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL53	Interest Revision Date 2	{DATEFORMAT}	Date of 2nd interest rate change (e.g. discount margin changes, fixed period ends, underlying exposure re-fixed etc. this is not the next LIBOR/EURIBOR/index reset date).	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL54	Revision Margin 3	{PERCENTAGE}	The margin for the underlying exposure at the 3rd revision date. This refers only to contractual changes in the margin (e.g. from +50bps to +100bps) or the underlying index (e.g. from 3M EUIBOR to 1M EURIBOR) used for the interest calculation. This field does not refer to the date that the index is reset periodically (e.g. resetting 1M EURIBOR each month). The full revised margin must be entered in this field, not the change in the margin.	YES	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL55	Interest Revision Date 3	{DATEFORMAT}	Date of 3rd interest rate change (e.g. discount margin changes, fixed period ends, underlying exposure re-fixed etc. this is not the next LIBOR/EURIBOR/index reset date).	NO	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL56	Revised Interest Rate Index	{LIST}	Next interest rate index. MuniAAA (MAAA) FutureSWAP (FUSW) LIBID (LIBI) LIBOR (LIBO) SWAP (SWAP) Treasury (TREA) Euribor (EURI) Pfandbriefe (PFAN) EONIA (EONA) EONIASwaps (EONS) EURODOLLAR (EUUS) EuroSwiss (EUCH) TIBOR (TIBO) ISDAFIX (ISDA) GCFRepo (GCFR) STIBOR (STBO) BBSW (BBSW) JIBAR (JIBA) BUBOR (BUBO) CDOR (CDOR) CIBOR (CIBO) MOSPRIM (MOSP) NIBOR (NIBO) PRIBOR (PRBO) TELBOR (TLBO) WIBOR (WIBO) Bank of England Base Rate (BOER) European Central Bank Base Rate (ECBR) Lender's Own Rate (LDOR) Other (OTHR)	YES	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL57	Revised Interest Rate Index Tenor	{LIST}	Tenor of the next interest rate index: Overnight (OVNG) IntraDay (INDA) 1 day (DAIL) 1 week (WEEK) 2 week (TOWK) 1 month (MNTH) 2 month (TOMN) 3 month (QUTR) 4 month (FOMN) 6 month (SEMI) 12 month (YEAR) On Demand (ONDE) Other (OTHR)	YES	YES	"ND5"				Always "ND5" NOTE: CAS mortgages are always fixed-rate mortgages according to CAS Reference Pool Eligibility Criteria, but criteria is subject to change	ND5
RREL58	Number Of Payments Before Securitisation	{INTEGER-9999}	Enter the number of payments made prior to the exposure being transferred to the securitisation.	YES	NO	15	FIRST PAYMENT DATE	The date of the first scheduled mortgage loan payment to be made by the borrower under the terms of the mortgage loan documents.		Difference between CAS Closing Date and CAS 15 of latest "Ongoing (Monthly) Data" file, in months (always rounded down)	CAS Closing Date "110718" minus CAS 15 "092018" (equals to 2 months) TO RREL58: 2
RREL59	Percentage Of Prepayments Allowed Per Year	{PERCENTAGE}	Percentage amount of pre-payments allowed under the product per year. This is for underlying exposures that allow a certain threshold of pre-payments (i.e. 10%) before charges are incurred.	YES	YES	"100"				Always "100"	100
RREL60	Prepayment Lock-Out End Date	{DATEFORMAT}	The date after which the lender allows prepayment of the underlying exposure.	YES	YES	"ND5"				Always "ND5" NOTE: Not relevant as borrower can always prepay	ND5

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL61	Prepayment Fee	{MONETARY}	Amount collected from the obligor as the fee/penalty due for making prepayments as required under the terms of the underlying exposure agreement. This is not intended to include any amounts paid as a "break cost" to make up interest payments up to the underlying exposure Payment Date. This includes amounts collected that have not been securitised. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	"USD 0"				Always "USD 0"	USD 0
RREL62	Prepayment Fee End Date	{DATEFORMAT}	The date after which the lender allows prepayment of the underlying exposure without requirement for a prepayment fee to be paid.	YES	YES	"ND5"				Always "ND5"	ND5
RREL63	Prepayment Date	{DATEFORMAT}	The latest date on which an unscheduled principal payment was received.	YES	YES	"ND3"				Always "ND3"	ND3
RREL64	Cumulative Prepayments	{MONETARY}	Total prepayments collected as at the data cut-off date (prepayments defined as unscheduled principal payment) since the underlying exposure origination date. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES	"ND3"				Always "ND3"	ND3
RREL65	Date Of Restructuring	{DATEFORMAT}	Enter the date at which the underlying exposure has been restructured. Restructuring refers to any changes made to the contractual terms of the underlying exposure agreement due to forbearance, including payment holidays, arrears capitalisation, change of interest rate basis or margins, fees, penalties, maturity and/or other generally-accepted measures of restructuring under forbearance. In the event of multiple dates, all dates must be provided according to the XML schema.	YES	YES	3 and 42	MONTHLY REPORTING PERIOD MODIFICATION FLAG	The month and year that pertains to the servicer's cut-off period for mortgage loan information. An indicator that denotes if the mortgage loan has been modified.		IF CAS 42 is "Y" in latest "Ongoing (Monthly) Data" files, report as: a) In the earliest "Ongoing (Monthly) Data" file in which CAS 42 is "Y" b) CAS 3 includes the year and month of the relevant monthly reporting period date in the format MMYYYY c) Report RREL65 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event OTHERWISE, RREL65 is "ND5"	CAS 42: Y CAS 3: 062018 TO RREL65: 2018-06-30
RREL66	Date Last In Arrears	{DATEFORMAT}	Date the obligor was last in arrears.	YES	YES	3 and 14 and 41	MONTHLY REPORTING PERIOD LOAN PAYMENT HISTORY ORIGINATION DATE	The month and year that pertains to the servicer's cut-off period for mortgage loan information. The coded string of values that describes the payment performance of the loan over the most recent 24 months. The most recent month is located to the right. The date of the note.	For mortgage loans removed from the reference pool, this field will be blank. • 00 = Current • 01 = 30-59 Days • 02 = 60-89 Days • 03 = 90-119 Days • 04 = 120-149 Days • 05 = 150-179 Days • 06 = 180-209 Days, etc. • XX = Unknown	- IF last two digits of CAS41 are NOT equal to "00", then report RREL66 as CAS3 - IF any previous digits of CAS41 are NOT equal to "00", then report RREL66 as CAS3 of that CAS41 period - OTHERWISE, IF (CAS3-CAS14)/30 <= 24, report RREL66 as "ND5" - OTHERWISE, take the closest report older than 24m and restart the routine to check for potential dates older than 24 months - CAS 3 includes the year and month of the relevant monthly reporting period date in the format MMYYYY - Report RREL 66 as YYYY-MM-DD, where DD equals last day of the month of the relevant period, not actual date of event	CAS 41: XXXX01 CAS3: 062018 TO RREL66: 2018-06-30
RREL67	Arrears Balance	{MONETARY}	Current balance of arrears, which is defined as: Total payments due to date PLUS any amounts capitalised PLUS any fees applied to the account LESS total payments received to date. If no arrears then enter 0. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO	N/A				Not available	
RREL68	Number Of Days In Arrears	{INTEGER-9999}	Number of days this underlying exposure is in arrears (either interest or principal and, if different, the higher number of the two) as at the data cut-off date.	NO	NO	40	CURRENT LOAN DELINQUENCY STATUS	The number of months the obligor is delinquent as determined by the governing mortgage documents		The Number of Days in Arrears is not available. Fannie Mae reports the number of months the obligor is delinquent Report RREL68 as CAS 40 * 30	CAS 40: 3 TO RREL68: 90

