BIRD Technical Guidelines (Release 4.1)

October 2019

Contents

Introduction

The BIRD technical guidelines provide technical instructions on how to use the content of the BIRD database. This document contains the technical guidelines that accompanied the release 4.1 of the BIRD database.

The BIRD Database describes the data which should be extracted from the banks' internal IT systems ("input cubes"), the transformation rules to be applied to the data extracted in order to derive reports, and the specific final regulatory figures ("output cubes").

The transformation rules are described using (i) "natural language" and (ii) the Validation and Transformation Language (VTL). More detailed information on transformation rules in the BIRD model can be found in the BIRD Handbook.

1 General instructions

The BIRD input layer is intended to support credit institutions to generate reports as required by regulatory authorities.

1.1 Reporting population

The unit populating the BIRD input layer may be:

a. A head office, including domestic branches
b. A foreign branch
c. A legal entity
d. A group or part of a group

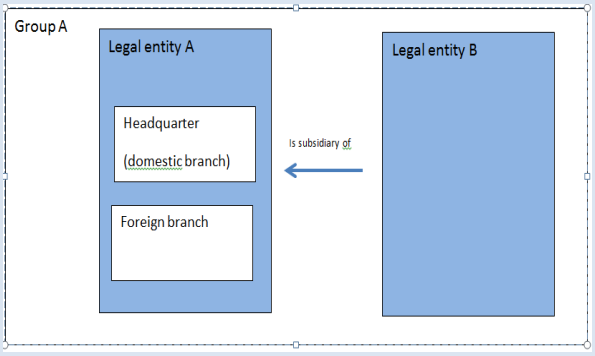
The Input data comprises information describing the relationship between different units: (i) between the head office and foreign branches, (ii) among foreign branches, and (iii) among the head of the group and its subsidiaries.

Although BIRD may allow the reporting to be done at the level of the branch, the legal entity, or the group, it is not within the scope of BIRD to account for the consolidation process. As such, whether the information is presented at consolidated level or at individual level is a matter of which data is used to feed the input layer. The consolidation process is not envisaged to be managed by the BIRD. However the input layer

Example 1: An illustrative example on the issues above

Suppose there are two legal entities A and B, where B is a subsidiary of A.

Entity A is composed of the Head Office (the domestic branch) and an EU Branch. Entities A and B belong to the same Group A.



The BIRD input layer may refer to:

- **group A**
- The **legal entity A**. In this case, the input layer will contain information on all the branches belonging to the legal entity, making possible to generate reports for individual units.
- The **Headquarter alone** or any of the **foreign branches** alone.
- The **legal entity B**

1.2 Conventions

The following section describes the conventions applied in the BIRD model.

1.2.1 i). Sign convention

contain one or more measures. A measure is a variable that quantitatively represents a phenomenon and points towards a monetary (MNTRY) domain. In order to correctly represent a phenomenon, a sign convention has to be followed indicating whether the measure is to be reported in the input layer as positive or negative.

double-entry bookkeeping system is a standard used in accounting to report economic transactions. Each economic transaction is reported in two different types of accounts: debit and credit. Transactions involving UnderAssets and expense items are reported in the debit accounts while those corresponding to liability, equity and income are reported in the credit accounts.

Debit	**Credit**
Asset	Liability, Equity
Expense (cost)	Income (revenue)

The following table explains the sign convention to follow:

	Balance/Increase	**Reversal /Decrease**
Asset	Positive (+)	Negative (-)
Liabilities	Positive (+)	Negative (-)
Equity	Positive (+)	Negative (-)

Income	Positive (+)	Negative (-)
Expense	Positive (+)	Negative (-)

To report the values with the correct sign it is necessary to understand:

i) The CUBE related account (Asset, Liabilities, Equity, Income, Expense)

ii) The nature of the measure used within the cube (Balance/Increase, Reversal/Decrease)

exceptions or special cases may arise and are documented as such. Illustrative examples

Case 1:

Suppose there is a loan measured at amortized cost. The loan is unimpaired and is reported in the cube other loans (OTHR_LN) and belongs to *asset accounts*.

The measures are represented by the following variables:

VARIABLE_ID	**DESCRIPTION**	**AMOUNT**
GRSS_CRRYNG_AMNT_E_INTRST	Gross carrying amount excluding interest	+ 1000
ACCRD_INTRST	Accrued interest	+ 10
ACCMLTD_IMPRMNT	Accumulated impairment	- 15

The amounts are represented in the asset accounts, respectively by:

- A *balance* in assets of gross carrying amount excluding interest (positive value)
- A *balance* in assets of accrued interest (positive value)
- A *decrease* in assets by a loss allowance (negative value)

Suppose now that, subsequently, the loan is credit impaired, and the entity recognizes a loss of a 100 in the balance sheet. The entity shall recognize a decrease in the asset account via accumulated impairment of 100. The result for the accumulated impairment should decrease of 100 and the amount shall be:

VARIABLE_ID	**DESCRIPTION**	**AMOUNT**
ACCMLTD_IMPRMNT	Accumulated impairment	-15 + (-100) = - 115

Case 2:

Suppose the entity issues a 10 year bond measured at fair value with a par value of 1000 with annual fixed coupon rate. The interest rate is consistent with market rates for bonds with similar characteristics.

In subsequent reporting periods the following market prices for the bond are observed and the accumulated changes in fair value are calculated:

DESCRIPTION	**FV (Fair value)**	**ACCMLTD_CHNG_FV (Accumulated changes in fair value)**
Fair value	+ 1000	0
Fair value	+ 900	- 100 = 900 - 1000
Fair value	+ 1050	+ 50 = (1050 - 900) + (-100)

The amounts are represented, for each reporting period, in the liability accounts, by:

- A *balance* in liability of fair value (positive value)
    - In period 1, a decrease in liability with respect to period 0 (negative value),
    - In period 2, an increase in liability with respect to period 0 (positive value).

Case 3:

On 01/01/20X1 the entity enters a long position forward derivative contract with the following characteristics:

UNDERLYNG	**1000 shares of stock XYZ**
MATURITY DATE	31/12/20X1
STRIKE PRICE	101

Assume that the annually compound risk free rate is constant at 1% and, for the sake of simplicity; no dividend yield is payed during the period.

In the following table are represented the fair values calculated for each reporting period:

PERIOD	DATE	SPOT PRICE	FV[1] (Fair value)
0	01/01/20X1	100	0
1	31/03/20X1	120	+ 19760
2	30/06/20X1	150	+ 49510
3	30/09/20X1	90	- 10750
4	31/12/20X1	80	- 21000

Because of the nature of the derivative contract, the reported value could be either an asset or liability depending on its fair value at reporting period.

In this case a different convention is used and a positive fair value will be considered under asset accounts and a negative fair value will be considered under liabilities account.

ii). Null / not applicable

In specific cases it is necessary to indicate that a particular concept (i.e. a variable) is not applicable or does not exist. In the BIRD input layer the following convention applies:

- For enumerated variables (i.e. defined on an enumerated domain) the member "**Not applicable** (0)" is used (please note that this also applies for Boolean variables).
- For non-enumerated variables (e.g. numeric, string or date) the value **null** indicates that the concept is not applicable or does not exist in this case. Please note that the second case also includes identifiers (e.g. Protection identifier variable is null when no protection may be associated with an instrument).

In some reporting frameworks however, when a value is not provided by the reporting agent it is required that a distinction be made between a missing value (one that does not exist) and one that is not required, the latter case being driven in most cases by national derogations. The BIRD input layer did not account for such distinctions.

In the output layer, such variables that require a distinction have been associated with a new variable, having the role of an attribute, NEVS_VARIABLE and capable to indicate the reason of the variable not being available. However such variables in the output are independent of the BIRD input layer and neither are they the subject of transformations.

[1] The fair value is calculated according to the formula {Number of shares}*({Spot price} - {Strike price}*(1+{risk free})^(-{time to maturity})).

Example: AnaCredit cube related to the accounting information {[cube_structure_item:ANCRDT_ACCNTNG_C_1]}

Input layer	Output layer
Variable: CRRYNG_AMNT subdomain MNTRY_ALL_2D	Variable: CRRYNG_AMNT subdomain MNTRY_ALL_2D Variable: NEVS_CRRYNG_AMNT subdomain NEVS_CLLCTN ={ Not applicable (NEVS_0), Not required (NEVS_-5)}

iii). (Input) Parameters

In order to process the data from the input layer (in the transformations stage of the BIRD) to i. obtain the specific output requirements of a reporting framework or/and ii. to account for the architecture of the input layer whereby some cubes/variables are populated according to the bank's choice, the reporting agent has to populate in the BIRD input layer a specific cube called Parameters (PRMTRS).

The variables belonging to the input PRMTRS cube play the role of constant parameters at a certain point in time and are used as such during the transformations (the transformation scheme P_PRMTRS_1 is extracting the value reported by the reporting agent from this cube and assigns it to a constant parameter).

Example 1

In the input cube PRMTRS the reporting agent is populating the variable {[variable:IS_CRRYNG_AMNT_DRVD:Is carrying amount derived]}. Its value indicates if the BIRD derivation rule for the carrying amount should be applied (yes) or the bank is providing its own input values for the carrying amount (no). By running the transformation P_PRMTRS_1, the value inserted by the bank (yes/no) is assigned to the constant parameter CNSTNT_IS_CRRYNG_AMNT_DRVD to be used in the transformations.

Example 2

: DT_ACCNTNG_YR date considered for the accounting year]}. Its value indicates the date of the opening balance that may differ from the first day of the year. By running the transformation P_PRMTRS_1, the date inserted by the bank is assigned to the constant parameter T0 to be used in the transformations.

iv). Time

The BIRD input layer cubes The BIRD input layer cubes contain information as at a certain moment in time, as indicated by the variable *Reference date (DT_RFRNC*) present in the cubes. By applying the function GT_CB_VLD_AT_1 it is possible to extract the values from a cube at a chosen point in time (e.g. information on loans as reported at a certain time).

In order to obtain the evolution in time of the variables, it is necessary to call the function at different points in time.

Example

For instance the same loan can be represented at different points in time by following 2 steps: 1. filtering the information in the cube by choosing the instrument unique identifier that we are interested in and 2. applying the function on the filtered cube for different reference dates. The output would be depicted in the table below:

For instance the same loan can be represented at different points in time, as indicated in the following table.

Loans			
Instrument unique identifier	***Reference date***	***…***	***Carrying amount***
exampleLoan	31/01/2018	…	31
exampleLoan	28/02/2018	…	29
exampleLoan	31/03/2018	…	23
exampleLoan	30/04/2018	…	19
…	…	…	…

Table 1: a loan for different points in time

Please note that the variable *Reference date (DT_RFRNC)* acts as a dimension in the input cubes.

v). Unique identification via identifiers

The reporting agent needs to ensure the unique identification of objects via its identifier. For example an instrument needs to be uniquely identified by its {[variable:INSTRMNT_UNQ_ID:Instrument unique identifier]}.

The same holds true for credit facilities and their {[variable:CRDT_FCLTY_UNQ_ID:Credit facility unique identifier]} or protections and their {[variable:PRTCN_ID:Protection identifier]}.

Please note that the {[variable:INSTRMNT_UNQ_ID:Instrument unique identifier]} is not to be confused with the {[variable:INSTRMNT_ ID:Instrument identifier]} reported in

{[framework:ANCRDT:AnaCredit]}. The first one acts as a dimension in the instrument cubes allowing the identification of a record in these cubes while the later only acts as an observation.

1.3 BIRD scope as regards individual and consolidated reporting

The BIRD process for data generation covers different output requirements for the data that is taken into consideration when generating the reports, e.g. the AnaCredit output layer comprises individual content while FinRep may comprise individual and/or consolidated content.

In general banking group structures are in scope of the BIRD. However, the consolidation process (e.g. derivation of consolidated data) is not handled by the BIRD. Therefore consolidated figures (e.g. the carrying amount of a loan as it contributes in the consolidated balance sheet) need to be provided in the input layer together with individual figures.

The following example illustrates a group structure and related instruments and indicates what is in scope of the BIRD and what is not in scope of the BIRD.

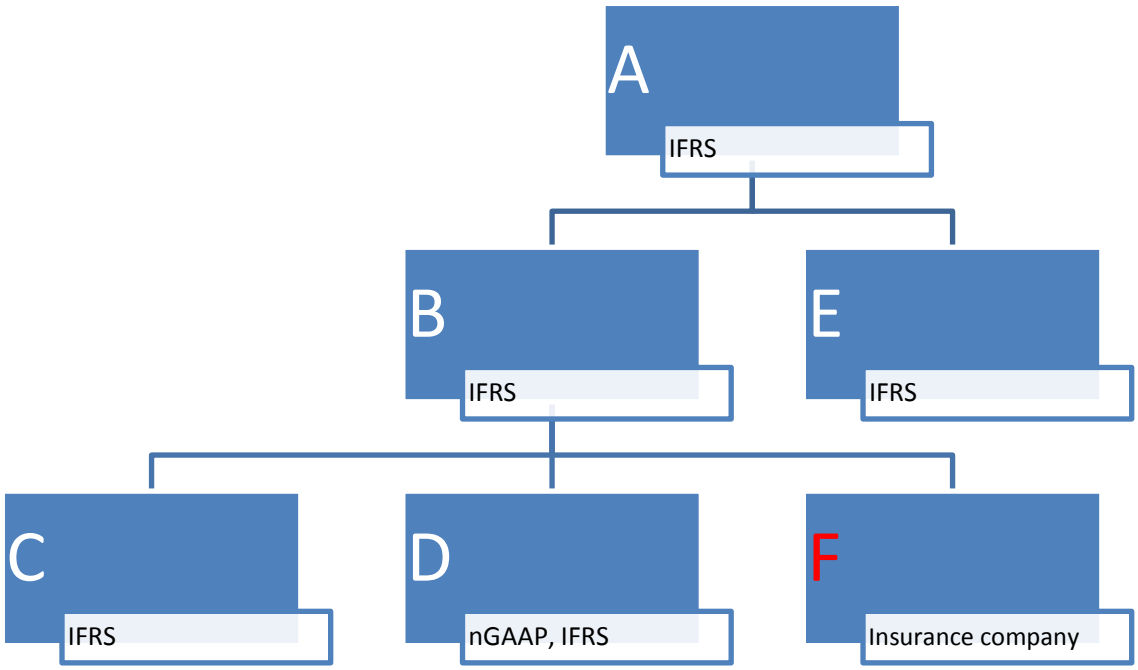


Table 2: Group structure example

Where the group (ABCDE or BCD) itself and each member of the group apply IFRS except for D who applies nGAAP.

Any composition of the group ((ABE, AB, E, C) can be described within the BIRD. A specific group ID (GRP_ID) is stored for each group structure in the Cube Group and related entities (BIRD_GRP_2).

Example of group (ABCDEF) and different perimeter (ABE)

Cube Group			
Group ID	***Legal entity ID***	***Consolidation method***	***Scope of consolidation***
ABCDEF	A	1	Prudential
ABCDEF	B	1	Prudential
ABCDEF	C	1	Prudential
ABCDEF	D	1	Prudential
ABCDEF	E	1	Prudential
ABCDEF	F	2	Accounting
ABE	A	1	Prudential
ABE	B	1	Prudential
ABE	E	1	Prudential

Perspective, objective, subjective information

Due to the fact that the BIRD covers individual and group related reporting requirements using the same input layer it is necessary to be able to perceive an instrument or an aggregate from different perspectives (e.g. individual / solo perspective or the perspective from group G).

By objective information we refer to information that is independent of the perspective taken, e.g. the currency of a loan is independent of the perception in the sense that it is the same for solo and consolidated reporting. On the other hand, subjective information is dependent on the taken perspective, e.g. the accounting classification of a loan may be different with respect to solo and consolidated reporting.

In the BIRD input layer such a loan is presented in the following way.

Loans			
Instrument unique identifier	***Perspective identifier***	***Currency***	***Accounting classification***

singleLoan	D	Euro	nGAAP: Trading financial assets
singleLoan	ABCDE	Euro	IFRS: Financial assets held for trading

Table 3: a single loan perceived from two different perspectives

Please note that only subjective information may change (e.g. Accounting classification) while objective information (e.g. Currency) is static. A detailed description of subjective information is defined in the section dedicated to auxiliary table.

In order to define the perspective identifier, the cube *Perspective information (BIRD_PRSPCTV_INF_1)* needs to be fed following the example of the group reported above.

We can manage the information reported by the company D following accounting framework of the group (IFRS) and its own accounting framework (nGAAP).

Perspective information		
Accounting framework	***Counterparty identifier***	***Perspective identifier***
nGAAP	D	D1
IFRS	D	D2

Depending on the accounting framework different perspective, such as identifiers internal, intra-group instruments / aggregates will be reported in the instrument cubes.

Because the BIRD covers individual and group related reporting requirements it is necessary to identify internal (i.e. transactions between a legal entity and its foreign branches) and intra-group transactions (i.e. transactions between legal entities that are part of the same group).

For instruments the relevant counterparty is easily identifiable and using the information about the group structure (see cube *Group (GRP)* and *Composition of the legal entity (CMPSTN_LGL_ENTTY)*) internal and intra-group instruments can be identified and if necessary omitted (e.g. in case of individual FinRep reporting internal instruments should not be considered, in case of consolidated FinRep reporting intra-group instruments should not be considered).

For cubes comprising aggregated information (e.g. *Other assets (OTHR_ASSTS)*) this approach cannot be applied. In this case the perspective on the data is relevant; consequently the value of internal, intra-group aggregates is controlled by the *Perspective identifier (PRSPCTV_ID)*.

1.4 Information regarding Accounting frameworks

Many dictionary elements and transformation rules are related to accounting standards and these may either refer to IFRS or national accounting frameworks (national Generally Accepted Accounting Principles or nGAAP). For the variable *Accounting Framework (ACCNTNG_FRMWK)*, member 2 has to be chosen for IFRS. Alternatively, for nGAAP member 1 shall be used if the nGAAP bases on Bank Account Directive (BAD)[2], or member 3 if the respective nGAAP is fully "compatible with IFRS". Depending on the reporting institution, the accounting framework for the solo (ACCNTNG_FRMWK_SL) and, if applicable, also for the group reporting (ACCNTNG_FRMWK_GRP) needs to be populated.

For nGAAP compatible with IFRS, the IFRS dictionary elements and transformation rules apply. For nGAAP based on BAD the national central banks and supervisory authorities defined in close collaboration with the banking industry which data could be reported under nGAAP. This exercise was done for the FINREP templates, hence, on an aggregated level. The results of this exercise should also be used for BIRD, if applicable on a granular level. Further information on particular nGAAP issues will be provided in the subsequent sections of the BIRD technical guideline. In general, the reporters shall choose instead of IFRS related elements the respective nGAAP attributes.

Example. If it was decided for nGAAP reporting that levels for fair value hierarchy (in the sense of IFRS 13) could not be provided, e.g. according to DE and FR nGAAP, since it does not exist, the variable FV_HRRCHY shall be populated with member "not applicable".

Independent from the accounting standard, for some institutions the financial year might deviate from the calendar year. If this is the case it is particularly important to choose the correct *reference date (DT_RFRNC)*. If an institution also produces consolidated financial information for FINREP, the reference date shall be adjusted accordingly, i.e. relating to the date to which the consolidated financial information refer. Similarly, the same applies to flow information which relate to a specific period, instead of end of period stock data.

[2] Council Directive 86/635/EEC of 8 December 1986 on the annual accounts and consolidated accounts of banks and other financial institutions (OJ L 372, 31.12.1986, p. 1).

Auxiliary table

The Auxiliary table are tables populated with specific values developed by the BIRD, which are used for BIRD transformations.

The auxiliary cubes contain data and are not stored in the BIRD DB in which only metadata are described.

Auxiliary table on sector classification

One auxiliary cube has been developed to assign the sector classification of the International Organisation. The treatment is different according to different reporting framework. The auxiliary cube can be used to derive the proper classification.

International Organisations are stored in the input cubes (International organisation code) in counterparty cubes. Starting form this codification the distinction between International Organisation (IO) and Multilateral Development Banks (MDB) that are assigned to general government and to credit institution respectively by FinRep is reported in column “classification for FinRep”.

The distinction between IO and MDB for FinRep classification has been derived first using the classification contained in CRR art 117 and 118(column BIRD classification following art 117 and 118 CRR) , then the Balance of Payment statistics - ECB classification of International organisation sector classification (column Sector Classification) and finally using the list of "Non-bank financial institutions" published by the BIS in its Guidelines for reporting the BIS international banking statistics following the Q&A EBA nr 138.

MEMBER_TECHNICAL_	EMBER	DESCRIPTION	BIRD classification following art 117 and 118 CRR	list of int org List of "Non-bank financial institutions" published by the BIS in its Guidelines for reporting the BIS international banking statistics see Q&A EBA nr 138	sector classification	Classification for IFRS
GGRPHCL_ARS_0	0	Not applicable				
GGRPHCL_ARS_1C	1C	IMF (International Monetary Fund)	IO	non bank financial institution	S122	IO
GGRPHCL_ARS_1D	1D	WTO (World Trade Organisation)			S13	IO
GGRPHCL_ARS_1E	1E	IBRD (International Bank for Reconstruction and Development)	MDB	non bank financial institution	S125	MDB
GGRPHCL_ARS_1F	1F	IDA (International Development Association)			S125	MDB
GGRPHCL_ARS_1G	1G	ICSID (International Centre for Settlement of Investment Disputes)			S126	IO
GGRPHCL_ARS_1H	1H	UNESCO (United Nations Educational, Scientific and Cultural Organisation)			S13	IO
GGRPHCL_ARS_1J	1J	FAO (Food and Agriculture Organisation)			S13	IO
GGRPHCL_ARS_1K	1K	WHO (World Health Organisation)			S13	IO
GGRPHCL_ARS_1L	1L	IFAD (International Fund for Agricultural Development)			S125	MDB
GGRPHCL_ARS_1M	1M	IFC (International Finance Corporation)	MDB	non bank financial institution	S125	MDB
GGRPHCL_ARS_1N	1N	MIGA (Multilateral Investment Guarantee Agency)	MDB		S125	MDB
GGRPHCL_ARS_1O	1O	UNICEF (United Nations Children Fund)			S13	IO
GGRPHCL_ARS_1P	1P	UNHCR (United Nations High Commissioner for Refugees)				IO
GGRPHCL_ARS_1Q	1Q	UNRWA (United Nations Relief and Works Agency for Palestine)				IO
GGRPHCL_ARS_1R	1R	IAEA (International Atomic Energy Agency)			S13	IO
GGRPHCL_ARS_1S	1S	ILO (International Labour Organisation)			S13	IO
GGRPHCL_ARS_1T	1T	ITU (International Telecommunication Union)			S13	IO
GGRPHCL_ARS_1U	1U	Rest of UN Organisations n.i.e.			S13	IO
GGRPHCL_ARS_4B	4B	EMS (European Monetary System)			S11	
GGRPHCL_ARS_4C	4C	EIB (European Investment Bank)	MDB	non financial sector	S125	MDB
GGRPHCL_ARS_4D	4D	European Commission	IO		S13	IO
GGRPHCL_ARS_4E	4E	EDF (European Development Fund)			S13	IO
GGRPHCL_ARS_4F	4F	ECB (European Central Bank)			S121	IO
GGRPHCL_ARS_4G	4G	EIF (European Investment Fund)	MDB		S125	MDB
GGRPHCL_ARS_4H	4H	European Community of Steel and Coal			S13	IO
GGRPHCL_ARS_4I	4I	Neighbourhood Investment Facility			S13	IO
GGRPHCL_ARS_4J1	4J1	European Parliament	IO		S13	IO
GGRPHCL_ARS_4J2	4J2	Council of the European Union	IO		S13	IO
GGRPHCL_ARS_4J3	4J3	Court of Justice	IO		S13	IO
GGRPHCL_ARS_4J4	4J4	Court of Auditors	IO		S13	IO
GGRPHCL_ARS_4J5	4J5	European Council	IO		S13	IO
GGRPHCL_ARS_4J6	4J6	Economic and Social Committee	IO		S13	IO
GGRPHCL_ARS_4J7	4J7	Committee of Regions	IO		S13	IO
GGRPHCL_ARS_4J8	4J8	Other small European Union Institutions (Ombudsman, Data Protection Supervisor etc	IO		S13	IO
GGRPHCL_ARS_4J81	4J81	Agency for the Cooperation of Energy Regulators			S13	IO
GGRPHCL_ARS_4J810	4J810	European Centre for Disease Prevention and Control			S13	IO
GGRPHCL_ARS_4J811	4J811	European Centre for the Development of Vocational Training			S13	IO
GGRPHCL_ARS_4J812	4J812	European Chemicals Agency			S13	IO
GGRPHCL_ARS_4J813	4J813	European Data Protection Supervisor			S13	IO
GGRPHCL_ARS_4J814	4J814	European Defence Agency			S13	IO
GGRPHCL_ARS_4J815	4J815	European Environment Agency			S13	IO
GGRPHCL_ARS_4J816	4J816	European External Action Service			S13	IO
GGRPHCL_ARS_4J817	4J817	European Fisheries Control Agency			S13	IO
GGRPHCL_ARS_4J818	4J818	European Food Safety Authority			S13	IO
GGRPHCL_ARS_4J819	4J819	European Foundation for the Improvement of Living and Working Conditions			S13	IO
GGRPHCL_ARS_4J82	4J82	Body of European Regulators for Electronic Communications			S13	IO
GGRPHCL_ARS_4J820	4J820	European GNSS Agency			S13	IO
GGRPHCL_ARS_4J821	4J821	European Institute for Gender Equality			S13	IO
GGRPHCL_ARS_4J822	4J822	European Institute of Innovation and Technology			S13	IO
GGRPHCL_ARS_4J823	4J823	European Maritime Safety Agency			S13	IO
GGRPHCL_ARS_4J824	4J824	European Medicines Agency			S13	IO
GGRPHCL_ARS_4J825	4J825	European Monitoring Centre for Drugs and Drug Addiction			S13	IO
GGRPHCL_ARS_4J826	4J826	European Network and Information Security Agency			S13	IO
GGRPHCL_ARS_4J827	4J827	European Ombudsman			S13	IO
GGRPHCL_ARS_4J828	4J828	European Personnel Selection Office			S13	IO
GGRPHCL_ARS_4J829	4J829	European Police College			S13	IO
GGRPHCL_ARS_4J83	4J83	Community Plant Variety Office			S13	IO
GGRPHCL_ARS_4J830	4J830	European Police Office			S13	IO
GGRPHCL_ARS_4J831	4J831	European Public Prosecutor's Office (in preparation)			S13	IO
GGRPHCL_ARS_4J832	4J832	European Railway Agency			S13	IO
GGRPHCL_ARS_4J833	4J833	European School of Administration			S13	IO
GGRPHCL_ARS_4J834	4J834	European Training Foundation			S13	IO
GGRPHCL_ARS_4J835	4J835	European Union Agency for Fundamental Rights			S13	IO
GGRPHCL_ARS_4J836	4J836	European Union Institute for Security Studies			S13	IO
GGRPHCL_ARS_4J837	4J837	European Union Intellectual Property Office			S13	IO
GGRPHCL_ARS_4J838	4J838	European Union Satellite Centre			S13	IO
GGRPHCL_ARS_4J839	4J839	Publications Office of the European Union			S13	IO
GGRPHCL_ARS_4J84	4J84	Computer Emergency Response Team			S13	IO
GGRPHCL_ARS_4J840	4J840	The European Union's Judicial Cooperation Unit			S13	IO
GGRPHCL_ARS_4J841	4J841	Translation Centre for the Bodies of the European Union			S13	IO
GGRPHCL_ARS_4J85	4J85	European Agency for Safety and Health at Work			S13	IO
GGRPHCL_ARS_4J86	4J86	European Agency for the Management of Operational Cooperation at the External Borders			S13	IO
GGRPHCL_ARS_4J87	4J87	European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice			S13	IO
GGRPHCL_ARS_4J88	4J88	European Asylum Support Office			S13	IO
GGRPHCL_ARS_4J89	4J89	European Aviation Safety Agency			S13	IO
GGRPHCL_ARS_4M	4M	SRB (Single Resolution Board)			S13	IO
GGRPHCL_ARS_4R	4R	EU-Africa Infrastructure Trust Fund			S13	IO
GGRPHCL_ARS_4S	4S	ESM (European Stability Mechanism)	IO	non bank financial institution	S125	IO
GGRPHCL_ARS_4T	4T	Joint Committee of the European Supervisory Authorities			S126	IO
GGRPHCL_ARS_4T1	4T1	EBA (European Banking Authority)			S126	IO
GGRPHCL_ARS_4T2	4T2	ESMA (European Securities and Markets Authority)			S126	IO
GGRPHCL_ARS_4T3	4T3	EIOPA (European Insurance and Occupational Pensions Authority)			S126	IO
GGRPHCL_ARS_4U	4U	EURATOM			S13	IO
GGRPHCL_ARS_4V	4V	FEMIP (Facility for Euro-Mediterranean Investment and Partnership)			S125	MDB
GGRPHCL_ARS_5B	5B	BIS (Bank for International Settlements)	IO		S121	IO
GGRPHCL_ARS_5C	5C	IADB (Inter-American Development Bank)	MDB	non bank financial institution	S125	MDB
GGRPHCL_ARS_5D	5D	AfDB (African Development Bank)	MDB	non bank financial institution	S125	MDB
GGRPHCL_ARS_5E	5E	AsDB (Asian Development Bank)	MDB	non bank financial institution	S125	MDB
GGRPHCL_ARS_5F	5F	EBRD (European Bank for Reconstruction and Development)	MDB	non bank financial institution	S125	MDB
GGRPHCL_ARS_5G	5G	IIC (Inter-American Investment Corporation)	MDB		S125	MDB
GGRPHCL_ARS_5H	5H	NIB (Nordic Investment Bank)	MDB	non bank financial institution	S125	MDB
GGRPHCL_ARS_5I	5I	ECCB (Eastern Caribbean Central Bank)			S121	IO
GGRPHCL_ARS_5J	5J	IBEC (International Bank for Economic Co-operation)			S125	MDB
GGRPHCL_ARS_5K	5K	IIB (International Investment Bank)			S125	MDB
GGRPHCL_ARS_5L	5L	CDB (Caribbean Development Bank)	MDB		S125	MDB
GGRPHCL_ARS_5M	5M	AMF (Arab Monetary Fund)			S125	MDB
GGRPHCL_ARS_5N	5N	BADEA (Banque arabe pour le developpement economique en Afrique)			S125	MDB
GGRPHCL_ARS_5O	5O	BCEAO (Banque Centrale des Etats de l`Afrique de l`Ouest)			S121	IO
GGRPHCL_ARS_5P	5P	CASDB (Central African States Development Bank)			S125	MDB
GGRPHCL_ARS_5Q	5Q	African Development Fund			S125	MDB
GGRPHCL_ARS_5R	5R	Asian Development Fund			S125	MDB
GGRPHCL_ARS_5S	5S	Fonds special unifie de developpement			S125	MDB
GGRPHCL_ARS_5T	5T	CABEI (Central American Bank for Economic Integration)	MDB		S122	MDB
GGRPHCL_ARS_5U	5U	ADC (Andean Development Corporation)	MDB		S122	MDB
GGRPHCL_ARS_5W	5W	BEAC (Banque des Etats de l`Afrique Centrale)			S121	IO
GGRPHCL_ARS_5Z1	5Z1	Africa Finance Corporation			S125	MDB
GGRPHCL_ARS_5Z10	5Z10	International Civil Aviation Organization			S13	IO
GGRPHCL_ARS_5Z11	5Z11	International Cocoa Organization			S13	IO
GGRPHCL_ARS_5Z12	5Z12	International Coffee Organization			S13	IO
GGRPHCL_ARS_5Z13	5Z13	International Copper Study Group			S13	IO
GGRPHCL_ARS_5Z14	5Z14	International Cotton Advisory Committee			S13	IO
GGRPHCL_ARS_5Z15	5Z15	International Grains Council			S13	IO
GGRPHCL_ARS_5Z16	5Z16	International Jute Study Group			S13	IO
GGRPHCL_ARS_5Z17	5Z17	International Lead and Zinc Study Group			S13	IO
GGRPHCL_ARS_5Z18	5Z18	International Maritime Organization			S13	IO
GGRPHCL_ARS_5Z19	5Z19	International Maritime Satellite Organization			S13	IO
GGRPHCL_ARS_5Z2	5Z2	African Development Bank Group			S125	MDB
GGRPHCL_ARS_5Z20	5Z20	International Olive Oil Council			S13	IO
GGRPHCL_ARS_5Z21	5Z21	International Rubber Study Group			S13	IO
GGRPHCL_ARS_5Z22	5Z22	International Sugar Organization			S13	IO
GGRPHCL_ARS_5Z23	5Z23	Latin American and the Caribbean Economic System			S13	IO
GGRPHCL_ARS_5Z24	5Z24	Latin American Energy Organization			S13	IO
GGRPHCL_ARS_5Z25	5Z25	Latin American Integration Association			S13	IO
GGRPHCL_ARS_5Z26	5Z26	League of Arab States			S13	IO
GGRPHCL_ARS_5Z27	5Z27	Organisation of Eastern Caribbean States			S13	IO
GGRPHCL_ARS_5Z28	5Z28	Organization of American States			S13	IO
GGRPHCL_ARS_5Z29	5Z29	Organization of Arab Petroleum Exporting Countries			S13	IO
GGRPHCL_ARS_5z3	5z3	Arab Fund for Economic and Social Development			S125	MDB
GGRPHCL_ARS_5Z30	5Z30	Organization of Central American States			S13	IO
GGRPHCL_ARS_5Z31	5Z31	Organization of the Petroleum Exporting Countries			S13	IO
GGRPHCL_ARS_5Z33	5Z33	South Asian Association for Regional Cooperation			S13	IO
GGRPHCL_ARS_5Z34	5Z34	United Nations Conference on Trade and Development			S13	IO
GGRPHCL_ARS_5Z35	5Z35	West African Economic Community			S13	IO
GGRPHCL_ARS_5Z36	5Z36	West African Health Organisation			S13	IO
GGRPHCL_ARS_5Z37	5Z37	West African Monetary Agency			S13	IO
GGRPHCL_ARS_5Z38	5Z38	West African Monetary Institute			S13	IO
GGRPHCL_ARS_5Z39	5Z39	World Council of Churches			S15	IO
GGRPHCL_ARS_5Z4	5Z4	Asian Clearing Union			S125	MDB
GGRPHCL_ARS_5Z40	5Z40	World Intellectual Property Organization			S13	IO
GGRPHCL_ARS_5Z41	5Z41	World Meteorological Organization			S13	IO
GGRPHCL_ARS_5Z42	5Z42	World Tourism Organization			S13	IO
GGRPHCL_ARS_5Z5	5Z5	Colombo Plan			S13	IO
GGRPHCL_ARS_5Z6	5Z6	Economic Community of West African States			S13	IO
GGRPHCL_ARS_5Z7	5Z7	European Free Trade Association			S13	IO
GGRPHCL_ARS_5Z8	5Z8	Fusion for Energy			S13	IO
GGRPHCL_ARS_5Z9	5Z9	Intergovernmental Council of Copper Exporting Countries			S13	IO
GGRPHCL_ARS_6A1	6A1	African Union			S13	IO
GGRPHCL_ARS_6A2	6A2	Association of Southeast Asian Nations			S13	IO
GGRPHCL_ARS_6A3	6A3	Caribbean Community and Common Market			S13	IO
GGRPHCL_ARS_6A4	6A4	Central American Common Market			S13	IO
GGRPHCL_ARS_6A5	6A5	East African Development Bank			S125	MDB
GGRPHCL_ARS_6A6	6A6	ECOWAS Bank for Investment and Development			S125	MDB
GGRPHCL_ARS_6A7	6A7	Latin American Association of Development Financing Institutions			S126	IO
GGRPHCL_ARS_6A8	6A8	OPEC Fund for International Development			S125	MDB
GGRPHCL_ARS_5Z	5Z	Other International Financial Organisations n.i.e.				IO
GGRPHCL_ARS_6B	6B	NATO (North Atlantic Treaty Organisation)			S13	IO
GGRPHCL_ARS_6C	6C	Council of Europe			S13	IO
GGRPHCL_ARS_6D	6D	ICRC (International Committee of the Red Cross)			S13	IO
GGRPHCL_ARS_6E	6E	ESA (European Space Agency)			S13	IO
GGRPHCL_ARS_6F	6F	EPO (European Patent Office)			S13	IO
GGRPHCL_ARS_6G	6G	EUROCONTROL (European Organisation for the Safety of Air Navigation)			S13	IO
GGRPHCL_ARS_6H	6H	EUTELSAT (European Telecommunications Satellite Organisation)				IO
GGRPHCL_ARS_6I	6I	EMBL (European Molecular Biology Laboratory)			S13	IO
GGRPHCL_ARS_6J	6J	INTELSAT (International Telecommunications Satellite Organisation)				IO
GGRPHCL_ARS_6K	6K	EBU/UER (European Broadcasting Union/Union europeenne de radio-television)			S13	IO
GGRPHCL_ARS_6L	6L	EUMETSAT (European Organisation for the Exploitation of Meteorological Satellites)			S13	IO
GGRPHCL_ARS_6M	6M	ESO (European Southern Observatory)			S13	IO
GGRPHCL_ARS_6N	6N	ECMWF (European Centre for Medium-Range Weather Forecasts)			S13	IO
GGRPHCL_ARS_6O	6O	OECD (Organisation for Economic Co-operation and Development)			S13	IO
GGRPHCL_ARS_6P	6P	CERN (European Organisation for Nuclear Research)			S13	IO
GGRPHCL_ARS_6Q	6Q	IOM (International Organisation for Migration)			S13	IO
GGRPHCL_ARS_6Z	6Z	Other International Non-Financial Organisations n.i.e.				IO
GGRPHCL_ARS_7A	7A	WAEMU (West African Economic and Monetary Union)			S13	IO
GGRPHCL_ARS_7B	7B	IDB (Islamic Development Bank)	MDB		S125	MDB
GGRPHCL_ARS_7C	7C	EDB (Eurasian Development Bank)			S125	MDB
GGRPHCL_ARS_7D	7D	Paris Club Creditor Institutions			S13	IO
GGRPHCL_ARS_7E	7E	CEB (Council of Europe Development Bank)	MDB		S125	MDB
GGRPHCL_ARS_7F	7F	International Union of Credit and Investment Insurers			S126	IO
GGRPHCL_ARS_7G	7G	Black Sea Trade and Development Banks	MDB		S125	MDB
GGRPHCL_ARS_7H	7H	AFREXIMBANK (African Export-Import Bank)			S122	MDB
GGRPHCL_ARS_7I	7I	BLADEX (Banco Latino Americano De Comercio Exterior)			S122	MDB
GGRPHCL_ARS_7J	7J	FLAR (Fondo Latino Americano de Reservas)			S122	MDB
GGRPHCL_ARS_7K	7K	Fonds Belgo-Congolais d`Amortissement et de Gestion			S13	IO
GGRPHCL_ARS_7L	7L	IFFIm (International finance Facility for Immunisation)	MDB		S13	MDB
GGRPHCL_ARS_7M	7M	EUROFIMA (European Company for the Financing of Railroad Rolling Stock)			S125	MDB

