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EXPECTATIONS ON VALUATION CAPABILITIES



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Abbreviations

ABS Asset-backed securities

AnaCredit Analytical credit datasets

AT1 Additional Tier 1

AVAC Aircraft Value Analysis Company

BaU Business-as-usual

BB Banking book

BRRD Bank Recovery and Resolution Directive

CAPM Capital asset pricing model

CBM Cubic metre

CDO Collateralised debt obligations

CDS Credit default swap

CET1 Common Equity Tier 1

CIR Commission Implementing Regulation

COREP Common reporting

CRR Capital Requirements Regulation

CSDB Centralised Securities Database

CSV Comma-separated value

CVA Credit valuation adjustment

DCF Discounted cash flow

DDM Dividend discount model

docx Microsoft Word

Data Repository for Resolution

DTA Deferred tax assets

DTL Deferred tax liabilities

DVA Debit valuation adjustment

DWT Deadweight tonnage

EBA European Banking Authority

ECB European Central Bank

EfB Expectations for Banks

EMIR European Market Infrastructure Regulation

EoVC Expectations on valuation capabilities

ES Expected shortfall

FINREP Financial reporting

FTE Full-time employee

FTP File Transfer Protocol

FX Foreign exchange

GAAP Generally Accepted Accounting Principles

IFRS International Financial Reporting Standards

IRB Internal ratings-based

IRT Internal Resolution Team

ISIN International Securities Identification Number

IT Information technology

KPI Key performance indicator

LDR Liability Data Report

LEI Legal entity identifier

LGD Loss given default

MBDT Minimum Bail-in Data Template

MFI ID Monetary Financial Institutions Unique Identifier

MIS Management information system

MPE Multiple point of entry

MSN Manufacturer serial number

NACE National classification of economic activities

NRA National resolution authority

PAX Passengers

PD Probability of default

P&L Profit and loss statement

Ppt PowerPoint

PRS Preferred resolution strategy

RA Resolution authority

RE Resolution entities

RIAD Register of Institutions and Affiliates Database

RLE Relevant legal entities

RoE Return on equity

RWA Risk-weighted assets

SFTP Secure File Transfer Protocol

SFTR Securities Financing Transaction Regulation

SHS Statistics on holdings of securities

SPE Single point of entry

SPOC Single point of contact

SRMR Single Resolution Mechanism Regulation

sVaR Stressed value at risk

TB Trading book

TEU Twenty-foot equivalent unit

VaR Value at risk

VDI Valuation Data Index

VDS Valuation Dataset

VDS 2020 Valuation Dataset 2020

XIsx Microsoft Excel

1. Executive summary

- Valuations are a critical component of the successful resolution of banks, as they form the basis for resolution authorities' resolution decisions. In the context of resolution, the capacity of banks' management information systems (MISs) to provide accurate and timely information is crucial for the reliability and robustness of valuations. Therefore, data availability is a fundamental prerequisite for valuations in resolution.
- 2 Banks' capabilities to produce data for valuations are addressed explicitly by Principle 5.2 of the SRB's Expectations for Banks (EfB), which requires banks to have in place MIS capabilities to produce information that is as up to date and complete as reasonably possible, to ensure a fair, prudent and realistic valuation.
- In 2019, the SRB published its Framework for Valuation¹, providing potential independent valuers and the general public with an indication of the SRB's expectations regarding the principles and methodologies for Valuations 2 and 3. In 2020, the SRB also published its standardised dataset (VDS 2020).² The Expectations on Valuation Capabilities (EoVCs) described herein supersede the 'SRB valuation dataset instructions' and the 'Explanatory note' documents.
- In this context, the SRB VDS 2020 outlined granular data requirements for valuation in resolution, with a focus on individual data attributes. Based on comprehensive market feedback and experience in real-life cases, the EoVCs improve the existing SRB VDS 2020, expanding it with additional information, and outline expectations on (i) Data Repository for Resolution (DRR) and (ii) valuation playbooks. To reduce the burden on banks, the EoVCs rely, as far as possible, on existing common definitions and EU standards. The required new set of additional information is based on standard reports that are typically already available at banks.
- The EoVCs are designed to ensure that a minimum expected set of data is available to the SRB on a permanent basis to support valuations. However, documents already accessible to the SRB, such as resolution deliverables (e.g. bail-in playbooks, solvent wind-down plans, etc.) and prudential reporting, do not form part of the EoVCs. In specific circumstances, such as ongoing resolution cases, the SRB may deviate from the expectations outlined in this publication, particularly in terms of additional information not included in the EoVCs.

¹ See https://www.srb.europa.eu/system/files/media/document/2019-02-01%20Framework%20for%20Valuation.pdf.

² 'SRB Valuation dataset instructions document' and 'Explanatory note'.

Since the EoVCs introduce expectations, banks will be given a gradual phase-in period to adapt their existing capabilities to meet these new standards. However, the capabilities that banks have put in place to produce the SRB VDS 2020 on an ad hoc basis should remain in place until the phase-in of the EoVCs is completed.

2. Overview of the main components

- 7 This chapter firstly lays out the main components of the EoVCs, and secondly explains the rational for the choices made.
- 8 The main components of the EoVCs are:
 - data requirements in the form of a Valuation Data Index (VDI), consisting of structured³ and unstructured information;
 - Data Repository for Resolution (DRR) functionalities; and
 - expectations on the structure and content of valuation playbooks.

2.1. Valuation Data Index

9 Having access to data for performing valuations in resolution is key to ensuring a fair, prudent and realistic valuation. To that end, the independent valuer should have access to all relevant sources of information, such as the internal records, systems and models of banks⁴. The EoVCs expand the data requirements of SRB VDS 2020, which are defined in the newly introduced VDI. To carry out a robust and accurate valuation for assets and liabilities, additional information is required (e.g. balance sheet reconciliation, the assessment of tax and regulatory implications, the derivation of company values via provided business plans, risk reports). Collecting all this data is a lengthy process that requires extensive interactions with banks, as it involves gathering, verifying and organising large amounts of detailed information. Frontloading this activity during the resolution planning phase ensures that the information is available on time, accurate, and meets the specific needs of potential independent valuers to carry out valuations in resolution. The VDI strives to make a sufficient comprehensive set of information⁵ available to the SRB and/or independent valuers for performing valuations so that the risk of lacking sufficient data to tune their valuation models is mitigated. Moreover, the VDI will foster consistency in all valuation processes in resolution, as all independent valuers will have access to the same minimum set of information.

³ The term 'structured information' in the EoVCs refers to tabular data (typically quantitative) organised according to a predefined data model, namely the VDS. Conversely, 'unstructured information' encompasses information that lacks a predefined data model or format, such as business plans, audit reports, risk reporting and managerial information, which are typically presented in PDF or editable document/presentation format.

⁴ Recital 3 of CDR 2018/345.

⁵ See Annex 1.

- 10 As the expected data will already be gathered in the resolution planning phase based on an established and structured process, the expectation is that the quality of the information will progressively improve compared to ad hoc requested data. The EoVC covers expectations on data quality, including a full list of data validations rules and a standardised validation report template.
- 11 The VDI consists of:
 - an enhanced Valuation Dataset (VDS), which includes data attribute requests on single asset and liability level, and data at portfolio level (for trading books and liabilities⁶); and
 - a set of documents, which includes audit reports, risk reports, business plans, information on internal models for valuation purposes, etc.
- The VDS enables the SRB or an independent valuer to prepare standardised models for valuation and to automate valuation processes to the greatest extent possible. The enhanced VDS aims to be broad and proportionate, since it covers a wide range of asset and liability classes and off-balance sheet positions, while being proportionate to the complexity of banks' business models. The EoVCs introduce technical rules⁷ for submitting files including the VDS data attributes, which will help independent valuers to organise the data and develop capabilities ready for use in the event that a valuation is requested by the SRB on short notice. These technical rules are also indispensable for effective quality assurance. It ensures consistency in the way banks prepare the data files, which in turn minimises the risk of errors.

2.2. Data Repository for Resolution

- 13 The VDI information is expected be submitted to the DRR at a predefined frequency. The establishment of a permanent DRR is essential for two main reasons:
 - Data availability: historical evidence indicates that obtaining data from banks can be time-consuming. Preparing and securing data during business-as-usual (BaU) periods ensures that the information is promptly available when required. A permanent DRR ensures that the SRB can act swiftly in crisis situations and guarantees that in such events, the necessary data is readily accessible to an independent valuer or the SRB.

⁶ Data for instruments that are not part of the MBDT will be provided on an aggregated basis.

⁷ See Annex 2.

- Efficiency in data collection: during a valuation process, a significant amount of information and data is collected. This process is more structured and efficient when using a DRR during BaU compared to an ad hoc request to the bank.
- 14 The EoVCs outline the minimum functionalities expected for the DRR, giving banks the flexibility to choose the technical solution that aligns most effectively with their own MIS architecture, whether through fully in-house solutions or external vendor options.
- 15 Banks are expected to ensure the capability to regularly provide and submit the information expected in the VDI to the DRR, as well as any other additional information upon request, if necessary. The data must be of high-quality and reconcilable with other financial information.
- 16 Therefore, banks are expected to implement internal processes to ensure that:
 - the information expected in the DRR (see Chapter 3.3.3) is prepared and regularly updated;
 - additional documents are provided on request within a short timeframe via the DRR; and
 - restricted SRB and NRA staff have access to the DRR within 24 hours when requested by the SRB.

2.3. Valuation playbooks

- 17 The EoVCs establish expectations on the content and structure of the valuation playbooks. Valuation playbooks will cover three main areas: the valuation self-assessment, the use of internal valuation capabilities and the governance arrangements.
- The existing EU Regulation explicitly allows independent valuers to rely on banks' internal models when deemed appropriate, taking into account the quality of data, among other aspects. Moreover, Principle 5.2 of the SRB EfB expects banks to clearly explain and justify the data sources, assumptions and methodologies underlying their internal valuation models.
- 19 To support the potential use of banks' internal valuation models, preparatory work during the resolution planning phase should endeavour to ensure that any potential independent valuer consulting the valuation playbooks would gain an in-depth understanding of the bank's internal valuation models and their use during BaU.
- 20 Banks are expected to conduct a self-assessment of how they currently value their assets and liabilities. It is important to note that this assessment focuses on valuation methodologies and challenges, not on performing an actual self-valuation. This assessment should identify critical

⁸ Article 7(2) of CDR 2018/345.

- valuation topics and provide insights into potential valuation methodologies. Since banks have the most insight into their operations, they are best positioned to undertake a preliminary analysis of valuation challenges and areas of higher valuation uncertainty.
- 21 The use of internal valuation models by independent valuers can be facilitated either by directly applying the outputs of such models or by having banks re-run them based on the independent valuer's instructions (e.g. with different input parameters), ensuring that the results are suitable for valuation.⁹
- 22 The valuation playbook should contain an assessment of the flexibility of banks' internal valuation models, particularly in terms of how easily inputs and assumptions can be adjusted in line with the instructions provided by the independent valuer.¹⁰
- 23 The provision of accurate valuation data relies on robust governance. This includes having procedures in place to manage the data throughout its lifecycle, from collection, storage and updating to processing and sharing via the DRR. Effective governance is not only critical to ensure the availability and quality of data, but it also enables bank staff to provide sufficient support to the independent valuer when conducting its work.
- The valuation playbook should document all the relevant information on governance arrangements relevant to valuations in resolution. This includes explaining how the information in the VDI is collected and stored in the DRR, the outline of the submission approval, and the data quality-assurance process. Banks should also document the management responsibilities and a single point of contact responsible for valuations in resolution. Moreover, the valuation playbook is expected to outline the arrangements in place to ensure the availability of relevant staff (including any interactions with the valuer).

⁹ Chapter 10 of the EBA's Handbook on Valuation for purposes of resolution.

¹⁰ See Chapter 6.4.1 for more details.

3. SRB Valuation Data Index

3.1. Definition

The SRB VDI is a comprehensive document request list organised by subject area. It details the minimum information that banks are expected to submit in the DRR. As the VDI cannot be exhaustive, the SRB may request additional information as necessary. Please refer to Annex 1, which provides the detailed content of the VDI.

3.2. Entities in scope

- As a general rule, resolution entities (REs) and relevant legal entities (RLEs) are expected to submit the list of documents specified in the VDI (the 'VDI documents') to the DRR according to the guiding principles outlined in Chapter 3.3. The determination of which entities are in scope is based on the following criteria:
 - whether the entity is a RE or an RLE;
 - whether the entity is a credit institution;
 - whether the entity is domiciled in a jurisdiction within the banking union;
 - whether the entity is an intermediate holding company.¹¹
- 27 Based on these criteria, entities may be required to provide either a full-scope VDI or a reduced-scope VDI. The full-scope VDI encompasses all requested information, particularly the VDS for the respective entity, while the reduced-scope VDI focuses on unstructured data and does not require the VDS or any other structured data as outlined in VDI items 1.3 and 1.4 (See Annex 1).
- 28 'Resolution entity' means a resolution entity as defined in Article 2(1)(83a) of Directive 2014/59/EU. RLEs are defined as legal entities that fulfil the criteria outlined in the latest available SRB 'Guidance on the liability data report'.
- 29 The VDI requirements for different entities are as follows:

¹¹ See the definitions of financial, mixed financial and mixed-activity holding companies in Article 4(1) of Regulation (EU) No 575/2013, and the definition of an intermediate entity as defined in the 'Guidance on the liability data report'.

- RE domiciled within the banking union are expected to provide the full scope of the VDI.¹²
- For RLEs, the scope of the VDI is defined as follows:
 - ▶ If the RLE is a credit institution domiciled within the banking union, it is expected to provide a full-scope VDI (i.e. all the VDI documents).
 - ▶ If the RLE is a non-credit institution domiciled in the banking union, it is expected to provide a reduced VDI, excluding the VDS.¹³
 - ▶ If the RLE is either a credit institution or a non-credit institution domiciled outside the banking union, it is expected to provide the VDI based on specific SRB requests, which will be clarified and agreed upon in the resolution colleges with the respective RAs.
 - ► If the RLE is earmarked for liquidation in the resolution plan, it is not expected to submit the VDI.
- Entities that are EU subsidiaries (under the SRB's remit) of third-country parent undertakings¹⁴, or that have parent undertakings outside the banking union but within the European Union¹⁵ that are not designated as RE themselves, are expected to provide a fullscope VDI.
- Entities that are neither REs nor RLEs are not expected to submit the VDI. However, the SRB may ask entities affiliated to a cooperative banking group to provide a full or reduced VDI where this is appropriate to ensure a proper implementation of the PRS.
- Intermediate holding companies are expected to submit VDI document 3.3 only (i.e. annual financial statements and interim reports for each relevant intermediate holding company within the resolution group).

¹² Holding companies whose only relevant assets consist of participations in RLEs are exempt from submitting VDI documents 1.1 (VDS), 1.3, and 1.4.

¹³ However, the SRB may request (parts of) the VDS based on the business model (e.g. asset managers, real estate-focused subsidiaries).

¹⁴ So-called 'third-country hosted entities'.

¹⁵ So-called 'EU hosted entities'.

Figure 1. VDI documents for entities in scope

	Full-scope VDI	Reduced- scope VDI	VDI based on specific requests	No VDI	VDI request 3.3
REs in the BU	X				
RLEs (credit institutions in the BU)	Х				
RLEs (non-credit institutions in the BU)		Х			
REs and RLEs outside the BU			Х		
RLEs earmarked for liquidation				Х	
EU subsidiaries of third-country entities or EU but non-BU parent undertakings not designated as REs	Х				
Entities that are neither REs nor RLEs				Х	
Intermediate holding companies					Х

30 For groups following a multiple-point-of-entry resolution strategy, Figure 1 must be applied for each of the resolution groups.

3.3. Guiding principles for the VDI

- 31 This chapter presents general guidance on how entities are expected to supply the information requested in the VDI: 16
 - Minimum list of VDI documents
 - Mapping the VDI to existing documents and reports
 - Submitting VDI documents to the DRR
 - Cut-off date of the VDI documents and availability in the DRR
 - Individual vs group-level information
 - Naming convention

¹⁶ In addition, see Annex 2 for further technical instructions on submission. These principles do not apply to the VDS (see Chapter 4.2).

3.3.1. Minimum list of VDI documents

The VDI is a standard request list and is not customised to specific business models. Therefore, the VDI is not exhaustive, and the SRB may request additional information if needed. The SRB may waive the submission of certain documents if they are deemed irrelevant in light of the entity's specific business model or reporting processes (for example, some documents may not exist at single-entity level if they are not requested by the bank's management board, senior management, etc.). The SRB will decide and inform the bank if it is waived from submitting any of the VDI documents.

3.3.2. Mapping the VDI to existing documents and reports

- 33 Entities may utilise existing documentation, such as internal policies, reports or other relevant documents, to provide the required VDI information to the DRR. If a specific document or report does not fulfil (whether fully or partially) the VDI's content requirements, the entity is expected to submit an appropriate document or supplements/annexes that meets these standards.
- Documents already accessible to the SRB, such as resolution deliverables (e.g. bail-in playbooks, solvent wind-down plans) or prudential reporting, do not form part of the VDI. In certain instances, the VDI documents may refer to materials that are already publicly available or accessible to the SRB. The entity is expected to notify the SRB, which may grant an exemption from submitting that information to the DRR. For example, if an annual report can be found on the entity's website, it does not need to be submitted. Banks are expected to indicate in the DRR index of documents (see Chapter 5.2) the list of documents that will not be provided, including the link to the publicly available source, or the respective deliverable to the SRB in IRIS.

3.3.3. Submitting VDI documents to the DRR

- 35 During BaU, banks are expected to update the DRR on a regular basis (see Chapters 3.3.3 and 3.3.4). This includes a review of whether the documents within the scope of the VDI have been either updated or newly created.
- 36 Banks are expected to submit the VDI documents and, where applicable, update the information stored in the DRR, as outlined in Annex 1, according to the cut-off and submission dates outlined in Chapter 3.3.4.
- 37 Shortly before, during or after the application of any resolution actions, documents may need to be updated at short notice and made available in the DRR, upon request.

3.3.4. Cut-off date of the VDI documents and availability in the DRR

38 Banks are expected to implement the necessary arrangements to ensure that VDI documents are kept up to date in accordance with the cut-off dates specified in Annex 1. There are two distinct cut-

off dates for the VDI documents listed in Figure 2. These are all linked to the usual business cycles or processes of banks:

- Year-end for the two preceding years: for some VDI documents, the cut-off date is 31 December of the two preceding years. Historical data is essential in valuations, as it offers insights into the entity's past performance, validates future forecasts, assesses risks and ensures transparency and comparability. These documents must be submitted to the DRR by 30 April of the current year.
- Latest version available: the latest version of the VDI document should be submitted in the DRR as it becomes available.
- 39 If the end of the financial year is not 31 December, the year-end should be regarded as the actual end date of the financial year. In this case, the documents should be submitted in the DRR within four months after the actual end date of the financial year.

Figure 2. Cut-off dates for VDI documents

	Most recent version	31 December of the previous year (T-1)	31 December of year (T-2)
Year-end for the two preceding years		X	X
Latest version available	X		

3.3.5. Individual vs group-level information

In general, single-entity-level VDI information is expected for REs and RLEs. However, certain VDI documents at group¹⁷ level are also expected for REs. It may occur that VDI documents are not available either at single-entity or group level (for example, risk reports may not available at single entity-level). In such cases, the SRB may waive the submission of the VDI document.

3.3.6. Naming convention

41 To enable the independent valuer to manage the data efficiently, a standardised naming convention for the provided data is expected. The naming convention is based on the structure of the VDI (see Chapter 3.4). Please refer to Annex 2, which provides detailed technical instructions.

¹⁷ 'Group' means a parent undertaking and all its subsidiary undertakings, as defined in Article 2(11) of Directive 2013/34/EU.

3.4. Structure of the SRB Valuation Data Index

42 The VDI is organised into ten key subject areas, each containing several sub-areas. Annex 1 provides details on the expected content for each VDI document.

Figure 3. Key subjects of the SRB valuation VDI list

Key subjects of the Valuation Data Index		
SRB Valuation Dataset and other structured data		
2. General information		
3. Financial information		
4. Taxes		
5. Personnel		
6. IT		
7. Risk management		
8. Legal and compliance		
9. Information on internal valuation models		
10. Other information		

- 43 High-level description of the key subject areas:
 - 1. SRB Valuation Dataset and other structured data: The SRB Valuation Dataset is the most important single component of the VDI, and enables the SRB and the independent valuer to act in a timely manner with structured and quality-assured data (see Chapter 4 for details). The other structured dataset that needs to be prepared and stored in the DRR is the Minimum Bail-in Data Template (MBDT), the trial balance sheet extract and the outcome of the reconciliation process.
 - **2. General information**: This section provides a comprehensive overview of the entity, covering aspects such as legal-entity structure, investor presentations and external ratings.
 - 3. Financial information: Financial information provides the basis for the assessment of financial developments in the last few years, and helps to identify the main value drivers and risks. This information is also essential to valuing the franchise value.¹⁸

¹⁸ Article 1(g) of CDR 2018/345.

- **1. Taxes**: Tax information is key for valuation purposes, particularly when valuing the franchise value or the post-conversion equity value. ¹⁹ Tax effects not only impacts the overall valuation, but might also be affected by the application of different resolution tools (e.g. assessments of tax-loss carry-forwards in a sale-of-business transaction).
- 5. Personnel: An overview of the quantity, qualification and costs of staff ensures that the independent valuer factors in related costs. This is particularly important for valuing the franchise value and assessing the implications of this valuation for the application of resolution tools, especially with transfer strategies or potential organisational restructuring after a bail-in.
- **6. IT**: A detailed IT cost breakdown further helps assess current and future expenses. This is particularly important for valuing the franchise value.
- 7. Risk management: Understanding a bank's risk management is crucial for valuation, as it supports the assessment of the individual risks, governance quality and financial resilience. This understanding also serves as a foundation for identifying potential additional risks to be considered in resolution valuations and areas of higher valuation uncertainty, and provides transparency regarding the methodologies applied for risk measurement. Notably, the information on the risk situation is an essential valuation input.
- 8. Legal and compliance: Legal and compliance information helps assess potential legal risks and liabilities from litigations and disputes, which can significantly affect the valuation. Costs from contract termination, which may be particularly relevant in transfer strategies, could also have a material impact on the valuation. Additionally, internal audit reports provide an insight into the bank's internal controls and an evaluation of key areas relevant for valuations.
- 9. Information on internal valuation models: The independent valuer may rely on the bank's internal models to conduct valuations. This includes aspects such as model specifications, valuation inputs and the assessment of areas with the highest valuation uncertainty.
- **10. Other information**: Any other documentation not included in the previous items, upon request by the SRB.

¹⁹ Article 10(5) of CDR 2018/345.

4. SRB Valuation Dataset

4.1. Definition

- The VDS is a collection of predefined datasets covering various asset classes, including loans, securities, derivatives and subsidiaries, as well as liabilities. It supersedes the SRB Valuation Dataset 2020, which has been enhanced to increase its usability for the independent valuers. The VDS is part of the VDI (see Chapter 3).
- 45 Chapter 4.2 contains guidance for banks on key aspects of the VDS. The general structure of the VDS is explained in Chapter 4.3. The major changes in the VDS compared to the VDS 2020 are summarised in Chapter 4.4. An overview of the requested information per dataset is provided in Chapter 4.5. The expectations on quality assurance are provided in Chapter 4.6.
- Please refer to Annex 2, which provides instructions on submitting the VDS and the data quality report; Annex 3, which provides the full list of data attributes²⁰ in the VDS, along with their definitions; and Annex 4, which provides technical descriptions of the data attributes and validation rules, and rules outlining how the data attributes apply to the different types of exposures; and Annex 5, which provides a data quality report. Annex 6 provides a comparison between the new VDS and the SRB VDS 2020.
- 47 The entities within the scope of the VDS are defined in Chapter 3.2.

4.2. Guiding principles for the VDS

- 48 This chapter provides guidance on how banks are expected to submit the information requested in the VDS:
 - Annual submission frequency.
 - Completeness and reconcilability with FINREP and accounting information.
 - Data format and naming conventions.
 - Relationship of the VDS with other regulatory reporting.
 - General rules regarding monetary amounts.

²⁰ A data attribute refers to a column in the VDS.

4.2.1 Annual submission frequency and cut-off date

- 49 As part of the VDI, the VDS and other structured data (see VDI items 1.1, 1.2, 1.3 and 1.4 in Annex 1) with a year-end cut-off date are expected be provided in the DRR on an annual basis and submitted by 30 April (see Chapter 3.3.3). Moreover, only the two most recent VDS with a cut-off date year-end are expected to be kept in the DRR.
- 50 However, entities are expected to ensure the capability to prepare the VDS with an end-of-month cut-off date upon request, except for the derivatives, securities and trading book datasets, which may be requested with cut-off dates other than end-of-month.²¹ This specific capability will be assessed in the context of testing exercises.
- As regards the VDS, all datasets (see Chapter 4.3) are expected to be submitted in the DRR on an annual basis, except for the protection datasets related to 'shipping', 'aviation', and 'renewables'. These datasets shall be provided upon request by the SRB, taking into account circumstances such as crisis situations in the relevant economic sectors, sectoral concentration of the bank, etc.

4.2.2 Completeness and reconcilability of data

- For the purpose of valuation in resolution, it is essential for the independent valuer to have access to high-quality data on the institution's assets and liabilities. To achieve this, banks are expected to establish robust arrangements to ensure that their MIS capabilities can produce accurate, consistent and reliable data. Before submitting the VDS files to the DRR, banks should conduct a series of data validation rules (See Chapter 4.6 and Annex 4).
- Valuation data must be reconcilable with the relevant financial statements and regulatory reporting. As part of the data quality-assurance process, banks are expected to ensure that the sum of the carrying amounts reported in the VDS at instrument level are reconcilable with the corresponding items in FINREP reporting or in the accounting ledger. This means that the production of the VDS is expected to be primarily based on a granular breakdown of FINREP or accounting ledger data. Explanations of differences in balance-sheet line exposures and the aggregated carrying amounts in the VDS are expected and have to be provided in the DRR (see VDI document 1.4). Additionally, the VDS requires certain accounting information (local GAAP) for each instrument to assess the potential accounting implications of the resolution.
- 54 Please refer to Chapter 4.6 and Annex 4 for guidance on how banks are expected to perform the reconciliation with FINREP and the financial statements as part of the quality assurance.

²¹ The same capability applies to the provision of the MBDT.

4.2.3 Data format and naming conventions

The VDS requires the use of a specific standardised and exportable format to make it easier for independent valuers to manage large amounts of data and to develop ready-to-use capabilities if a quick valuation is required. The VDS submission must be in CSV format and adhere to specific naming conventions. Please refer to Annex 2 for the technical specifications regarding the data format and naming conventions.

4.2.4 Relationship of the VDS with other regulatory reporting

The VDS is closely aligned with various established frameworks, such as the analytical credit datasets (AnaCredit²²), the European Market Infrastructure Regulation (EMIR), Statistics on Holdings of Securities (SHS), the Centralised Securities Database (CSBD), the Liability Data Report (LDR) and the Minimum Bail-in Data Template (MBDT). The VDS includes identifiers to connect it with the above frameworks. The VDS is designed to serve as a complementary dataset and addresses data gaps for valuation purposes.

4.2.5 General rules regarding monetary amounts

All data attributes representing monetary amounts should reported in euro. All foreign currency amounts should be converted into euro at the respective exchange rate on the cut-off date (see data attributes LOA_60, SMBDT_35. SEC_63, DRT_10 and SUB_21).

4.3. General structure

- 58 The VDS consists of datasets for the asset and liability classes loans and off-balance sheet exposures, securities, derivatives and subsidiaries and for financial liabilities. It also includes a specific dataset covering trading-book data. Detailed information on other asset and liability classes not covered in the VDS is part of the unstructured information within the VDI. A detailed list of the expected data attributes and related descriptions is provided in Annex 3.
- 59 For each asset class, the VDS captures relevant information in the 'Instrument' dimension. The instrument dimension needs to be provided for each asset class separately. For loan instruments and off-balance sheet exposures, separate 'Counterparty', and 'Protection' datasets are expected. For the trading book and liabilities not part of the MBDT, an additional 'Portfolio view' is used.

²² This should be understood as referring to the forthcoming IReF Regulation, which will supersede the AnaCredit Regulation, among others, once it becomes effective.

- The structure of the VDS datasets within the same dimension follows a consistent format. The data attributes are organised into various information categories to ensure transparency. The following subsections provide an overview of the requested information for each dimension.
- The submitting entity must ensure that, where relevant, certain information is anonymised when the information is submitted to the DRR²³. This assessment is the responsibility of the submitting entity, regardless of the instructions provided in Annex 3.

4.3.1 Instrument datasets

- The instrument dimension is the centrepiece of the data model. The instrument datasets aim to provide the independent valuer with the necessary information to value the instrument on an individual basis. It therefore provides information on the basic features of the instrument and a description of its financial aspects (e.g. cash-flow information, risk characteristics and accounting features). Data attributes for reconciliation with FINREP, when applicable, are also provided.
- The instrument datasets also contain information on the bank's fair-value valuation, including the fair value and the level in the fair-value hierarchy. Instrument datasets also include information on the so-called valuation clusters. Banks are expected to provide these clusters in a consistent manner in both the valuation playbook and the VDS. For additional information, please refer to Chapter 6.
- Additionally, mapping data attributes have been included in the VDS to capture the relationships between specific asset and liability datasets and between these datasets and the existing regulatory reporting frameworks.

4.3.2 Counterparty dataset

- 65 The 'Counterparty' dimension is only applicable for the instrument class 'Loans and off-balance sheet exposure'.
- This dimension provides information on counterparties of the reported instruments. It includes the counterparty's identification data, the general characteristics of the counterparty, and information on risk and default.

²³ Corresponding data protection regulations, in particular the requirements of the GDPR, must be observed. The SRB recommends the implementation of a data anonymisation process by using internal unique identifiers that allow the institution to map such IDs to the actual counterparties. This approach enables the institution to maintain the necessary internal references while safeguarding the confidentiality of the data.

4.3.3 Protection dataset

- 67 The 'Protection' dimension is only applicable for the instrument class 'Loans and off-balance sheet exposure'.
- This dimension provides information on any protection that serves to secure instruments, including guarantees and collateral. In addition, protection-class-specific information (e.g. for real estate, shipping, etc.) is included in the VDS.
- 69 Real estate protection-class specific data is expected to be provided on a regular basis according to the cut-off and submission dates specified in Chapter 4.2.1. However, the datasets for shipping, aviation and renewables will need to be provided upon a SRB request (see Chapter 4.2.1).

4.3.4 Portfolio view datasets

- The portfolio view is applicable to trading books. It is introduced as granular valuations of products within trading-book valuation are often complex in nature (especially for exotic derivatives) and might need to be performed on a simplified portfolio or desk level when time or access to the bank's staff is not available. Usually, within one trading desk the allocated derivatives (and securities, if applicable) have comparable market-risk profiles and sensitivity indicators ('Greeks'). This allows the independent valuer to estimate impacts on the valuation if market parameters change.
- 71 Additionally, a dataset on liabilities that do not fall under the scope the MBDT provides information on instruments on an aggregate level.
- 72 The following figure summarises the structure of the VDS:

Figure 4. Overview of the structure of the SRB Valuation Dataset

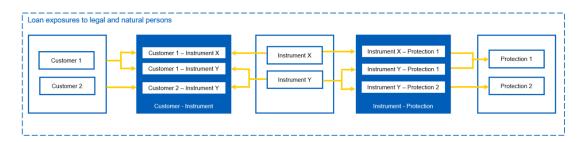
Assets Dimension	Loans and off- balance sheet exposure	Securities	Subsidiaries, joint ventures and associates	Derivatives	Supplementary MBDT	Complementary liabilities
Instrument	✓	✓	✓	✓	✓	
Counterparty	✓					
Protection	✓					
Portfolio				✓		✓
Related reporting	AnaCredit, SFTR	SHS, SFTR		EMIR	CSDB, LDR, MBDT	

4.3.5 Mapping tables

73 For loan instruments and off-balance sheet exposure, the instrument, protection and counterparty datasets are interconnected through separate mapping tables, as illustrated in the general data

model (Figure 5 below). Banks are expected to assign a unique identifier²⁴ to each exposure, protection and counterparty involved in a transaction, which enables a logical connection across the three datasets. For instance, an instrument may be secured by various protections, or may involve two or more borrowers along with a guarantor.²⁵ The VDS includes three datasets establishing the relationships between instruments and the protections, between instruments and counterparties, and between counterparties and protections. Specifically, any instrument covered in the instruments' dataset, counterparties, from the perspective of the submitting entity, may take the roles of debtor, protection provider or both (see data attribute IC_3 – Party role).

Figure 5. Example of relationships between instrument, protection and counterparty datasets



74 The figure below illustrates the VDS data model, encompassing all datasets, mapping tables, and their relationships.

²⁴ Unique identifiers are defined in the VDS for each single dataset. For instance, in the 'Loan Instruments and Off-Balance Sheet Exposure dataset', the unique identifier is LOA_1. The unique identifier assigned to a specific exposure, protection, or counterparty is expected to be consistent and unchanged across submissions over time.

²⁵ Specifically, any instrument covered in the instruments' dataset, counterparties, from the perspective of the submitting entity, may take the roles of debtor, protection provider or both (see data attribute IC_3 – Counterparty role).

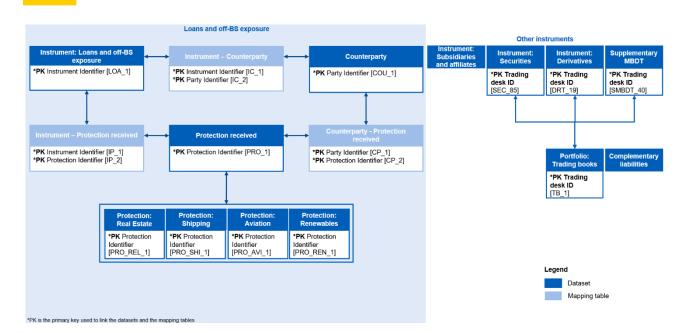


Figure 6. General data model of the SRB Valuation Dataset

4.3.6 Mapping with existing reporting frameworks

75 To link the information for an instrument to other regulatory reporting frameworks, such as AnaCredit and MBDT, relevant mapping data attributes have been included in the VDS. The following figure illustrates how the VDS can be linked to other reporting frameworks.