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL69	Account Status	{LIST}	<p>Current status of the underlying exposure that has been securitised:</p> <p>Performing (PERF)</p> <p>Restructured - No Arrears (RNAR)</p> <p>Restructured - Arrears (RARR)</p> <p>Defaulted according to Article 178 of Regulation (EU) No 575/2013 (DFLT)</p> <p>Not defaulted according to Article 178 of Regulation (EU) No 575/2013 but classified as defaulted due to another definition of default being met (NDFT)</p> <p>Defaulted both according to Article 178 of Regulation (EU) No 575/2013 and according to another definition of default being met (DTCR)</p> <p>Defaulted only under another definition of default being met (DADB)</p> <p>Arrears (ARRE)</p> <p>Repurchased by Seller – Breach of Representations and Warranties (REBR)</p> <p>Repurchased by Seller – Defaulted (REDF)</p> <p>Repurchased by Seller – Restructured (RERE)</p> <p>Repurchased by Seller – Special Servicing (RESS)</p> <p>Repurchased by Seller – Other Reason (REOT)</p> <p>Redeemed (RDMD)</p> <p>Other (OTHR)</p> <p>Restructuring refers to any changes made to the contractual terms of the underlying exposure agreement due to forbearance, including payment holidays, arrears capitalisation, change of interest rate basis or margins, fees, penalties, maturity, and/or other generally-accepted measures of restructuring under forbearance.</p>	NO	NO	41 and 42 and 44 and 52	<p>LOAN PAYMENT HISTORY</p> <p>MODIFICATION FLAG</p> <p>ZERO BALANCE CODE</p> <p>FORECLOSURE DATE</p>	<p>The coded string of values that describes the payment performance of the loan over the most recent 24 months. The most recent month is located to the right.</p> <p>An indicator that denotes if the mortgage loan has been modified.</p> <p>A code indicating the reason the loan's balance was reduced to zero or experienced a credit event.</p> <p>The date on which the completion of the legal action of foreclosure occurred.</p>	<p>For mortgage loans removed from the reference pool, this field will be blank.</p> <ul style="list-style-type: none"> • 00 = Current • 01 = 30–59 Days • 02 = 60–89 Days • 03 = 90–119 Days • 04 = 120-149 Days • 05 = 150-179 Days • 06 = 180-209 Days, etc. • XX = Unknown <p>The Modification Flag will be set to "Y" once a mortgage loan has been modified. Given the various mortgage loan modification programs available to borrowers, a mortgage loan could be modified more than once. Although the Modification Flag is already set to "Y" from the first modification, changes related to a subsequent modification will be reflected in the data.</p> <ul style="list-style-type: none"> • Y = Yes • N = No <ul style="list-style-type: none"> •01 = Prepaid or Matured •02 = Third Party Sale •03 = Short Sale 	<p>In "Ongoing (Monthly) Data" File:</p> <ul style="list-style-type: none"> - IF CAS 52 is NOT "BLANK", then RREL69 is "DADB" - IF CAS 44 is "06", then RREL69 is "REOT" - IF CAS 44 is "01" OR "02" OR "03" OR "09" OR "15" OR "16" OR "96", then RREL69: "RDMD" - IF CAS 42 is "Y" AND two right-most digits of CAS 41 are NOT "00", then RREL69 is "RARR" - IF CAS 42 is "Y" AND two right-most digits of CAS 41 are "00", then RREL69 is "RNAR" - IF two right-most digits of CAS 41 are NOT "00", then RREL69 is "ARRE" - OTHERWISE, RREL69 is "PERF" 	<p>CAS 52: blank or null</p> <p>CAS 44: blank or null</p> <p>CAS 42: "Y"</p> <p>CAS 41: XXX00</p> <p>TO</p> <p>RREL69: "RNAR"</p>
RREL70	Reason for Default or Foreclosure	{LIST}	<p>If the underlying exposure is in default as per Article 178 of Regulation (EU) No 575/2013, select the appropriate reason:</p> <p>In default because the debtor is unlikely to pay, in accordance with Article 178 of Regulation (EU) No 575/2013. (UPXX)</p> <p>In default because any debt is more than 90/180 days past due, in accordance with Article 178 of Regulation (EU) No 575/2013. (PDXX)</p> <p>In default both because it is considered that the debtor is unlikely to pay and because any debt is more than 90/180 days past due, in accordance with Article 178 of Regulation (EU) No 575/2013. (UPPD)</p>	YES	YES	"ND5"				Always "ND5"	ND5

