

## Multifamily Structured Credit Risk (MSCR) Notes

### DISCLAIMER

European institutional investors should be aware that Freddie Mac makes no representation or warranty concerning the accuracy or completeness of the information set forth herein as it relates to the due diligence requirements under Article 5 or otherwise. An EU institutional investor must conduct its own independent review and make its own assessment of the completeness of the information set forth herein with respect to the due diligence obligations set forth in Article 5. EU and UK institutional investors should consult legal, tax and accounting advisors for assistance in assessing the information set forth herein and concluding that the due diligence obligations under Article 5 have been satisfied.

FIELD CODE	FIELD NAME	CONTENT TO REPORT	ND1-ND4 allowed?	ND5 allowed?	FORMAT	Closing Date or Static Info (Y/N)	Source of Information	Notes
IVSS1	Unique Identifier	The unique identifier assigned by the reporting entity according to Article 11(1) of the Commission Delegated Regulation (EU) 2017/2402. (Include full reference to the disclosure RTS)	NO	NO	{ALPHANUM-28}	Y	Input same Unique Identifier used on Annex 3	
IVSS2	Data Cut-Off Date	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	{DATEFORMAT}	Y	Input same data cut off date used on Annex 3. This should be the distribution date in the last month of the reporting period.	Input actual trust name
IVSS3	Securitisation Name	Enter the name of the securitisation	NO	NO	{ALPHANUM-100}	Y		
IVSS4	Reporting Entity Name	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	NO	NO	{ALPHANUM-100}	Y		Input reporting entity
IVSS5	Reporting Entity Contact Person	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	{ALPHANUM-256}	Y		TBD
IVSS6	Reporting Entity Contact 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	{TELEPHONE}	Y		TBD
IVSS7	Reporting Entity Contact Emails	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	{ALPHANUM-256}	Y		TBD
IVSS8	Risk Retention Method	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	{LIST}	Y		Always use the code for Vertical Slice, "VSLC"
IVSS9	Risk Retention Holder	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	{LIST}	Y		Always use "ORIG"
IVSS10	Underlying Exposure Type	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	{LIST}	Y		Always use "CMRT"
IVSS11	Risk Transfer Method	In accordance with Article 242(10) and (11) of Regulation (EU) No 575/2013, the securitisation risk transfer method is "true sale".	NO	NO	{Y/N}	Y		Always use "Y"
IVSS12	Trigger Measurement s/Ratios	Has any underlying exposure-related trigger event occurred? These include any delinquency, dilution, default, loss, stop-substitution, stop-revolving, or similar exposure-related 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	{Y/N}	Y		Input "Y" if any trigger is defined in the IVSR fields has been tripped, otherwise input "N"
IVSS13	Revolving/ Ramp-Up Period End-Date	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	{DATEFORMAT}	Y		Always use "ND5"
IVSS14	Principal Recoveries In The Period	Gross principal recoveries received during the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	{MONETARY}			Cert Admin to Provide
IVSS15	Interest Recoveries In The Period	Gross interest recoveries received during the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	{MONETARY}			Cert Admin to Provide
IVSS16	Principal Collections In The Period	Collections treated as principal in the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	{MONETARY}			Cert Admin to Provide
IVSS17	Interest Collections In The Period	Collections treated as revenue in the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	YES	{MONETARY}			Cert Admin to Provide
IVSS18	Drawings Under Liquidity Facility	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	{Y/N}	Y		Always use "ND5"
IVSS19	Securitisation Excess Spread	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	{MONETARY}	Y		Always use "USD 0"
IVSS20	Excess Spread Trapping Mechanism	Excess spread is currently trapped in the securitisation (e.g. accumulated in a separate reserve account)	NO	NO	{Y/N}	Y		Always use "N"
IVSS21	Current Overcollateralisation	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	{PERCENTAGE}			Loan balance excluding defaulted loans divided by total balance of all principal bonds. This will be 100% to the extent there are no defaulted loans in the pool.
IVSS22	Annualised Constant Prepayment Rate	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) / (total principal balance at the start of the collection period)]. The Periodic CPR is then annualised as follows: 1-((1-Periodic CPR)^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	{PERCENTAGE}			Cert Admin to Provide
IVSS23	Dilutions	Total reductions in principal exposures during the period. Include the currency in which the amount is denominated, using {CURRENCYCODE_3} format.	NO	NO	{MONETARY}	Y		Always use "USD 0"
IVSS24	Gross Charge Offs In The Period	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	{MONETARY}	Y		Always use "USD 0"
IVSS25	Repurchased Exposures	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	{MONETARY}			Source from Servicer
IVSS26	Restructured Exposures	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	{MONETARY}			Source from Servicer
IVSS27	Annualised Constant Default Rate	The annualised Constant Default Rate (CDR) for the underlying exposures based on the periodic CDR. Periodic CDR is equal to the [(total current balance of underlying exposures classified as defaulted during the period) / (total current balance of non-defaulted underlying exposures at the beginning of the period)] * 100. This value is then annualised as follows: 1-((1-Periodic CDR)^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	{PERCENTAGE}			Cert Admin to Provide
IVSS28	Defaulted Exposures	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	{MONETARY}			
IVSS29	Defaulted Exposures CRR	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	{MONETARY}			Aggregate balance of loans flagged as imminent default in CREFC IRP + loans that are 90+ days delinquent
IVSS30	Risk Weight Approach	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	{LIST}			Issuer to Provide
IVSS31	Probability of Default in Range [0.00%,0.10 %)	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	{PERCENTAGE}			Issuer to Provide
IVSS32	Probability of Default in Range [0.10%,0.25 %)	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	{PERCENTAGE}			Issuer to Provide
IVSS33	Probability of Default in Range [0.25%,1.00 %)	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	{PERCENTAGE}			Issuer to Provide
IVSS34	Probability of Default in Range [1.00%,7.50 %)	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	{PERCENTAGE}			Issuer to Provide