Auxiliary table on subjective information

The following table provides an overview on all subjective variables and the reasoning why the variable may have different values (green columns).

IS SUBJECTIV	CHANGE BECAUSE OF ACCOUNTING STANDARI	CHANGE BECAUSE SCOPE OF CONSOLIDATION	VARIABLE_ID	NAME
Y	Y	Y	ACCMLTD_IMPRMNT	Accumulated impairment
Y	Y	Y	ACCMLTD_WRTFFS	Accumulated write-offs
Y	Y	Y	ACCNTNG_CLSSFCTN	Accounting classification
Y	N	Y	ACCRD_INTRST	Accrued interest (accounting)
N	N	N	ANNLSD_AGRD_RT	Interest rate
N	N	N	APPRCH_CRDT_QLTY_STTS	Assessment approach for credit quality status
Y	N	Y	ARRRS	Arrears for the instrument
N	N	N	CMLTV_RCVRS_SNC_DFLT	Cumulative recoveries since default
N	N	N	CMMTMNT_INCPTN	Commitment amount at inception
N	N	N	CNTRCT_ID	Contract identifier
Y	Y	N	CRDT_QLTY_STTS	Credit quality status
N	N	N	CRRNCY_DNMNTN	Currency denomination of instruments
Y	Y	Y	CRRYNG_AMNT	Carrying amount
N	N	N	DT_DFLT_STTS	Date of default status
N	N	N	DT_END_INTRST_ONLY	End date of the interest-only period
N	N	N	DT_FRBRNC_STTS	Date of forbearance and renegotiation status
N	N	N	DT_INCPTN	Inception date
N	N	N	DT_LGL_FNL_MTRTY	Legal final maturity date
N	N	N	DT_NXT_INTRST_RT_RST	Next interest rate reset date
N	N	N	DT_PRFRMNG_STTS	Date of the performing status of the instrument
N	N	N	INSTRMNT_UNQ_ID	Instrument unique identifier
N	N	N	INTRST_RT_CP	Interest rate cap
N	N	N	INTRST_RT_FLR	Interest rate floor
N	N	N	INTRST_RT_RST_FRQNCY	Interest rate reset frequency
N	N	N	INTRST_RT_SPRD	Interest rate spread / margin
N	N	N	IS_DBT_FNNCNG	Is debt financing
N	N	N	IS_RTL_EXPSR	Is retail exposure
N	N	N	IS_SRVCD_OBSRVD_AGNT	Is serviced by the observed agent
N	N	N	OBSRVD_AGNT_INTRNL_ID	Observed agent internal identifier
Y	Y	Y	OFF_BLNC_SHT_AMNT	Off-balance sheet amount
Y	N	Y	OTSTNDNG_NMNL_AMNT	Outstanding nominal amount
N	N	N	PRCNTG_TRNSFRRD	Percentage transferred
Y	Y	Y	PRDNTL_PRTFL	Prudential portfolio
N	N	N	PRJCT_FNNC_LN	Project finance loan
N	N	N	PRPS	Purpose
Y	Y	Y	PRVSNS_OFF_BLNC_SHT	Provisions associated with off-balance sheet exposures
N	N	N	PYMNT_FRQNCY	Payment frequency
N	N	N	RCRS	Exposure with recourse
N	N	N	RFRNC_RT	Reference rate
N	N	N	RLTNSHP_SCRTSTN_CRDT_TRNSFR	Relationship with securitisation or credit transfer
N	N	N	SBRDNTD_DBT	Subordinated debt
N	N	N	SCRTSTN_TRNSFR_ID	Securitisation/transfer identifier
N	N	N	SRC_ENCMBRNC	Source of encumbrance
N	N	N	CMPNNT_ID	Component identifier
N	N	N	LGL_ENTTY_ID	Legal entity ID
N	N	N	TYP_CMPNNT	Type of component
Y	Y	N	ACCNTNG_FRMWRK_SL	Accounting framework for solo reporting
N	N	N	ANNL_TRNVR	Annual turnover
Y	N	Y	APPRCH_PRDNTL_PRPSS	Approach for prudential purposes
N	N	N	BLNC_SHT_TTL	Balance sheet total
N	N	N	CHRCTRSTCS_CRDT_RSK	Characteristics for credit risk
N	N	N	CNTRL_PBLC_BDS	Control by public bodies
N	N	N	CNTRPRTY_ID	Counterparty identifier
N	N	N	CNTRY	Country of residence
N	N	N	CTY	City
N	N	N	DT_ENTRPRS_SZ	Date of enterprise size
N	N	N	DT_INTTN_LGL_PRCDNGS	Date of initiation of legal proceedings
N	N	N	DT_STTS	Entity status date
N	N	N	ECNMC_ACTVTY	Economic activity
N	N	N	ENTRPRS_SZ_CHC	Enterprise size choice
N	N	N	ENTRPRS_SZ_INPT	Enterprise size (input)
N	N	N	EXCPTN_MRG_ACQSTN	Exception due to merge or acquisition
N	N	N	HD_OFFC_UNDRT_ID	Head office undertaking identifier (identifier type: RIAD internal identifier)
N	N	N	IMMDT_PRNT_UNDRT_ID	Immediate parent undertaking identifier (identifier type: RIAD internal identifier)
N	N	N	INSTTTNL_SCTR	Institutional sector
N	N	N	INSTTTNL_SCTR_CNTRL	Institutional sector control
N	N	N	INTRNTNL_ORGNSTN	International organisations
N	N	N	IS_CNTRL_GVRNMNT_TRTD_LG	Is regional government or local authority treated as central government
N	N	N	IS_CNTRL_GVRNMNT_TRTD_PS	Is public sector entity treated as central government
N	N	N	IS_LCL_GVRNMNT_TRTD_PS	Is public sector entity treated as regional government or local authority
N	N	N	IS_PLLNG_EFFCT	Is pulling effect
N	N	N	IS_SM_PRTCTN_SCHM	Is same institutional protection scheme
N	N	N	LEI	LEI code
N	N	N	LGL_FRM	Legal form
N	N	N	LGL_PRCDNG_STTS	Legal proceeding status
N	N	N	NM_ENTTY	Name
N	N	N	NMBR_EMPLYS	Number of employees
N	N	N	NTNL_ID	National identifier
N	N	N	PSTL_CD	Postal code
N	N	N	STRT	Street
N	N	N	STTS	Observation status
N	N	N	TRRTRL_UNT	Territorial unit
N	N	N	TYP_ENTRPRS	Type of enterprise
N	N	N	ULTMT_PRNT_UNDRT_ID	Ultimate parent undertaking identifier (identifier type: RIAD internal identifier)
N	N	N	CNTRPRTY_EXTRNL_ID	Counterparty external identifier
N	N	N	TYP_CNTRPRTY_EXTRNL_ID	Type of counterparty external identifier
N	N	N	OBSRVD_AGNT_ID	Observed agent identifier (identifier type: RIAD internal identifier)
Y	N	Y	PD	Probability of default
Y	Y	Y	PRSPCTV	Identify the type of perspective adopted for the evaluation of the b/s and prudential items

			PRSPCTV	prudential items
N	N	N	CRRNCY	unit
N	N	N	EXTRNL_CRDT_ASSSSMNT	External credit assessment
N	N	N	IS_MMBR_STT	Is Member State
Y	Y	Y	ACCMLTD_CHNGS_FV_CR	Accumulated changes in fair value due to credit risk
N	N	N	DT_PST_D	Date of past due
N	N	N	DT_STTLMNT	Settlement date
N	N	N	FDCRY	Fiduciary instrument
N	N	N	FRBRNC_STTS	Forbearance and renegotiation status
Y	Y	Y	FV	Fair value
Y	Y	Y	FV_CHNG_CR_BFR_PRCHS	Fair value changes due to changes in credit risk before purchase
Y	Y	Y	FV_CHNG_HDG_ACCNTNG	Fair value changes due to hedge accounting
Y	Y	Y	GRSS_CRRYNG_AMNT_E_INTRST	Gross carrying amount excluding accrued interest
Y		Y	IMPRMNT_ASSSSMNT_MTHD	Impairment assessment method
Y	Y	Y	IMPRMNT_STTS	Impairment status
N	N	N	INSTRMNT_ID	Instrument identifier
N	N	N	TYP_AMRTSTN	Type of amortisation
N	N	N	TYP_INTRST_RT	Type of interest rate
N	N	N	CRDT_FCLTY_UNQ_ID	Credit facility unique identifier
Y	N	Y	GRNTD_AMNT	Granted amount
N	N	N	IS_RVCBL	Is revocable
N	N	N	RPYMNT_RGHTS	Repayment rights
N	N	N	SYNDCTD_CNTRCT_ID	Syndicated contract identifier
N	N	N	TYP_FCLTY	Type of facility
N	N	N	TYP_INSTRMNT	Type of instrument
N	N	N	INSTRMNT_CB	Instrument cube
N	N	N	TYP_TRNSCTN	Type of transaction
N	N	N	ENTRPRS_SZ_CLCLTD	Enterprise size (calculated)
N	N	N	ENTRPRS_SZ_PRLMNRY	Enterprise size (preliminary)
N	N	N	CRDT_QLTY_STP	Credit quality step
N	N	N	ECAI_ECA	ECAI/ECA
N	N	N	IS_SHRT_TRM_CRDT_ASSSSMNT	Is short-term credit assessment
N	N	N	CSH_RSRV_AMNT	Cash reserve amount
N	N	N	DT_MTRTY_CSH_RSRV	Maturity date of the cash reserve
N	N	N	DT_ORGNL_CSH_RSRV_AMNT	Date of original cash reserve amount
N	N	N	GNRT_CSH_RSRV	Generate cash reserve
N	N	N	IS_CRDT_LN_OTHR_RV_CRDT	Is credit line other than revolving credit
N	N	N	IS_RVLVNG_LN	Is revolving loan
Y	Y	Y	ORGNL_CSH_RSRV_AMNT	Original cash reserve amount
Y	Y	N	CNSLDTN_SCP	Scope of consolidation
N	N	N	GRP_ID	Group ID
N	N	N	GRP_TYP	Type of group
Y	Y	Y	PRCNTG_CNSLDTN	Percentage of consolidation
Y	N	Y	TYP_PRDTL_CNSLDTN	Type of prudential consolidation
N	N	N	GRP_INTRNL_ID	Group internal identifier
N	N	N	CNNCTD_FCTRNG_ID	Connected factoring operation identifier
N	N	N	PRTCTN_ALLCTD_VL	Protection allocated value
N	N	N	PRTCTN_ID	Protection identifier
N	N	N	THRD_PRTY_PRRTY_CLMS	Third party priority claims against the protection
N	N	N	JNT_CNTRPRTY_CMPNNT	Joint counterparty component
N	N	N	JNT_CNTRPRTY_PRCNTG	Joint counterparty percentage
N	N	N	LNKD_ENTRPRS_ID	Linked enterprise identifier
N	N	N	DT_MTRTY_PRTCTN	Maturity date of the protection
N	N	N	DT_ORGNL_PRTCTN_VL	Date of original protection value
N	N	N	DT_PRTCTN_VLTN	Protection valuation date
Y	N	Y	ORGNL_PRTCTN_VL	Original protection value
Y	N	Y	PRTCTN_VL	Protection value
Y	N	Y	PRTCTN_VLTN_APPRCH	Protection valuation approach
N	N	N	TYP_PRTCTN	Type of protection
N	N	N	TYP_PRTCTN_VL	Type of protection value
N	N	N	SBTYP_PRTCTN	Subtype of the protection
Y		Y	EXPSR_CLSS	Exposure class
Y		Y	EXPSR_VL	Exposure Value
Y	N	Y	IS_EQTY_250_RSK_WGHT	Is equity with 250% risk weight
Y	N	Y	IS_EQTY_HLD_370_RSK_WGHT	Is equity holding with 370% risk weight
Y	N	Y	IS_QLFY_HLD_1250_RSK_WGHT	Is qualifying holding with 1250% risk
N	N	N	IS_SHRT_PSTN	Is short position
Y	N	Y	LGD_DWNTRNS	Loss given default (LGD) in downturns
Y	N	Y	LGD_NRML	Loss given default (LGD) in normal economic times
N	N	N	MRKT_VL	Position at market value in Euro
N	N	N	NMNL_VL	Position at Nominal Value in EUR
N	N	N	ORGNL_SCRTSTN_ID	Original securitisation identifier
N	N	N	OWND_SCRTY_ID	Owned Security identifier
N	N	N	OWNR_INTRNL_ID	Owner internal identifier
Y	N	Y	RSK_WGHT	Risk-weight
N	N	N	SCRTY_ID	Identifier value
Y	N	Y	SPCFC_RSK_WGHT	Specific risk weight
N	N	N	ACCNTNG_FRMWRK_CNS	Accounting Framework for Cons Reporting
N	N	N	ACCNTNG_RL_WTN_GRP	Accounting rules within the group
N	N	N	APPRCH_JNT_LBLTS	Approach for joint liabilities
N	N	N	DRGTN_SMLL_TRDNG_BK_BSNSS	Derogation for small trading book business
N	N	N	DT_RFRNC	Reference date
N	N	N	FRM_RFRNC	Frame of reference
N	N	N	INSTTTN_ID	Institution identifier
Y	Y	Y	IS_CRRYNG_AMNT_DRVD	Is carrying amount derived
Y	Y	Y	IS_EXPSR_CLSS_DRVD	Is exposure class derived
N	N	N	IS_SBJCT_CPTL_RQRMNTS	Is subject to capital requirements
Y	N	Y	PRCNTG_INTRST_CPTL_VTNG_RGHTS	Percentage interest in the capital or voting rights
N	N	N	PRTNR_ENTRPRS_ID	Partner enterprise identifier
N	N	N	CLLTRL_LCTN	Collateral geographical location
N	N	N	DT_ISS	Issue date
N	N	N	DT_MTRTY	Maturity date
N	N	N	DT_SCRTY_STTS	Security status date
N	N	N	GRNTR_ID	Guarantor ID
N	N	N	IS_CVRD_BND	Is covered bond
N	N	N	IS_LSTD	Listed
N	N	N	IS_PRTCLR_HGH_RSK	Is particular high risk
N	N	N	ISIN	ISIN code
N	N	N	ISSR_ID	Issuer ID
N	N	N	PRMRY_ASST_CLSSFCTN	Instrument type
N	N	N	SCRTY_GRNT_LVL	Security Guarantee level
N	N	N	SCRTY_LVL	Security level
N	N	N	SCRTY_RNK_LVL	Security rank level
N	N	N	SCRTY_STTS	Status of the security, whether the instrument is active and not active
N	N	N	TYP_ASST_SCRTSTN	Type of asset provided as security
N	N	N	UNT_MSR_NV	Number of units or aggregated nominal value
N	N	N	PRTCTN_ITM_ID	Protection item identifier
N	N	N	RL_ESTT_CLLTRL_LCTN	Real estate collateral location
N	N	N	IS_RSCRTSTN	Is re-securitisation
Y	N	Y	SGNFCNT_RSK_TRNSFR	Significant risk transfer
N	N	N	TRTMNT_TRNSFRRD_ASSTS_BLNC_SHT	Treatment of securitised/transferred assets in balance sheet
N	N	N	TYP_RSK_TRNSFR	Type of risk transfer
N	N	N	CNTRPRTY_RL	Counterparty role in a transaction
N	N	N	IS_PRMRY_PRTCTN_PRVDR	Is primary protection provider
N	N	N	JNT_LBLTY	Joint liability
Y	Y	Y	JNT_LBLTY_AMNT	Joint liability amount
N	N	N	TRNSCTN_ID	Transaction identifier

2 BIRD Input Layer

The BIRD Input Layer (BIRD-IL) is an Entity Relationship Model (ERM) covering specific reporting requirements (which are represented by the BIRD Output Layer (BIRD-OL), e.g. frameworks Anacredit, Financial reporting (FINREP), Securities holdings statistics (SHS)). It is defined in a way that reflects how the data is organised in banks' internal systems such that the population with data of the BIRD-IL is as simple as possible.

The following sections complement the information provided in the dictionary and only highlight particular aspects of the model.

The aspects covered by the BIRD-IL may be categorised as follows:

- Entities (and information related to entities)
- Master data
- Financial assets / liabilities
    - Financial instruments
    - Derivatives
- Aggregates (covering non-financial assets / liabilities)
- Off-balance sheet items
- Protections (or collateral received)
- Relationships between these aspects
- Input parameters

The following sections provide additional information about how to populate the BIRD-IL. It should be considered in the context of the information provided by the dictionary.

2.1 Information related to credit facilities & instruments

Relationship between off-balance sheet items, instruments and related parties

Off-balance sheet items and instruments are related to the parties involved in the underlying contract. These parties may have different roles in such a contract (e.g. creditor, debtor, servicer of a loan) and, in general, one of the involved parties is the reporting agent (or party associated with the reporting agent, e.g. a foreign branch of the reporting agent).

The variable *observed agent internal identifier (OBSRVD_AGNT_INTRNL_ID)* in the instruments cube allows for the identification of the component of the reporting agent (e.g. the subsidiary or foreign branch) that is involved in the contract. Consequently, by filtering the observed agent internal identifier we can distinguish between the different transactions related to one specific observed agent internal identifier.

The variable *is serviced by observed agent (IS_SRVCD_OBSRVD_AGNT)* allows to identify those loans that are serviced by the observed agent. If a loan is not serviced by the observed agent and this loan fulfils the requirements to be reporting in AnaCredit the servicer of this loan needs to be registered in the cube *transactions-counterparties (TRNSCTNS_CNTPRTS).*

In case of securitized / transferred assets or fiduciary instruments specific information about the involved parties (e.g. servicer, transferee) needs to be provided in the BIRD-IL. For further information, please see the particular section of the technical guidelines.

Relationship between off-balance sheet items and instruments

In the BIRD-IL the relationship between the cube *credit facilities (CRDT_FCLTS)* and instruments is modelled using the cube *credit facilities-instruments (CRDT_FCLTS_INSTRMNTS)* allowing us to establish a many-to-many relationship between credit facilities and instruments.

For the other off-balance sheet items (i.e. *commitments given other than credit facilities (OTHR_CMMTMNTS_GVN)* and *financial guarantees given (FNNCL_GRNTS_GVN)*) this relationship is not intended. The reason is that, in case of the activation of such an

off-balance sheet item (e.g. a financial guarantee is called upon) the off-balance sheet ceases to exist and may initiate the creation of an instrument (e.g. the loan).

We would like to highlight that there may exist instruments that are not related to any credit facility. Candidates are *credit card debt (CRDT_CRD_DBT)*, *reverse repurchase loans (RVRS_RPRCHS_LNS)* but also loans whose credit facility has been revoked.

Off-balance sheet information

Off-balance sheet items given

Credit facilities

The cube *credit facilities (CRDT_FCLTS)* needs to be fed every time the reporting agent commits itself to lend or to provide other credit facilities. It must be fed independently of the existence of related instruments whenever a contract has been signed and there is a commitment of the reporting agent, being revocable or irrevocable.

If the credit facility backs an instrument, the cube *credit facilities-instruments (CRDT_FCLTS_INSTRMNTS)* needs to be fed accordingly in order to represent the relationship between the *credit facility (CRDT_FCLTY_UNQ_ID)* and the instrument.

The variable Type of *credit facility (TYP_CRDT_FCLTY)* allows a distinction between credit facilities “to lend”, “to provide acceptance facilities” (which are considered as loan commitments in FinRep (FINREP)) and “to provide guarantees” (which are considered other commitments given in FinRep); see subdomain *type of credit facility (TYP_CRDT_FCLTY)* for a detailed list of Members.

For FinRep purposes it is also required that each credit facility must be treated according to its classification. Therefore this classification needs to be provided by the reporting agent via the variable *off-balance sheet items accounting classification (OFF_BLNC_SHT_ACCNTNG_CLSSFCTN).* For a detailed list of members see subdomain *accounting classification applicable to off-balance sheet items (OFF_BLNC_SHT_ACCNTNG_CLSSFCTN)*.

Commitments given other than credit facilities

The cube *commitment given other than credit facilities (OTHR_CMMTMNTS_GVN) needs* to be fed every time the reporting agent commits itself to provide facilities other than credit facilities.

The variable *type of commitment (TYP_CMMTMNT)* allows to distinguish between *forward deposits (TYP_CMMTMNT_1)* (which are considered loan commitments in FinRep) and other commitments (which are considered *other commitments given (TYP_CMMTMNT_930)* in FinRep). For a detailed list of members see subdomain *type of commitment given (TYP_CMMTMNT_GVN).*

For FinRep purposes it is also required that each commitment given other than credit facilities must be treated according to its classification. Therefore this classification needs to be provided by the reporting agent via the variable *off-balance sheet items accounting classification (OFF_BLNC_SHT_ACCNTNG_CLSSFCTN)*. For a detailed list of members see subdomain *accounting classification applicable to off-balance sheet items (OFF_BLNC_SHT_ACCNTNG_CLSSFCTN).*

Financial guarantees given

The cube *financial guarantees given (FNNCL_GRNTS_GVN)* needs to be fed every time the reporting agent signs a contract according to which it commits itself to make specific 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 to other financial guarantees. Under IFRS these contracts shall meet the definition of financial guarantee contracts according to IFRS 9.2.1(e) and IFRS 4.A. The following items of Annex I of CRR shall be classified as 'financial guarantees':

- Guarantees having the character of credit substitute
- Credit derivatives that meet the definition of financial guarantee
- Irrevocable standby letters of credit having the character of credit

Commitments received (CMMTMNT_RCVD)

The following section comprises specific instructions for feeding commitments received in the BIRD input layer.

Loan commitments received (TYP_CMMTMNT_10) and *other commitments received (TYP_CMMTMNT_11)* have to be fed in the BIRD input layer using the cube *commitment received (CMMTMNT_RCVD).*

In some cases the commitments received are linked to instruments reported in the liability side of the asset and they need to be included in a liability template the value of the commitment directly on the instruments cube the value of the commitment directly on the instruments cube.

The variable *type of commitment (TYP_CMMTMNT)* allows a distinction between the two types of commitments.

Financial guarantees received (excluding protections associated with instruments)

The cube Financial guarantees received (excluding protections associated with instruments) covers financial guarantees received that are not associated with instruments. Examples are financial guarantees received for tranches of a Synthetic securitisation or financial guarantees received from government.

Off-balance sheet items accounting classification (OFF_BLNC_SHT_ACCNTNG_CLSSFCTN)

With allowed members:

- *Under IFRS 9 impairment (ACCNTNG_CLSSFCTN_90)*
- *Measured under IAS 37 (ACCNTNG_CLSSFCTN_911)*
- *Measured under IFRS 4 (ACCNTNG_CLSSFCTN_912)*
- *Measured at fair value through profit or loss (ACCNTNG_CLSSFCTN_92)*
- *Under nGAAP (ACCNTNG_CLSSFCTN_93)*

Loan commitments, financial guarantees and other commitments given listed in Annex I of CRR may be instruments that are in the scope of IFRS 9 where they are measured at fair value through profit or loss, or where they are subject to the impairment requirements of IFRS 9, as well as instruments that are within the scope of IAS 37 or IFRS 4 (see Annex V, Part II, paragraph 104). This variable is required in the cubes of *credit facilities (CRDT_FCLTS), commitments given other than credit facilities (OTHR_CMMTMNTS_GVN)* and *financial guarantees given (FNCL_GRNTS_GVN)* to

classify the off-balance sheet items in the proper category. Specific validation rules verify that the values provided are consistent with the type of item.

Financial instruments

Financial instrument may be classified in the as following:

- Securities held by the reporting agent[3] (Securities holdings)
- Securities issued (by the reporting agent)
- Cubes that comprise assets and liabilities
- Equity instruments (not in the form of securities)
- Loans and advances
- Deposits (liabilities)

The categories of "revolving loans" (as in *Revolving loans and overdraft (TYP_INSTRMNT_101)*) and *credit lines other than revolving credit (TYP_INSTRMNT_1002)* are identified by two specific variables, Is revolving loan (IS_RVLVNG_LN) and *is credit line other than revolving credit (IS_CRDT_LN_OTHR_RV_CRDT),* respectively.

The cubes of instruments must be normally fed as from the moment when the loan is disbursed or the money is deposited. However for some operations, such as credit card and overdraft, they have to be fed from the moment when the credit is made available to the debtor. For further information see the next sections dealing with specific instrument cube instructions.

In some situations, in order to fulfil AnaCredit requirements, the cubes have to be kept in the input layer beyond the natural life of the operations. In particular:

- Written-off instruments (see AnaCredit Manual, part I, paragraph 5.2.2.2.1). The cubes must be kept until the end of the reporting period (or longer if the client is above the threshold without considering written off amounts).
- Defaulted instruments that cease existing because of full repayment (see draft AnaCredit Manual, part II, paragraph 3.5.15.1). The cubes must be kept until the end of the reporting period.