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL71	Default Amount	{MONETARY}	Total gross default amount before the application of sale proceeds and recoveries. If not in default, enter 0. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	12 and 52	CURRENT ACTUAL UPB FORECLOSURE DATE	The current actual outstanding unpaid principal balance of a mortgage loan as it contributes to the current outstanding balance of the Reference Pool. The date on which the completion of the legal action of foreclosure occurred.	For a mortgage loan that has been modified, the current actual UPB will be updated to reflect the modified terms, including principal forgiveness, if applicable. The current actual UPB will be reduced to zero in the month in which the loan is removed from the Reference Pool. Due to borrower privacy considerations, this value will be rounded to the nearest \$1,000 for the first six months of the life of the loan Servicing lenders may refer to this as the liquidation or sale date, not to be confused with the REO sale date. Due to borrower privacy considerations, the day value defaults to "01", regardless of the date on which the actual foreclosure event occurred within the reported month and year.	- IF CAS 52 is NOT BLANK, then RREL71 is "USD" [space] CAS 12 - OTHERWISE, RREL71 is "ND5" CAS 12 stays constant after the Foreclosure Date (CAS 52) until a loss determination is made	CAS 52: 03/01/2018 CAS 12: 12000 TO RREL71: USD 12000
RREL72	Default Date	{DATEFORMAT}	The date of default.	NO	YES	52	FORECLOSURE DATE	The date on which the completion of the legal action of foreclosure occurred.	Servicing lenders may refer to this as the liquidation or sale date, not to be confused with the REO sale date. Due to borrower privacy considerations, the day value defaults to "01", regardless of the date on which the actual foreclosure event occurred within the reported month and year.	From "Ongoing (Monthly) Data" file: - IF CAS 52 is BLANK, then RREL72 is "ND5" - IF CAS 52 is NOT BLANK, CAS 52 includes the year and month of the redemption in the format MM/01/YYYY, so report RREL72 as YYYY-MM-01 NOTE: The reported DD ("01" in MM/01/YYYY) is the first day of the month in which the event occurred, not the actual date of the event	CAS 52: 03/01/2018 TO RREL72: 2018-03-01
RREL73	Allocated Losses	{MONETARY}	The allocated losses to date, net of fees, accrued interest etc. after application of sale proceeds (excluding prepayment charge if subordinate to principal recoveries). Show any gain on sale as a negative number. Should reflect most recent situation as at the data cut-off date, i.e. as recoveries are collected and the work out process progresses. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	76 and 78	CUMULATIVE MODIFICATION LOSS AMOUNT CUMULATIVE CREDIT EVENT NET GAIN OR LOSS	The cumulative loss amount calculated for a mortgage loan resulting from a modification event. The cumulative net realized gain or loss amounts for a mortgage loan resulting from a credit event.	Determination of a modification event is defined in each of the individual CAS offering documents. If the cumulative modification loss amount is not applicable, the value will be zero. Not applicable to CIRT. This field will be populated based on the individual deal claims and reporting timeline after the disclosed Disposition Date of the mortgage loan or the subject property.	Report RREL73 as "USD" [space] CAS 76 + CAS 78 NOTE: Allocated losses as sum of CAS 76 and 78 will include calculation of delinquent interest and costs (net amounts)	CAS 76: 10000 CAS 78: -1000 TO RREL73: USD 9000
RREL74	Cumulative Recoveries	{MONETARY}	Total recoveries (regardless of their source) on the (defaulted/charged-off/etc.) debt, net of costs. Include all sources of recoveries here, not just proceeds from the disposal of any collateral. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	N/A				Not available There are various recovery and cost fields in the CAS loan-level data but the aggregation will be different to the ESMA definition	
RREL75	Litigation	{Y/N}	Flag to indicate litigation proceedings underway (if account has recovered and is no longer being actively litigated this shall be re-set to N).	NO	YES	N/A				Not available While there are some relevant CAS fields, they do not meet the ESMA definition	
RREL76	Recourse	{Y/N}	Is there recourse (full or limited) to the obligor's assets beyond the proceeds of any collateral for this underlying exposure?	YES	YES	"ND3"				Always "ND3"	ND3

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREL77	Deposit Amount	{MONETARY}	The sum of all obligor amounts held by the originator or seller that are potentially off-settable against the underlying exposure balance, excluding the benefit of any national deposit compensation scheme. To prevent double-counting, this shall be capped at the lower of (1) the deposit amount, and (2) the maximum potential off-settable amount at the obligor-level (i.e. not underlying exposure-level) within the pool. Use the same currency denomination as that used for this underlying exposure. If an obligor has more than one underlying exposure outstanding in the pool, then this field shall be completed for each underlying exposure, and it is up to the discretion of the reporting entity to decide to allocate the deposit amount across each of the underlying exposure, subject to the above-mentioned cap and so long as the total entries for this field across the multiple underlying exposures adds up to the accurate amount. For example, if Obligor A has deposit balance of €100, and two underlying exposures outstanding in the pool of: underlying exposure 1 - €60 and underlying exposure 2 - €75. This field could be completed as either underlying exposure 1 - €60 and underlying exposure 2 - €40, or underlying exposure 1 - €25 and underlying exposure 2 - €75 (i.e. the relative entries for this field in each underlying exposure is capped at €60 for underlying exposure 1 and at €75 for underlying exposure 2 and the sum of the values across underlying exposure 1 and underlying exposure 2 must equal €100). Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format	NO	YES	"ND5"				Always "ND5"	ND5
RREL78	Insurance Or Investment Provider	{ALPHANUM-100}	Name of the insurance or investment provider (i.e. for life insurance or investment underlying exposures).	YES	YES	"ND5"				Always "ND5"	ND5
RREL79	Original Lender Name	{ALPHANUM-100}	Give the full legal name of the original lender. Where a Legal Entity Identifier (LEI) is available in the Global Legal Entity Foundation (GLEIF) database, the name entered shall match the name associated with the LEI.	YES	YES	5	SELLER NAME	The name of the entity that delivered the mortgage loan to Fannie Mae.	For sellers whose combined loans' contribution to the At Issuance UPB represents less than 1% of the total At Issuance reference pool UPB, the file will reflect "Other".	CAS 5 in "At-Issuance Data" file NOTE: This field does not account for M&A activity or the sale and purchase of mortgage notes by lenders	
RREL80	Original Lender Legal Entity Identifier	{LEI}	Provide the Legal Entity Identifier (as specified in the Global Legal Entity Foundation (GLEIF) database) of the original lender. Where no Legal Entity Identifier is available, enter ND5.	YES	YES	"ND1"				Always "ND1"	ND1
RREL81	Original Lender Establishment Country	{COUNTRYCODE_2}	Country where the original lender is established.	YES	YES	"US"				Always "US"	US
RREL82	Originator Name	{ALPHANUM-100}	Give the full legal name of the underlying exposure originator. Where a Legal Entity Identifier (LEI) is available in the Global Legal Entity Foundation (GLEIF) database, the name entered shall match the name associated with the LEI.	NO	NO	5	SELLER NAME	The name of the entity that delivered the mortgage loan to Fannie Mae.	For sellers whose combined loans' contribution to the At Issuance UPB represents less than 1% of the total At Issuance reference pool UPB, the file will reflect "Other".	CAS 5 in "At-Issuance Data" file NOTE: This field does not account for M&A activity or the sale and purchase of mortgage notes by lenders	
RREL83	Originator Legal Entity Identifier	{LEI}	Provide the Legal Entity Identifier (as specified in the Global Legal Entity Foundation (GLEIF) database) of the underlying exposure originator.	NO	NO	N/A				Not available	
RREL84	Originator Establishment Country	{COUNTRYCODE_2}	Country where the underlying exposure originator is established.	NO	NO	"US"				Always "US"	US

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
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Collateral-level information section