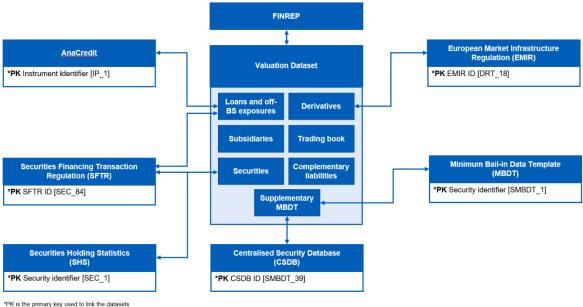


Figure 7. Mapping with existing reporting frameworks

PK is the primary key used to link the datasets

4.3.7 Additional relationships between datasets

In addition to the connections between the datasets established through mapping tables, there are relationships between specific asset and liability datasets created through specific data attributes. For example, derivative instruments are linked to other instruments when used for micro hedging purposes; netting sets' IDs are used for repo or derivatives transactions; and liabilities are associated with encumbered assets. The following figure illustrates these relationships. Further guidance is provided in Chapter 4.5.

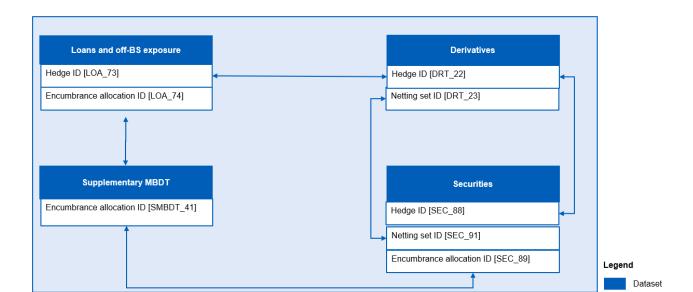


Figure 8. Relationships between datasets

4.4. Summary of the major changes compared to VDS 2020

77 This chapter summarises the major changes in the VDS compared to the VDS 2020. Please refer to Annex 6, which provides a detailed comparison of the new VDS and the VDS 2020 on a single data attribute level.

4.4.1 Data model

- The existing data model of the VDS 2020 has been improved and streamlined based on lessons learnt from previous crisis situations. The industry's feedback regarding the simplification of the VDS 2020 has also been incorporated into the new VDS. These improvements aim to enhance the model's completeness and usability.
- 79 Compared to the VDS 2020, the new data model is more flexible and proportionate to the complexity of banks' business models.

4.4.2 Mapping with existing reporting frameworks

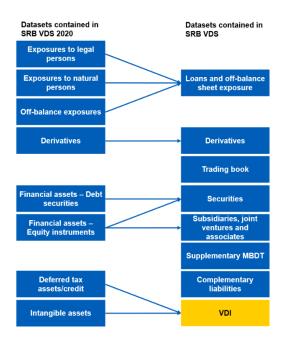
- 80 In general, the instrument datasets have been closely aligned with a focus on the integration of other components of the EoVCs:
 - to facilitate the reconciliation of the VDS with FINREP reporting (at individual level or at consolidated level of the ultimate parent undertaking) and accounting data, data attributes have been added to the instrument datasets;

 to link the information for an instrument to other regulatory reporting frameworks (such as AnaCredit, EMIR, SHS, LDR and MBDT), relevant mapping data attributes have been included in the VDS.

4.4.3 Newly created and revised datasets

81 The list of contained datasets has been revised. Please see Figure 9 for a comparison:

Figure 9. Comparison of included datasets



- Similar to the AnaCredit data model, the instrument datasets for exposures to legal persons, exposures to natural persons and off-balance sheet exposures have been combined in a single instrument dataset. Likewise, the corresponding counterparty and protection datasets have been combined in a single counterparty and a single protection dataset respectively. In addition, new mapping tables / datasets have been added to the VDS to capture the relationship between instruments and counterparties, instruments and protections received as well as the relationships between counterparties and protections.
- Protection-class-specific datasets have been added. In particular, datasets for the protection classes 'Real estate', 'Aviation', 'Renewables' and 'Shipping' have been included. These datasets are expected to be submitted only by lenders holding portfolios with high concentration in such segments, and only upon request by the SRB (except for 'Real estate' which will be requested on a regular basis as per Chapter 4.4.3), which will consider various factors including the entity's business model, high concentration risks in the specific segments, sectoral crisis affecting those segments, etc.

- The datasets for asset classes, deferred tax assets and intangible assets have been removed. The corresponding information request has been moved to the VDI, as the information can be more effectively provided there in the form of unstructured data.
- The new 'Subsidiaries, joint ventures and associates' dataset, which was only partially included in the equity instrument of the 2020 VDS, has been revised with a focus on the valuation of companies. The remaining equity exposures are included in the new dataset on securities, which contains information that was previously part of the datasets on equity instruments and debt securities.
- The securities dataset has been simplified and expanded to incorporate essential information that enables the independent valuer to identify the instruments, risks characteristics, accounting classification, fair-value information, etc. Cash-flow data deemed necessary for the individual valuation of instruments has also been enhanced. However, this data will only be collected from banks with more complex securities portfolios, specifically those holding Level 2 and Level 3 securities, thus significantly reducing the number of data attributes expected for simpler banks.
- Two datasets on liabilities have been included to complement the data reported in the MBDT with relevant information for valuation purposes. Granular cash-flow data will only be collected from liabilities that would qualify as Level 2 and Level 3 securities.
- The dataset on derivatives has been simplified, significantly reducing the number of data attributes, notably those relating to cash-flow data (they can be extracted from EMIR reporting). The remaining data attributes will allow the independent valuer to identify the instrument.
- Finally, a new dataset for trading books has been introduced for banks subject to solvent wind-down requirements and for others with material trading books, to address situations where the valuation of securities and derivatives in the trading books might need to be performed on a simplified portfolio / desk level, particularly when there is insufficient time or access to the bank's staff.
- 82 Additionally, a simplified approach has been adopted when defining new data attributes, namely:
 - many of the new data attributes introduced are simply identifiers or contain data for reconciling the carrying amounts against the banks' general ledger and supervisory reporting; and
 - the new VDS introduces many unique data attributes, i.e. data attributes that are actually repeated across multiple datasets e.g. 'Fair value', 'carrying amount', 'Valuation cluster ID', 'General ledger account ID', 'Fair value hierarchy', 'Accounting portfolio (FINREP), etc.

4.5. Deep dive into the datasets contained in the VDS

- In general, the VDS datasets enable the independent valuer to perform an economic valuation of assets and liabilities using relevant valuation methodologies, such as cash-flow valuation, the adjusted book value, the expected credit loss approach, etc. Additionally, further valuation-related tasks and analyses, such as assessing potential risks in a resolution scenario, can be conducted. Beyond performing the valuation, the independent valuer may use the VDS data to stratify the balance sheet and identify high-risk balance sheet exposures, develop dashboards to support decisions related to valuation approaches and valuation inputs, and assess other aspects concerning transfer perimeters, e.g. net asset value, franchise value, etc.
- 84 This chapter provides detailed explanations of the scope and structure of the respective datasets and indicates the potential use for the independent valuer.
- 85 The VDS is harmonised with other financial reporting standards, particularly FINREP, for reconciliation and valuation purposes. The scope of the datasets is defined by the corresponding FINREP positions. This means that entities are expected to reproduce in the VDS a breakdown of the balance sheet exposures as presented in FINREP.
- 86 Furthermore, data attribute categories are introduced to structure the datasets.
- 87 The deep dives into the specific datasets are structured as follows:
 - Scope: Defines the instruments that must be reported within the dataset by referencing FINREP positions. Please refer to Commission Implementing Regulation (EU) 2021/451 for the definitions related to FINREP.
 - Overview of the requested data attributes: Provides an overview of the requested data attribute categories.
 - Specific observations: Offers further guidance on specific data attributes / topics.
 - Potential use of the VDS in valuations in resolution: Outlines the relevance and potential
 applications of the dataset for valuations in resolution.

4.5.1 Loans and off-balance sheet exposure dataset

88 **Scope:** The SRB Valuation Dataset on loans and off-balance sheet exposure covers the following exposures:

- Credit-risk instruments, such as loans and receivables, to natural or legal persons, among others.²⁶
- Off-balance sheet exposures broken down into loan commitments, financial guarantees and other commitments.
- The instruments included in the scope of the dataset correspond to those defined under the main categories and accounting portfolios in FINREP Tables 1.1 (Assets) and 9.1.1 (Off-balance sheet exposures: loan commitments, financial guarantees and other commitments given), irrespective of whether the entity is subject to FINREP reporting. The relevant accounting portfolios and main categories are outlined in the tables below.

Figure 10. Scope according to FINREP Table 1.1 (assets)

Accounting portfolio	Main category	Row reference
Financial assets held for trading	Loan and advances	0090
Non-trading financial assets mandatorily at fair value through profit or loss	Loan and advances	0099
Financial assets designated at fair value through profit loss	Loan and advances	0130
Financials assets at fair value through other comprehensive income	Loan and advances	0144
Financial assets at amortised cost	Loan and advances	0183

Figure 11. Scope according to FINREP Table 9.1.1 (off-balance sheet exposures: loan commitments, financial guarantees and other commitments given)

Accounting portfolio	Row reference
Loan commitments given	0010
Financial guarantees given	0090
Other commitments given	0170

90 **Overview of the requested data attributes:** The instrument dataset on loans and off-balance sheet exposure comprises data attributes organised into the information categories detailed in the table below. However, in certain cases, the applicability of data attributes depends on the type of

²⁶ In contrast to AnaCredit reporting requirements, the SRB Valuation Dataset on loans and off-balance sheet exposures does not include a reporting threshold and includes information on exposures to both legal and natural persons. The absence of thresholds allows exposures with relatively low amounts, such as consumer lending, leasing, factoring, etc., to fall within the scope of the dataset. It will also streamline the data quality process, particularly when reconciling the data with FINREP or the general ledger account.

exposures. For example, some data attributes do not apply to off-balance sheet exposures. The applicability rules can be found in Annex 4 (see tab 'List of data attributes', column 'Applicability').

Figure 12. Number of requested data attributes per information category for the instrument data: loans and off-balance sheet exposure

Information categories	Number of data attributes
Identification	1
Type of instrument	11
Instrument information at inception	2
Instrument information at cut-off date	4
Cashflow information	19
Fair value	2
Instrument risk	8
Performing status of the instrument	5
Accounting	8
Reconciliation FINREP	8
Mapping	7
Total number of data attributes	75

- The first information category, 'Identification', facilitates the unique identification of each instrument by requiring a unique instrument identifier. This ensures that each instrument can be identified and mapped to counterparties and protection received via the corresponding mapping tables 'Loan instruments and off-balance sheet exposure counterparty mapping table', 'Loan instruments and off-balance sheet exposure protection mapping table' and 'Loan instruments and off-balance sheet exposure 'counterparty protection' mapping table.
- Data attributes in the 'Type of instrument' category provide a general description of the instrument, including the type of instrument and the country of governing law. These details give the independent valuer a comprehensive understanding of the nature of the instrument.
- The categories 'Instrument information at inception' and 'Instrument information at cut-off date' provide key data at different points in the instrument's lifecycle. As of inception, details such as the inception date should be provided. As of the cut-off date, information such as the outstanding nominal amount and arrears amount for the instrument are requested. This data provides the independent valuer with information on the development of the instrument over time.

- The 'Cashflow information' category includes information on the amortisation and interest payment schedule, such as the amortisation type, the legal final maturity date, the interest rate type and the current interest rate. These data attributes enable the independent valuer to forecast the contractual cash flows for the purpose of a DCF valuation for each single instrument.
- The 'Fair value' category provides the fair value of the instrument as calculated by the entity according to IFRS 13, along with its fair-value hierarchy, which can serve as a reference point for the independent valuer.
- 'Instrument risk' provides information on risk-weighted assets and risk parameters such as IFRS 9 probability of default and IFRS 9 loss given default. This enables the independent valuer to perform a risk analysis, which can then be reflected in the estimates for expected cash flows as part of the DCF or adjusted book value valuations.
- The 'Performing status of the instrument' category identifies non-performing instruments by providing the default status and the performing status of the instrument. This information helps the independent valuer to distinguish between performing and non-performing instruments.
- The 'Accounting' category contains information on the recognition and measurement of the
 instrument (e.g. its carrying amount), and enables the independent valuer to reconcile the
 data with the financial statements by providing the general ledger account where the
 instrument is booked.
- The 'Reconciliation FINREP' category provides data attributes for reconciliation with FINREP, such as the FINREP accounting portfolio.
- The 'Mapping' category provides data attributes to align various datasets with existing reports such as SFTR, and to identify connections between assets and liabilities, including reverse repos, encumbered exposures and hedged instruments. This category also includes an identifier to map the exposure to the valuation cluster (see Chapter 6), as assigned by the bank.

91 Specific observations:

• 'Encumbrance allocation ID' and 'Source of encumbrance' data attributes: These data attributes are introduced to identify assets that serve as collateral for issued liabilities (e.g. cover-pool assets). The 'Encumbrance allocation ID' is also used for flagging the corresponding liabilities within the supplementary MBDT dataset.

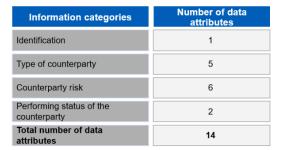
- 92 **Potential use of the VDS in valuations in resolution:** The VDS on loans and off-balance sheet exposure enables the independent valuer to perform several analyses related to valuation in resolution:
 - Reconciliation: The VDS facilitates reconciliation with FINREP to ensure the completeness
 of the data. Additionally, by providing the mapping to related datasets, such as AnaCredit,
 the VDS helps the independent valuer gain a clear and comprehensive understanding of the
 interconnections.
 - Stratification: The VDS provides the independent valuer with key information about the characteristics of the instruments, as well as details about the counterparties and protections through linked datasets. This information is crucial for the independent valuer to perform crisis-specific stratifications of the portfolio, complementing the clustering already provided by the bank. For instance, the independent valuer can use the VDS to identify all loans within a specific industry, allowing for a more targeted analysis.
 - Valuation: The VDS includes data attributes that enable the independent valuer to distinguish between performing loans and non-performing loans. This distinction is essential, as the valuation methodologies for these two categories differ significantly:
 - For performing loans, the DCF method is typically used to derive the hold or disposal values on single instrument basis. This method requires detailed data to forecast future cash flows accurately. The VDS enables the independent valuer to forecast the contractual cash flows and, by providing information on the risk profile of the instruments, to also estimate the expected cash flows by considering the risk factors of the loan, such as the cost of risk.
 - ➤ For non-performing loans, valuation is primarily based on the protections (e.g. collateral) associated with the instruments. The VDS includes detailed data essential for conducting thorough valuations, including key data attributes in the 'Protection received' dataset and the connected protection-class-specific datasets.
 - Impact assessment: In addition, the independent valuer can utilise the VDS data to prepare
 the accounting balance sheet and assess the effects on regulatory capital (also after the
 application of resolution tools).²⁷

²⁷ As required by Article 20(7) of SRMR.

4.5.2 Counterparty dataset

- 93 Scope: The counterparty dataset provides information on counterparties serving as debtors or protection providers of instruments included within the scope of the 'Loan instruments and offbalance sheet exposure dataset'.
- 94 **Overview of the requested data attributes:** The dataset on counterparties comprises 14 data attributes, organised into various information categories as detailed in the table below.

Figure 13. Number of requested data attributes per information category for the 'Counterparty dataset'



- The first information category, 'Identification', facilitates the unique identification of each counterparty by requiring a unique counterparty identifier. This ensures that each counterparty can be identified and mapped to instruments via the corresponding mapping table 'Loan instruments and off-balance sheet exposure counterparty mapping table' and to the protection received dataset.
- The 'Type of counterparty' category includes information that describes the counterparty's
 role in relation to the instrument (e.g. the full legal name of the counterparty and its economic
 activity).
- The 'Counterparty risk' category contains data on the counterparty's credit rating and the risk parameters.
- The 'Performing status of the counterparty' category provides data attributes to identify the counterparty's default status.

4.5.3 Loan instruments and off-balance sheet exposure - counterparty mapping table

- 95 Scope: The 'Loan instruments and off-balance sheet exposure counterparty mapping table' connects the 'Loan instruments and off-balance sheet exposure dataset' to the 'Counterparty dataset', and describes the relationship between the instrument and the counterparty (debtor or protection provider).
- 96 **Overview of the requested data attributes:** The 'Loan instruments and off-balance sheet exposure counterparty mapping table' comprises three data attributes, organised into two information categories as detailed in the table below.

Figure 14. Number of requested data attributes per information category for the dataset: Instrument
Counterparty

Information categories	Number of data attributes
Identification	2
Type of counterparty	1
Total number of data attributes	3

- The 'Identification' category consists of the corresponding unique identifiers ('Instrument identifier' and 'Counterparty identifier') to link counterparties to instruments and vice versa.
- The 'Type of counterparty' category provides a description of the counterparty's role in relation to the instrument.

4.5.4 Protection received dataset

- 97 **Scope:** The 'Protection received' dataset describes the characteristics of any protection that secures instruments included in the 'Loan and off-balance sheet exposure' dataset.
- 98 **Overview of the requested data attributes:** The 'Protection received' dataset comprises 9 data attributes, organised into various information categories as detailed in the table below.

Figure 15. Number of requested data attributes per information category for the 'Protection received' dataset

Information categories	Number of data attributes
Identification	1
Type of protection received	3
Value at inception	2
Fair value	3
Total number of data attributes	9

- The first information category, 'Identification', facilitates the unique identification of each protection by requiring a unique protection identifier. This ensures that each protection can be identified and mapped to instruments via the corresponding mapping table 'Loan instruments and off-balance sheet exposure protection mapping table' and to the counterparty dataset.
- The 'Type of protection received' category includes information that describes the specific type of protection.

- The 'Value at inception' category contains information on the protection value at the date when the protection was originally recognised as such.
- The 'Fair value' category consists of the protection value of the protection and additional information on the valuation (e.g. protection valuation approach, protection value date).
- 99 Potential uses of the VDS in valuations in resolution: For non-performing loans, valuation is driven by the protections linked to the instruments. Detailed information regarding the protections is provided in this dataset and further detailed in the corresponding protection-class-specific datasets. This information enables the independent valuer to perform an outside-in analysis of the collateral.

4.5.5 Loan instruments and off-balance sheet exposure - protection mapping table

- 100 Description: The 'Loan instruments and off-balance sheet exposure protection mapping table' connects the 'Loan instruments and off-balance sheet exposure' dataset to the 'Protection received' dataset. A corresponding connection for each instrument secured is established.
- 101 **Overview of the requested data attributes:** The 'Loan instruments and off-balance sheet exposure protection mapping table' comprises three data attributes, organised into two information categories as detailed in the table below.

Figure 16. Number of requested data attributes per information category for the dataset: Instrument –

Protection received

Information categories	Number of data attributes
Identification	2
Fair value allocation	1
Total number of data attributes	3

- The 'Identification' category consists of the corresponding unique identifiers (instrument identifier and protection identifier) to link protections to instruments.
- The 'Fair value allocation' category includes the allocation of the protection value as an interface between the instrument and the protection.

4.5.6 Loan instruments and off-balance sheet exposure - counterparty - protection mapping table

- 102 **Scope:** The 'Counterparty protection mapping table' connects the 'Counterparty dataset' to the 'Protection received dataset'.
- 103 Overview of the requested data attributes: The 'Counterparty protection mapping table' comprises two data attributes, organised into one information category as detailed in the table below.

Figure 17. Number of requested data attributes per information category for the dataset: Counterparty

- Protection received

Information categories	Number of data attributes
Identification	2
Total number of data attributes	2

 The 'Identification' category consists of the corresponding unique identifiers (counterparty identifier and protection identifier) to link protections to counterparties that are protection providers.

4.5.7 Protections: Real estate, Shipping, Aviation and Renewables

- **Scope:** The protection-class-specific datasets further describe the characteristics of the main collateral types real estate, shipping, aviation and renewables. Additionally, the real estate dataset covers information on various types of collateral, including residential property, land plots, office buildings, hotel and entertainment, retail, and industrial including logistics.
- **Overview of the requested data attributes:** The protection datasets on real estate, shipping, aviation and renewables are organised into various information categories as detailed in the table below.

Figure 18. Number of requested data attributes per information category for the protection datasets:

Real estate, Shipping, Aviation and Renewables

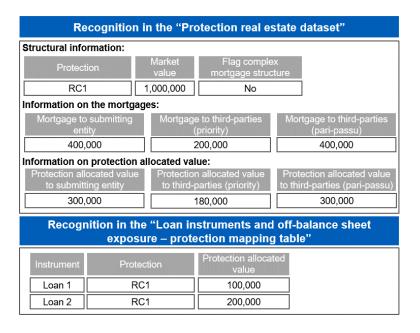
Information categories	Real estate	Shipping	Aviation	Renewables
Identification	1	1	1	1
Type of protection received	6	4	5	10
Fair value allocation	6	3	3	3
Key characteristics	8	12	10	7
Total number of data attributes	21	20	19	21

- The 'Identification' category consists of the protection identifier that enables the independent valuer to uniquely identify each protection.
- The 'Type of protection received' category provides further protection-class-specific data attributes, which include additional information on the type of the protection (e.g. for real estate: Address data; for shipping: IMO number; for aviation: Aircraft registration ID; for renewables: Segment based on the energy generation technology).
- The 'Fair value allocation' category provides information on the legal and realisable claims
 of the protection to the submitting entity and additional third parties.

- The 'Key characteristics' category consists of further protection-class-specific data attributes, which provide additional information on the characteristics of the protection (e.g. for real estate: Building area of the building in square metres, for shipping: Capacity of the vessel, for aviation: AVAC rating, for renewables: Net annual output in MWh).
- 106 **Specific observations:** Non-performing engagements are usually valued based on the realisation of the underlying collateral. In a distressed situation, the independent valuer would most likely need to adjust collateral values downwards, which would affect the collateral realisation results. Therefore, information on senior and *pari passu* claims of third parties are expected, as they directly impact the realisable claim of the submitting entity. To capture this information the following data attributes were introduced:
 - Protection allocated value to submitting entity: This data attribute determines the part of the market value of the protection that can be considered credit protection for instruments of the submitting entity. The protection allocated value is determined at collateral level (e.g. real estate); however, it might be assigned to several instruments. The allocation of the protection-allocated value to the specific instruments of the submitting entity is recognised in the 'Loan instruments and off-balance sheet exposure protection mapping table'. Therefore, the sum of the protection-allocated values in the mapping table on a certain protection must be equal to the value reported in the protection-specific-data type (e.g. 'Protection shipping dataset').
 - Protection allocated value to third-parties (priority): This data attribute determines the
 portion of the market value of the collateral that can be considered credit protection that is
 assumed to be allocated to third parties whose claims take priority over the claims of the
 entity.
 - Protection allocated value third-parties (pari-passu): This data attribute determines the
 portion of the market value of the collateral that can be considered credit protection that is
 assumed to be allocated to third-parties whose claims rank pari passu with those of the entity.
- The sum of the protection-allocated values to the submitting entity, third parties (priority) and third parties (pari passu) cannot exceed the 'Protection value' (PRO_7) submitted in the 'Protection received' dataset.
- 108 The following data attributes are especially relevant for real estate protections:
 - Mortgage to submitting entity: This is the maximum amount that the submitting entity can claim as credit protection, determined by the mortgage registration value.

- Mortgage to third-parties (priority): This is the maximum amount that can be claimed to be determined by the mortgage registration value that is assumed to be allocated to third parties whose claims take priority over the claims of the entity.
- Mortgage to third-parties (pari-passu): This is the maximum amount that can be claimed to be determined by the mortgage registration value that is assumed to be allocated to third parties whose claims rank pari passu with those of the entity.
- Flag complex mortgage structure: This data attribute indicates whether the mortgage structure is too complex to be allocated to the above-mentioned categories.
- The following example provides further clarification. The market value of the real estate collateral ('RC1') is EUR 1 000 000. The submitting entity has two loans ('Loan 1' and 'Loan 2') with outstanding nominal amounts of EUR 100 000 and EUR 200 000 respectively. The loans are fully collateralised by a mortgage of EUR 400 000 on RC1. A third party has a loan (*pari passu*) with an outstanding nominal amount of EUR 300 000 ('Loan 3'), which is secured by a *pari passu* mortgage of EUR 400 000 on RC1. Another third party has a priority loan with an outstanding nominal amount of EUR 180 000, which is secured by a priority mortgage of EUR 200 000 (this information might not be available to the submitting entity).

Figure 19. Illustrative example of recognition in the VDS



4.5.8 Securities dataset

Scope: The SRB Valuation Dataset on securities covers instruments such as debt securities and shares that corresponds to those defined under the main categories and accounting portfolios in FINREP Table 1.1 (Assets), irrespective of whether the entity is subject to FINREP reporting. The relevant accounting portfolios and main categories are outlined in the table below.

Figure 20. Scope according to FINREP Table 1.1 (assets)

Accounting portfolio	Main category	Row reference
Financial assets held for trading	Equity instruments	0070
Financial assets held for trading	Debt securities	0080
Non-trading financial assets mandatorily at fair value through profit or loss	Equity instruments	0097
Non-trading financial assets mandatorily at fair value through profit or loss	Debt securities	0098
Financial assets designated at fair value through profit or loss	Debt securities	0120
Financial assets at fair value through other comprehensive income	Equity instruments	0142
Financial assets at fair value through other comprehensive income	Debt securities	0143
Financial assets at amortised cost	Debt securities	0182

111 **Overview of the requested data attributes:** The instrument dataset on securities comprises 91 data attributes, organised into various information categories as detailed in the table below.

Figure 21. Number of requested data attributes per information category for the dataset Instrument:

Securities

Information categories	Number of data attributes
Identification	2
Type of instrument	8
Instrument information at inception	3
Instrument information at cut-off date	5
Cashflow information	22
Fair value	2
Instrument risk	8
Performing status of the instrument	4
Accounting	9
Reconciliation FINREP	7
Issuer information	13
Mapping	8
Total number of data attributes	91

The instrument dataset for securities generally follows the same structure as the 'Loan
instruments and off-balance sheet exposure' dataset. Furthermore, the VDS dataset for
securities includes additional data attributes (such as the ISIN for the identification on listed

- securities), and data attributes pertaining to the issuer of the security (such as the issuer's name and external credit rating), enabling the independent valuer to develop a comprehensive understanding of the issuer.
- The 'Mapping' category provides data attributes designed to align the dataset with existing EU reporting, such as SHS and SFTR. It serves to establish connections between assets and liabilities across the different datasets. This includes identifying securities used as collateral for repos, encumbered securities, and hedged instruments. Additionally, the dataset includes a specific identifier that connects the instrument to the 'Trading book' dataset. This category also includes an ID identifier to map the instrument to the valuation cluster (see Chapter 6), as assigned by the bank.
- All data attributes should be submitted for the instruments in scope, except data attributes in the 'Cash flow information' category, which are only applicable to securities qualifying as Level 2 and 3 instruments according to IFRS 13 (see data attribute 'SEC_42').
- 112 **Potential use of the VDS in valuations in resolution:** In general, the same use cases apply to the VDS dataset for securities as they do to the dataset on loans and off-balance sheet exposure, particularly regarding reconciliation, stratification, valuation, and impact assessment. Therefore, only the main specifics related to the securities dataset are explained in this subsection. The valuation approach could differ between listed and unlisted instruments:
 - The independent valuer may use the fair values from the VDS as a reference point when performing valuations of securities with an ISIN that qualifies as Level 1 assets.
 - The valuation of unlisted debt securities is generally performed based on their cash flows. Therefore, the dataset comprises data attributes to derive the contractual cash flows of plain vanilla and simple structured debt securities. Complex structures (e.g. ABS) might need additional assumptions. The dataset also includes information on the issuer to assess the risk of default and to estimate related expected cash flows.

4.5.9 Derivatives dataset

Scope: The SRB Valuation Dataset on derivatives covers exposures to derivative instruments, irrespective of their positive/negative fair value on the cut-off date, which are defined according to the main categories and accounting portfolios in FINREP Tables 1.1 (Assets) and 1.2 (Liabilities). The relevant accounting portfolios and main categories are outlined in the tables below.

Figure 22. Allocation of derivatives in FINREP (assets)

Accounting portfolio	Main category	Row reference
Financial assets held for trading	Derivatives	0060
Derivatives – Hedge accounting	n.a.	0240

Figure 23. Allocation of derivatives in FINREP (liabilities)

Accounting portfolio	Main category	Row reference
Financial liabilities held for trading	Derivatives	0020
Derivatives – Hedge accounting	n.a.	0150

114 **Overview of the requested data attributes:** The instrument dataset on derivatives comprises 23 data attributes, organised into various information categories as detailed in the table below.

Figure 24. Number of requested data attributes per information category for the dataset Instrument:

Derivatives

Information categories	Number of data attributes
Identification	1
Type of instrument	5
Accounting	4
Fair value	2
Instrument risk	2
Reconciliation FINREP	3
Mapping	6
Total number of data attributes	23

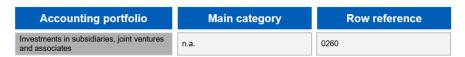
- The derivatives dataset primarily follows the structure of the 'Loan instruments and off-balance sheet exposure' dataset, but is significantly smaller compared to the VDS 2020, as data attributes for deriving cash flows and risk parameters can be sourced from EMIR. Therefore, only a very limited number of data attributes are requested for the instrument dataset on derivatives, including main instrument features, accounting, instrument risk, fair value, mapping and reconciliation.
- The 'Mapping' category provides data attributes to link the dataset with EMIR reporting or to align it with other datasets, enabling connections to be identified across the different datasets, such as hedges and netting sets. Additionally, this category includes an identifier to map the exposure to the valuation cluster (see Chapter 6), as assigned by the bank.

115 **Potential use of the VDS in valuations in resolution**: In general, the same use cases apply to the VDS dataset for derivatives as they do to the datasets on loans and off-balance sheet exposure, particularly regarding reconciliation, stratification, and impact assessment. The fair value provided by the entity serves as a starting point for the independent valuer and can be adjusted based on risk information (e.g. value at risk) and sensitivities. The VDS also provides the independent valuer with key details about the characteristics of the instruments (e.g. fair-value hierarchy) and about the trading desk to which the instruments belong. This information is essential for the independent valuer to stratify the portfolio and identify exposures with high valuation uncertainty, such as Level 3 products, allowing for a more targeted analysis.

4.5.10 Subsidiaries, joint ventures and associates dataset

- Scope: The SRB Valuation Dataset on subsidiaries, joint ventures and associates includes information on equity instruments, participations issued by subsidiaries, joint ventures, and associate companies. The instruments within the scope of the dataset correspond to those defined under the main categories and accounting portfolios in FINREP Table 1.1 (Assets), irrespective of whether the entity is subject to FINREP reporting.
- 117 The relevant accounting portfolio is outlined in the table below.

Figure 25. Scope according to FINREP Table 1.1 (Assets)



118 **Overview of the requested data attributes:** The 'Subsidiaries, joint ventures and associates' dataset comprises 24 data attributes, organised into various information categories as detailed in the table below.

Figure 26. Number of requested data attributes per information category for the dataset Instrument:

Subsidiaries, joint ventures and associates

Information categories	Number of data attributes
Identification	3
Type of instrument	4
Instrument information at cut-off date	2
Fair value	4
Instrument risk	4
Accounting	4
Reconciliation FINREP	1
Mapping	2
Total number of data attributes	24

- The 'Subsidiaries, joint ventures and associates' dataset is largely based on the structure of the loan dataset, but is more concise, with data attributes primarily focused on the characteristics of the subsidiaries, joint ventures and associates. Additionally, detailed information, such as business plans, audit reports and other relevant documents, is specifically requested for REs and RLEs in the VDI.
- Furthermore, the dataset contains data attributes related to the company description and
 instrument information, enabling the independent valuer to gain a comprehensive
 understanding of the economic activity of the participation. It also contains data attributes
 such as the participation quote and the proportionate equity.
- 119 **Potential use of the VDS in valuations in resolution**: In general, the same use cases apply to the VDS dataset for subsidiaries, joint ventures and associates as those for the dataset on loans and off-balance sheet exposures, particularly in areas such as reconciliation, stratification, and impact assessment. Additionally, The VDS provides the independent valuer with an overview of the subsidiaries, joint ventures and associates, which helps determine the appropriate valuation methodology. The valuation of subsidiaries in the context of resolution is highly specific and requires a detailed understanding of each subsidiary's business model. The valuation may be based on the business plan (see Annex 1), a single asset view (referred to as the 'net asset value approach'), market comparables or other methods.

4.5.11 Financial liabilities dataset

120 **Scope:** Financial liabilities are covered in the VDS by the following two datasets:

- a. **Supplementary MBDT dataset:** This dataset mirrors the scope of the entities²⁸ and instruments within the scope of MBDT Table B02.00.²⁹
- b. **Complementary liability dataset:** This dataset includes the remaining instruments as outlined in Figure 29, which are not within the scope of the 'Supplementary MBDT' dataset.
- As the scope of the MBDT is different for resolution and non-resolution entities, the breakdown in both datasets also differs according to the reporting requirements of the MBDT.
- The combination of the two datasets should reconcile with the positions in FINREP Table 1.2 (Liabilities). The relevant accounting portfolios and main categories are outlined in the table below.