IVSS35	Obligor Probability Of Default In Range [7.50%,20.00 %]	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 NDS.	NO	YES	{PERCENTAGE}		Issuer to Provide	Deemed NDS For CLO
IVSS36	Obligor Probability Of Default In Range [20.00%,100.00%]	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 NDS.	NO	YES	{PERCENTAGE}		Issuer to Provide	Deemed NDS For CLO
IVSS37	Internal Loss Given Default Estimate	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 NDS.	NO	YES	{PERCENTAGE}		Issuer to Provide	Deemed NDS For CLO
IVSS38	Arrears 1-29 Days	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 cut-off date of the exposures of this type and in this category of arrears, relative to the total outstanding principal amount of all exposures as at the data cut-off date.	NO	NO	{PERCENTAGE}		Calculate from CREL130 inputs	
IVSS39	Arrears 30-59 Days	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	{PERCENTAGE}		Calculate from CREL130 inputs	
IVSS40	Arrears 60-89 Days	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	{PERCENTAGE}		Calculate from CREL130 inputs	
IVSS41	Arrears 90-119 Days	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	{PERCENTAGE}		Calculate from CREL130 inputs	
IVSS42	Arrears 120-149 Days	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	{PERCENTAGE}		Calculate from CREL130 inputs	
IVSS43	Arrears 150-179 Days	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.	NO	NO	{PERCENTAGE}		Calculate from CREL130 inputs	
IVSS44	Arrears 180+ Days	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 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	{PERCENTAGE}		Calculate from CREL130 inputs	
IVSR1	Unique Identifier	Report the same unique identifier here as the one entered into field IVSS1.	NO	NO	{ALPHANUM-28}	Y	Issuer to Provide	
IVSR2	Original Test/Event/Trigger Identifier	The original unique test/event/trigger identifier. The reporting entity shall not amend this unique identifier.	NO	NO	{ALPHANUM-1000}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSR3	New Test/Event/Trigger Identifier	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	{ALPHANUM-1000}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSR4	Description	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	{ALPHANUM-10000}	Y	Cert Admin to Provide	Confirm naming, match to prior deal conventions
IVSR5	Threshold Level	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 NDS.	NO	YES	{NUMERIC}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSR6	Actual Value	Enter the current value of the measure being compared against the threshold level. In the event of non-numerical tests/events/triggers, enter NDS. 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	{NUMERIC}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSR7	Status	Is this status of the test/event/trigger set to 'Breached' (i.e. the test has not been met or the trigger conditions have been met) at the data cut-off date?	NO	NO	{Y/N}	Y		
IVSR8	Cure Period	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	{INTEGER-9999}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSR9	Calculation Frequency	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	{INTEGER-9999}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSR10	Consequence for Breach	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	{LIST}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSF1	Unique Identifier	Report the same unique identifier here as the one entered into field IVSS1.	NO	NO	{ALPHANUM-28}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSF2	Original Cashflow Item Identifier	The original unique cashflow item identifier. The reporting entity shall not amend this unique identifier.	NO	NO	{ALPHANUM-1000}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSF3	New Cashflow Item Identifier	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	{ALPHANUM-1000}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSF4	Cashflow Item	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	{ALPHANUM-1000}	Y	Issuer to Provide	Confirm naming, match to prior deal conventions
IVSF5	Amount Paid During Period	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).	NO	NO	{MONETARY}		Cert Admin to Provide	
IVSF6	Available Funds Post	Include the currency in which the amount is denominated, using {CURRENCYCODE 3} format. 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	{MONETARY}		Cert Admin to Provide	