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREC1	Unique Identifier	{ALPHANUM-28}	The unique identifier assigned by the reporting entity according to Article 11(1) of the Commission Delegated Regulation (EU) ... [include full reference to the disclosure RTS].	NO	NO	See "Input for ESMA" fields				Identical to RREL1. Fannie Mae does not produce a Unique Identifier based on EU guidelines. Users can construe such an ID for a CAS transaction by: In sequential order: a) The reporting entity LEI - B1V7KEBTPIMZEU4LTD58 b) The letter N, as the securitisation is non-ABCP c) Four-digit year that the first securities of the securitisation were issued d) A two digit number corresponding to the number order in which securitisations with the same identifier according to items a) to c) of this list	RREL1: B1V7KEBTPIMZEU4LTD58NYYYYX X
RREC2	Underlying Exposure Identifier	{ALPHANUM-1000}	Unique identifier for each underlying exposure. This must match field RREL3.	NO	NO	2	LOAN IDENTIFIER	A unique identifier for the mortgage loan	The Loan Identifier does not correspond to other mortgage loan identifiers found in existing Fannie Mae disclosures.	Identical to RREL2 CAS 2 in "At-Issuance Data" file	CAS 2: 91672351 TO RREL2: 91672351
RREC3	Original Collateral Identifier	{ALPHANUM-1000}	The original unique identifier assigned to the collateral. The identifier must be different from any external identification number, in order to ensure anonymity of the obligor. The reporting entity shall not amend this unique identifier.	NO	NO	N/A				Not available Note that there cannot be a loan secured by more than one property; therefore Original Underlying Exposure Identifier could be used	
RREC4	New Collateral Identifier	{ALPHANUM-1000}	If the original identifier in field RREC2 cannot be maintained in this field enter the new identifier here. The identifier must be different from any external identification number, in order to ensure anonymity of the obligor. If there has been no change in the identifier, enter the same identifier as in RREC2. The reporting entity shall not amend this unique identifier.	NO	NO	N/A				Not available Note that there cannot be a loan secured by more than one property; therefore Original Underlying Exposure Identifier could be used	

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREC5	Collateral Type	{LIST}	The primary (in terms of value) type of asset securing the debt. Where there is a guarantee backed by physical or financial collateral, look through the guarantee to any collateral that may be supporting that guarantee. Automobile (CARX) Industrial Vehicle (INDV) Commercial Truck (CMTR) Rail Vehicle (RALV) Nautical Commercial Vehicle (NACM) Nautical Leisure Vehicle (NALV) Aeroplane (AERO) Machine Tool (MCHT) Industrial Equipment (INDE) Office Equipment (OFEQ) IT Equipment (ITEQ) Medical Equipment (MDEQ) Energy Related Equipment (ENEQ) Commercial Building (CBLD) Residential Building (RBLD) Industrial Building (IBLD) Other Vehicle (OTHV) Other Equipment (OTHE) Other Real Estate (OTRE) Other goods or inventory (OTGI) Securities (SECU) Guarantee (GUAR) Other Financial Asset (OTFA) Mixed Categories Due to Security Over All Assets of the Obligor (MIXD) Other (OTHR)	NO	NO	"RBLD"				Always "RBLD"	RBLD
RREC6	Geographic Region - Collateral	{NUTS}	The geographic region (NUTS3 classification) where the physical collateral is located. Where no NUTS3 classification has been produced by Eurostat (e.g. a non EU jurisdiction), enter the two-digit country code in {COUNTRYCODE_2} format followed by 'ZZZ'.	YES	YES	"USZZZ"				Always "USZZZ"	USZZZ
RREC7	Occupancy Type	{LIST}	Type of property occupancy: Owner Occupied i.e. owned by a private household with the purpose of providing shelter to its owner (FOWN) Partially Owner Occupied (A property which is partly rented) (POWN) Non-Owner Occupied or Buy-To-Let (TLET) Holiday or Second Home (HOLD) Other (OTHR) If the collateral being reported is not property collateral, enter ND5.	YES	YES	30	OCCUPANCY TYPE	An indicator that denotes whether the mortgage loan, at its origination date, is secured by a principal residence, second home or investment property.	<ul style="list-style-type: none"> Investor Principal Second 	- IF CAS 30 is equal to "Investor", then RREC 7 is "TLET" - IF CAS 30 is equal to "Principal", then RREC 7 is "FOWN" - IF CAS 30 is equal to "Second", then RREC 7 is "HOLD"	CAS30: "Principal" TO RREC7: "FOWN"
RREC8	Lien	{INTEGER-9999}	Highest lien position held by the originator in relation to the collateral. If the collateral being reported is not property collateral, enter ND5.	YES	YES	"1"				Always "1" NOTE: Subject to changes in CAS Reference Pool Eligibility Criteria	1

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREC9	Property Type	{LIST}	Property type: Residential (House, detached or semi-detached) (RHOS) Residential (Flat or Apartment) (RFLT) Residential (Bungalow) (RBGL) Residential (Terraced House) (RTHS) Multifamily House (properties with more than four units securing one underlying exposure) (MFHS) Partial Commercial use (property is used as a residence as well as for commercial use where less than 50% of its value derived from commercial use, e.g. doctor's surgery and house) (PCMM) Commercial or Business Use (BIZZ) Land Only (LAND) Other (OTHR) If the collateral being reported is not property collateral, enter ND5.	NO	YES	28	PROPERTY TYPE	An indicator that denotes whether the property type secured by the mortgage loan is a condominium (CONDO), co-operative (CO-OP), planned urban development (PUD), manufactured home (MH), or single-family home (SF).	<ul style="list-style-type: none"> • Condo • Co-Op • PUD • MH • SF 	IF CAS 28 in "Ongoing (Monthly) Data" file is: - "Condo", then RREC9 is "RFLT" - "Co-op", then RREC9 is "RFLT" - "PUD", then RREC9 is "OTHR" - "MH", then RREC9 is "OTHR" - "SF", then RREC9 is "RHOS"	CAS 28: "PUD" TO RREC9: "OTHR"
RREC10	Energy Performance Certificate Value	{LIST}	The energy performance certificate value of the collateral at the time of origination: A (EPCA) B (EPCB) C (EPCC) D (EPCD) E (EPCE) F (EPCF) G (EPCG) Other (OTHR)	YES	YES	"ND5"				Always "ND5"	ND5
RREC11	Energy Performance Certificate Provider Name	{ALPHANUM-100}	Enter in the legal name of the energy performance certificate provider. Where a Legal Entity Identifier (LEI) is available in the Global Legal Entity Foundation (GLEIF) database, the name entered shall match the name associated with the LEI.	YES	YES	"ND5"				Always "ND5"	ND5
RREC12	Current Loan-To-Value	{PERCENTAGE}	Current loan to Value ratio (LTV). For non-first lien loans this shall be the combined or total LTV. Where the current loan balance is negative, enter 0.	YES	YES	"ND3"				Always "ND3"	ND3
RREC13	Current Valuation Amount	{MONETARY}	The most recent valuation of the collateral as assessed by an independent external or internal appraiser. If such assessment is not available, the current value of the collateral can be estimated using a real estate value index sufficiently granular with respect to geographical location and type of collateral; if such real estate value index is also not available, a real estate price index sufficiently granular with respect to geographical location and type of collateral can be used after application of a suitably chosen mark-down to account for the depreciation of the collateral. If the collateral being reported is not property collateral, enter the most recent valuation of the collateral as assessed by an independent external or internal appraiser or, if not available, by the originator. If the collateral being reported is a guarantee, enter the amount of underlying exposure guaranteed by this collateral item to the benefit of the originator. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES	"ND3"				Always "ND3"	ND3