Figure 27. Scope according to FINREP Table 1.2. (Liabilities)

Accounting portfolio	Main category	Row reference
Financial liabilities held for trading	Deposits	0040
Financial liabilities held for trading	Debt securities issued	0050
Financial liabilities held for trading	Other financial liabilities	0060
Financial liabilities designated at fair value through profit or loss	Deposits	0080
Financial liabilities designated at fair value through profit or loss	Debt securities issued	0090
Financial liabilities designated at fair value through profit or loss	Other financial liabilities	0100
Financial liabilities measured at amortised cost	Deposits	0120
Financial liabilities measured at amortised cost	Debt securities issued	0130
Financial liabilities measured at amortised cost	Other financial liabilities	0140

4.5.11.1 Supplementary MBDT dataset

123 **Overview of the requested data attributes:** The supplementary MBDT dataset comprises 43 data attributes, organised into various information categories as detailed in the table below. Data attributes that can be retrieved from the MBDT by the independent valuer are not included in the dataset.

²⁸ The Supplementary MBDT dataset applies only to entities subject to MBDT requirements.

²⁹ Reference to the Minimum Bail-in Data Template (MBDT): https://www.srb.europa.eu/en/content/minimum-bail-data-template.

Figure 28. Number of requested data attributes per information category for the dataset Instrument:

Liabilities

Information categories	Number of data attributes				
Identification	2				
Type of instrument	3				
Cashflow information	21				
Fair value	2				
Instrument risk	1				
Accounting	6				
Reconciliation FINREP	3				
Mapping	5				
Total number of data attributes	43				

- The instrument supplementary MBDT dataset generally follows the same structure as the
 other datasets. This dataset supplements the MBDT, most notably with data required to
 derive cash flows and to perform reconciliations/mappings. Therefore, only a limited number
 of data attributes are requested for the supplementary MBDT dataset.
- The 'Mapping' category provides data attributes that link the dataset with existing reports, such as the Centralised Securities Database (CSDB). It also serves to establish connections between assets and liabilities across the datasets, including identifying assets that secure liabilities. Furthermore, the dataset includes a specific identifier that links the liability to the 'Trading books' dataset. This category also includes an ID to map the instrument to the valuation cluster (see Chapter 6), as assigned by the bank.
- All data attributes should be submitted for the instruments in scope, except data attributes in the 'Cash flow information' category, which only apply to securities qualifying as Level 2 and 3 instruments according to IFRS 13 (see data attribute 'SMBDT_28').

124 Observations on specific data attributes:

- Limited counterparty information is directly included in the supplementary MBDT dataset, as more granular information is not necessarily required for valuation purposes.
- Information on deposits must be provided on a granular level as provided in Submission B³⁰,
 according to Minimum Bail-in Data Template (MBDT) guidance.

³⁰ In relation to deposits eligible for bail-in, entities will be expected, as part of MBDT reporting, to deliver two separate submissions of tab B02.00 ('Submission A' and 'Submission B'). Submission B includes granular information on deposits eligible for bail-in.

- Potential use of the VDS in valuations in resolution: In general, the same use cases apply to the VDS supplementary MBDT dataset as those for the dataset on loans and off-balance sheet exposures, particularly regarding reconciliation (in connection with the complementary liability dataset), stratification, valuation, and impact assessment. The supplementary MBDT dataset enriches the MBDT dataset by providing additional data attributes essential for valuing liabilities on a single-instrument basis. The VDS includes various data attributes that offer insights into the risk profile and the features of the liability portfolios. The valuation approach may differ for listed and unlisted liabilities:
 - for listed liabilities, valuation assessments are based on the market values, which can be sourced from data providers based on the provided ISIN;
 - for unlisted liabilities, valuation is generally performed based on their cash flows.

4.5.11.2 Complementary liability dataset

Overview of the requested data attributes: The 'Complementary liability' dataset comprises 14 data attributes, organised into various information categories as detailed in the table below. In comparison to the other data tapes, the 'Complementary liability' dataset is not submitted on a single instrument basis. The instruments are aggregated according to a predefined aggregation of data attributes.

Figure 29. Number of requested data attributes per information category for the dataset:

Complementary liability dataset

Information categories	Number of data attributes
Identification	2
Aggregation attributes	6
Instrument information at cut-off date	1
Cashflow information	1
Fair value	1
Accounting	2
Reconciliation FINREP	1
Total number of data attributes	14

- The 'Identification' category consists of the aggregation identifier, which enables the independent valuer to uniquely identify each aggregation line in the dataset, as well as the number of instruments that have been aggregated.
- Data attributes in the 'Aggregation attributes' category provide guidance based on criteria according to which the instruments must be aggreged. In general, the aggregation must be

- performed within the FINREP sub-buckets. A few further aggregation criteria are introduced to capture the specifics of the instruments (e.g. term buckets, liability category).
- The remaining categories generally follow the same structure as the 'Loan instruments and off-balance sheet exposure' dataset.
- Potential use of the VDS in valuations in resolution: The complementary liabilities dataset ensures that all financial liabilities, including those excluded from the MBDT (e.g. liabilities excluded from bail-in), are covered in the VDS, but on an aggregated basis. This enables the independent valuer to perform a simplified valuation at portfolio level, and to identify potential risks for instruments that are not within the scope of the MBDT.

4.5.12 Trading books dataset

- **Scope:** The trading books dataset covers instruments, including derivatives and securities, that form part of the entity's trading book³¹. The information is submitted in a portfolio view reflecting entities' trading desks.
- The entities subject to VDS requirements, including the 'Trading books' dataset, are outlined in Chapter 3.2. Notwithstanding, only entities subject to solvent wind-down requirements, and other entities that are not subject to solvent wind-down requirements but whose trading books are sufficiently material to justify inclusion in the scope (upon request by the SRB), are expected to submit the 'Trading books' dataset. As a first step, banks are expected to stratify the trading book into sub-portfolios according to entities' internal structure and the organisation of the trading desks. Moreover, the SRB may grant permission to submit the dataset at a level different from the one specified in Annex 1. For example, the trading book dataset may be available at group level (gathering different location/entities), but not at entity level
- 130 **Overview of the requested data attributes:** The dataset on trading books comprises 7 data attributes, organised into various information categories as detailed in the table below.

Figure 30. Number of requested data attributes per information category for the dataset: Trading books

Information categories	Number of data attributes			
Identification	1			
Fair value	3			
Risk measures	3			
Total number of data attributes	7			

³¹ As defined in Articles 102-104 of Regulation (EU) No 575/2013.

- The first information category, 'Identification', consists of the trading desk ID, which enables the independent valuer to uniquely identify sub-clusters (portfolios).
- The 'Fair value' category provides the aggregated, positive and negative fair value of tradingbook positions assigned to the corresponding trading desk.
- The 'Risk measures' category provides key risk indicators, including the value at risk (VaR), the stressed VaR and the expected shortfall (ES) for each trading desk. This data is further enhanced in the VDI with additional reports on the instrument breakdown within the trading desks, the methodologies used for calculating the risk indicators, and the associated sensitivities (see VDI document 7.3).
- Potential use of the VDS in valuations in resolution: The valuation of derivatives or other positions in the trading books is often complex in nature (especially for exotic derivatives), and might need to be performed on a simplified portfolio/desk level when there is insufficient time or access to the bank's staff is not available. Usually, within one trading desk, the allocated derivatives (and securities, if applicable) have comparable market-risk profiles and risk parameters. This enables the independent valuer to estimate the impacts on the valuation if market parameters change.

4.6. Quality assurance

- To ensure a fair and prudent valuation in resolution, banks must maintain a high level of data quality in the VDS. Therefore, banks are expected to apply validation rules when preparing the VDS and before submitting the VDS to the DRR. The EoVCs, more specifically Annex 4, outline a minimum set of validation rules banks are expected to implement and perform covering the following types (See Figure 31):
 - Completeness.
 - Data format integrity.
 - Plausibility.
 - Consistency.
 - Referential integrity.
 - Reconciliation.
- While a minimum set of validation rules is outlined in Annex 4, the SRB retains the right to expand this list in the future, and may impose additional rules on a case-by-case basis. Furthermore, banks may apply additional internal validation rules. Banks are expected to document the results

- of the performed data quality rules in a data quality report (see Annex 5). Additional rules that are applied on a case-by-case basis are not part of the data quality report.
- The following chapters complement and provide guidance on Annex 4, focusing on validation rules, and Annex 5, for the data quality report. In a first step, the general structure of Annex 4 is described, followed by details on the types of validation rules. To make it easier to read the technical rule description, the syntax is described. Finally, the data quality report is introduced in more details.

4.6.1 Overall structure of Annex 4 - Technical descriptions and validation rules

- 135 Generally, Annex 4 is structured as follows:
 - Technical instructions: provides comprehensive guidance on navigating Annex 4.
 - List of data attributes: includes a list of all data attributes with expectations on (i) the data format, (ii) the applicability of the data attributes, and (iii) the references to the validation rules applied to the respective data attributes. Banks are expected to have all the data attributes available, unless they are deemed not applicable (e.g. due to the banks' business model specificities).
 - Data validation rules: data validation rules are split according to their types (as mentioned above) and each validation rule has a unique identifier. The description of the individual rules includes references to (i) the relevant data attribute(s), (ii) the relevant dataset(s), including external data sources, if applicable, (iii) a general and a technical description of the validation rule.
 - Constraints: this consists of the tabs 'Data attribute drop-downs' and 'Default values'. The tab 'Data attribute drop-downs' provides the list of drop-down values for data attributes where only a predefined list of values is expected and their corresponding technical codes³². The tab 'Default values' outlines the default values for corresponding data formats to be used when the data attribute is not applicable or not available. If the data attribute is not applicable, the corresponding entry³³ must be filled with the default value. Meanwhile, if the data attribute is not available (i.e. the data attribute entries cannot currently be sourced from the entities' internal systems), the corresponding entry must be empty.

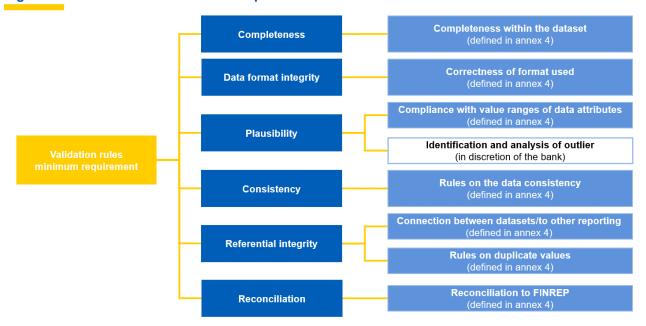
³² Technical codes refer to the integers in the square brackets associated to each data attribute's possible value (descriptive labels) in the 'Data attribute drop-downs' tab of Annex 4. When submitting the data, for the drop-down attributes, technical codes must be used instead of the descriptive labels. Please refer to the 'Technical instructions' tab in Annex 4 for a detailed example.

³³ Entry refers to a single value in a data attribute in the VDS.

4.6.2 Types of validation rules

The validation rules introduced for the SRB Valuation Dataset are structured within the following categories.

Figure 31. Overview of the minimum requirements of validation rules



- 137 **Completeness:** Completeness rules ensure that the data attributes are filled. Furthermore, they ensure that the 'Default values' are only applied for data attributes for which the respective 'Default values' are allowed. For example, an 'Instrument identifier' must be submitted for each instrument in the 'Loan instruments and off-balance sheet exposure' dataset, and the 'Default value' cannot be applied.
- Data format integrity: The data format integrity rules ensure that the data attributes' format aligns with the expected format according to the specifications of Annex 4. For example, for each loan, the 'Instrument identifier' must be in the 'String' data format.
- Plausibility: Plausibility rules ensure that data attributes reported in the VDS are within a plausible range. For some data attributes, the values can only be within a certain value range by definition. For example, the value reported under the probability of default (e.g. LOA_41 Probability of default (IFRS 9 lifetime)) in the 'Loan instruments and off-balance sheet exposure' dataset must be within a range from 0 to 1. For certain data attributes, the thresholds cannot be predefined by the SRB, since they are dependent on the products included in the portfolio, among

other things. However, outliers might be explained in connection to other data attributes.³⁴ Some data attributes are particularly relevant to performing valuation or identifying data quality issues. For instance, this includes the following categories:

- Cash flow: Checking whether the interest rate is within a plausible range;
- Instrument or counterparty risk: Checking whether the reported PDs are in line with the internal credit rating of the instrument/counterparty.
- Banks are expected to carry out an outlier analysis on these data attributes to further enhance their data quality. The detailed implementation i.e. defining and executing the additional validation rules for outliers is at the discretion of the bank. However, filtering the data attributes for the lowest and highest values and analysing the filtered instruments for plausibility might be a good starting point. Upon request by the SRB, banks must be able to provide evidence of the outlier analysis.
- 141 **Consistency:** Consistency rules ensure that entries submitted across data attributes are consistent and align logically with one another for the same level of granularity. These rules complement the individual data attribute requirements by acting as a cross-checking mechanism to validate the datasets' logical integrity. For example, the 'Maturity date' of an instrument must occur after its 'Inception date'.
- Referential integrity: Referential integrity rules ensure that the data provided in the VDS is consistent across the different datasets and with other reported frameworks (EMIR, MBDT), and that the relationships between the datasets are correctly reflected and in line with the VDS data model. Furthermore, the rules ensure the uniqueness of the primary keys, i.e. that the unique identifier has no duplicate values. For example, every loan reported in the loan instrument dataset must be linked to a debtor in the 'Loan instruments and off-balance sheet exposure protection mapping table'.
- 143 **Reconciliation:** Reconciliation rules define how the data attributes provided in the VDS should be aggregated for the reconciliation with FINREP. For example, the aggregation of the 'FINREP carrying amount' of instruments classified as 'Trading financial asset' (FINREP accounting portfolio) with the FINREP main category 'Loans and advances' should be reconciled to FINREP data attribute row 0095, column 0010 in source table F01.01.
- For entities that are not required to report FINREP on a solo entity level due to a waiver, the FINREP reconciliation rules are not expected to be performed. In these cases, banks are

³⁴ For example, no meaningful threshold can be defined for the interest rate of a loan, as this can vary from portfolio to portfolio. The loan could be issued in a different currency, which would justify a higher interest rate.

expected to perform a reconciliation of the carrying amounts submitted in the VDS to the trial balance sheet on an aggregate level and the results must be provided in the DRR (see VDI document 1.4).

4.6.3 Explanation on the syntax used in the technical description to define validation rules

- To support the clear implementation of the rules, a technical description has been provided in Annex 4. This description provides a mapping between the components of the VDS (e.g. datasets, data attributes, data values) and corresponding validation rules. Specifically, each validation rule is uniquely assigned an ID and explicitly linked to one or more data attributes, along with a technical description.
- Reference to data attributes in the VDS: Data attributes are referred to as [dataset.data attribute ID]. For example, [Loan instruments and off-balance sheet exposure dataset.LOA_1] refers to data attribute LOA_1 ('Instrument identifier') in the 'Loan instruments and off-balance sheet exposure dataset'.
- 147 **Reference to other regulatory reporting:** Reconciliation rules refer to external data sources (e.g. FINREP). A clear reference to the exact data attribute of the external source is mapped as {data source table; data attribute}. For example, {F 01.01; 0099} refers to the value reported under data attribute 0099 in FINREP Table F 01.01.
- 148 **Logic operators:** Additionally, conditionalities are expressed by means of simple self-explanatory logical operators (e.g. IF, THEN, WHERE, ELSE).
- Some validation rules implicitly assume the existence of a value being reported. This is expressed by the operators [dataset1.data attribute1] <> { }. For example, [Loan instruments and off-balance sheet exposure dataset.LOA_1] <> {} checks whether LOA_1 ('Instrument identifier') in the 'Loan instruments and off-balance sheet exposure dataset' has a valid reported value, i.e. that it is not empty.
- Under the data format integrity rules, the operator 'Type' is introduced to validate whether the values are reported in the expected data format. For example, Type([Loan instruments and off-balance sheet exposure dataset.LOA_1]) = 'String: Free text' validates whether the values for the instrument identifier data attributes in the 'Loan instruments and off-balance sheet exposure dataset' are in a string format.
- 151 For some validation rules, the existence of an entry in one dataset implies the existence of a corresponding entry in another dataset. This is referred to by the expression 'EXISTS IN'. For example, [Instrument-Counterparty.IC_1] EXISTS IN [Loan instruments and off-balance sheet exposure dataset.LOA_1] validates whether all the instrument identifiers reported to the 'Loan

instruments and off-balance sheet exposure - counterparty mapping table' are also reported to the 'Loan instruments and off-balance sheet exposure dataset'.

4.6.4 Data quality report

- To assess the data quality of the submitted VDS and to identify areas of improvement, banks are expected to submit a data quality report (see Annex 2 for instructions on the submission and Annex 5 for the data quality report template). The data quality report must be prepared for each VDS, stored in the DRR (together with the VDS datasets) and submitted to the SRB following the VDS submission to the DRR. The report documents the results of the performed data validation rules as defined in Annex 4, thus providing an overview of the data quality of the corresponding VDS at the submission date.
- 153 The template is structured into tabs according to the following information:
 - Technical instructions.
 - Meta information.
 - Overview implementation.
 - Aggregate checks results.
 - FINREP reconciliation.
 - Deep dive checks (one per validation rule category).
- **Technical instructions:** The 'Technical instructions' tab provides comprehensive guidance on using the data quality report template. It includes specific details on which cells in the Excel sheet must be populated by the banks and which values/information must be included.
- Meta information: The 'Meta information' tab provides general details on the entity submitting the data quality report. Information such as 'Legal entity identifier (LEI)', 'Name of legal entity' and 'Cut-off date of the submitted data' is included.
- **Overview implementation:** The 'Overview implementation' tab enables the SRB to gain an overview of the overall implementation status of the data attributes within the VDS. Banks are expected to document the implementation on data-attribute level, corresponding to the implementation status³⁵:
 - Implemented: The data attribute has been implemented for all the entries and the corresponding data has been submitted in the VDS.

³⁵ See Annex 4 for further details on the technical implementation of the data attributes.

- Partially implemented: The data attribute has not been implemented for all the entries and the corresponding data has been submitted in the VDS.
- Not implemented available: The data attribute has not been implemented but is generally available within the bank's internal systems.
- Not implemented not available: The data attribute has not been implemented and is currently not available within the bank's internal systems.
- Not implemented not applicable: The data attribute has not been implemented and is deemed not applicable by the institution.
- Aggregate checks results: The 'Aggregate checks results' tab provides a comprehensive overview of the data quality across the relevant validation rules categories. Furthermore, this makes it possible to identify potential areas of improvement on an aggregate level.
- 158 **FINREP reconciliation:** The 'FINREP reconciliation' tab includes an aggregated reconciliation of the carrying amounts, following the structure of FINREP Tables 1.1 and 1.2. This tab enables both the bank and the independent valuer to obtain a clear and organised overview of the status of the reconcilability with the reported FINREP balance sheet. It is important to note that the tab 'FINREP reconciliation' includes the list of FINREP positions as defined under IFRS standards. However, if the entity reports FINREP under national GAAP, it may adjust the accounts names or modify the FINREP positions, subject to prior notification and discussion with the SRB.
- Deep dive checks: Banks are expected to report the results of each individual check in the 'Deep dive checks' tabs. The structure of these tabs is generally aligned with the validation rule categories as defined in Annex 4. Therefore, the 'deep dive checks' tabs are the following:
 - Completeness.
 - Data format integrity.
 - Plausibility.
 - Consistency.
 - Referential integrity.
- In the 'deep dive checks' tabs, banks are expected to report the 'Total number of times the check was in scope' and the 'Total number of times the check has failed'³⁶. Furthermore, the

³⁶ See the 'Technical instructions' tab of Annex 5 for more details.

corresponding relevant amounts should also be reported to gain further insights into the materiality of the validation rules performed.

5. Data Repository for Resolution

5.1. Objective and scope of the repositories

- Banks are expected to set up a permanent DRR³⁷ in which all data necessary for a valuation in resolution is provided. In this context, a DRR is any technical solution or repository used to store the data in a centralised and structured manner. Banking groups with REs earmarked for liquidation in the resolution plan are not expected to set up a permanent DRR.
- The main purpose of the DRR is to ensure that a minimum set of information is permanently available to perform a valuation in resolution as defined in the VDI (see Chapter 3). A permanent DRR enables the SRB to respond swiftly in emergency scenarios by ensuring that critical information is always available when needed. In the context of a valuation process, a substantial volume of data and information is gathered. A permanent DRR enhances the process by providing a more organised and efficient approach, as opposed to relying on ad hoc requests to the bank. Therefore, banks are expected to grant access to the data stored in the DRR to the SRB as well as to third parties such as the independent valuer and advisors to potential buyers, when such access is requested in the course of preparations for a crisis or in testing exercises.
- In terms of technical solutions for the DRR, these could include internal solutions and externally hosted DRRs. Banks are free to select their preferred option, provided that the selected solution complies with the established minimum requirements regarding the functionalities (see below).

5.2. Minimum functionalities for DRR

- Banks are expected to comply with the following minimum functionalities to ensure secure, efficient and compliant data management.³⁸
- 165 Functionalities are classified in three groups: accessibility, usability and security of the data repositories.

Accessibility

³⁷ Each banking group under the SRB's remit is expected to set up a DRR, i.e. one DRR hosting all entities is sufficient ensuring that there will be one index per entity adhering to the VDI structure, to enable easy navigation.

³⁸ Any additional functionalities that the bank deems necessary can be added.

- a. Access rights and permission management: External access to the VDI information stored in the DRR is expected to remain inactive during business-as-usual. However, in crisis situations banks are expected to grant access within 24 hours when requested by the SRB. If access is requested, the DRR is expected to support different user groups with varying levels of access rights to ensure secure and controlled access to data. Predefining user groups enhances efficiency by allowing new users to be added quickly and assigned easily to the appropriate groups, which is essential in crisis situations. Banks need to ensure flexible access management for the DRR in place that ensures that access rights can be granted (e.g. to independent valuers, financial or legal advisors, etc.) or modified within 24 hours. The SRB will provide the bank with information on users who should be provided with access rights.³⁹ The following minimum permissions are expected for the appointed users:
 - general access to the DRR;
 - ability to view all documents in the DRR;
 - ability to download all documents in the DRR in the original file format.

As an integral component of future testing exercises -including deep-dives and on-site inspections-, access rights will be examined to confirm that access to DRR information, both on-site at banks' premises and remotely, can be granted within 24 hours.

If access is requested by the SRB, for larger files that may be unstable or impossible to download, banks should have transmission via FTP (File Transfer Protocol) in place. Banks may already have this in place, e.g. for regulatory reporting to NRAs, and will need to develop this with the SRB as well, upon request. Testing of file transmission via FTP will be conducted.

b. Compatibility: The DRR must be designed to be compatible with all major devices, browsers and operating systems to ensure seamless accessibility and usability, whether by the SRB, the NRA, the independent valuer or other potential external parties, if their access rights are requested by the SRB.

Usability

c. Search function: The DRR provides a robust search function that allows users to search for documents in the DRR.

³⁹ Should the SRB consider it necessary, banks may also be required to grant additional unlimited access rights to an independent valuer and other potential external parties.

- **d. DRR folder structure:** The DRR's (sub)folder structure should follow a logical and intuitive layout with clearly and consistently named folders and files (for the naming convention for files, please follow the instructions in Annex 2). The main folders should follow the VDI structure (see Chapter 3.4, Figure 3).
- e. Index function: The DRR should have an index of documents or a table of contents that outlines the documents inside the DRR, as provided by the entity. This DRR index / table of contents should provide an overview of the content of the DRR, enabling smooth navigation by incorporating links into the VDI documents. The index should follow the VDI structure (see Chapter 3.4, Figure 3) and include the cut-off date of the file, the date when the file was uploaded to the DRR, and changes (including version changes) to documents within the DRR. Banks are expected to prepare and maintain a VDI index of documents for each entity within the scope of the VDI, distinguishing between information requested at group and individual levels.
- **f. Batch download:** Users can download multiple files simultaneously, e.g. in a single .zip file, to facilitate efficient data retrieval.

Security

- g. Robust encryption: All information is encrypted both in transit and at rest, to ensure data security.
- h. General data protection compliance: This includes implementing robust data security measures to protect sensitive information.
- i. Backup and recovery: There must be regular backups and off-site storage to ensure data availability and integrity in the event of system failures. Banks are expected to ensure that valuation data stored in the DRR is regularly backed up to a secure location, ensuring near-instantaneous data recovery in case of major incidents. This backup system should be seamlessly integrated into the bank's overall operational resilience framework, and should undergo regular testing as part of business continuity plans and the digital operational resilience testing programme.⁴⁰
- j. Audit trail: As a minimum a timestamp of the documents and the identity of the person accessing the document are required. This ensures transparency, accountability, and security by providing a detailed record of interactions with the repository.

⁴⁰ Article 24 of Regulation (EU) 2022/2554.

166 Banks are also expected to establish a helpdesk function, though not necessarily as an integrated feature of the DRR, by appointing a single Point of Contact (SPOC). This SPOC must be a designated individual, ideally at a senior level, who is accountable for overseeing quality assurance and sign-off procedures, while also acting as the primary interface for gathering and responding to user and technical queries. The SPOC role ensures clear responsibility, traceability, and effective coordination across operational and technical related aspects of the DRR framework. Further details are provided in Chapter 6.

6. Valuation playbooks

- Playbooks in general are already employed across various contexts within resolution planning (e.g. bail-in playbooks). As a well-established and effective tool, they are now being deployed in the context of valuation capabilities.
- Banks are expected to prepare valuation playbooks to document the implementation of the EoVCs and the respective processes. This helps the SRB and the independent valuer to organise the valuation in a structured and efficient manner. The valuation playbook will further complement the VDI by explaining the internal valuation capabilities and the governance arrangements. A valuation playbook must be prepared for each resolution group or for the portion of the group that includes EU subsidiaries (under the SRB's remit) of third-country parent undertakings, or with parent undertakings outside the banking union but within the European Union that are not designated as resolution entities themselves.⁴¹
- 169 As a minimum, the playbooks are expected to cover the following:
 - A valuation self-assessment that describes how entities value their assets and liabilities. This
 includes a stratification of the balance sheet into homogenous clusters (assets and liabilities
 that have similar characteristics and can be valued with similar valuation methodologies and
 internal valuation models).
 - A detailed description of potential use of internal valuation capabilities to ensure that an independent valuer can leverage the internal valuation models.
 - An identification and description of relevant governance arrangements for all activities connected to valuation in resolution during business as usual and in the event of resolution.
 - A description of the processes and timelines to produce the VDS, collect the unstructured information from the VDI and manage the DRR, as well as corresponding quality-assurance and sign-off procedures.
- Main components of a valuation playbook: The following overview illustrates the main components of a valuation playbook. Banks may include additional chapters with other key subjects if they deem it appropriate (e.g. explanations on the relationship with other REs in the MPE strategy, bank-specific information that should be addressed in the playbook).

⁴¹ Banking groups subject to a multiple-point-of-entry (MPE) strategy are expected to have a separate playbook for each of the resolution groups within the BU. Additionally, these groups should explain in the playbook the interconnections between the REs for the purpose of the valuation exercise. Banks may consider referring to documents from the VDI or any document drafted in the context of resolution planning for further details.

Figure 32. Main components of a valuation playbook

Main components of a Valuation Playbook (non-exhaustive)
1. Executive summary
2. General aspects for updates, version history and sign-off
3. Valuation self-assessment
4. Use of internal valuation capabilities
5. Flexibility of internal valuation models
6. Governance arrangements for valuations

6.1. Executive summary

171 This chapter should provide a summary of the key items further detailed in the valuation playbook.

6.2. General aspects for updates, version history and sign-off

- 172 A valuation playbook is a living operational document owned by the bank. As such, it is expected to be updated at least annually, taking into account any material changes within the bank, as well as the SRB's feedback, other guidance from the resolution authorities, and lessons learnt from testing exercises. Lessons learnt should result in specific action points, which the bank is expected to track, address and include within the playbook to ensure continuous improvement.
- Material changes compared to the previous version are expected to be clearly indicated. Banks are expected to list the remaining shortcomings related to the different chapters, and discuss openly with the SRB the way forward to address them.
- 174 The bank's senior management is expected to validate and sign off the playbook, and banks are expected to document the validation and sign-off process within the playbook.

6.3. Valuation self-assessment

Banks are expected to assess how they currently value themselves (i.e. the assets and liabilities), point out the critical valuation topics, and provide guidance on potential valuation methodologies. Since banks are most knowledgeable about their own operations, they are best positioned to conduct a preliminary analysis of valuation challenges. This assessment is a first step that enables the SRB and the independent valuer to assess key valuation items in a very short timeframe and without access to the bank. It should be stressed that this assessment relates to

the valuation methodologies and key critical valuation challenges, hence the bank is not expected to carry out an actual self-valuation.

176 Specifically, the valuation self-assessment should consider the following aspects⁴²:

- A brief company overview, including a description of the bank's corporate structure and significant entities, its core business operations, and other key activities and services. Banks might refer to documents from the VDI, any document drafted in the context of resolution planning, or even the recovery plan.
- The balance sheet of the resolution entity and of each relevant legal entity in the group that is required to submit its own VDS (see Chapter 3.2.), should be stratified into homogenous valuation (sub)clusters, in which the assets and liabilities have similar characteristics and can be valued with similar valuation methodologies. Additionally, banks may choose to further differentiate within the clusters, taking into account specific factors and defining subclusters (e.g. the 'Non-performing loans' cluster may be subdivided into different subclusters based on geographical region or collateral type). Banks are expected to assign unique identifiers ((sub)cluster ID) to each cluster and subcluster. These (sub)cluster IDs should be consistent with the (sub)cluster IDs reported in the VDS (see Annex 3).
- For cooperative groups with several affiliated entities, cluster analysis can be conducted on their aggregated balance sheet rather than individually, provided that these entities share a similar balance-sheet structure and business model.
- Clusters must cover the entities in scope (see above), including any off-balance sheet exposure / risks (see the examples in Figure 33 and Figures A7.1 and A7.2 in Annex 7).
- A comprehensive overview of all (sub)clusters (e.g. in one table) is expected to be prepared, including, at a minimum and for each (sub)cluster, the book value, the fair value and a split into Level 1-3 fair values, and a reference to the relevant VDS if applicable (see the example in Figure A7.3 in Annex 7).
- For each (sub)cluster, a summary (e.g. in template format) must be prepared. Figures A7.4 to A7.7 (Section A) in Annex 7 provide examples of potential cluster documentation.
- 177 The following example shows a simplified example of clustering.

⁴² See Annex 7 for further information.

Figure 33. Simplified example of potential clustering of the balance sheet

Main cluster	Subcluster								
C1: Loans to banks	C1.1: Loans			C1.2: Reverse Repos					
C2: Loans to customers (PL)	C2.1: Retail (Consumer / F	C2.2: Corpo	rporate C2.3: Real esta			cate C2.4: Asset based			
C3: Loans to customers (NPL)	C3.1: Retail (Consumer / Real Estate)		C3.2: Corpo	C3.2: Corporate		C3.3: Real estate		C3.4: Asset based	
C4: Securities	C4.1: Debt C4.2: Equity & F			ty & Fι	unds C4.3: As			set backed securities	
C5: Derivatives	C5.1: Simple / Plain Vanilla				C5.2:	25.2: Exotic			
C6: Other assets	C6.1: Cash	C6.2: Intangibles		C6.3	.3: Tangibles		C6.4: Tax assets		C6.5: Others
C7: Liabilities			C7.2: Senior unsecured			: T2 / ordinated	C7.4: Deposits	C7.5: AT1	C7.6: Others
C8: Off-balance	C8.1: Loan commitments			C	C8.2: Other				

6.4. Use of internal valuation capabilities

- The independent valuer should be able to perform the valuation supported by the entities' internal valuation models for the derivation of economic values (if deemed appropriate).⁴³ In addition, by assessing the valuation playbooks, the SRB and independent valuers can gain insight into the bank's valuation processes and, in case of a crisis, rely on the information provided as a starting point, adapting it to the specific circumstances of the crisis, in order to ensure a more accurate valuation of the bank in resolution.
- In the context of the EoVCs, the focus is especially on all models that contribute directly to deriving any disclosed IFRS 13 fair values (Level 2 and 3), as well as the fair value of financial instruments at amortised cost (IFRS 7.25-7.26). For entities not subject to IFRS reporting standards at individual level, the focus should be on models used to estimate these fair values for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.
- 180 For the purpose of the valuation playbook, the following definitions should be adhered to:
 - a. Internal valuation model: a set of tools and procedures aimed at estimating the fair value of financial instruments, assets or liabilities that are not actively traded or lack observable market prices (i.e. Level 2 or 3). The internal valuation model includes various aspects, such as valuation methodologies, input data, sensitivity analysis, governance elements and supporting documentation.

⁴³ Article 7(2) of Commission Delegated Regulation (EU) 2018/345 of 14 November 2017.

- b. Valuation methodology: the technique or approach used to estimate the fair value of an asset or liability. Below is a non-exhaustive list of valuation methodologies applicable to various types of financial instruments:
 - Loans: the value of a loan can be estimated by discounting the future cash flows
 to their present value ('DCF models'), considering both the income (i.e. principal
 and interest payments) and cost factors such as the expected loss, the cost of
 capital, administrative costs and the cost of funding.
 - Derivatives: valuation methodologies include DCF models, binomial or trinomial trees, Monte Carlo simulation, finite difference methods, closed-form formulas, etc. Banks can refer to applied models, such as Black-Scholes, Cox-Ingersoll-Ross, Hull-White, Heston, LIBOR market, Merton, etc.
 - Securities: typically, these are valued by estimating the present value of future cash flows, applying a discount rate that reflects the security's risk. Alternatively, they can be valued using market comparables. The valuation of structured products, such as for CDOs, requires valuation methodologies similar to those used for derivatives.
- c. Valuation inputs: specific data or parameters used as inputs in valuation methodologies and internal valuation models to determine the value of an asset or liability. Valuation inputs can include a wide range of data, such as share prices, interest-rate curves, volatilities, correlations, credit spreads, etc.
- 181 Fair values are requested as data attributes in the VDS (see the 'Fair value' data attribute category) and might serve as a starting point for the independent valuer (especially for valuing complex securities, derivatives and other tradable assets).
- Banks must describe the use of the valuation methodologies (related to IFRS 13 disclosure, IFRS 7.25-7.26) within the valuation playbook. As a minimum, this section should include the following⁴⁴:
 - a. A comprehensive description of the valuation landscape for each relevant banking entity in scope (or overarching for the banking group, if more appropriate). This includes a description of the valuation methodologies used and an overview of the governance processes in place for the internal valuation models. Banks can align their general description with the related model lifecycle by including different stages such as development, testing, risk assessment

⁴⁴ Please refer to Annex 7, which provides further guidance on the content and a few examples of the level of detail expected in valuation playbooks.

