

SPRING WORKSHOP – GERMANY

22 APRIL 2021



WELCOME AND INTRODUCTION

DR. CHRISTIAN THUN, EUROPEAN DATAWAREHOUSE

ON TODAY'S CALL



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AGENDA

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- **REGULATORY AND FIRM UPDATES**
- **EDW ROADMAP, TECHNICAL OFFERINGS AND ENHANCEMENTS**
- **PRIVATE DEAL REPORTING IN EDITOR**
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- **DATA REQUIREMENTS FOR EUROPEAN CMBS**
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MICHAEL OSSWALD, STS VERIFICATION INTERNATIONAL
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REGULATORY AND FIRM UPDATES

MARTIN KUHN, EUROPEAN DATAWAREHOUSE

ESMA PUBLISHES NEW VERSION OF XML SCHEMA, VALIDATION RULES AND Q&A

- On 26 February 2021, ESMA published an updated version of the XML schema v.1.3.0 and validation rules as well as an updated version of the Q&A document (v.7)
- ESMA has also published the standardised XML templates for the “end-of-day report” and the “rejection report” that the Securitisation Repositories need to implement based on the RTS on operational standards.
- Please note that the Reporting Entities may continue using both versions until 1 September 2021. As of that date only version 1.3.0 will be acceptable.

REPORTING INSTRUCTIONS, XML SCHEMA AND VALIDATION

The XML schema for these templates and accompanying technical reporting instructions and validation rules are available below. Reporting entities may choose to use either version 1.2.0 or version 1.3.0 of the XML schema and validation rules until 1 September 2021. As of that date, only version 1.3.0 will be admissible.

Current Version: Version 1.3.0 published on 26 February 2021

- [Technical reporting instructions](#) ⓘ

- [XML schema and validation rules](#) on disclosure templates [ERRATUM: file updated 03/03/2021]

Version 1.3.0 includes also standardised XML templates for the “end-of-day report” and the “rejection report” which a securitisation repository is required to make available in accordance with the [RTS on operational standards](#) ⓘ:

- [XML Schema and technical guidance](#) on end of day report and rejection report

Further guidance on how to understand and complete the disclosure templates is available in:

- [ESMA's Q&A document](#) on Securitisation Topics

<https://www.esma.europa.eu/policy-activities/securitisation>

EUROPEAN DATAWAREHOUSE SUBMITS APPLICATION TO ESMA TO BE REGISTERED AS A SECURITISATION REPOSITORY

EUROPEAN DATAWAREHOUSE

PRESS RELEASE

European DataWarehouse Submits Application to ESMA to be Registered as a Securitisation Repository

FRANKFURT, GERMANY – 23 September 2020 – European DataWarehouse (EDW) today announced it has submitted its application to become a Securitisation Repository registered and supervised by the European Securities and Markets Authority (ESMA).

The extensive application describes in detail the sound operational and technical aspects of the company and its market-leading reporting solutions.

In January 2018, European DataWarehouse announced its application to become a Securitisation Repository under the Securitisation Regulation. The platform was initially launched to reflect the latest template characteristics.

Prof. José Manuel González-Páramo stated: "EDW was founded in 2011 to restore the securitisation market and restore track record as the securitisation market. Hence our continued support that EDW will submit a successful application for registration as a securitisation repository by ESMA."

Steve Gandy, Managing Director of EDW, added: "As a founding shareholder, we are committed to promoting best practice in the market. Hence our continued support towards the goal of greater transparency in the market, and we are confident that the repository services which are a by-product of this successful application".

ESMA RECEIVES SECURITISATION REPOSITORY REGISTRATION APPLICATION

23 September 2020

SECURITISATION

The European Securities and Markets Authority (ESMA), the EU's securities markets regulator, has received its first application for registration as a securitisation repository (SR) under the Securitisation Regulation.

ESMA, under the Securitisation Regulation, has direct responsibilities regarding the registration and supervision of SRs, who centrally collect and maintain the records of securitisation transactions in the EU.

The reporting obligation for reporting entities will begin with the registration of the first SR. ESMA will announce publicly when the first SR(s) are registered.

If you are interested in applying for a registration, please refer to this guidance, and for further information on the registration process, please contact SR-registration@esma.europa.eu.

"European DataWarehouse (EDW) today (23 September 2020) announced it has submitted its application to become a Securitisation Repository registered and supervised by the European Securities and Markets Authority (ESMA)."

"The extensive application describes in detail the sound operational and technical aspects of the company and its market-leading reporting solutions."

EUROPEAN DATAWAREHOUSE SUBMITS APPLICATION TO FCA TO BE REGISTERED AS A SECURITISATION REPOSITORY

EUROPEAN DATAWAREHOUSE

PRESS RELEASE

European Datawarehouse Submits Application to FCA to be Registered as a UK Securitisation Repository

FRANKFURT, GERMANY – 18 December 2020 – European DataWarehouse (EDW) today announced it has submitted its application to become a Securitisation Repository in the UK registered and supervised by the Financial Conduct Authority (FCA).

The extensive application describes in detail the sound operational and technical aspects of the company and its market-leading reporting solutions which are necessary for EDW to collect and maintain UK securitisation records.

Prof. José Manuel González-Páramo, Chairman of European DataWarehouse stated: "Building on its proven track record as the designated securitisation repository of the Eurosystem, I am confident that EDW will submit a successful application and be named as a securitisation repository with the FCA".

This release follows earlier announcements [from European DataWarehouse regarding the establishment of a UK subsidiary, European DataWarehouse Ltd](#), as well as a UK office. These developments, along with today's press release, demonstrate European DataWarehouse's ongoing commitment to its UK customers before and beyond Brexit.

European DataWarehouse was established as part of the implementation of the European Central Bank's ABS loan-level initiative. Since its inception as an initiative by the leading participants of the European securitisation market, EDW acted as a repository that has collected loan-level data and relevant documentation for over 1,600 transactions.

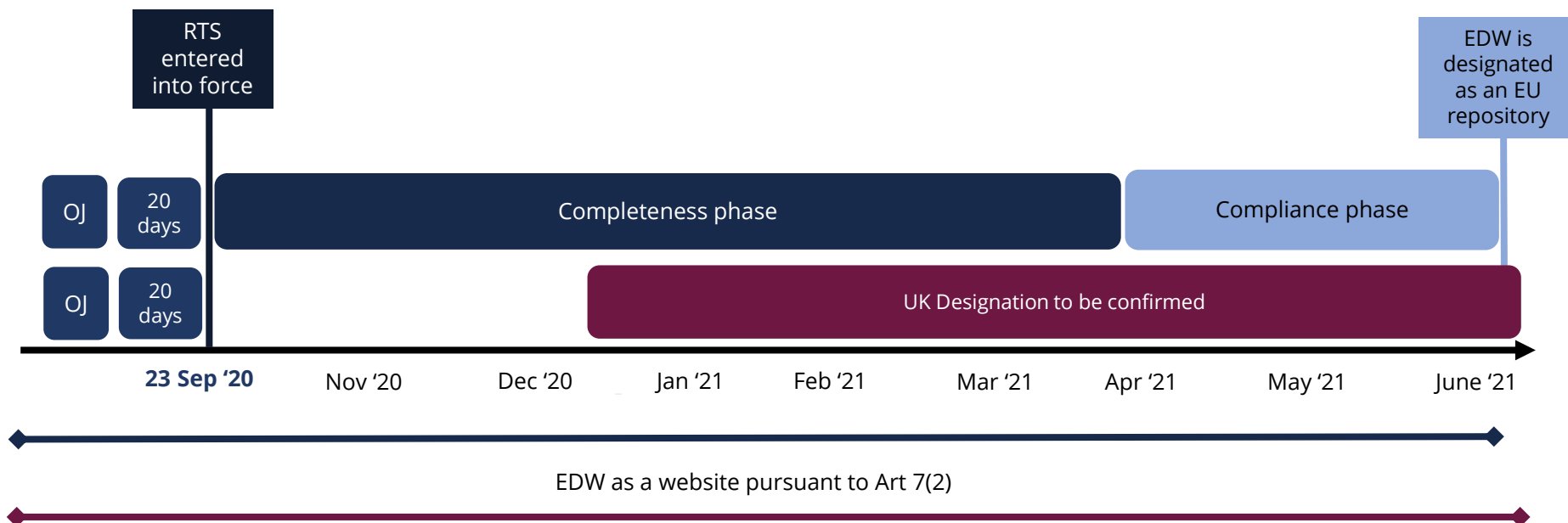
About European DataWarehouse GmbH

European DataWarehouse (EDW) is the first and the only centralised data repository in Europe for collecting, validating and distributing detailed, standardised and asset class specific loan-level data for Asset Backed Securities (ABS) and private whole loan portfolios. EDW stores loan-level data and

"European DataWarehouse (EDW) today announced it has submitted its application to become a Securitisation Repository in the UK registered and supervised by the Financial Conduct Authority (FCA)."

"The extensive application describes in detail the sound operational and technical aspects of the company and its market-leading reporting solutions which are necessary for EDW to collect and maintain UK securitisation records."