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREC14	Current Valuation Method	{LIST}	The method of calculating the most recent value of the collateral, as provided in RREC13: Full, internal and external inspection (FIEI) Full, only external inspection (FOEI) Drive-by (DRVB) Automated Value Model (AUVM) Indexed (IDX) Desktop (DKTP) Managing Agent or Estate Agent (MAEA) Tax Authority (TXAT) Other (OTHR)	YES	NO	"ND3"				Always "ND3"	ND3
RREC15	Current Valuation Date	{DATEFORMAT}	The date of the most recent valuation, as provided in RREC13.	YES	YES	"ND3"				Always "ND3"	ND3
RREC16	Original Loan-To-Value	{PERCENTAGE}	Originator's original underwritten loan To Value ratio (LTV). For non-first lien loans this shall be the combined or total LTV. If the collateral being reported is not property collateral, enter ND5.	YES	YES	20	ORIGINAL LOAN TO VALUE RATIO (LTV)	A ratio calculated at the time of origination for a mortgage loan. The Original LTV reflects the loan-to-value ratio of the loan amount secured by a mortgaged property on the origination date of the underlying mortgage loan	This field is calculated by dividing the original loan amount by either (1) in the case of a purchase, the lower of the sales price of a mortgaged property or its value at the time of the sale, or (2) in the case of a refinancing, the value of the mortgaged property at the time of refinancing	CAS 20 in "Ongoing (Monthly) Data" file	CAS 20: 75 TO RREC16: 75
RREC17	Original Valuation Amount	{MONETARY}	The original valuation of the collateral used when the underlying exposure was originated (i.e. before securitisation). Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	NO	"ND3"				Always "ND3"	ND3
RREC18	Original Valuation Method	{LIST}	The method of calculating the value of the collateral at the time of underlying exposure origination, as provided in RREC17: Full, internal and external inspection (FIEI) Full, only external inspection (FOEI) Drive-by (DRVB) Automated Valuation Model (AUVM) Indexed (IDX) Desktop (DSKT) Managing Agent / Estate Agent (MAEA) Tax Authority (TAXH) Other (OTHR)	YES	NO	"ND3"				Always "ND3"	ND3
RREC19	Original Valuation Date	{DATEFORMAT}	The date of original valuation of the collateral, as provided in RREC17.	YES	NO	"ND3"				Always "ND3"	ND3
RREC20	Date Of Sale	{DATEFORMAT}	The date of sale of the foreclosed collateral.	YES	YES	53	DISPOSITION DATE	The date on which Fannie Mae's interest in a property ends through either the transfer of the property to a third party or the satisfaction of the mortgage obligation.	Due to borrower privacy considerations, the day value defaults to "01", regardless of the date on which the actual disposition event occurred within the reported month and year.	- CAS 53 includes the year and month of the date of sale in the format MM/01/YYYY - Report RREC 20 as YYYY-MM-01 NOTE: The reported DD ("01" in MM/01/YYYY) is the first day of the month in which the event occurred, not the actual date of the event	CAS 53: 06/01/2018 TO RREC20: 2018-06-01
RREC21	Sale Price	{MONETARY}	Price achieved on sale of collateral in case of foreclosure. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	59	NET SALES PROCEEDS	Total cash received from the sale of the property net of any applicable selling expenses, such as fees and commissions, allowable for inclusion under the terms of the property sale, as currently reported on the HUD-1 or other settlement statement	This field will be populated based on the individual deal claims and reporting timeline after the disclosed Disposition Date of the mortgage loan or the subject property.	The following transformation provides an approximation of RREC21, as CAS 59 is net of applicable selling expenses From "Ongoing (Monthly) Data" file, report RREC21 as "USD" [space] CAS 59	CAS 59: 90000 TO RREC21: USD 90000
RREC22	Collateral Currency	{CURRENCYCODE_3}	This is the currency in which the valuation amount provided in RREC13 is denominated.	NO	YES	"USD"				Always "USD"	USD

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	Relevant CAS Field(s)	CAS Field Name	CAS Glossary Description	CAS Glossary Notes	Input for ESMA field and Explanations	Input for ESMA field - Example
RREC23	Guarantor Type	{LIST}	Guarantor Type: No Guarantor (NGUA) Individual - Family Relation (FAML) Individual - Other (IOTH) Government (GOVE) Bank (BANK) Insurance Product (INSU) Nationale Hypotheek Garantie Guarantee Scheme (NHGX) Fonds de Garantie de l'Accession Sociale (FGAS) Caution (CATN) Other (OTHR)	YES	NO	"NGUA"				Always "NGUA"	NGUA

CAS to ESMA Annex 12 Mapping

Explanatory Notes:

- The table below maps CAS investor report information to ESMA reporting fields.
- CAS investor reports for each transaction are available on the Wells Fargo website at www.ctslink.com
- CAS investor reports are available in PDF format and do not have data fields in the format of the ESMA investor report template. The table below provides input for certain ESMA data fields that can be found in specific sections of the CAS investor reports.

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS1	Unique Identifier	{ALPHANUM-28}	The unique identifier assigned by the reporting entity according to Article 11(1) of the Commission Delegated Regulation (EU) .../... [include full reference to the disclosure RTS].	NO	NO			See RREL1 explanations in the loan-level mapping file
IVSS2	Data Cut-Off Date	{DATEFORMAT}	The data cut-off date for this data submission. This must match the data cut-off date in the applicable underlying exposure templates submitted.	NO	NO			See RREL6 explanations in the loan-level mapping file
IVSS3	Securitisation Name	{ALPHANUM-100}	Enter the name of the securitisation	NO	NO	Deal Name	Deal Name	
IVSS4	Reporting Entity Name	{ALPHANUM-100}	Legal name of the entity designated as per Article 7(2) of the Regulation (EU) 2017/2402; this name shall match the name entered in for that entity in field SESP3 in the counterparty information section. Where a Legal Entity Identifier (LEI) is available in the Global Legal Entity Foundation (GLEIF) database, the name entered shall match the name associated with the LEI. Entity Foundation (GLEIF) database, the name entered shall match the name associated with the LEI.	NO	NO		Fannie Mae	
IVSS5	Reporting Entity Contact Person	{ALPHANUM-256}	First and Last name of the contact person(s) responsible for preparing this securitisation comprehensive report and to whom questions on this comprehensive report must be addressed.	NO	NO		Customer Service - CTSLink Wells Fargo Bank, N.A.	
IVSS6	Reporting Entity Contact Telephone	{TELEPHONE}	Direct telephone number(s) of the contact person(s) responsible for preparing this securitisation comprehensive report and to whom questions on this comprehensive report must be addressed.	NO	NO		1-866-846-4526	