- of models, etc., as well as the various units, departments and committees involved, along with their respective roles and responsibilities.
- b. A list of the relevant valuation methodologies for Level 2 and 3 assets and liabilities for each valuation cluster or subcluster: banks are expected to group internal valuation models with similar features under the same valuation methodology category. Figures A7.4 to A7.7 (Section B) in Annex 7 provide examples of the level of detail requested. For the internal valuation models/methodologies mentioned in this list, banks are expected to make references and provide the related documentations or manuals within the VDI (see VDI section 9.1).
- 183 While section 9 of the VDI index serves as a comprehensive repository for detailed model documentation, the Valuation playbook is expected to provide a more concise overview of the methodology and key aspects of these models. This means that instead of duplicating extensive technical details within the playbook, banks can include a general introduction to the internal models in line with paragraph 182 and provide cross-references to relevant documents that are already uploaded in the VDI. Finally, if required, the SRB may request additional documentation or manuals related to the valuation models for valuing the different (sub)clusters.

6.4.1 Flexibility of internal valuation models

- In resolution, the independent valuer might request that the bank provide valuation results for certain asset classes considering alternative assumptions and valuation inputs⁴⁵, which will be provided by the independent valuer at short notice. The SRB expects the playbook to include an assessment of the bank's flexibility and readiness to incorporate different valuation inputs within a short timeframe, without necessitating changes to the current model infrastructure. Instead, the valuation playbook should outline the steps and timeline required to perform such actions when inputs are provided at short notice, allowing the SRB and ultimately the valuer (in case of a crisis) to evaluate the appropriateness of the valuation outcomes for ex-ante valuation or an ex-post definitive valuation process.
- Banks are expected to be able to cope with the requests from the valuers to re-run their internal valuation models based on the instructions and inputs provided, and explain the valuation results and any potential limitations of the results and/or the internal valuation model(s) to the independent valuer. Valuation playbooks should:

⁴⁵ Principle 2.5.3 of the EfB provides that banks test the sensitivity and flexibility of their internal valuation models.

- detail all the process steps necessary to produce alternative valuation results using alternative inputs provided by the independent valuer, considering the specifics of different asset classes and valuation methodologies; and
- assess the bank's flexibility and readiness to incorporate different valuation inputs within a short timeframe, including the timeframe to re-run the internal valuation models, the inputs needed from the independent valuer, and how the independent valuer should share its assumptions and valuation inputs (e.g. templates or files with structured data).

6.5. Governance arrangements for valuations

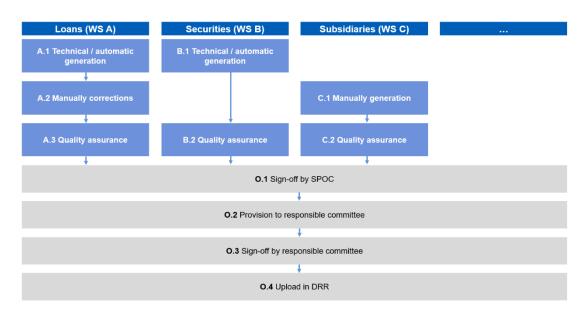
- The EfB expects that entities have in place robust governance arrangements that facilitate the preparation and implementation of the resolution strategy. In accordance with the EfB47, the management body and senior management are expected to provide all necessary assistance to achieve the resolution objectives and operationalise the bank's resolution strategy. In the context of valuations in resolution, the responsible member of the management body and/or the responsible senior executive appointed to manage the bank's resolution-planning activities are expected to play an active role (e.g. review and sign off on the main deliverables, attend relevant meetings). In addition, the playbook is expected to be validated by the bank's senior management.
- To achieve this, banks are expected to establish clear governance arrangements to support valuation-related activities during both the resolution planning phase and crisis.
- 188 The governance arrangements for valuation in resolution should adhere to the following principles:
 - Timely and accurate provision of relevant information for valuation on a regular and ad hoc basis.
 - b. Staff awareness of the roles and tasks to be performed in planning and in crisis.
 - c. Effective oversight during resolution planning and potential crisis situations.
 - d. Efficient decision-making in the lead-up to or at the time of resolution.
 - e. Clear structures and responsibilities for reporting, escalation and formal decision-making within the resolution group.

⁴⁶ Principles 1.1 and 1.2 of the EfB.

⁴⁷ Principle 1.1 of the EfB.

- f. Defining a single point of contact (SPOC) responsible for valuation in resolution within the resolution group and for coordination with external parties in crisis (e.g. SRB, NRA, independent valuer). The SPOC should be a designated individual -preferably an experienced senior-level executive- with the authority to oversee quality assurance and approve key deliverables.
- g. When applicable, adequate involvement of subsidiaries by defining experts within the subsidiaries (especially when data provisioning is decentralised).
- 189 When describing the valuation-related processes, banks should cover at least the following key processes and the related timeline:
 - a. Generating the VDS (P1):
 - Process steps to generate the VDS considering the specifics of each dataset (where relevant). The description should also include the different data sources that the group relies on to generate the VDS.
 - Figure 34 provides an illustrative example of the process to generate the VDS.

Figure 34. Simplified example of a flow chart for the process to generate the VDS



- b. Collecting all information required in the VDI (P2): Process steps to collect and prepare the documents expected in the VDI.
- c. Managing the DRR (P3):
 - Process steps to ensure regular and timely updating of the DRR.

- Process steps for managing access rights and permission management, and for providing technical support for resolving technical issues.
- d. Usage of internal models (P4): Process steps necessary to produce alternative valuation results using alternative inputs provided by the independent valuer, considering the specifics of different asset classes/models.
- More specifically, banks should cover the following dimensions when describing the valuationrelated processes outlined above:
 - a. Production, collection and management (D1)
 - b. **Quality assurance** (D2). For instance, preparing the data quality report for the VDS (see Chapter 4.6) and subsequent procedures to address discrepancies. This should encompass a detailed description of the implementation of validation rules (see Annex 4), as well as any additional checks developed by the bank.
 - c. Sign-off procedures (D3)
- 191 Figure 35 illustrates how the listed dimensions (D1, D2 and D3) should be considered in the relevant processes (P1, P2, P3 and P4).

Figure 35. Illustration of the interconnection between the processes and dimensions (non-exhaustive examples)

	P1 Generating the VDS	P2 Collecting all information required in the VDI	P3 Managing the DRR	P4 Usage of internal valuation capabilities	
D1 Production, collection and management	Technical production of the different datasets	Collecting all the information necessary to produce the VDI	Upload of the VDI documents Managing access rights	Re-run valuation with the provided assumptions of the SRB / independent valuer	
D2 Quality assurance	Validation of the different datasets – Production of the outcome report	Review of the produced and collected information to populate the VDI	Conduct regular reviews of VDI documents uploaded to the DRR to ensure they remain up- to-date.	Review of the result of the adjusted calculation	
D3 Sign-off procedures	Sign-off of datasets	Sign-off of the VDI documents	Sign-off of the permitted access rights	Sign-off of fair values	

- 192 All governance arrangements for valuation are expected to be outlined in the valuation playbook, including the following:
 - a. Identification of the responsible units, departments, committees, and staff (pre-existing or specifically designed for valuation purposes) within the bank that are involved in the different stages of valuation-related activities, with a clear allocation of responsibilities. The roles and tasks of the different parties and committees and the interactions between them are expected to be clearly described.
 - b. The SPOC is responsible for ensuring that an expert is designated for each key process defined in the playbook. In particular, for P1, one valuation expert should be available for each valuation cluster. The list of experts should be included in the valuation playbook.
 - c. All processes that are necessary to adhere to the requirements of the EoVCs (see paragraph 182). The description of these processes should cover the following:
 - a description of the overall process, lining out the sequence and dependencies between the process steps (e.g. in the form of a flowchart);
 - a detailed description of all automated and manual process steps, including the time required for each process step, the inputs and outputs, and the required MIS.

Annexes

Annex 1. Valuation Data Index: list of documents

In this annex, there is a detailed description of the requested information in the VDI. In Figure A.1.1 below, the details of each VDI request are given, such as the expected scope, and cut-off dates.

Figure A1.1. Subject areas and topics of the VDI list

#	Topic	Scope	Cut-off date			
1.	SRB Valuation Dataset and other structured data					
1.1	The SRB Valuation Dataset	Single entity	Year-end for the two preceding years			
1.2	Minimum Bail-in Data Template	Single entity	Year-end for the two preceding years			
1.3	Trial balance extract	Single entity	Year-end for the two preceding years			
1.4	Reconciliation with the trial balance sheet and FINREP	Single entity	Year-end for the two preceding years			
2.	General information					
2.1	Legal entity structure	Group	Latest version available			
2.2	Investor presentations	Group / Single entity	Latest versions available			
2.3	External rating reports	Single entity	Latest versions available			
3.	3. Financial information					
3.1	Annual reports	Group / Single entity	Year-end for the two preceding years			
3.2	Interim reports	Group / Single entity	Latest versions available			
3.3	Annual financial statements and interim reports of intermediate holding companies	Group	Financial statements: Year-end for the two preceding years			
	.,		Interim reports: latest versions available			
3.4	External audit reports	Group / Single entity	Latest versions available			
3.5	Management reports	Group / Single entity	Latest versions available			
3.6	Business plan	Group / Single entity	Latest versions available			

		ı		
3.7	Explanation of the business plan	Group / Single entity	Latest versions available	
3.8	Governance of the planning processes	Group / Single entity	Latest versions available	
3.9	External or internal valuation reports	Single entity	Latest versions available	
3.10	Tangible assets	Single entity	Year-end for the two preceding years	
3.11	Intangible assets	Single entity	Year-end for the two preceding years	
3.12	Pension provisions	Single entity	Year-end for the two preceding years	
3.13	Protection schemes	Group	Latest versions available	
4.	Taxes			
4.1	Tax calculation for current taxes	Single entity	Year-end for the two preceding years	
4.2	Tax planning calculation	Group / Single entity	Latest version available	
4.3	Detailed breakdown DTA/DTL	Group / Single entity	Year-end for the two preceding years	
4.4	Unrecognized tax risks	Single entity	Year-end for the two preceding years	
4.5	Calculation of the effective tax rate	Group	Year-end for the two preceding years	
5.	Personnel			
5.1	FTE cost overview	Group	Year-end for the two preceding years	
6.	П			
6.1	IT costs	Group	Year-end for the two preceding years	
7.	Risk management			
7.1	Risk reports	Group / Single entity	Latest versions available	
7.2	Trading book risk reports	Group / Single entity	Latest versions available	
7.3	Sensitivity calculations for the Trading book	Single entity	Year-end for the two preceding years ⁴⁸	
8.	Legal and compliance			

⁴⁸ Only the most recent version of the methodological document should be maintained in the DRR (see description of VDI document 7.3).

8.1	Litigations	Single entity	Latest version available			
8.2	Contract termination risks	Single entity	Latest version available			
8.3	Internal audit reports	Single entity	Latest version available			
9.	9. Information on internal models for valuation purposes					
9.1	Information on internal valuation models	Single entity	Latest version available			
9.2	Rating Master Scale	Group / Single entity	Latest version available			
10.	Other information					

1. The SRB Valuation Dataset and other structured data

1.1. The SRB Valuation Dataset

The SRB Valuation Dataset is described in Chapter 4. The datasets must be submitted according to the technical instructions in Annex 2. The SRB Valuation Dataset must be accompanied by the data quality report (Annex 5).

1.2. Minimum Bail-in Data Template (MBDT)

The MBDT was designed to support the operationalisation of the bail-in tool. However, data collected through the MBDT can be leveraged to perform liability valuations in resolution, when supplemented with additional data attributes, which are collected through the Supplementary MBDT and Complementary Liabilities datasets.

Hence, in order to exploit synergies between crisis-related data collections, only the following MBDT tables are expected to be submitted to the DRR: B02.00, B90.00 and B99.00 tables (Submission A and B).

The requirements outlined in the MBDT guidance concerning the capability to update the MBDT report at non-standard reference dates remains in place for bail-in operationalisation purposes.

Only entities qualifying as reporting entities under Section 1.2. of the 'MBDT Guidance' are expected to submit the MBDT tables.

1.3. Trial balance extract

This refers to the trial balance sheet as of the respective cut-off-date. It should disclose the closing balances of all accounts in the general ledger.

The trial balance sheet should be provided in a machine-readable format (e.g. Excel).

1.4. Reconciliation with the trial balance sheet and FINREP

Documentation evidencing the results of the reconciliation of the VDS with the trial balance (if applicable).

- Reconciliation of the VDS with the trial balance: for entities not required to report FINREP on an individual entity level due to a waiver, the financial reporting (FINREP) reconciliation rules cannot be performed. In these cases, the entities are expected to perform a reconciliation of the carrying amounts submitted in the VDS to the trial balance sheet on an aggregated level. Explanations for the differences between balance sheet line exposures and the aggregated carrying amounts in the VDS are expected to be provided in a document, which should be stored in the DRR.
- Entities expected to perform the reconciliation with FINREP are expected to provide this reconciliation as part of the data quality report (see Chapter 4.6. and Annex 5 for further details). Entities are expected to justify any differences identified during the reconciliation.

2. General Information

2.1. Legal entity structure

A complete legal entity overview that includes all group entities and affiliates along with their respective participation percentages.

2.2. Investor presentations

Presentations that outline the entity's financial performance, strategy and planned future developments to investors and other relevant stakeholders.

2.3. External rating reports

Rating reports and relevant rating updates published by all rating agencies that provide either an issuer rating or a rating for specific debt instruments.

3. Financial information

3.1. Annual reports

Applicable on a single entity basis (in line with the applicable GAAP) and group level basis (in line with the applicable GAAP or IFRS).

3.2. Interim reports

Interim reports containing information similar to that presented in annual reports, but covering a period shorter than a full financial year. Applicable on a single entity basis (in line with the applicable GAAP) and group level basis (in line with the applicable GAAP or IFRS).

3.3. Annual financial statements and interim reports of intermediate holding companies

Only relevant for resolution entities: annual financial statements and interim reports for each relevant intermediate holding company (see Chapter 3.2) within the resolution entity's group.

If the book values of individual direct subsidiaries are not explicitly detailed in the annual statement but are instead presented in an aggregated format, an additional breakdown showing the book value for each subsidiary individually should be submitted.

3.4. External audit reports

Audit report on the financial statements prepared by the external auditor.

3.5. Management reports

Provided reports should contain a description of the financial developments of the entity at the level of business units

They should refer at a minimum the following items and their components:

- P&L statement;
- balance sheet statement; and,
- key performance indicators (KPIs) which are relevant to the respective business units.

These reports are expected to highlight any significant deviations from the budgeted figures and include explanatory notes to clarify the reasons behind these deviations.

3.6. Business plan

The business plan should contain a projection for each of the following items:

- P&L statement;
- balance sheet;
- · regulatory capital plan; and,
- KPIs.

Additionally, the business plan should provide sufficient detail, including a breakdown by different business lines or segments and a detailed breakdown of revenues and costs that reflect the business model.

The business plan should also be provided in a machine-readable format, such as Excel.

3.7. Explanation of the business plan

Relevant documentation of the business plan should include both the qualitative and quantitative assumptions used to derive the business plan's figures. This encompasses:

- new business and actual business development and growth rates;
- market shares;
- interest rates of interest-bearing assets and liabilities, their margins and the underlying interest rates;
- FX assumptions; and,
- if applicable, assumptions regarding industry specific developments.

3.8. Governance of the planning processes

Relevant documentation of the governance of the planning process that includes details on the responsible business units, the timeline, the internal committees involved, and the sign-off processes.

3.9. External or internal valuation reports

Reports documenting any valuations – whether performed internally by the entity or externally – related to the entity carried out e.g. in the context of M&A transactions, price purchase allocations, impairment tests in accordance with IAS 36 or applicable GAAP, including:

- Any valuations of the entity or its subsidiaries.
- Valuations of business units or portfolios of assets and/or liabilities, asset management, insurance business, etc.

3.10. Tangible assets

Documentation or reports containing:

- An overview of tangible assets, including an inventory of owned real estate, equipment, art, and other physical assets.
- If these tangible assets are deemed material (at group level) defined as representing more than 1% of the group's total assets the relevant documentation should include detailed information such as asset type, the book value, the gross value, impairments, the most recent internal or external valuation, depreciation method, the average age of the assets, and their average remaining useful life.

3.11. Intangible assets

Documentation or reports containing:

- An overview of intangible assets, such as goodwill, software, trademarks, and royalty agreements.
- If intangible assets are deemed material (at group level) defined as representing more than 1% of the group's total assets the relevant documentation should include detailed information such as asset type, the book value, the most recent internal or external valuation, the depreciation method used, the average age of the assets, and their average remaining useful life.

3.12. Pension provisions

This applies only to entities whose balance sheets include pension provisions.

Extracts from actuarial reports on pension provisions should be provided, with special emphasis on non-funded pension obligations.

3.13. Protection schemes

This applies only to entities that are part of an institutional protection scheme or contribute to voluntary deposit guarantee schemes.

Documentation or report containing a detailed breakdown of the compensation scheme, including institutional protection schemes and voluntary deposit guarantee schemes. The documentation should describe how payments and payment commitments related to the compensation scheme are treated, including their impact on the balance sheet, the P&L and CET1.

The above information should be supplemented by the relevant contractual arrangements, such as IPS agreements.

4. Taxes

4.1. Tax calculation for current taxes

Documentation or report containing a detailed calculation of current taxes, including:

- An outline of the applicable framework, including accounting standards and local tax regulations.
- A comprehensive calculation of current taxes, detailing the breakdown of taxable income and expenses, deductions, non-deductible items, and tax-free income.
- An indication of both the statutory tax rate and the effective tax rate, specifying the statutory tax rate applicable in the jurisdiction of the entity's fiscal residence, and presenting the effective tax rate that reflects the actual fiscal burden according to the respective GAAP.

The report should be supplemented with a clear narrative explanation outlining each step of the calculation process. This narrative should detail how the figures were derived and any assumptions made along the way.

4.2. Tax planning calculation

Documentation or report containing a detailed tax planning calculation (at group and single entity levels) derived from the business plan. This should include:

An estimation of taxable income and expenses.

Projection of existing tax assets and liabilities, including reversals of deferred tax assets covering temporary differences and tax loss carryforwards. The reversal of those deferred taxes where the reversal is later than five years (e.g. reversal of deferred taxes on real estate) should also be included in the projection.

4.3. Detailed breakdown DTA/DTL

Applicable solely to entities (at group and single entity levels) that hold deferred tax assets ('DTA') and/or liabilities ('DTL'), where the amount of DTAs at the individual level exceeds 10% of the entity's CET1⁴⁹

Documentation or report containing a detailed breakdown of DTA/DTL, including:

- Calculation of deferred tax assets and liabilities in accordance with the applicable GAAP. This
 calculation is based on temporary differences and tax losses carried forward and should be presented
 separately for DTAs and DTLs, including an explanation of netting procedures (and tax losses carried
 back, where relevant).
- Calculation of the used and unused amounts of tax losses carried forward, along with an explanation
 of how the unused can be utilized in future fiscal years.
- Calculation of deferred tax credits (DTCs), as applicable.

On the group level, the following information should be provided:

Report containing a detailed breakdown of DTA/DTL, including:

 Calculation of deferred tax assets and liabilities in accordance with IFRS. This calculation should be based on temporary differences and a full-scope balance sheet comparison (IFRS to tax balance sheet), as well as on tax losses, presented separately for DTAs and DTLs, with an explanation of the netting procedures.

4.4. Unrecognized tax risks

Information on unrecognized tax risks, if applicable, such as those arising from ongoing tax audits or uncertain tax positions, whether paid or unpaid. This should include a list with explanations of the uncertain tax positions and the corresponding tax exposure amounts.

4.5. Calculation of the effective tax rate

Calculation or estimation of the statutory and effective tax rate at the group level.

⁴⁹ The 10% threshold should be measured as the amount of DTA as at the individual level relative to the CET1 of the entity.

5. Personnel

5.1. FTE cost overview

The provided documentation or reports should detail the internal organizational structure and personnel costs on the level of organizational units (e.g. departments or business units). For each organizational unit the following information should be included:

- the number of full-time employees (FTEs);
- the average number of years of employment; and,
- the associated personnel costs including remuneration. These costs should be reconcilable with the figures provided in the annual reports (See VDI document 3.1 - Annual reports).

6. IT

6.1. IT costs

Documentation or reports containing a detailed and itemised breakdown of all expenses associated with the company's information technology including:

- Operational expenses, divided into costs for software, hardware, and professional services.
- Personnel expenses, depreciation, and capital expenses.

These should be reconcilable with the figures provided in the annual reports (See VDI document 3.1 – Annual reports).

7. Risk management

7.1. Risk reports

Regular and event-driven (risk) documentation or reports that were prepared for discussion at risk committees responsible for overseeing the identification, measurement, and management of various risks. At a minimum, the risk reports to be submitted to the DRR should cover the following types of risk:

- credit risk;
- market risk:
- operational risk; and,
- structural risks such as liquidity risk, interest rate risk in the banking book and currency risks.

These reports typically include a detailed analysis of key performance indicators and risk metrics, trends and any significant changes in the bank's risk profile since the previous reporting period, along with an assessment of how these risks are being managed. Additionally, the reports also offer insights into emerging risks, whether related to changes in market conditions, regulatory environments, or operational challenges, and evaluate the bank's preparedness to manage these risks. Furthermore, these reports may highlight any risk incidents or breaches of regulatory requirements or risk appetite limits and discuss actions to address them.

7.2. Trading book risk reports

This section applies only to entities that are expected to submit the Trading books dataset (see Chapter 4.5.12).

Comprehensive documents or reports are requested offering an analysis and overview of the risks associated with the entity's trading activities, including:

- a comprehensive description of the products per trading desk;
- a description of the type of trading activities per trading desk i.e. proprietary trading, market making, client-driven activities, etc.
- identification of various risks including market risk, credit risk, liquidity and valuation risks; and

The submitted documentation should be accompanied by a methodological document or note that explains the approaches and the parameters used to calculate the VaR, sVarR and ES metrics reported in the Trading books dataset, including:

- confidence level;
- time horizon; and,
- the methodology for deriving VaR, sVaR and ES (e.g. historical approach, variance-covariance approach, Monte Carlo simulation approach, etc.), along with details on the inputs utilised.

The information submitted under this item should align with the information provided in the solvent wind-down plans, where applicable.

7.3. Sensitivity calculations for the Trading book

This section applies only to entities that are expected to submit the Trading books dataset (see Chapter 4.5.12).

Document or report detailing the sensitivity parameters of the instrument's price to change in the price of instruments' underlying factors (interest rates, FX, equity, commodity, inflation, etc.). These sensitivities should be reported for each trading desk listed in the Trading books dataset. The report is expected to cover as a minimum the following items:

Trading desk ID, as reported in the Trading books dataset.

- Aggregated carrying amount of the positions included in the respective trading desk.
- Granular first order sensitivities (and second order, if available) to each of the relevant risk factors.

The report should be provided in a machine-readable format (e.g. Excel).

The report should be supplemented by a methodological document or note that explains the risk factors included in the report and the methodology used to derive the sensitivities. Additionally, the document should clarify the data inputs, assumptions, and any relevant calibration techniques applied to ensure that the sensitivities accurately reflect market conditions and risk exposures.

8. Legal and compliance

8.1. Litigations

Documentation or a report with information on litigation and legal disputes, as applicable.

The report should detail the maximum amount at risk, the accounting treatment (contingent liabilities and IAS 37 provisions), and the allocated provisions.

The report should be supplemented by a document or note detailing:

- the litigation and legal disputes that the entity is involved in;
- the procedural status of such litigation proceedings (e.g. not filed, ongoing, resolved, appealed, under review, settled, dismissed, etc.);
- the rationale for the allocated provisions and details of the methodology used to estimate these allocations.

8.2. Contract termination risks

Documentation or reports outlining the legal risks arising from the entity's contractual relationships with service providers, including insurers (e.g. in bancassurance agreements), asset managers, and other third-party vendors, due to clauses that could trigger penalties if the following conditions are met, namely:

- A change of control over the entity, such as in a sale of business or in a bail-in event.
- Failure to meet specified performance targets.

For example, if the entity is acquired by another one or there is a significant shift in the ownership structure, this may activate review clauses or result in automatic financial penalties under the terms of the contract. Other triggers may include non-compliance with agreed financial or operational performance metrics, potentially exposing the entity to economic liabilities.

Entities are not required to document termination risks arising from all contractual relationships with service providers, except for those risks directly associated with the conditions specified above, which may have a material impact on the entity's P&L or CET1.

The report should include:

- a detailed analysis of the legal risks; and,
- an assessment of the potential financial impact of penalties.

8.3. Internal audit reports

Internal audit reports (or extracts thereof) on matters relevant to valuations, including:

- valuation models;
- independent price verification function;
- identification of non-performing exposures and accounting practices;
- collateral valuation;
- data integrity and reliability, covering:
 - accounting / prudential reporting;
 - other regulatory reporting in relation to analytical credit datasets (AnaCredit), statistics on holdings of securities (SHS), the European Market Infrastructure Regulation (EMIR), the Securities Financing Transactions Regulation (SFTR), and the Centralised Securities Database (CSDB), among others;
- specific internal audits on the VDI, VDS and MBDT.

9. Information on internal valuation models

9.1. Information on internal valuation models

The documentation should specifically include:

- Valuation approach / methodologies.
- Key input parameters for valuation assumptions, including the source of the information, derivation, or expert judgement.
- Technical basis of the model, such as the software or provider used for the calculations.
- Model validation documentation, including back-testing and audit / validation reports.

Please see Chapter 6.4 on the use of internal valuation capabilities. The documentation under this item is expected to complement the information provided in the Valuation playbooks.

9.2. Rating Master Scale

A standard and uniform rule for credit levels used to compare the credit quality across the entity's different portfolios. The documentation provided should include a:

- mapping between the probability of default and the rating / scoring and;
- transition matrix of probabilities of default;

10. Other information

Any other documentation not included in the previous items, upon request by the SRB.

Annex 2. Technical Instructions

Annex 2 provides detailed technical instructions for submitting files to the DRR. Section 1 details the naming convention for requested files in the VDI. Section 2 encompasses specific instructions for submitting the VDS to the DRR. Section 3 specifies the naming convention of the data quality report.

1. Naming convention for requested files in the VDI

The instructions in the following paragraphs apply to VDI documents, except for the VDS, for which separate instructions are provided in the subsequent section.

Each document should be either an excel (xlsx), power point (pptx, ppt), word (docx), portable document format (pdf), or a comma-separated values (csv) file. When providing a csv file, banks are requested to separate columns in the files by using a semicolon separator (';'). Other file formats may be used after consulting the SRB.

The file name must respect the following naming conventions:

- <IndexNumber_Bank>_<specific document name>_<Cut-off date>.<FileExtension>

where:

- <IndexNumber> is the index number of the VDI is the tab code with a separating point (e.g. '1.1', '1.2', '1.3', etc.).
- <Bank specific document name> is the internal designation of the bank for the respective document. Banks are requested to use clear and consistent file naming across all submissions, ensuring that the names clearly reflect the content of the documents.
- <Cut-off date> is the cut-off date of the document in the format YYYY-MM-DD.
- <FileExtension> is the file name extension which indicates the data type of the file (e.g. 'xlsx').

For example, a resolution entity is requested to provide the VDI document '3.6 Business plan' and transmits the Excel file with the internal file name 'BusinessPlan2024_base_case_Vfinal.xlsx' and the cut-off date 31.12.2024 to the DRR with the following file name:

3.6_BusinessPlan2024_base_case_Vfinal_2024-12-31.xlsx

For the DRR Index of documents (see Chapter 5.2.), please use the following naming convention:

DRR_Index_<LEI>_<Update date>.<FileExtension>

where:

- <Country> is ISO 3166-1 alpha-2 code of the country of incorporation of the submitting institution.
- <LEI> is LEI code of the submitting institution.
- <Update date> is the date of the latest update of the DRR index using the format YYYY-MM-DD.
- <FileExtension> is the file name extension which indicates the data type of the file (e.g. 'xlsx').

For example:

DRR Index ES SADMGFJPUZEK53983R35 2024-12-31.xlsx

2. Instructions for submitting the VDS

A VDS submission consists of the complete set of datasets (e.g. 'Loan instruments and off-balance sheet exposure', 'Derivatives instruments', 'Securities', etc.) as outlined in Chapter 4.5.

All datasets are expected to be submitted to the DRR, except for PRO_SHI, PRO_AVI and PRO_REN, unless otherwise requested by the SRB. If an institution has not been required to submit these datasets, it is not necessary to produce and submit that particular dataset to the DRR. However, it is crucial to note that if the institution is requested to submit any of these datasets, it is expected to develop accordingly all the necessary capabilities to provide that dataset.

Each dataset must be delivered as a separate file in comma-separated values (csv) format, using UTF-8 encoding. If, for any reason, the institution is unable to produce the csv files in UTF-8 encoding, please contact the SRB before submitting the datasets providing details of the encoding used and the reason for the deviation.

When producing the csv files, the following rules should be followed:

- Columns in the files are to be separated by a semicolon separator (';').
- The data attributes included in the respective datasets should follow the mapping between data attributes and datasets as outlined in the 'List of data attributes' of Annex 4 (e.g. the csv file for the dataset 'Loan instruments and off-balance sheet exposure' should contain only 'LOA' data attributes).
- The first row of the csv files should contain and follow the order of the list of 'Data attribute ID's (e.g. 'LOA_1', 'LOA_2', 'LOA_3', etc.) of the corresponding datasets according to the 'List of data attributes' of Annex 4. No additional columns should be included in the datasets. The data attributes should follow the instructions with respect to the data format and applicability outlined in the 'List of data attributes' of Annex 4. Each data attribute and dataset should be submitted irrespective of the availability and applicability of the data⁵⁰.

⁵⁰ With the exception of PRO_AVI, PRO_SHI, and PRO_REN that must be submitted only upon SRB request (4.2.1).

- The actual data should start from the second row onwards. No additional rows are expected between the 'Data attribute ID' headers and the row where the actual data begins.
- In general, the VDS is designed to have only a single entry for each data attribute. However, the VDS includes data attributes where multiple entries might occur within the same attribute (e.g. LOA_5: 'Country of governing law'). In such cases, the vertical bar (|) must be used as a separator for each entry in the specific data attribute with no extra spaces allowed.
- For numeric data attributes, no thousands separator must be introduced and the dot (.) must be used as a decimal separator. In addition, percentages must be expressed in decimal format, as indicated in Annex 4 (tab 'List of data attributes', data attributes with format 'Numeric: 4 decimals'), e.g. 0.0512 must be used to represent the 5.12%.
- For data attributes with a drop-down format, the technical code (the integer in square brackets in the 'Data attribute drop-downs' tab of Annex 4) must be submitted.
- For string data attributes, values must be enclosed within double quotes ("").

The file name must respect the following naming convention:

<TabCode>_<Country>_<LEI>_<Cut-off date>.csv

where:

- <TabCode> is the tab code without the separating point (e.g. LOA, DRT, SEC, etc.). The tab codes are provided in Figure A2.1 below.
- <Country> is ISO 3166-1 alpha-2 code of the country of incorporation of the submitting institution.
- <LEI> is the LEI code of the submitting institution.
- <Cut-off date > is the cut-off date in the format YYYY-MM-DD.

For example, a resolution entity incorporated in Spain – as LEI SADMGFJPUZEK53983R35 producing a VDS subject to the cut-off date 31 December 2024 submitted as csv files to the DRR – will do so with the following file names:

- META_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- SMBDT_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- CL_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- SEC_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- DRT_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- TB_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- SUB_ES_SADMGFJPUZEK53983R35_2024-12-31.csv

- LOA_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- IC_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- COU_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- ▶ IP_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- PRO_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- CP_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- PRO_REL_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- PRO_SHI_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- PRO_AVI_ES_SADMGFJPUZEK53983R35_2024-12-31.csv
- PRO_REN_ES_SADMGFJPUZEK53983R35_2024-12-31.csv

The combination of the elements above will allow the SRB to link all the different files pertaining to a single VDS submission, keeping track of potential resubmissions.

If the size of one or more files is such that they cannot be downloaded from the DRR and/or opened, the SRB may request the bank to split the files into one or more subsets.

In Annex 4, there are additional details on the specific data types and constraints expected for each VDS data attribute. In addition, entities should not include additional modifications, such as spaces, enter signs or tabulations in the files.

Figure A2.1. Mapping of tab names and tab codes.

Dataset name	Tab code	Dataset name	Tab code
Meta	META	Protection - Shipping	PRO_SHI
Loan instruments and off-balance sheet exposure	LOA	Protection - Aviation	PRO_AVI
Counterparty	COU	Protection - Renewables	PRO_REN
Loan instruments and off-balance sheet exposure – Counterparty mapping table	IC	Supplementary MBDT	SMBDT
	- PDO	Complementary liabilities	CL
Protection received Loan instruments and off-balance sheet	PRO	Securities	SEC
exposure - Protection received mapping table	IP	Derivatives instruments	DRT
Counterparty - Protection received mapping table	СР	Subsidiaries and affiliates	SUB
Protection - Real estate	PRO_REL	Trading book	ТВ

3. Instructions for submitting the data quality report

A data quality report must be prepared for each VDS, stored in the DRR (together with the VDS datasets) and submitted to the SRB following the VDS submission to the DRR. The Excel template (in Annex 5) should be used for submissions. Further instructions on the content and exact usage of the template can be found in the tab 'Technical Instructions' included in Annex 5.

The file name must respect the following naming convention:

- DQR_<Country>_<LEI>_<Cut-off date>.xlsx

where:

- Country> is ISO 3166-1 alpha-2 code of the country of incorporation of the submitting institution.
- <LEI> is the LEI code of the submitting institution.
- <Cut-off date > is the cut-off date in the format YYYY-MM-DD.

For example, a resolution entity incorporated in Spain – as LEI SADMGFJPUZEK53983R35 producing a VDS subject to the cut-off date 31 December 2024 – will submit the data quality report with the following file name: DQR_ES_SADMGFJPUZEK53983R35_2024-12-31.xlsx.

Annex 3. Valuation Dataset: data attributes and definitions

1. META - Meta Information

META_1 - Name of the legal entity

Free-form text identification of the incorporation name of the entity for which the table is reported. Please state the official name as listed in the trade registry, and indicate the legal form.

META_2 - LEI of the legal entity

The unique legal entity identifier (LEI) code for the entity, in line with the requirements of the European market infrastructure regulation (EMIR), for which the report is submitted. In the absence of an LEI, the ECB Monetary Financial Institutions unique Identifier (MFI ID) of the entity, used in the RIAD (Register of Institutions and Affiliates Database), should be used. If neither of these identifiers can be used, a local identifier must be used.

META 3 - Country of incorporation

The ISO 3166-1 alpha-2 code of the country of incorporation of the entity.

META_4 - Entity type

Status of the entity as indicated in the resolution plan. Please indicate either 'Resolution Entity' or 'Non-Resolution Entity'.

META_5 - Cut-off date of the submitted data

Cut-off date of the submitted data in the VDS.

2. LOA - Loans and off-balance sheet exposure

LOA_1 - Instrument identifier

The unique identifier of each instrument. Each instrument must have one instrument identifier.

LOA_2 - Type of instrument

Classification of the instrument according to the type of contractual terms agreed between the parties. The possible values are:

Overdrafts: Debit balances on current accounts, which may be authorised (subject to a credit contract
with a predefined limit) or unauthorised (arising without a prior agreement). Overdrafts can be used or

unused, meaning the account may have a positive or negative balance. They are distinct from revolving credit, as they are directly linked to a current account.

- Credit card debt: Credit granted via delayed debit cards (i.e. cards providing convenience credit) or via credit cards (i.e. cards providing convenience credit and extended credit). Extended credit is defined as the credit granted after the due dates of the previous billing cycles have passed.
- Revolving credit card other than overdrafts and credit card debt: Credit where the debtor can use or
 withdraw funds up to a pre-approved limit without prior notice to the creditor. The available credit can
 increase or decrease as funds are borrowed and repaid, and the credit may be used repeatedly. It does
 not include credit card debt or overdrafts.
- Credit lines other than revolving credit: Credit that has the following features: (i) the debtor may use or withdraw funds up to a pre-approved credit limit without giving prior notice to the creditor; (ii) the credit may be used repeatedly; and (iii) it is not revolving credit, credit cards debt or overdrafts.
- Financial lease: Finance lease as defined in paragraph 5.134 to 5.135 of Annex A to Regulation (EU)
 No 549/2013, as well as operational lease assets subject to on-balance-sheet recognition under IFRS
 16 or equivalent under national accounting practices.
- Loans: Loans that are entirely disbursed in one instalment and loans other than overdrafts, credit card
 debt, revolving credit card other than overdrafts and credit card debt, credit lines other than revolving
 credit, financial leases, loans, deposits other than reverse repurchase agreements, reverse repurchase
 agreements and trade receivables.
- Deposits other than reverse repurchase agreements: deposits other than reverse repurchase agreements.
- Reverse repurchase agreements: Reverse repurchase agreement means finance granted in exchange
 for securities or gold bought under repurchase agreements, i.e. transactions in which the institution
 receives cash in exchange for securities or gold bought under repurchase agreements, i.e. transactions
 in which the institution receives cash in exchange for financial assets sold at a given price under a
 commitment to repurchase the same (or identical) assets at a fixed price on a specific future date, or
 borrowed under securities lending agreements.
- Trade receivables: Loans to other debtors granted on the basis of bills or other documents that give the right to receive the proceeds of transactions for the sale of goods or provision of services. This item includes all factoring and similar transactions, such as acceptances, outright purchase of trade receivables, forfaiting, discounting of invoice, bills of exchange, commercial papers and other claims where the entity buys the trade receivable.
- Other: other instruments not classified under the previous categories.

LOA_3 - Type of off-balance exposure

Classification of the off-balance exposure in accordance with Part 1.44 of Annex 5 of the Commission Implementing Regulation (EU) No 2021/451.

LOA_4 - Internal type of instrument (granular)

Internal classification/description of the instrument type at the lowest granular level as per the entity's internal systems, such as 'overdraft facility' or 'amortisation loan'.

LOA_5 - Country of governing law

Country whose legal system governs the contract of the instrument. The ISO 3166-1: Alpha-2 code of the country must be selected.

LOA_6 - Currency

Currency denomination of the instrument, in accordance with the ISO 4217 standard. This data attribute identifies the currency in which the instrument is denominated and not the currency in which the instrument is submitted (note that in the VDS all monetary amounts are submitted in euro).

LOA_7 - Eligibility for ECB collateral

Indication of whether a particular financial instrument fulfils certain criteria set by the ECB to be eligible as collateral for monetary policy transactions.

LOA 8 - Syndicated contract indicator

An indicator to specify whether the loan forms part of a syndicated loan. A syndicated contract is a single loan agreement in which several institutions participate as creditors.

LOA_9 - Fiduciary status

Identification of the status of instruments where the entity acts in its own name but on behalf of and with the risk borne by a third party. In other words, these are instruments held in the name of the entity (the trustee) on behalf of a third party (the trustor). Fiduciary instruments involve services such as custody, asset management or portfolio management on a discretionary basis.

LOA_10 - Flag pass-through loan

This flags instruments that are part of a pass-through loan arrangement. Broadly two types of loans can fall under this type of arrangements:

 Promotional loans provided by public authorities or other institutions, typically as part of funding programmes, to a bank. The bank then offers this loan to specific borrowers. The credit risk may be either shared between the bank and the public authority or assumed entirely by one of them. • Loans originated by the entity and then pooled into a pass-through structure (although they still remain on the balance sheet), in which the payments are 'passed through' to investors, for example through a special-purpose vehicle that issues bonds.

LOA_11 - Recourse status

Identification specifying whether the creditor has rights to seize assets other than the protection pledged to secure the instrument.

LOA_12 - Flag collateralised instrument

This flags instruments that are collateralized and therefore have underlying collateral securing them.

LOA_13 - Inception date

The date on which the contract became binding for all parties.

LOA_14 - Settlement date

The date on which the conditions specified in the contract are executed for the first time.

LOA_15 - Outstanding amount

Generic data attribute that captures the balance sheet instrument's amount outstanding, at the submission date, in accordance with the relevant valuation principle.

LOA_16 - Off-balance sheet amount

This data attribute refers to both on-balance sheet instruments and strictly off-balance sheet instruments.

For on-balance sheet instruments, the undrawn amount available should be provided.

For strictly off-balance sheet instruments, the nominal amount should be provided.

LOA_17 - Arrears amount

Sum of principal, interest and any fee payment outstanding at the submission date, which is contractually due and has not been paid (past due).

LOA 18 - Past due date

The date on which an instrument will be considered past due, i.e. where any amount of principal, interest or fee has not been paid on the date it was due.

LOA_19 - Amortisation type

The type of amortisation structure of the instrument, defined as the way in which the principal of the instrument is paid off. It refers to the following:

- French: amortisation in which the total amount principal plus interest repaid in each instalment is the same. For variable-rate interest loans, the instalment amount remains the same between two interest rate reset dates.
- German: amortisation in which the first instalment is interest-only and the remaining instalments are constant, including capital amortisation and interest.
- Fixed: amortisation in which the principal amount repaid in each instalment is the same.
- Bullet: amortisation in which the full principal amount is repaid in the last instalment.
- Amortisation types other than French, German, fixed or bullet: other amortisation type not included in any of the categories listed above e.g. balloon.

LOA_20 - Internal description of amortisation type

Classification of the amortisation structure of the instrument based on the submitting bank's internal description. This should, in principle, mirror the information provided in LOA_19 ('Amortisation type') data attribute but at the most granular level available within the bank's internal system.

This enables to reflect amortisation types of instruments not covered by the predefined drop-down options for LOA_19 ('Amortisation type'). Furthermore, it provides the valuer with a deeper understanding of the instruments.

LOA 21 - Principal payment frequency

Frequency of principal payments due, according to predefined time intervals.

LOA_22 - Next amortisation payment date

Next amortisation payment date of the instrument.

LOA_23 - Maturity date

The contractual maturity date of the instrument, taking into account any agreements amending initial contracts.

LOA_24 - Outstanding loan amount at legal final maturity ('balloon')

Remaining balance of a loan that is due in full at the end of the loan term. This typically applies to loans with a balloon payment structure, where regular instalment payments may cover only interest or a portion of the principal, with the remaining principal due as a lump sum at the loan's maturity. For example, in a mortgage loan with a 5-year term and a balloon payment, the borrower might make monthly payments based on a 30-year amortisation schedule, but the remaining principal balance is due in full at the end of the five-year period.

LOA_25 - Interest rate type

Classification of interest rate based on the base rate for each payment period. The possible values are:

- Fixed regular coupon/interest: Fixed rate for which the coupon/interest payments are fixed for the life
 of the instrument, or for a certain period.
- Fixed zero coupon/interest: Fixed rate for which the instrument has a single-payment, with no coupon/interest payments.
- Variable reference rate linked: Variable rate for which the instrument has the coupon/interest or principal payments (or both) linked to a reference rate.
- Fixed stepped: Fixed rate for which the coupon/interest payments are fixed over the life of the instrument but increase or decrease at predetermined intervals.
- Mixed: Interest payments that comprise of a mix of fixed and variable interest payments.

LOA_26 - Interest payment frequency

Frequency with which interest payments on the instruments are made (e.g. monthly, annually, etc.).

LOA_27 - Next interest payment date

Next interest payment date on the instrument.

LOA_28 - End date of interest-only period

The date on which the interest-only period of the instrument ends.

LOA_29 - Interest rate

The interest rate, on an annual basis, that equalises the present value of all commitments other than charges (deposits or loans, payments or repayments, interest payments), future or existing, agreed by the entity and the borrower.

LOA 30 - Day count convention

Day count convention used for the calculation of the interest payments on the instrument:

- US (NASD) 30/360: assumes each month has 30 days and a year has 360 days.
- Actual/actual: calculates the interest based on the actual number of days in the period and the actual number of days in the year.
- Actual/360: calculates the interest based on the actual number of days in the period and assumes a 360-day year.
- Actual/365: calculates the interest based on the actual number of days in the period and assumes a 365-day year.
- European 30/360: assumes each month has 30 days and a year has 360 days (different to the US (NASD) 30/360 due to different date adjustment rules).

 Other: any day count convention that does not fit into the above categories, potentially including custom or regional conventions.

LOA_31 - Reference rate type

Reference rate used for the calculation of the actual interest rate.

LOA_32 - Reference rate maturity

Maturity or tenor of the reference rate used for the calculation of the actual interest rate.

LOA_33 – Interest rate spread/margin

Margin or spread to add to the reference rate that is used for the calculation of the interest rate.

LOA_34 - Next interest rate reset date

The date that the next interest rate reset takes place.

LOA_35 - Interest rate reset frequency

Frequency at which the interest rate is reset after the initial fixed-rate period, if any.

LOA_36 - Interest rate cap

Maximum value for the nominal annual interest rate charged.

LOA_37 - Interest rate floor

Minimum value for the nominal annual interest rate charged.

LOA_38 - Fair value (IFRS 13)

Fair value of the instrument calculated in accordance with IFRS 13 (financial instruments at fair value) or IFRS 7.25-7.26 (fair value of financial instruments at amortised cost), as reported in FINREP 14 ('Fair value hierarchy: financial instruments at fair value') and 41.1 ('Fair value hierarchy: financial instruments at amortised cost'), respectively.

If the entity is not subject to IFRS reporting standards at the individual level, it should submit the fair value estimated for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.

LOA_39 - Fair value hierarchy

Indicates the level in the fair value hierarchy (Level 1, Level 2 or Level 3) according to IFRS 13.

The fair value hierarchy will also be identified for instruments classified as 'Financial assets at amortised cost', as reported in FINREP 41.1.

If the entity is not subject to IFRS reporting standards at individual level, it should identify the fair value hierarchy used for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.

LOA_40 - Credit risk risk-weighted assets

Risk-weighted assets arising from credit risk according to Title II of CRR.

LOA_41 - Probability of default (IFRS 9 lifetime)

The likelihood of an instrument defaulting on its financial obligations throughout its lifetime, in accordance with IFRS 9. The data attribute only needs to be reported if the PD is determined on an instrument level.

The submitting entity must ensure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on an instrument (LOA_41, LOA_42, LOA_43, LOA_44) or issuer basis (COU_9, COU_10, COU_11, COU_12).

LOA_42 – Probability of default (IFRS 9 twelve months)

The likelihood of an instrument defaulting on its financial obligations within the next twelve months, in accordance with IFRS 9. The data attribute only needs to be reported if the PD is determined on an instrument level.

The submitting entity must ensure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on an instrument (LOA_41, LOA_42, LOA_43, LOA_44) or issuer basis (COU_9, COU_10, COU_11, COU_12).

LOA_43 - Probability of default (IRB)

The likelihood of an instrument defaulting on its financial obligations, estimated using IRB models used by the entity, in accordance with Title II, Chapter 3 of Regulation (EU) No 575/2013. The data attribute only needs to be reported if the PD is determined on an instrument level.

The submitting entity must ensure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on an instrument (LOA_41, LOA_42, LOA_43, LOA_44) or issuer basis (COU_9, COU_10, COU_11, COU_12).

LOA_44 - Probability of default (bank-internal twelve months)

The likelihood of an instrument defaulting on its financial obligations within the next twelve months, estimated using the bank's internal methodologies. The data attribute only needs to be reported if the PD is determined on an instrument level.

The submitting entity must ensure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on an instrument (LOA_41, LOA_42, LOA_43, LOA_44) or issuer basis (COU_9, COU_10, COU_11, COU_12).

LOA_45 - CRR Loss given default

Current level of the 'loss given default' of the instrument, determined in accordance with Articles 161, 164, 179 and 181 of CRR.

LOA_46 - IFRS 9 Loss given default

Current level of the 'loss given default' of the instrument determined for accounting purposes.

LOA_47 - Internal credit rating /scoring

Internal credit rating or scoring of the instrument, if available at the instrument level.

LOA_48 - Default status

Categories describing the situations in which the instrument is in default in accordance with Article 178 of CRR.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of CRR and has no obligation to report FINREP/COREP on an individual basis, it will provide the default status used at consolidated level for the FINREP/COREP reporting of the ultimate parent entity.

LOA 49 - Default status date

The date on which the default status, as reported in the data attribute LOA 48 ('Default status'), is determined.

LOA_50 - Performing status

Identification of the performing status of instruments, in accordance with Article 47a of CRR. The possible values are the following:

- Non-performing instrument: Non-performing instrument in accordance with Article 47a of CRR.
- Performing instrument under probation: Performing instrument in accordance with Article 47a of CRR. Exited from Non-Performing Exposures (NPE) in the last 12 months.
- Performing instrument not under probation: Performing instrument in accordance with Article 47a of CRR.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of CRR and has no obligation to report FINREP / COREP on an individual basis, it will provide the performing status used at consolidated level for the FINREP/COREP reporting of the ultimate parent entity.

LOA 51 – Performing status date

The date on which the performing status, as reported in LOA_50 ('Performing status'), is considered to have been established or changed.

LOA 52 - Forbearance status

Identification of instruments by type of forbearance. The possible values are:

- Not forborne: Forbearance measures, as defined in Article 47b of CRR, do not apply to the instrument.
- Forborne: refinancing: Forbearance measures, as defined in Article 47b of CRR, apply to a refinanced instrument.
- Forborne: instrument with modified interest rate below market condition: Forbearance measures, as defined in Article 47b of CRR, apply to an instrument with modified terms and conditions, including at least a modification of interest rate below market conditions.
- Forborne: instrument with other modified terms and conditions: Forbearance measures, as defined in Article 47b of CRR, apply to an instrument with modified terms and conditions, excluding a modification of interest rate below market conditions.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of CRR and has no obligation to report FINREP / COREP on an individual basis, it will provide the forbearance status used at consolidated level for the FINREP / COREP reporting of the ultimate parent entity.

LOA_53 - General ledger account ID

Identification number of the general ledger account according to the chart of accounts of the entity on which the instrument is booked. The chart of accounts and a corresponding extract of the trial balance has to be provided in the VDI (see VDI document 1.3). In the case that the carrying amount of the instrument is not entirely recognised within a single general ledger account, the general ledger account containing the largest portion of the carrying amount should be provided.

LOA_54 - Carrying amount

This data attribute captures the net carrying amount as recognised in the balance sheet in accordance with the applicable accounting framework.

LOA_55 - Accrued interest

The amount of accrued interest on instruments at the submission date. In accordance with the general principle of accruals accounting, the interest is subject to on-balance sheet recording as it accrues (i.e. on an accruals basis) rather than when it is actually received (i.e. on a cash basis).

LOA_56 - Type of impairment (local GAAP)

This data attribute indicates the type of impairment the instrument is subject to. For instruments subject to impairment under IFRS 9-consistent national GAAP one of three stages according to IFRS 9 (stage 1, stage 2 or stage 3) need to be provided. If the instrument is subject to impairment in accordance with an accounting standard not consistent with IFRS 9 it needs to be specified if specific loss allowances or general loan loss allowances were recorded.

LOA_57 - Type of impairment (IFRS)

For instruments subject to impairment under IFRS this data attribute indicates the type of impairment according to the three stages (stage 1, stage 2 or stage 3) under IFRS 9.

LOA_58 - Accumulated impairments (local GAAP)

The amount of loss allowances that are held against or are allocated to the instrument according to GAAP. This data attribute applies to instruments subject to impairment. Under GAAP, the accumulated impairment relates to the following amounts:

- Loss allowance at an amount equal to general allowances;
- Loss allowance at an amount equal to specific allowances.

In the case of instruments for which the impairment is collectively assessed, the accumulated impairment amount that is determined for the total pool of instruments (to which the instrument is assigned for the purpose of the collective assessment) should be allocated as appropriate to the individual instrument.

LOA_59 - Accumulated impairments (IFRS)

The amount of loss allowances that are held against or are allocated to the instrument according to IFRS. This data attribute applies to instruments subject to impairment. Under IFRS, the accumulated impairment relates to the following amounts:

- Loss allowance at an amount equal to 12-month expected credit losses (stage 1);
- Loss allowance at an amount equal to lifetime expected credit losses (stage 2 and stage 3).

In the case of instruments for which the impairment is collectively assessed, the accumulated impairment amount that is determined for the total pool of instruments (to which the instrument is assigned for the purpose of the collective assessment) should be allocated as appropriate to the individual instrument.

LOA_60 - Exchange rate

Exchange rate of the instrument which is used to convert monetary amounts of instruments in foreign currencies into euro within the local GAAP of the submitting entity. The exchange rate must always be expressed against the euro. For instruments denominated in euro, an exchange rate of 1 is expected.

LOA_61 - Accounting Portfolio (FINREP)

The accounting portfolio to which the instrument is assigned, as defined in FINREP:

- Financial assets held for trading as reported in {F 01.01; 0090}.
- Non-trading financial assets mandatorily at fair value through profit or loss as reported in {F 01.01; 0099}.
- Financial assets designated at fair value through profit or loss as reported in {F 01.01; 0130}.

- Financial assets at fair value through other comprehensive income as reported in {F 01.01; 0144}.
- Financial assets at amortised cost as reported in {F 01.01; 0183}.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of CRR and is not required to report FINREP on an individual basis, it will provide the accounting portfolio as reported in the FINREP consolidated reporting of the ultimate parent entity.

LOA_62 - Counterparty sector (FINREP)

Counterparty sector as defined in FINREP, in Annex 5 part 1.42(a)-(f) in accordance with the Commission Implementing Regulation (EU) 2021/451.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of CRR and is not required to report FINREP on an individual basis, it will provide the counterparty sector as reported in the FINREP consolidated reporting of the ultimate parent entity.

LOA_63 - Impairment status (FINREP)

Impairment status reference as defined in F 04.03.01 and F 04.04.01 in columns 0015, 0030, and 0040.

For off-balance sheet exposures, impairment status reference as defined in F 09.01.01 in columns 0010, 0020 and 0030.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of CRR and is not required to report FINREP on an individual basis, it will provide the impairment status as reported in the FINREP consolidated reporting of the ultimate parent entity.

LOA_64 - Product (FINREP)

Product type in accordance with FINREP as defined in Annex 5 part 2.85(a)-(g) of the Commission Implementing Regulation (EU) 2021/451.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of CRR and is not required to report FINREP on an individual basis, it will provide the product as reported in the FINREP consolidated reporting of the ultimate parent entity.

LOA_65 - Carrying amount (FINREP)

Carrying amount according to FINREP as reported on e.g. F 01.01.

This data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

LOA_66 - Accumulated impairment amount (FINREP)

Accumulated impairment amount in accordance to FINREP as reported in F 04.03.01 and F 04.04.01, in columns 0050, 0060 and 0070.

For off-balance sheet exposures, amount of provisions in accordance with FINREP as reported in F 09.01.01, in columns 0040, 0050 and 0060.

This data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

LOA_67 - Gross carrying amount (FINREP)

Gross carrying amount in accordance with FINREP as reported in F 04.03.01 and F 04.04.01.

This data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

LOA_68 - Nominal amount (FINREP)

Nominal amount of off-balance sheet exposure in FINREP as reported in F 09.01.01.

This data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

LOA 69 - Contract identifier

A unique identifier applied to identify each contract comprising one or more loans or off-balance sheet exposures given.

LOA_70 - Valuation cluster ID

The ID assigned to the valuation cluster as outlined in the Valuation playbook.

LOA_71 - Valuation subcluster ID

The ID assigned to the valuation subcluster as outlined in the Valuation playbook.

LOA_72 - SFTR ID

The Securities Financing Transactions Regulation (SFTR) ID is a unique identifier assigned to each securities financing transaction in accordance with the requirements set out in the Commission Implementing Regulation (EU) 2019/363 e.g. when the instrument forms part of a reverse repo transaction.

LOA_73 - Hedge ID

The Hedge ID is a unique identifier assigned to each specific hedging transaction or position that is intended to mitigate the risk of a particular asset or liability. The Hedge ID should only be provided for micro-hedged instruments. The same ID must be provided for the data attribute DRT_22 ('Hedge ID').

LOA 74 - Encumbrance allocation ID

Unique identifier that assigns an asset to a liability that is collateralised by it (e.g. an instrument which forms part of a collateral pool securing a covered bond). The same identifier is to be used for data attribute SMBDT 41 ('Encumbrance allocation ID').

LOA_75 - Sources of encumbrance

Type of transaction in which the exposure is encumbered. An asset will be treated as encumbered if it is not considered an unencumbered asset, as defined in Article 411(5) of CRR.

The possible values are the following:

- Central bank funding: Central bank funding (of all types, including repos), in accordance with the European Banking Authority's (EBA) implementing technical standards on asset encumbrance reporting.
- Debt securities issued asset-backed securities: Debt securities issued asset-backed securities issued in accordance with the EBA's implementing technical standards on asset encumbrance reporting.
- Debt securities issued covered bonds securities: Debt securities issued covered bonds securities
 issued in accordance with the EBA's implementing technical standards on asset encumbrance
 reporting.
- Debt securities issued other than covered bonds and ABSs: Debt securities issued other than covered bonds and ABSs issued in accordance with the EBA's implementing technical standards on asset encumbrance reporting.
- Deposits repurchase agreements other than to central banks: Deposits Repurchase agreements
 other than to central banks in accordance with the EBA's implementing technical standards on asset
 encumbrance reporting.
- Deposits other than repurchase agreements: Deposits other than repurchase agreements in accordance with the EBA's implementing technical standards on asset encumbrance reporting.
- Exchange traded derivatives: Exchange traded derivatives in accordance with the EBA's implementing technical standards on asset encumbrance reporting.
- Other sources of encumbrance: Other sources of encumbrance in accordance with the EBA's implementing technical standards on asset encumbrance reporting.
- Over-the-counter derivatives: Over-the-counter derivatives in accordance with the EBA's implementing technical standards on asset encumbrance reporting.
- Unencumbered/No encumbrance: Instruments which have not been pledged or which is without any
 form of arrangement to secure, collateralize, or credit-enhance any instrument from which it cannot be
 freely withdrawn.

3. COU - Counterparty

COU_1 - Party identifier

A unique identifier applied to identify the party.

COU_2 - Party name

Full legal name of the party, if the counterparty is not a natural person. When deemed relevant to ensure compliance with GDPR requirements, in case of natural persons the legal name of the counterparty will be anonymised by the submitting entity.

COU 3 - Country

The country of residence of the party in accordance with paragraphs 1.61 and 2.07 of Annex A of Regulation (EU) No 549/2013. The country is recorded in accordance with ISO 3166-1 alpha-2 codes of the country.

COU_4 - Economic activity

Classification of counterparties according to their main economic activity, in accordance with the NACE revision 2.1 statistical classification as laid down in Regulation (EC) No 1893/2006 of the European Parliament and of the Council.

COU_5 - Flag intragroup counterparty

Flag to identify counterparties which are entities or companies within the resolution group of the submitting entity.

COU_6 - Flag legal person

Flag to identify counterparties which are legal persons.

COU_7 - External credit rating

External credit rating of the counterparty. If the entity obtains external ratings from more than one rating agency, information must be provided for all rating agencies in the following alphabetical order: Fitch, Moody's, and Standard & Poor's (S&P) and followed by others. The enumeration has to be separated by the standardised separator '|'. Please also refer to Annex 2 on Technical instructions.

If a counterparty has the following ratings: Fitch: AA-, Moody's: Aa2, Standard & Poor's (S&P): AA, and another agency: A (high), then the data must be provided in the following format: 'AA-|Aa2|AA|A (high)'.

COU_8 - Internal credit rating/scoring

Internal credit rating/scoring issued to the counterparty. The master scale which provides the corresponding PD range has to be provided in the VDI (see VDI document 9.2).

COU_9 - Probability of default (IFRS 9 lifetime)

The likelihood of a party defaulting on its financial obligations throughout its lifetime, in accordance with IFRS 9. The data attribute only needs to be reported if the PD is determined on a counterparty level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (LOA_41, LOA_42, LOA_43, LOA_44) or issuer basis (COU_9, COU_10, COU_11, COU_12).

COU_10 – Probability of default (IFRS 9 twelve months)

The likelihood of a party defaulting on its financial obligations within the next twelve months, in accordance with IFRS 9. The data attribute only needs to be reported if the PD is determined on a counterparty level.

The submitting entity must ensure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (LOA_41, LOA_42, LOA_43, LOA_44) or issuer basis (COU_9, COU_10, COU_11, COU_12).

COU_11 - Probability of default (IRB)

The likelihood of a party defaulting on its financial obligations, estimated using IRB models used by the entity, in accordance with Chapter 3 of Regulation (EU) No 575/2013. The data attribute only needs to be reported if the PD is determined on a counterparty level.

The submitting entity must ensure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (LOA_41, LOA_42, LOA_43, LOA_44) or issuer basis (COU_9, COU_10, COU_11, COU_12).

COU_12 - Probability of default (bank-internal twelve months)

The likelihood of a party defaulting on its financial obligations within the next twelve months, estimated using the bank's internal methodologies. The data attribute only needs to be reported if the PD is determined on a counterparty level.

The submitting entity must ensure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (LOA_41, LOA_42, LOA_43, LOA_44) or issuer basis (COU_9, COU_10, COU_11, COU_12).

COU 13 - Default status

Categories describing the situations in which the party is in default in accordance with Article 178 of Regulation (EU) No 575/2013.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of CRR and has no obligation to report FINREP/COREP on an individual basis, it will provide the default status used at consolidated level for FINREP/COREP reporting of the ultimate parent entity.

COU 14 - Default status date

The date on which the default status, as reported in the data attribute COU_13 ('Default status'), is determined.

4. IC - Instrument-Counterparty

IC_1 - Instrument identifier

Instrument identifier LOA_1.

IC_2 - Party identifier

Party identifier COU_1.

IC_3 - Party role

The roles that the counterparties assume in relation to an instrument recorded in the instrument dataset are recorded in the counterparty-instrument dataset.

5. PRO - Protection received

PRO 1 - Protection identifier

A unique identifier applied to identify each protection used to secure the instrument.

PRO_2 - Protection type

Classification according to the type of protection received (irrespective of its eligibility for credit risk mitigation in accordance with Regulation (EU) No 575/2013).

PRO_3 - Internal type of protection (granular)

Bank internal designation of the type of protection at the lowest granular level.

PRO_4 - Maturity date of protection

The contractual maturity date of the protection, which is the earliest date at which the protection may terminate or be terminated, considering any agreements amending initial contracts.

PRO_5 - Original protection value

The protection's value at the date when it was originally received as a credit protection.

PRO_6 - Original protection value date

The date of the protection's original value, e.g. the date on which the latest appraisal or valuation of the protection was carried out prior to its initial receipt as a credit protection.

PRO_7 - Protection value

The amount of the protection value.

PRO_8 - Protection valuation approach

Method used to determine the protection value. The possible values are the following:

- Credit valuation: Valuation method whereby the valuation is carried out by the creditor, or an appraiser who is not independent from the credit decision process.
- Mark-to-market valuation: Valuation method whereby the protection value is based on unadjusted quoted prices for identical assets and liabilities in an active market.
- Other type of valuation: Other type of valuation not included in any other categories.
- Counterparty estimation: Valuation method whereby the valuation is carried out by the provider of the protection.
- Third-party valuation: Valuation method whereby the valuation is provided by an appraiser who is independent from the credit decision process.

PRO 9 - Protection value date

The date on which the latest appraisal or valuation of the protection was carried out.

6. CP - Counterparty-Protection

CP 1 - Party identifier

Party identifier COU_1.

CP_2 - Protection identifier

Protection identifier PRO_1.

7. IP - Instrument-Protection received

IP_1 - Instrument identifier

Instrument identifier LOA_1.

IP_2 - Protection identifier

Protection identifier PRO_1.

IP 3 - Protection allocated value

The maximum amount of the protection value that can be considered as credit protection for the instrument, excluding the existing third party or entity priority claims. Capped at the carrying amount for the on-balance component of the secured instrument.

8. PRO_REL - Protection - Real estate

PRO_REL_1 - Protection identifier

An identifier applied to uniquely identify each protection. Needs to be identical to PRO_1 ('Protection identifier').

PRO_REL_2 - Main segment

Segment of the real estate protection regarding the main usage type in accordance with ESRB recommendation 2016/14, Annex V, point 3. The possible values are:

- Office: Properties used, for example, primarily as professional or business offices.
- Retail: Properties used, for example, for restaurants, shopping malls.
- Industrial including logistics: Properties used, for example, for production, distribution or logistics.
- Residential: Properties used for residential purposes, multi-household premises, etc.
- Hotel: Properties used as hotels.
- Land plots (not included in the ESRB recommendation): Specific parcels or pieces of land that are
 delineated and recognised for a particular use (e.g. agriculture) or development purposes (e.g.
 residential, industrial, etc). If a land plot has already been developed (e.g. with a multi-household
 premises), either partially or totally, it should no longer be considered a land plot.
- Other: Other uses not included in the above categories.

PRO_REL_3 - Internal segment granular

Bank's internal designation of the main segment of the protection at the lowest granular level.

PRO_REL_4 - Country

The country of the location of the real estate collateral. The country is recorded in accordance with ISO 3166-1 alpha-2 codes of the country.

PRO REL 5 - City

City where the property is located.

PRO_REL_6 - Street

Part of the address indicating the party's or real estate collateral's street, including the street number and unit number, wherever possible.

PRO_REL_7 - Flag complex mortgage structure

Flags protection for a mortgage structure in which the entity's rights cannot be clearly classified into priority, pari-passu, or own mortgages.

PRO_REL_8 - Protection allocated value to submitting entity

The data attribute determines the part of the protection value, which has been fully allocated to the submitting entity.

Please see Chapter 4.5.7 of the EoVC for an illustrative example of the data attribute PRO_REL_9 to PRO_REL_15.

PRO_REL_9 - Protection allocated value to third-parties (priority)

The data attribute determines the part of the protection value, which is assumed to be allocated to the priority claims of third-parties.

PRO REL 10 - Protection allocated value to third-parties (pari-passu)

The data attribute determines the part of the protection value, which is assumed to be allocated to pari-passu claims of third-parties.

PRO_REL_11 - Mortgage to submitting entity

Mortgage allocated to the submitting entity.

PRO_REL_12 - Mortgage to third-parties (priority)

Mortgage allocated to third-parties which have priority claims on the protection.

PRO_REL_13 - Mortgage to third-parties (pari-passu)

Mortgage allocated to third-parties which have pari-passu claims on the protection.

PRO_REL_14 - Year of construction

Year in which the construction of the property was finished.

PRO REL 15 - Year of last renovation

Year in which the last renovation was finished, i.e. the execution of significant renovation / maintenance work. This data attribute should be submitted only with the information available as of the date of the origination of the instrument if PRO_REL_2 ('Main segment') is 'Office'.

PRO_REL_16 - Building area (M2)

Area of the building in square metres.

PRO_REL_17 - Intended use

Current or intended primary use of the real estate as of the instrument's origination date. If there are more than two current or intended uses, only the primary use should be submitted. The possible values are:

- Private households: Real estate owned by end-users who are households, intended for use as a first or second residence, regardless of whether it was acquired as buy-to-let property or is currently rented, excluding social housing. This also includes residential real estate under development, irrespective of its completion status (see PRO_REL_18), but excludes social housing.
- Business purpose or activity: Real estate used by the owners of the property for conducting their business, purpose or activity, including business premises, as well as real estate of a more sui generis nature such as churches, universities, museums, in accordance with Recommendation ESRB/2016/14.
- Rental housing: Real estate which is owned by legal entities (such as professional investors) with the aim of being let to tenants, in accordance with Recommendation ESRB/2016/14.
- Income-producing real estate: Real estate with income generated by their rents or profits with their sale, excluding rental housing, in accordance with Recommendation ESRB/2016/14.
- Social housing: Real estate intended to provide affordable accommodation for individuals or families with low to moderate incomes in accordance with Recommendation ESRB/2016/14.
- Other: Any loan use that does not fit into the defined categories.

PRO REL 18 – Real estate completion status

Identification of the status of real estate, specifying whether the real estate is under construction or development as of the date of origination of the instrument.

PRO_REL_19 - Average daily rate room rate

Average daily rate room rate of the hotel as of the date of origination of the instrument. This data attribute applies only if PRO_REL_2 ('Main segment') is 'Hotel'.

PRO_REL_20 - Number of bedrooms

Number of usable bedrooms in the hotel as of the date of origination of the instrument. This data attribute applies only if PRO_REL_2 ('Main segment') is 'Hotel'.

PRO_REL_21 - Net operating income

This data attribute applies only if PRO_REL_2 ('Main segment') is 'Hotel' or PRO_REL_17 ('Intended use') is 'Rental housing' or 'Income-producing real estate'.

Annual net operating income of the hotel or rented assets over the 12 months preceding the instrument's origination date.

For rented assets, net operating income should include rental income net of operating expenses. If the real estate is not currently rented but planned for future rental, an estimated net operating income as of the date of the origination of the instrument should be provided.

9. PRO_SHI - Protection - Shipping

All of these data attributes, except PRO_REL_6, PRO_REL_7, and PRO_REL_8, will be submitted with reference data as of the origination date of the instrument. PRO_REL_6, PRO_REL_7, and PRO_REL_8 are expected to be updated each time the PRO_REL dataset is produced and submitted to the DRR.

PRO_SHI_1 - Protection identifier

An identifier applied to uniquely identify each protection. Needs to be identical to PRO_1 ('Protection identifier').

PRO_SHI_2 - Ship segment

Type of vessel.

PRO SHI 3 - Internal segment granular

Bank's internal designation of the main segment of the protection at the lowest granular level.

PRO_SHI_4 - Name of the ship

Name of the vessel.

PRO_SHI_5 - IMO number

IMO number of the International Maritime Organization for the vessel.

PRO_SHI_6 - Protection allocated value to submitting entity

The data attribute determines the part of the protection value, which has been fully allocated to the submitting entity.

PRO_SHI_7 - Protection allocated value to third-parties (priority)

The data attribute determines the part of the protection value, which is assumed to be allocated to priority claims of third-parties.

PRO_SHI_8 - Protection allocated value to third-parties (pari-passu)

The data attribute determines the part of the protection value, which is assumed to be allocated to pari-passu claims of third-parties.

PRO_SHI_9 - Capacity

Capacity of the vessel provided in the designated unit of capacity.

PRO_SHI_10 - Capacity unit

Unit of capacity for the vessel:

- CBM: Cubic meter.
- DWT: Deadweight tonnage.
- PAX: Passengers.
- TEU: Twenty-foot equivalent unit.
- Other: Other than CBM, DWT, PAX, TEU.

PRO_SHI_11 - Deadweight in metric tons

Deadweight in metric tons of the vessel.

PRO_SHI_12 - Year of manufacture

Year of the manufacture of the vessel.

PRO_SHI_13 - Estimated remaining useful life

Estimated remaining useful life, i.e. estimated number of remaining years that the vessel should be able to function, in accordance with its intended purpose before warranting replacement.

Name of the shipyard where the vessel was constructed.

PRO_SHI_15 - Country of registration

Country of registration of the ship according to the ISO 3166-1 alpha-2 codes of the country.

PRO_SHI_16 - Start date of latest charter contract

Start date of the current charter. This data attribute is applicable if the vessel is chartered or intended to be chartered.

PRO_SHI_17 - End date of latest charter contract

Contractual end date of the current charter. This data attribute is applicable if the vessel is chartered or intended to be chartered.

PRO_SHI_18 - Contractual charter rate of latest charter contract per day

Daily (estimated) contractual charter rate in EUR of the current charter. This data attribute is applicable if the vessel is chartered or intended to be chartered. This is expressed often as TCE (Time Charter Equivalent) daily rate multiplied by the number of operating days.

PRO_SHI_19 - Operating costs

Estimated annual operating costs of the vessel for the precedent year, including:

- Voyage-related costs: fuel, port charges and fees, canals and tolls, etc.
- Operating expenses: crew costs, technical maintenance and repair, insurance, etc.
- Capital expenditures: dry docking costs, upgrades, etc.

PRO_SHI_20 - Operating income

Estimated annual operating income generated by the vessel for the precedent year.

10. PRO AVI - Protection - Aviation

All of these data attributes, except PRO_AVI_7, PRO_AVI_8, and PRO_AVI_9, will be submitted with reference data as of the origination date of the instrument. PRO_AVI_7, PRO_AVI_8, and PRO_AVI_9 are expected to be updated each time the PRO_AVI dataset is produced and submitted to the DRR.

PRO_AVI_1 - Protection identifier

An identifier applied to uniquely identify each protection. Needs to be identical to PRO_1 ('Protection identifier').

PRO_AVI_2 - Internal segment granular

Bank's internal designation of the main segment of the collateral at the lowest granular level.

PRO_AVI_3 - Aircraft registration ID

Unique aircraft registration number that is marked on the exterior of the aircraft.

PRO_AVI_4 - Manufacturer's model designation

Model designation assigned by the manufacturer to distinguish their different models and variants of aircraft.

PRO_AVI_5 - Model variant

Refers to specific versions of a particular aircraft model that may have different configurations, capabilities, or features.

PRO_AVI_6 - MSN (manufacturer serial number)

Unique identifier assigned to each individual aircraft by the manufacturer. It allows for detailed record-keeping of the aircraft's history, including maintenance, ownership changes, and modifications.

PRO_AVI_7 - Protection allocated value to submitting entity

The data attribute determines the part of the protection value, which has been fully allocated to the submitting entity.

PRO_AVI_8 - Protection allocated value to third-parties (priority)

The data attribute determines the part of the protection value, which is assumed to be allocated to priority claims of third-parties.

PRO_AVI_9 - Protection allocated value to third-parties (pari-passu)

The data attribute determines the part of the protection value, which is assumed to be allocated to pari-passu claims of third-parties.

PRO_AVI_10 - Date of delivery

Specific date on which an aircraft is officially handed over from the manufacturer to the purchaser or operator.

PRO_AVI_11 - AVAC rating

Aircraft rating provided by the appraisal company Aircraft Value Analysis Company (AVAC).

PRO_AVI_12 - Country of registration

Refers to the country in which an aircraft is officially registered and under whose jurisdiction it operates, according to the ISO 3166-1 alpha-2 codes of the country.

PRO AVI 13 - Maintenance reserve

Financial provisions set aside by aircraft operators or lessors to cover the costs of future maintenance and overhauls.

PRO_AVI_14 - Latest end of the last lease agreement

End date of a current lease agreement for an aircraft, when the lease contract between the lessor and the lessee officially ends.

PRO_AVI_15 - Lessee

Full legal name of the party that leases the aircraft.

PRO_AVI_16 - Rating of lessee

Internal rating of the lessee.

PRO_AVI_17 - End date of latest sub-lease agreement

Refers to the specific date on which a sub-lease contract between the primary lessee and the sub-lessee officially ends.

PRO_AVI_18 - Sub-lessee

Name of the party leasing the aircraft from the primary lessee, rather than directly from the aircraft owner.

PRO_AVI_19 - Estimated remaining useful life

Estimated remaining useful life, i.e. estimated number of remaining years that the aircraft should be able to function in accordance with its intended purpose before warranting replacement.

11.PRO_REN - Protection - Renewables

All of these data attributes, except PRO_REN_12, PRO_REN_13, and PRO_REN_14, will be submitted with reference data as of the origination date of the instrument. PRO_REN_12, PRO_REN_13, and PRO_REN_14 are expected to be updated each time the PRO_REN dataset is produced and submitted to the DRR.

PRO REN 1 - Protection identifier

An identifier applied to uniquely identify each protection. Needs to be identical to PRO_1 ('Protection identifier').

PRO_REN_2 - Segment

Segment based on the energy generation technology.

PRO_REN_3 - Internal segment granular

Bank's internal designation of the main segment of the of protection at the lowest granular level.

PRO_REN_4 - Project name

Name of the project.

PRO REN 5 - Country

Country in which project is located according to the ISO 3166-1 alpha-2 codes of the country.

PRO_REN_6 - Turbine OEM51 / PV module OEM

Manufacturer of the WTGs or PV modules.

PRO_REN_7 - Turbine product name / PV module product name

Name of the turbine / PV module by the OEM.

PRO_REN_8 - Number of installed WTGs52 / PV modules

Number of installed WTGs / PV modules.

PRO REN 9 - Location (latitude)

Latitude of the location of the project.

PRO_REN_10 - Location (longitude)

Longitude of the location of the project.

PRO_REN_11 - Rated power of installed plants (total)

Rated power of installed plants (total) in MW.

PRO_REN_12 - Protection allocated value to submitting entity

The data attribute determines the part of the protection value, which has been fully allocated to the submitting entity.

PRO_REN_13 - Protection allocated value to third-parties (priority)

The data attribute determines the part of the protection value, which is assumed to be allocated to priority claims of third-parties.

PRO_REN_14 - Protection allocated value to third-parties (pari-passu)

The data attribute determines the part of the protection value, which is assumed to be allocated to pari-passu claims of third-parties.

PRO_REN_15 - Commissioning date

Commissioning date of the plant.

⁵¹ In the context of renewable energy (especially wind power), the OEM is the company that designs, manufactures, and supplies the wind turbine equipment.

⁵² Installed WTGs means the total number or capacity of wind turbines that have been physically set up and connected to the grid or are ready to generate electricity.

PRO_REN_16 - Expected end date of the project

Expected end date of the project.

PRO_REN_17 - Net annual output in MWh according to energy yield assessment (P50 value)

Net annual output in MWh according to energy yield assessment (EYA) (P50 value). The P50 value represents the energy output level that has a 50% probability of being exceeded in a year.

PRO_REN_18 - Net annual output in MWh according to energy yield assessment (P90 value)

Net annual output in MWh according energy yield assessment (EYA) (P90 value). The P90 value represents the energy output level that has a 90% probability of being exceeded in a year.

PRO_REN_19 - Secured power price ratio (FiT/PPA)

Determines the proportion of the volume net annual output (P50) that is expected to be secured by either a feed-in-tariff (FiT) or a power purchase agreement (PPA). In case multiple FiTs/PPAs exists, please calculate the blended ratio.

PRO_REN_20 - Maturity of secured price ratio in years (FiT/PPA)

Expected average length for which PRO_REN_19 ('Secured power price ratio (FiT/PPA)') is secured (FiT/PPA).

PRO_REN_21 - Volume weighted secured power prices in EUR/MW

Percentage of the net annual output (P50) which is expected to be covered by the FiT/PPA during the time of the FiT/PPA. In case multiple FiTs/PPAs exists, please calculate the blended volume for the average length of the FiT/PPA durations.

12. SEC - Securities

SEC_1 - Security identifier

Identifier to uniquely identify each security. Each security must have a unique security identifier.

SEC_2 - Security identifier type

Classification of the types of security identifiers. The possible values are the following:

- CUSIP: The Committee on Uniform Securities Identification Procedures (CUSIP) identifier is an alphanumeric code that uniquely identifies North American securities.
- SEDOL: The Stock Exchange Daily Official List (SEDOL) identifier is an alphanumeric code that uniquely identify securities issued in the United Kingdom and Ireland.

- ISIN: International Securities Identification Number assigned to securities, composed of 12 alphanumeric characters, which uniquely identifies a securities issue as defined in ISO 6166.
- · Other: Other than CUSIP, SEDOL or ISIN.

SEC_3 - Security type

Classification of the security according to the type of contractual terms agreed between the parties. This will include all items from the following categories as per ESA 2010: Debt securities (F.3) and Equity (F.5). The possible values are the following:

- Other fund: A fund that is of a type not listed separately.
- Other equity: Other equity comprises all forms of equity other than those classified in sub-categories listed shares and unlisted shares in accordance with Regulation (EU) No 549/2013.
- Other debt: A debt item that is of a type not listed separately.
- Shares: Listed shares are equity securities listed or unlisted on an exchange.
- Bond: Bonds and debentures are long-term debt securities that give the holders the unconditional right
 to fixed payments or contractually determined variable payments on a specified date or dates, that is,
 the earning of interest is not dependent on earnings of the debtors. Bonds and debentures also give
 holders the unconditional right to fixed sums as payments to the creditor on a specified date or dates.
- Undertaking for collective investment in transferable securities (UCITS) fund: Undertakings for Collective Investment in Transferable Securities (UCITS) as defined in Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to UCITS.
- Alternative investment fund (AIF): Alternative investment fund (AIF) as defined in point (a) of Article 4(1) of Directive 2011/61/EU on Alternative Investment Fund Managers.
- Depository receipt: A financial item that allows a non-resident to introduce securities into a market in a form more readily acceptable to the investors in that market. A deposit-taking corporation will purchase the underlying security and then issue receipts in a currency more acceptable to the investor.
- Treasury bill: A common form of sovereign short-term debt security that many governments issue.
- Non-participating (preferred) share: Holders are entitled to receive a fixed dividend, but do not participate in the distribution of the residual value of a corporation on dissolution.
- Structured debt security (Certificates): Structured debt securities typically combine a debt security, or a
 basket of debt securities, with a financial derivative, or a basket of financial derivatives. These financial
 derivatives are typically embedded in and are therefore inseparable from the debt securities.
- Straight bond: A bond without any further special characteristics listed separately.

- Perpetual bond: A debt security that has no stated maturity date.
- Other bond: A bond that is of a type not listed separately.
- Convertible bond: A fixed interest rate bond that the investor has the option of converting into the equity
 of the borrower or its parent.
- Other hybrid debt item: A hybrid debt item that is of a type not listed separately.
- Preference/Preferred share: Holders of preferred shares have priority over holders of ordinary shares
 when it comes to laying claim to a corporation's assets. However, while preferred shares may have
 priority over ordinary shares in the payment of dividends and in the event of liquidation, they are
 subordinated to debt securities.
- Other money market item: A money market item that is of a type not listed separately.
- Bankers acceptance: A negotiable order to pay a specified amount of money on a future date, accepted and guaranteed by a bank and drawn on a deposit at a bank.
- Stapled debt item: Stapled items which, under their terms of issue, are two or more different financial items (for example, ordinary equity securities and unsecured notes) coupled together for certain purposes are usually treated separately as fixed interest rate debt securities and equity securities. However, stapled items usually cannot be transferred separately either in the market or as the result of an over-the-counter (OTC) transaction. A parcel consisting of one equity security and one or more notes is traded in the market as though it were a single security, although conceptually the components are regarded as separate. If the components cannot be separately identified, the stapled item should be classified according to the predominant component, that is, either as a debt security or an equity security.
- Commercial paper (CP): A discounted and unsecured debt security issued by a corporation whose name appears on the front of the security and who promises to pay to the security holder a certain amount on a stated maturity date.
- Hybrid equity item: Item with characteristics of debt and equity which are classified as equity according to their main characteristics.
- Strip bond: Separate trading of registered interest and principal of securities (STRIPS) are securities
 that have been transformed from a principal amount and periodic coupons into a series of zero-coupon
 bonds, with the range of maturities matching the coupon payment dates and the redemption date of the
 principal amount.
- Securitisation bond: Securitisation is the issuance of debt securities for which coupon or principal payments are backed by specified assets or by future income streams.

- Linked bond: Linked bonds have their coupon or principal payments (or both) linked to a general price index for goods and services (such as the consumer price index (CPI)), interest rate (such as the London interbank offered rate (LIBOR) or a bond yield), or asset price.
- Certificate of deposit: Negotiable certificate issued by a bank acknowledging a deposit in that bank for a specified period of time at a specified interest rate.
- Equity securities other than shares, depository receipts or hybrid equity items: Equity securities other than shares, depository receipts or hybrid equity items.
- Ordinary/Common share: Ordinary shares (or 'common' shares) usually give holders the right to the following:
 - Holders are generally entitled to participate in the corporation's general policymaking and have the right to attend, speak, and vote (in the case of voting shares) at general meetings. Holders of ordinary shares can vote on corporate objectives and matters of policy, on stock splits, and to elect the corporation's board of directors.
 - Holders are usually entitled to a preferential subscription in the event of a capital increase. Some holders of ordinary shares also receive preemptive rights (a rights issue), which enables them to retain their proportional share in the ownership of a corporation should it issue more stock.
 - Holders generally have the right to a share in the corporation's profits. However, no fixed dividends are paid out to ordinary shareholders. Ordinary shareholders' returns are therefore uncertain and dependent on earnings, corporate reinvestment, and the market's ability to value and sell stock efficiently.
- Bonds with warrants attached: Bonds with warrants attached are debt securities that incorporate warrants giving the holder the option to purchase equity in the issuer or another company during a predetermined period, or at a particular date, and at a fixed contract price. The warrant may be detachable and traded separately from the debt security.
- Redeemable preferred share: These can be redeemed at the request of either the corporation or the shareholder (at a fixed price on a specified date or during a specified period of time).
- Principal strip: A strip bond created for the part of the principal amount.
- Participation certificate (Genussschein): Participation certificates grant their holders participation rights.
 Participation rights may take various forms, both for equity securities and for debt securities. In many countries, almost no legal restrictions are placed on this type of financial item. Depending on their specific features, participation certificates are considered to be either equity securities or debt securities.

- Other linked bond: Detailed breakdowns by type in accordance with definitions laid down in Handbook of Securities Statistics⁵³.
- Credit-linked bond: Detailed breakdowns by type in accordance with definitions laid down in Handbook of Securities Statistics.
- Leverage product: The leverage product category of Structured debt securities covers securities with a large risk compared with the initial investment and that combine an investment in an underlying security with a future or option.
- Other hybrid equity item: A hybrid equity item that is of a type not listed separately.
- Inflation-linked bond: Detailed breakdowns by type in accordance with definitions laid down in Handbook of Securities Statistics.
- Jumbo covered bond: Jumbo covered bonds are covered bonds issued in accordance with the requirements in Article 52(4) of Directive 2009/65/EC and with an issuing volume of at least EUR 1 billion, for which at least three market-makers provide regular bid and ask quotes.
- Euro commercial paper (ECP): A commercial paper denominated in Euro.
- Other CP: A commercial paper that is of a type not listed separately.
- Currency-linked bond: Detailed breakdowns by type in accordance with definitions laid down in Handbook of Securities Statistics.
- Other covered bond: Covered bonds other than jumbo covered bonds.
- Other securitisation: A securitisation that is of a type not listed separately.
- Traditional securitisation: Securitisation involving the transfer of the economic interest in the exposures being securitised through the transfer of ownership of those exposures from the originator to an SSPE or through sub-participation by an SSPE, as defined in point (9) of Article 2 of Regulation (EU) 2017/2402.
- Cumulative preferred share: Holders are entitled to receive a fixed dividend ahead of ordinary shares and retain the right to any accumulated preferred dividends that may have built up.
- Other preferred share: A preferred share that is of a type not listed separately.
- Contingent convertible bonds (CoCo's): Contingent convertible securities are hybrid securities issued as debt items and automatically converted into equity shares if a contractually pre-defined 'trigger event'

https://www.ecb.europa.eu/press/pr/date/2015/html/pr150512.en.html

occurs. Their defining characteristics are a loss-absorption mechanism (conversion or write-down) and an activation trigger, either based on a mechanical rule or on supervisors' discretion.

- Other depository receipt: A depository receipt that is of a type not listed separately.
- American depository receipt (ADR): American depository receipts (ADR) are liabilities of the non-U.S. institutional units whose securities underlie the ADR, not of the U.S. financial institutions issuing the ADR.
- Cumulative, participating preferred share: A preferred share that fulfils the criteria of cumulative and participating preferred shares at the same time.
- Exchange Traded Notes (ETN): Detailed breakdowns by type in accordance with definitions laid down
 in Handbook of Securities Statistics.
- Investment product: The Investment product category of Structured debt securities covers securities where the principal amount is (1) protected and returned at maturity, regardless of the performance of the reference financial item; (2) exposed to losses limited to less than the full principal; (3) fully at risk subject to a level of initial loss protection or (4) fully at risk.
- Interest rate-linked bond: Detailed breakdowns by type in accordance with definitions laid down in Handbook of Securities Statistics.
- Convertible (preferred) share: Holders are allowed to convert preferred shares into a specified amount
 of ordinary shares.
- Coupon strip: A strip bond created for the part of the coupons.
- Synthetic securitisation: Securitisation where the transfer of risk is achieved by the use of credit derivatives or guarantees, and the exposures being securitised remain exposures of the originator, as defined in point (10) of Article 2 of Regulation (EU) 2017/2402.
- Asset-linked bond: Detailed breakdowns by type in accordance with definitions laid down in Handbook of Securities Statistics.
- Exchange Traded Commodities (ETC): Detailed breakdowns by type in accordance with definitions laid down in Handbook of Securities Statistics.
- Pagarés: Specific type of commercial paper commonly known in Spain.
- Subscription right: Subscription rights that are traded separately are often given their own separate
 International Securities Identification Number (ISIN). They are classified as shares, rather than as
 financial derivatives, since they represent a claim on the residual value of a corporation. Issuers of
 shares use subscription rights to provide existing shareholders with the opportunity to participate in new
 issues, which enables them to retain their proportional share in the ownership of the corporation. To

make the new shares even more attractive, these subscription rights may also allow existing shareholders to buy the shares at less than the market price.

- Global depository receipt (GDR): Global depository receipts (GDR) are securities available in one or more markets outside the corporation's country of residence.
- Participating preferred share: Holders are entitled to participate in the profits of a corporation over and above fixed dividends by means of an additional fluctuating dividend. They also participate in the distribution of the residual value of a corporation on dissolution.
- Capital protection product: Detailed breakdowns of upper category in accordance with categorisation of European Structured Investment Products Association (EUSIPA).
- Other investment product: Detailed breakdowns of upper category in accordance with categorisation of European Structured Investment Products Association (EUSIPA).
- Other leverage product: A subsector of Leverage product. Detailed breakdowns of upper category in accordance with categorisation of European Structured Investment Products Association (EUSIPA).
- Leverage product with knock-out: A subsector of Leverage product. Detailed breakdowns of upper category in accordance with categorisation of European Structured Investment Products Association (EUSIPA).
- Constant leverage product: Constant leverage product.
- Participation product: Detailed breakdowns of upper category in accordance with categorisation of European Structured Investment Products Association (EUSIPA).
- Yield enhancement product: Detailed breakdowns of upper category in accordance with categorisation of European Structured Investment Products Association (EUSIPA).
- Leverage product without knock-out: A subsector of Leverage product. Detailed breakdowns of upper category in accordance with categorisation of European Structured Investment Products Association (EUSIPA).

SEC_4 - Internal classification of the instrument (granular)

Internal classification/description of the instrument type at the lowest granular level as per the bank's internal systems. For example, 'G10_Government Bond_EUR_1-3Y' or 'Preferred_Stock_EU'.

SEC_5 - Type of placement

Indicates the type of placement of the instrument (public or private). Public refers to issuances in capital markets, therefore to the instruments for which SEC_2 ('Security identifier type') is 'ISIN'. Private refers to securities structured for clients or other third parties that were sold bilaterally.

SEC_6 - Instrument seniority type

A standardised classification of a financial instrument's position in the issuer's capital structure, based on three dimensions: guarantee level, rank level, and security level. The possible values are:

- Unguaranteed, senior, security level not available: No guarantee, ranks as senior debt, no collateral information available.
- Unguaranteed, senior, secured: No guarantee, senior rank, backed by collateral.
- Unguaranteed, subordinated: No guarantee, subordinated in the capital structure, typically unsecured.
- Guaranteed, senior, unsecured: Backed by a guarantee, senior rank, no collateral.
- Guaranteed, senior, secured: Backed by a guarantee and collateral, senior rank.
- Guaranteed, subordinated: Backed by a guarantee, but structurally subordinated.
- Bail-inable, senior non-preferred: Senior but non-preferred under resolution, unsecured, no guarantee.
- Bail-inable, subordinated (e.g. AT1, Tier 2): Subordinated and eligible for bail-in;
- Not available: Not available.

SEC_7 - Asset securitisation type

Categorisation of a securitisation transaction based on the nature of the underlying financial assets. The possible values are the following:

- Not applicable: Not applicable.
- Consumer loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Commercial mortgage-backed security (CMBS): Detailed asset type breakdown of MBSs mainly in accordance with definitions of European and American Securitisation Forum.
- Manufactured housing leases ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Other assets ABS: An ABS that is of a type not listed separately.
- Other MBS: An MBS that is of a type not listed separately.
- Small and medium-sized enterprises (SME) loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Mixed MBS: An MBS that is a mix of different MBS types, e.g. combination of RMBS and CMBS.

- Credit card receivables ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Whole business securitisation (WBS) ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Auto loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Residential mortgage-backed security (RMBS): Detailed asset type breakdown of MBSs mainly in accordance with definitions of European and American Securitisation Forum.
- Home equity loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Student loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Other securitisation: A securitisation that is of a type not listed separately.
- Collateralised mortgage obligation (CMO): A bond, created through securitisation, whose coupon
 payments and principal repayments are dependent on a diversified pool of loan and bond items of
 mortgages, either purchased in the secondary market or from the balance sheet of an original asset
 owner.
- Equipment leases ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Mixed securitisation: A securitisation that is a mix of different securitisation types, e.g. combination of auto loans and mortgages.
- Mortgage-backed security (MBS): A bond, created through securitisation, whose coupon payments and principal repayments are dependent on a pool of mortgages, either purchased in the secondary market or from the balance sheet of an original asset owner.
- Collateralised debt obligation (CDO): A bond, created through securitisation, whose coupon payments and principal repayments are dependent on a diversified pool of loan and bond items, either purchased in the secondary market or from the balance sheet of an original asset owner; excluding mortgages.
- Asset-backed security (ABS): A bond, created through securitisation, whose coupon payments and
 principal repayments are dependent on a pool of assets, either purchased in the secondary market or
 from the balance sheet of an original asset owner; excluding mortgages.
- Other covered bond: A covered bond that is of a type not listed separately.
- Mixed ABS: An ABS that is a mix of different ABS types, e.g. combination of auto and consumer loans.

- Aircraft covered bond: Detailed asset type breakdown of covered bonds mainly in accordance with definitions of European Covered Bond Council.
- Mixed covered bond: A covered bond that is a mix of different covered bond types.
- Public sector covered bond: Detailed asset type breakdown of covered bonds mainly in accordance with definitions of European Covered Bond Council.
- Mortgage covered bond: Detailed asset type breakdown of covered bonds mainly in accordance with definitions of European Covered Bond Council.
- Ship covered bond: Detailed asset type breakdown of covered bonds mainly in accordance with definitions of European Covered Bond Council.

SEC 8 - Next termination date

If an option exists for holders of the instrument to request early termination, or conditions for early reimbursement are contractually provided, the earliest occurrence date should be indicated. An example of this is the early redemption of a puttable bond.

SEC_9 - Currency

Currency denomination of instruments, in accordance with the ISO 4217 standard. This data attribute identifies the currency in which the instrument is denominated and not the currency in which the instrument is submitted (note that in the VDS all monetary amounts are submitted in euro).

SEC 10 - Eligibility for ECB collateral

Indication of whether a particular financial instrument fulfils certain criteria set by the ECB to be eligible as collateral for monetary policy transactions.

SEC_11 - Issue date

The date on which the securities are delivered to the underwriter by the issuer against payment. This is the date when the securities are available for delivery to investors for the first time.

SEC_12 - Date of first payment

Effective start date of the instrument defined as the date on which the first coupon payment is made. For a zero-coupon instrument the date is equal to the maturity date of the instrument.

SEC_13 - Maturity date

The contractual maturity date of the instrument, taking into account any agreements amending initial contracts.

SEC_14 - Number of units

Number of units held (holdings) or issued (issuances). For issuances, this number is used when calculating the market capitalisation of the company. For example, if the submitting entity holds a total of 500 shares of the company ABC at a current price of EUR 23.41, the number of securities would be 500.

SEC_15 - Total notional

For securities quoted in percentages (typically debt securities), the total notional of the security held by the submitting entity at the submission date in EUR. For example, if the submitting entity holds 100 units of a specific government bond with a face value of EUR 1 000 then the total notional is EUR 100 000.

SEC 16 - Quotation basis

Quotation basis of the instrument, which can be either a currency or a percentage.

SEC 17 - Arrears for the instrument

Sum of principal, interest and any fee payment outstanding at the submission date, which is contractually due and has not been paid (past due).

SEC_18 - Past due date

The date on which the instrument became past due in accordance with Part 2.96 of Annex 5 of the Commission Implementing Regulation (EU) No 2021/451.

Note: Data attributes from the 'Cash flow information' category (i.e. SEC_19 to SEC_40) are applicable only to exposures qualifying as Level 2 and Level 3 exposures, according to IFRS 13, as per data attribute SEC_42.

SEC_19 - Amortisation type

Type of amortisation structure of the instrument, defined as the way in which the principal of the instrument is paid off. Indicate the following:

- Bullet: the principal amount is repaid in a single lump sum at the end of the instrument's term.
- Fixed amount: the principal is repaid in equal, fixed amounts over the life of the instrument.
- Relative to initial notional: the principal repayments are calculated as a percentage of the initial notional
 of the instrument.
- Relative to previous notional: the principal repayments are calculated as a percentage of the remaining principal amount of the instrument after each repayment.
- Annuity: the principal and interest repayments are structured so that each payment is the same amount.
- No amortisation: indicates that the instrument is not subject to amortisation.
- Other: any amortisation method that does not fit into the above categories.

SEC_20 - Internal description of amortisation type

Classification of the amortisation structure of the instrument based on the submitting bank's internal description. In principle the same information as under the data attribute amortisation type should be submitted but on the most granular level which is available within the bank's internal system.

This enables to reflect amortisation types of instruments not covered by the predefined drop-down options for amortisation type. Furthermore, it helps the valuer gain a more comprehensive understanding of the instruments.

SEC 21 - Amortisation fixed amount

Fixed amount of principal repaid in each amortisation period. The data attribute is only applicable for instruments which report SEC_19 ('Amortisation type') as 'fixed amount'.

SEC_22 - Amortisation reference percentage

Percentage of initial or previous principal repaid in each amortisation period. For instruments amortising relative to initial principal, this percentage will represent a constant payment (e.g. 2% of the initial notional of EUR 100 000) in each period. If the amortisation is relative to previous principal, the percentage will result in a decreasing repayment in each period. The data attribute is applicable only to instruments where the SEC_19 ('Amortisation type) is specified as 'relative to initial notional' or 'relative to previous notional'.

SEC 23 - Annuity amount

Amount of annuity payment (equal to principal payment + interest payment) per amortisation period. The data attribute is only applicable for instruments where the SEC_19 ('Amortisation type') is specified as 'annuity'.

SEC_24 - Amortisation frequency

This data attribute identifies the payment frequency of the amortisation payments (principal payments) as of the cut-off date of an instrument (e.g. monthly, quarterly, annually, etc.). For some instruments (e.g. bullet) the amortisation frequency might be different than the SEC_28 ('Coupon payment frequency').

SEC_25 - Amortisation start date

The date on which the first (partial) redemption payment of the principal amount is due for payment (e.g. cases in which a portion of the security is reimbursed before the final legal maturity). If not applicable (i.e. the instrument is not subject to early (partial) redemption) the amortisation end date should be provided.

SEC_26 - Amortisation end date

End date of amortisation, referring to the date of the final principal repayment of the security.

SEC_27 - Coupon type

Classification of coupon rate based on the base rate for each payment period. The possible values are the following:

- Fixed regular coupon/interest: Fixed rate for which the coupon/interest payments are fixed for the life
 of the instrument, or for a certain period.
- Fixed zero coupon/interest: Fixed rate for which the instrument has a single-payment, with no coupon/interest payments.
- Variable asset-linked: Variable rate for which the instrument has the coupon or principal payments (or both) linked to an asset price.
- Variable inflation-linked: Variable rate for which the instrument has the coupon or principal payments (or both) linked to an inflation rate.
- Variable reference rate linked: Variable rate for which the instrument has the coupon/interest or principal payments (or both) linked to a reference rate.
- Fixed stepped: Fixed rate for which the coupon/interest payments are fixed over the life of the instrument but increase or decrease at predetermined intervals.

SEC_28 - Coupon payment frequency

Frequency of coupon payments due, according to predefined time intervals.

SEC 29 - Next coupon payment

Payment date of the next coupon payment.

SEC 30 - Coupon currency

The currency in which the coupon payments of the instrument are denominated. This is relevant for instruments which have coupon payments in a currency different from the SEC_9 ('Currency') of the instrument (e.g. dual currency bonds).

SEC_31 - Coupon rate

The annualised rate used to determine the coupon amount that the issuer pays to the holders of the debt security.

SEC 32 - Next interest rate reset date

The date that the next interest rate reset takes place.

SEC_33 - Interest rate reset frequency

Frequency at which the interest rate is reset after the initial fixed-rate period, if any.

SEC_34 – Day count convention

Day count convention which is used for the calculation of the interest payments of the instruments:

US (NASD) 30/360: assumes each month has 30 days and a year has 360 days.