[3] Please note that by "the reporting agent" we actually refer to "the reporting agent or one of its associated entities" that includes branches and subsidiaries subject to consolidation

Cube(s) that comprise assets & liabilities

Current accounts (including transferable deposits)

The cube *current accounts (CRRNT_ACCNT)* (including Transferable deposits) comprises assets and liabilities. Consequently, some specifics need to be considered when feeding particular input layer variables (especially the variables representing monetary values) with data.

The variable *is transferable deposit (IS_TRNSFRBL_DPST)* allows to identify transferable deposits with respect to ESA classification.

All monetary variables of this cube (e.g. *carrying amount (CRRNG_AMNT)*, *accumulated impairment (ACCMLTD_IMPRMNT))* are dependent on the value of the variable *is asset (IS_ASST).* Consequently a current account representing an asset should be treated similarly to other instruments representing assets (e.g. a record of the cube Other loans (OTHR_LNS) while a current account representing a liability should be treated similarly to other instruments representing liabilities (e.g. a record of the cube *deposits (liabilities)(DPSTS_LBLTS)*) with respect to monetary variables. Due to the fact that this cube comprises variables only applicable to assets (e.g. *accumulated impairment (ACCMLTD_IMPRMNT)),* reporting agents needs to ensure the integrity of the content of this cube (e.g. for liabilities the value of *accumulated impairment (ACCMLTD_IMPRMNT)* should be set to NULL).

Due to the fact that this cube comprises assets and liabilities concepts that apply to both sides of the balance sheet at the same time where split into two variables, e.g. Interest rate for assets and Interest rate for liabilities.

Financial assets

Factoring

Providing information for the cube *factoring (FCTRNG*) does not require special treatment. The main difference to other instrument cubes is fact that the *counterparty (CNTRPRTY_ID)* representing the debtor is dependent on the concept of Recourse (RCRS). For factoring with recourse the debtor is defined to be the factoring client while for factoring without recourse it's the ultimate debtor. Therefore the content of the cube *transactions-counterparties (TRNSCTNS_CNTRPRTS)* needs to be fed accordingly, e.g. in case of factoring with recourse, the variable *counterparty identifier (CNTRPRTY_ID)* of the cube *transactions-counterparties (TRNSCTNS_CNTPRTS)* related to the factoring

operation (via the variable *instrument unique identifier (INSTRMNT_UNQ_ID)* and *counterparty role in a transaction (CNTRPRTY_RL)* set to *debtor (CNTRPRTY_RL_1)*) needs to point to the factoring client.

In case the cash reserve (of such a factoring operation) is not considered as a protection, the cube *factoring auxiliary (FCTRNG_AXLRY)* needs to be fed with information about the cash reserve (in order to produce this protection for AnaCredit reporting requirements). If this cash reserve is already presented as a protection in the input layer (utilizing the cube *other financial protection (OTHR_FNNCL_PRTCTN)* there is no need to populate the cube *factoring auxiliary (FCTRNG_AXLRY).*

Financial leases

There is no special treatment when feeding the input with respect to the cube *Financial leases (FNNCL_LSS)* but the consideration of the leasing good as a protection. If the leasing good is considered as a protection by the reporting agent and represented in the BIRD input layer accordingly there is no need for additional information when feeding the input layer. On the contrary, if the leasing good is not considered as a protection by the reporting agent and consequently no protection (representing the leasing good) is presented in the input layer, the reporting agent needs to feed the cube *Financial leases auxiliary (FNNCL_LSS_AXLRY)* in order to provide information about the leasing good such that the leasing good may be presented as a protection for AnaCredit reporting requirements.

Credit card debt

The cube *Credit card debt (CRDT_CRD_DBT)* comprises convenient and extended credit card debt. Consequently, the variables related to the interest rate (e.g. *Interest rate (ANNLSD_AGRD_RT), Interest rate reset frequency (INTRST_RT_RST_FRQNCY))* only apply for extended credit card debt.

Financial liabilities

Deposits (liabilities)

The cube *Deposits (liabilities) (DPSTS_LBLTS)* comprises deposits with agreed maturity and deposits redeemable at notice. The distinction between those two categories is established by the variable *Is redeemable at notice (IS_RDMBL_NTC).*

Repurchase agreements

The content of the cube *Repurchase agreements (RPRCHS_AGRMNTS)* comprises liabilities of the reporting agent which origin from a repurchase agreement.

Via the cubes *Repurchase agreement-securities (RPRCHS_AGRMNTS_SCRTS)* and *Repurchase agreement-loans (RPRCHS_AGRMNTS_LNS)* the repurchase agreement can be connected to the asset(s) that were pledged in such a repurchase agreement (e.g. Securities).

Securities

Securities in the BIRD-IL are classified as follows:

- Securities held by the reporting agent (Securities holdings)
- Debt securities issued (by the reporting agent)

Securities holdings may be separated into

- Owned securities, and
- Securities borrowed

Registry table of securities (master data about securities)

The master data for securities is included in a single cube *Registry table of security (RGSTRY_TBL_SCRTS)*, where the level of granularity is the security.

It contains registry information on securities, characteristics of the securities that are stable over time. The primary key of this cube is the *Security identifier (SCRTY_ID),* by which it is possible to uniquely identify the security, also in case of security without ISIN code.

The cube is linked to the cubes *Owned securities (OWND_SCRTS)*, *Securities borrowed (SCRTS_BRRWD), Short positions (SHRT_PSTNS)* and *Securities issued (SCRTS_ISSD)* via the *Security identifier (SCRTY_ID)* variable; it is also linked with the cube *Counterparties (CNTRPRTS)* via the *Issuer identifier (ISSR_ID)* and *Guarantor identifier (GRNTR_ID)* in order to identify the issuer and possible guarantor of the security.

Owned securities

The data for securities characteristics is dependent on the reporting agent evaluation. The level of granularity is the owned security ID, an identifier that identifies each record in the owned security table.

The cube *Owned securities (OWND_SCRTS)* contains information on the securities owned by the institution. The cube describes the ownership of the securities and the characteristics of the securities that depend on the reporting agent evaluation.

Securities borrowed

The cube *Securities borrowed (SCRTS_BRRWD)* comprises securities that are borrowed, e.g. because of a securities lending transaction or as collateral received in a *Reverse repurchase agreement (RVRS_RPRCHS_LNS).*

Instruments and Fair Value Hierarchy

The International Financial Reporting Standard 13, Fair value measurement, requires a classification of assets and liabilities measured at fair value in three different levels.

According to Regulation 680/2014 Annex V all IFRS and national GAAP compatible with IFRS institutions shall report the hierarchy prescribed by IFRS 13.

Moreover, according to Annex V, if national GAAP under BAD also requires the allocation of assets measured at fair value between different levels of fair value, institutions under national GAAP shall also report this information.

In case the instruments are measured at amortized cost or at a cost-based method or in case the national GAAP based on BAD does not require allocation of assets according to different levels the variable *Fair value hierarchy (FV_HRRCHY)* shall be reported with value *Not applicable (FV_HRRCHY_0).*

However, institutions that shall report a fair value hierarchy are required, once a year, corresponding to the accounting year-end of financial information reporting, to provide an evaluation at fair value for instruments measured at a cost based method or amortized cost with the corresponding hierarchy.

Non-current assets and instruments in disposal groups classified as held for sale (IS_HFS)

The International Financial Reporting Standard 5, Non-current Assets Held for Sale and Discontinued Operations, requires identifying and measuring those assets and liabilities in disposal groups classified as held for sale.

According to Regulation 680/2014 Annex V all IFRS and national GAAP compatible with IFRS institutions shall report the "Non-current assets and disposal groups classified as held for sale" regulated by IFRS 5. In order to identify those instruments, the variable Is held for sale (IS_HFS) shall be populated with TRUE (FALSE otherwise) and measure the carrying amount according to IFRS 5.

Held for Sale (IS_HFS), subjective information

In case of intra-group sale (a non-current asset or a disposal group sold to a member of the group) the variable *Is held for sale (IS_HFS)* shall be set according to the relevant *Perspective identifier (PRSPCTV_ID).*

Suppose that entity B is selling a branch to entity A and a set of loans of the branch sold by B is in a disposal group classified as held for sale:

[D] Instrument unique identifier (INSTRMNT_UNQ_ID)	[D] Perspective identifier (PRSPCTV_ID)	Is an intra-group sale	Is held for sale (IS_HFS)
singleLoan	B	NO	TRUE
singleLoan	BCD	NO	TRUE
singleLoan	ABCDE	YES	FALSE

Table 1: A loan in a disposal group reported according to three different perspectives

Please refer to the section BIRD scope with respect to Individual- & Consolidated reporting in the General instructions page for further details about the perspective identifier and the group structure examples.

2.2 Securitisations and other credit transfers, covered bonds

Securitisations and other credit transfers, covered bonds

In the BIRD-IL, Securitisations and other credit transfers are covered by the cubes *Covered bond program (CVRD_BND_PRGRM)* and *Securitisations and other credit transfer (SCRTSTNS_OTHR_CRDT_TRNSFRS)* which comprises *Traditional securitisations (TYP_TRNSFR_1)*, *Synthetic securitisations (TYP_TRNSFR_*6) and *other credit transfers different to covered bonds (TYP_TRNSFR_3)* (according to IFRS9 / nGAAP). The variable *Type of risk transfer (TYP_RSK_TRNSFR)* allows distinguishing between these three types. The main reason for the special treatment of Covered bonds is the additional reporting requirements set by Asset encumbrance.

These cubes need to be fed when:

- The securitisation or credit transfer originates from the reporting agent and the transferred assets are recognised in its balance sheet; or
- The transferred assets are serviced by the reporting agent, both in the case the securitisation or the credit transfer originates from the institution, and in case it originates from other entities.

The following tables provide an overview about the reporting treatment for securitisations and other credit transfers.

Type of securitisation	Is tranched	Derecognition	Role in the securitisation	Reporting treatment
Traditional securitisations	FALSE			Out of scope
	TRUE	TRUE	Servicer and originator	FinRep (Table 15, Column 100)[4]
				AnaCredit, only if the creditor is not a reporting agent)
			Servicer and not originator	AnaCredit, only if the creditor is not a reporting agent)
		FALSE	In any case	AnaCredit and FinRep 15
Synthetic securitisations	FALSE			Out of scope
	TRUE	Not applicable	Originator	AnaCredit , and FinRep 9 for the protection

[4] If the bank is the servicer and the creditor of the loans is reporting to AnaCredit, the bank can choose if it feeds the loans cube or provides the aggregates amounts for FINREP

Table 2: Reporting treatment for securitisations

Generated credit risk in the past	Derecognition	Role in the transaction	Creditor reporting to AnaCredit	Reporting treatment
TRUE	FALSE	Creditor		FinRep (Table 15, Column 10) and AnaCredit
		Not creditor	TRUE	FinRep (Table 15, Column 10)
			FALSE	FinRep (Table 15, Column 10) and AnaCredit
	TRUE	Servicer	TRUE	FinRep (Table 15, Column 100) [1]
			FALSE	FinRep (Table 15, Column 100) and AnaCredit
		Not the servicer		Out of scope
FALSE	TRUE	Servicer	TRUE	Out of scope
			FALSE	AnaCredit

Table 3: Reporting treatment for other credit transfers

Securitisations and other credit transfer and involved instruments (assets, liabilities)

In the BIRD-IL a securitisation and other credit transfer links a pool of instruments (assets) with a pool of liabilities (e.g. ABS issued). The pool of instruments is represented by the following cubes:

- *Underlying pool for ABSs (UNDRLYNG_PL_ABS)*
- *Underlying pool for covered bonds (UNDRLYNG_PL_CVRD_BND)*
- *Underlying pool for other structures (UNDRLYNG_PL_OTHR)*

The main reason for having three different pools (for different types of securitisations / credit transfers) is twofold, first – as mentioned already in the previous section – because the reporting requirements are different (for covered bonds w.r.t. securitisations) and second, because it simplifies possible validations that only apply to a particular type of securitisation and / or credit transfer.

The connection between such a pool and the instruments subject to securitisation or other credit transfer is established via the following cubes:

- *Underlying pool for covered bonds-instrument (UNDRLYNG_PL_CVRD_BND_INSTRMNT)*
- *Underlying pool-instrument (UNDRLYNG_PL_INSTRMNT)*

Please note that the variables *Relationship with securitisation or credit transfer (RLTNSHP_SCRTSTN_CRDT_TRNSFR)* and *Percentage transferred (PRCNTG_TRNSFRRD)* need to be populated accordingly.

The pool of liabilities is represented by the following cubes:

- *Liability pool for covered bonds (LBLTY_PL_CVRD_BND)*
- *Liability pool for other structures (LBLTY_PL_OTHR)*

And the connection between a pool and the tranches / liabilities resulting from the securitisation or other credit transfer is established via the following cubes:

- *Liability pool for covered bonds-securities issued (LBLTY_PL_CVRD_BND_SCRTS_ISSD)*
- *Liability pool for other structures-instrument (LBLTY_PL_OTHR_INSTRMNT)*
- *Liability pool for securitisations-instrument (LBLTY_PL_SCRTSTN_INSTRMNT)*

Where the variable *Seniority of the tranche (SNRTY_TRNCH)* needs to be provided accordingly (for ABSs).

Please also note that the cubes *Underlying pool for covered bonds – forecast (UNDRLYNG_PL_CVRD_BND_FRCST)* and *Liability pool for covered bonds – forecast (LBLTY_PL_CVRD_BND_FRCST)* need to be fed in case of a covered bond program.

Specific instructions for securitisations

Significant risk transfer

In a securitisation where the financial assets are recognised for accounting purposes but de-recognised for prudential purposes (Annex V, 182) the following information needs to provided: The variable significant risk transfer in the securitisations and other asset transfers cube is “TRUE” and the variable “amount derecognised for prudential purposes” in the cube securitisations and other asset transfers needs to be filled.

This solution is sufficient for the generation of FINREP but should be reviewed for COREP.

Treatment of subordinated loans and credit facilities to the SPVs

Subordinated loan provided to the SPV in order to retain the junior tranche of a securitisation as well as credit facilities acting as liquidity support need to be registered in the underlying pool. The variable *Relationship with securitisation or credit transfer (RLTNSHP_SCRTSTN_CRDT_TRNSFR)* takes the value *Exposure to a securitisation or to a credit transfer – other than liquidity support or credit enhancement (RLNTSHP_SCRTSTN_CRDT_TRNSFR_23)* or *Exposure to a securitisation or to a credit transfer – Liquidity support (RLTNSHP_SCRTSTN_CRDT_TRNSFR_21)* respectively.

According to the AnaCredit manual (part III, 6.2.4) such loans and credit facilities should be reported, however the manual does not provide particular guidance about how to report account and prudential related characteristics.

In case a tranche in the form of a security issued in the context of a securitisation is held by the reporting agent (e.g. in order to fulfil the retention requirement), according to the SHS Guidance notes (4.3), such securities (including covered bonds and other similar asset types) are subject to SHSG reporting. Additionally the guidance specifies that the general treatment for intra-group positions applies, which implies that accounting and prudential characteristics do not apply.

Based on these reporting requirements such subordinated loans or credit facilities are not recorded in the balance sheet as asset, however they affect the amount of liabilities recognised for the securitisation. Consequently, accounting related characteristics (e.g. the *Accounting classification (ACCNTNG_CLSSFCTN)*) are not relevant and may therefore take the value *Not applicable (ACCNTNG_CLSSFCTN_0).*

Proposed Treatment in AnaCredit

Given that the accounting characteristics for such positions are not significant, and for consistency with SHS we propose that the accounting and risk related characteristics take the value Not applicable.

Securitised assets / reimbursement

In case the reporting agent (being the originator of the securitisation) may receive future payments from the reimbursement of the junior tranche (held by the reporting agent) and the securitised assets have already amortised, the reporting agent may record an *Advance (ADVNCS_NT_LNS)* to the SPV in order to capture this information. The variable Relationship with securitisation or credit transfer takes the value *Credit to the*

vehicle deriving from the reimbursement of securitised assets (RLTNSHP_SCRTNSTN_CRDT_TRNSFR_3) in such a case. An alternative treatment is to reduce the carrying amount of the associated liabilities by the expected payments from the ABSs.

Credit enhancement/liquidity support

In case the bank has a credit line with the SPV as a form of credit enhancement an expected loss in the securitised assets would result in payments to the SPV. The bank reports a provision to reflect the decline in the carrying amount of the underlying assets. Due to a withdrawal the bank reports less cash and a carrying amount of the associated liability which is lowered by the withdrawn amount.

Other forms of credit enhancement are treated the following:

- Substitution of loans in default does not result in chances for reporting purposes.

- A retained spread is treated as a reserve on the balance sheet of the SPV. The bank reports a carrying amount of the associated liabilities less the amount of the reserve.

In case the credit line is drawn for liquidity purposes the reporting of the securitisation remains unaffected. The liquidity support withdrawal has to be reported to AnaCredit, and therefore it is necessary to have a record in the relevant loan cube.

Traditional securitisation where the reporting institution is the originator and it entirely recognises securitised loans

Cubes of instruments

The bank includes the securitised assets (variable Relationship with securitisation or credit transfer = “securitised/transferred asset”) and securitisation positions (variable Relationship with securitisation or credit transfer = “exposure to a securitisation or to a credit transfer”), if any, and in every instance of them it provides the Securitisation/transfer identifier.

For securitised assets the variable Percentage transferred is fed.

The variable Sources of encumbrance is “deposits other than repurchase agreements” for securitised assets; it is “not applicable” for securitisation positions if they are entirely derecognised.

Cube of liabilities

In case of associated liabilities the banks provides the Securitisation/transfer identifier.

Cube Securitisations and other credit transfers

The features of the securitisation are provided. In particular:

- the variable Type of risk transfer is “traditional securitisation”;
- the variable Treatment of securitised/transferred assets in balance sheet is “entirely recognised”.

Cube Transactions-Counterparties

With the securitisation/transfer identifier as Transaction identifier and the Type of transaction = “Securitisation/Transfer”, the bank provides the Counterparty identifier of the following instances of the variable Counterparty role in a transaction:

- the “Originator”, which is the bank itself;
- the “Transferee”, which is the vehicle to which the assets have been transferred;
- the “Servicer”, which is the servicer of the securitisation .

Instruments serviced by the bank and the current creditor is not reporting to AnaCredit

These instruments need to be included in the respective instruments cubes.

Here link can be provided to the instructions on instruments.

Self-securitisation

Self-securitisations are not distinguished from traditional securitisations where transferred assets are entirely recognised.

The variable Sources of encumbrance is “no encumbrance” for securitised assets if the ABS are not encumbered in other transactions.

Securitisation with two vehicles

In a securitisation where securitised assets are sold to a vehicle, which in turn sells them to another vehicle that issues ABS, the following criteria must be followed to feed the cube Transactions-Counterparties:

- the second vehicle has the role of “transferee”
- the original seller has the role of “originator”.

Securitisation with resale of loans and the bank is the servicer

In a securitisation where securitised assets are sold to a financial intermediary, which in turn sells them to a vehicle that issues ABS, the following criteria must be followed to feed the cube Transactions-Counterparties:

- the vehicle has the role of “transferee”;
- the financial intermediary has the role of “originator”.

Synthetic securitisation originated by the reporting institution

Cubes of instruments

The bank includes the securitised assets (variable Relationship with securitisation or credit transfer = “securitised/transferred asset”) and securitisation positions (variable Relationship with securitisation or credit transfer = “exposure to a securitisation or to a credit transfer”), if any, and in every instance of them it provides the Securitisation/transfer identifier.

For securitised assets the variable Percentage transferred is zero.

Cube Securitisations and other credit transfers

The features of the securitisation are provided. In particular:

- the variable Type of risk transfer is “synthetic securitisation”;
- the variable Treatment of securitised/transferred assets in balance sheet is “entirely recognised”.

Cube Transactions-Counterparties

With the securitisation/transfer identifier as Transaction identifier and the Type of transaction = “Securitisation/transfer”, the bank provides its own Counterparty identifier as “originator” if it follows the definition contained in Regulation (EU) No 1075/2013. If the transfer of risk is achieved by the use of an instrument that qualifies as protection, the bank has also to provide the Counterparty identifier of the “protection provider”. In this case, information concerning the protection has to be provided in the cubes pertaining to (i) protection received, (ii) protection valuation and (iii) link between protection and instruments (see section on protection).

Specific instructions for other asset transfers

Loan transfer aimed at issuing covered bonds

Jurisdictions may have different solutions for isolating assets underlying covered bonds. If underlying asset are sold the following instructions apply:

Cubes of instruments

The bank includes the sold assets (variable Relationship with securitisation or credit transfer = “securitised/transferred asset”), and in every instance of them it provides the Securitisation/transfer identifier. The variable Percentage transferred is fed.

If the bank is financing the operation, it also has to include the loan to the vehicle for the purchase of the assets (variable Relationship with securitisation or credit transfer = “exposure to a securitisation or to a credit transfer”).

The variable Sources of encumbrance is “debt securities issued – covered bonds securities” for transferred assets; it is “not applicable” for the exposures to the credit transfer if they are entirely derecognised.

Cube of liabilities

In case of associated liabilities the banks provides the Securitisation/transfer identifier.

Cube Securitisations and other credit transfers

The features of the operation are provided. In particular:

- the variable Type of risk transfer is “other credit transfer”;
- the variable Treatment of securitised/transferred assets in balance sheet is “entirely recognised”.

At this stage, it is not needed to distinguish the case where the bank is financing from the case where another institution is financing.

Cube Transactions-Counterparties

With the securitisation/transfer identifier as Transaction identifier and the Type of transaction = “Securitisation/Transfer”, the bank provides the Counterparty identifier of the following instances of the variable Counterparty role in a transaction:

- the “Transferee”, which is the vehicle to which the assets have been transferred;
- the “Servicer”, if there is a servicer of the whole operation different from the bank itself.

2.3 Derivatives

In general:

- For a definition of derivatives under the accounting standard see IFRS 9.
- If it is not treated as derivative for accounting purposes (own use exemption and embedded derivatives closely related, IFRS 9), is not included in the derivatives cubes.
- Please note for NGAAP the elements described in this section can be different.
- At a later stage for the integration of other reporting frameworks, this treatment needs to be review.

Structured contracts

Structured contracts can comprise embedded derivatives that need to be separated from the host contract. We refer to IFRS 9. In case they need to be separated, the derivative needs to be included in the derivatives cubes. On the other hand, if the derivative is not separated from the host contract, they must not be included.

In any case, the carrying amount of the host instrument shall include the value of the embedded derivative if it is not separated. The carrying amount of the instrument can either be amortised costs or the fair value. If the carrying amount is the amortised costs, the value of the derivative is considered to be included in the amortised costs of the host contract. If the carrying amount is the fair value, the value of the derivative is considered to be included in the fair value of the host contract.

For the structured contracts including only derivatives, where the derivatives are not reported separately, the reporting agents will have to assign the single type of instrument and type of risk.

Credit derivatives that meet the definition of financial guarantee contracts

Credit derivatives that meet the definition of financial guarantees shall not be included in the derivatives cube. In the future, when CoRep will be dealt with, these credit derivatives will also be included in the derivatives cube, a proper flag as for structured contracts will be required.

Number of cubes

Based on the applicable information, and on the relationships, in the input layer, there will be the following cubes:

- *Credit derivatives (BIRD_CRDT_DRVTV*
- *Financial options (FNNCL_OPTN)*
- *Financial swaps and forwards (BIRD_OTHR_FNNCL_DRVTV)*

The level of granularity of the derivatives cube is given by the position. A position in a derivative instrument will be given by the combination of:

- For OTC derivatives (including those cleared with a CCP): Each different contract
- For exchange traded derivatives with a CCP, provided that the market and the account in the market is the same:
    - Contract (i.e. type of derivative, strike, maturity and underlying asset)
    - Prudential portfolio
    - Accounting portfolio (including hedges)

- For structured instruments: Each different derivative that can be identified in terms of type of risk and type of derivative.

Classification of derivatives

Classifications for derivatives usually consider two dimensions. The type of risk (or asset class) and the type of instrument. The type of risk is usually taking the same values (interest rate, equity, FX, commodities, credit risk), but when it comes to the type of instrument there several different solutions, that in many cases mix different aspects.

For the SDD/BIRD classification, we intend to have clearly defined values for the classification of type of risk and type of instrument. Also, we need clear classifications that are complete and disjoint, i.e. every derivative can have a value, and only one value.

The criteria for these variables are:

- Type of instrument: Describe the derivatives according to the kind of flows they generate at settlement. There are three categories: Swaps, forwards and options.
- Type of risk: Describes the type of risk to which the derivative creates an exposure.

A third variable will provide the required additional details when the types of derivative mix both components (for instance, total return swap, credit default swap, cross currency swap…). This typology is less stable than the other two, and does not need to be provided for all the instruments. Partial hierarchies can be created (for instance, all credit derivatives).

Counterparties and positions

On counterparties, the reporting agent needs to use the generic role “costumer”, because the counterparty can either be a creditor or debtor which may change during the life of the instrument. There can be situations where the derivative counterparty is unknown.

On the positions, a variable “Position in the instrument” with the values “Buyer” and “Seller” shall apply to financial options and credit derivatives.

Master netting agreements

Master netting agreements are relevant for reporting purposes in case they imply an accounting netting (FinRep), prudential netting (CoRep) or other contractual netting (Contractual netting). The accounting netting needs to be in accordance to IAS 32. The

variable Netting applicability is set “accounting netting”. The reporting agent must provide information related to the single contracts including in the netting agreement and the netting agreement itself in separate cube. The variable “is main component” indicates the position that will be used for the allocation to the respective rows in the FINREP templates (F10/11).

Master netting agreements may have a Credit Support Annex (CSA), an additional contract appended to a Master netting agreement. CSA specifies risk mitigants such as cash collateral (initial margins, variation margins) and/or securities collateral, that in general are subject to a haircut. Master netting agreement may have additional protection outside of a CSA , the information on protection of a specific master netting agreement is stored in the cube Master netting protection (BIRD_MSTR_NTTNG_PRTCTN).

Hedge accounting

For the purpose of hedge accounting the derivatives cubes has two variables:

- *Type of hedge (TYP_HDG)*
- *Type of hedged risk (TYP_HDGD_RSK)*

The type of hedge risk can be different from the type of risk of the derivative in cases like cross currency swaps.

Type of market

The variable *type of market (TYP_MRKT)* indicates whether the transaction is OTC or organized market. See the instructions in FinRep Annex V, 136: “The allocation of a transaction as ‘OTC’ or ‘Organized market’ shall be based on the nature of the market where the transaction takes place and not on whether there is a mandatory clearing obligation for that transaction. An ‘Organised market’ is a regulated market in the meaning of article 4(92) of the CRR. Therefore, where a reporting entity enters into a derivative contract in an OTC market where central clearing is compulsory, it shall classify that derivative as ‘OTC’ and not as ‘Organised market’”.

Fair value/Carrying amount

IFRS user need to provide the fair value but not the carrying amount of the derivative. For the generation of the templates the transformation rules will set the absolute fair value

equal to the carrying amount. NGAAP users should provide both the carrying amount and the fair value.

2.4 Credit quality and Protection

Legal sources

Default

Article 178 of Regulation (EU) No 575/2013 (Capital Requirements Regulation – CRR) specifies the definition of default that is used for the purpose of IRB Approach according to Chapter 3 of Title II in Part three of the CRR as well as for the Standardized Approach in line with Article 127 of the CRR. The definition specifies among others that a default shall be considered to have occurred when the obligor is either or both unlikely to pay or past due more than 90 days on any material credit obligation to the institution, the parent undertaking or any of its subsidiaries. The materiality threshold of such obligations past due is set by the competent authority and reflects a level of risk that the competent authority considers to be reasonable. In addition, competent authorities may replace the 90 days with 180 days for exposures secured by residential or SME commercial real estate in the retail class, as well as exposures to public sector entities.

Impaired

According to IFRS 9, a financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

(a) significant financial difficulty of the issuer or the borrower;

(b) a breach of contract, such as a default or past due event;

(c) the lender(s) of the borrower, for economic or contractual reasons relating to the borrower’s financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;

(d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganization;

(e) the disappearance of an active market for that financial asset because of financial difficulties; or

(f) the purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses.

According to national GAAP the definition of impaired might deviate from the IFRS approach, depending on the country.

Non-performing

Implementing Regulation (EU) No 680/2014 (Annex V, Part 2, paragraph 213) states that non-performing exposures are those that satisfy either or both of the following criteria:

(a) material exposures which are more than 90 days past-due;

(b) the debtor is assessed as unlikely to pay its credit obligations in full without realization of collateral, regardless of the existence of any past-due amount or of the number of days past due.

This categorization shall apply notwithstanding the classification of an exposure as defaulted for regulatory purposes in accordance with Article 178 of Regulation (EU) No 575/2013 or as impaired for accounting purposes. Exposures in respect of which a default is considered to have occurred in accordance with Article 178 of Regulation (EU) No 575/2013 and exposures that have been found impaired in accordance with the applicable accounting framework shall always be considered as non-performing exposures.

Exposures may be considered to have ceased being non-performing when all of the following conditions are met:

(a) the exposure meets the exit criteria applied by the reporting institution for the discontinuation of the impairment and default classification;

(b) the situation of the debtor has improved to the extent that full repayment, according to the original or when applicable the modified conditions, is likely to be made;

(c) the debtor does not have any amount past-due by more than 90 days.

An exposure shall remain classified as non-performing while these criteria are not met, even though the exposure has already met the discontinuation criteria applied by the reporting institution for the impairment and default classification.

When forbearance measures are extended to non-performing exposures, the exposures may be considered to have ceased being non-performing only when all the following additional conditions are met:

(a) the extension of forbearance does not lead to the recognition of impairment or default;

(b) one year has passed between the moment when forbearance measures were applied and the moment when exposures have been classified as non-performing (EBA Q&A 2015/2145);

(c) there is not, following the forbearance measures, any past-due amount or concerns regarding the full repayment of the exposure according to the post-forbearance conditions. The absence of concerns has to be determined after an analysis of the debtor's financial situation. Concerns may be considered as no longer existing when the debtor has paid, via its regular payments in accordance with the post-forbearance conditions, a total equal to the amount that was previously past-due (if there were past-due amounts) or that has been written-off (if there were no past-due amounts) under the forbearance measures or the debtor has otherwise demonstrated its ability to comply with the post-forbearance conditions.

Forbearance

Forborne exposures are debt contracts in respect of which forbearance measures have been extended (Annex V of Regulation 680/2014 Annex V, Part 2, paragraph 240). Forbearance measures consist of concessions towards a debtor facing or about to face difficulties in meeting its financial commitments ("financial difficulties").

A concession refers to either of the following actions:

(a) a modification of the previous terms and conditions of a contract that the debtor is considered unable to comply with due to its financial difficulties ("troubled debt") to allow for sufficient debt service ability, that would not have been granted had the debtor not been in financial difficulties;

(b) a total or partial refinancing of a troubled debt contract, that would not have been granted had the debtor not been in financial difficulties.

A concession may entail a loss for the lender.

Exposures shall be treated as forborne if a concession has been made, irrespective of whether any amount is past-due or if the classification of the exposures is impaired in accordance with the applicable accounting standards or is defaulted in accordance with Article 178 of Regulation (EU) No 575/2013.

Exposures shall not be treated as forborne when the debtor is not in financial difficulties. Nevertheless the following situations shall be treated as forbearance measures:

(a) a modified contract was classified as non-performing or would in the absence of modification be classified as non-performing;

(b) the modification made to a contract involves a total or partial cancellation by write-offs of the debt;

(c) the institution approves the use of embedded forbearance clauses for a debtor who is under non-performing status or who would be considered as non-performing without the use of these clauses;

(d) simultaneously with or close in time to the concession of additional debt by the institution, the debtor made payments of principal or interest on another contract with the institution that was non-performing or would in the absence of refinancing be classified as non-performing.