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS7	Reporting Entity Contact Emails	{ALPHANUM-256}	Direct email address(es) of the contact person(s) responsible for preparing this securitisation comprehensive report and to whom questions on this comprehensive report must be addressed.	NO	NO		ctslink.customerservice@wellsfargo.com	
IVSS8	Risk Retention Method	{LIST}	Method for complying with risk retention requirements in the EU (e.g. Article 6 of the Regulation (EU) 2017/2402, or until entry into force, Article 405 of Regulation (EU) 575/2013): Vertical slice - i.e. Article 6(3)(a) (VSLC) Seller's share - i.e. Article 6(3)(b) (SLLS) Randomly-selected exposures kept on balance sheet - i.e. Article 6(3)(c) (RSEX) First loss tranche - i.e. Article 6(3)(d) (FLTR) First loss exposure in each asset - i.e. Article 6(3)(e) (FLEX) No compliance with risk retention requirements (NCOM) Other (OTHR)	NO	NO		Article 6(3)(a)	See the EU Risk Retention Letter published on Fannie Mae's website for the respective transactions (http://www.fanniemae.com/portal/funding-the-market/credit-risk/transactions.html)
IVSS9	Risk Retention Holder	{LIST}	Which entity is retaining the material net economic interest, as specified in Article 6 of the Regulation (EU) 2017/2402, or until its entry into force, Article 405 of Regulation (EU) 575/2013): Originator (ORIG) Sponsor (SPON) Original Lender (OLND) Seller (SELL) No Compliance with Risk Retention Requirement (NCOM) Other (OTHR)	NO	NO		ORIG	

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS10	Underlying Exposure Type	{LIST}	Enter in the type of underlying exposures of the securitisation. If multiple types from the list below are present, enter in 'Mixed' (with the exception of securitisations whose underlying exposures consist exclusively of a combination of consumer loans and automobile loans or leases--for these securitisations the value corresponding to 'Consumer loans' must be entered): Automobile Loan or Lease (ALOL) Consumer Loan (CONL) Commercial Mortgage (CMRT) Credit-Card Receivable (CCRR) Lease (LEAS) Residential Mortgage (RMRT) Mixed (MIXD) Small and Medium Enterprise (SMEL) Non Small and Medium Enterprise Corporate (NSML) Other (OTHR)	NO	NO		RMRT	
IVSS11	Risk Transfer Method	{Y/N}	In accordance with Article 242(10) and (11) of Regulation (EU) No 575/2013, the securitisation risk transfer method is 'true sale'.	NO	NO		N	
IVSS12	Trigger Measurements/Ratios	{Y/N}	Has any underlying exposure-related trigger event occurred? These include any delinquency, dilution, default, loss, stopsubstitution, stop-revolving, or similar exposurerelated events which impact the securitisation, as at the data cut-off date. This also includes if there is a debit balance on any PDL or an asset deficiency.	NO	NO	Section "Additional Reporting - Deal Level"	Minimum Credit Enhancement Test Pass and Delinquency Test Pass can be found under "Structural Reporting"	
IVSS13	Revolving/ Ramp-Up Period End-Date	{DATEFORMAT}	Enter the date at which the securitisation's revolving or ramp-up period is scheduled to cease. Enter the securitisation maturity date if there is a revolving period with no scheduled end date.	NO	YES		ND5	
IVSS14	Principal Recoveries In The Period	{MONETARY}	Gross principal recoveries received during the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES		Not available, no distinction between interest and principal recoveries	

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS15	Interest Recoveries In The Period	{MONETARY}	Gross interest recoveries received during the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES		Not available, no distinction between interest and principal recoveries	
IVSS16	Principal Collections In The Period	{MONETARY}	Collections treated as principal in the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	Section Additional Reporting - Deal Level	Total Principal Reduction Current	
IVSS17	Interest Collections In The Period	{MONETARY}	Collections treated as revenue in the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES		ND5	Not relevant in the context of a synthetic transaction
IVSS18	Drawings Under Liquidity Facility	{Y/N}	If the securitisation has a liquidity facility confirm whether or not there has been a drawing under the liquidity facility in the period ending on the last interest payment date.	NO	YES		ND5	
IVSS19	Securitisation Excess Spread	{MONETARY}	The amount of funds left over after application of all currently-applicable stages of the waterfall, commonly referred to as 'excess spread'. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO		USD 0	
IVSS20	Excess Spread Trapping Mechanism	{Y/N}	Excess spread is currently trapped in the securitisation (e.g. accumulated in a separate reserve account)	NO	NO		N	
IVSS21	Current Overcollateralisation	{PERCENTAGE}	Current overcollateralisation of the securitisation, calculated as the ratio of (the sum of the outstanding principal balance of all underlying exposures, excluding underlying exposures classified as defaulted, as at the data cut-off date) to (the sum of the outstanding principal balance of all tranches/bonds as at the data cut-off date).	NO	NO		Will be always zero	Overcollateralisation for CAS transactions as outlined in the Investor report follows a different definition compared to IVSS21

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS22	Annualised Constant Prepayment Rate	{PERCENTAGE}	The annualised Constant Prepayment Rate (CPR) of the underlying exposures based upon the most recent periodic CPR. Periodic CPR is equal to the [(total unscheduled principal received at the end of the most recent collection period) / (the total principal balance at the start of the collection period)]. The Periodic CPR is then annualised as follows: $1 - ((1 - \text{Periodic CPR})^{\text{number of collection periods in a year}})$ 'Periodic CPR' refers to the CPR during the last collection period i.e. for a securitisation with quarterly paying bonds this will usually be the prior three month period.	NO	NO	Section Prepayment Rates	CPR for current month and averages	For definitions and calculations, please review the text below the summary box in the Prepayment rates section
IVSS23	Dilutions	{MONETARY}	Total reductions in principal exposures during the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO		Will be always zero	Dilutions are defined by ESMA as reduction in principal due to e.g. fraud claims; not relevant for CAS transactions
IVSS24	Gross Charge Offs In The Period	{MONETARY}	Total amount of gross principal charge-offs (i.e. before recoveries) for the period. Charge-off is as per securitisation definition, or alternatively per lender's usual practice. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO	Realized Loss Report - Collateral		Given the synthetic nature of the transaction, there is no equivalent to Gross Charge Offs - Realized Losses for the period can be found under "Realized Loss Summary - Realized Dispositions in Current Period"
IVSS25	Repurchased Exposures	{MONETARY}	The amount of underlying exposures that have been repurchased by the originator/sponsor between the immediately previous data cut-off date and the current data cut-off date. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES	Section Substitutions / Repurchases	Sum of Current Payment in this section	