TENTATIVE APPLICATION TIMELINE IN EU AND UK



EDITOR REPORTING REGIMES

Fulfil regulatory and eligibility reporting requirements under different regimes



- Dedicated website fulfilling the ESMA reporting criteria during the interim period under the ESMA XML reporting regime
- Plan to be an ESMA securitisation repository, submitted application on 23 September 2020
- ECB repository for issuers to fulfil their Eurosystem eligibility requirements for ABS and private whole loan portfolios



- Issuers are now able to fulfil their Bank of England (BoE) eligibility requirements by reporting their loan-level data, cashflow models and documentation to European DataWarehouse
- ED intends to become a securitisation repository in the UK submitted application on 29 December 2020

EDW ROADMAP, TECHNICAL OFFERINGS AND ENHANCEMENTS

IRA-MARIA PARALLOJ, EUROPEAN DATAWAREHOUSE

THE EDITOR ROADMAP



Reporting Entities	<ul style="list-style-type: none"> • Create your securitisation • Upload documentation, incl. all 12 item codes prescribed in the RTS • Structured ESMA XML template upload support for all asset classes, incl. ND and data quality checks, both in the Live and Sandbox Environments • Draft state to preview ND Scores and Data Quality • Separate CSV to ESMA XML Converter • All features as required in the RTS for Securitisation repositories (e.g., Written confirmation, EOD Reports, etc.) 	<ul style="list-style-type: none"> • Data Usability Enhancements, including benchmarking of transactions • Support of FCA template in EDITOR and the CSV to XML converter (<i>once FCA publishes the XML schemas</i>)
Data Users	<ul style="list-style-type: none"> • Access to all uploaded documentation through the EDITOR website and SFTP • Access structured XMLs also in CSV format 	<ul style="list-style-type: none"> • “EDITOR Insights” add-on in EDITOR with Deal History, Benchmarks and Monitoring Report

ESMA REPORTING PRODUCT COMPARISON

	EDITOR	EDW BASIC
ESMA-compliant features	✓	✓
Detailed data quality checks	✓	✓
Unlimited support from customer service and account management team	✓	✓
Seamless deal access via EDITOR for investors	✓	✓
Integrated csv-to-xml converter	✓	Optional
Exclusive resource-saving extended rating agency templates	✓	Optional
Private area / restricted access	✓	—
Reporting for ECB possible	✓	—
Draft stage during file upload	✓	—
Sandbox testing environment	✓	—

ESMA VALIDATION CHECKS

ESMA defined more than 1000 validation checks across all templates and asset classes.

The checks can be grouped in the following categories:

- Identifier checks
- ISO / NACE / NUTS / LEI code checks
- Date inconsistencies
- Value checks: Negative, unusually high, unusually low values

FINDINGS FROM TESTING REAL CUSTOMER DATA

ID checks

Template	Description
IR	New Cashflow Item Identifier (IVSF3) duplicated with another New Cashflow Item Identifier (IVSF3) in the current submission.
IR	New Test/Event/Trigger Identifier (IVSR3) duplicated with another New Test/Event/Trigger Identifier (IVSR3) in the current submission.
IR	Original Cashflow Item Identifier (IVSF2) duplicated with another Original Cashflow Item Identifier (IVSF2) in the current submission.
IR	Original Test/Event/Trigger Identifier (IVSR2) duplicated with another Original Test/Event/Trigger Identifier (IVSR2) in the current submission.
SE	New Tranche Identifier (SEST3) duplicated with another New Tranche Identifier in the current submission.
SE	Original Tranche Identifier (SEST2) duplicated with another Original Tranche Identifier (SEST2) in the current submission.

FINDINGS FROM TESTING REAL CUSTOMER DATA

ISO / NACE / NUTS / LEI code checks

Template	Description
UE	Original Lender Name does not match the name corresponding to the Original Lender Legal Entity Identifier (RREL80) provided in the GLEIF Database.
UE	Originator Name does not match the name corresponding to the Originator Legal Entity Identifier (RREL83) provided in the GLEIF Database.
UE	Geographic Region - Collateral reports an invalid NUTS Code or has a two-digit country code that does not exist in the NUTS classification.
UE (SME)	NACE Industry Code (CRPL14) reports an invalid NACE code.
SE	Counterparty Legal Entity Identifier (SESP2) could not be validated against the GLEIF Database.
SE	Counterparty Country Of Establishment (SESP5) is not a valid ISO Country Code.
SE	Counterparty Name (SESP3) does not match the name corresponding to the Counterparty Legal Entity Identifier (SESP2) provided in the GLEIF Database.
SE	Counterparty Rating Source Name (SESP9) does not match the name corresponding to the Counterparty Rating Source Legal Entity Identifier (SESP8) provided in the GLEIF Database.

FINDINGS FROM TESTING REAL CUSTOMER DATA

Date inconsistencies

Template	Description
UE	Current Valuation Date later than the Data Cut-Off Date.
UE	Date Of Restructuring later than Data Cut-Off Date.
UE	Default Date later than Data Cut-Off Date.
UE	Interest Revision Date 1 earlier than or equal to the Data Cut-Off Date.
UE	Original Valuation Date later than Data Cut-Off Date.
UE	Prepayment Date later than Data Cut-Off Date.
UE	Prepayment Fee End Date earlier than the Data Cut-Off Date.
UE	Prepayment Lock-Out End Date earlier than the Data Cut-Off Date.
UE	Principal Grace Period End Date earlier than the Data Cut-Off Date.
SE	Interest Payment Date earlier than or equal to the Data Cut-Off Date.

FINDINGS FROM TESTING REAL CUSTOMER DATA

In clarification with ESMA

Template	Description
UE	Allocated Losses lower than zero.
UE	Maturity Date earlier than the Data Cut-Off Date.
SE	Current Coupon (SEST13) greater than 100.
SE	Current Interest Rate Margin/Spread (SEST14) greater than 100.

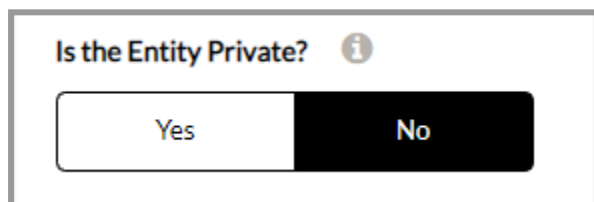
PRIVATE DEAL REPORTING IN EDITOR

MARTIN KUHN, EUROPEAN DATAWAREHOUSE

PRIVATE DEAL SOLUTIONS

EDITOR offers a dedicated website which allows private transactions to comply with the disclosure requirements under Article 7(1) of the Securitisation Regulation

- Includes features for the controlled transmission of the information to third parties
- Access to the relevant **data is fully managed by the Data Owner (DO)** (sponsor, originator or special securitisation purpose entity (SSPE)). DOs are responsible for authorising access to Data Users (DU)
- The same features in EDITOR that are used in the public area can also be used in the private area



The screenshot shows a web form with the title "Is the Entity Private?" followed by an information icon (i). Below the title are two buttons: "Yes" and "No". The "No" button is highlighted in black, indicating it is the selected option.

ACCESSIBILITY:
EASY AND USER-FRIENDLY
WEB-BASED ACCESS

FLEXIBILITY:
ABILITY TO MODIFY USERS,
DEAL STATUS AND ACCESS AT
DOCUMENT LEVEL

INTEGRITY:
LEGAL FRAMEWORK FOR
ACCESSING AND UPLOADING
INFORMATION

RELIABILITY:
ROBUST SOFTWARE WITH
ONGOING SUPPORT

FEES FOR PRIVATE ABS TRANSACTIONS

Special offer for private ABS under the Securitisation Regulation

- Private non-ABCP securitisations are defined as those securitisations where no prospectus has to be drawn up in compliance with Directive 2003/71/EC of the European Parliament and the European Council
- The disclosure requirements in Article 7 of the Securitisation Regulation extend to all securitisations

The special offer is limited in time until EDW will be nominated as a Securitisation Repository (SR) as per the publication date on the ESMA website (expected in Q2 2021):

- Based on this offer, for any private non-ABCP created in EDW, the one-off deal registration fee and the surveillance fee will be waived for the first year
- There are no limitations in terms of the number of private non-ABCP deals created in EDITOR

Full flexibility is granted in managing private deals in EDITOR:

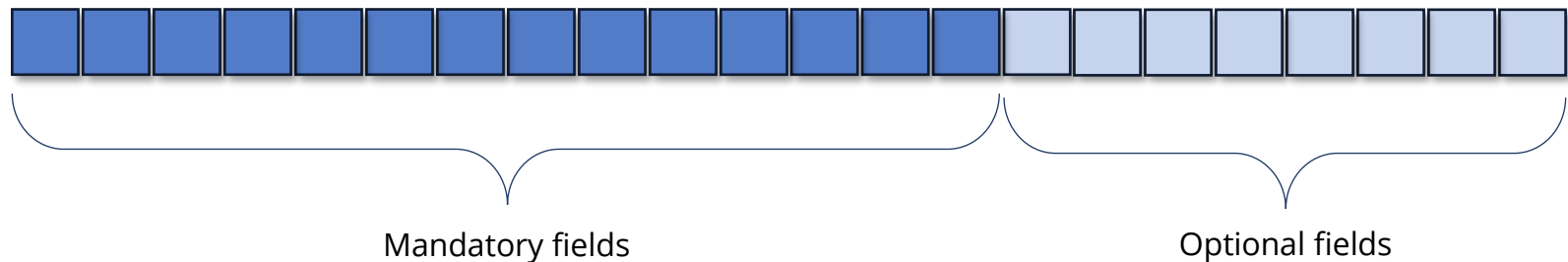
- It is possible to deactivate private deals similarly to public ABS transactions via a notification in EDITOR
- It is also possible to make a private deal into a public ABS transaction in EDITOR

EDW EXTENDED REPORTING TEMPLATES

DR. CHRISTIAN THUN, EUROPEAN DATAWAREHOUSE

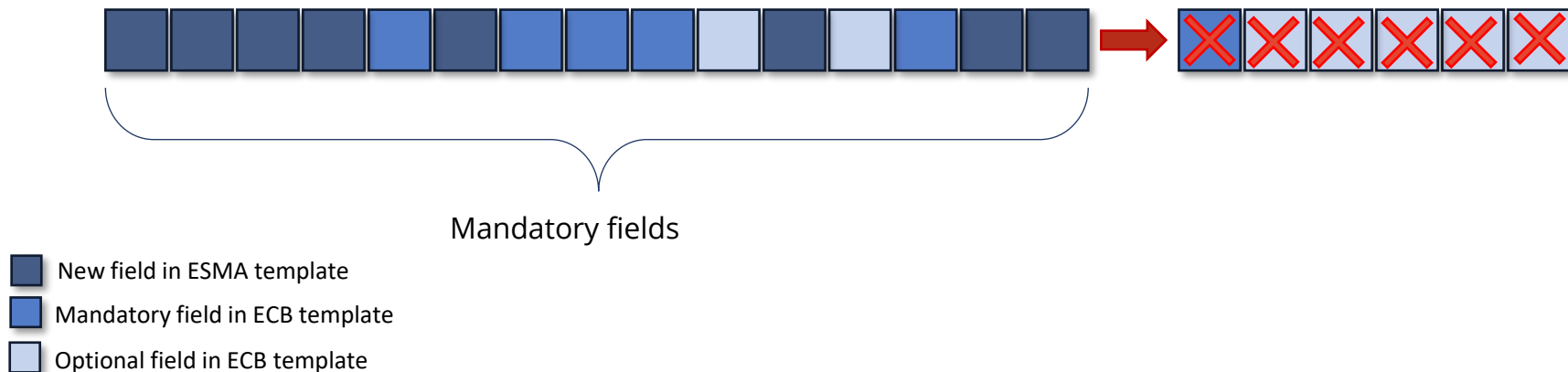
ECB TEMPLATES 2012 – TODAY

- Between December 2012 and September 2013 the European Central Bank (ECB) published a series of reporting templates that were intended to improve transparency, give investors access to loan-level data, as well as ensure that rating agencies and other market participants have the information they need to update their credit and cash flow models.
- The reporting templates consist of various sets of fields. The Eurosystem decided that only a subset of those fields should be mandatory.



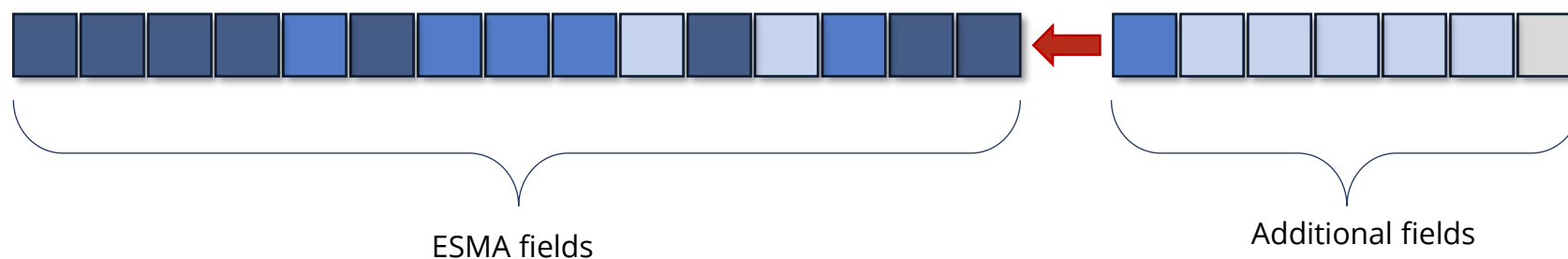
LOSS OF INFORMATION

- In August 2018, the European Securities and Market Authority (ESMA) published the draft underlying exposure templates, followed by subsequent versions.
- There are a series of key differences between the ESMA templates and the existing ECB templates:
 - A key difference is the removal of fields;
 - The ESMA templates include mandatory fields only.



CRUCIAL DATASET FOR CREDIT RATING AGENCIES

- The ESMA templates no longer comprise data fields containing valuable information that credit rating agencies and other market participants need to update their credit and cash flow models.
- The EDW Extended Templates contain all data fields required to meet the regulatory disclosure requirements under the Securitisation Regulation (EU) 2017/2402 while at the same time providing all the information required by credit rating agencies.
- All fields added in the Extended Templates are optional; credit rating agencies will accept templates with a subset of populated additional fields, as long as they fulfil the reporting needs.



- New field in ESMA template
- Mandatory field in ECB template
- Optional field in ECB template
- Additional field required by rating agency

A SEAMLESS UPLOAD PROCESS

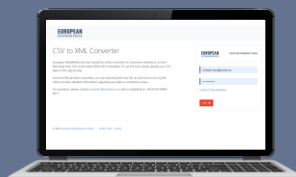
1

Upload EDW
Extended
Template in CSV-
format to the
converter



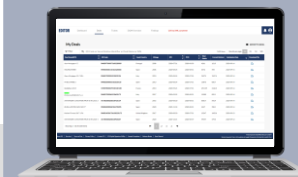
2

The ESMA fields
are automatically
converted into an
XML file



3

The XML file is published
on EDITOR for ESMA-
regulatory compliance



The EDW Extended
Template is stored in CSV-
format for credit rating
agencies



4

SEVERAL KEY BENEFITS USING OUR EXTENDED TEMPLATES

Easy-to-use format

The data can be submitted in CSV-format

Saving time and resources

No need to prepare a second loan tape for credit rating agencies

Free of charge

The templates are provided free of charge

Restricted access only

Templates provided via SFTP with access for selected parties only



DATA REQUIREMENTS FOR EUROPEAN CMBS

MATHIAS HERZOG, S&P GLOBAL RATINGS

S&P Global Ratings

Data Requirements for European CMBS

Mathias Herzog

Director

EMEA CMBS

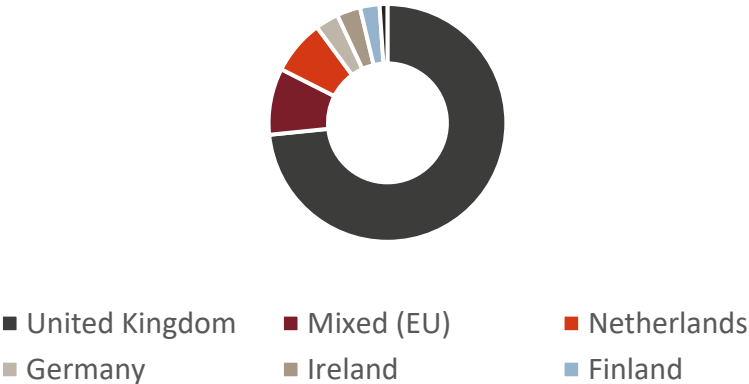
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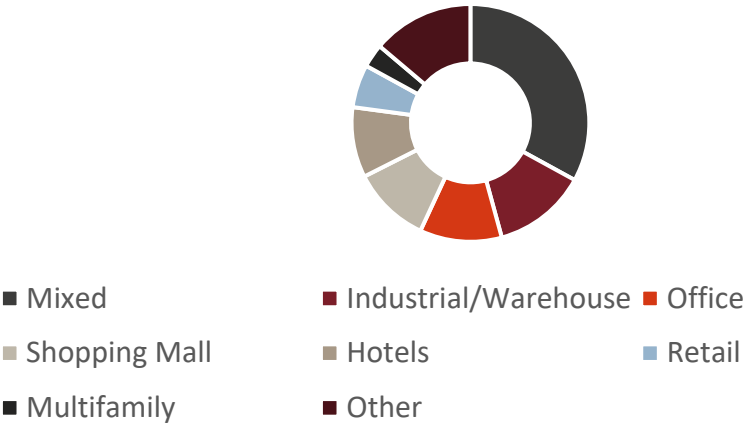


EMEA CMBS Ratings

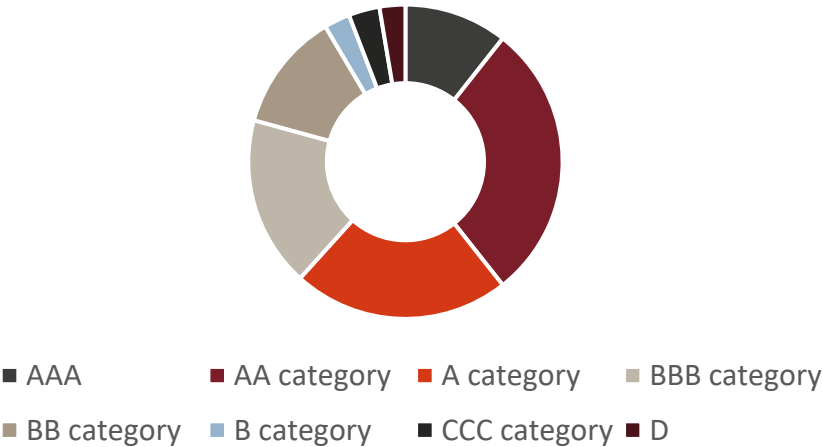
EMEA Ratings By Country



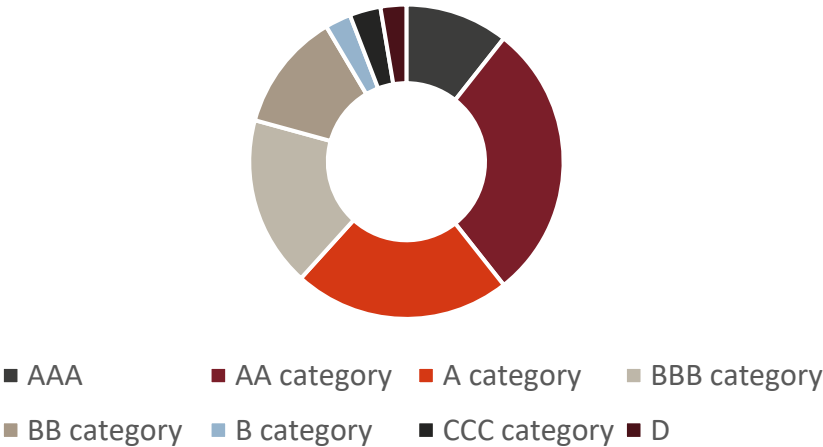
EMEA Ratings By Property Type



EMEA Ratings Split



EMEA Ratings Split



188 ratings in total, thereof **61** in the EU

48 transactions, public and private, incl. **11** CTLs

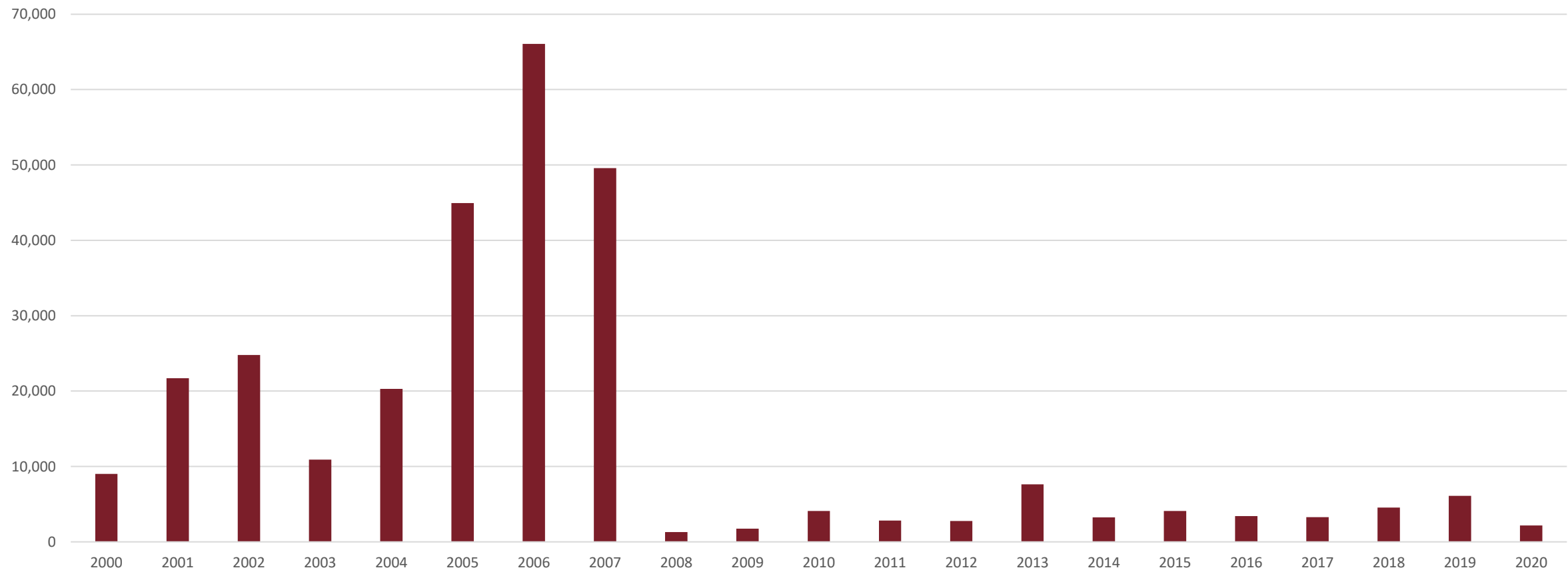
average rating is **A** (sf) for the EU and **A-** (sf) the non-EU portfolio

Recent CMBS Issuance Summary (1)

Transaction Name	Year	Issuance Amount (million)	Arranger	No of loans	Sponsor	Property Type	Collateral country
Kanaal CMBS Finance DAC	2019	€ 264,4	Goldman Sachs	2	Multiple	Retail, office, mixed-use	Netherlands
Taurus 2019-1 FR DAC	2019	€ 249,6	Bank of America	1	Colony Capital	Office, warehouse	France
Deco 2019 – Vivaldi S.R.L.	2019	€ 222,2	Deutsche Bank	2	Blackstone	Retail	Italy
Pembroke Property Finance DAC	2019	€ 227,5	HSBC	139	Multiple	Mixed	Ireland
ERNA S.r.l.	2019	€ 300,0	Bank of America	4	TPG Sixth Street Partners	Telephone exchanges	Italy
Scorpio (European Loan Conduit No. 34) DAC	2019	£236,4	Morgan Stanley	1	Blackstone	Light Industrial	UK
Cold Finance 2019 PLC	2019	£282,8	Goldman Sachs	1	Lineage	Cold Storage	UK
Eos (European Loan Conduit No. 35) DAC	2019	€ 291,0	Morgan Stanley	1	M7	Office, Light Industrial, R	Netherlands, Germany, Finland
Westfield Stratford City Finance No.2 PLC	2019	£750,0	BNP Paribas	1	URW	Retail	UK
Taurus 2019-2 UK DAC	2019	£366,0	Bank of America	1	Blackstone	Logistics	UK
Deco 2019-RAM DAC	2019	£142,5	Deutsche Bank	1	Intu	Retail	UK
Taurus 2019-3 UK DAC	2019	£232,2	Bank of America	1	Blackstone	Student Housing	UK
Logicor 2019-1 UK PLC	2019	£900,0	Goldman Sachs/ Mc	1	CIC/Blackstone	Industrial	UK
Emerald Italy 2019 Srl	2019	€ 106,0	JP Morgan	1	Kildare	Retail	Italy
Usil (European Loan Conduit No. 36) DAC	2019	€ 687,8	Morgan Stanley	1	Blackstone/M7	Light Industrial	Germany
Taurus 2019-4 FIN DAC	2019	€ 194,1	Bank of America	1	Sponda/Blackstone	Retail, Office	Finland
Helios (European Loan Conduit No. 37) DAC	2019	€ 332,5	Morgan Stanley	1	Atlas Hotels	Hotels	UK
River Green Finance 2020 DAC	2020	€ 186,4	Goldman Sachs	1	LRC Real Estate Limited	Office	France
Magenta 2020 PLC	2020	£265,6	Goldman Sachs	1	DTGO Corp. Ltd.	Hotels	UK
Taurus 2020-1 NL DAC	2020	€ 653,3	Bank of America	1	Blackstone	Mixed	Netherlands
Taurus 2020-2 UK DAC	2020	£450,0	Bank of America	1	Blackstone	Light Industrial	UK
Sage AR Funding No. 1 Plc	2020	£220,0	Deutsche Bank	1	Sage Housing	Social Housing	UK
Folio Residential Finance No. 1 plc	2020	£250,0	Barclays	1	Notting Hill Genesis	Multifamily	UK
Pearl Finance 2020 DAC	2020	€ 318,6	BNP Paribas	1	Blackstone	Light Industrial	France, Finland, Denmark, Germ
Taurus 2021-1 UK DAC	2021	£323,0	Bank of America	1	Blackstone	Light Industrial	UK
Taurus 2021-2 SP DAC	2021	€ 133,0	Bank of America	1	Blackstone	Office	Spain
Taurus 2021-3 DEU DAC	2021	€ 473,0	Bank of America	2	GC Equity Partners Investment Management Lt	Mixed	Germany
Last Mile Securities - PE 2021 DAC	2021	€ 383,5	Morgan Stanley	1	Blackstone	Light Industrial	Netherlands, Germany

Recent CMBS Issuance Summary (2)






EMEA CMBS Issuance in Mil. Euro



Source: S&P Global Ratings

CMBS : Monitoring

The Five Pillars of “Principles of Credit Ratings” for Structured Finance

Pillar	What It Involves
 Credit Quality	Analyzing the credit quality of the underlying securitized assets
 Payment Structure & Cash Flow Mechanics	Analyzing the structure and the distribution all the proceeds
 Legal and Regulatory	Reviewing the compliance with the bankruptcy-remoteness criteria by the SPE
 Operational Risks	Reviewing that the servicer and other relevant parties have the right tools, staff and experience to perform their duties
 Counterparty Risks	Making sure that all transaction participants have the minimum required rating requirement and replacement framework to be able to support the ratings on the transaction

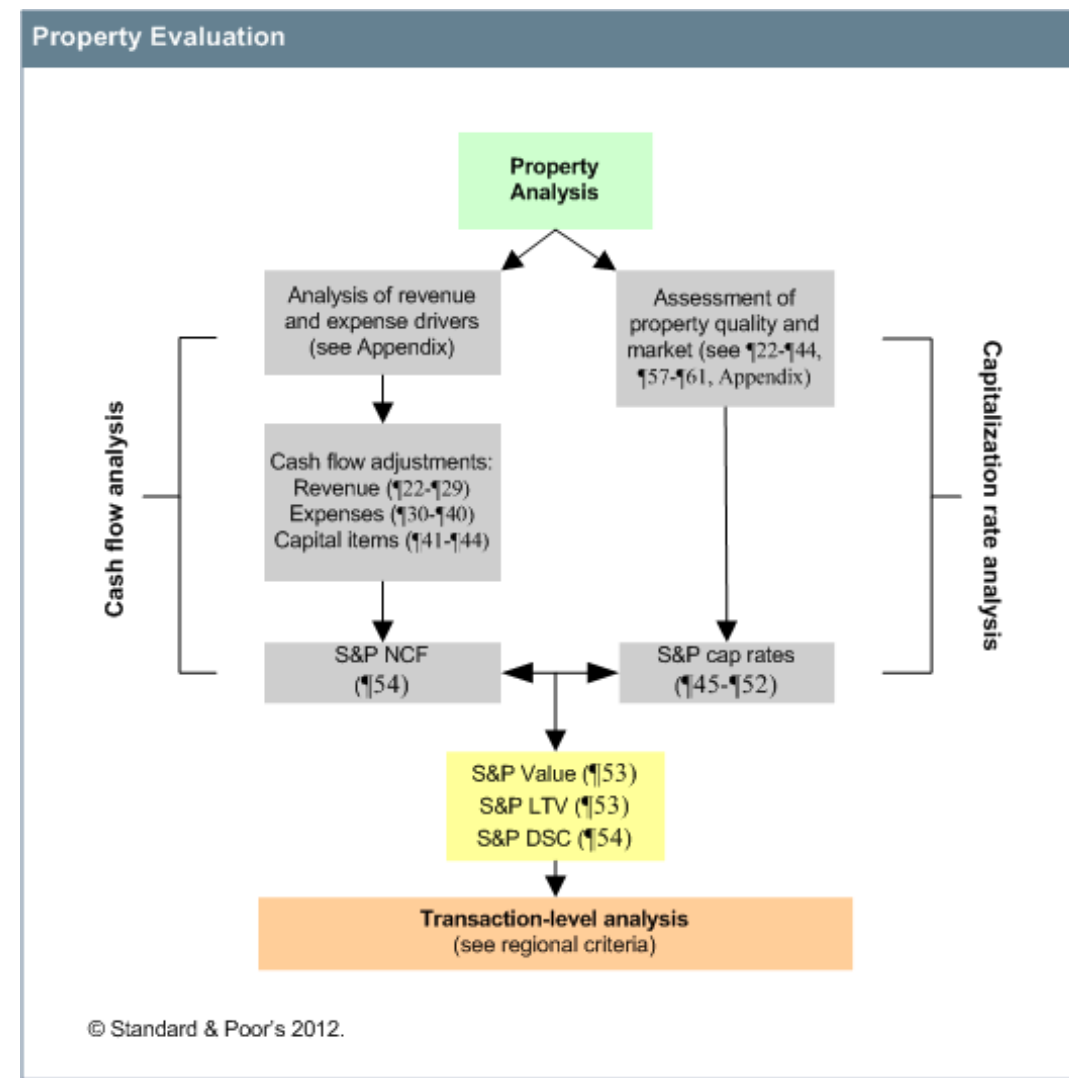
Global Property Evaluation Criteria

The global methodology sets out our approach for valuing each property in a transaction, as a product of the S&P NCF and the appropriate cap rate.

S&P values are typically lower than market value. This differs from RMBS where the valuation assigned to a property is the product of the reported underwriting valuation at origination and the relevant HPI.

There are a few key reasons why CMBS property valuation is much more granular than RMBS.

1. Most commercial property loans do not provide significant amortization, they are exposed to refinancing risk. Thus we typically assume 100% default frequency.
2. In RMBS pools are diversified, loans typically do amortize and only a portion of the pool is expected to default.



Information Requirements and Timeliness

- The Servicer provides a performance report once every payment period – typically quarterly.

Property Portfolio Overview

Loan Name	Annual Contracted Rent	Valuation	Valuation Date	Total Area (Sqm)	Vacancy rate	No. of Assets	No. of Tenants	WAULT	WAULTB
Cheetah	€6,535,745	€81,980,000	31 Aug 2019	65,033	2.26%	43	304	2.75	2.66
Cygnat	€3,326,578	€41,080,000	03 Apr 2019	47,229	23.73%	12	92	2.67	2.67
Legion	€2,275,321	€29,510,000	03 Dec 2019	15,732	7.91%	4	10	4.80	4.80
Phoenix	€13,445,894	€194,790,000	30 Aug 2019	109,455	24.13%	15	83	4.51	4.72
	€25,583,539	€347,360,000		237,450	16.99%	74	489	3.85	3.93



- The Cash Manager provides a payment report within a few business days after each IPD.

Notes	ISIN / Common Code	Original Principal Balance	No. Of Notes	Beginning Principal Balance	Total Principal Distribution	Ending Principal Balance	Total Interest Distribution
Class A Notes	XS1912765234 / 1912765234	128,200,000.00	1,282	112,641,180.13	2,780,192.25	109,860,987.88	294,118.63
Class B Notes	XS1912765408 / 1912765408	17,800,000.00	178	15,639,727.04	254,577.10	15,385,149.94	61,255.59
Class C Notes	XS1912765663 / 1912765663	27,500,000.00	275	24,162,499.64	393,307.31	23,769,192.32	119,872.84
Class D Notes	XS1912769061 / 1912769061	19,300,000.00	193	16,957,681.56	276,030.22	16,681,651.34	115,123.81
Class E Notes	XS1912776439 / 1912776439	4,200,000.00	42	3,690,272.67	60,068.75	3,630,203.92	33,628.63
Class X Notes	XS1912778484 / 1912778484	100,000.00	1	5,000.00	0.00	5,000.00	508,607.08

- S&P Operations team tracks the expected time to receive each trustee report.
 - An escalation process by the Operation team is in place when a report is not received.

Types of Reviews

Report	KPI
Annual Review	5 Pillars are reviewed.
Quarterly Review	The review involves Credit and the review of credit indicators, including changes in interest coverage, new valuations or any special notices received.

Formal Reviews can only be conducted using either Committee Reviews or Annual Reviews.

Issue	Outcome
Portfolio Review	Determine whether to refer Credit Ratings for Committee Review
Annual Review	Determine whether to refer Credit Ratings for Committee Review
Committee Review	Revise the Credit Rating or CreditWatch.

Key metrics that we review on an ongoing basis include **occupancy, NCF, market value, interest coverage, and credit enhancement levels.**

Information

S&P Global Ratings will issue a Credit Rating only when it possesses sufficient information upon which to base a Credit Rating.