The forbearance classification shall be discontinued when all the following conditions are met:

(a) the contract is considered as performing, including if it has been reclassified from the non-performing category after an analysis of the financial condition of the debtor and it no longer met the conditions to be considered as nonperforming;

(b) a minimum 2 year probation period has passed from the date the forborne exposure was considered as performing;

(c) regular payments of more than an insignificant aggregate amount of principal or interest have been made during at least half of the probation period;

(d) none of the exposures to the debtor is more than 30 days past-due at the end of the probation period.

When the conditions are not met at the end of the probation period, the exposure shall continue to be identified as performing forborne under probation until all the conditions are met. The conditions shall be assessed on at least a quarterly basis.

A forborne exposure may be considered as performing from the date when forbearance measures were extended if either of the following conditions is met:

(a) this extension has not led the exposure to be classified as non-performing;

(b) the exposure was not under non-performing status at the date the forbearance measures were extended.

If a performing forborne contract under probation is extended additional forbearance measures or becomes more than 30 days past-due, it shall be classified as non-performing.

Credit quality and the input layer

Credit quality status

As they have relevant overlapping areas, the two definitions of “non-performing” and “default” have been managed with a single BIRD variable named Credit quality status (CRDT_QLTY_STTS), which is required both in the instruments’ cubes and in the counterparties’ cubes. Its domain allows classifying also those cases in which the definitions differ according to the Regulations backing them:

- *Performing (CRDT_QLTY_11)*
- *Default because unlikely to pay (CRDT_QLTY_19)*
- *Default because more than 90/180 days past due (CRDT_QLTY_20)*
- *Default because both unlikely to pay and more than 90/180 days past due (CRDT_QLTY_18)*
- *Non performing but not in default (CRDT_QLTY_20)*

The accounting concept of “impaired” is identified in a different way as it corresponds to the value “STAGE 3” or, for national GAAP based on BAD, “Specific allowances (GAAP)” of the variable *Impairment status (IMPRMNT_STTS).*

Such values are normally associated with one of the “defaulted” values of the variable above (*Default because unlikely to pay (CRDT_QLTY_19)*, *Default because more than 90/180 days past due (CRDT_QLTY_20)*, *Default because both unlikely to pay and more than 90/180 days past due (CRDT_QLTY_18)*) but in some particular cases it can refer to *Non performing but not in default (CRDT_QLTY_2)* circumstances.

Specific credit risk adjustments (SCRA)

The guidelines provide clarification regarding the application of each indication of unlikeliness to pay as specified in Article 178(3) of the CRR. In particular, it is necessary to provide guidance on how to apply Article 178(3)(b), which specifies that where, as a result of a significant perceived decline in the credit quality of an obligation, the institution recognizes an SCRA on any exposure of an obligor, this obligor should be classified as defaulted. In this context it has been specified that all SCRA as specified in Article 1(5)(a)

and (b) of Commission Delegated Regulation (EU) No 183/2014 on the calculation of specific and general credit risk adjustments, i.e. (a) losses recognised in the profit or loss account for instruments measured at fair value that represent credit risk impairment under the applicable accounting framework, and (b) losses as a result of current or past events affecting a significant individual exposure or exposures that are not individually significant which are individually or collectively assessed, should be considered to be a result of a significant perceived decline in the credit quality of an obligation and hence should be treated as an indication of unlikeliness to pay.

It is expected that by the time of implementation of these guidelines many institutions will already apply IFRS 9 instead of current accounting standards. Since these new rules are significantly different from the currently used IAS 39 and introduce the concept of expected credit losses, which is new in the accounting framework, the EBA considers necessary to specify the treatment of provisions under IFRS 9 – despite those rules not having entered into effect. As a general rule all exposures classified as Stage 3, i.e. exposures treated as credit-impaired under IFRS 9, should be treated as defaulted.

It should be noted that, although Stage 2 under IFRS 9 contains exposures with potentially decreased credit quality, classification to Stage 2 should not be considered an indication of default. Therefore, exposures classified as Stage 2 will in general not be considered defaulted unless there are other indications of unlikeliness to pay.

Sale of credit obligation

According to Article 178(3)(c) of the CRR a material credit-related economic loss related to the sale of credit obligations should be treated as an indication of default. Where the institution sells the credit obligations due to a decrease in their quality or the loss on that sale is otherwise related to the credit quality of the obligations, the materiality of this credit-related economic loss should be assessed (e.g. the difference between the outstanding amounts of the obligations and the agreed price). If the economic loss is higher than a certain threshold the sale of the exposure should be considered an event of default.

Distressed restructuring

According to Article 178(3)(d) of the CRR a distressed restructuring is an indication of unlikeliness to pay where this is likely to result in a diminished financial obligation caused by the material forgiveness, or postponement, of principal, interest or, where relevant fees (e.g. a comparison between the present value of expected cash flows before the changes in the terms and conditions of the contract and the present value of expected cash flows based on the new arrangement, both discounted using the original effective

interest rate). In order to be consistent with the supervisory reporting framework it has been specified that distressed restructuring should be considered to have occurred when forbearance measures have been extended towards a debtor as specified in the ITS on forbearance and non-performing exposures. Therefore, those forborne exposures where the forbearance measures are likely to result in a diminished financial obligation should be classified as defaulted.

Bankruptcy

Although the concept of bankruptcy is usually clearly specified in the national legal frameworks it is not always clear how the ‘similar order’ or ‘similar protection’ referred to in points (e) and (f) of Article 178(3) of the CRR should be understood. Therefore, typical characteristics of such concepts have been specified in the guidelines in order to allow harmonised application of this concept for the purpose of default identification. It has also been specified that all types of arrangements listed in Annex A to Regulation (EU) 2015/848 have to be treated as an order or a protection similar to bankruptcy and hence as an indication of default.

Additional indications of unlikeliness to pay

As Article 178(3) of the CRR does not provide a comprehensive list of all situations that may indicate the unlikeliness to pay of an obligor, institutions should specify those other indications of unlikeliness to pay in their internal procedures on the basis of their experience. These indications may reflect specific characteristics of different types of exposures and obligors.

Default because more than 90/180 days past due

The definition of default of an obligor specified in Article 178 see section 4 of the CRR includes, inter alia, the days past due criterion for default identification: the obligor/instrument is past due more than 90 days on any material credit obligation to the institution, the parent undertaking or any of its subsidiaries. However, in the absence of specific rules on these specific aspects of the application of the definition of default various approaches have been adopted across institutions and jurisdictions. As a consequence, until the mandatory application of the Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013 it is not possible to give more detailed instructions that could be useful for all European reporting agents. Competent authorities may also replace the 90 days with 180 days for exposures secured by residential or SME commercial real estate in the retail exposure class, as well

as exposures to public sector entities. The 180 days shall not apply for the purposes of Article 127 of Regulation (EU) No 575/2013.

Non-performing but not in default

As said before, as a general rule all exposures classified as Stage 3, i.e. exposures treated as credit-impaired under IFRS 9 (whose cubes can be identified through the value "STAGE 3" of the variable Impairment status (IMPRMNT_STTS), should be treated as defaulted. Only a few exceptions from that rule are possible, at least from a theoretical point of view (e.g. exposures where 180 days past due are used instead of 90 days on the basis of the discretion provided in Article 178(1)(b) of the CRR).

Where such conditions are met the value to be provided for such variable should be 'Non-performing but not in default'. The value can also be used for cases in which the obligor has not met the conditions to cease being non-performing while meeting the exit criteria for the discontinuation of the default classification.

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In the case of retail exposures, Article 178 (1) of Regulation (EU) No 575/2013 also states that institutions may apply the definition of default at the level of an individual credit facility rather than in relation to the total obligations of a borrower. When such option is exercised for all the retail exposures of a counterparty then the variable *Credit quality status (CRDT_QLTY_STTS)* of that counterparty is not needed and the value "Non-applicable" must be provided in the BIRD input. However please note that a special case arises if in accordance with Article 178(1) of the CRR the option to apply the definition of default at the level of an instrument is exercised only for a subset of instruments extended to a counterparty, while this option is not exercised for other instruments extended to the same counterparty. This scenario implies that default is assessed both at instrument and counterparty level. In such cases, the default status of the counterparty is subject to AnaCredit reporting.

Whenever there's a change in the credit quality status of an instrument, reporting agents have to record the *Date of default status (DT_DFLT_STTS)* and/or the *Date of performing status (DT_PRFRMNG_STTS)*. For example, if a bank classifies a retail exposure under the transaction approach out of the *Default because more than 90/180 days past due (CRDT_QLTY_20)* category back to the *Non performing but not in default (CRDT_QLTY_2)* one, it has to keep track of the date in which the reclassification has occurred *Date of default status (DT_DFLT_STTS)*. However the *Date of performing status (DT_PRFRMNG_STTS)* should not be modified because it has not changed the status of being classified as "non-performing". Changes between default status (e.g. from *Default because unlikely to pay (CRDT_QLTY_19)* to *Default because more than 90/180 days past due (CRDT_QLTY_20))* do not trigger changes in the *Date of default status*

(DT_DFLT_STTS), i.e. that date should be the date when the instrument or obligor entered or exited the default status for the last time.

For instruments performing since the origination, the inception date of the instrument must be reported as *Date of performing status (DT_PRFRMNG_STTS)*. For instruments that have been classified as not in default since the origination, the inception date of the instrument must be reported as *Date of default status (DT_DFLT_STTS).* The date refers to the latest change in the default/performing status. In case of debtor approach the *Date of performing status (DT_PRFRMNG_STTS)* of all instruments treated under such approach of the same debtor should be the date in which the outcome of the assessment of the debtor has switched from "performing" to "non-performing" and vice versa. However in case of a debtor considered "performing" for those instruments considered "non-performing" as they are impaired the date above should be the date in which the instrument has been classified as STAGE 3.

When there is a change in the credit quality status of a counterparty, reporting agents have to record the *Date of default status (DT_DFLT_STTS)*. For example, if a bank classifies a counterparty out of the *Default because more than 90/180 days past due (CRDT_QLTY_20)* category back to the NON-PERFORMING BUT NOT IN DEFAULT one, it has to keep track of the date in which the reclassification has occurred. Changes between default status (e.g. from DEFAULT *default because unlikely to pay (CRDT_QLTY_19)* to *Default because more than 90/180 days past due (CRDT_QLTY_20)* do not trigger changes in the *Date of default status (DT_DFLT_STTS)*, i.e. that date should be the date when the obligor entered or exited the default status for the last time.

The attribute, required in the cubes of counterparties, is a date defined as dd/mm/yyyy.

The date of the status at a given reporting reference date must not be later than the reporting reference date. For counterparties not defaulted since the origination, the value "Non-applicable" must be reported as *Date of the default status of the issuer (Dt_DFLT_STTS_ISSR).*

In the case of counterparties which are protection providers - for which the default status of the counterparty is subject to reporting - and which do not have any credit obligation to a given observed agent (i.e. are not debtors vis-à-vis an observed agent) and which are not classified in default in accordance with Article 178 of the CRR, the *Credit quality status (CRDT_QLTY_STTS)* of the counterparty is to be provided as *Performing (CRDT_QLTY_11)* while the *Date of defaulting status of the issuer (DT_DFLT_STTS_ISSR)* must be provided as "Not applicable".

The attributes *Date of the default status of the issuer (DT_DFLT_STTS_ISSR), Date of the default status (DT_DFLT_STTS)* and *Date of performing status (DT_PRFRMNG_STTS)*, for both cubes of instruments and counterparties, are dates defined as dd/mm/yyyy.

The date of the status at a given reporting reference date must not be later than the reporting reference date.

Assessment approach for credit quality status

The last sentence of Article 178(1) of the CRR for calculating the own funds requirement provides institutions with the option, in the case of retail exposures, to apply the definition of default laid down in points (a) and (b) of the first subparagraph at the level of an individual credit facility rather than in relation to the total obligations of a borrower.

The level of application of the default definition for retail exposures should be based on the internal risk management practices of the institution. Where institutions decide to use different levels of application of the definition of default for different types of retail exposures it may happen that some exposures of an obligor are assessed at the individual facility level while others at obligor level. This is the reason why such input variable has to be provided at the level of instruments and not of the counterparty. The Boolean domain of this variable allows us to classify each instrument according to the approach under which it is treated for credit quality (Annex V part 2 paragraph 226 of Implementing Regulation (EU) No 680/2014):

- *Debtor based (APPRCH_CRDT_QLTY_STTS_1)*
- *Transaction based (APPRCH_CRDT_QLTY_STTS_2)*

This data attribute is intended to capture all modifications of the instrument's terms and conditions, irrespective of whether or not the modifications meet the forbearance criteria as laid down in Implementing Regulation (EU) No 680/2014 (Annex V, Part 2. 241). While the *Credit quality status (CRDT_QLTY_STTS)* is a variable that can be meaningful both at counterparty level and at an instrument level, the *Status of forbearance and renegotiation (FRBRNC_STTS)* variable makes sense only at instrument level and so it is required only on the instrument cubes with the following domain:

- *Exposure with forbearance measures (FRBRNC_STTS_1)*
- *Forborne: Refinanced debt (FRBRNC_STTS_3)*
- *Forborne: instruments with modified interest rate below market conditions (FRBRNC_STTS_4)*
- *Forborne: instruments with other modified terms and conditions (FRBRNC_STTS_5)*
- *Not forborne or renegotiated (FRBRNC_STTS_8)*
- *Renegotiated instrument without forbearance measures (FRBRNC_STTS_9)*

Date of the status of forbearance and renegotiation

The data attribute *Date of forbearance and renegotiation status (DT_FRBRNC_STTS)* has to be filled in with the date on which the respective status as reported in the data attribute *Status of forbearance and renegotiation (FRBRNC_STTS)* is considered to have occurred. In particular, if an instrument is considered to be *Forborne: instruments with other modified terms and conditions (FRBRNC_STTS_5)* then the date must be reported on which the terms and conditions of the instrument were thus modified.

By contrast, if an instrument is not anymore considered to be *Forborne: instruments with other modified terms and conditions (FRBRNC_STTS_5),* then the date has to be reported on which the forbearance ceased and the instrument was considered to be *Not forborne or renegotiated (FRBRNC_STTS_8).*

If an instrument is renegotiated without forbearance measures (e.g. the interest rate is lowered purely for commercial reasons) on a date prior to the reporting reference date, t should be reported as the date of the status of forbearance and renegotiation. However, if at a later moment t + x, the instrument is once again renegotiated without forbearance measures (e.g. the credit line is increased purely for commercial reasons), t + x should be reported as the date of the status of forbearance and renegotiation at the first reporting reference date after the second renegotiation.

Moreover, instruments which have not been considered to have been forborne or otherwise renegotiated at any moment in time since they have been originated until the reporting reference date must be reported as “Not forborne or renegotiated” and the inception date of the instrument must be reported as the Variable *Date of forbearance and renegotiation status (DT_FRBRNC_STTS)* as of the reporting reference date.

The data attribute is a date defined as dd/mm/yyyy.

Specific instructions for national gaap reporters

For nGAAP based on BAD the “Specific allowances for credit risk” , ”General allowances for credit risk affecting carrying amount”, and “General allowances for banking risk affecting carrying amount” are important to give information on the credit quality. The concept is modelled with the combination of variables *Accumulated impairment for national GAAP 1 (ACCMLTD_IMPRMNT_GAAP1)* and *Accumulated impairment for national GAAP 2 (ACCMLTD_IMPRMNT_GAAP2)* vs. *Impairment status (IMPRMNT_STTS)* as shown in the subsequent table.

Illustration of the distribution of the “Specific”- and “General” allowances using the members “Accumulated impairment” and “Impairment status”.

If *Impairment status (IMPRMNT_STTS*) =21 If *Impairment status (IMPRMNT_STTS)* =26

Accumulated impairment for national GAAP 1 (ACCMLTD_IMPRMNT_GAAP1) General allowances for credit risk affecting carrying amount Specific allowances for credit risk

Accumulated impairment for national GAAP 2 (ACCMLTD_IMPRMNT_GAAP2) General allowances for banking risk affecting carrying amount Accumulated negative value adjustments on LOCOM assets - credit risk induced

Further, according to some nGAAPs instruments can be measured at the lower of cost or market (LOCOM). Under this concept instruments might be measured under a non-continuous basis ('moderate LOCOM') regardless of their actual measurement as of the reporting reference date or on a continuous basis ('strict LOCOM'). Assets measured at strict LOCOM are assets for which the applicable accounting framework either provides for the initial and subsequent measurement at LOCOM, or the initial measurement at cost and the subsequent measurement at LOCOM.

LOCOM assets are identified via Accounting classification: "Non-trading non-derivative financial assets measured at a cost-based method. LOCOM" and "Other non-trading non-derivative financial assets. LOCOM". For these instruments "Accumulated negative value adjustments on LOCOM assets - credit risk induced" may be reported using the members *Accumulated impairment for national GAAP 2 (ACCMLTD_IMPRMNT_GAAP2)* and *Impairment status (IMPRMNT_STTS)*=26 (see previous table).

2.5 General information on protection cubes

Other financial protection (BIRD_OTHR_FNNCL_PRTCTN_2)

The purpose of this cube is to represent financial protections which do not qualify as securities.

Maximum amount of guarantee that can be considered (CLLTRL_MXMM_AMNT_CNSDRD)

Where a financial guarantee received has been issued by more than one guarantor the bank has to feed the BIRD input specifying which one is the most relevant for the

mitigation of credit risk. Depending on the option chosen for the codification of joint debtors the bank has to feed the variable *Is primary protection provider (IS_PRMRY_PRTCTN_PRVDR)* in the *Transactions counterparties (TRNSCTN_CNTRPRTS)* cube.

Instruments-protections (BIRD_INSTRMNTS_PRTCTNS_2)

This entity serves to link the protection received to the instruments it is protecting *Instruments-protections (BIRD_INSTRMNTS_PRTCTNS_2).*

The cube Instruments protections provides the BIRD model with the functionality to connect instruments and protections. Therefore the dimensions of this cube are: the Instrument unique identifier *Instrument unique identifier (INSTRMNT_UNQ_ID)* and the *Protection identifier (PRTCTN_ID)*, as one instrument can be secured by multiple protections, while one protection can be pledged to multiple instruments the relation between instruments and protections is of the type many-to-many. Additionally, this cube comprises variables which are connected to the instrument as well as the protection. For example the Protection allocated value *Protection allocated value (PRTCTN_ALLCTD_VL)* and the *Maximum amount of guarantee that can be considered (CLLTRL_MXMM_AMNT_CNSDRD).*

Protection allocated Value (PRTCTN_ALLCTD_VL)

For banks this piece of information is a result of the allocation of collateral and guarantees on the instruments according to AnaCredit criteria. At this stage, the BIRD does not manage this allocation. Consequently, the protection allocated value is an input variable Protection allocated value *Protection allocated Value (PRTCTN_ALLCTD_VL*) which is required in the cube *Instruments-protections (INSTRMNTS_PRTCTNS).*

Maximum amount of the collateral/guarantee that can be considered (CLLTRL_MXMM_AMNT_GRNT_CNSDRD)

For banks this piece of information is a result of the allocation of collateral and guarantees on the instruments according to FinRep criteria. It is the maximum amount of the collateral or guarantee that can be considered as credit protection for the instruments. The sum of the amounts of the financial guarantee and/or collateral for a specific instrument shall not exceed the carrying amount or the nominal amount of the instrument. For instruments that have simultaneously more than one type of collateral or guarantee, the amount of the *Maximum amount of the collateral/guarantee that can be considered (CLLTRL_MXMM_AMNT_GRNT_CSNDRD)* shall be allocated according to its quality

starting from the one with the best quality. For instruments collateralised by immovable property, immovable property collateral shall always be reported first, irrespective of its quality compared to other collateral. Where the *Maximum amount of the collateral/guarantee that can be considered (CLLTRL_MXMM_AMNT_GRNT_CSNDRD)* exceeds the value of immovable property collateral, its remaining value shall be allocated to other collateral types and guarantees according to its quality starting from the one with best quality.

Collateral Obtained by Taking Possession (CLLTRL_OBTND_TKNG_PSSSSN)

The value TRUE has to be fed for those tangible assets (Non-current assets held-for-sale, Property, plant and equipment, Investment property, Equity and debt instruments and Other assets) which are recognised in the balance sheet at the reference date and were obtained by taking possession of collateral. For the remaining assets the value to be fed should be FALSE.

Date of the collateral obtained by taking possession (CLLTRL_OBTND_TKNG_PSSSSN_DT)

The variable is needed to identify the collateral that has been obtained between the first day of the accounting year to the reference date (see EBA Q&A 2014_1094). It has to be fed only if *Collateral Obtained by Taking Possession (CLLTRL_OBTND_TKNG_PSSSSN)* is equal to TRUE.

Is primary protection provider (IS_PRMRY_PRTCTN_PRVDR)

The variable has to be fed in the *Transactions counterparties (BIRD_TRNSCTNS_CNTRPRTS_2)*. It identifies the most relevant guarantor for a specific collateral/guarantee.

This variable should be fed having in mind the instructions given in par. 119 of the Part II of Annex V which states “where a financial guarantee received has been issued by more than one guarantor, the guaranteed amount shall be reported only once in this template; the guaranteed amount shall be allocated to guarantor that is more relevant for the mitigation of credit risk”. This criterion for selecting the most relevant guarantor has to be reused also for representing in AnaCredit only one of the guarantors and should apply also when feeding *Is main counterparty (IS_MN_CNTRPRTY)* in the *Transactions*

counterparties (BIRD_TRNSCTNS_CNTRPRTS_2). For those banks that use the alternative method for treating joint counterparties.

Commitments-protections (BIRD_CMMTMNT_PRTCTN_1)

This cube is used to link the commitments cubes (*Financial guarantees given (BIRD_FNNCL_GRNTS_GVN*), *Credit facilities (IL_CRDT_FCLTS_2), Other commitments given then credit facilities BIRD_OTHR_CMMTMNTS_GVN_1)*) to the protection cubes.

In case a commitment is linked to a protection, a record in this cube has to be added using the variables: *Commitment unique identifier (CMMTMNT_UNQ_ID)* for the commitment and *Protection identifier (PRTCTN_ID)* for the protection. Two illustrative examples are provided and related to this cube.

Master netting protection (MSTR_NTTNG_PRTCTN_1)

This cube is used to link he master netting agreement to its own protection if present.

3 Framework Generation

Different reporting requirements are described in different ways, with different methodologies. At present, there are mainly two standardised methodologies in use: the Data Point Model (DPM) and Statistical Data and Metadata Exchange (SDMX) methodologies.

A precondition for effective and efficient data integration in the BIRD is to describe all the datasets with the same methodology.

The BIRD can accommodate the DPM and SDMX methodology using the SMCube methodology that contains all the substantive details present in the existing modelling methodologies and is compatible with these, so that the translation process can be largely automated and serves to describe all existing reporting frameworks. The benefit of having a common information model compatible with all other models is that different kinds of datasets can be stored, managed and retrieved in a common way regardless of the model/standard used for the actual data exchange.

The process to import the original data model into the SMCube model is called methodological integration.

The AnaCredit framework was included in BIRD without any methodological integration because AnaCredit metadata were directly developed within the SMCube methodology.

To integrate “frameworks defined in the DPM”.the BIRD has translated the DPM into the SMCube. In particular the content of the EBA’s DPM has been imported into the SMCube methodology automatically from the XBRL taxonomies. All the DPM content remains untouched, only a translation between methodologies is performed.

Once the issue of integrated modelling methodology is solved, the problem of semantical integration still persists.

Semantic integration means that all concepts for describing statistical and supervisory data should have a single and unambiguous codification. In the followings we refer to the integrated dictionary as the reference dictionary. In order to use the unambiguous codification, a process of mapping has been implemented to match the DPM and SHS concepts into the unique codification that is used in BIRD (called reference dictionary).

Mappings provide a way to establish that two concepts created by different maintenance agencies (e.g. the EBA and the ECB) are equivalent. The concepts we are interested in are the variables and the members, which are the building blocks for describing a dataset.

In an ideal world mappings would be very simple, one table with two columns could suffice to express mappings.

SOURCE MEMBER	DESTINATION MEMBER	SOURCE VARIABLE	DESTINATION VARIABLE
A	1	x	7
B	2	y	8
C	3	x	9

But, unfortunately, the reality is much more complex, and this implies the need for more complex mappings. There are two main sources of complexity: (i) use of different classification systems, and (ii) errors.

As an illustrative example, let's take the European System of Accounts (ESA) classification of financial instruments. This classification is done with a specific purpose and mixes different concepts within the same classification. For instance, in the ESA classification of instruments there are two values for *long-term debt securities* and *short-term debt securities*. Data frameworks that follow ESA classification tend to have one variable where two possible values are *long-term debt securities* and *short-term debt securities*. But in other frameworks, like FinRep, this classification is not followed, and therefore there are two separate variables: *type of instrument* and *original maturity*.

ESA_ INSTR_CLASS
F32 - Long-term debt security
F31 - Short-term debt security

→

→

TYP_INSTRMNT	ORGNL_MTRTY
1 - Debt security	1 - Long-term
1 - Debt security	2 - Short-term

The SMCube methodology provides a model able to address complex (n to m) mappings. In the SMCube, one full mapping points to one mapping of variables and, eventually, one mapping of members.

One full mapping points only to a variable when the variable is not enumerated. For example, if we want to map the variable Carrying amount, with code mi53 in the DPM, to the same concept with code CRRYNG_AMNT in the reference dictionary.

If the mapping is for enumerated variables, then it needs also to point to the member mappings. The MAPPING_DEFINITION table contains the full mappings. It includes one field with the mapping type. The most relevant types of mappings have the value 'E' and

‘A’. ‘E’ mappings imply that a member mapping is required, while ‘A’ mappings imply that an algorithm is required. The algorithm in the latter case serves to add operations, if needed to the values in the non-enumerated variables. In most cases it will not have any value, meaning that no operation has to be done.

VARIABLE_MAPPING and VARIABLE_MAPPING_ITEM tables provide the variable mappings, while MEMBER_MAPPING and MEMBER_MAPPING_ITEM provide the member mappings.

The two previous examples would be described (for illustrative purposes, the tables are simplified and only the enumeration tables are shown).

MAPPING_DEFINITION

MAPPING_ID	MAPPING_TYPE	ALGORITHM	VARIABLE_MAPPING_ID	MEMBER_MAPPING_ID
ie1	E		vm1	mm1
ie2	A		vm2	

VARIABLE_MAPPING_ITEM

VARIABLE_MAPPING_ID	VARIABLE_ID	IS_SOURCE
vm1	ESA_ INSTR_CLASS	TRUE
vm1	TYP_INSTRMNT	FALSE
vm1	ORGNL_MTRTY	FALSE
vm2	mi53	TRUE
vm2	CRRYNG_AMNT	FALSE

MEMBER_MAPPING_ITEM

MEMBER_MAPPING_ID	MEMBER_MAPPING_ROW	VARIABLE_ID	IS_SOURCE	MEMBER_ID
mm1	1		TRUE	F32
mm1	1	TYP_INSTRMNT	FALSE	1
mm1	1	ORGNL_MTRTY	FALSE	1
mm1	2		TRUE	F31
mm1	2	TYP_INSTRMNT	FALSE	1
mm1	2	ORGNL_MTRTY	FALSE	2

Note that:

- Given that mappings are n to m, the number of source and destination elements is unknown. This is the reason for having one record per element, and not per mapping.

- Each mapping maps 1 set of variables, but several sets of members. That is why the MEMBER_MAPPING_ITEM table has the field MEMBER_MAPPING_ROW.

- The first mapping is 1 to 2, so when coming to the mappings, there is no need to specify the variable for the source member (it can only be one: ESA_ INSTR_CLASS), but the specification of the destination variable is required, because if, for instance, only '1' was specified, there would be doubts on whether that 1 would apply to TYP_INSTRMNT or ORGNL_MTRTY.

As a consequence of this semantic integration in the DB for FinRep and SHSGroup reporting two different output cubes are present, the original cubes and the translation to the reference codes. The original cubes describe the information to be transmitted as described in the original documentation. The translated cubes are created automatically from the original cubes by applying the mappings.

The technical choice made in order to achieve this goal is to consider a FinRep normalised template as a cube with several combination, each combination within a non-reference cube is considered a data point described by the Data Point Model. The FinRep reference cubes then are a normalised template described by reference codes and reference combinations.

Therefore is should be possible to link a non-reference combination - a datapoint - to a reference combination.[5]

With reference mappings is possible to generate a FINREP report by feeding from the BIRD input layer, via transformation rules, the translated cubes.

3.1 Framework generation of "frameworks defined using the DPM"

3.1.1 Level of aggregation, application of hierarchies

Please note that the BIRD process does not explicitly create all the levels of aggregation (sum, of-which positions) that are necessary in order to feed some data point but rather generates the most granular data that may be aggregated in order to derive the required data points.

[5] The non-reference combination ID are coded with the DataPointVID of DPM database. Reference combination ID are structured in the same way ending with _REF subscript. (i.e. EBA_100 == EBA_100_REF, and identify DataPointVID = 100).

The main reasons for this limitation (of explicit transformation rules) are

- Convention for the member Not applicable / all (x0)
- Non-disjoint output requirements

The first point is based on a misalignment of dictionaries. In the reference dictionary the member Not applicable (0) means that a concept is not applicable in this particular case while for a member comprising all other members would be represented by a different member than Not applicable (0) due to the fact that all other members represent a different concept than not applicable. In the future we may adapt our mappings (from the non-reference to the reference cubes) and take this misalignment into account, for the time being however this limitation stays in place.

The second item is mainly presented by overlapping “of-which” positions but also other overlapping concepts. This implies a stepwise derivation of the underlying combinations of a cube taking into account the application of relevant member hierarchies before each step. For further details please consider the following example.

Example: Application of member hierarchies & aggregation for “Breakdown of non-trading loans and advances to non-financial corporations by NACE codes (F 06.01)”

Setup

This example describes the necessary steps that are indicated by the function transformation-search: TRANSFORMATION_SCHEME. For the sake of simplicity we’ll only consider the following combinations:

			Columns					
			Non-financial corporations					
			Gross carrying amount			Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures	
				of which: loans and advances subject to impairment	Of which: non-performing			(NAC:NC) NACE code counterparty
			010	011	012	021	022	
Rows	A Agriculture, forestry and fishing	010	152499 €£$	150946 €£$	152500 €£$	150858 €£$	152369 €£$	(NC:A) A - Agriculture, forestry and fishing
	Loans and advances	190	152498 €£$	150945 €£$	152575 €£$	150857 €£$	152407 €£$	
	Metric		(mi136) Gross carrying amount [mi]	(mi136) Gross carrying amount [mi]	(mi136) Gross carrying amount [mi]	(mi7) Accumulated impairment [mi]	(mi504) Accumulated negative changes in fair value due to credit risk [mi]	
	(BAS:BA) Base		(BA:x6) Assets	(BA:x6) Assets	(BA:x6) Assets	(BA:x6) Assets	(BA:x6) Assets	
	(MCY:MC) Main category		(MC:x469) Loans and advances	(MC:x469) Loans and advances	(MC:x469) Loans and advances	(MC:x469) Loans and advances	(MC:x469) Loans and advances	
	(CPS:CT) Counterparty sector		(CT:x20) Non-financial corporations	(CT:x20) Non-financial corporations	(CT:x20) Non-financial corporations	(CT:x20) Non-financial corporations	(CT:x20) Non-financial corporations	
	(APL:PL) Accounting portfolio		(PL:x77) Financial assets other than Held for trading and Trading Financial Assets	(PL:x4) Accounting portfolios for financial assets subject to impairment	(PL:x77) Financial assets other than Held for trading and Trading Financial Assets	(PL:x4) Accounting portfolios for financial assets subject to impairment	(PL:x76) Financial assets at fair value other than Held for trading and Trading Financial Assets	
	(PFS:IM) Performing status				(IM:x16) Non-performing exposures		(IM:x16) Non-performing exposures	

Table 4: relevant combinations for the given example (represented in the non-reference codification system)

Please note that this is a representation of the (so called) non-reference cube EBA_FINREP_EBA_F_06_01_FINREP_2017-A: F_06_01 while we describe the generation of the reference cube FINREP_REF_F_06_01_14: F_06_01_REF in this example.