- Actual/actual: calculates interest based on the actual number of days in the period and the actual number of days in the year.
- Actual/360: calculates interest based on the actual number of days in the period and assumes a 360day year.
- Actual/365: calculates interest based on the actual number of days in the period and assumes a 365day year.
- European 30/360: assumes each month has 30 days and a year has 360 days. (Different to the US (NASD) 30/360 due to different date adjustment rules).
- Other: any day count convention that does not fit into the above categories, potentially including custom or regional conventions.

SEC_35 - Reference rate type

Reference rate used for the calculation of the actual interest rate.

SEC 36 - Reference rate maturity

Maturity or tenor of the reference rate used for the calculation of the actual interest rate.

SEC_37 - Structured coupon formula

Formula of the coupon based on banks internal systems for products for which SEC_27 ('Coupon type') is classified as 'Variable – asset-linked' or 'Variable – inflation-linked' or 'Fixed – stepped'. For example, a formula with several indices with multipliers and/or spreads (e.g. (3 * EURIBOR_3M + 0.5) - (3.4 * EURIBOR_6M)).

SEC_38 - Interest rate cap

The maximum nominal interest rate that can be charged on the outstanding nominal amount per annum. The data attribute is only applicable to products for which SEC_27 ('Coupon type') is classified as 'Variable – reference rate linked' or 'Variable – asset-linked' or 'Variable – inflation-linked' or 'Fixed – stepped'.

SEC_39 - Interest rate floor

The minimum nominal interest rate that can be charged on the outstanding nominal amount per annum. The data attribute is only applicable to products for which SEC_27 ('Coupon type') is classified as 'Variable – reference rate linked' or 'Variable – asset-linked' or 'Variable – inflation-linked' or 'Fixed – stepped'.

SEC_40 - Spread

The margin or spread, expressed in basis points, that is applied to the reference rate that is used for the calculation of the interest rate. The data attribute is only applicable to products for which SEC_27 ('Coupon type') is classified as 'Variable – reference rate linked'.

SEC_41 - Fair value (IFRS 13)

Fair value of the instrument calculated in accordance to IFRS 13 (financial instruments at fair value) or IFRS 7.25-7.26 (fair value of financial instruments at amortised cost), as reported in FINREP 14 ('Fair value hierarchy: financial instruments at fair value') and 41.1 ('Fair value hierarchy: financial instruments at amortised cost'), respectively.

If the entity is not subject to IFRS reporting at the individual level, it should submit the fair value estimated for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.

SEC_42 - Fair value hierarchy

Indicates the level in the fair value hierarchy (Level 1, Level 2 or Level 3) according to IFRS 13.

The fair value hierarchy will also be identified for instruments classified as 'Assets measured at amortised cost', as reported in FINREP 41.1.

If the entity is not subject to IFRS reporting standards at the individual level, it should identify the fair value hierarchy used for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.

SEC_43 - Credit risk risk-weighted assets

Risk-weighted assets arising from credit risk according to Title II of CRR.

SEC_44 - Probability of default (IFRS 9 lifetime) - Instrument

The likelihood of an instrument defaulting on its financial obligations throughout its lifetime, in accordance with IFRS 9. The data attribute only needs to be reported if the PD is determined on an instrument level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (SEC_44, SEC_45, SEC_46, SEC_47) or issuer basis (SEC_78, SEC_79, SEC_80, SEC_81).

SEC_45 - Probability of default (IFRS 9 twelve months) - Instrument

The likelihood of an instrument defaulting on its financial obligations within the next twelve months, in accordance with IFRS 9. The data attribute only needs to be reported if the PD is determined on an instrument level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (SEC_44, SEC_45, SEC_46, SEC_47) or issuer basis (SEC_78, SEC_79, SEC_80, SEC_81).

SEC_46 - Probability of default (IRB) - Instrument

The likelihood of an instrument defaulting on its financial obligations, estimated using IRB models used by the entity, in accordance with Title II, Chapter 3 of Regulation (EU) No 575/2013. The data attribute only needs to be reported if the PD is determined on an instrument level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (SEC_44, SEC_45, SEC_46, SEC_47) or issuer basis (SEC_78, SEC_79, SEC_80, SEC_81).

SEC_47 - Probability of default (bank-internal twelve months) - Instrument

The likelihood of an instrument defaulting on its financial obligations within the next twelve months, estimated using the bank's internal methodologies. The data attribute only needs to be reported if the PD is determined on an instrument level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (SEC_44, SEC_45, SEC_46, SEC_47) or issuer basis (SEC_78, SEC_79, SEC_80, SEC_81).

SEC_48 - CRR Loss given default

Current level of the loss given default of the instrument, determined in accordance with Articles 161, 164, 179 and 181 of CRR.

SEC_49 - IFRS 9 Loss given default

Current level of the loss given default of the instrument determined for accounting purposes.

SEC_50 – External rating of the instrument

External credit rating of the instrument. If the entity obtains external ratings from more than one rating agency, information must be provided for all rating agencies in the following order: Fitch, Moody's, Standard & Poor's (S&P), followed by the others. The enumeration has to be separated by the standardised separator '|'. Please also refer to Annex 2 on Technical instructions.

If an instrument has the following ratings: Fitch: AA-, Moody's: Aa2, Standard & Poor's (S&P): AA, and another agency: A (high), then the data must be provided in the following format: 'AA-|Aa2|AA|A (high)'.

SEC 51 - Default status

Identification of the default status of the instrument in accordance with Article 178 (CRR). If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and has no obligation to report FINREP / COREP on an individual basis, it will provide the default status used at consolidated level for the FINREP/COREP reporting of the ultimate parent entity.

SEC_52 - Default status date

The date on which the default status, as provided in the data attribute SEC_51 ('Default status'), is considered to have occurred.

SEC_53 - Performing status

Classification of the instrument as performing or non-performing in accordance with the Commission Implementing Regulation (EU) No 2021/451.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and has no obligation to report FINREP/COREP on an individual basis, it will provide the performing status used at consolidated level for determining the FINREP/COREP of the ultimate parent entity.

SEC_54 - Performing status date

The date on which the performing status as provided in SEC_53 ('Performing status') is considered to have been established or changed.

SEC_55 - General ledger account ID

Identification number of the general ledger account according to the chart of accounts of the entity on which the instrument is booked. The chart of accounts and a corresponding extract of the trial balance has to be provided in the VDI (see VDI document 1.3). If the carrying amount of the instrument is not entirely recognised within a single general ledger account, the general ledger account containing the largest portion of the carrying amount should be provided.

SEC_56 - Portfolio classification

The data attribute indicates whether the instrument is in the submitting entity's TB or BB pursuant to the CRR.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and has no obligation to report FINREP on an individual basis, it will provide the portfolio classification used at consolidated level for determining the capital requirement of the ultimate parent entity.

SEC_57 - Carrying amount

This data attribute captures the net carrying amount as recognised in the balance sheet in accordance with the applicable accounting framework.

SEC 58 - Accrued interest

The amount of accrued interest on instruments at the submission date. In accordance with the general principle of accruals accounting, the interest is subject to on-balance sheet recording as it accrues (i.e. on an accruals basis) rather than when it is actually received (i.e. on a cash basis).

SEC_59 - Type of impairment (local GAAP)

This data attribute indicates the type of impairment to which the instrument is subject. For instruments subject to impairment under IFRS 9-consistent national GAAP, one of the three stages of the IFRS 9 (stage 1, stage 2 or stage 3) must be provided. If the instrument is subject to impairment in accordance with an accounting standard not consistent with IFRS 9, it must be stated where specific loss allowances or general loan loss allowances are recorded.

SEC_60 - Type of impairment (IFRS)

For instruments subject to impairment under IFRS, this data attribute indicates the type of impairment according to the three stages (stage 1, stage 2 or stage 3) under IFRS 9.

SEC_61 - Accumulated impairments (local GAAP)

The amount of loss allowances that are held against or are allocated to the instrument as of the cut-off date according to GAAP. This data attribute applies to instruments subject to impairment. Under GAAP, the accumulated impairment relates to the following amounts:

- loss allowance at an amount equal to general allowances;
- loss allowance at an amount equal to specific allowances.

In the case of instruments for which the impairment is collectively assessed, the accumulated impairment amount that is determined for the total pool of instruments (to which the instrument is assigned for the purpose of the collective assessment) should be allocated as appropriate to the individual instrument.

SEC_62 - Accumulated impairments (IFRS)

The amount of loss allowances that are held against or are allocated to the instrument as of the cut-off date according to IFRS. This data attribute applies to instruments subject to impairment. Under IFRS, the accumulated impairment relates to the following amounts:

- loss allowance at an amount equal to 12-month expected credit losses (stage 1);
- loss allowance at an amount equal to lifetime expected credit losses (stage 2 and stage 3).

In the case of instruments for which the impairment is collectively assessed, the accumulated impairment amount that is determined for the total pool of instruments (to which the instrument is assigned for the purpose of the collective assessment) should be allocated as appropriate to the individual instrument.

SEC_63 - Exchange rate

Exchange rate of the instrument which is used to convert monetary amounts of instruments in foreign currencies into euro within the local GAAP of the submitting entity. The exchange rate must always be expressed against euro. For instruments denominated in euro, an exchange rate of 1 is expected.

SEC_64 - Accounting Portfolio (FINREP)

The accounting portfolio to which the instrument is assigned, as defined in FINREP:

- Financial assets held for trading as reported in {F 01.01; 0070} and {F 01.01; 0080}.
- Non-trading financial assets mandatorily at fair value through profit or loss as reported in {F 01.01; 0097} and {F 01.01; 0098}.
- Financial assets designated at fair value through profit or loss as reported in {F 01.01; 0120}.
- Financial assets at fair value through other comprehensive income as reported in {F 01.01; 0142} and {F 01.01; 0143}.
- Financial assets at amortised cost as reported in {F 01.01; 0182}.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not obligated to report FINREP on an individual basis, it will provide the accounting portfolio as assigned in the FINREP reporting of the ultimate parent entity.

SEC_65 - Main category (FINREP)

The main category to which the instrument is assigned, as defined in FINREP:

- Equity instruments as reported in {F 01.01; 0070}, {F 01.01; 0097}, {F 01.01; 0142}.
- Debt securities as reported in {F 01.01; 0080}, {F 01.01; 0120}, {F 01.01; 0143}, {F 01.01; 0182}.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not obligated to report FINREP on an individual basis, it will provide the main category as assigned in the FINREP reporting of the ultimate parent entity.

SEC_66 - Counterparty sector (FINREP)

Counterparty sector in accordance to FINREP as defined in Annex 5 part 1.42(a)-(f) of the Commission Implementing Regulation (EU) 2021/451.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not obligated to report FINREP on an individual basis, it will provide the counterparty sector as assigned in the FINREP reporting of the ultimate parent entity.

SEC_67 - Impairment status (FINREP)

Impairment status in accordance to FINREP as reported in F 04.03.01 and F 04.04.01:

- Assets without significant increase in credit risk since initial recognition (stage 1).
- Assets with significant increase in credit risk since initial recognition but not credit-impaired (stage 2).
- Credit-impaired assets (stage 3).

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not obligated to report FINREP on an individual basis, it will provide the impairment status as assigned in the FINREP reporting of the ultimate parent entity.

SEC_68 - Carrying amount (FINREP)

Carrying amount according to FINREP as reported on e.g. F 01.01.

This data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

SEC_69 - Accumulated impairment amount (FINREP)

Accumulated impairment amount in accordance to FINREP as reported in F 04.03.01 and F 04.04.01, in columns 0050, 0060 and 0070.

This data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

SEC_70 - Gross carrying amount (FINREP)

Gross carrying amount in accordance with FINREP as reported in F 04.03.01 and F 04.04.01.

This data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

SEC 71 - Issuer identifier

The party identifier referring to the main security issuer.

SEC_72 - Issuer name

Full legal name of the counterparty. If relevant, copy of the entry from the national trade register.

SEC_73 - Issuer country

The country where the issuer is officially located (e.g. in accordance with the business register, if applicable). The ISO 3166-1: Alpha-2 code of the country must be submitted.

SEC_74 - Business sector of the issuer

Classification of the issuer according to their economic activities, in accordance with the NACE revision 2 statistical classification as laid down in Regulation (EC) No 1893/2006 of the European Parliament and of the Council.

SEC 75 - Flag intragroup issuer

Flag to identify issuers which are entities or other companies within the resolution group of the submitting entity.

SEC_76 - Default status of the issuer

Identification of the default status of the issuer in accordance with Article 178 (CRR). If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and has no obligation to report FINREP

on an individual basis, it will provide the default status used at consolidated level for determining the capital requirement of the ultimate parent entity.

SEC 77 - Default status date of the issuer

The date on which the default status, as provided in the data attribute SEC_76 ('Default status of the issuer'), is considered to have occurred.

SEC_78 - Probability of default (IFRS 9 lifetime) - Issuer

The likelihood of an issuer defaulting on its financial obligations throughout its lifetime, in accordance with IFRS 9. The data attribute only needs to be reported if the PD is determined on an issuer level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (SEC_44, SEC_45, SEC_46, SEC_47) or issuer basis (SEC_78, SEC_79, SEC_80, SEC_81).

SEC_79 - Probability of default (IFRS 9 twelve months) - Issuer

The likelihood of an issuer defaulting on its financial obligations within the next twelve months, in accordance with IFRS 9. The data attribute only needs to be reported if the PD is determined on an issuer level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (SEC_44, SEC_45, SEC_46, SEC_47) or issuer basis (SEC_78, SEC_79, SEC_80, SEC_81).

SEC_80 - Probability of default (IRB) - Issuer

The likelihood of an issuer defaulting on its financial obligations, estimated using IRB models used by the entity, in accordance with Chapter 3 of Regulation (EU) No 575/2013. The data attribute only needs to be reported if the PD is determined on an issuer level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (SEC_44, SEC_45, SEC_46, SEC_47) or issuer basis (SEC_78, SEC_79, SEC_80, SEC_81).

SEC_81 - Probability of default (bank-internal twelve months) – Issuer

The likelihood of an issuer defaulting on its financial obligations within the next twelve months, estimated using the bank's internal methodologies. The data attribute only needs to be reported if the PD is determined on an issuer level.

The submitting entity must assure that for every instrument within the dataset at least one PD is submitted, according to the IFRS 9, CRR or other, either on instrument (SEC_44, SEC_45, SEC_46, SEC_47) or issuer basis (SEC_78, SEC_79, SEC_80, SEC_81).

SEC_82 - External issuer rating

External credit rating of the issuer. If the entity obtains external ratings from more than one rating agency, information must be provided for all rating agencies in the following order: Fitch, Moody's, Standard & Poor's (S&P), followed by the others. The enumeration has to be separated by the standardised separator '|'. Please also refer to Annex 2 on Technical instructions.

If an issuer has the following ratings: Fitch: AA-, Moody's: Aa2, Standard & Poor's (S&P): AA, and another agency: A (high), then the data must be provided in the following format: 'AA-|Aa2|AA|A (high)'.

SEC_83 - Internal issuer rating/scoring

Internal credit rating or scoring of the issuer.

SEC 84 - SFTR ID

The Securities Financing Transactions Regulation (SFTR) ID is a unique identifier assigned to each securities financing transaction in accordance with the requirements set out in the Commission Implementing Regulation (EU) 2019/363 e.g. when the security forms part of a repo transaction.

SEC_85 - Trading desk ID

Identifier of the trading desk to which the position is assigned, as specified in the Trading book dataset and in the VDI (see VDI document 7.2). The trading desk ID should be consistent with the ones used in the solvent wind-down plans, if available.

SEC_86 - Valuation cluster ID

The ID assigned to the valuation cluster as outlined in the Valuation playbook.

SEC 87 - Valuation subcluster ID

The ID assigned to the valuation subcluster as outlined in the Valuation playbook.

SEC_88 - Hedge ID

For securities that are being directly hedged by a derivative, the hedge ID links the derivative to its corresponding hedged position, i.e. the same ID must be provided for the data attribute DRT_22 ('Hedge ID') in the derivatives dataset. The hedge ID is only applicable in the case of micro hedging relationships.

SEC_89 - Encumbrance allocation ID

Unique identifier that assigns an asset to a liability that is collateralised by it (e.g. an instrument which forms part of a collateral pool securing a covered bond). The same identifier is to be used for data attribute SMBDT_41 ('Encumbrance allocation ID').

SEC_90 - Sources of encumbrance

Type of transaction in which the exposure is encumbered in accordance with Commission Implementing Regulation (EU) 2021/451. An asset will be treated as encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralise or credit enhance any instrument from which it cannot be freely withdrawn.

SEC_91 - Netting set ID

Identifier of the netting set to which the instrument belongs. The same identifier needs to be provided for all instruments subject to the same netting set.

13. DRT - Derivatives instruments

DRT_1 - Derivative identifier

A unique identifier used to identify derivatives on a granular level.

DRT_2 - Flag encumbrance

Flag indicating whether the derivative is encumbered, i.e. it is owned by the submitting entity, but there may be a legal claim to that asset by another entity. An example would be if a derivative is contained in the cover pool for a covered bond.

DRT 3 - Flag macro hedges

Flag indicating whether the derivative is used for a macro hedge.

DRT_4 - Flag intragroup counterparty

Flag to identify counterparties which are entities or companies within the resolution group of the submitting entity.

DRT_5 - Derivative risk type

Classification of the type of derivative according to its risk. The possible values are the following:

- Credit risk derivative: Contracts in which the payout is linked primarily to some measure of the creditworthiness of a particular reference credit and that do not meet the definition of financial guarantees (IFRS 9.4.2.1 (c)).
- Equity risk derivative: Contracts that have a return, or a portion of their return, linked to the price of a particular equity or to an index of equity prices.
- Foreign exchange and gold risk derivative: Contracts involving the exchange of currencies in the forward market and the exposure to gold. They include outright forwards, foreign exchange swaps, currency

- swaps (including cross-currency interest rate swaps), currency futures, currency options, currency swaps, and currency warrants.
- Interest rate risk derivative: Contracts related to an interest-bearing financial instrument the cash flows
 of which are determined by referencing interest rates or another interest rate contract such as an option
 on a futures contract to purchase a treasury bill.
- Derivative other than interest rate risk, equity risk, foreign exchange and gold risk, credit risk or commodity risk derivative: Any other derivative contracts, which do not involve an exposure to foreign exchange, interest rate, equity, gold, commodity or credit risk such as climatic derivatives or insurance derivatives.
- Commodity risk derivative: Contracts that have a return, or a portion of their return, linked to the price of, or to a price index of, a commodity such as a precious metal (other than gold), petroleum, lumber or agricultural products.
- Other: other derivative contracts not classified under the previous categories.

DRT_6 – Derivative type

Classification of the type of derivative. The possible values are the following:

- Option other than credit spread option: A derivative contract that gives the holder the right, but not the
 obligation, to buy or sell an underlying asset, excluding options based on credit spreads, such as equity,
 interest rate, or commodity options.
- Derivative other than credit default swaps, options and total return swaps: A derivative contract other than credit default swaps, options and total return swaps.
- Credit default swap: A derivative contract in which one party pays a fee to another party in return for a
 payment or other benefit in the case of a credit event relating to a reference entity and of any other
 default, relating to that derivative contract, which has a similar economic effect.
- Credit spread option: A derivative contract where the payoff is based on changes in the credit spread of
 a reference entity or instrument, allowing the buyer to hedge or speculate on the widening or narrowing
 of credit spreads.
- Credit derivative not meeting the definition of financial guarantee: A credit derivative that does not qualify
 as a financial guarantee, which requires the issuer to make specified payments to reimburse the holder
 of a loss it incurs, because a specified debtor fails to make payment where due in accordance with the
 original or modified terms of a debt instrument, including guarantees provided for other financial
 guarantees.

- Total return swap: A derivative contract where one party agrees to pay the total return of an asset (including income and capital appreciation) to another party in exchange for a fixed or floating rate payment.
- Other: other derivative contracts not classified under the previous categories.

DRT_7 - General ledger account ID

Identification number of the general ledger account according to the chart of accounts of the entity on which the instrument is booked. The chart of accounts and a corresponding extract of the trial balance has to be provided in the VDI (see VDI document 1.3). In the case that the carrying amount of the instrument is not entirely recognised within a single general ledger account, the general ledger account containing the largest portion of the carrying amount should be provided.

DRT_8 - Portfolio classification

The data attribute indicates whether the instrument is in the submitting entity's TB or BB pursuant to the CRR.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and has no obligation to report FINREP on an individual basis, it will provide the portfolio classification used at consolidated level for determining the capital requirement of the ultimate parent entity.

DRT_9 - Carrying amount

The carrying amount that corresponds to the carrying amount in the bank's accounting balance sheet as provided in the trial balance excerpt provided in the VDI (see VDI document 1.3).

The carrying amount is the amount of the instrument recognised as an asset (or a liability) in the balance sheet, i.e. after deducting any accumulated impairment (referred to as the 'net carrying amount') for instruments measured at amortised cost and the fair value for instruments measured at fair value through profit and loss or other comprehensive income.

DRT_10 - Exchange rate

Exchange rate of the instrument which is used to convert monetary amounts of instruments in foreign currencies into euro within the local GAAP of the submitting entity. The exchange rate must always be reported against the euro. For instruments denominated in euro, an exchange rate of 1 is expected.

DRT_11 - Fair value (IFRS 13)

Fair value of the instrument calculated in accordance to IFRS 13 (financial instruments at fair value) as reported in FINREP 14 ('Fair value hierarchy: financial instruments at fair value').

If the entity is not subject to IFRS reporting standards at the individual level, it should submit the fair value estimated for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.

DRT_12 - Fair value hierarchy

Indicates the level in the fair value hierarchy (Level 1, Level 2 or Level 3) according to IFRS 13.

If the entity is not subject to IFRS reporting standards at individual level, it should identify the fair value hierarchy used for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.

DRT_13 - Credit valuation adjustments (CVA)

Credit Valuation Adjustment (CVA) represents the adjustment to the fair value of derivative contracts, reflecting the counterparty's credit risk as calculated for accounting purposes or for prudential purposes if the former is not available.

DRT_14 - Debit valuation adjustments (DVA)

Debit valuation Adjustment (DVA) represents the adjustment to the fair value of derivative contracts, reflecting the credit risk of the submitting entity with respect to its counterparties, as calculated for accounting purposes or for prudential purposes if the former is not available.

DRT_15 - Base (FINREP)

Data attribute indicates if the instrument represents either an asset or a liability in FINREP table F 01.01. or F 01.02:

- Assets if the instrument is reported in F 01.01.
- Liabilities if the instrument is reported in F 01.02.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not required to report FINREP on an individual basis, it will provide the base as reported in the FINREP consolidated reporting of the ultimate parent entity.

DRT_16 - Accounting Portfolio (FINREP)

The accounting portfolio to which the instrument is assigned, as defined in FINREP:

- Financial assets held for trading as reported in {F 01.01; 0060}.
- Financial liabilities held for trading as reported in {F 01.02; 0020}.
- Derivatives Hedge accounting as reported in {F 01.01; 0240} and {F 01.02; 0150}.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not required to report FINREP on an individual basis, it will provide the accounting portfolio as reported in the FINREP consolidated reporting of the ultimate parent entity.

DRT_17 - Carrying amount (FINREP)

The carrying amount according to FINREP as reported on e.g. F.01.01.

Data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

DRT_18 - EMIR ID

ID of the instrument as reported under EMIR ('Unique trade identifier'). This data attribute is required to link the dataset with existing EMIR reporting.

DRT_19 - Trading desk ID

Identifier of the trading desk to which the position is assigned, as specified in the Trading book dataset and in the VDI (see VDI document 7.2). The trading desk ID should be consistent with the ones used in the solvent wind-down plans, if available.

DRT_20 - Valuation cluster ID

The ID assigned to the valuation cluster as outlined in the Valuation playbook.

DRT_21 - Valuation subcluster ID

The ID assigned to the valuation subcluster as outlined in the Valuation playbook.

DRT_22 - Hedge ID

For instruments designated in micro hedge relationships, the hedge ID connects the derivative to its corresponding hedged position. The same hedge ID must be provided for the data attributes LOA_73, SEC_88 and DRT_22. The hedge ID is only applicable in the case of micro hedging relationships.

DRT_23 - Netting set ID

The identifier of the netting set to which the instrument belongs. The same identifier needs to be provided for all instruments subject to the same netting set.

14. SUB - Subsidiaries, joint ventures and associates

SUB 1 - Instrument identifier

The unique internal identification code of the investment in subsidiaries, joint ventures and associates. Each instrument must have a unique instrument identifier.

SUB_2 - Security identifier type

Classification of the types of security identifiers. The possible values are the following:

- CUSIP: The Committee on Uniform Securities Identification Procedures (CUSIP) identifier is an alphanumeric code that uniquely identifies North American securities.
- SEDOL: The Stock Exchange Daily Official List (SEDOL) identifier is an alphanumeric code that uniquely identify securities issued in the United Kingdom and Ireland.
- ISIN: International Securities Identification Number assigned to securities, composed of 12 alphanumeric characters, which uniquely identifies a securities issue as defined in ISO 6166.
- Other: Other than CUSIP, SEDOL or ISIN.

SUB_3 - Full legal name of participation

The full legal name of the subsidiary, joint venture or associate as reported in the local registers (including the legal form).

SUB_4 - Location headquarter

The full address of the location of the headquarter of the subsidiary, joint venture or associate.

SUB_5 - Country headquarter

The country in which the headquarter of the subsidiary, joint venture or associate is located according to the ISO 3166-1 alpha-2 codes of the country.

SUB_6 - Currency

The currency denomination of the subsidiary, joint venture or associate in accordance with the ISO 4217 standard. This data attribute identifies the currency in which the instrument is denominated and not the currency in which the instrument is submitted (note that in the VDS all monetary amounts are submitted in euro).

SUB_7 - Economic activity

The economic activity in accordance with the NACE revision 2 statistical classification as laid down in Regulation (EC) No 1893/2006 of the European Parliament and of the Council.

SUB_8 - Participation quote

The percentage of ownership in the share capital of the subsidiary, joint venture or associate.

SUB_9 - Proportionate equity

The nominal value of equity held by the submitting entity, according to the local GAAP.

SUB_10 - Fair value (IFRS 13)

The fair value of the instrument calculated in accordance to IFRS 13 or IFRS 12.21(b)(iii)⁵⁴. If a fair value is not available, the entity may use the results of the impairment test (IAS 36) as an alternative (in that case please refer to SUB 12).

SUB_11 - Fair value hierarchy

Indicates the level in the fair value hierarchy (Level 1, Level 2 or Level 3) according to IFRS 13. Level 3 inputs are unobservable inputs for the asset or liability.

The fair value hierarchy will be identified for all instruments, even if the instrument is not designated in any of the fair value categories in FINREP 14.00 ('Fair value hierarchy: financial instruments at fair value').

This data attribute should be submitted even if the submitting entity is not subject to FINREP reporting on an individual basis.

SUB_12 - Valuation approach

Valuation approach refers to the method or framework used to determine the fair value of the subsidiary, joint venture or associate e.g. discounted cash flow (DCF), dividend discount model (DDM), etc.

SUB_13 - Date of valuation

Date of the most recent valuation of the subsidiary, joint venture or associate.

SUB 14 - Credit risk risk-weighted assets

Risk-weighted assets arising from credit risk according to Title II of CRR.

SUB 15 - Own funds deduction amount (CET1)

CET1 deduction amount according to Article 36 (CRR) which can be allocated to the instrument.

SUB_16 - Own funds deduction amount (T1)

Tier 1 (T1) deduction amount according to Article 56 (CRR) which can be allocated to the instrument.

SUB_17 - Own funds deduction amount (T2)

Tier 2 (T2) deduction amount according to Article 66 (CRR) which can be allocated to the instrument.

SUB 18 - General ledger account ID

Identification number of the general ledger account according to the chart of accounts of the entity on which the instrument is booked. The chart of accounts and a corresponding extract of the trial balance has to be

⁵⁴ An entity shall disclose the fair value for a joint venture or associate if they are accounted for using the equity method and if there is a quoted market price.

provided in the VDI (see VDI document 1.3). In the case that the carrying amount of the instrument is not entirely recognised within a single general ledger account, the general ledger account containing the largest portion of the carrying amount should be provided.

SUB_19 - Carrying amount

The carrying amount that corresponds to the carrying amount in the bank's accounting balance sheet as provided in the trial balance excerpt provided in the VDI (see VDI document 1.3).

The carrying amount is the amount of the instrument recognised as an asset in the balance sheet, i.e. after deducting any accumulated impairment (referred to as the 'net carrying amount') for instruments measured at amortised cost and the fair value for instruments measured at fair value through profit and loss or other comprehensive income.

SUB_20 - Accumulated impairments (local GAAP)

Aggregated impairment amount, i.e. book value compared to acquisition costs.

SUB_21 - Exchange rate

Exchange rate of the instrument which is used to convert monetary amounts of instruments in foreign currencies into euro within the local GAAP of the submitting entity. The exchange rate must always be expressed against the euro. For instruments denominated in euro, an exchange rate of 1 is expected.

SUB_22 - Carrying amount (FINREP)

Carrying amount according to FINREP as reported on F 01.01.

This data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

SUB 23 - Valuation cluster ID

The ID assigned to the valuation cluster as outlined in the Valuation playbook.

SUB_24 - Valuation subcluster ID

The ID assigned to the valuation subcluster as outlined in the Valuation playbook.

15. SMBDT - Supplementary MBDT

SMBDT_1 - Instrument identifier

Identifier to uniquely identify each instrument. Each instrument must have one instrument identifier. This data attribute must match the identifier reported in MBDT B02.00, c0020.

SMBDT 2 - Security identifier type

Classification of the types of security identifiers. The possible values are the following:

- CUSIP: The Committee on Uniform Securities Identification Procedures (CUSIP) identifier is an alphanumeric code that uniquely identifies North American securities.
- SEDOL: The Stock Exchange Daily Official List (SEDOL) identifier is an alphanumeric code that uniquely identify securities issued in the United Kingdom and Ireland.
- ISIN: International Securities Identification Number assigned to securities, composed of 12 alphanumeric characters, which uniquely identifies a securities issue as defined in ISO 6166.
- Other: Other than CUSIP, SEDOL or ISIN.

SMBDT_3 - Internal classification of the instrument (granular)

Internal classification/description of the instrument type at the lowest granular level as per the bank's internal systems. For example, 'Issued_Unsecured_Note_5Y' or 'Issued_Covered_Bond_Mortgage'.

SMBDT_4 - Instrument seniority type

A standardised classification of a financial instrument's position in the issuer's capital structure, based on three dimensions: guarantee level, rank level, and security level. The possible values are:

- Unguaranteed, senior, security level not available: No guarantee, ranks as senior debt, no collateral information available.
- Unguaranteed, senior, secured: No guarantee, senior rank, backed by collateral.
- Unguaranteed, subordinated: No guarantee, subordinated in the capital structure, typically unsecured.
- Guaranteed, senior, unsecured: Backed by a guarantee, senior rank, no collateral.
- Guaranteed, senior, secured: Backed by a guarantee and collateral, senior rank.
- Guaranteed, subordinated: Backed by a guarantee, but structurally subordinated.
- Bail-inable, senior non-preferred: Senior but non-preferred under resolution, unsecured, no guarantee.
- Bail-inable, subordinated (e.g. AT1, Tier 2): Subordinated and eligible for bail-in;
- Not available: Not available.

SMBDT_5 - Asset securitisation type

Categorisation of a securitisation transaction based on the nature of the underlying financial assets. The possible values are the following:

- Not applicable: Not applicable.
- Consumer loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.

- Commercial mortgage-backed security (CMBS): Detailed asset type breakdown of MBSs mainly in accordance with definitions of European and American Securitisation Forum.
- Manufactured housing leases ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Other assets ABS: An ABS that is of a type not listed separately.
- Other MBS: An MBS that is of a type not listed separately.
- Small and medium-sized enterprises (SME) loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Mixed MBS: An MBS that is a mix of different MBS types, e.g. combination of RMBS and CMBS.
- Credit card receivables ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Whole business securitisation (WBS) ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Auto loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Residential mortgage-backed security (RMBS): Detailed asset type breakdown of MBSs mainly in accordance with definitions of European and American Securitisation Forum.
- Home equity loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Student loans ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Other securitisation: A securitisation that is of a type not listed separately.
- Collateralised mortgage obligation (CMO): A bond, created through securitisation, whose coupon
 payments and principal repayments are dependent on a diversified pool of loan and bond items of
 mortgages, either purchased in the secondary market or from the balance sheet of an original asset
 owner.
- Equipment leases ABS: Detailed asset type breakdown of ABSs mainly in accordance with definitions of European and American Securitisation Forum.
- Mixed securitisation: A securitisation that is a mix of different securitisation types, e.g. combination of auto loans and mortgages.

- Mortgage-backed security (MBS): A bond, created through securitisation, whose coupon payments and principal repayments are dependent on a pool of mortgages, either purchased in the secondary market or from the balance sheet of an original asset owner.
- Collateralised debt obligation (CDO): A bond, created through securitisation, whose coupon payments and principal repayments are dependent on a diversified pool of loan and bond items, either purchased in the secondary market or from the balance sheet of an original asset owner; excluding mortgages.
- Asset-backed security (ABS): A bond, created through securitisation, whose coupon payments and
 principal repayments are dependent on a pool of assets, either purchased in the secondary market or
 from the balance sheet of an original asset owner; excluding mortgages.
- Other covered bond: A covered bond that is of a type not listed separately.
- Mixed ABS: An ABS that is a mix of different ABS types, e.g. combination of auto and consumer loans.
- Aircraft covered bond: Detailed asset type breakdown of covered bonds mainly in accordance with definitions of European Covered Bond Council.
- Mixed covered bond: A covered bond that is a mix of different covered bond types.
- Public sector covered bond: Detailed asset type breakdown of covered bonds mainly in accordance with definitions of European Covered Bond Council.
- Mortgage covered bond: Detailed asset type breakdown of covered bonds mainly in accordance with definitions of European Covered Bond Council.
- Ship covered bond: Detailed asset type breakdown of covered bonds mainly in accordance with definitions of European Covered Bond Council.