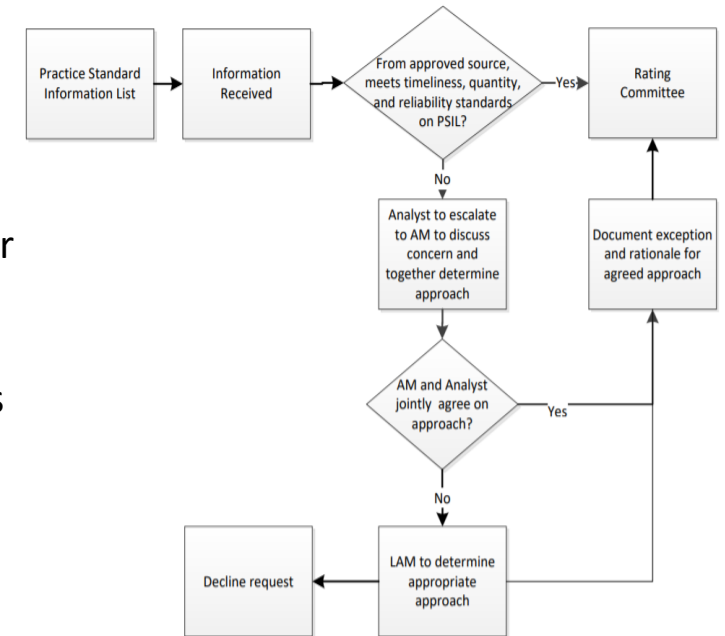
Information may be deemed sufficient only when:

- (a) there is sufficient quantity of information to enable the assignment of a Credit Rating;
- (b) S&P Global Ratings has received such information on a timely basis; and
- (c) S&P Global Ratings determines that the information received is reliable.

S&P Global Ratings' determination that information is sufficient is not an audit, is not designed to prevent or detect fraud and S&P Global Ratings' use of such information is not a guarantee of its accuracy

Practice Standard Information List

- a. Before making a Rating Recommendation a Primary Analyst must determine whether sufficient information is available to assign a Credit Rating. In making this determination, the Primary Analyst must follow the guidelines and standards in the applicable PSIL.
- b. The Primary Analyst answers Information Quality Assessment questions to evidence their assessment within applicable workflow systems. In determining whether sufficient information is available to base a Credit Rating upon, the Primary Analyst must:
 - i. Assess whether the available information meets the quantity and timeliness standards established in the applicable PSIL, and
 - ii. Assess whether the information is sufficiently reliable by considering relevant findings resulting from evaluations performed by a third party or by performing internal assessments as provided in the applicable PSIL.



Practice Standard Information List (PSIL)- CMBS

CMBS New Issuance






Information Category	Quantity Standard	Timeliness Standard	Reliability Standard Checked against one or more of the following	One or more of the following (*Refer to Document Source and Storage Guidance)
Assets (mortgage loans/leases) Must have one or more of: <ul style="list-style-type: none"> • Loan Terms, • General Collateral Descriptions, • General Lease Structure 	Mandatory	Latest preliminary and/or final data file, no older than 180 days (does not apply to loan agreement documents)	<u>Third Party Evaluation:</u> <ul style="list-style-type: none"> • Loan information subject to Due Diligence <ul style="list-style-type: none"> ➢ ABS Form 15-E (Must be requested for 17g-5 applicable transactions), ➢ Non 17g-5 applicable transactions in EMEA, must request confirmation of any due diligence conducted <u>Internal Assessment:</u> <ul style="list-style-type: none"> • Analytical Overlay (Analyst) • System validations for collateral data (EMEA) 	<ul style="list-style-type: none"> • Asset Summary (ASR) • Loan Tape / Collateral File • Loan Summary (Legal Summary Template)/ Underwriting Files • Legal Agreements/Governing Documents (eg. Indenture/PSA/etc) • Offering Docs (eg. Prospectus/PPMs/etc.)
Underlying Assets (properties): Must have one or more of: <ul style="list-style-type: none"> • Property Level (situational as required) • Borrower's Right in Collateral • Revenue and Expense • Market Information 	Mandatory	Latest preliminary and/or final data file	<u>Third Party Evaluation:</u> <ul style="list-style-type: none"> • Independent property valuations from non-issuer sources/ 3rd party sources (North America & APAC) <u>Internal Assessment:</u> <ul style="list-style-type: none"> • Property visit for sample of assets • Analytical Overlay (Analyst) 	<ul style="list-style-type: none"> • Asset Summary (ASR) • Loan Tape / Collateral File • Loan Summary (Legal Summary Template)/ Underwriting Files • Third Party Appraisals/ Valuation Reports • Engineering/Environmental Reports • Third Party Market Data • Offering Docs (eg. Prospectus/PPMs/etc.)
Deal Structure: Must have one or more of: <ul style="list-style-type: none"> • Capital Structure (subordination) • Cash Flow Waterfall • Reps & Warranties • Trigger 	Mandatory	Final drafts (no further material changes expected) at time of the Rating Recommendation	Agreements (for example, loan agreements, indentures, sale agreements, security agreements) reflect contractual obligations and may be taken at face value. Term sheets and	<ul style="list-style-type: none"> • Term Sheet • Offering Docs (eg. Prospectus/PPMs/etc.) • Legal Agreements/Governing Documents (eg. Indenture/PSA/etc) • Operating Documents / Operating Guidelines
Legal Structure: <ul style="list-style-type: none"> • Legal Isolation of Assets • Tax treatment 	Mandatory			<ul style="list-style-type: none"> • Offering Docs (eg. Prospectus/PPMs/etc.) • Legal Agreements/Governing Documents (eg. Indenture/PSA/etc) • Operating Documents / Operating Guidelines

CMBS Surveillance

Information Category	Sufficiency Standards			Standard Source Document
	Quantity Standard	Timeliness Standard	Reliability Standard Checked against one or more of the following	One or more of the following (*Refer to Document Source and Retention Guidance)
Rated Security Information: Must have at least one of the following: Principal Balance Principal and Interest Distribution	Mandatory	No more than 180 days (Exception is granted for securities that only report on a quarterly or semi-annual basis)		<ul style="list-style-type: none"> • Servicer Report/ Trustee Report/ Electronic File / Investor Report • CREFC Investor Reporting Package • Transaction Participant Correspondence • Third Party Vendor
Underlying Asset Information- Loan and Property Level: Must have at least one of the following: Loan Balance Payment Status Performance Data	Mandatory (typically for the significant performing loans within the pool)	No more than 180 days (Exception is granted for securities that only report on a quarterly or semi-annual basis)	<u>Internal Assessment:</u> <ul style="list-style-type: none"> • Subject to data validations (Data & Content Org) • Subject to data quality accuracy sampling (Data & Content Org) 	
Payment default Information/Full Repayment Information: Must have at least one of the following: Principal Loss Interest Shortfall Repayment	Situational	Upon occurrence	<ul style="list-style-type: none"> • Analytical Overlay (Analyst) 	
Event related information: Market or other event driven circumstances	Situational	Upon relevant announcement	<u>Internal Assessment:</u> <ul style="list-style-type: none"> • Analytical Overlay (Analyst) 	<ul style="list-style-type: none"> • Notice from Transaction Participant • Regulatory / Statutory Filing • External Press Report/ Release, External Research • S&P Publication or other Internal Communication
Dependent rating change: S&P rating change on counterparty/ Dependent rating/re-securitization Monoline insurer rating	Situational	NA	NA	<ul style="list-style-type: none"> • S&P Publication or other Internal Communication

The PSIL supports the analytical process by serving as a reference for the Sufficiency Standards, Standard Source Documents, and Approved Sources of information that may be used to form the basis of the Credit Ratings issued by that Practice Area.

The Five Pillars of “Principles of Credit Ratings” for Structured Finance

Pillar	What It Involves
 Credit Quality	Analyzing the credit quality of the underlying securitized assets
 Payment Structure & Cash Flow Mechanics	Analyzing the structure and the distribution all the proceeds
 Legal and Regulatory	Reviewing the compliance with the bankruptcy-remoteness criteria by the SPE
 Operational Risks	Reviewing that the servicer and other relevant parties have the right tools, staff and experience to perform their duties
 Counterparty Risks	Making sure that all transaction participants have the minimum required rating requirement and replacement framework to be able to support the ratings on the transaction

Overview Of Cash Flow Evaluator (CFE)

Recreates transaction specific waterfalls under assumed stress conditions, e.g. rising interest rates, haircut S&P NCF