Initial situation

The (unfolded) reference representation of the cube EBA_FINREP_EBA_F_06_01_FINREP_2017-A: F_06_01 is generated by the transformation scheme (TRANSFORMATION_SCHEME_ID=G_F_06_01_REF_UNFLDD_FINREP_1:G_F_06_01_REF_UNFLDD_FINREP). It takes into account Loans and advances per debtor, applies member hierarchies on the variables Type of instrument (TYP_INSTRMNT), Institutional sector (INSTTTNL_SCTR) and Economic Activity (ECNMC_ACTVTY) in order to comply with the level of granularity (w.r.t. those variables) and applies filters regarding the variables Institutional sector (INSTTTNL_SCTR), Is held for sale (IS_HFS), Type of accounting item (TYP_ACCNTNG_ITM) and Type of instrument (TYP_INSTRMNT). Finally it produces a cube having the following structure:

Breakdown of non-trading loans and advances to non-financial corporations by NACE codes - Reference (unfolded) (F_06_01_REF_UNFLDD)		
Role	***Variable***	***Subdomain***
Dimension	Accounting classification (ACCNTNG_CLSSFCTN)	No restriction

Dimension	Reference date (DT_RFRNC)	{Generic subdomain date (DT)}
Dimension	Economic activity (ECNMC_ACTVTY)	No restriction
Dimension	Institutional sector (INSTTTNL_SCTR)	{Non financial corporations (S11)}
Dimension	Is held for sale (IS_HFS)	{FALSE (F)}
Dimension	Observed agent internal identifier (OBSRVD_AGNT_INTRNL_ID)	{Generic subdomain strings (STRNG)}
Dimension	Performing status (PRFRMNG_STTS)	No restriction
Dimension	Type of accounting item (TYP_ACCNTNG_ITM)	{Financial instruments. Creditor (40)}
Dimension	Type of instrument (TYP_INSTRMNT)	{Loans and advances (149)}
Observation	Accumulated changes in fair value due to credit risk - negative (ACCMLTD_CHNG_NGTV_FV_CR)	{Monetary amount without further specification (MNTRY)}
Observation	Accumulated impairment (ACCMLTD_IMPRMNT)	{Monetary amount without further specification (MNTRY)}
Observation	Gross carrying amount (GRSS_CRRYNG_AMNT)	{Monetary amount without further specification (MNTRY)}

Table 5: Cube structure resulting from the transformation scheme {[link:/transformation_scheme?TRANSFORMATION_SCHEME_ID=G_F_06_01_REF_UNFLDD_FINREP_1:G_F_06_01_REF_UNFLDD_FINREP_1]}

For the sake of simplicity we will omit all variables that are not related to members (i.e. Observed agent internal identifier (OBSRVD_AGNT_INTRNL_ID) and Reference date (DT_RFRNC)) as they are irrelevant for our aim and also variables that may only take one value (e.g. Institutional Sector (INSTTTNL_SCTR)).

Records of the data set (described by this cube) may look as follows:

Accounting classification (ACCNTNG_CLSSFCTN)	Economic activity (ECNMC_ACTVTY)	Performing status (PRFRMNG_STTS)	Carrying amount (CRRYNG_AMNT)	Accumulated impairment (ACCMLTD_IMPRMNT)	Accumulated changes in fair value due to credit risk - negative (ACCMLTD_CHNG_NGTV_FV_CR)
IFRS: Financial assets at amortised cost (6)	AGRICULTURE, FORESTRY AND FISHING (A)	Non-performing (1)	7	3	0
IFRS: Financial assets at fair value through other comprehensive income (8)	AGRICULTURE, FORESTRY AND FISHING (A)	Performing (11)	13	0	5
IFRS: Non-trading financial assets mandatorily at fair value through profit or loss (41)	AGRICULTURE, FORESTRY AND FISHING (A)	Performing (11)	11	0	3
…	…	…	…	…	…

Table 6: real data example for the cube indicated in table 2

We observe that the values of the variable accounting classification (ACCNTNG_CLSSFCTN) are not in line with the required output values (i.e. members ACCNTNG_CLSSFCTN_54, ACCNTNG_CLSSFCTN_60: and ACCNTNG_CLSSFCTN_61:) due to the fact that they reflect the values that are allowed in the input layer. Consequently we need to apply member hierarchies on this variable such that we may derive the required output values but unfortunately the values for the columns Gross carrying amount (010) and Accumulated negative changes in fair value due to credit risk on non-performing exposures (022) are different. Subsequently we need to apply two different member hierarchies on the same data set resulting in two different (non-disjoint) views on the data.

Application of first member hierarchy

First we apply the member hierarchy for Financial assets other than Held for trading and Trading Financial Assets (ACCPOR60): resulting in the following view:

Accounting classification (ACCNTNG_CLSSFCTN)	Economic activity (ECNMC_ACTVTY)	Performing status (PRFRMNG_STTS)	Carrying amount (CRRYNG_AMNT)	Accumulated impairment (ACCMLTD_IMPRMNT)	Accumulated changes in fair value due to credit risk - negative (ACCMLTD_CHNG_NGTV_FV_CR)
Financial assets other than Held for trading and Trading Financial Assets (60)	AGRICULTURE, FORESTRY AND FISHING (A)	Non-performing (1)	7	3	0
Financial assets other than Held for trading and Trading Financial Assets (60)	AGRICULTURE, FORESTRY AND FISHING (A)	Performing (11)	13	0	5
Financial assets other than Held for trading and Trading Financial Assets (60)	AGRICULTURE, FORESTRY AND FISHING (A)	Performing (11)	11	0	3
...	...	...	...	...	...

Table 7: real data example after application of Member Hierarchy AccPor60

Which allows us (via aggregation) to generate the combinations EBA_152499_REF and EBA_152500_REF, resulting in the following situation:

			Columns				
			Non-financial corporations				
			Gross carrying amount			Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
				of which: loans and advances subject to impairment	Of which: non-performing		
			010	011	012	021	022
Rows	A Agriculture, forestry and fishing	010	31	150946 €£$	7	150858 €£$	152369 €£$
	Loans and advances	190	152498 €£$	150945 €£$	152575 €£$	150857 €£$	152407 €£$

Table 8: combinations created based on application of Member Hierarchy AccPor60 and following aggregation

The associated VTL statements would look like this:

```
/*Apply filter criteria in order to identify the records contributing to the combination
```

```
EBA_152499_REF*/EBA_152499_REF := F_06_01_REF [filter(ACCNTNG_CLSSFCTN = "60" and ECNMC_ACTVTY = "A" and INSTTTNL_SCTR = "S11" and IS_HFS = "F" and TYP_ACCNTNG_ITM = "40" and TYP_INSTRMNT = "149")];

/*Keep only relevant observation*/ EBA_152499_REF := EBA_152499_REF [keep(GRSS_CRRYNG_AMNT)];
```

for the combination EBA_152499_REF, and

```
/*Apply filter criteria in order to identify the records contributing to the combination EBA_152500_REF*/EBA_152500_REF := F_06_01_REF [filter(ACCNTNG_CLSSFCTN = "60" and ECNMC_ACTVTY = "A" and INSTTTNL_SCTR = "S11" and IS_HFS = "F" and PRFRMNG_STTS = "1" and TYP_ACCNTNG_ITM = "40" and TYP_INSTRMNT = "149")];

/*Keep only relevant observation*/ EBA_152500_REF := EBA_152500_REF [keep(GRSS_CRRYNG_AMNT)];
```

for the combination EBA_152500_REF.

Please note that these statements may be extracted from the database (by selecting the combination items related to the combination of interest and omitting all variable, member combinations where the member takes the value “Not applicable (0)”).

Application of second member hierarchy

As a second step we apply the member hierarchy for Accounting portfolios for financial assets subject to impairment (ACCPOR54) on the original data set (and consequently creating a non-disjoint data set w.r.t. the one that was previously generated), resulting in the following view:

Accounting classification (ACCNTNG_CLSSFCTN)	Economic activity (ECNMC_ACTVTY)	Performing status (PRFRMNG_STTS)	Carrying amount (CRRYNG_AMNT)	Accumulated impairment (ACCMLTD_IMPRMNT)	Accumulated changes in fair value due to credit risk - negative (ACCMLTD_CHNG_NGTV_FV_CR)
Accounting portfolios for financial assets subject to impairment (54)	AGRICULTURE, FORESTRY AND FISHING (A)	Non-performing (1)	7	3	0
Accounting portfolios for financial assets subject to impairment (54)	AGRICULTURE, FORESTRY AND FISHING (A)	Performing (11)	13	0	5
IFRS: Non-trading financial assets mandatorily at fair value through profit or loss (41)	AGRICULTURE, FORESTRY AND FISHING (A)	Performing (11)	11	0	3
...	...	...	...	...	...

Table 9: real data example after application of Member Hierarchy AccPor54

Again we may apply filter statements in order to extract the values for the combinations: EBA_150946_REF and EBA_150858_REF. This time however not all of the records contribute to the result as the third record does not fulfil the filter criteria.

			Columns				
			Non-financial corporations				
			Gross carrying amount			Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
				of which: loans and advances subject to impairment	Of which: non-performing		
			010	011	012	021	022
Rows	A Agriculture, forestry and fishing	010	31	20	7	3	152369 €£$
	Loans and advances	190	152498 €£$	150945 €£$	152575 €£$	150857 €£$	152407 €£$

Table 10: combinations created based on application of Member Hierarchy AccPor54 and following aggregation

The associated VTL statements take the following form:

```
/*Apply filter criteria in order to identify the records contributing to the combination EBA_150946_REF*/EBA_150946_REF := F_06_01_REF [filter(ACCNTNG_CLSSFCTN = "54" and ECNMC_ACTVTY = "A" and INSTTTNL_SCTR = "S11" and IS_HFS = "F" and TYP_ACCNTNG_ITM = "40" and TYP_INSTRMNT = "149")];

/*Keep only relevant observation*/ EBA_150946_REF := EBA_150946_REF
```

```
[keep(GRSS_CRRYNG_AMNT)];
```

for the combination EBA_150946_REF, and

```
/*Apply filter criteria in order to identify the records contributing to the combination EBA_150858_REF*/EBA_150858_REF := F_06_01_REF [filter(ACCNTNG_CLSSFCTN = "54" and ECNMC_ACTVTY = "A" and INSTTTNL_SCTR = "S11" and IS_HFS = "F" and MTRCS = ACCMLTD_IMPRMNT and TYP_ACCNTNG_ITM = "40" and TYP_INSTRMNT = "149")];

/*Keep only relevant observation*/ EBA_150858_REF := EBA_150858_REF [keep(ACCMLTD_IMPRMNT)];
```

for the combination EBA_150858_REF.

Application of third member hierarchy

As a last step we apply the member hierarchy for financial assets at fair value other than Held for trading and Trading Financial Assets (ACCPOR61): and follow the above describe procedure resulting in the following view:

Accounting classification (ACCNTNG_CLSSFCTN)	Economic activity (ECNMC_ACTVTY)	Performing status (PRFRMNG_STTS)	Carrying amount (CRRYNG_AMNT)	Accumulated impairment (ACCMLTD_IMPRMNT)	Accumulated changes in fair value due to credit risk - negative (ACCMLTD_CHNG_NGTV_FV_CR)
IFRS: Financial assets at amortised cost (6)	AGRICULTURE, FORESTRY AND FISHING (A)	Non-performing (1)	7	3	0
Financial assets at fair value other than Held for trading and Trading Financial Assets (61)	AGRICULTURE, FORESTRY AND FISHING (A)	Performing (11)	13	0	5
Financial assets at fair value other than Held for trading and Trading Financial Assets (61)	AGRICULTURE, FORESTRY AND FISHING (A)	Performing (11)	11	0	3
…	…	…	…	…	…

Table 11: real data example after application of Member Hierarchy AccPor61

Again we apply the relevant filter criteria resulting in the last combination (i.e. EBA_152369_REF) of this row:

			Columns				
			Non-financial corporations				
			Gross carrying amount			Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
				of which: loans and advances subject to impairment	Of which: non-performing		
			010	011	012	021	022
Rows	A Agriculture, forestry and fishing	010	31	20	7	3	8
	Loans and advances	190	152498 €£$	150945 €£$	152575 €£$	150857 €£$	152407 €£$

Table 12: combinations created based on application of Member Hierarchy AccPor61 and following aggregation

And the associated VTL statements:

```
/*Apply filter criteria in order to identify the records contributing to the combination EBA_152369_REF*/EBA_152369_REF := F_06_01_REF [filter(ACCNTNG_CLSSFCTN = "61" and ECNMC_ACTVTY = "A" and INSTTTNL_SCTR = "S11" and IS_HFS = "F" and PRFRMNG_STTS = "1" and TYP_ACCNTNG_ITM = "40" and TYP_INSTRMNT = "149")];

/*Keep only relevant observation*/ EBA_152369_REF := EBA_152369_REF [keep(ACCMLTD_CHNG_NGTV_FV_CR)];
```

Conclusion

As we have seen throughout this example the generation of the relevant combinations not only requires aggregation, but due to the structure of the output layer, also requires the application of member hierarchies on the granular data set which results in a duplication of data. Therefore, at least for the time being, we leaf the explicit generation of each individual combination open for active implementations of the BIRD.

3.1.2 Input-Output cubes related to FinRep

The BIRD process does not generate all FinRep output cubes - templates - starting from the input layer. The BIRD Expert Group decided to leave the generation of the following templates to the reporting agents. In this case the BIRD does not provide any kind of transformation for the following cubes:

- With quarterly frequency

CUBE/TEMPLATE	DESCRIPTION

EBA_FINREP_EBA_F_00_01 _FINREP_2017-A: F_00_01	Nature of Report (FINREP)
EBA_FINREP_EBA_F_01_03 _FINREP_2017-A: F_01_03	Balance Sheet Statement [Statement of Financial Position]: Equity
EBA_FINREP_EBA_F_02_00 _FINREP_2017-A: F_02_00	Statement of profit or loss
EBA_FINREP_EBA_F_03_00 _FINREP_2017-A: F_03_00	Statement of comprehensive income
EBA_FINREP_EBA_F_11_03 _1_FINREP_2017-A: F_11_03_1	Non-derivative hedging instruments
EBA_FINREP_EBA_F_11_03 _FINREP_2017-A: F_11_03	Non-derivatives - Hedge accounting: Breakdown by accounting portfolio and type of hedge
EBA_FINREP_EBA_F_11_04 _FINREP_2017-A:F_11_04	Hedged items in fair value hedges
EBA_FINREP_EBA_F_12_00 _FINREP_2017-A: F_12_00	Movements in allowances for credit losses and impairment of equity instruments
EBA_FINREP_EBA_F_12_01 _a_FINREP_2017-A: F_12_01_a	Movements in allowances and provisions for credit losses (a)
EBA_FINREP_EBA_F_12_01 _b_FINREP_2017-A: F_12_01_b	Movements in allowances and provisions for credit losses (b)
EBA_FINREP_EBA_F_12_02 _FINREP_2017-A: F_12_02	Transfers between impairment stages (gross basis presentation)
EBA_FINREP_EBA_F_16_01 _FINREP_2017-A: F_16_01	Breakdown of selected statement of profit or loss items: Interest income and expenses by instrument and counterparty sector
EBA_FINREP_EBA_F_16_02 _FINREP_2017-A: F_16_02	Realised gains and losses on financial assets and liabilities not measured at fair value through profit or loss by instrument

EBA_FINREP_EBA_F_16_03 _FINREP_2017-A: F_16_03	Gains and losses on financial assets and liabilities held for trading by instrument
EBA_FINREP_EBA_F_16_04 _1_FINREP_2017-A: F_16_04_1	Gains or losses on non-trading financial assets mandatorily at fair value through profit or loss by instrument
EBA_FINREP_EBA_F_16_04 _FINREP_2017-A: F_16_04	Gains and losses on financial assets and liabilities held for trading by risk
EBA_FINREP_EBA_F_16_05 _FINREP_2017-A: F_16_05	Gains and losses on financial assets and liabilities designated at fair value through profit or loss by instrument
EBA_FINREP_EBA_F_16_06 _FINREP_2017-A: F_16_06	Gains and losses from hedge accounting
EBA_FINREP_EBA_F_16_07 _a_FINREP_2017-A: F_16_07_a	Impairment on financial and non-financial assets (a)
EBA_FINREP_EBA_F_16_07 _b_FINREP_2017-A: F_16_07_b	Impairment on financial and non-financial assets (b)
EBA_FINREP_EBA_F_17_01 _FINREP_2017-A:F_17_01	Reconciliation between IFRS and CRR scope of consolidation: Assets
EBA_FINREP_EBA_F_17_02 _FINREP_2017-A:F_17_02	Reconciliation between IFRS and CRR scope of consolidation: Off-balance sheet exposures - loan commitments, financial guarantees and other commitments given
EBA_FINREP_EBA_F_17_03 _FINREP_2017-A:F_17_03	Reconciliation between IFRS and CRR scope of consolidation: Liabilities
EBA_FINREP_EBA_F_20_03 _FINREP_2017-A:F_20_03	Geographical breakdown of main income statement items by location of the activities
EBA_FINREP_EBA_F_22_01 _FINREP_2017-A:F_22_01	Fee and commission income and expenses by activity
EBA_FINREP_EBA_F_22_02 _FINREP_2017-A:F_22_02	Assets involved in the services provided

With half yearly frequency

CUBE/TEMPLATE	DESCRIPTION
EBA_FINREP_EBA_F_30_01 _FINREP_2017-A:F_30_01	Interests in unconsolidated structured entities
EBA_FINREP_EBA_F_30_02 _FINREP_2017-A:F_30_02	Breakdown of interests in unconsolidated structured entities by nature of the activities
EBA_FINREP_EBA_F_31_02 _FINREP_2017-A:F_31_02	Related parties: expenses and income generated by transactions with

With yearly frequency

CUBE/TEMPLATE	DESCRIPTION
EBA_FINREP_EBA_F_43_00_FINREP_2017-A:F_43_00	Provisions
EBA_FINREP_EBA_F_44_01_FINREP_2017-A:F_44_01	Components of net defined benefit plan assets and liabilities
EBA_FINREP_EBA_F_44_02_FINREP_2017-A:F_44_02	Movements in defined benefit plans and employee benefits
EBA_FINREP_EBA_F_44_03_FINREP_2017-A:F_44_03	Memo items [related to staff expenses]
EBA_FINREP_EBA_F_45_01_FINREP_2017-A:F_45_01	Gains and losses on financial assets and liabilities designated at fair value through profit or loss by accounting portfolio
EBA_FINREP_EBA_F_45_02_FINREP_2017-A:F_45_02	Gains and losses on derecognition of non-financial assets other than held for sale
EBA_FINREP_EBA_F_45_03_FINREP_2017-A:F_45_03	Other operating income and expenses
EBA_FINREP_EBA_F_46_00_FINREP_2017-A:F_46_00	Statement of changes in equity

3.1.3 Input-Output cubes related to Resolution Plan

CUBE/TEMPLATE	DESCRIPTION
Z 01 00	Organisational structure (ORG)
Z_02_00	Liability structure (only rows 500—600 are input-output)
Z_03_00	Own funds requirements
Z_07_01	Criticality assessment of economic functions
Z_07_02	Mapping of critical functions by legal entity
Z_07_03	Mapping of core business lines to legal entities
Z_07_04	Mapping of critical functions to core business lines
Z_08_00	Critical services
Z_09_00	FMI Services – providers and users – Mapping to Critical Functions
Z_10_01	Critical Information Systems (general information)
Z_10_02	Mapping of Information Systems

3.2 Framework generation of Securities' Holdings Statistics of Banking Groups (SHSG)

The implementation of SHS in BIRD took into account the applicable Legal Framework i. the Regulation (EU) No 1011/2012 of the ECB of 17 October 2012 concerning statistics on holdings of securities, including the latest amendments up to and including Regulation (EU) 2018/318, ii. the Guideline of the ECB of 22 March 2013 concerning statistics on holdings of securities (ECB/2013/7), up to and including the Guideline (EU) 2018/323. It is to be noted that although the scope of the regulation is much broader (e.g. including also information at sectoral level) BIRD only reflects the information reported by the banking groups (SHSG). In this respect the BIRD working group on SHSG also accounted for the ECB Guidance notes to reporting agents on SHSG regulation that further clarifies and illustrates the extended data collection.

The implementation of SHSG in BIRD resulted in a number of 4 cubes corresponding to the 4 data sets required by the regulation (information on Groups, Entities, ISIN and NON-ISIN holdings). As the SHSG reporting framework considers a different codification system than the one used in BIRD we have 4 cubes for the reference codes (the BIRD codes) and 4 cubes corresponding to the original SHSG codification (non-reference). The correspondence between them is done by applying the BIRD mapping package.

Some aspects considered in the modelling process of the SHSG reporting framework in BIRD are worth highlighting:

i. Output variables that are not considered in BIRD

A number of variables that are part of the SHSG reporting framework were not modelled in BIRD (they are not part of the IL nor a product of transformations). However they were artificially created in the cube structure item just to create a correspondence to the BIRD codification. The output cubes are provided using the internal ID, for this reason the ID type is not reported, and it will be added at the level of National Central Bank.

Variable in the REFERENCE codification (ECB)	Corresponding variable in the NON-REFERENCE codification (ECB2)
TYP_CRDTR_ID	ENTITY_ID_TYPE
TYP_IMMDT_PRNT_ID	IMMEDIATE_PARENT_ID_TYPE
TYP_CRDTR_GRP_ID	GROUP_ID_TYPE
TYP_GRNTR_ID	GUARANTOR_ID_TYPE
TYP_ISSR_ID	ISSUER_ID_TYPE
RPRTNG_INSTTTN_CD	COMPILING_ORG
TYP_INPT	INPUT_TYPE_GROUP/ INPUT_TYPE_ENTITY
TYP_INSTRMNT_ID	IDENTIFIER_TYPE

There are other variables that are not part of the transformation because they have a constant value, or a value already defined as such in the BIRD input layer. The variables exist in the database just for mapping purposes. These are:

Variable in the REFERENCE codification (ECB)	Corresponding variable in the NON-REFERENCE codification (ECB2)
FREQ	ECB2_FREQ
IS_INTRST_ACCRD_MV	ECB2_ACCR_INTR_MV
IS_ERLY_RDMPTN_INCLDD	ECB2_EARLY_RED
CRRNCY_TRNSCTN_RPRTD	ECB2_REP_NOM_CURR
RPRTNG_BSS	REPORTING_BASIS
UNIT	UNIT_MEASURE

ii. Versioning

In order to reflect in BIRD any change to the original reporting framework two cases were considered:

- Any change made to the code list before 1st of September 2018 (pre-stage 4) that was part of a correction of the original code list (e.g. country wrongly assigned to the region it was part of) will have the description and/or code

overwritten. Should the change not be an error (e.g. the deletion of a member no longer to be considered for reporting) new member will be created and valid from/valid to attributes will be filled accordingly for the specific subdomain.

- Any change made to the code list after 1st of September 2018 (Stage 4), considered correction or not, will result in the creation of new members and valid from/valid to variables will be filled accordingly.

iii. Members belonging to output variables not considered in BIRD cubes or transformations:

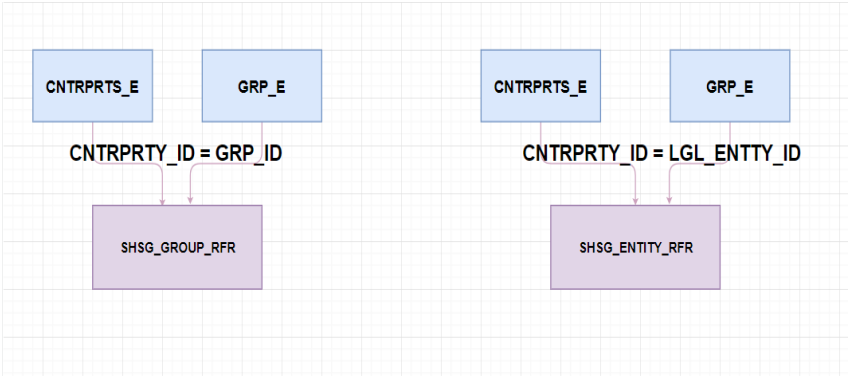
The SHSG enumerated non-reference subdomain codifications are not disjoint sets. That is, the requirement to report data in SHSG codification is based on the concept of "the most granular level available" leaving the choice to the bank on what data to report from a multitude of members that go from very granular level to aggregate level. This approach is different from the one used in BIRD, where, based on the defined input layer it is expected that the banks are able to provide the granular level. The consequence for the SHSG reporting is that for the output subdomains, comprising both granular and aggregated members, only the granular ones will be populated based on the input layer and transformations. The reference output subdomains do contain the aggregate members, but it was done only for mapping purposes.

Another characteristic of SHSG is the presence of default values for pre-stage 4 reporting (before September 2018) for those variables where an input was missing (e.g. for variable *Instrument seniority type* in case the value was missing, the default value to be filled in was *999*). This aspect was not tackled in BIRD.

An overview of the transformations needed to derive the SHSG framework is provided below, going from the input layer and applying the transformations. The diagrams that accompany the explanations are highly schematic and are meant just to give a general business overview of the transformations involved. For the complete set of transformations and cubes please refer to the BIRD data base.

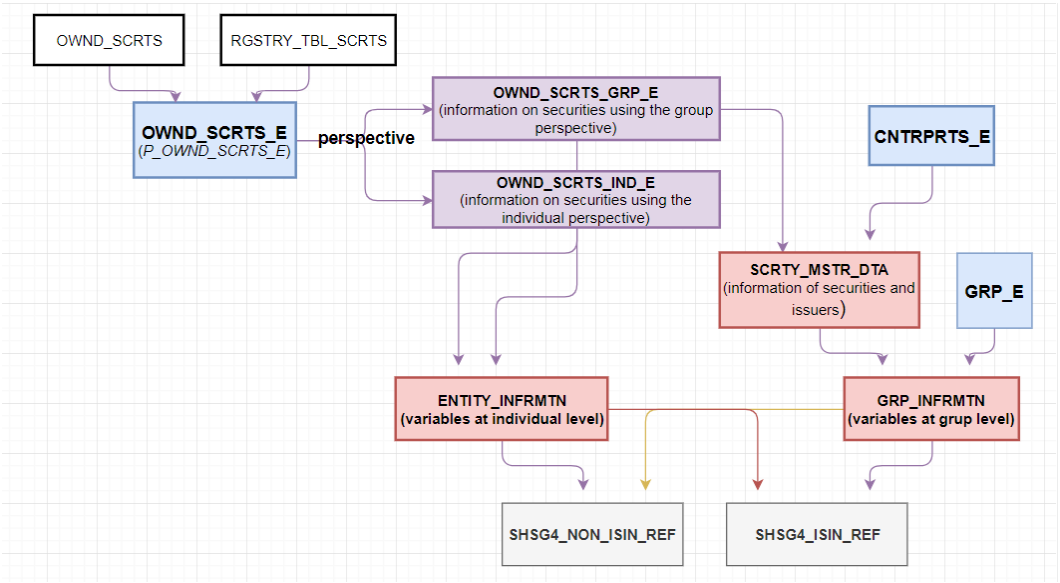
Group and Entity datasets

All the necessary information to derive the two data sets requires combining information from counterparties with information related to the group. For the GROUP dataset, we are interested in information related to the group, while for the ENTITY dataset we are interested in information for all legal entities that belong to the specified group.



ISIN and NON-ISIN datasets

As the name of the datasets suggests, the difference between the two is given by the fact that for ISIN securities, the ISIN code allows for the identification of certain attributes of the instrument from other sources while for this reason, the NON-ISIN dataset requires that additional information on the issuer, security and the holder of the security be directly reported.



In order to understand the logic behind the transformations applied, it is important to understand that some of the variables are required to be reported with their values computed at group level (e.g. the LGD will be the same whether it is computed at entity or at group level). For this reason, information from OWND_SCRTS_E cube can be split

depending on the perspective desired. This was the logic behind computing a cube containing all variables that are to be reported at group level (GRP_INFRMTN).

For the rest of the variables, the requirement is that they are reported at entity level, subject to national derogations. This aspect was controlled by actually mixing in the entity information cube (ENTITY_INFRMTN) information at entity level with variables that may be reported at group level depending on whether the accounting rules are applied the same at group level or not (information that has to be included by the banks in the PRMTR cube and later retrieved in the parameter CNSTNT_ACCNTNG_RL_WTN_GRP {boolean}).

3.3 Framework generation of AnaCredit Reporting datasets

The implementation of AnaCredit in BIRD took into account the ECB regulation ECB/2016/13 as well as the AnaCredit Reporting Manuals, including May 2019 updates. It is to be noted that currently BIRD describes how the data will be collected by the ECB from NCBs therefore the output cubes may not correspond to what the banks will actually send to their national authority. However, in order to define common transformation rules, BIRD assumes that the output of its process is common to all banks.

One direct consequence of describing only the secondary reporting data to be collected by ECB is that out of the 10 datasets required by AnaCredit, one dataset (Entity dataset - containing attributes related to counterparties involved in the transactions) was out of the BIRD scope as the data is available to the ECB through RIAD. However, for completeness purpose a representation of the output cube was generated without it actually being linked to any input layer or transformations. The remaining 9 datasets are represented by 9 cubes and is important to highlight that they were directly created using the BIRD codification (there is no related mapping package).

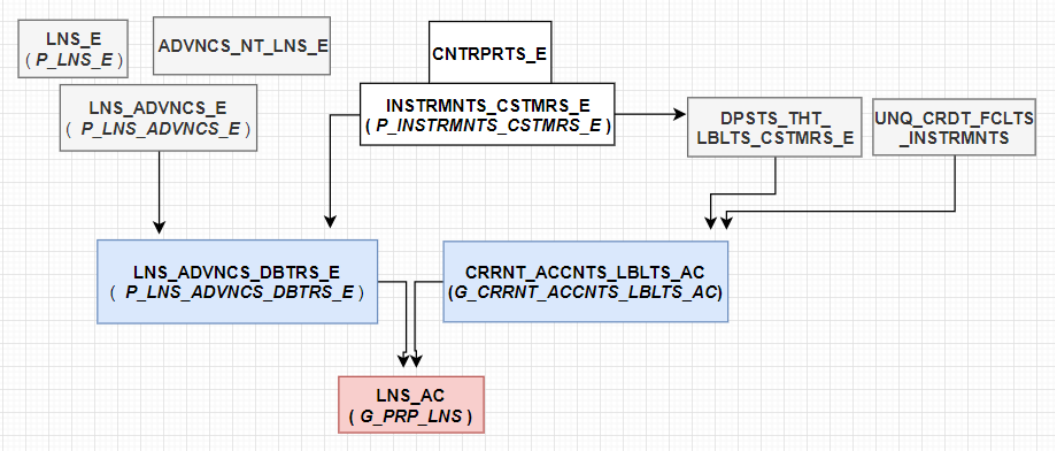
A second consequence of describing the secondary reporting data is that no national derogations could be accounted for, especially when it comes to distinguishing the reason behind missing values for certain variables (e.g. true missing value or national derogation) (AnaCredit Manual part ii section 2.2). Please read section 1.2(ii) of this document for further clarifications.

An overview of the transformations needed to derive some of the AnaCredit datasets (the ones that might entail a bit more complexity) is provided below, going from the input layer and applying the transformations. The diagrams that accompany the explanations are highly schematic and are meant just to give a general business overview of the

transformations involved. For the complete set of transformations and cubes please refer to the BIRD data base.

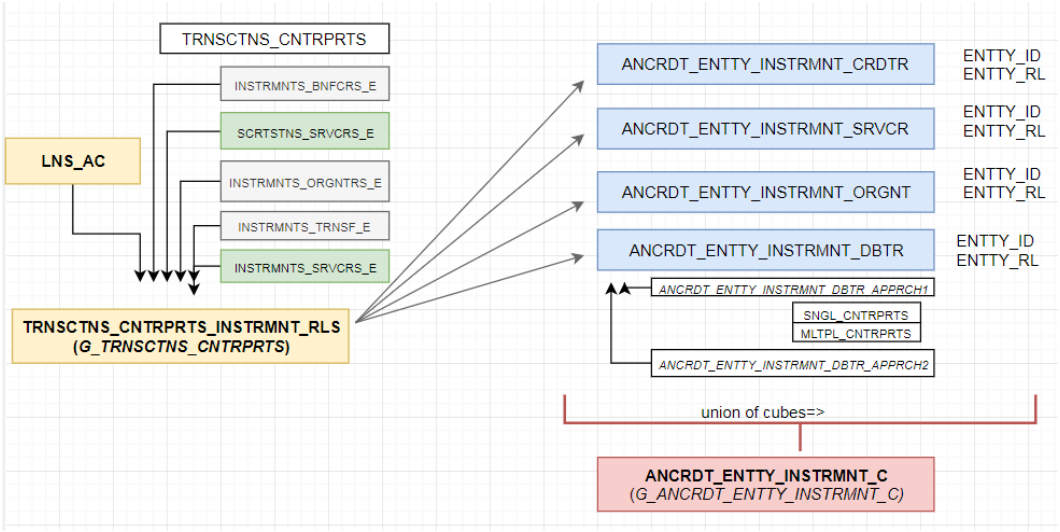
The **instrument entity table** (comprising Instrument, financial and accounting datasets)

The centrepiece of the Anacredit reporting framework in BIRD is represented by the cube LNS_AC containing all information related to the instruments to be reported for AnaCredit purpose.



On the left-hand side of the diagram we have a cube (LNS_ADVNCS_DBTRS_E,part of the enriched BIRD layer) that gathers information about financial instruments that are considered loans, and debtors. On the right-hand side we account for a specific requirement in AnaCredit for which current accounts that are not debit but for which a credit limit exist should be reported (Section 3.4.1. AnaCredit manual ii). For such current accounts a number of variables are taken from the associated credit facility. Inside the transformation G_PRP_LNS that generates the final cube LNS_AC we start narrowing the scope for specific Anacredit components (that is, going from a general enriched BIRD layer to more specific requirements for a specific reporting framework). From the LNS_AC we can derive the information needed in the instruments entity table.

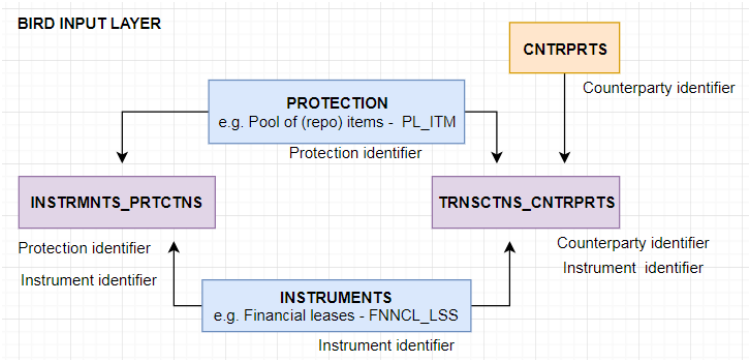
The counterparty-instrument **table** (having the role to identify counterparties that take on a certain role vis-à-vis the instrument reported). Similar to the AnaCredit model, the BIRD architecture makes use of bridging tables. As such, for the derivation of the AnaCredit table, the main components are LNS_AC cube derived above and derived cubes from the BIRD IL cube TRNSCTNS_CNTRPRTS that contain the relationship between instruments and counterparties with a specified role in the transaction.



There are 4 types of counterparties that should be reported: the creditor, the debtor, the servicer and the originator. The transformations result in 4 cubes (left side of the image) the union of which makes the output AnaCredit table. The specific IDs following the AnaCredit definition are obtained by applying different functions. The debtor id in particular accounts for the bank's approach in representing joint liabilities.

The **protection tables**, including information on the protection and the link with the instruments

A simplified way to represent the connection in the BIRD input layer between different entities, more specifically counterparties, protections and instruments can be seen below. Once these input cubes are populated, transformations are applied to retrieve the data in the desired output format.



Example (based on AnaCredit manual part ii, section 3.4.1): taking the example of o financial lease transaction we may identify the components of such a transaction and how they are represented in the BIRD IL: i. information about the lessor and the lessee is recorded in the CNTRPRTS cube while their role in the transaction (lessor - creditor or lessee-debtor) is represented in TRNSCTNS_CNTRPRTS., ii. the financial lease(the loan) is recorded in the INSTRUMENTS cubes, iii. the underlying asset that is leased is recorded in the protection cube. In order to link these 3 entities we make use of the bridging tables as seen in the image.

Regarding the treatment of protections, they have been grouped into i. protections that represent real estate and ii. protections that are not real estate and applied separate treatment as per AnaCredit requirements (please check transformation G_ANCRDT_PRTCTN_RCVD_C for further details and the transformations generating the underlying cubes involved).

4 Derivation Rules

4.1 Derivation of Carrying amount

Scope (applicability)

- The derivation rule applies only to banks that use IFRS.
- The derivation rule shall only apply if the variable*Is carrying amount derived (IS_CRRYG_AMNT_DRVD)* in the parameters cube has the value 1.
- The derivation rule applies to loans and owned securities

Natural language

For instruments fair valued according to their accounting classification, the carrying amount is equal to the fair value of the instrument.

For instruments at amortised cost according to their accounting classification, the carrying amount is equal to their gross carrying amount excluding accrued interest plus their accrued interest minus their accumulated impairment plus the fair value changes due to hedge accounting.

Involved elements

Accounting classification (ACCNTNG_CLSFCTN): Accounting portfolio where the instrument is recorded in accordance with the accounting standard – IFRS or national GAAP –under Regulation (EU) 2015/534 (ECB/2015/13) applied by the observed agent's legal entity. Involved values:

ID	DESCRIPTION	DEFINITION
14	IFRS: Cash balances at central banks and other demand deposits	Cash balances at central banks and other demand deposits in accordance with IFRS.
6	IFRS: Financial assets at amortised cost	Financial assets measured at amortised cost in accordance with IFRS.
8	IFRS: Financial assets at fair value through other comprehensive income	Financial assets measured at fair value through other comprehensive income due to business model and cash-flows characteristics in accordance with IFRS.
4	IFRS: Financial assets designated at fair value through profit or loss	Financial assets measured at fair value through profit and loss and designated as such upon initial recognition or subsequently in accordance with IFRS, except those classified as financial assets held for trading.

2	IFRS: Financial assets held for trading	Financial assets held for trading in accordance with IFRS.
41	IFRS: Non-trading financial assets mandatorily at fair value through profit or loss	Non-trading financial assets mandatorily at fair value through profit or loss in accordance with IFRS.

Fair value (FV): Fair value as defined in IFRS 13.9.

Gross carrying amount excluding interest (GRSS_CRRYNG_AMNT_E_INTRST): Gross carrying amount, as defined in IFRS 9 appendix A, excluding accrued interest

Accrued interest (ACCRD_INTRST): The amount of accrued interest on loans at the reporting reference date as defined in Regulation (EU) No 1071/2013 (ECB/2013/33). In accordance with the general principle of accruals accounting, interest receivable on instruments should be 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).

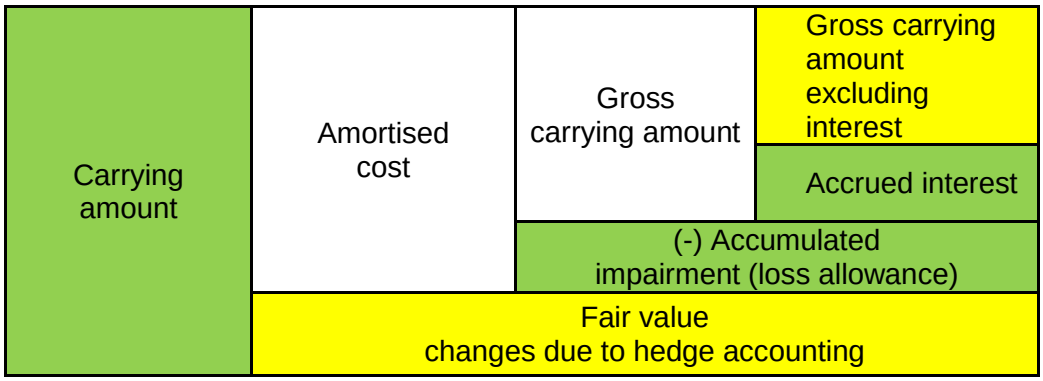
Accumulated impairment (ACCMLTD_IMPRMNT): The amount of loss allowances that are held against or are allocated to the instrument on the reporting reference date. This data attribute applies to instruments subject to impairment under the applied accounting standard.

Fair value changes due to hedge accounting (FV_CHNG_HDG_ACCNTNG): Changes in the fair value of an instrument, which is a hedged item and measured at amortised cost, that are recognised in the carrying amount due to the application of hedge accounting (IFRS 9.6)

Explanation

This derivation rule aims to obtain the IFRS carrying amount from its basic building blocks. It can be split in two parts: For instruments measured at fair value, the carrying amount is simply the fair value of the instrument. For instruments measured at amortised cost, the carrying amount can be subdivided into components that are requested to be reported separately in many frameworks (notably accrued interest and accumulated impairment).

The following schema shows the relation between different values referred to in IFRS 9 or other frameworks:



The concepts in green show the concepts required in AnaCredit, while the cells in yellow show the additional variables required in the input layer for instruments at amortised cost if the carrying amount is to be derived.

The following IFRS 9 definitions are related to the concepts above:

Amortised cost of a financial asset or financial liability: The amount at which the financial asset or financial liability is measured at initial recognition minus the principal repayments, plus or minus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount and, for financial assets, adjusted for any loss allowance.

Gross carrying amount of a financial asset: The amortised cost of a financial asset, before adjusting for any loss allowance.

Loss allowance: The allowance for expected credit losses on financial assets measured in accordance with paragraph 4.1.2 (at amortised cost), lease receivables and contract assets, the accumulated impairment amount for financial assets measured in accordance with paragraph 4.1.2A (at fair value through other comprehensive income) and the provision for expected credit losses on loan commitments and financial guarantee contracts.

Illustrative examples

Let's suppose we have a loan with the following characteristics:

Initial date	30/05/2016
Number of instalments (annual)	5
Initial principal amount	1000
Annualised agreed rate	3%
Fair value at inception	990
Transaction costs	8

The creditor classifies the loan as financial asset at amortised cost. For the application of the effective interest rate method, a new amortisation table shall be calculated, containing the figures to be used for calculated the gross carrying amount, as defined in IFRS 9 Appendix A (The amortised cost of a financial asset, before adjusting for any loss allowance)

The effective interest rate is, according to the IFRS 9, the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset or financial liability to the gross carrying amount of a financial asset.

The resulting effective interest rate, assuming that the estimated future cash receipts are the contractual ones, would be 3.07%. With this rate, the resulting accounting amortisation table would be:

Contractual amortisation table

Date	Accrued interest in the period (contractual)	Instalment (contractual)	Outstanding nominal amount (after cash flow)
30/05/2016			1000
30/05/2017	30	218.35	811.65
30/05/2018	24.35	218.35	617.64
30/05/2019	18.53	218.35	417.81
30/05/2020	12.53	218.35	211.99
30/05/2021	6.36	218.35	0.00

Note first that the gross carrying amount at inception is different to the outstanding nominal amount. This is due to the fact that the gross carrying amount excluding interest at inception is the initial measurement amount, i.e. the fair value plus the transaction costs.

Case 1

Reporting date 30/6/2016. The input variables (in blue) are provided by the operational systems. From there, the rest of variables can be easily derived.

<table>
<tr><td rowspan="3">Carrying amount = 1000.04</td><td rowspan="2">Amortised cost = 1000.04</td><td rowspan="2">Gross carrying amount = 1000.54</td><td>Gross carrying amount excluding interest = 998</td></tr>
<tr><td>Accrued interest = 2.54</td></tr>
<tr><td colspan="2">(-) Accumulated impairment (loss allowance) = 0.5</td></tr>
<tr><td></td><td colspan="3">Fair value changes due to hedge accounting = 0</td></tr>
</table>

It is worth highlighting that:

- The *Gross carrying amount excluding interest* can be obtained from the accounting amortisation table.
- The accrued interest is calculated by applying the effective interest rate to the gross carrying amount excluding interest for the relevant accrual period.
- The *Outstanding nominal amount* in this case would be 1000. It is different to the *Gross carrying amount excluding interest* or the *Carrying amount*, since it is obtained from contractual figures, not accounting figures.

Case 2

Reporting date 30/06/2017, after the first instalment, which was duly paid.

<table>
<tr><td rowspan="3">Carrying amount = 811.86</td><td rowspan="2">Amortised cost = 811.86</td><td rowspan="2">Gross carrying amount = 812.36</td><td>Gross carrying amount excluding interest = 810.29</td></tr>
<tr><td>Accrued interest = 2.07</td></tr>
<tr><td colspan="2">(-) Accumulated impairment (loss allowance) = 0.5</td></tr>
<tr><td></td><td colspan="3">Fair value changes due to hedge accounting = 0</td></tr>
</table>

It is worth highlighting that:

- The *Gross carrying amount excluding interest* can again be obtained from the accounting amortisation table.
- The *Outstanding nominal amount* would be in this case 811.65, as shown in the contractual amortisation table.

Case 3

Reporting date 31/12/2018. Let's now suppose that the payment due on 30/05/2018 was not satisfied, and that the loan is considered in stage 3 from 30/06/2018.

<table>
<tr><td rowspan="4">Carrying amount = 650.16</td><td rowspan="3">Amortised cost = 650.16</td><td rowspan="2">Gross carrying amount = 850.16</td><td>Gross carrying amount excluding interest = 810.29</td></tr>
<tr><td>Accrued interest = 39.87</td></tr>
<tr><td colspan="2">(-) Accumulated impairment (loss allowance) = 200</td></tr>
<tr><td colspan="3">Fair value changes due to hedge accounting = 0</td></tr>
</table>

It is worth highlighting that:

- The *Gross carrying amount excluding interest* can again be obtained from the accounting amortisation table. But, given that the payment due was not satisfied, the amount to be considered is the one after the latest payment satisfied.
- The *Outstanding nominal amount* is simply would be 836 , calculated as the sum of the contractual outstanding amount after the last instalment paid (811.65) plus the interest accrued in the period until the instalment date, which can also be taken from the contractual amortisation table (24.35). No additional interest is to be added to that amount, since the variable is calculated *including unpaid past due interest but excluding accrued interest*.

4.2 Derivation of “Exposure class” and “Risk weight”

4.2.1 Introduction

The variables *Exposure class* (*EXPSR_CLSS*) and *Risk weight* (*RSK_WGHT*), which are defined in the SHS framework in accordance with CRR, are calculated by the transformation rule D_EXPSR_CLSS_AND_RSK_WGHT. The rule is designed to be applied to the exposures for which the bank follows the standardised approach (SA) to calculate the risk-weighted exposure amounts, in accordance with Part three, Title II, Chapter 2 of CRR. When the internal ratings based (IRB) approach is followed, the bank has to feed the information on the exposure class and the risk weight directly in the input layer. This transformation rule is designed to satisfy SHS requirements.

Even if the SA approach is followed the bank may report the exposure class and the risk weight directly as an input without applying this transformation rule, in this case the value provided as input will be equal to the output.

At this stage, the transformation rule does not cover the following cases:

- possible changes of exposure class and risk weight due to credit risk mitigation (Part three, Title II, Chapter 4 of CRR);
- possible changes of exposure class and risk weight due to mortgages on immovable property (Part three, Title II, Chapter 2, Section 2, Articles 124 to 126);
- the treatment of synthetic securitisations (Part three, Title II, Chapter 5, Section 3, Sub-section 2 of CRR);
- specific treatments of securitisation positions (Part three, Title II, Chapter 5, Section 3, Sub-section 3, Articles 253 and 254 of CRR), for which some information should be calculated from securitised exposures.

4.2.2 The structure of the transformation rule

The transformation rule is executed on the instances of the cube “Owned securities” (OWND_SCRTY) and it comprises four steps.

1) **Identification of exposures under IRB or to be classified as not applicable.**
   For the exposures for which the IRB approach is followed the exposure class and the risk weight are set equal to the variables provided in the

input layer. Then some cases where these two variables are not applicable are identified, namely:

- trading book and no derogation for small trading book business;
- short positions;
- intra-group holdings;
- securitisation positions where the originator has not transferred significant credit risk;
- transferred assets where the originator has transferred significant credit risk.

Only if the exposure is in none of the cases here identified the following steps are executed.

2) The exposure class is assigned.

The prioritisation criteria followed by the rule are compliant with COREP decision tree.

For the exposure classes that are disjoint among themselves the assignment is mainly based on the institutional sector of the issuer. The following table summarizes this approach.

Exposure class	Institutional sectors	Additional conditions
6 - Exposures to central governments or central banks	S121	
	S1311	CHRCTRSTCS_CRDT_RSK = 0
13 - Exposures to regional governments or local authorities	S1312, S1313	CHRCTRSTCS_CRDT_RSK = 0
12 - Exposures to public sector entities	S122_A, S1311, S1312, S1313	CHRCTRSTCS_CRDT_RSK = 2
	S1314	
9 - Exposures to institutions without a short-term credit assessment	S122_A	CHRCTRSTCS_CRDT_RSK = 1
		IS_CVRD_BND ≠ T
		IS_SHRT_TRM_CRDT_ASSSSMNT ≠ T
	S122_B1, S122_B2, S125_B, S125_C, S125_D, S125_E, S125_I, S126, S127	CHRCTRSTCS_CRDT_RSK = 1
		IS_SHRT_TRM_CRDT_ASSSSMNT ≠ T
7 - Exposures to corporates without a short-term credit assessment	S11, S125_A, S128, S129, S14_A, S14_B, S15	IS_SHRT_TRM_CRDT_ASSSSMNT ≠ T
	S122_A, S122_B1, S122_B2, S125_B, S125_C, S125_D, S125_E, S125_I, S126, S127	CHRCTRSTCS_CRDT_RSK = 0
		IS_SHRT_TRM_CRDT_ASSSSMNT ≠ T
	S1311, S1312, S1313	CHRCTRSTCS_CRDT_RSK = 3
		IS_SHRT_TRM_CRDT_ASSSSMNT ≠ T
3 - Exposures in the form of covered bonds	S122_A	CHRCTRSTCS_CRDT_RSK = 1
		IS_CVRD_BND = T
8 - Exposures to institutions and corporates with a short-term credit assessment	S11, S122_B1, S122_B2, S125_A, S125_B, S125_C, S125_D, S125_E, S125_I, S126, S127, S128, S129, S14_A, S14_B, S15	IS_SHRT_TRM_CRDT_ASSSSMNT = T
	S122_A	CHRCTRSTCS_CRDT_RSK = 0, 1
		IS_CVRD_BND ≠ T
		IS_SHRT_TRM_CRDT_ASSSSMNT = T
	S1311, S1312, S1313	CHRCTRSTCS_CRDT_RSK = 3
		IS_SHRT_TRM_CRDT_ASSSSMNT = T
4 - Exposures in the form of units or shares in CIUs	S123, S124	

Note: only the exposure classes mainly derived by the issuer's institutional sector are present in this table; therefore, the conditions to classify the exposure in other classes are not shown here.

3) The credit quality step is determined.

For each exposure class a credit quality step associated to a risk weight is assigned. Subject to certain conditions it is determined on the basis of the external credit assessment and it corresponds to the "credit quality step" referred to in the CRR. In other cases some other factors (original maturity, residual maturity, specific credit risk adjustments, etc.) are relevant.

The rule applies the criteria defined in the CRR. In particular, for some specific cases the approach taken by the BIRD group is as follows:

- when, in order to assign a certain risk weight, it is required that the exposure is "funded" in a currency, the group believes that the condition is fulfilled if that currency is the domestic currency of the owner;
- when an exposure to a public sector entity or to a regional government or local authority is to be treated as exposure to the central government, the group assumes that the credit assessment of ECAs may not be used.

4) The risk weight is assigned.

The risk weight is assigned on the basis of the cube "Calculation of risk weights" (CLCLTN_RSK_WGHT), which is composed by the variables *Exposure class* (*EXPSR_CLSS*), *Credit quality step in BIRD process* (*CRDT_QLTY_STP_BIRD*) and *Risk weight* (*RSK_WGHT*). The contents of this cube are provided in the table below. In some cases the value of the variable *Specific risk weight* is used, since it cannot be derived from other input information.

TABLE "Calculation of risk weights"

EXPSR_CLSS	CRDT_QLTY_STP_BIRD	RSK_WGHT	Explanation
6	1	0	Art. 114(2): Table 1
6	2	20	Art. 114(2): Table 1
6	3	50	Art. 114(2): Table 1
6	4	100	Art. 114(2): Table 1
6	5	100	Art. 114(2): Table 1
6	6	150	Art. 114(2): Table 1
6	10	0	Art. 137(2): Table 9

6	11	0	Art. 137(2): Table 9
6	12	20	Art. 137(2): Table 9
6	13	50	Art. 137(2): Table 9
6	14	100	Art. 137(2): Table 9
6	15	100	Art. 137(2): Table 9
6	16	100	Art. 137(2): Table 9
6	17	150	Art. 137(2): Table 9
6	81	0	Art. 114(3,4)
6	87	100	Art. 114(1)
6	99	SPCFC_RSK_WGHT	
9	1	20	Art. 120: Table 3
9	2	50	Art. 120: Table 3
9	3	50	Art. 120: Table 3
9	4	100	Art. 120: Table 3
9	5	100	Art. 120: Table 3
9	6	150	Art. 120: Table 3
9	11	20	Art. 120: Table 4
9	12	20	Art. 120: Table 4
9	13	20	Art. 120: Table 4
9	14	50	Art. 120: Table 4
9	15	50	Art. 120: Table 4
9	16	150	Art. 120: Table 4
9	21	20	Art. 121: Table 5
9	22	50	Art. 121: Table 5
9	23	100	Art. 121: Table 5
9	24	100	Art. 121: Table 5
9	25	100	Art. 121: Table 5
9	26	150	Art. 121: Table 5
9	81	0	Art. 113(7)
9	83	20	Art. 121(3), Art. 119(2)
9	87	100	Art. 121(2)
9	92	250	Art. 48(4)
9	99	SPCFC_RSK_WGHT	
13	1	20	Art. 120: Table 3
13	2	50	Art. 120: Table 3
13	3	50	Art. 120: Table 3
13	4	100	Art. 120: Table 3
13	5	100	Art. 120: Table 3
13	6	150	Art. 120: Table 3
13	21	20	Art. 121: Table 5
13	22	50	Art. 121: Table 5

13	23	100	Art. 121: Table 5
13	24	100	Art. 121: Table 5
13	25	100	Art. 121: Table 5
13	26	150	Art. 121: Table 5
13	31	0	Art. 114(2): Table 1
13	32	20	Art. 114(2): Table 1
13	33	50	Art. 114(2): Table 1
13	34	100	Art. 114(2): Table 1
13	35	100	Art. 114(2): Table 1
13	36	150	Art. 114(2): Table 1
13	81	0	Art. 115(2), Art. 114(4)
13	83	20	Art. 121(3), Art. 115(5)
13	87	100	Art. 121(2)
13	99	SPCFC_RSK_WGHT	
12	1	20	Art. 120: Table 3
12	2	50	Art. 120: Table 3
12	3	50	Art. 120: Table 3
12	4	100	Art. 120: Table 3
12	5	100	Art. 120: Table 3
12	6	150	Art. 120: Table 3
12	21	20	Art. 116: Table 2
12	22	50	Art. 116: Table 2
12	23	100	Art. 116: Table 2
12	24	100	Art. 116: Table 2
12	25	100	Art. 116: Table 2
12	26	150	Art. 116: Table 2
12	31	0	Art. 114(2): Table 1
12	32	20	Art. 114(2): Table 1
12	33	50	Art. 114(2): Table 1
12	34	100	Art. 114(2): Table 1
12	35	100	Art. 114(2): Table 1
12	36	150	Art. 114(2): Table 1
12	41	20	Art. 120: Table 3
12	42	50	Art. 120: Table 3
12	43	50	Art. 120: Table 3
12	44	100	Art. 120: Table 3
12	45	100	Art. 120: Table 3
12	46	150	Art. 120: Table 3
12	51	20	Art. 121: Table 5
12	52	50	Art. 121: Table 5
12	53	100	Art. 121: Table 5

12	54	100	Art. 121: Table 5
12	55	100	Art. 121: Table 5
12	56	150	Art. 121: Table 5
12	81	0	Art. 116(4), Art. 114(4)
12	83	20	Art. 116(3)
12	87	100	Art. 116(1)
12	99	SPCFC_RSK_WGHT	
11	1	20	Art. 120: Table 3
11	2	50	Art. 120: Table 3
11	3	50	Art. 120: Table 3
11	4	100	Art. 120: Table 3
11	5	100	Art. 120: Table 3
11	6	150	Art. 120: Table 3
11	21	20	Art. 121: Table 5
11	22	50	Art. 121: Table 5
11	23	100	Art. 121: Table 5
11	24	100	Art. 121: Table 5
11	25	100	Art. 121: Table 5
11	26	150	Art. 121: Table 5
11	81	0	Art. 117(2)
11	87	100	Art. 121(2)
10	81	0	Art. 118
7	1	20	Art. 122: Table 6
7	2	50	Art. 122: Table 6
7	3	100	Art. 122: Table 6
7	4	100	Art. 122: Table 6
7	5	150	Art. 122: Table 6
7	6	150	Art. 122: Table 6
7	87	100	Art. 122(2)
7	88	150	Art. 122(2)
8	1	20	Art. 131: Table 7
8	2	50	Art. 131: Table 7
8	3	100	Art. 131: Table 7
8	4	150	Art. 131: Table 7
8	5	150	Art. 131: Table 7
8	6	150	Art. 131: Table 7
4	1	20	Art. 132: Table 8
4	2	50	Art. 132: Table 8
4	3	100	Art. 132: Table 8
4	4	100	Art. 132: Table 8
4	5	150	Art. 132: Table 8

4	6	150	Art. 132: Table 8
4	87	100	Art. 132(1)
4	99	SPCFC_RSK_WGHT	
3	1	10	Art. 129: Table 6a
3	2	20	Art. 129: Table 6a
3	3	20	Art. 129: Table 6a
3	4	50	Art. 129: Table 6a
3	5	50	Art. 129: Table 6a
3	6	100	Art. 129: Table 6a
3	21	10	Art. 129(5)
3	22	20	Art. 129(5)
3	23	50	Art. 129(5)
3	24	50	Art. 129(5)
3	25	50	Art. 129(5)
3	26	100	Art. 129(5)
3	87	100	Art. 121(2)
14	88	150	Art. 128(1)
2	87	100	Art. 127(1)(b)
2	88	150	Art. 127(1)(a)
1	87	100	Art. 133(2)
1	90	1250	Art. 89(3)
1	92	250	Art. 48(4)
1	93	370	Art. 471
15	1	20	Art. 251: Table 1
15	2	50	Art. 251: Table 1
15	3	100	Art. 251: Table 1
15	4	350	Art. 251: Table 1
15	5	1250	Art. 251: Table 1
15	6	1250	Art. 251: Table 1
15	11	20	Art. 251: Table 1
15	12	50	Art. 251: Table 1
15	13	100	Art. 251: Table 1
15	14	1250	Art. 251: Table 1
15	15	1250	Art. 251: Table 1
15	16	1250	Art. 251: Table 1
15	21	40	Art. 251: Table 1
15	22	100	Art. 251: Table 1
15	23	225	Art. 251: Table 1
15	24	650	Art. 251: Table 1
15	25	1250	Art. 251: Table 1
15	26	1250	Art. 251: Table 1

15	31	40	Art. 251: Table 1
15	32	100	Art. 251: Table 1
15	33	225	Art. 251: Table 1
15	34	1250	Art. 251: Table 1
15	35	1250	Art. 251: Table 1
15	36	1250	Art. 251: Table 1
15	90	1250	Art. 251
16	87	100	

4.3 Derivation of template ZO2 of Resolution Plan

Introduction

The derivation of template Z02 requires granular information on the liability structure broken down by liabilities excluded from bail-in and liabilities not excluded from bail-in and further breakdowns by liability classes, counterparty classes.

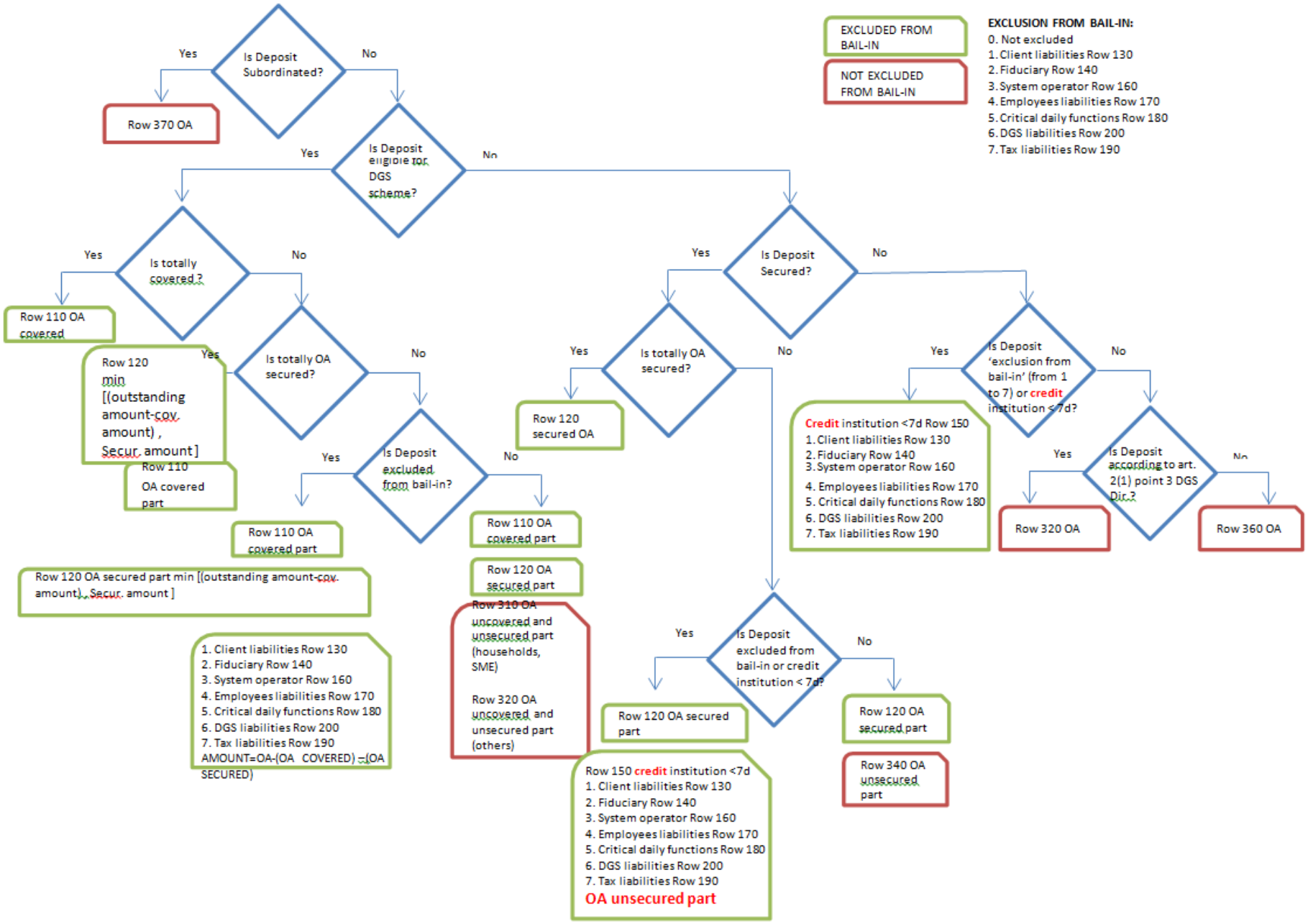
In order to easily describe the process to assign the liability to the template rows a decision tree was developed. In particular, a decision tree for the deposit liabilities and one specific for the securities.

The Tree structure

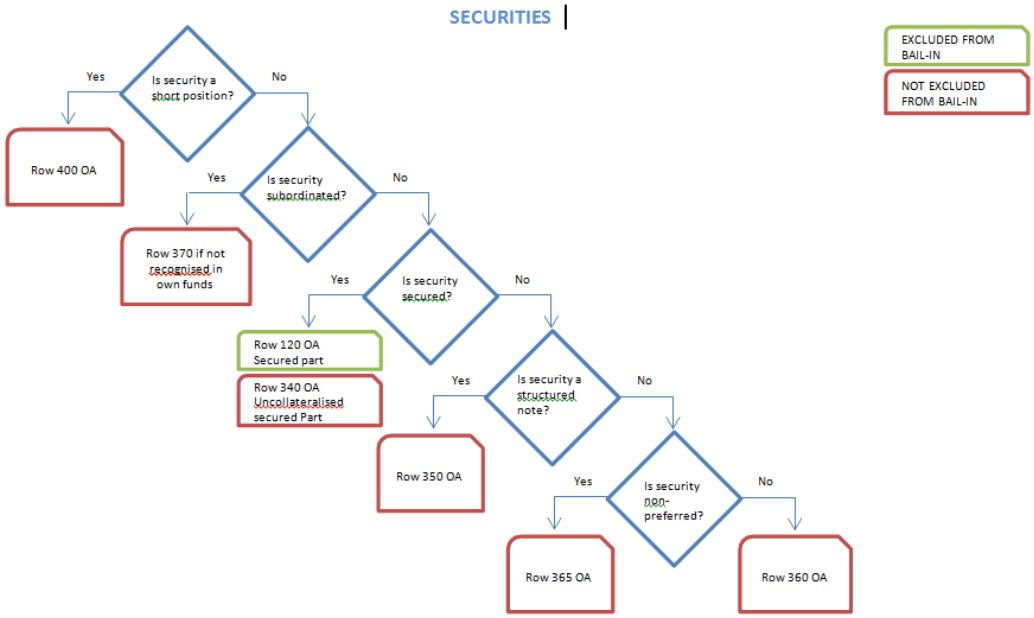
The assignment of the specific column is not covered by the decision tree and is derived by the sector classification and information related to the group structure, the law that is applicable to the contract and specific information on the securities (listed).

Tree structure for Deposit

DEPOSITS


EXCLUDED FROM BAIL-IN
NOT EXCLUDED FROM BAIL-IN
EXCLUSION FROM BAIL-IN:
0. Not excluded
1. Client liabilities Row 130
2. Fiduciary Row 140
3. System operator Row 160
4. Employees liabilities Row 170
5. Critical daily functions Row 180
6. DGS liabilities Row 200
7. Tax liabilities Row 190
Is Deposit Subordinated?
Yes
No
Row 370 OA
Is Deposit eligible for DGS scheme?
Yes
No
Is totally covered ?
Yes
No
Row 110 OA covered
Is totally OA secured?
Yes
No
Row 120 min [(outstanding amount-cov. amount) , Secur. amount]
Row 110 OA covered part
Is Deposit excluded from bail-in?
Yes
No
Row 110 OA covered part
Row 120 OA secured part min [(outstanding amount-cov. amount) , Secur. amount]
1. Client liabilities Row 130
2. Fiduciary Row 140
3. System operator Row 160
4. Employees liabilities Row 170
5. Critical daily functions Row 180
6. DGS liabilities Row 200
7. Tax liabilities Row 190
AMOUNT=OA-(OA COVERED) - (OA SECURED)
Row 120 OA secured part
Row 310 OA uncovered and unsecured part (households, SME)
Row 320 OA uncovered and unsecured part (others)
Is Deposit Secured?
Yes
No
Is totally OA secured?
Yes
No
Row 120 secured OA
Is Deposit excluded from bail-in or credit institution < 7d?
Yes
No
Row 120 OA secured part
Row 150 credit institution <7d
1. Client liabilities Row 130
2. Fiduciary Row 140
3. System operator Row 160
4. Employees liabilities Row 170
5. Critical daily functions Row 180
6. DGS liabilities Row 200
7. Tax liabilities Row 190
OA unsecured part
Row 120 OA secured part
Row 340 OA unsecured part
Is Deposit 'exclusion from bail-in' (from 1 to 7) or credit institution < 7d?
Yes
No
Credit institution <7d Row 150
1. Client liabilities Row 130
2. Fiduciary Row 140
3. System operator Row 160
4. Employees liabilities Row 170
5. Critical daily functions Row 180
6. DGS liabilities Row 200
7. Tax liabilities Row 190
Is Deposit according to art. 2(1) point 3 DGS Dir.?
Yes
No
Row 320 OA
Row 360 OA

Tree structure for Securities



5 Illustrative Examples

5.1 Illustrative Example on derivatives

Option

Plain equity call

OTC contract that gives me the option to buy 1000 shares of company xyz with strike 1000€ in the date 1/2/2018.

Type of instrument	Position in the instrument	Type of risk	Type of derivative	Type of market	Notional amount
Call option	Buyer	Equity	Not applicable	OTC	1,000,000

Notional amount is calculated as the strike price times the number of shares.

Forward

FRA

OTC forward rate agreement with a notional deposit of 1.000.000€ for 3 months and a reference rate of 3.5%. The settlement date is in 12 months. The underlying reference rate is Euribor 3m.

Type of instrument	Position in the instrument	Type of risk	Type of derivative	Type of market	Notional amount
Forward	Not applicable	Interest rate	Not applicable	OTC	1,000,000

Future

Exchange traded contract to buy 1000 barrels of oil for 50$ in 6 months (exchange rate 1.1 USD/EUR).

Type of instrument	Position in the instrument	Type of risk	Type of derivative	Type of market	Notional amount
Forward	Not applicable	Commodities	Not applicable	Organised market	45,455

The notional amount is calculated as the strike price times number of units. Since the price is in USD, it needs to be translated to EUR first.

Swap

Interest rate swap

OTC contract to exchange each year for the next 10 years, for a notional of 1.000.000€, a fixed rate of 3.5% against Euribor 12 months.

Type of instrument	Position in the instrument	Type of risk	Type of derivative	Type of market	Notional amount
Swap	Not applicable	Interest rate	Not applicable	OTC	1,000,000

FX swap

OTC contract to exchange, in 3 days, we pay 1,000,000 USD for 750,000 GBP, and in 6 months we pay 725,000 GBP for 1,000,000 USD. Exchange rates: 1.1 USD/EUR, 0.89 GBP/EUR.

Type of instrument	Position in the instrument	Type of risk	Type of derivative	Type of market	Notional amount
Swap	Not applicable	FX	Not applicable	OTC	909,091

The notional amount is considered to be the fixed amount (i.e. the amount that the banks pays first and receives after). Since it is in dollars, it is converted to euros. In other words, the derivative is considered to be about applying different exchange rates (spot and forward) to a fixed notional amount.

Cross currency swap

OTC contract to exchange initially 1M USD (pay) for 750,000 GBP (receive), with floating interest rate for USD and fixed interest rate (2%) for GBP during 5 years, and final exchange 750,000 GPB (receive) for 1M (USD) pay. Exchange rates: 1.1 USD/EUR, 0.89 GBP/EUR.

Type of instrument	Position in the instrument	Type of risk	Type of derivative	Type of market	Notional amount
Swap	Not applicable	FX	Not applicable	OTC	909,091

The contract has two legs, one with the currency and interest rate we will receive (USD floating) and another one with the currency and interest rate we will pay (GBP fixed). The contract, assuming the evolution of floating rates in the third column, would imply the following cash flows (shown for illustrative purposes):

	USD	GBP	Floating rate
0	-1000000	750000	
1	22500	-15000	2.25%
2	20000	-15000	2.00%
3	17500	-15000	1.75%
4	20000	-15000	2.00%
5	22500	-15000	2.25%
5	1000000	-750000	

The relevant leg for calculating the notional amount and providing the currency of the derivative is considered to be the leg with the amounts we are ensuring to receive in the future, i.e. USD.

According to Annex 5, part 2, paragraph 129, this kind of derivative shall be classified with the type of risk FX.

Total return swap

OTC contract to exchange the interest rate of a debt security plus its increases in the fair value, and receive decreases in the fair value of the debt securities plus floating rate and 2% spread. The reference nominal amount for the contract is 1,000,000 EUR. The bank is buying the protection.

This contract has the particularity that can be seen as a single contract or as the combination of a Credit Default Swap (CDS) and an Interest Rate Swap (IRS)[6]. When populating the input layer, two approaches can be followed:

a) One single record for the contract:

Position ID	Instrument ID	Is main component	Position in the instrument	Type of instrument	Type of risk	Type of derivative	Type of market	Notional amount	Fair value
1			Buyer	Swap	Credit derivative	Total return swap	OTC	1,000,000	20,000 €

b) Two records, one for each component of the contract:

Position ID	Instrument ID	Is main component	Position in the instrument	Type of instrument	Type of risk	Type of derivative	Type of market	Notional amount	Fair value
2	456	TRUE	Buyer	Swap	Credit derivative	Total return swap	OTC	1,000,000	30,000 €
3	456	FALSE	Not applicable	Swap	Interest rate	Not applicable	OTC	1,000,000	-10,000 €

In this case, both contracts share the same instrument ID. Furthermore, the variable “Is main component” specifies the main record from which the information will be taken. Note that the type of derivative is Total return swap, and not CDS. The input layer shall be populated with this value, transformation from CDS to Total return swap should be then done before data is populated into the input layer. The generation rules for FinRep shall take all the values from the main component, except for the fair value, which will be the sum of all components. The final result is equivalent to option a).

Several contracts with the same organised market

[6] Actually, for CoRep both derivatives have to be treated separately.

General case

Suppose that a bank has two accounts with one organised market, and several different exchange traded derivatives with each account as shown in the following table:

Account ID	Contract	Underlying asset	Maturity	Strike	Position	Number of contracts	Notional	Fair value
123	Future	AT1234567 89	31/03/2018		Long	100	1000	0[7]
123	Future	AT1234567 89	30/04/2018		Long	90	1000	0
123	Call option	AT1234567 89	31/03/2018	100	Sold	200	1000	-100
123	Future	AT1234567 89	31/03/2018		Short	50	1000	0
456	Call option	AT1234567 89	31/03/2018	100	Sold	100	1000	-50
456	Call option	AT1234567 89	31/03/2018	100	Bought	200	1000	100

In exchange traded derivatives, transactions on the same contract are added together as a single transaction by the market for each account in the market. For futures, two contracts are the same if they have the same underlying asset and maturity. For options, two contracts are the same if they have the same underlying asset, maturity and strike.

The BIRD input layer has to be populated with the net position towards each account in the market.

In this example there are two separate accounts. This means that the contracts in both accounts have to be treated separately.

For the account 123, the same contract has been entered in twice with opposite positions (green rows). In practice, the market creates one single contract with the net result. There is another future with the same underlying asset but a different maturity date, so it constitutes a separate contract.

As regards account 456, there are two transactions on the same contract, which leads to a net position in the contract. Note that the contract in account 456 is the same as the option in account 123, but given that the accounts are different, the market is not putting them together.

Position ID	Type of instrument	Position in the instrument	Type of risk	Type of derivative	Type of market	Notional amount	Fair value
1	Future	Not applicable	Equity	Not applicable	Organised market	50,000 €	0 €
2	Future	Not applicable	Equity	Not applicable	Organised market	90,000 €	0 €
3	Call option	Seller	Equity	Not applicable	Organised market	200,000 €	-100 €
4	Call option	Buyer	Equity	Not applicable	Organised market	100,000 €	50 €

[7] We suppose that the fair value is 0 because the margins are settled with the market, so the profit or loss generated by the instruments is recognised against cash.

Position 1 corresponds to the two transactions in green. Given that they are one single position, the notional amount is calculated considering the absolute value of net amount of contracts (100-50) times the notional amount per each contract.

Positions 2 and 3 correspond to the other two transactions with account 123.

Position 4 corresponds to the two transactions with the same contract in the account 456 (in blue). In this case, supposing that there is a fair value, the fair value positions will be the sum of all the fair values.

Master netting agreements

Master netting agreements are relevant for reporting purposes in case they imply an accounting netting (FinRep) or prudential netting (CoRep). The accounting netting needs to be in accordance to IAS 32. The variable Netting applicability is set “accounting netting”.

In these cases, the challenge is how to allocate the net amounts between the derivative positions that are part of the agreement.

Master netting agreements can be collateralized.

Because master netting agreements have their own characteristics (like whether they are applicable for accounting or prudential purposes, and the relationships to collateral), we propose to create a separate cube.

Single product

The following transactions are included in a master netting agreement:

Transaction	Position in the instrument	Type of risk	Type of instrument	Notional amount	Fair value
1	Buyer	Equity	Call option	2000	200
2	Seller	Equity	Call option	1000	-50
3	Seller	Equity	Call option	1000	-50
4	Seller	Equity	Call option	1000	-50
				5000	50

According to FinRep, the notional amount cannot be netted, so the final result for such a case would be:

		Carrying amount		Notional amount	
		010	020	030	040
070	**Equity**				
080	of which: economic hedges				
090	OTC options	50		5000	3000

The input layer would contain two cubes, one for the netting agreement:

Master netting agreement ID	Netting applicability	Main position ID
abc	Accounting netting	1

And for the derivatives:

Master netting agreement ID	Position in the instrument	Type of instrument	Type of risk	Type of derivative	Type of market	Notional amount	Fair value
abc	Buyer	Call option	Equity	Not applicable	OTC	2,000 €	200 €
abc	Seller	Call option	Equity	Not applicable	OTC	1,000 €	-50 €
abc	Seller	Call option	Equity	Not applicable	OTC	1,000 €	-50 €
abc	Seller	Call option	Equity	Not applicable	OTC	1,000 €	-50 €

A derivation rule should generate the carrying amount, by assigning the sum of all fair values to the position marked in the master netting agreement cube.

Master netting agreement ID	Position in the instrument	Type of instrument	Type of risk	Type of derivative	Type of market	Notional amount	Fair value	Carrying amount
abc	Buyer	Call option	Equity	Not applicable	OTC	2,000 €	200 €	50 €
abc	Seller	Call option	Equity	Not applicable	OTC	1,000 €	-50 €	0 €
abc	Seller	Call option	Equity	Not applicable	OTC	1,000 €	-50 €	0 €
abc	Seller	Call option	Equity	Not applicable	OTC	1,000 €	-50 €	0 €

Cross product

Let's suppose now a master netting agreement with the following instruments:

Position in the instrument	Type of risk	Type of instrument	Notional amount	Fair value
Not applicable	Equity	Forward	2000	200
Not applicable	Equity	Swap	1000	-50
Seller	Interest rate	Call option	3000	-75
Buyer	Credit	Total return swap	4000	75
			10000	150

In Finrep, this should be reported as:

		Carrying amount		Notional amount	
		Financial assets Held for trading and trading	Financial liabilities Held for trading and trading	Total Trading	of which: sold
		010	020	030	040
010	**Interest rate**				
030	OTC options			3000	3000
070	**Equity**				
100	OTC other	150[8]		3000	
190	**Credit**				
230	Total return swap			4000	

The master netting agreements cube should indicate the preferred contract for assigning the carrying amount:

Master netting agreement ID	Netting applicability	Main position ID
def	Accounting netting	1

The input layer for the derivatives would be:

Position ID	Master netting agreement ID	Position in the instrument	Type of instrument	Type of risk	Type of derivative	Type of market	Notional amount	Fair value
1	def	Not applicable	Forward	Equity	Not applicable	OTC	2,000 €	200 €
2	def	Not applicable	Swap	Equity	Not applicable	OTC	1,000 €	-50 €
3	def	Seller	Call option	Interest rate	Not applicable	OTC	3,000 €	-75 €
4	def	Buyer	Swap	Credit	Total return swap	OTC	4,000 €	75 €

[8] Depending on the banks' decision

After applying the derivation rule, the carrying amount would be assigned:

Position in the instrument	Type of instrument	Type of risk	Type of derivative	Type of market	Notional amount	Fair value	Carrying amount
Not applicable	Forward	Equity	Not applicable	OTC	2,000 €	200 €	150 €
Not applicable	Swap	Equity	Not applicable	OTC	1,000 €	-50 €	0 €
Seller	Call option	Interest rate	Not applicable	OTC	3,000 €	-75 €	0 €
Buyer	Swap	Credit	Total return swap	OTC	4,000 €	75 €	0 €

5.2 Illustrative example on Securitisation

Traditional securitisations

Case A: Traditional securitisation with subordinated loan to the SPV

Description

The bank transfers a pool of loans to an SPV as part of a traditional securitisation according to the CRR. The portfolio consists of three loans (instrument identifier # 1,2,3) with an outstanding nominal amount of 100, 110 and 120 EUR. The carrying amount is identical. The loans are measured at amortised costs on the balance sheet of the bank and the carrying amount equals to the outstanding nominal amount. In order to retain the junior tranche of 10% of the loan pool, the bank gives a subordinate loan to the SPV (instrument identifier # 10).

In this example the securitised loans are entirely recognised on the balance sheet. The subordinate loan is not recorded in the balance sheet as an asset, but modifies the amount of liabilities recognised for the securitisation. Therefore, the accounting attributes related to the positions are not significant.

Treatment in the main output frameworks

Information on the securitisation is reported in FinRep template F15.00. The carrying amount of the associated liability is derived by subtracting the outstanding nominal amount of the subordinated loan (33 EUR) from the carrying amount of the loan portfolio (330 EUR).

	References		Transferred financial assets entirely recognized					
			Transferred assets			Associated liabilities *ITS V.Part 2.181*		
			Carrying amount	**Of which: securitizations**	**Of which: repurchase agreements**	**Carrying amount**	**Of which: securitizations**	**Of which: repurchase agreements**
			IFRS 7.42D.(e), Annex V.Part 1.27	*IFRS 7.42D(e); CRR art 4(1)(61)*	*IFRS 7.42D(e); Annex V.Part 2.183-184*	*IFRS 7.42D(e)*	*IFRS 7.42D.(e)*	*IFRS 7.42D(e); Annex V.Part 2.183-184*
			010	020	030	040	050	060
131	**Financial assets at amortised cost**	*IFRS 7.8 (f); IFRS 9.4.1.2*						
132	Debt securities	*Annex V.Part 1.31*						
133	Loans and advances	*Annex V.Part 1.32*	330	330		297	297	

The securitised assets and the subordinate loan are reported to AnaCredit. Note that the junior tranche is sometimes represented by ABSs, which would be reported in SHS but not AnaCredit. Given that the accounting attributes for these positions is not significant, and for consistency with SHS, we propose that the accounting and risk-related attributes take the value not applicable for these variables.

Regarding the sources of encumbrance, we consider that the assets are not per se encumbered, because the loan may be freely disposed of. Of course, this does not prevent the loan for being encumbered for other reasons.

Instrument identifier	Accounting classification	Source of encumbrance	Recognition	Type of securitisation	Carrying amount	Outstanding amount
1	Amortised cost	Deposits other than repurchase agreements	Entirely recognised	Traditional securitisation	100	100
2	Amortised cost	Deposits other than repurchase agreements	Entirely recognised	Traditional securitisation	110	110
3	Amortised cost	Deposits other than repurchase agreements	Entirely recognised	Traditional securitisation	120	120
10	Not applicable	No encumbrance	Entirely derecognised	Not applicable		33

Population of the input layer

Loan cube:

Instrument ID	Securitisation/ transfer identifier	Relationship with securitisation or credit transfer	Sources of encumbrance	accounting classification	Carrying amount	Outstanding nominal amount
1	SEC 1	securitised/transferred asset	deposits other than repurchase agreements	Amortised cost	100	100
2	SEC 1	securitised/transferred asset	deposits other than repurchase agreements	Amortised cost	110	110
3	SEC 1	securitised/transferred asset	deposits other than repurchase agreements	Amortised cost	120	120
10	SEC 1	Credit enhancement	Not encumbered	Not applicable		33

Liability cube:

Instrument ID	Securitisation/transfer identifier	Relationship with securitisation or credit transfer	accounting classification	Carrying amount
7	SEC 1	Not necessary for liabilities	Amortised costs(liabilities)	324

Securitisation and other asset transfers

Securitisation/ transfer identifier	Type of risk transfer	Treatment of securitised/transferred assets in balance sheet
SEC 1	traditional securitisation	entirely recognised

Transactions to counterparties: In the example the associated liability is a deposit, but may also reflected as different type of liability. The dummy variable indicates the counterparty provide by the bank.

Transaction identifier	Type of transaction	Counterparty identifier	Counterparty role in a transaction
SEC 1	Securitisation/Transfer	Reporting bank	orginator
SEC 1	Securitisation/Transfer	SPV	transferee
SEC 1	Securitisation/Transfer	Reporting bank	servicer
7	Deposits	Dummy - Banks shall create the dummy counterparties with the sectors they consider	Customer

Case B: Traditional securitisation with credit line and a derivative

Description

The bank transfers a pool of loans to an SPV as part of a traditional securitisation according to the CRR. The portfolio consists of three loans (instrument identifier # 1,2,3) with an carrying amount of 110, 120 and 130 EUR. A credit line with the SPV provides liquidity support and a different credit line is established for the purpose of credit enhancement (instrument identifier # 20 and 21, respectively). The bank arranges an interest rate swap with the SPV to exchange floating against fixed payments (instrument identifier #25).

Treatment in the main output frameworks

In FinRep F 15:

	References		**Transferred financial assets entirely recognized**					
			Transferred assets			**Associated liabilities** *ITS V.Part 2.181*		
			Carrying amount	**Of which: securitizations**	**Of which: repurchase agreements**	**Carrying amount**	**Of which: securitizations**	**Of which: repurchase agreements**
			IFRS 7.42D.(e), Annex V.Part 1.27	*IFRS 7.42D(e); CRR art 4(1)(61)*	*IFRS 7.42D(e); Annex V.Part 2.183-184*	*IFRS 7.42D(e)*	*IFRS 7.42D.(e)*	*IFRS 7.42D(e); Annex V.Part 2.183-184*
			010	020	030	040	050	060
131	**Financial assets at amortised cost**	*IFRS 7.8 (f); IFRS 9.4.1.2*						
132	Debt securities	*Annex V.Part 1.31*						
133	Loans and advances	*Annex V.Part 1.32*	360	360		360	360	

In AnaCredit:

Instrument identifier	Accounting classification	Recognition	Type of securitisation	Carrying amount	Outstanding amount
1	Amortised cost	Entirely recognised	Traditional securitisation	110	120
2	Amortised cost	Entirely recognised	Traditional securitisation	120	130
3	Amortised cost	Entirely recognised	Traditional securitisation	130	140
20	Not applicable	Entirely derecognised	Not applicable		10
21	Not applicable	Entirely derecognised	Not applicable		35

Population of the input layer

Loan cube

Instrument ID	Securitisation/transfer identifier	Relationship with securitisation or credit transfer	Sources of encumbrance	accounting classification	Carrying amount	Outstanding nominal amount
1	SEC 1	securitised/transferred asset	deposits other than repurchase agreements	Amortised cost	110	120
2	SEC 1	securitised/transferred asset	deposits other than repurchase agreements	Amortised cost	120	130
3	SEC 1	securitised/transferred asset	deposits other than repurchase agreements	Amortised cost	130	140

Cube of credit lines

Instrument ID	Securitisation/transfer identifier	Relationship with securitisation or credit transfer	Purpose	Commitment amount at inception
20	SEC 1	Liquity support	Other purposes	10
21	SEC 1	Credit enhancement	Other purposes	35

Cube other financial derivatives

Instrument ID	Securitisation/transfer identifier	Relationship with securitisation or credit transfer
25	SEC 1	Exposure to securitisations other than liquidity support or credit enhancement

Liabilities cube

Instrument ID	Securitisation/transfer identifier	Relationship with securitisation or credit transfer	Type of instrument	accounting classification	Carrying amount
7	SEC 1	Not necessary for liabilities	Deposits (or ABSs)	Amortised costs(liabilities)	360

Cube transactions to counterparties

Transaction identifier	Type of transaction	Counterparty identifier	Counterparty role in a transaction
SEC 1	Securitisation/Transfer	Reportig bank	orginator
SEC 1	Securitisation/Transfer	SPV	transferee
SEC 1	Securitisation/Transfer	Reportig bank	servicer
1	Loans	person	Customer
2	Loans	person	Customer
3	Loans	person	Customer
7	Deposits	Dummy - Banks shall create the dummy counterparties with the sectors they consider	Customer
20	Credit line	SPV	Customer
21	Credit facility	SPV	Customer
25	Derivatives	SPV	Counterparty

Second case - Instruments to be reported which are not on in the bank books

Description

Transaction 1: The bank transfers a loan (ID 10) with an outstanding nominal amount 200 EUR to bank ABC. The loan is entirely derecognised from its balance sheet. The bank is still servicer of the loans. The current creditor (bank ABC) is reporting to AnaCredit.

Transaction 2: The bank transfers a loan (ID 11) with an outstanding nominal amount 300 EUR. The loan is entirely derecognised from its balance sheet. The current creditor (bank EFG) is not reporting to AnaCredit.

Treatment in the main output frameworks

Transaction 1: There is no reporting requirement in AnaCredit. The loans are reported in FinRep template F15 in the column “Principal amount outstanding of transferred financial assets entirely derecognised for which the institution retains servicing rights”.

Transaction 2: The loan is reported to AnaCredit. The regulation Annex 1 states that accounting and prudential attributes are not required. The reporting of some other attributes are left for national discretion. The reporting in FinRep is equivalent to transaction 1.

Population of the input layer

Cube of instruments: The variable “gave risk to credit risk in the past” needs to be filled, if the bank is not the creditor of the loans. In case the value is FALSE, the loan is not FinRep F15.

Instrument ID	Securitisation/ transfer identifier	Relationship with securitisation or credit transfer	accounting classification	Carrying amount	Outstanding nominal amount	Gave rise to credit risk in the past
10	Transfer 1	securitised/transferred asset	Not applicable		200	TRUE
11	Transfer 2	securitised/transferred asset	Not applicable		300	TRUE

Securitisation and other asset transfers

Securitisation/ transfer identifier	Type of risk transfer	Treatment of securitised/transferred assets in balance sheet
Transfer 1	Other credit transfer	Entirely derecognised
Transfer 2	Other credit transfer	Entirely derecognised

Transactions to counterparties:

Transaction identifier	Type of transaction	Counterparty identifier	Counterparty role in a transaction
Transfer 1	Securitisation/Transfer	Bank ABC	transferee
Transfer 1	Securitisation/Transfer	Reporting bank	servicer
10	Loans	Legal entitiy	Customer
10	Loans	Reporting bank	servicer
10	Loans	Bank ABC	creditor
Transfer 2	Securitisation/Transfer	Bank EFG	transferee
Transfer 2	Securitisation/Transfer	Reporting bank	servicer
11	Loans	Legal entitiy	Customer
11	Loans	Reporting bank	Servicer
11	Loans	Bank EFG	Customer

Counterparties:

Counterparty identifier	Is reporting to AnaCredit
Bank ABC	TRUE
Bank EFG	FALSE

5.3 Illustrative example on Joint liability

Two approaches are currently followed by banks to handle joint liabilities:

1) the joint liability is treated as a specific counterparty;
2) only the components of the joint liability are considered as counterparties.

The solution adopted for the BIRD input layer is compatible with both approaches. Some information is related to both approaches. In particular for cube *Counterparties (CNTRPRTS)*:

- *Counterparty identifier*
- Other variables related to the counterparty (name, institutional sector, NACE, country, etc.)
- *Note: in approach 1 the joint counterparty has got a specific identifier.*

For all the cubes related to instruments:

- *Instrument unique identifier*
- Other variables related to the instrument (currency, purpose, interest rate, outstanding nominal amount, etc.)

For the cube *Transactions-Counterparties (TRNSCTNS_CNTRPRTS)*:

- *Counterparty identifier*
- *Transaction identifier*
- *Counterparty role in a transaction*
- Note: in case of an instrument to a joint counterparty, for approach 1 there is only one record, whereas for approach 2 there are several records.

Under approach 1 (the joint liability is treated as a specific counterparty) the following information has to be provided.

For cube *Joint counterparties (JNT_CNTRPRTS)*:

- *Counterparty identifier*
- *Joint counterparty component (JNT_CNTRPRTY_CMPNNT)*
- *Joint counterparty percentage (JNT_CNTRPRTY_PRCNTG)* (by multiplying it by the outstanding nominal amount, the joint liability amount can be obtained)

For approach 2 (only the components of the joint liability are considered as counterparties) the following information has to be reported.

For cube *Transactions-Counterparties (TRNSCTNS_CNTRPRTS)*:

- *Joint liability (JNT_LBLTY)*, which can assume the values 0 (= no joint liability), 1 (= joint liability – main counterparty), 2 (= joint liability – secondary counterparty)[9]

Joint liability amount (JNT_LBLTY_AMNT): a schematic representation is displayed in the following tables. Green parts refer to approach 1, whereas orange parts refer to approach 2.

[9] This variable is used to determine the counterparty's features (institutional sector, NACE, country, etc.) needed to classify the instrument. The possibility to classify the joint counterparty differently from its components cannot be handled in approach 2.

COUNTERPARTIES

Counterparty identifier	Name	Institutional sector	Country	……..
A	……	……	……	……
B	……	……	……	……
AB	……	……	……	……
……	……	……	……	……

INSTRUMENT

Instrument unique ID	Currency	Purpose	Interest rate	Outstanding nominal amount	……..
InsID1	……	……	……	……	……
InsID2	……	……	……	……	……
InsID3	……	……	……	……	……
……	……	……	……	……	……

TRANSACTIONS-COUNTERPARTIES

Counterparty identifier	Transaction Identifier	Counterparty role in a transaction	Joint liability	Joint liability amount	……..
A	InsID1	Debtor	0 = no joint liability	0	……
B	InsID2	Debtor	0 = no joint liability	0	……
AB	InsID3	Debtor			……
A	InsID3	Debtor	1 = main counterparty	……	……
B	InsID3	Debtor	2 = secondary counterparty	……	……
……	……	……	……	……	……

JOINT LIABILITIES

Counterparty identifier	Joint counterparty component	Joint counterparty percentage
AB	A	……
AB	B	……
……	……	……

5.4 Illustrative example on perspective information

In this example is illustrated how the perspective of the agent that is reporting the information can influence the probability of default of the counterparty and the concept of related party following the IAS 24.

Assuming one group ABC that is composed by entity:

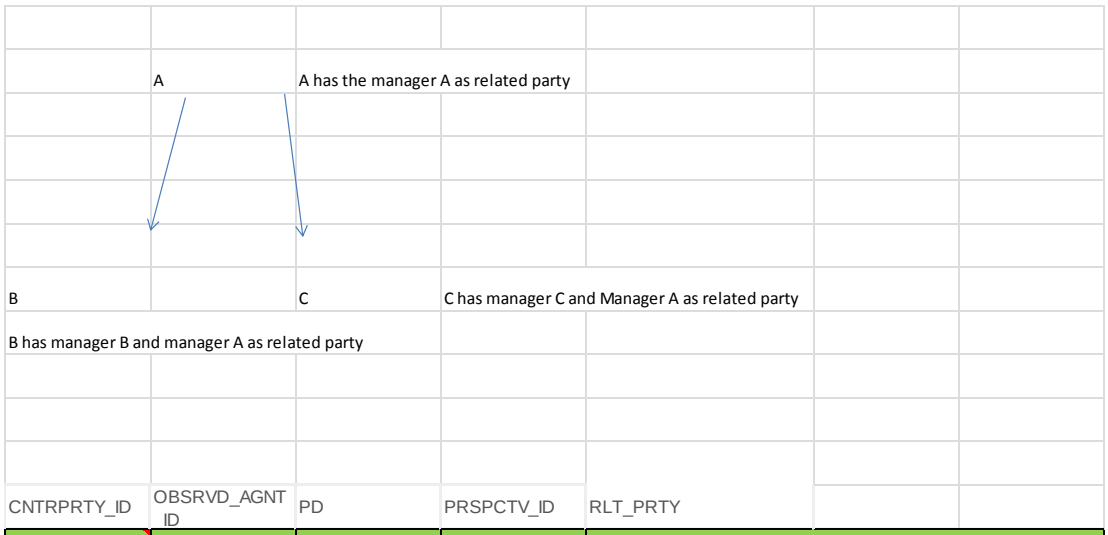
- A
- B
- C

Entity A has as a related party its own manager “manager A”

Entity B has as a related party its own manager “manager B” and “manager A”

Finally entity C has as a related party its own manager “manager C” and “manager A”

In the example below it is shown how the point of view of the entity that is evaluating the related party change the condition of related party and the evaluation of the probability of default that can be assigned to the specific counterparty. The point of view is indicated with variable perspective id



CNTRPRTY_ID	OBSRVD_AGNT ID	PD	PRSPCTV_ID	RLT_PRTY
manager B	B	0.001	B	F(key management personnel of the entity or its parent
Manager A	B	0.0002	B	F(key management personnel of the entity or its parent
Manager C	B	0.0004	B	H not a related party
A	B	0.001	B	A (the parent
C	B	0.0004	B	g(other related parties)
manager B	C	0.003	C	H not a related party
Manager A	C	0.001	C	F(key management personnel of the entity or its parent
Manager C	C	0.0002	C	F(key management personnel of the entity or its parent
manager B	A	0.0004	A	H not a related party
Manager A	A	0.003	A	F(key management personnel of the entity or its parent
Manager C	A	0.001	A	H not a related party
manager B	ABC	0.0002	ABC	H not a related party
Manager A	ABC	0.0004	ABC	F(key management personnel of the entity or its parent)
Manager C	ABC	0.003	ABC	H not a related party

5.5 Illustrative examples on (Reverse) repurchase agreements

Description of the scenario

when	***what***
initial setup	Bank A owns securities (of type xyz) of 200, the passive side of Bank A consists of equity instruments only.
t0	Bank A & Bank B enter into a repo / reverse repo contract with a maturity data of three month. For Bank A, who gets cash (100) for giving securities (of type xyz), this is a Repurchase agreement, while for Bank B, who gives cash (100) for getting securities, this is a Reverse repurchase loan.
t1	Bank A & Bank D enters into a reverse repo / repo with Bank D, where Bank A gets security for giving cash (25). Therefore for Bank A it's a Reverse repurchase loan while for Bank D it's a Repurchase agreement.
t2	Bank A & Bank B enter into another repo / reverse repo contract with a value of 125 where A gives security for getting cash. So for Bank A it's again a Repurchase agreement, while for Bank B it's a Reverse repurchase loan.

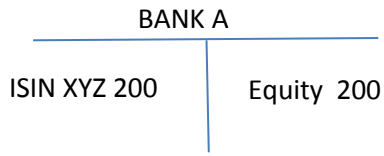
Please note that we present records from different reporting agents in the same cube in order to illustrate the whole situation, the distinction to which reporting agent a particular record belongs can be achieved by the value of the variable Observed agent internal identifier (OBSRVD_AGNT_INTRNL_ID). Please also note that the value of the variable Reference date (DT_RFRNC) allows distinguishing between the different points in time.

For the sake of completeness we also note that the columns indicated in green represent the dimension(s) (i.e. primary key) of each cube.

Representation in the input layer

At time t0

Bank A balance sheet

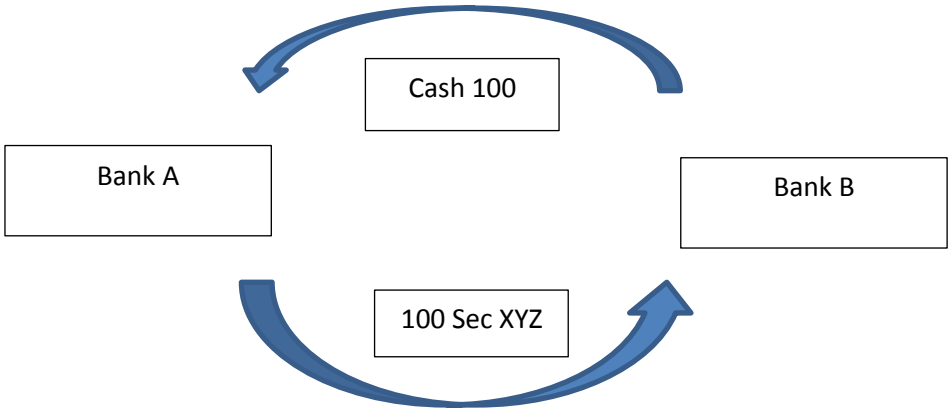


Starting from Bank A's perspective of the situation there is the 200 owned securities represented in the cube of Owned securities (OWND_SCRTS):

Owned Securities (OWND_SCRTS)			
OWND_SCRTY_ID	OBSRVD_AGNT_INTRNL_ID	SCRTY_ID	CRRYNG_AMNT
sec1	Bank A	xyz	200

After Bank A & Bank B enter the repo / reverse repo contract

In particular Bank A gets cash (100) for giving securities (of type xyz), this is a Repurchase agreement, while for Bank B, who gives cash (100) for getting securities, this is a Reverse repurchase loan, the duration of the REPO is three months.



Bank A balance sheet after the REPO

BANK A	
ISIN XYZ 200 Cash 100 (pledge given 100)	Equity 200 REPO 100

Involved cubes.

Bank A lists a record in the cube Repurchase agreement (RPRCHS_AGRMNT):

Repurchase agreement (RPRCHS_AGRMNT)				
DT_RFRNC	INSTRMNT_UNQ_ID	OBSRVD_AGNT_INTRNL_ID	DT_STTLMNT	CRRYNG_AMNT
t0	repoAB1	Bank A	t0	100

With related record in the cube Repurchase agreements-securities (RPRCHS_AGRMNTS_SCRTS):

Repurchase agreement-securities (RPRCHS_AGRMNT_SCRTS)				
OBSRVD_AGNT_INTRNL_ID	DT_RFRNC	INSTRMNT_UNQ_ID	SCRTY_ID	ENCMBRD_AMNT
Bank A	t0	repoAB1	xyz	100

Linking to the cube Registry table of securities (RGSTRY_TBL_SCRTS):

Registry table of securities (RGSTRY_TBL_SCRTS)		
SCRTY_ID	CRRNCY_DNMNTN	…
xyz	EURO	

Which allows us to establish a connection between the liability (i.e. the Repurchase agreement) and the asset (i.e. the Owned securities).

Due to the fact that there is an obligation for Bank A to exchange the items at the end of the maturity, there arises an off-balance sheet item for Bank A in the form of a Financial guarantee given (FNNCL_GRNT_GVN):

Financial guarantees given (FNNCL_GRNTS_GVN)					
DT_RFRNC	CRDT_FCLTY_UNQ_ID	TYP_FCLTY	OBSRVD_AGNT_INTRNL_ID	GRNTD_AMNT	OFF_BLNC_SHT_AMNT
t0	crdtFcltyId(repoAB1)	To provide guarantees	Bank A	100	100

While for Bank B there arises a Financial guarantee received.

Bank B on the other hand lists a new record in the cube Reverse repurchase loans (RVRS_RPRCHS_LNS):

Reverse repurchase loans (RVRS_RPRCHS_LNS)					
DT_RFRNC	INSTRMNT_UNQ_ID	OBSRVD_AGNT_INTRNL_ID	DT_STTLMNT	DT_LGL_FNL_MTRTY	CRRYNG_AMNT
t0	reverseRepoAB1	Bank B	t0	t0 + 3 month	100

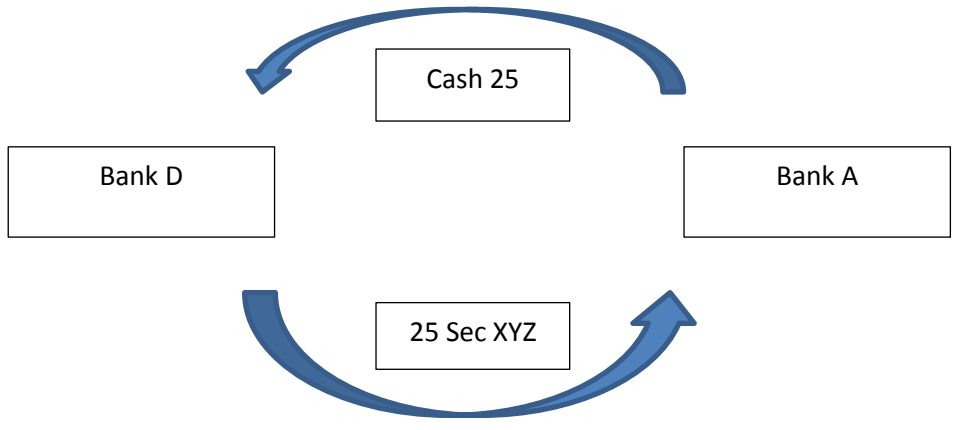
With related records in the cubes Instruments-protections (INSTRMNTS_PRTCTNS) and Securities protection (SCRTS_PRTCTN):

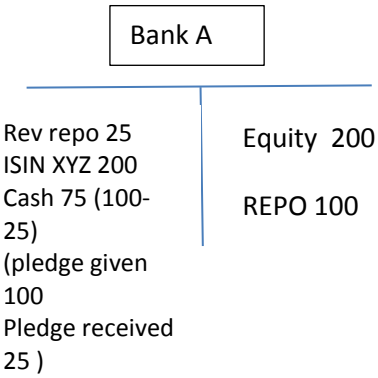
Instruments-protections (INSTRMNTS_PRTCTNS)					
OBSRVD_AGNT_INTRNL_ID	DT_RFRNC	INSTRMNT_UNQ_ID	PRTCTN_ID	PRTCTN_ALLCTD_VL	…
Bank B	t0	reverseRepoAB1	securityProtectionB1	100	

Securities protection (SCRTS_PRTCTN)				
DT_RFRNC	PRTCTN_ID	OBSRVD_AGNT_INTRNL_ID	SCRTY_ID	…
t0	securityProtectionB1	Bank B	xyz	

At time t1

Now Bank A enters into another repo / reverse repo with Bank D. For Bank A it's a Reverse repurchase loan (i.e. getting securities for giving cash), while for Bank D it's a Repurchase agreement. Bank A is giving 25 cash to Bank D to have 25 Securities XYZ





In term of input cubes

Therefore Bank A lists a new record in the cube Reverse repurchase loans (RVRS_RPRCHS_LNS):

Reverse repurchase loans (RVRS_RPRCHS_LNS)					
DT_RFRNC	INSTRMNT_UNQ_ID	OBSRVD_AGNT_INTRNL_ID	DT_STTLMNT	DT_LGL_FNL_MTRTY	CRRYNG_AMNT
t0	reverseRepoAB1	Bank B	t0	t0 + 3 month	100
t1	reverseRepoAB1	Bank B	t0	t0 + 3 month	100
t1	reverseRepoDA1	Bank A	t1	?	25

With related records in the cubes Instruments-protections (INSTRMNTS_PRTCTNS) and Securities protection (SCRTS_PRTCTN):

Instruments-protections (INSTRMNTS_PRTCTNS)					
OBSRVD_AGNT_INTRNL_ID	DT_RFRNC	INSTRMNT_UNQ_ID	PRTCTN_ID	PRTCTN_ALLCTD_VL	…
Bank B	t0	reverseRepoAB1	securityProtectionB1	100	
Bank B	t1	reverseRepoAB1	securityProtectionB1	100	
Bank A	t1	reverseRepoDA1	securityProtectionD1	25	

Securities protection (SCRTS_PRTCTN)				
DT_RFRNC	PRTCTN_ID	OBSRVD_AGNT_INTRNL_ID	SCRTY_ID	…
t0	securityProtectionB1	Bank B	xyz	
t1	securityProtectionB1	Bank B	xyz	
t1	securityProtectionD1	Bank A	xyz	

While Bank D lists a new record in the cubes Repurchase agreement (RPRCHS_AGRMNT) and Repurchase agreements-securities (RPRCHS_AGRMNTS_SCRTS):

Repurchase agreement (RPRCHS_AGRMNT)				
DT_RFRNC	INSTRMNT_UNQ_ID	OBSRVD_AGNT_INTRNL_ID	DT_STTLMNT	CRRYNG_AMNT
t0	repoAB1	Bank A	t0	100
t1	repoAB1	Bank A	t0	100
t1	repoDA1	Bank D	t1	25

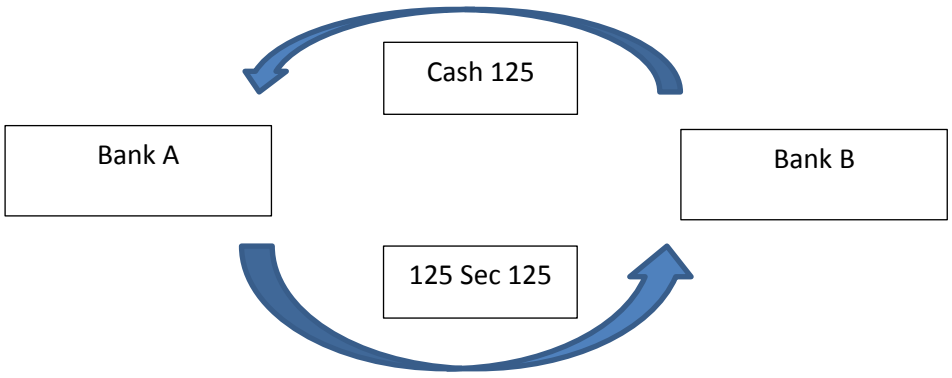
Repurchase agreement-securities (RPRCHS_AGRMNT_SCRTS)				
OBSRVD_AGNT_INTRNL_ID	DT_RFRNC	INSTRMNT_UNQ_ID	SCRTY_ID	ENCMBRD_AMNT
Bank A	t0	repoAB1	xyz	100
Bank A	t1	repoAB1	xyz	100
Bank D	t1	repoDA1	xyz	25

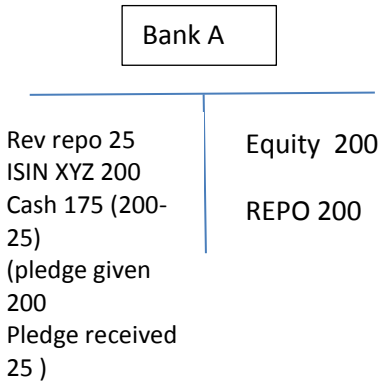
The related off-balance sheet items, in the form of Financial guarantees given (FNNCL_GRNTS_GVN) is given as follows:

Financial guarantees given (FNNCL_GRNTS_GVN)					
DT_RFRNC	CRDT_FCLTY_UNQ_ID	TYP_FCLTY	OBSRVD_AGNT_INTRNL_ID	GRNTD_AMNT	OFF_BLNC_SHT_AMNT
t0	crdtFcltyId(repoAB1)	To provide guarantees	Bank A	100	100
t1	crdtFcltyId(repoAB1)	To provide guarantees	Bank A	100	100
t1	crdtFcltyId(repoDA1)	To provide guarantees	Bank D	25	25

At time t2

Bank A & Bank B enter into a similar repo / reverse repo contract as at time t0, bank A receives 125 cash and provides to bank B 125 XYZ securities





resulting in the following input layer:

Repurchase agreement (RPRCHS_AGRMNT)				
DT_RFRNC	INSTRMNT_UNQ_ID	OBSRVD_AGNT_INTRNL_ID	DT_STTLMNT	CRRYNG_AMNT
t0	repoAB1	Bank A	t0	100
t1	repoAB1	Bank A	t0	100
t1	repoDA1	Bank D	t1	25
t2	repoAB1	Bank A	t0	100
t2	repoDA1	Bank D	t1	25
t2	repoAB2	Bank A	t2	125

Repurchase agreement-securities (RPRCHS_AGRMNT_SCRTS)				
OBSRVD_AGNT_INTRNL_ID	DT_RFRNC	INSTRMNT_UNQ_ID	SCRTY_ID	ENCMBRD_AMNT
Bank A	t0	repoAB1	xyz	100
Bank A	t1	repoAB1	xyz	100
Bank D	t1	repoDA1	xyz	25
Bank A	t2	repoAB1	xyz	100
Bank D	t2	repoDA1	xyz	25
Bank A	t2	repoAB2	xyz	125

Reverse repurchase loans (RVRS_RPRCHS_LNS)					
DT_RFRNC	INSTRMNT_UNQ_ID	OBSRVD_AGNT_INTRNL_ID	DT_STTLMNT	DT_LGL_FNL_MTRTY	CRRYNG_AMNT
t0	reverseRepoAB1	Bank B	t0	t0 + 3 month	100
t1	reverseRepoAB1	Bank B	t0	t0 + 3 month	100
t1	reverseRepoDA1	Bank A	t1	?	25
t2	reverseRepoAB1	Bank B	t0	t0 + 3 month	100
t2	reverseRepoDA1	Bank A	t1		25
t2	reverseRepoAB2	Bank B	t2		125

Instruments-protections (INSTRMNTS_PRTCTNS)					
OBSRVD_AGNT_INTRNL_ID	DT_RFRNC	INSTRMNT_UNQ_ID	PRTCTN_ID	PRTCTN_ALLCTD_VL	…
Bank B	t0	reverseRepoAB1	securityProtectionB1	100	
Bank B	t1	reverseRepoAB1	securityProtectionB1	100	
Bank A	t1	reverseRepoDA1	securityProtectionD1	25	
Bank B	t2	reverseRepoAB1	securityProtectionB1	100	
Bank A	t2	reverseRepoDA1	securityProtectionD1	25	
Bank B	t2	reverseRepoAB2	securityProtectionB2	125	

Securities protection (SCRTS_PRTCTN)				
DT_RFRNC	PRTCTN_ID	OBSRVD_AGNT_INTRNL_ID	SCRTY_ID	…
t0	securityProtectionB1	Bank B	xyz	
t1	securityProtectionB1	Bank B	xyz	
t1	securityProtectionD1	Bank A	xyz	
t2	securityProtectionB1	Bank B	xyz	
t2	securityProtectionD1	Bank A	xyz	
t2	securityProtectionB2	Bank B	xyz	

Financial guarantees given (FNNCL_GRNTS_GVN)					
DT_RFRNC	CRDT_FCLTY_UNQ_ID	TYP_FCLTY	OBSRVD_AGNT_INTRNL_ID	GRNTD_AMNT	OFF_BLNC_SHT_AMNT
t0	crdtFcltyId(repoAB1)	To provide guarantees	Bank A	100	100
t1	crdtFcltyId(repoAB1)	To provide guarantees	Bank A	100	100
t1	crdtFcltyId(repoDA1)	To provide guarantees	Bank D	25	25
t2	crdtFcltyId(repoAB1)	To provide guarantees	Bank A	100	100
t2	crdtFcltyId(repoDA1)	To provide guarantees	Bank D	25	25
t2	crdtFcltyId(repoAB2)	To provide guarantees	Bank A	125	125

5.6 Illustrative example on credit quality

Specific instructions to feed the input layer are provided below, with reference to some examples described in the Part II of the AnaCredit Manual.

Example 1 illustrates the reporting in the case of 'transaction based' assessment in line with paragraph 154 of Annex V to the ITS applying the definition of default at the level of an individual instrument in line with Article 178(1) of the CRR.

	BIRD INPUT					ANACREDIT OUTPUT			
INSTRUMENT IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**DATE OF PERFORMING STATUS**	**ASSESSMENT APPROACH FOR CREDIT QUALITY STATUS**	**IS RETAIL EXPOSURE**	**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**	**PERFORMING STATUS**	**DATE OF PERFORMING STATUS**
INS#1	NON-PERFORMING BUT NOT IN DEFAULT	31/12/2017	12/09/2019	TRANSACTION BASED	TRUE	NOT IN DEFAULT	31/12/2017	NON-PERFORMING	12/09/2019
INS#2	DEFAULT BECAUSE MORE THAN 90/180 DAYS PAST DUE	20/09/2019	20/09/2019	TRANSACTION BASED	TRUE	DEFAULT BECAUSE MORE THAN 90/180 DAYS PAST DUE	20/09/2019	NON-PERFORMING	20/09/2019
COUNTERPARTY IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**IS PULLING EFFECT**			**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**		
DEB#1	NOT APPLICABLE	-	FALSE			-	-		

Example 2 illustrates the reporting in the case of 'debtor based' assessment in line with paragraph 154 of Annex V to the ITS applying the definition of default at the level of a debtor.

	BIRD INPUT					ANACREDIT OUTPUT			
INSTRUMENT IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**DATE OF PERFORMING STATUS**	**ASSESSMENT APPROACH FOR CREDIT QUALITY STATUS**	**IS RETAIL EXPOSURE**	**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**	**PERFORMING STATUS**	**DATE OF PERFORMING STATUS**
INS#1	NOT APPLICABLE	-	20/09/2019	DEBTOR BASED	TRUE	NOT APPLICABLE	NOT APPLICABLE	NON-PERFORMING	20/09/2019
INS#2	NOT APPLICABLE	-	20/09/2019	DEBTOR BASED	TRUE	NOT APPLICABLE	NOT APPLICABLE	NON-PERFORMING	20/09/2019
COUNTERPARTY IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**IS PULLING EFFECT**			**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**		
DEB#1	DEFAULT BECAUSE MORE THAN 90/180 DAYS PAST DUE	20/09/2019	FALSE			DEFAULT BECAUSE MORE THAN 90/180 DAYS PAST DUE	20/09/2019		

Example 3 illustrates the reporting in the case of non-retail exposures applying the definition of default at the level of a debtor.

	BIRD INPUT					ANACREDIT OUTPUT			
INSTRUMENT IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**DATE OF PERFORMING STATUS**	**ASSESSMENT APPROACH FOR CREDIT QUALITY STATUS**	**IS RETAIL EXPOSURE**	**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**	**PERFORMING STATUS**	**DATE OF PERFORMING STATUS**
INS#1	NOT APPLICABLE	-	11/05/2018	DEBTOR BASED	FALSE	NOT APPLICABLE	NOT APPLICABLE	PERFORMING	11/05/2018
INS#2	NOT APPLICABLE	-	15/09/2019	DEBTOR BASED	FALSE	NOT APPLICABLE	NOT APPLICABLE	NON-PERFORMING	15/09/2019
INS#3	NOT APPLICABLE	-	21/01/2019	DEBTOR BASED	FALSE	NOT APPLICABLE	NOT APPLICABLE	PERFORMING	21/01/2019
COUNTERPARTY IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**IS PULLING EFFECT**			**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**		
DEB#1	PERFORMING	31/12/2099	FALSE			NOT IN DEFAULT	NOT APPLICABLE		
DEB#2	DEFAULT BECAUSE UNLIKELY TO PAY	15/09/2019	FALSE			DEFAULT BECAUSE UNLIKELY TO PAY	15/09/2019		
DEB#3	PERFORMING	31/12/2099	FALSE			NOT IN DEFAULT	NOT APPLICABLE		

Example 4 illustrates the reporting in the case of 'transaction based' assessment in line with paragraph 154 of Annex V to the ITS applying the definition of default at the level of an individual credit facility in line with Article 178(1) of the CRR.

	BIRD INPUT					ANACREDIT OUTPUT			
INSTRUMENT IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**DATE OF PERFORMING STATUS**	**ASSESSMENT APPROACH FOR CREDIT QUALITY STATUS**	**IS RETAIL EXPOSURE**	**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**	**PERFORMING STATUS**	**DATE OF PERFORMING STATUS**
INS#1	NON-PERFORMING BUT NOT IN DEFAULT	29/03/2018	20/09/2019	TRANSACTION BASED	TRUE	NOT IN DEFAULT	29/03/2018	NON-PERFORMING	20/09/2019
INS#2	DEFAULT BECAUSE MORE THAN 90/180 DAYS PAST DUE	20/09/2019	20/09/2019	TRANSACTION BASED	TRUE	DEFAULT BECAUSE MORE THAN 90/180 DAYS PAST DUE	20/09/2019	NON-PERFORMING	20/09/2019
COUNTERPARTY IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**IS PULLING EFFECT**			**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**		
DEB#1	NOT APPLICABLE	-	TRUE			NOT APPLICABLE	NOT APPLICABLE		

Example 5: reporting the default status of the counterparty.

Reference date: 31/03/2019

	BIRD INPUT					ANACREDIT OUTPUT			
INSTRUMENT IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**DATE OF PERFORMING STATUS**	**ASSESSMENT APPROACH FOR CREDIT QUALITY STATUS**	**IS RETAIL EXPOSURE**	**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**	**PERFORMING STATUS**	**DATE OF PERFORMING STATUS**
LOAN#1	NOT APPLICABLE	-	31/12/2017	DEBTOR BASED	FALSE	NOT APPLICABLE	NOT APPLICABLE	PERFORMING	31/12/2017
COUNTERPARTY IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**IS PULLING EFFECT**			**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**		
DEB#1	PERFORMING	-	FALSE			NOT IN DEFAULT	NOT APPLICABLE		
GAR#T	PERFORMING	-	FALSE			NOT IN DEFAULT	NOT APPLICABLE		

Reference date: 30/09/2019

	BIRD INPUT					ANACREDIT OUTPUT			
INSTRUMENT IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**DATE OF PERFORMING STATUS**	**ASSESSMENT APPROACH FOR CREDIT QUALITY STATUS**	**IS RETAIL EXPOSURE**	**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**	**PERFORMING STATUS**	**DATE OF PERFORMING STATUS**
LOAN#1	DEFAULT BECAUSE UNLIKELY TO PAY	-	15/09/2019	DEBTOR BASED	FALSE	NOT APPLICABLE	NOT APPLICABLE	NON-PERFORMING	15/09/2019
COUNTERPARTY IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**IS PULLING EFFECT**			**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**		
DEB#1	DEFAULT BECAUSE UNLIKELY TO PAY	15/09/2019	FALSE			DEFAULT BECAUSE UNLIKELY TO PAY	15/09/2019		
GAR#T	PERFORMING	-	FALSE			NOT IN DEFAULT	NOT APPLICABLE		

Reference date: 31/01/2020

	BIRD INPUT					ANACREDIT OUTPUT			
INSTRUMENT IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**DATE OF PERFORMING STATUS**	**ASSESSMENT APPROACH FOR CREDIT QUALITY STATUS**	**IS RETAIL EXPOSURE**	**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**	**PERFORMING STATUS**	**DATE OF PERFORMING STATUS**
LOAN#1	DEFAULT BECAUSE UNLIKELY TO PAY	-	15/09/2019	DEBTOR BASED	FALSE	NOT APPLICABLE	NOT APPLICABLE	NON-PERFORMING	15/09/2019
COUNTERPARTY IDENTIFIER	**CREDIT QUALITY STATUS**	**DATE OF DEFAULT STATUS**	**IS PULLING EFFECT**			**DEFAULT STATUS**	**DATE OF DEFAULT STATUS**		
DEB#1	DEFAULT BECAUSE UNLIKELY TO PAY	15/09/2019	FALSE			DEFAULT BECAUSE UNLIKELY TO PAY	15/09/2019		
GAR#T	DEFAULT BECAUSE MORE THAN 90/180 DAYS PAST DUE	24/01/2020	FALSE			DEFAULT BECAUSE MORE THAN 90/180 DAYS PAST DUE	24/01/2020		

Example 6: Reporting the relationship between Credit Facilities and related protections/instruments items, no sublimit for the instruments.

Time	Business Situation
T0	The bank registers a new Credit Facility (CF1) with the nominal amount of 300 euros that is completely covered by the collateral (P1). The banks allocation process of the collateral consists in splitting the collateral proportionally among the different instruments of the credit facility. There are no specific limits to the different instruments connected to the CF, only the maximum amount of the CF. The allocation process among the instruments, in case the total amount of the CF is not used, is proportional.
T1	The bank creates a new Instrument (I1) connected with the Credit Facility. The carrying amount of the instrument is 100.
T2	The bank creates a new Instrument (I2) connected with the Credit Facility. The carrying amount of the instrument is 100.
T3	The bank creates a new Instrument (I2) connected with the Credit Facility. The carrying amount of the instrument is 100.

			RECORD			
Credit Facility Cube	Time	Action	COMMITMENT UNIQUE ID	NOMINAL AMOUNT	OFF-BALANCE SHEET AMOUNT	INSTRUMENT ID
	T0	ADD	CF1	300	300	-
	T1	MODIFY	CF1	300	200	I1
	T2	MODIFY	CF1	300	100	I2
	T3	MODIFY	CF1	300	0	I3

			RECORD		
Instrument Cube (For instance Other Loans)	Time	Action	INSTRUMENT ID	CARRYING AMOUNT	OFF-BALANCE SHEET AMOUNT
	T0		-	-	-
	T1	ADD	I1	100	200
	T2	MODIFY	I1	100	50
	T2	ADD	I2	100	50
	T3	MODIFY	I1	100	0
	T3	MODIFY	I2	100	0
	T3	ADD	I3	100	0

			RECORD			
Instrument-Protection Cube	Time	Action	INSTRUMENT ID	PROTECTION ID	Maximum amount of guarantee that can be considered	.....
	T0		-	-	-	
	T1	ADD	I1	P1	100	
	T2	ADD	I2	P1	100	
	T3	ADD	I3	P1	100	

RECORD

Commitment - Protection Cube	Time	Action	COMMITMENT UNIQUE ID	PROTECTION ID	Maximum amount of guarantee that can be considered	….
	T0	ADD	CF1	P1	300	
	T1	MODIFY	CF1	P1	200	
	T2	MODIFY	CF1	P1	100	
	T3	MODIFY	CF1	P1	0	

Example 7: Reporting the relationship between Credit Facilities and related protections/instruments items; one of the instruments is not secured by any guarantees/collaterals.

Time	Business Situation
T0	The bank registers a new Credit Facility (CF1) of 300 euros that is completely covered by the collateral (P1). The banks allocation process of the collateral consists in splitting the collateral proportionally among the different instruments of the credit facility. There are no specific limits to the different instruments connected to the CF, only the maximum amount of the CF. The allocation process among the instruments, in case the total amount of the CF is not used, is proportional. The collateral covers all instruments issued connected to the CF except those with a special characteristic.
T1	The bank creates a new Instrument (I1) connected with the Credit Facility. The amount of the instrument is 100 and it is not covered by the collateral (P1), due to the special characteristic of the instrument.
T2	The bank creates a new Instrument (I2) connected with the Credit Facility. The amount of the instrument is 100.
T3	The bank creates a new Instrument (I2) connected with the Credit Facility. The amount of the instrument is 100.

			RECORD			
Credit Facility Cube	Time	Action	COMMITMENT UNIQUE ID	NOMINAL AMOUNT	OFF-BALANCE SHEET AMOUNT	INSTRUMENT ID
	T0	ADD	CF1	300	300	-
	T1	MODIFY	CF1	300	200	I1
	T2	MODIFY	CF1	300	100	I2
	T3	MODIFY	CF1	300	0	I3

			RECORD		
Instrument Cube (For instance Other Loans)	Time	Action	INSTRUMENT ID	CARRYING AMOUNT	OFF-BALANCE SHEET AMOUNT
	T0		-	-	-
	T1	ADD	I1	100	200
	T2	MODIFY	I1	100	50
	T2	ADD	I2	100	50
	T3	MODIFY	I1	100	0
	T3	MODIFY	I2	100	0
	T3	ADD	I3	100	0

			RECORD			
Instrument-Protection Cube	Time	Action	INSTRUMENT ID	PROTECTION ID	Maximum amount of guarantee that can be considered	…..
	T0		-	-	-	
	T1		-	-	-	
	T2	ADD	I2	P1	100	
	T3	ADD	I3	P1	100	

			RECORD			
Commitment Protection Cube	Time	Action	COMMITMENT UNIQUE ID	PROTECTION_ID	Maximum amount of guarantee that can be considered	….
	T0	ADD	CF1	P1	300	
	T1	-	-	-	-	
	T2	MODIFY	CF1	P1	100	
	T3	MODIFY	CF1	P1	0	