SMBDT_6 - Amortisation type

Type of amortisation structure of the instrument, defined as the way in which the principal of the instrument is paid off. The possible values are:

- Bullet: the principal amount is repaid in a single lump sum at the end of the instrument's term.
- Fixed amount: the principal is repaid in equal, fixed amounts over the life of the instrument.
- Relative to initial notional: the principal repayments are calculated as a percentage of the initial principal
 amount of the instrument.
- Relative to previous notional: the principal repayments are calculated as a percentage of the remaining principal amount of the instrument after each repayment.
- Annuity: the principal and interest repayments are structured so that each payment is the same amount.
- No amortisation: indicates that the instrument is not subject to amortisation.

Other: any amortisation method that does not fit into the above categories.

Note: Data attributes from the 'Cash flow information' category (i.e. SMBDT_6 to SMBDT_26) are applicable only to exposures qualifying as Level 2 and Level 3 exposures, according to IFRS 13, as per data attribute SMBDT_28 ('Fair value hierarchy').

SMBDT_7 - Internal description of amortisation type

Classification of the amortisation structure of the instrument based on the submitting bank's internal description. In principle, the same information as under the data attribute amortisation type should be submitted but on the most granular which is available within the bank's internal system.

This enables to reflect amortisation types of instruments not covered by the predefined drop-down options for amortisation type. Furthermore, it helps the valuer gain a more comprehensive understanding of the instruments.

SMBDT_8 - Amortisation fixed amount

Fixed amount of principal repaid in each amortisation period. The data attribute is only applicable for instruments where the SMBDT_6 ('Amortisation type') is specified as 'fixed amount'.

SMBDT_9 - Amortisation reference percentage

Percentage of initial or previous principal repaid in each amortisation period. For instruments amortising relative to initial principal, this percentage will represent a constant payment (e.g. 2% of the initial notional of EUR 100 000) in each period. If the amortisation is relative to previous principal, the percentage will result in a decreasing repayment in each period. The data attribute is applicable only to instruments where the SMBDT_6 ('Amortisation type') is specified as 'relative to initial notional' or 'relative to previous notional'.

SMBDT_10 - Annuity amount

Amount of annuity payment (equal to principal payment + interest payment) per amortisation period. The data attribute is only applicable for instruments where SMBDT_6 ('Amortisation type') is specified as 'annuity'.

SMBDT_11 - Amortisation frequency

This data attribute identifies the payment frequency of the amortisation payments (principal payments) as of the cut-off date of an instrument (e.g. monthly, quarterly, annually, etc.). For some instruments (e.g. bullet) the SMBDT_11 ('Amortisation frequency) might be different than SMBDT_15 ('Coupon payment frequency).

SMBDT_12 - Amortisation start date

The date on which the first (partial) redemption payment of the principal amount is due for payment (e.g. cases in which a portion of the security is reimbursed before the final legal maturity). If not applicable (i.e. the instrument is not subject to early (partial) redemption) the amortisation end date should be provided.

SMBDT_13 - Amortisation end date

End date of amortisation, referring to the date of the final principal repayment of the instrument.

SMBDT_14 - Coupon type

Classification of coupon rate based on the base rate for each payment period. The possible values are the following:

- Fixed regular coupon/interest: Fixed rate for which the coupon/interest payments are fixed for the life of the instrument, or for a certain period.
- Fixed zero coupon/interest: Fixed rate for which the instrument has a single-payment, with no coupon/interest payments.
- Variable asset-linked: Variable rate for which the instrument has the coupon or principal payments (or both) linked to an asset price.
- Variable inflation-linked: Variable rate for which the instrument has the coupon or principal payments (or both) linked to an inflation rate.
- Variable reference rate linked: Variable rate for which the instrument has the coupon/interest or principal payments (or both) linked to a reference rate.
- Fixed stepped: Fixed rate for which the coupon/interest payments are fixed over the life of the instrument but increase or decrease at predetermined intervals.

SMBDT_15 – Coupon payment frequency

Frequency of coupon payments due, according to predefined time intervals.

SMBDT_16 - Coupon currency

The currency in which the coupon payments of the instrument are denominated. This is relevant for instruments which have coupon payments in a different currency than the principal payments (e.g. dual currency bonds).

SMBDT 17 - Coupon rate

The annualised rate used to determine the coupon amount that the issuer pays to the holders of the debt security.

SMBDT_18 - Next interest rate reset date

The date that the next interest rate reset takes place.

SMBDT_19 - Interest rate reset frequency

Frequency at which the reference rate resets.

SMBDT_20 - Day count convention

Day count convention which is used for the calculation of the interest payments of the instrument:

- US (NASD) 30/360: assumes each month has 30 days and a year has 360 days.
- Actual/actual: calculates interest based on the actual number of days in the period and the actual number of days in the year.
- Actual/360: calculates interest based on the actual number of days in the period and assumes a 360day year.
- Actual/365: calculates interest based on the actual number of days in the period and assumes a 365day year.
- European 30/360: assumes each month has 30 days and a year has 360 days (different to the US (NASD) 30/360 due to different date adjustment rules).
- Other: any day count convention that does not fit into the above categories, potentially including custom or regional conventions.

SMBDT_21 - Reference rate type

Reference rate used for the calculation of the actual interest rate.

SMBDT_22 - Reference rate maturity

Maturity or tenor of the reference rate used for the calculation of the actual interest rate.

SMBDT 23 - Structured coupon formula

Formula of the coupon based on banks internal systems for products for which SMBDT_14 ('Coupon type') is classified as 'Variable - asset-linked' or 'Variable - inflation-linked' or 'Fixed – stepped'. For example, a formula with several indices with multipliers and/or spreads could be as follows: (3 * EURIBOR_3M + 0.5) – (3.4 * EURIBOR_6M)).

SMBDT 24 - Interest rate cap

The maximum nominal interest rate that can be charged on the outstanding nominal amount per annum. The data attribute is only applicable to products for which SMBDT_14 ('Coupon type') is 'Variable – reference rate'.

SMBDT_25 - Interest rate floor

The minimum nominal interest rate that can be charged on the outstanding nominal amount per annum. The data attribute is only applicable to products for which SMBDT_14 ('Coupon type') is 'Variable – reference rate'.

SMBDT_26 - Spread

The margin or spread, expressed in basis points, that is applied to the reference rate that is used for the calculation of the interest rate. The data attribute is only applicable to products for which SMBDT_14 ('Coupon type') is 'Variable – reference rate'.

SMBDT_27 - Fair value (IFRS 13)

Fair value of the instrument calculated in accordance with IFRS 13 (financial instruments at fair value) or IFRS 7.25-7.26 (fair value of financial instruments at amortised cost), as reported in FINREP 14 ('Fair value hierarchy: financial instruments at fair value') and 41.1 ('Fair value hierarchy: financial instruments at amortised cost'), respectively.

If the entity is not subject to IFRS reporting at the individual level, it should submit the fair value estimated for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.

SMBDT_28 - Fair value hierarchy

Indicates the level in the fair value hierarchy (Level 1, Level 2 or Level 3) according to IFRS 13.

The fair value hierarchy will also be identified for instruments classified as 'Financial liabilities measured at amortised cost', as reported in FINREP 41.1 ('Fair value hierarchy: financial instruments at amortised cost').

If the entity is not subject to IFRS reporting standards at individual level, it should identify the fair value hierarchy used for the purpose of preparing the consolidated financial statements by the parent entity of the group to which the submitting entity belongs.

SMBDT_29 - External rating of the instrument

External credit rating of the instrument. If the entity obtains external ratings from more than one rating agency, information from all rating agencies must be provided in the following order: Fitch, Moody's, Standard & Poor's (S&P), followed by the others. The enumeration has to be separated by the standardised separator '|'. Please also refer to Annex 2 on technical instructions.

If an instrument has the following ratings: Fitch: AA-, Moody's: Aa2, Standard & Poor's (S&P): AA, and another agency: A (high), then the data must be provided in the following format: 'AA-|Aa2|AA|A (high)'.

SMBDT_30 - Change in the fair value due to own credit risk

Cumulative pre-tax balance at the submission date attributable solely to changes in the entity's own credit risk on financial liabilities designated at fair value through profit or loss (FVTPL), recognised in OCI under IFRS 9.5.7.7.

SMBDT_31 - General ledger account ID

Identification number of the general ledger account according to the chart of accounts of the entity on which the instrument is booked. The chart of accounts and a corresponding extract of the trial balance has to be provided in the VDI (see VDI document 1.3). If the carrying amount of the instrument is not entirely recognised in a single general ledger account, the general ledger account containing the largest portion of the carrying amount should be provided.

SMBDT_32 - Portfolio classification

Indicate if the instrument is classified in the Trading book (TB) or in the Banking book (BB) pursuant to the CRR.

SMBDT_33 - Carrying amount

The carrying amount that corresponds to the carrying amount in the bank's accounting balance sheet as provided in the trial balance excerpt provided in the VDI (see VDI document 1.3).

SMBDT 34 - Accrued interest

Interest accrued since the last coupon payment, or the accrual start date.

SMBDT_35 - Exchange rate

Exchange rate of the instrument which is used to convert monetary amounts of instruments in foreign currencies into euro within the local GAAP of the submitting entity. The exchange rate must always be expressed against the euro. For instruments denominated in euro, an exchange rate of 1 is expected.

SMBDT_36 - Accounting Portfolio (FINREP)

The accounting portfolio to which the instrument is assigned, as defined in FINREP:

- Financial liabilities held for trading as reported in {F 01.02; 0010}.
- Financial liabilities designated at fair value through profit or loss as reported in {F 01.02; 0070}.
- Financial liabilities measured at amortised cost as reported in {F 01.02; 0110}.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not required to report FINREP on an individual basis, it will provide the accounting portfolio as reported in the FINREP consolidated reporting of the ultimate parent entity.

SMBDT_37 - Main category (FINREP)

The main category to which the instrument is assigned, as defined in FINREP:

- Short positions as reported in {F 01.02; 0030}.
- Deposits as reported in {F 01.02; 0040}, {F 01.02; 0080}, {F 01.02; 0120}.

- Debt securities issued as reported in {F 01.02; 0050}, {F 01.02; 0090}, {F 01.02; 0130}.
- Other financial liabilities as reported in {F 01.02; 0060}, {F 01.02; 0100}, {F 01.02; 0140}.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not required to report FINREP on an individual basis, it will provide the main category as reported in the FINREP consolidated reporting of the ultimate parent entity.

SMBDT_38 - Carrying amount (FINREP)

Carrying amount according to FINREP as reported in F 01.02.

Data attribute is not applicable if the entity has no obligation to report FINREP on an individual level.

SMBDT_39 - CSDB ID

Unique internal identifier of the position in the CSDB Database. This should correspond to the 'Internal instrument code' field in the CSDB Database.

SMBDT_40 - Trading desk ID

Identifier of the trading desk to which the position is assigned, as specified in the Trading book dataset and in the VDI (see VDI document 7.3). The trading desk ID should be consistent with the ones used in the solvent wind-down plans, if available.

SMBDT_41 - Encumbrance allocation ID

Unique identifier that assigns an asset to a liability that is collateralised by it (e.g. an instrument which forms part of a collateral pool securing a covered bond). The same identifier is to be used for data attributes SEC_89 and LOA_74.

SMBDT 42 - Valuation cluster ID

The ID assigned to the valuation cluster as outlined in the Valuation playbook.

SMBDT_43 - Valuation subcluster ID

The ID assigned to the valuation subcluster as outlined in the Valuation playbook.

16. CL - Complementary liabilities

CL_1 - Aggregation group identifier

An identifier used to uniquely identify each group of aggregated liabilities. The grouping of liabilities is determined by specific aggregation criteria, which should be defined by the bank. Consequently, all liabilities within the same aggregation group must share identical data attributes for these aggregation criteria.

CL 2 - Number of instruments

The number of instruments which are contained in the aggregation group.

CL_3 - Accounting Portfolio (FINREP)

This data attribute is an aggregation criterion (see CL_1).

The accounting portfolio to which all instruments in the aggregation group are assigned, as defined in FINREP:

- Financial liabilities held for trading as reported in {F 01.02; 0010}.
- Financial liabilities designated at fair value through profit or loss as reported in {F 01.02; 0070}.
- Financial liabilities measured at amortised cost as reported in (F 01.02; 0110).

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 (CRR) and is not required to report FINREP on an individual basis, it will provide the accounting portfolio as reported in the FINREP consolidated reporting of the ultimate parent entity.

CL_4 - Main category (FINREP)

This data attribute is an aggregation criterion (see CL_1).

The main category to which all instruments in the aggregation group are assigned, as defined in FINREP:

- Short positions as reported in {F 01.02; 0030}.
- Deposits as reported in {F 01.02; 0040}, {F 01.02; 0080}, {F 01.02; 0120}.
- Debt securities issued as reported in {F 01.02; 0050}, {F 01.02; 0090}, {F 01.02; 0130}.
- Other financial liabilities as reported in {F 01.02; 0060}, {F 01.02; 0100}, {F 01.02; 0140}.

If the entity is exempt from capital requirements in accordance with Articles 7 or 10 of the CRR and is not required to report FINREP on an individual basis, it will provide the main category as reported in the FINREP consolidated reporting of the ultimate parent entity.

CL_5 - Liability category

This data attribute is an aggregation criterion (see CL_1).

CL_6 - Flag intragroup counterparty

This data attribute is an aggregation criterion (see CL_1).

Flag to identify counterparties which are entities or other companies within the resolution group of the submitting entity.

CL 7 - Term bucket

This data attribute is an aggregation criterion (see CL_1).

Remaining maturity bucket for the liabilities in the aggregation group.

CL_8 - General ledger account category

This data attribute is an aggregation criterion (see CL_1).

Identification number of the general ledger account according to the chart of accounts of the entity on which the instrument is booked. The chart of accounts and a current statement of balances must be made available in the VDI.

The selected level of the ledger account should offer additional insights into the type of instruments without causing unnecessary splits. For instance, all instruments could be grouped under broader account categories such as 'Deposits' or 'Covered Bonds' instead of more granular sub-categories.

CL_9 - Outstanding principal amount

Aggregated outstanding amount.

CL_10 - Interest rate

Weighted average interest rate paid to customers, with weights calculated according to the outstanding principal amount of the instruments (CL_9).

CL_11 - Fair value (IFRS 13)

Aggregated fair value of the instrument calculated in accordance to IFRS 13 (financial instruments at fair value) or IFRS 7.25-7.26 (fair value of financial instruments at amortised cost), as reported in FINREP 14 ('Fair value hierarchy: financial instruments at fair value') and 41.1 ('Fair value hierarchy: financial instruments at amortised cost'), respectively.

CL_12 - Carrying amount

The aggregated carrying amount that corresponds to the carrying amount in the bank's accounting balance sheet as provided in the trial balance excerpt provided in the VDI (see VDI document 1.3).

CL 13 - Accrued interest

Aggregated accrued interest.

CL_14 - Carrying amount (FINREP)

Aggregated carrying amount reported in FINREP.

Carrying amount according to FINREP as reported in F 01.02.

Data attribute is not applicable if the entity has no obligation to report FINREP on an individual basis.

17.TB – Trading book

TB_1 - Trading desk ID

The identifier that uniquely identifies each trading desk (portfolio). Additional documentation on the risks associated with each trading desk must be submitted as part of the trading book portfolio data request (see VDI document 7.3). Banks are expected to split their Trading book in accordance with the trading desk classification used for management or regulatory purposes. The trading desk ID should be consistent with the ones used in the solvent wind-down plans, if available.

TB 2 - Positive fair value

The aggregated fair value of trading book positions within the trading desk (portfolio) with a positive fair value. Only positions or instruments within the trading desk that have an individual positive fair value should be included in this value.

TB_3 - Negative fair value

The aggregated fair value of trading book positions within the trading desk (portfolio) with a negative fair value. Only positions or instruments within the trading desk that have an individual negative fair value should be included in this value.

TB_4 - Aggregated fair value

The aggregated fair value of trading book positions within the trading desk (portfolio). This value may differ from the sum of TB_2 ('Positive fair value') and TB_3 ('Negative fair value'), as it may include portfolio-level effects (e.g. XVA components) that cannot be disaggregated for the purpose of calculating the fair value bases prescribed in TB_2 and TB_3.

TB_5 - VaR

The Value at Risk measure for the positions in the trading desk. Information on the methodology for the calculation of VaR has to be provided as part of VDI document 7.2.

TB 6-sVaR

The Stressed Value at Risk measure for the positions in the trading desk. Information on the methodology for the calculation of the sVaR has to be provided as part of VDI document 7.2.

TB 7-ES

The Expected Shortfall measure for the positions in the trading desk. Information on the methodology for the calculation of ES has to be provided as part of VDI document 7.2.

Annex 4. Technical descriptions and validation rules

Please refer to the Excel file, which provides the list of validation rules, drop-down values and their corresponding technical codes, and default values to be used when the data attribute is not applicable or not available.

Annex 5. Data quality report template

Please refer to the Excel file, which provides the template for the data quality report.

Annex 6. Comparison with SRB VDS 2020

Please refer to the Excel file which provides a detailed comparison between the Valuation Dataset and the VDS 2020. The detailed gap analysis is not meant to be a perfect one-to-one match between the data attributes of the VDS and the VDS 2020.

Annex 7. Valuation playbooks

The concept of clustering for purposes of the valuation self-assessment was introduced in Chapter 6 and further guidance is provided in the following examples and explanations.

The stratification of on- and off-balance exposures into homogeneous clusters begins with the balance sheet, which serves as the starting point. This entails the formation of homogeneous valuation (sub)clusters by grouping assets and liabilities that share similar characteristics, that can be valued using the same valuation methodology, and that exhibit similar risk profiles. Furthermore, banks are expected to design clusters and subclusters also for asset classes not covered by the VDS.

Examples (non-exhaustive) of criteria for clustering loan portfolios include:

- Performance status: performing / non-performing.
- Geographical location/region: different geographical locations/regions, particularly if there are risks for specific locations/regions.
- Industry sector: loans grouped by the sectors in which the borrowers operate.
- Legal risks: portfolios with higher legal risks (e.g. exposed to potential changes in laws or regulations, subject to pending litigation).
- Collateral types, such us: residential real estate, commercial real estate, and shipping.

Examples (non-exhaustive) of criteria for clustering derivatives portfolios include:

- Different product types e.g. swaps, options, forwards, etc.
- Different underlying risk factors e.g. interest rates, equity, FX, credit, etc.
- ▶ Different counterparties, e.g. corporates, financial institutions, etc.

The following figures provide simplified examples on how a loan or a derivatives portfolio might be clustered:

Figure A7.1. Simplified example of a potential clustering of a loan portfolio with a focus on geographical footprint (without cluster IDs)

Loan portfolio main cluster	Subcluster									
	Country 1 CRE - Office	Country 1 CRE - Resid	dential	Country 1 CRE - Hotel	Countr CRE -		ountry 2 RE - Residential		ntry 2 - Hotel	CRE - other
Performing loans	rming loans Shipping - Container		er		Shipping - Tanker		Shipping - Bulk		ker	
	Country 1 Corp Large cap)	Count Corp.	ry 1 - SME		Country 2 Corp Larg	e cap		ntry 2 o SME	
Non performing loans	Country 1 Rest of ti					Country 2 Corp Lar	ge cap		Other	

Figure A7.2. Simplified example of a potential clustering of the derivatives portfolio (without cluster IDs)

Derivatives main cluster	Subcluster						
Interest rates	Interest rate swaps	Interest rate options		Interest rate swaptions		Exotic interest rate derivatives	
Foreign exchange	FX swaps	FX forwards		FX options		Exotic FX derivatives	
Credit	Credit default swaps (CDS)		Bespoke CDS		N to Default baskets		
Equity	Equity forwards		Equity options		Equity and equity-hybrid correlation products		
Other	Commodity options		Inflation derivatives		Others		

While banks have the discretion to provide the requested information using the approach and methodology that aligns best with their specific balance sheet structure and business model, the Valuation playbook should, at a minimum, include the following information for each (sub)cluster:

- The provision of key metrics for each (sub)cluster to enable the SRB and an independent valuer to gain a comprehensive overview regarding volumes, including the fair value and the fair value category, which should reconcile with the values reported in the VDS. For a simplified example see Figure A7.3.
- A description for each (sub)cluster with information on (sub)cluster positions, including the rationale for their classification and grouping as a homogeneous valuation cluster. This description should also encompass information necessary to gain an understanding of the specific risks associated with each (sub)cluster. Furthermore, banks should explain the valuation methodologies applied to the assets and liabilities in the (sub)clusters, providing reference to the relevant documentation of the associated valuation models (as requested in the VDI). Additionally, banks should highlight major valuation uncertainties (e.g. highly structured products, uncertainties of the assets regarding legal risks, highly illiquid markets, non-transparent counterparty risks, etc.).
- Simplified examples are provided in Figures A7.4, A7.5, A7.6 and A7.7. For further details on the cluster descriptions banks are allowed to reference to other supplementary information (e.g. risk reports).

Figure A7.3. Simplified example of a cluster overview of the assets of a sample bank

Cluster	Subcluster	Cluster	Key Metrics						Reference ID VDI	Comments
		ID	Book value total*	Fair value total	thereof level 1	thereof level 2	thereof level 3	. (if applicable)	(if applicable)	(if applicable)
Cash funds	Cash on hand	1.1	5	5	5	-	-	n/a	n/a	
Cash funds	Balances with central banks	1.2	95	95	95	-	-	n/a	n/a	
Loans to banks (PL)	Loans	2.1	7,500	5,625	-	563	5,063	Loans	n/a	
Loans to banks (FL)	Reverse repos	2.2	2,500	1,875	-	188	1,688	Loans	n/a	
	Mortgage loans - Europe	3.1	11,000	7,150	-	715	6,435	Loans	n/a	
	Mortgage loans - Asia	3.2	4,000	2,600	-	260	2,340	Loans	n/a	
Loans to customers	Mortgage loans - US	3.3	7,000	4,550	-	455	4,095	Loans	n/a	
(PL)	Mortgage loans - Rest of the world	3.4	3,000	1,950	-	195	1,755	Loans	n/a	
	Loans to local authorities	3.5	1,500	1,125	-	113	1,013	Loans	n/a	
	Other loans	3.5	3,000	1,800	-	180	1,620	Loans	n/a	
	Mortgage loans - Europe	4.1	2,000	1,300	-	-	1,300	Loans	n/a	
	Mortgage loans - US	4.2	1,000	750	-	-	750	Loans	n/a	
(NPL)	Mortgage loans - Rest of the world	4.3	700	525	-	-	525	Loans	n/a	
	Other loans	4.4	1,000	600	-	-	600	Loans	n/a	
	Interest rate swaps	5.1	1,500	1,500	150	750	600	Derivatives	n/a	
Derivatives	Foreign exchange	5.2	800	800	80	400	320	Derivatives	n/a	
	Caps/floors	5.3	200	200	20	100	80	Derivatives	n/a	
	Governmental bonds	6.1	4,000	2,800	2,520	280	-	Securities	n/a	
Debt, securities and	Other bonds	6.2	2,000	1,300	1,170	130	-	Securities	n/a	
equities	Equities and other non-fixed income securities	6.3	100	70	63	7	-	Securities	n/a	
	Participations	7.1	10	6	5	1	-	Subsidiaries	n/a	
Participations	Participations in affiliated banks	7.2	15	10	9	1	-	Subsidiaries	n/a	
	Participations in other affiliated companies	7.3	1,030	618	556	62	-	Subsidiaries	n/a	
	Trust assets	8.1	15	11	2	6	3	Loans	n/a	
	Intangible assets	8.2	20	13	3	7	4	n/a	3.11	
Oalson	Purchased concessions	8.3	5	3	1	2	1	n/a	3.11	
Other	Tangible assets	8.4	5	4	1	2	1	n/a	3.10	
	Other assets	8.5	300	195	39	98	59	n/a	n/a	
	Deferred tax assets	8.6	200	150	30	75	45	n/a	4.1.5	
Sum			54.500	37.630	4.749	4.586	28.295	<u> </u>		

^{*} Sum of cluster equals balance sheet sum; in $\ensuremath{\in}$ Mio.

In % of fair value In % of fair value In % of fair value

13%

12%

75%

Figure A7.4. Valuation self-assessment (cluster view) - Simplified example for performing loans (Consumer loans France)

Cluster Name Subcluster Name	Performing loans Consumer loans France	Cluster ID Subcluster ID	C2 C2.6
Casciació Hame	Concernor loane i Tanco	SECTION A	02.0
Description		erforming consumer loans in Fr. is. About 30% of the portfolio i	ance. The portfolio is well diversified with over s used for car financing.
Key metrics			
Gross book value (in Loan loss provisions thereof stage 1	•		7,653 459 <i>391</i>
thereof stage 2 Fair Value (in €m) thereof level 1			68 7,423 0
thereof level 2 thereof level 3 Number of accounts Number of clients			0 7,423 510,200 484,690
Average maturity			3.1 years
Risk metrics Risk-weighted assets Average PD Average LGD	(in €m)		5,740 0.05 0.85
		SECTION B	
Valuation capabilitie	s		
Valuation model - De	ocumentation	Model for loan valuat 7.9.	ion (DCF) - see loan valuation handbook chapter
Valuation methodolo	ogy	based on their scorin following risk factor administrative costs.	ed by cohorts, meaning exposures are grouped g grade. The DCF specification incorporates the ors: expected loss, cost of capital, and The present value is calculated by discounting ows using the entity's funding curve.
Valuation inputs		the cash flows using spread. The inputs for LGD, as estimated determined by multip the institution's RoE Administration costs reported in the annu	ans the instalments are estimated by projecting the EUR IRS forward curve plus the contractual or deriving the expected loss are the PDs and the for IFRS 9 purposes. The cost of capital is olying the CoE, the RWAs of the exposure and . The CoE is calculated using a CAPM model. are inferred by dividing the administrative costs all report by the size of the loan portfolio. The ed from the bank's funding mix and the yields on ses.
Valuation uncertaint	ies	n/a	

Figure A7.5. Valuation self-assessment (cluster view) - Simplified example for performing loans (CRE United States)

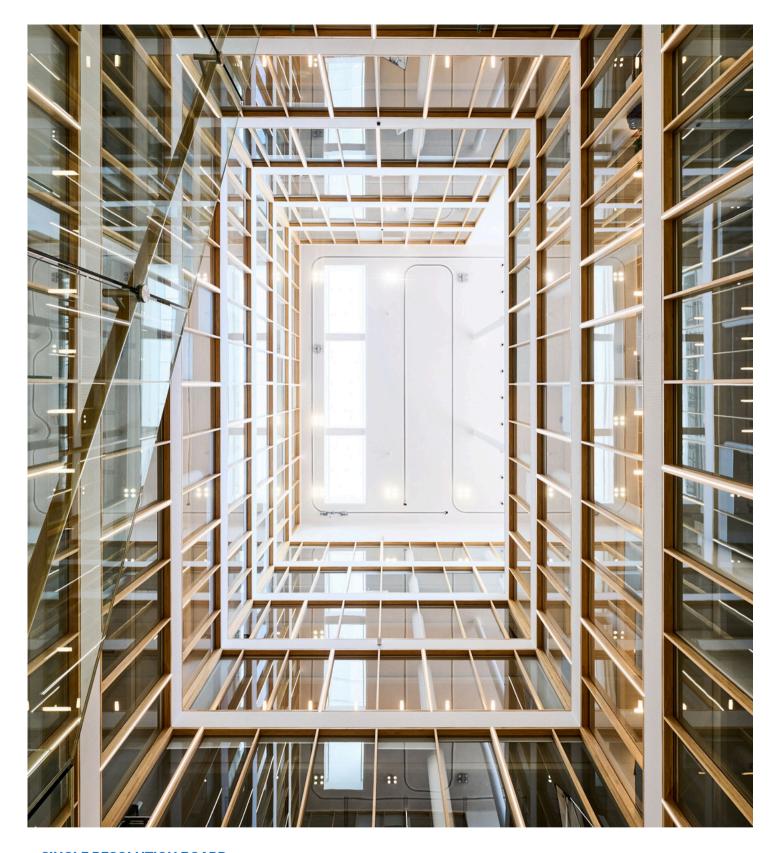
Cluster Name	Performing loans	Cluster ID	C2
Subcluster Name	CRE United States	Subcluster ID	C2.2
		SECTION A	
Description	located in key prime locations (New buildings. This subcluster is characte main risk factors are rising interest r Therefore, the average PD and LGE	York, Boston, Chicago a erised by the specific risl ates and vacancy rates i 0 of this cluster are highe seen classified in stage 1	te loans in the United States. All objects are and San Francisco) with a focus on office is situation of the US real estate market. The in combination with stagnating rental income. For compared to real estate loans in other and stage 2 based on recently updated analysis of the borrowers.
Key metrics			
Gross book value (in € Loan loss provisions (i thereof stage 1 thereof stage 2 Fair Value (in €m) thereof level 1 thereof level 2 thereof level 3 Number of accounts Number of clients Average maturity Risk metrics	•		6,530 313 201 112 6,334 0 0 5,971 316 109 2.4 years
Risk-weighted assets (Average PD Average LGD	(in €m)	SECTION B	2,939 0.03 0.55
		OLOTION B	
Valuation capabilities Valuation model - Do		Model for loan valuat 7.9.	ion (DCF) - see loan valuation handbook chapter
Valuation methodolog	gy	Model for loan valuat 7.3. Valuation is condu specification incorpo cost of capital, and	ion (DCF) - see loan valuation handbook chapter acted instrument by instruments. The DCF brates the following risk factors: expected loss, d administrative costs. The present value is nting the expected cash flows using the entity's
Valuation inputs		For variable-rate, loathe cash flows using spread. The inputs fo LGD, as estimated determined by multip the institution's RoE Administration costs reported in the annu	ans the instalments are estimated by projecting the EUR IRS forward curve plus the contractual or deriving the expected loss are the PDs and the for IFRS 9 purposes. The cost of capital is oblying the CoE, the RWAs of the exposure and and the CoE is calculated using a CAPM model, are inferred by dividing the administrative costs all report by the size of the loan portfolio. The ed from the bank's funding mix and the yields on ses.
Valuation uncertaintie	es	anticipate heightened in New York and E typically used in the vacancy rates and s To adress this, adju	risk situation of the US real estate market we PDs and LGDs for loans secured by collateral Boston, compared to the historical estimates a model. This is primarily driven by increasing tagnating average rental income in these cities. stment were made to the regulatory LDGs and with LGDs increased by 10% and PD by 5%.

Figure A7.6. Simplified example of a cluster description of derivatives interest rate swaps

Cluster Name Subcluster Name	Derivatives Interest rate swaps	Cluster ID Subcluster ID	C5 C5.2
Subcluster Name	interest rate swaps	SECTION A	65.2
		OLOTION A	
Description	the banking book are mainly us banking book swaps are deno exposures. The interest rate so are used for various purposes	sed for hedging purposes for minated in either EUR or USE waps are mostly centrally clear, including speculative trading positions. The trading book	ng book and trading book. Interest rate swaps of the loan book and the liquidity reserve. The D, reflecting the bank's primary currency ured. In the trading book, the interest rate swaps , arbitrage opportunities, and managing the s swaps are typically shorter in duration and more
Key metrics			
Book value - Assets (in thereof banking book thereof trading book book value - Liabilities thereof banking book thereof trading book Nominal - Assets (in € Nominal - Liabilities (in Fair Value - positive (in thereof level 1 thereof level 2 thereof level 3 Fair Value - negative (in thereof level 1 thereof level 1 thereof level 2 thereof level 3 Number of trades Risk metrics (in €m) Risk-weighted assets	k (in €m) k m) n €m) n €m)		889 702 187 1,498 1,228 270 19,202 29,511 889 345 544 545 1,498 899 599 0 73
DV01 of assets			0.077
Average maturity of the	e assets		4 years
DV01 of liabilities			0.148
Average maturity of the	e liabilities		5 years
		SECTION B	
Valuation capabilities	for Level 2 and 3		
Valuation model - dod	cumentation	Technical instruction	s on valuation of derivative products - Chapter 2
Valuation methodolog	ау 		w model where cash flows are estimated for both gs. The floating leg payments are estimated by proces.
Valuation inputs		derived from the zero rates swaps (mainly Valuation Adjustmer	rices to derive discount factors and forward rates o-coupon yield curve. For OTC long-term interest level 3) the fair value is adjusted for the Credit (CVA). CVA is estimated using Monte Carlo ounterparty's terms structure of credit spreads.
Valuation uncertaintie	es	n/a	

Figure A7.7. Simplified example of a cluster description of securities, collateralised debt obligations

Cluster Name	Securities	Cluster ID	C3
Subcluster Name	Collaterallised debt obligations	Subcluster ID	C3.2
		SECTION A	
Description	corporate bonds and asset-back pool. These include investment-gr	ed securities (ABS). Corp rade and high-yield bonds id include securities backe	obt obligations (CDO) backed by a portfolio of porated bonds comprise 60% of the underlying issued by companies from various sectors. The ed by pools of loans, suchas as auto loans and and mezzanine tranches only.
Key metrics			
Gross book value (in € Fair Value (in €m) thereof level 1 thereof level 2 thereof level 3 Number of securities Average maturity	m)		1,000 943 0 0 943 800 5.6
Risk metrics (in €m)			
Risk-weighted assets Average PD Average LGD VaR			3,253 0.04 0.60 260
		SECTION B	
Valuation capabilities	for Level 2 and 3		
Valuation model - doc	cumentation	Technical instructions	s on valuation of securities - Chapter 6 (CDO)
Valuation methodolog	зу	• • • • • • • • • • • • • • • • • • • •	where defaults are simulated using a structural correlation between them using a Gaussian
Valuation inputs		- Probabilities of defa - Correlation betweer - Zero-coupon yield o	
Valuation uncertaintie	es	parameters is highly	copula and the estimation of the correlation v sensitive to market conditions. In case of a m the losses for mezzanine tranches could be cipated.



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