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS26	Restructured Exposures	{MONETARY}	The amount of underlying exposures that have been restructured by the originator/sponsor between the immediately previous data cut-off date and the current data cut-off date. Restructuring refers to any changes made to the contractual terms of the underlying exposure agreement due to forbearance, including payment holidays, arrears capitalisation, change of interest rate basis or margins, fees, penalties, maturity and/or other generally-accepted measures of restructuring due to forbearance. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO	Sections Modification Summary and Modifications	Balance in Liquidated Actual in the Modification summary	Note that the Modifications section in the lower part of the investor report is a subset of the summary and should not be added
IVSS27	Annualised Constant Default Rate	{PERCENTAGE}	The annualised Constant Default Rate (CDR) for the underlying exposures based on the periodic CDR. Periodic CDR is equal to the $[(\text{total current balance of underlying exposures classified as defaulted during the period}) / (\text{total current balance of non-defaulted underlying exposures at the beginning of the period})] * 100$. This value is then annualised as follows: $1 - ((1 - \text{Periodic CDR})^{\text{number of collection periods in a year}})$ "Periodic CDR" refers to the CDR during the last collection period, i.e. for a securitisation with quarterly paying bonds this will usually be the prior three month period.	NO	NO	Section Realised Loss Report - Collateral	CDR for current month and averages	For definitions and calculations, please review the text below the summary box in the Realised Loss Report - Collateral section
IVSS28	Defaulted Exposures	{MONETARY}	The total outstanding principal amount as at the data cut-off date of exposures in default as at the cut-off date, using the definition of default specified in the securitisation documentation Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO	Additional Reporting - Deal Level		Given the synthetic nature of the transaction, there is no (direct) equivalent to Defaulted Exposures - Credit Event Amounts for the period and cumulative can be found under "Informational Reporting"

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS29	Defaulted Exposures CRR	{MONETARY}	The total outstanding principal amount as at the data cut-off date of exposures in default as at the cut-off date, using the definition of default specified in Article 178 of Regulation (EU) No 575/2013. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	YES	YES		ND5	
IVSS30	Risk Weight Approach	{LIST}	Indicate which risk weight approach was used by the originator to produce the risk weight attached to the underlying exposures, according to the Regulation (EU) 575/2013: Standardised Approach (STND) Foundation Internal Ratings-Based (FIRB) Advanced Internal Ratings-Based (ADIR)	NO	YES		ND5	
IVSS31	Obligor Probability Of Default in Range [0.00%,0.10%)	{PERCENTAGE}	The total outstanding amount of underlying exposures whose one-year-ahead probability of default has been assessed as in the range 0.00% <= x < 0.10%. This estimate can either come from the originator or the relevant national central bank. Where there is no regulatory requirement to calculate Probability of Default, enter ND5.	NO	YES		ND5	
IVSS32	Obligor Probability Of Default in Range [0.10%,0.25%)	{PERCENTAGE}	The total outstanding amount of underlying exposures whose one-year-ahead probability of default has been assessed as in the range 0.10% <= x < 0.25%. This estimate can either come from the originator or the relevant national central bank. Where there is no regulatory requirement to calculate Probability of Default, enter ND5.	NO	YES		ND5	
IVSS33	Obligor Probability Of Default in Range [0.25%,1.00%)	{PERCENTAGE}	The total outstanding amount of underlying exposures whose one-year-ahead probability of default has been assessed as in the range 0.25% <= x < 1.00%. This estimate can either come from the originator or the relevant national central bank. Where there is no regulatory requirement to calculate Probability of Default, enter ND5.	NO	YES		ND5	

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS34	Obligor Probability Of Default in Range [1.00%,7.50%)	{PERCENTAGE}	The total outstanding amount of underlying exposures whose one-year-ahead probability of default has been assessed as in the range 1.00% <= x < 7.50%. This estimate can either come from the originator or the relevant national central bank. Where there is no regulatory requirement to calculate Probability of Default, enter ND5.	NO	YES		ND5	
IVSS35	Obligor Probability Of Default in Range [7.50%,20.00%)	{PERCENTAGE}	The total outstanding amount of underlying exposures whose one-year-ahead probability of default has been assessed as in the range 7.50% <= x < 20.00%. This estimate can either come from the originator or the relevant national central bank. Where there is no regulatory requirement to calculate Probability of Default, enter ND5.	NO	YES		ND5	
IVSS36	Obligor Probability Of Default in Range [20.00%,100.00%]	{PERCENTAGE}	The total outstanding amount of underlying exposures whose one-year-ahead probability of default has been assessed as in the range 20.00% <= x <= 100.00%. This estimate can either come from the originator or the relevant national central bank. Where there is no regulatory requirement to calculate Probability of Default, enter ND5.	NO	YES		ND5	
IVSS37	Bank Internal Loss Given Default Estimate	{PERCENTAGE}	The originator's latest Loss Given Default estimate for the underlying exposure in a downturn scenario, weighted using the total outstanding principal balance of the underlying exposures as at the data cut-off date. Where there is no regulatory requirement to calculate Loss Given Default, enter ND5.	NO	YES		ND5	
IVSS38	Arrears 1-29 Days	{PERCENTAGE}	The percentage of exposures of this type in arrears on principal and/or interest payments due for a period between 1 and 29 days (inclusive) as at the data cut-off date. The percentage shall be calculated as the total outstanding principal amount as at the data cutoff date of the exposures of this type and in this category of arrears, relative to the total outstanding principal amount of all exposures of this type as at the data cut-off date.	NO	NO		Not available	

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS39	Arrears 30-59 Days	{PERCENTAGE}	The percentage of exposures in arrears on principal and/or interest payments due for a period between 30 and 59 days (inclusive) as at the data cut-off date. The percentage shall be calculated as the total outstanding principal amount as at the data cut-off date of the exposures in this category of arrears, relative to the total outstanding principal amount of all exposures as at the data cut-off date.	NO	NO	Section: Delinquency Status - MBA Delinquency Calculation Method	UPB (%) of Loans Delinquent for 30 days	
IVSS40	Arrears 60-89 Days	{PERCENTAGE}	The percentage of exposures in arrears on principal and/or interest payments due for a period between 60 and 89 days (inclusive) as at the data cut-off date. The percentage shall be calculated as the total outstanding principal amount as at the data cut-off date of the exposures in this category of arrears, relative to the total outstanding principal amount of all exposures as at the data cut-off date.	NO	NO	Section: Delinquency Status - MBA Delinquency Calculation Method	UPB (%) of Loans Delinquent for 60 days	
IVSS41	Arrears 90-119 Days	{PERCENTAGE}	The percentage of exposures in arrears on principal and/or interest payments due for a period between 90 and 119 days (inclusive) as at the data cut-off date. The percentage shall be calculated as the total outstanding principal amount as at the data cut-off date of the exposures in this category of arrears, relative to the total outstanding principal amount of all exposures as at the data cut-off date.	NO	NO	Section: Delinquency Status - MBA Delinquency Calculation Method	UPB (%) of Loans Delinquent for 90 days	
IVSS42	Arrears 120-149 Days	{PERCENTAGE}	The percentage of exposures in arrears on principal and/or interest payments due for a period between 120 and 149 days (inclusive) as at the data cut-off date. The percentage shall be calculated as the total outstanding principal amount as at the data cut-off date of the exposures in this category of arrears, relative to the total outstanding principal amount of all exposures as at the data cut-off date.	NO	NO	Section: Delinquency Status - MBA Delinquency Calculation Method	UPB (%) of Loans Delinquent for 120 days	