Note	Seq	Destination Account	Action	Action Defined By / Payment Limitations	Source Account	Begin Period	End Period	Action Execute If
Default Timing	20	u_dflt_tmng	Capture Value		Source			
	40	Interest_Account_1	Transfer Interest		GBP_Group			Period <= Value(u_dflt_tmng)
	60	Principal_Account_1	Transfer Principal		GBP_Group			Period <= Value(u_dflt_tmng)
	80	u_int	Capture Value	Bal(Interest_Account_1)	Source			
Rating Stress Level	100	u_RSL	Capture Value	Value(v_StressedNCF)	Source			
S&P NCF Value	120	u_SPNCF	Capture Value	30180000	Source			
Use LF ? : 1=Yes ; 0=No	140	u_LF	Capture Value	1	Source			
Recovery Timing	160	u_rcrvy_tmng	Capture Value	24	Source			
Recovery Stress Factor	180	u_rcrvy_stress	Capture Value	Value(v_StressedRecovery)	Source			
Recovery Amount	200	u_rcrvy_amt	Capture Value	f_ValueOfProperty	Source			
Stress Factor	220	u_stress_factor	Capture Value	If(Period <= Value(u_dflt_tmng)	Source			
	230	u_RR	Capture Value	0.7842	Source			
	240	Available_Revenue	Transfer Cash	Value(u_RR) * Value(u_str)	Source			Period <= Value(u_rcrvy_tmng)
	260	Available_Principal	Transfer Cash	(Value(u_rcrvy_stress) * v	Source			Period == Value(u_rcrvy_tmng)
	280	u_check	Capture Value	If((Period <= Value(u_dflt_tmng)	Source			
	300	Outflow	Transfer Cash		Available_Revenue			Value(u_check)==1
	310	Outflow	Transfer Cash		Available_Principal			Period<>Value(u_rcrvy_tmng)
	320	Outflow	Transfer Cash		Interest_Account_1			Value(u_check)==0
	340	Interest_Account_1	Receive Interest		BuyCap1			Value(u_check)==1
	360	BuyCap1	Deliver Interest		Interest_Account_1			Value(u_check)==1
	380	Available_Revenue	Receive Interest		BuyCap1			Value(u_check)==0
	390	BuyCap1	Deliver Interest		Available_Revenue			Value(u_check)==0
	420	Third Pty Expenses	Pay Fee		Available_Revenue			
	440	Third Pty Expenses	Pay Fee		Interest_Account_1			
	460	Third Pty Expenses	Pay Fee		LF_1			Value(u_LF)==1
	540	Servicing Fees	Pay Fee		Available_Revenue			
	560	Servicing Fees	Pay Fee		Interest_Account_1			
	580	Servicing Fees	Pay Fee		LF_1			Value(u_LF)==1
	600	Special Servicing Fees	Pay Fee		Available_Revenue			
	620	Special Servicing Fees	Pay Fee		Interest_Account_1			
	640	Special Servicing Fees	Pay Fee		LF_1			Value(u_LF)==1
	700	LF_1	Pay Principal Notional		Available_Principal			
	710	A1	Pay Principal Notional&Pik		Available_Principal			period>=Value(u_dflt_tmng)
	720	LF_1	Pay Fee		Available_Revenue			
	730	LF_1	Pay Interest		Available_Revenue			

Period	Dest. Account	Action	Source Account	Amount Transferred	Interest Remaining	Principal Remaining
24	Available_Revenue	Transfer_Cash	Source	2,958,395	2,958,395	N/A
24	Available_Principal	Transfer_Cash	Source	115,150,092	2,958,395	115,150,092
24	Third Pty Expenses	Pay_Fee	Available_Revenue	136,914	2,821,481	115,150,092
24	Servicing Fees	Pay_Fee	Available_Revenue	20,000	2,801,481	115,150,092
24	Special Servicing Fees	Pay_Fee	Available_Revenue	65,719	2,735,762	115,150,092
24	LF_1	Pay_Principal Notional	Available_Principal	1,951,622	2,735,762	113,198,470
24	A1	Pay_Principal	Available_Principal	112,300,000	2,735,762	898,470
24	LF_1	Pay_Fee	Available_Revenue	28,840	2,706,922	898,470
24	LF_1	Pay_Interest	Available_Revenue	54,733	2,652,189	898,470
24	A1	Pay_Interest	Available_Revenue	1,697,730	954,460	898,470
24	A2	Pay_Interest	Available_Revenue	234,799	719,660	898,470
24	B	Pay_Interest	Available_Revenue	242,190	477,471	898,470
24	C	Pay_Interest	Available_Revenue	406,840	70,631	898,470
24	D	Pay_Interest	Available_Revenue	70,631	0	898,470
24	A2	Pay_Principal	Available_Principal	898,470	0	0

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LATEST DEVELOPMENTS ON STS VERIFICATIONS

MICHAEL OSSWALD, SVI



THE STS VERIFICATION PROCESS – THE STRUCTURED PATH TO YOUR SUCCESS.

Latest Developments on STS Verifications

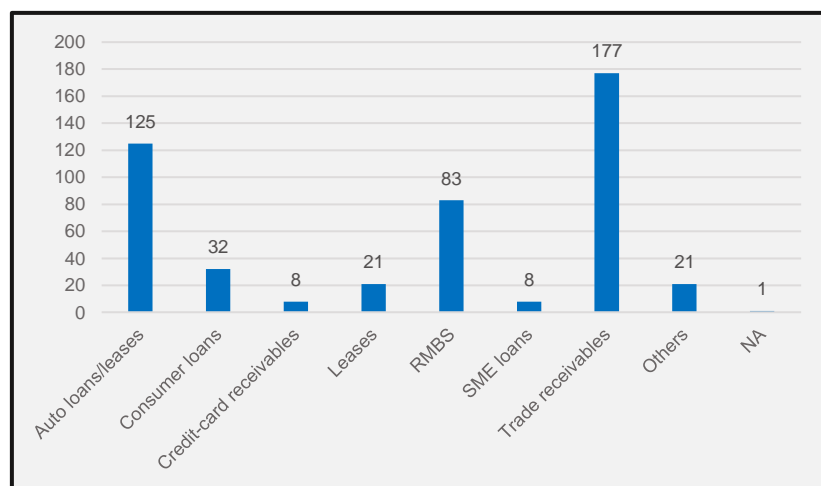
Michael Osswald

STS Verification International GmbH ("SVI")

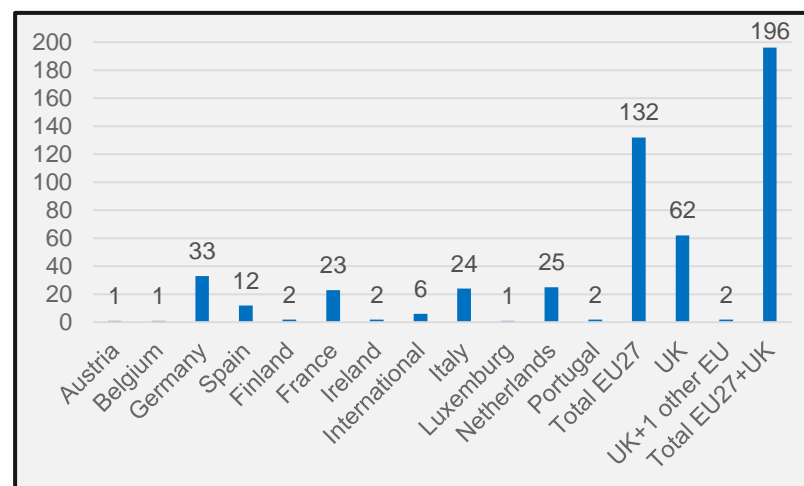
European Data Warehouse German Virtual Workshop, 22 April 2021

DEVELOPMENT OF THE MARKET FOR STS TRANSACTIONS

Distribution of all STS-notified Securitisations by Asset Class (2019-2021Q1)*)



Distribution of public STS-notified Securitisations by Jurisdiction (2019-2021Q1)*)



*) Period 1.1.2019 – 31.03.2021; Source: ESMA Website

- Since the introduction of the STS-segment, 476 securitisations have been notified at STS-compliant (226 non-ABCP vs. 250 ABCP, 196 public vs. 280 private transactions)
- STS-compliant transactions can be notified to ESMA as either “public” or “private” transactions, with resulting vastly different level of disclosure
- Following Brexit, more than 80 UK securitisations have been removed from the ESMA list of STS-notified transactions in a „clean-up exercise“ at the end of 2020/early 2021

THE SECURITISATION REGULATION - LEGAL FRAMEWORK

Securitisation Regulation

level	manner	Document / Topic	date	Valid from
1	ordinance	Securitisation Regulation (EU) 2017/2402 (as amended by Regulation (EU) 2021/557 dated 31.03.2021)	28.12.2017	01.01.2019
2 (ESMA)	RTS	STS Notification, Commission Delegated Regulation (EU) 2020/1226	12.11.2019	23.09.2020
2 (ESMA)	ITS	STS Notification, Commission Implementing Regulation (EU) 2020/1227	12.11.2019	23.09.2020
2 (EBA)	RTS	Homogeneity, Commission Delegated Regulation (EU) 2019/1851	28.05.2019	06.11.2019
2 (EBA)	RTS	Risk Retention, Final Draft	31.07.2018	[Open]
2 (ESMA)	RTS	STS Verification Services, Final Report	16.07.2018	18.06.2019
2 (ESMA)	RTS	Disclosure, Commission Delegated Regulation (EU) 2020/1224	16.10.2019	23.09.2020
2 (ESMA)	ITS	Disclosure, Commission Implementing Regulation (EU) 2020/1225	29.10.2019	23.09.2020
2 (ESMA)	RTS / ITS	Securitisation Repository (operational standards), Commission Delegated Regulation (EU) 2020/1229	29.11.2019	23.09.2020
2 (ESMA)	RTS	Securitisation Repository (registration), Commission Implementing Regulation (EU) 2020/1230	29.11.2019	23.09.2020
2 (ESMA)	ITS	Securitisation Repository (format of applications), Commission Implementing Regulation (EU) 2020/1228	29.11.2019	23.09.2020
3 (EBA)	guidelines	Non-ABCP STS criteria	12.12.2018	15.05.2019
3 (EBA)	guidelines	ABCP STS Criteria	12.12.2018	15.05.2019

Capital market regulation with reference to securitisation regulation

level	manner	Document / Topic	date	Valid from
1	ordinance	CRR (EU) 2017/2401 (as amended by Regulation (EU) 2021/558 dated 31.03.2021))	12.12.2017	01.01.2019
1	ordinance	LCR (EU) 2018/1620	13.07.2018	30.04.2020
1	ordinance	SolvV II (EU) C(2018) 3302	01.06.2018	01.01.2019
1	ordinance	MMF Regulation (EU) 2017/1131	14.06.2017	20.07.2017/ 21.07.2018
1	ordinance	MMF Commission Delegated Regulation (EU) 2018/990	10.04.2018	21.07.2018/ 01.01.2019

STS FOR SYNTHETIC ON-BALANCE-SHEET SECURITISATIONS

Comparison between the STS Criteria for synthetic on-balance-sheet securitisations and the existing STS Criteria for non-ABCP traditional securitisations

DELETED STS CRITERIA

- Art. 20 (1) – (5): True sale criteria
- Art. 20 (13): repayment of the securitisation positions not predominantly dependent on the sale of assets securing the underlying exposures
- Art. 21 (9): Clear terms for defaulted receivables and priority of payments

NEW STS CRITERIA

- Art. 26b (1) – (2): Originator requirements and origination of underlying exposures
- Art. 26b (3): On-balance-sheet holding of the underlying exposures by the originator or a group entity
- Art. 26b (4): No further credit hedging of the portfolio
- Art. 26b (5): Compliance with credit risk mitigation rules of the CRR
- Art. 26c (9): Reference register
- Art. 26e (1): Credit events
- Art. 26e (2): Credit protection payment
- Art. 26e (3): Credit protection agreement (extension period for workout, credit protection premiums)
- Art. 26e (4): Third-party verification agent
- Art. 26e (5), (5a): Transaction termination provisions (originator, investors)
- Art. 26e (6): Synthetic excess spread
- Art. 26e (7) – (9): Type of credit protection agreements, collateral requirements

STS FOR SYNTHETIC ON-BALANCE-SHEET SECURITISATIONS

Comparison between the STS Criteria for synthetic on-balance-sheet securitisations and the existing STS Criteria for non-ABCP traditional securitisations (continued)

(VIRTUALLY) UNCHANGED STS CRITERIA

- Art. 26b (8): Homogeneity, defined payment streams, no transferable securities
- Art. 26b (9): No securitisation positions
- Art. 26b (10): Underwriting standards, originator experience
- Art. 26b (11): No defaulted exposures or exposures to credit-impaired debtors
- Art. 26b (12): At least 1 payment made by debtor
- Art. 26c (1): Risk retention
- Art. 26c (2): Appropriate hedging of interest rate and currency risks
- Art. 26c (8): Experience of the servicer
- Art. 26c (10): Clear rules in the event of conflicts between noteholders
- Art. 26d (1): Historical performance data
- Art. 26d (2): Asset audit
- Art. 26d (3): Liability cashflow model
- Art. 26d (4): Environmental performance data on the financed assets
- Art. 26d (5): Disclosure requirements (Art. 7)

(SLIGHTLY) AMENDED STS CRITERIA

- Art. 26b (6): Reps & warranties of the originator on the underlying exposures
- Art. 26b (7): Eligibility criteria, no active portfolio management
- Art. 26c (3): Generally used reference rates for interest payments
- Art. 26c (4): Requirements in the event of an enforcement
- Art. 26c (5): Pro-rata vs. sequential amortization and triggers
- Art. 26c (6): Early amortisation provisions/triggers for termination of the revolving phase
- Art. 26c (7): Clear rules in the Transaction documentation on obligations of key transaction parties

ESG AND (STS) SECURITISATION

- **Initial Securitisation Regulation (as of 12 Dec 2017):** Since the inception of the STS-segment, the transparency criteria for non-ABCP securitisations have included the requirement to publish environmental performance data of the assets financed by residential mortgage loans and auto loans & leases, provided that such information is available to the originator and captured in its IT systems
- **Amended Securitisation Regulation (as of 31 March 2021):**
 - Art. 22 (4): Originators may alternatively decide to publish „the available information related to the principal adverse impacts of the assets financed by the underlying exposures on sustainability factors“. At the same time, the European Supervisory Authorities shall develop an RTS on the content, methodologies and presentation of the above mentioned information, in respect of the sustainability indicators in relation to adverse impacts on the climate and other ESG-related adverse impacts.
 - Art. 45a: The European Supervisory Authorities shall, by 1 November 2021, publish a report on the development of a sustainable securitisation framework. The EU Commission shall submit such report together with the report on the functioning of the Securitisation Regulation as per Article 46 of the Securitisation Regulation, to the European Parliament and to the Council, in order to prepare a „specific sustainable securitisation framework“.
- **Potential application of ESG principles to Securitisation:**
 - **Environmental:** Do the assets financed by the underlying exposure exhibit any climate change or pollution risks?
 - **Social:** Underwriting and servicing procedures that treat borrowers in non-discriminatory manner?
 - **Governance:** Does the transaction legal framework balance the requirements of the transaction parties?

ADDED VALUE OF THE THIRD-PARTY VERIFICATION

Added Value for **Originators**:

- During the preparation phase, the third-party verifier acts as first point of contact for questions and coordinated approach to the competent supervisory authorities
- Appropriate interpretation and consistent application of STS criteria (incl. RTS/ITS and guidelines) during the structuring phase
- These advantages also apply on an on-going basis during the life of the transactions (consistent implementation, contact with the competent supervisory authority, reduction of liability risks)

Added Value for **Investors**:

- Contribution to the uniform interpretation and application of the STS criteria throughout Europe
- Promoting confidence in the legally compliant application of the new Securitisation Regulation in general and the STS criteria in particular
- Facilitates risk analysis and portfolio management

Added Value for **Regulators**:

- Third party verification agents, as regulated independent bodies, can have interpretation discussions for the whole market on a basis of trust
- Risk of regulatory fragmentation undermining the European benchmark status of STS
- Due to their cross-border and cross-asset class work and expertise, third party verification agents can identify inconsistencies before they become a threat to the system



Q&A

UPCOMING WEBINARS

Register now at www.eurodw.eu

6 May 2021 @ 16:00 CET : COVID-19 Spring Research Update

This webinar will address EDW's latest insights into COVID-19.

Our February 2021 RMBS COVID-19 Tracker focuses exclusively on our mortgage data. In terms of delinquencies, the impact of the crisis on mortgages is muted overall, with a visible increase in delinquencies in Q2 2020, followed by a return to pre-crisis levels for Q3 and Q4 2020. In some countries, values can be significantly different and show different trends. In any case, we do not see a surge of similar magnitude as that observed during the financial crisis of 2008-2009.

THANK YOU//CONTACT US

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ANNEX

DISCLOSURE REQUIREMENTS

Differences between Public and Private Securitisations in EDITOR – European DataWarehouse repository solution

ESMA Reporting Templates	Public	Private
Underlying exposures	✓	✓
Investor Report	✓	✓
Inside information/ Significant Event	✓	✗

Disclosure requirements based on the RTS/ITS on operational standards for SR	Public Securitisation Repositories (SR)	Private (exempted from reporting to SR)
XML format	✓	✓
XML Schema checks	✓	✗
ESMA Scoring	✓	✗
Content checks (validation rules)	✓	✗
ND Thresholds	✓	✗

INNOVATION AND COLLABORATION OVER MORE THAN 1 YEAR

Our teams identified and incorporated hundreds of additional fields into the EDW Extended Templates



Together with the credit rating agencies, we have added the following fields per asset class:

• Residential:	61
• Auto:	11
• Corporate:	22
• Leasing:	12
• Consumer:	15
• Credit Cards:	5
• CMBS:	9
• Investor Reports:	97
• NPL:	5

LIMITED TIME OFFER FOR PRIVATE ABS TRANSACTIONS IN EDITOR

Special offer for private ABS

Example of special offer schema in case of private ABS transaction created on 31 March 2021

Deal Creation : 2021/03/31

	Fee – Deal registration	Fee - surveillance	Total amount	Invoice - Period of supply	Invoice – Issue date
1st Year	€0	€0	€0	No invoice*	No invoice*
2nd Year	n/a	€7000	€7000	2022/03/31 – 2023/03/30	2022/03/31
3rd Year	n/a	€7000	€7000	2023/03/31 – 2024/03/30	2023/03/31

This offer is valid till EDW is nominated as a Securitisation Repository by ESMA (end date to coincide with the publication on the website)

** EDW may issue a EUR 0 invoice upon request if necessary.*