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSS43	Arrears 150-179 Days	{PERCENTAGE}	The percentage of exposures in arrears on principal and/or interest payments due for a period between 150 and 179 days (inclusive) as at the data cut-off date. The percentage shall be calculated as the total outstanding principal amount as at the data cut-off date of the exposures in this category of arrears, relative to the total outstanding principal amount of all exposures as at the data cut-off date. The percentage shall be calculated as the total outstanding principal amount as at the data cutoff date of the exposures in this category of arrears, relative to the total outstanding principal amount of all exposures as at the data cut-off date.	NO	NO	Section: Delinquency Status - MBA Delinquency Calculation Method	UPB (%) of Loans Delinquent for 150 days	
IVSS44	Arrears 180+ Days	{PERCENTAGE}	The percentage of exposures in arrears on principal and/or interest payments due for a period for 180 days or more as at the data cutoff date. The percentage shall be calculated as the total outstanding principal amount as at the data cut-off date of the exposures in this category of arrears, relative to the total outstanding principal amount of all exposures as at the data cut-off date.	NO	NO	Section: Delinquency Status - MBA Delinquency Calculation Method	UPB (%) of Loans Delinquent for 180+ days	
Tests/Events/Triggers information section								
IVSR1	Unique Identifier	{ALPHANUM-28}	Report the same unique identifier here as the one entered into field IVSS1.	NO	NO		Not applicable There are no triggers or tests which change the priority of payments or lead to the replacement of a counterparty as per ESMA guidelines	
IVSR2	Original Test/Event/Trigger Identifier	{ALPHANUM-1000}	The original unique test/event/trigger identifier. The reporting entity shall not amend this unique identifier.	NO	NO			
IVSR3	New Test/Event/Trigger Identifier	{ALPHANUM-1000}	If the original identifier in field IVSR2 cannot be maintained in this field enter the new identifier here. If there has been no change in the identifier, enter the same identifier as in IVSR2. The reporting entity shall not amend this unique identifier.	NO	NO			

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSR4	Description	{ALPHANUM-1000000}	Describe the test/event/trigger, including any formulae. This is a free text field, however the description of the test/event/trigger shall include any formulae and key definitions to allow an investor/potential investor to form a reasonable view of the test/event/trigger and any conditions and consequences attached to it.	NO	NO			
IVSR5	Threshold Level	NA	Enter the level at which the test is deemed to have been met, the trigger is deemed to have been breached, or at which any other action is deemed to occur, as applicable given the type of test/event/trigger being reported. In the event of non-numerical tests/events/triggers, enter ND5.	NO	YES			
IVSR6	Actual Value	#N/A	Enter the current value of the measure being compared against the threshold level. In the event of non-numerical tests/events/triggers, enter ND5. Where percentages are being entered, these shall be entered in the form of percentage points, e.g. 99.50 for 99.50%, e.g. 0.006 for 0.006%.	NO	YES			
IVSR7	Status	{Y/N}	Is this status of the test/event/trigger set to 'Breach' (i.e. the test has not been met or the trigger conditions have been met) at the data cut-off date?	NO	NO			
IVSR8	Cure Period	#N/A	Enter in the maximum number of days granted for this test/trigger to be brought back into compliance with the required level. If no time is granted (i.e. there is no Cure Period), enter 0.	NO	YES			
IVSR9	Calculation Frequency	#N/A	Enter in the number of calendar days' interval for calculating the test. Use round numbers, for example 7 for weekly, 30 for monthly, 90 for quarterly, and 365 yearly.	NO	YES			

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSR10	Consequence for Breach	{LIST}	Enter in the consequence, as per the securitisation documentation, for this test/event/trigger not being satisfied (i.e. being breached): Change in the priority of payments (CHPP) Replacement of a counterparty (CHCP) Both change in the priority of payments and replacement of a counterparty (BOTH) Other consequence (OTHR)	NO	NO			
Cash-flow information section								
IVSF1	Unique Identifier	{ALPHANUM-28}	Report the same unique identifier here as the one entered into field IVSS1.	NO	NO	Section Certificate Account Statement	There is no traditional cash flow waterfall given the synthetic nature of CAS Transactions Investors can analyse cash flows in the Certificate Account Statement section which outlines Deposits, Withdrawals as well as Administration fee calculations and potential interest shortfalls	
IVSF2	Original Cashflow Item Identifier	{ALPHANUM-1000}	The original unique cashflow item identifier. The reporting entity shall not amend this unique identifier.	NO	NO			
IVSF3	New Cashflow Item Identifier	{ALPHANUM-1000}	If the original identifier in field IVSF2 cannot be maintained in this field enter the new identifier here. If there has been no change in the identifier, enter the same identifier as in IVSF2. The reporting entity shall not amend this unique identifier.	NO	NO			
IVSF4	Cashflow Item	{ALPHANUM-1000}	List the cashflow item, this field shall be completed in the order that would be used in a traditional investor report produced for investors, according to the applicable priority of payments as at the data cut-off date. That is, each source of cash inflows shall be listed in turn, after which sources of cash outflows shall be listed. This field shall therefore represent one line of the cashflow section of an investor report.	NO	NO			

ESMA - Field Code	ESMA - Field Name	ESMA - Format	ESMA - Content to Report	ESMA - ND1 - ND4 Allowed?	ESMA - ND5 Allowed?	CAS Investor Report	Input for ESMA field	Comments
IVSF5	Amount Paid During Period	{MONETARY}	What are the funds paid out as per the priority of payments for this item? Enter negative values for funds paid out, positive values for funds received. Note that the "Amount Paid During Period" value entered in a given line (e.g. in line B) plus the "Available Funds Post" value entered in the preceding line (e.g. line A) shall together equal the "Available Funds Post" value entered in this line (e.g. line B). Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO			
IVSF6	Available Funds Post	{MONETARY}	What are the funds available to the priority of payments after to the application of the cashflow item? Note that the "Amount Paid In Period" value entered in a given line (e.g. in line B) plus the "Available Funds Post" value entered in the preceding line (e.g. line A) shall together equal the "Available Funds Post" value entered in this line (e.g. line B). Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO			