

RRE data delivery agreement  
27 June 2019  
Status: Final



Reference number

[P097-919292326-209](#)

# **Residential Real Estate DDA**

**Owner: Statistics Division  
Manager Monetary and Banking Statistics Department**

**DNB-public  
Version 1.1.2**

**DNB-GLO-CODE:  
DNB\_STAT\_RRE\_GLO\_K**

## SUMMARY OF VERSIONS AND STATUS

### Version history

<i>Version</i>	<i>Date</i>	<i>Comment</i>	<i>Author(s)</i>
0.1	20 March 2017	First version of this document based on DDA template and AnaCredit delivery agreement	Bert Poel
0.7	4 April 2017	Comments made by Wim Goes are processed, data tables added	Bert Poel
0.8	30 August 2017	Updated the document according to the new LDM version and aligned the document with the DDA of AnaCredit	Iris Balemans
0.8	6 September 2017	Processed feedback of Arjan Bos and new changes raised by Wim Goes	Iris Balemans
0.9	12 September 2017	Added a new chapter 3.5 which maps the overlapping entities and attributes between RRE and AnaCredit	Iris Balemans
0.9	30 October 2017	Updated the document according to the new LDM version	Iris Balemans
1.0	2 November 2017	Processed feedback	Iris Balemans
1.0	9 November 2017	Improved paragraph 3.5 based on feedback of Wim Goes	Iris Balemans
1.0	30 November 2017	Finalized the DDA according to the final LDM version	Iris Balemans
1.0.1	2 January 2018	Small updates due to the move of attributes from stage 1 to stage 2 and some received feedback from de Volksbank	Iris Balemans
1.0.2	29 January 2018	Small updates concerning the EAD/PD/LGD model attributes and some changes in business rules (as is done in AnaCredit as well)	Iris Balemans
1.0.3	1 February 2018	Small updates thanks to questions raised by hypoport.	Iris Balemans
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1.0.5	19 February 2018	Small updates thanks to questions raised by Aegon and a finalized data delivery code.	Iris Balemans
1.0.6	12 March 2018	Small updates, partly due to the meeting with the banks on March, 8.	Iris Balemans
1.0.7	23 April 2018	Made attribute national identifier optional in entity 'Dutch natural person'	Iris Balemans
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1.1	23 January 2019	Updated mainly because of changes in business rules, and new added attributes for OSBE concerning interest only mortgages	Iris Balemans
1.1.1	27 March 2019	Updated debtor & instrument tables. Moved entities from instrument to debtor for:  <i>current_toetsinkomen, date_of_current_toetsinkomen, total_assets, date_of_total_assets, total_liabilities, date_of_total_liabilities, current_debtor_s_employment_status, date_of_current_debtor_s_employment_status</i>	Alco van Neck, Iris Balemans
1.1.1	12 June 2019	Updated the domain of intrst_rt_sprd and intrst_rt_at_origin from basis point to real number (positive or negative)	A.J. Bos



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# 1 DATA DELIVERY AGREEMENT

## 1.1 Subject of the agreement

This agreement enables for the delivery of granular data on loans backed by residential real estate and granted to households for the purpose of buying, building and/or refurbishing a house (hereafter RRE).

This agreement sets out the arrangements concerning:

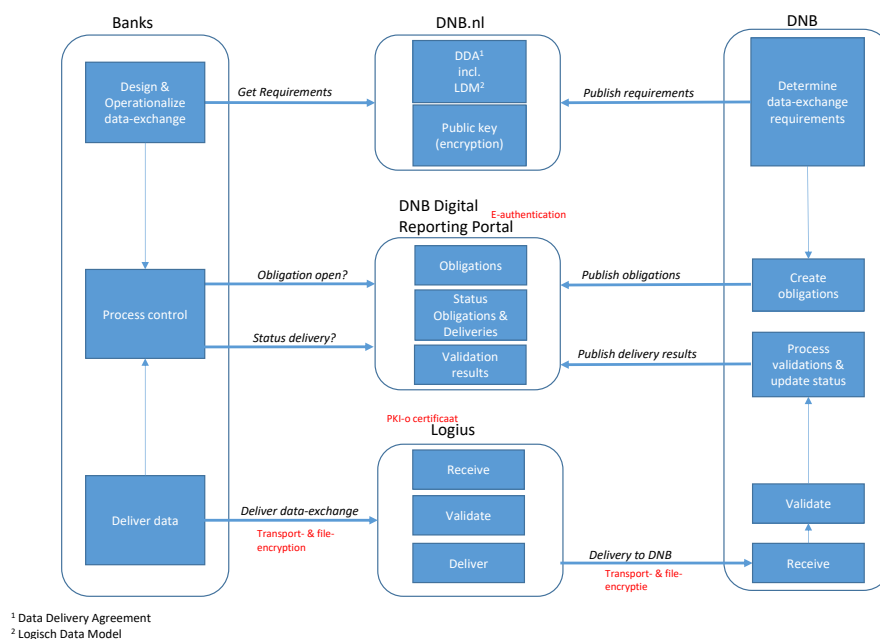
- the data to be delivered, and the delivery medium, format and frequency;
- the conditions and terms to be met by reporting agents towards DNB;
- the conditions and terms to be met by DNB towards the reporting agents, and
- changes to the agreement.

## 1.2 Reference documents

Document	URL
RRE reporting manual Part I – General Methodology	DNB-public
RRE reporting manual Part II – Entities and data attributes	DNB-public
Reporting population and reference population	DNB-public

### 1.3 Data delivery specifications

An overview of the design, run and control processes of the data exchange for RRE is depicted in Figure 1.



**Figure 1: Design, Run and Control overview of RRE data exchange**

Global description of the process:

- DNB determines the RRE data-exchange specifications (Data Delivery Agreement, Logical Data Model);
- DNB publishes these specifications, including the public encryptionkey on the website of DNB;
- Banks use this information to operationalize the RRE data exchange;
- DNB publishes the RRE data-exchange obligations in the DNB Digital Reporting Portal;
- Banks have secure access to the DNB Digital Reporting Portal where they can view the obligation;
- Banks deliver the RRE data exchange files to Logius. Transport as well as files are encrypted;
- Logius receives the data, performs a number of technical checks and send a delivery notification back to the bank. Subsequently Logius pushes the data to DNB;
- DNB receives the data, performs a number of technical and logical validations, updates the status of the obligation and publishes the outcome of these validations to the DNB Digital Reporting Portal;
- Designated (by the bank) employees will receive a notification;
- Banks can view these outcomes (and status) in the DNB Digital Reporting Portal.

Globally, the total data delivery has the features described below. Chapter 2 discusses the delivery of each file in greater detail.

### 1.4 Quarterly delivery

Reporting agents submit data quarterly. Reporting agents are therefore asked and expected to make a data delivery at the end of each quarter.

### 1.5 Data quality strategy

In the context of data exchanges, there is always a trade-off between the desire to process data as quickly as possible and the requirement to meet the standards concerning data before they are

made available. A high degree of availability often compromises checks, with all its consequences for the quality of the data and, consequently, their use and interpretation. Another factor to consider is cost's, which is often incurred downstream to make the data fit for the purpose.

In striking a balance between these two requirements, DNB has adopted the following approach:

- the validation rules used to determine the acceptance of the delivery obligation (2.4) and with which parties in the chain can prove without doubt that they are able to meet the delivery obligation;
  - [1] a number of checks that are technical in nature (Logius subscription, XML validity, PKI-o validity, existence recipient, valide MIME, etc..)
  - [2] a reporting requirement for a reporting period in the Digital Reporting Portal of DNB (imperative check)
  - [3] a file structure specification as described in the Data Delivery Agreement (structure check)
  - [4] a highly specified and formalised logical data model (3.2) which specifies explicitly all the blocking validation rules (constraints, Appendix A) within the data delivery set;
  - [5] on top of that, a list of validation rules (Appendix B) that are not explicitly modelled<sup>1</sup> but are checked and reported on:
- there is a category of validation rules that are labelled as 'signalling', meaning potentially blocking;<sup>2</sup>
- reporting agents are informed as soon as possible with regard to the blocking validation results if a delivery cannot be accepted, subsequently the delivery is not accepted. When the reporting agent meets the blocking validation rules, it has met its delivery obligation;
- reporting agents are informed about the results of signalling rules – the delivery will be accepted; informing reporting agents allows reporting agents to start improving their internal processing chain/data quality;
- having accepted a data delivery, DNB conducts checks that involve other data than the data delivered, these rules are labelled as 'signalling' and are stated in appendix B;
- signalling rules may require resubmission, i.e. an obligation to resubmit data for a period for which data were submitted earlier.

Please note that also data deliveries which can not be validated will be administered for management information purposes.

## 1.6 Reporting agent's responsibilities/obligations

The reporting agent undertakes the required actions to:

- enable access to DNBs Digital Reporting Portal;
- have a working connection with Logius;
- deliver and, if necessary, redeliver data in accordance with the applicable specifications;
- arrange for the data to be protected from access by unauthorised individuals;
- notify DNB in advance if it is unable to deliver the data by the specified deadline, i.e. 4 p.m. on the penultimate day of the period within which the data delivery must be made;
- deliver data in accordance with the applicable requirements (including delivery deadlines) until the validation rules are met;

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<sup>1</sup> Also rules that are somewhat implicit in the logical data model have been explicitly repeated in Appendix A and B, e.g. specialisation model constraints

<sup>2</sup> This means that they initially have a warning status (and do not affect the acceptance of the delivery) but are intended to eventually turn into blocking rules.



- provide information in case plausibility analyses prompt DNB to request a clarification;
- keep an archive of RRE data that has been exchanged for a period of 5 years;
- comply with requests for resubmission.

DNB expects to receive data directly (via Logius) from the banks. Currently, it is not allowed to submit data to intermediaries.

## 1.7 DNB's responsibilities/obligations

DNB will adequately specify the requirements to enable reporting agents to meet these.

DNB will notify reporting agents of data delivery issues, including:

- blocking validation rules (see paragraph 2.4 for details):
  - *technical*: is the incoming data technically compliant with regard to Logius requirement (subscription, PKI-O, etc..) and DNB (decryption, unzipping, etc..?)
  - *administrative*: is the incoming data delivery in line with the requirements set by DNB?
  - *structure*: do the deliveries comply with the required naming and structure?
  - *logical*: do the data meet the validation rules of the logical data model and is the data delivery complete?
- If possible, automated feedback is given on signalling validation rules.
- Feedback on plausibility checks<sup>3</sup> in case DNB requires additional information after evaluating the results of plausibility checks.

DNB will arrange for the prescribed data protection measures in accordance with the information classification level.

## 1.8 Compliance framework

This section will describe when reporting agents are not compliant and what implications this has.

The reporting agent is responsible for all of the data they submitted, or should have submitted to DNB. All data that DNB receives via other sources, like the counterparty reference data of Dutch counterparties from the national statistics institute CBS, is not the responsibility of the reporting agent. Any question that DNB has on data received from the reporting agent is for the reporting agent to answer. Questions on data received from other sources are the responsibility of those sources and are not the responsibility of the reporting agent.

## 1.9 Data ownership and information classification

Subject	Who/what
<b>Owner within DNB:</b>	Statistics Division, Monetary and Banking Statistics Department Manager

Criticality assessment performed (Y/N)	By	Result
<b>Yes</b>	Data owner DNB	DNB-CONFIDENTIAL

<sup>3</sup> The first priority is to provide feedback on blocking validation rules. DNB's ambition is to also distribute feedback reports on signalling validation rules, with a view to preparing reporting institutions for validation rules that will *eventually* turn into blocking rules.

DNB classification	Explanatory notes
<b>DNB-PUBLIC</b>	Information classified as <b>DNB-PUBLIC</b> is accessible to all stakeholders within and outside of DNB.
<b>DNB-UNRESTRICTED</b>	Access to information classified as <b>DNB-UNRESTRICTED</b> must be limited exclusively to persons employed by or performing work at DNB.
<b>DNB-RESTRICTED</b>	Information classified as <b>DNB-RESTRICTED</b> , can be made accessible to persons who are involved in the matter or would benefit from a general awareness of it in accordance with the rules of DNB.
<b>DNB-CONFIDENTIAL</b>	For information classified as <b>DNB-CONFIDENTIAL</b> , access should be limited to persons who "need to know", i.e. those who require the information for the proper performance of professional duties. "Need to know" should be interpreted broadly enough to enable staff to (a) access information relevant to their tasks; and (b) take over tasks from colleagues with minimal delay in the event of absences. "Need to know" access should be authorised at the appropriate level within DNB.
<b>DNB-SECRET</b>	For information classified as <b>DNB-SECRET</b> , access should be strictly limited to persons who are directly involved in the matter and whose "need to know" access is explicitly authorised, to the extent possible in a traceable way, at the appropriate level within DNB.

Subject	Required?	Explanatory notes
<b>Encryption</b>	Yes	Data transport will be encrypted from the transporter to DNB. Data encryption is the transporter's responsibility and DNB will oversee it. Data transport encryption from the reporting agent to the transporter is the reporting agent's responsibility. For now, data encryption of the files is not in scope.
<b>Anonymisation</b>	Not allowed	Anonymisation does not apply. RRE data are not related to natural persons.

## 1.10 Changes to the agreement

In the event of changes to the agreement, the procedure described in section 5.3 (Changes to the agreement) is followed.

## 1.11 Administrative processing

This document is published by DNB under reference number [P097-919292326-209](#)

Although great care has been put into creating the logical data model and supporting documents, no guarantee can be given with regards to the technical correctness of the contents.

List of documents applying to the data delivery agreement:

Document	Remarks
Data delivery agreement	This document
DNB RRE Business Terms	Ontology and reference data sets
DNB RRE Validation Rules	
Reporting population and reference population	
Logical datamodel RRE	Report of the Logical data model
RRE GLO LDM	Powerdesigner file containing the LDM
RRE Release Notes	List of changes to the DDA, the LDM and the business terms
DNB aansluitingspecificaties en documentatie logius	Detailed information about delivery of data to DNB using Logius Digipoort

## 1.12 Data integrity

The demands regarding the integrity of RRE data are classified as **very high**. As such, the following measures are taken to ensure compliance:

- The RRE data exchange is encrypted in transport as well as in rest. Files are encrypted using a DNB public key (AES-256) where the private key is only in possession of the DNB statistics division.
- The pay-out file needs to consist of a deterministic number of files, DNB will validate the number of delivered files;
- The files are hashed and the hash needs to be calculated by the banks upon delivery. DNB will validate these hashes when receiving the files, to ensure the files have been received exactly as the banks have sent it.
- The content of the data is hashed as well and the has needs to be calculated by the banks upon delivery. DNB will validate these completeness-hashes to ensure the data is received by DNB exactly as the banks have sent it.

## 2 FILE DELIVERY SPECIFICATIONS

### 2.1 Deliveries and files for each data delivery agreement

This section sets out the relationship between each DDA code/file interface and the related files. The file interfaces and files are specified below. The following tables list the files that must be reported under the DDA in question. Reporting agents deliver data on the basis of *not more than* the applicable DDA.

GLO code <sup>4</sup>	Frequency	Source file
DNB_STAT_RRE_GLO_K	Quarterly	A (win)zipped container where the name of the container can be determined by the bank but must adhere to the following pattern: [a-zA-Z0-9_-] (numbers, letters, underscore and hyphen)

All files under each DDA code must be submitted, see below.

.csv files to be included in the delivery	container
dnbmetadata.xml	X
accounting_data.csv	X
attribute_combination_delivery.csv	X
attribute_delivery.csv	X
contract.csv	X
counterparty.csv	X
credit_card_debt_instrument.csv	X
credit_lines_other_than_revolving_credit_instrument.csv	X
creditor_instrument_data.csv	X
current_account_instrument_with_credit_limit.csv	X
debtor.csv	X
debtor_default_data.csv	X
debtor_past_due.csv	X
debtor_instrument_data.csv	X
domestic_immovable_property.csv	X
drawn_instrument.csv	X
dutch_legal_entity.csv	X
dutch_natural_person.csv	X
ead_model_contract.csv	X
ead_model_debtor.csv	X
ead_model_instrument.csv	X
entity_type_delivery.csv	X
financial_data.csv	X
household.csv	X
immovable_property.csv	X
impaired_instrument.csv	X
instrument.csv	X
instrument_past_due.csv	X
instrument_subject_to_securitisation.csv	X
instrument_protection_received_data.csv	X
joint_liability.csv	X
legal_entity.csv	X
lgd_model_contract.csv	X
lgd_model_debtor.csv	X
lgd_model_instrument.csv	X
lgd_model_protection_received.csv	X
natural_person.csv	X

<sup>4</sup> The abbreviation GLO is the Dutch translation of the data delivery agreement and translates to "gegevensleveringsovereenkomst". To enhance comprehension on DNB side when providing support, the term GLO code is used in favour of its English translation.

natural_person_instrument_data.csv	X
non_fixed_interest_instrument.csv	X
observed_agent_delivery.csv	X
originator_secured_instrument_data.csv	X
other_loans_instrument.csv	X
overdraft_instrument.csv	X
pd_model_contract.csv	X
pd_model_debtor.csv	X
pd_model_instrument.csv	X
postal_code_region.csv	X
protection_provider_protection_received.csv	X
protection_received.csv	X
recognised_instrument.csv	X
reporting_agent_delivery.csv	X
revolving_credit_other_than overdrafts_and credit_card_debt_instrument.csv	X
servicer_instrument_data.csv	X

## Access to DNB Digital Reporting Portal

All agreements and requirements for RRE, the data deliveries, their statuses and the validation results are published in DNB Digital Reporting Portal. Banks are required to have access to this portal. Instructions are published on the DNB website<sup>5</sup>.

## 2.2 Delivery of data to DNB using Logius Digipoort

DNB expects that the reporting agent delivers its reports via the Logius portal. In order to do this, please use the values listed below.

Variable	Value(s) to be used	Options
Logius issued message name	DNB_rapportages	DNB_rapportages
Reporter identifier	Any RIAD code (N0129)	Please use the value for your organization as published in the RRE reporting population document on the DNB website.
Data Delivery Code	ZGRACRKRREXXXX	
GLO code	DNB_STAT_RRE_GLO_K	
Hashing method	SHA-256	SHA-0, SHA-1, SHA-256, SHA-512
Encryption method	AES-256	AES, DES, Rijndael, RC2, 3DES
Data file types	CSV, semicolon separated	CSV, PDF, JSON, XML, XBRL, SDMX

Details on how to use the Logius portal, including the checks done by Logius and DNB, can be found in the document called on the RRE part of the DNB website<sup>6</sup>.

## 2.3 <entity>.csv file interface

This section describes the metadata aspects of .csv files. Reporting agents must deliver one file for each of the entities described below. In addition, an exhaustive list of attributes is provided that is to be delivered for each file. As a rule, one .csv file must be submitted for each entity type in the logical data model, where only entity types that contain extra information in addition to their

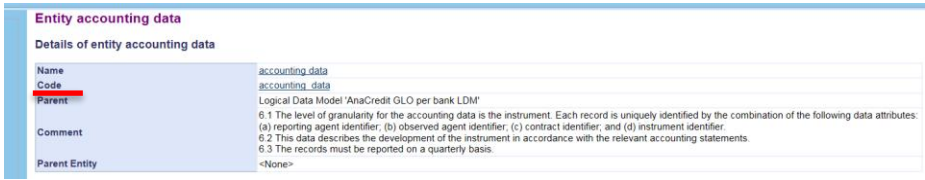
<sup>5</sup> <https://www.dnb.nl/statistiek/digitaal-loket-rapportages/algemeen/index.jsp>

<sup>6</sup> <https://www.dnb.nl/statistiek/digitaal-loket-rapportages/statistische-rapportages/banken/residential-real-estate-rre/index.jsp>

primary key attribute or attributes are subject to delivery. "Extra information" means an attribute of its own or a foreign key to another entity type.

### 2.3.1 <entity>.csv file description (metadata)

The table below describes the metadata aspects of each .csv file.

Metadata	
<b>Description:</b>	See logical data model. Each entity in the logical data model represents a file (.csv). As a rule, entities without characteristics – attributes or relationships – are not required
<b>File name:</b>	<p>The entity code in the logical data model is used as the file name. In this code, spaces are replaced by underscores (_)</p> 
<b>Selection:</b>	Each entity is delivered in its entirety, and must be a snapshot of the delivery date
<b>File format:</b>	CSV
<b>Character set:</b>	UTF-8
<b>Field separator:</b>	; (semicolon, ASCII number: 59)
<b>Heading:</b>	Yes, this contains the names of the columns, taking into account the field separator and the text field delimiter
<b>End of Line indicator:</b>	CRLF
<b>Text field delimiter:</b>	<p>" (double quotation mark, ASCII number 34)            Escape character: \ (backslash, ASCII number: 92)            Example 1: The string with inverted commas: This is a "test" then becomes "This is a \"test\""            Example 2: The string with double quotation marks: That was an "error" then becomes: "That was an \"error\""</p>
<b>Text field format:</b>	Free text (unless otherwise specified)
<b>Null values:</b>	::
<b>Date field delimiter:</b>	No delimiter
<b>Date format:</b>	ISO 8601 format, YYYY-MM-DD
<b>Numeric format:</b>	<p>Numeric fields such as amounts, percentages or chances must not contain dots (.) or commas (,). All of these must be entered in whole numbers, i.e. NNNNNNNNNNNN (no leading or trailing zeros, no decimals, no maximum length).</p> <ul style="list-style-type: none"> <li>Amounts in any currency must be entered in whole cents (for example 1000 euros = 100000 euro cents).</li> <li>Percentages and chances must be entered in millions (5% = 0.05 = 50000)</li> </ul> <p>Negative numbers are preceded by a minus sign (-) Positive numbers are not preceded by a plus sign (+)            The rationale for this is to prevent interpretation issues due to differences in localization settings between sending, re-transmitting and receiving systems</p>

<b>File integrity check</b>	<p>Some entities and combinations of attributes per entity require a checksum. See Section 2.6.6.</p> <p>Numeric fields must first be summarised and then hashed.</p> <p>It may be difficult to canonicalise strings; this issue is being investigated and will be specified in more detail in a later version of this document.</p> <p>The prescribed hash function is SHA-256</p>
<b>Reporting “Non-applicable”</b>	<p>Most attributes can be reported as “Non-applicable”. This applies to situations which are inherent to the arrangements made between the creditor and the other involved parties, or they can be because of the inherent structure of the data requirements.</p> <p>If the logical data model indicates that the value “Non-applicable” can be reported as the value of an attribute, and when the value “Non-applicable” is indeed needed for that attribute, the value to be inserted for that attribute in the corresponding .csv file is “Non-applicable”.</p> <p>Please note that DNB uses a strict check on both the case and the wording of “Non-applicable”. Spelling it wrong leads to a blocking error</p>

### 2.3.1.1 Determining which entity types to report

The logical datamodel of RRE contains over hundred and ten entity types. All these are relevant for reporting correctly. However, not all entity types have to be reported physically by the reporting agents. Each relevant entity type directly maps 1-to-1 to a .csv definition in this chapter.

The underlying mechanism for selecting an entity type to report is:

1. Select all entity types that have, as part of their primary key, the attribute ‘reporting agent identifier’.
2. Of these entity types, select only those that have more attributes than only those that make up the primary key.
3. Add to that the entity types that implement a many-to-many relationship.

This will select the entity types that have to be reported in step 1, and those entity types that will contain extra information in step 2.

The list of csv files to report is generated in this document using the above algorithm.

The next sections each describe a single specific <entity>.csv file

### 2.3.1.2 Reporting of empty files

When there is nothing to report for a specific .csv file, the file is still reported to us. It must contain the header record, but will otherwise be empty of data.

## 2.3.2 accounting\_data.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"frbrnc_stts";"dt_frbrnc_stts";"cumulative_recoveries_since_default";"cumulative_unsecured_recoveries_since_default";"fully_derecognised_instrument_being_serviced_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	frbrnc_stts	Variable multibyte (255)	255	code
7	dt_frbrnc_stts	Date		date

8	cumulative_recoveries_since_default	Decimal (12,0)	12	euro amount (non-negative) with exclusions
9	cumulative_unsecured_recoveries_since_default	Decimal (12,0)	12	euro amount (non-negative) with exclusions
10	fully_derecognised_instrument_being_served_indicator	Variable characters (50)	50	fully derecognised instrument being serviced indicator

### 2.3.3 attribute\_combination\_delivery.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"reporting_reference_date";"logical_data_model_code";"entity_type_code";"attribute_combination_code";"checksum"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	reporting_reference_date	Date		reporting reference date
3	logical_data_model_code	Variable multibyte (255)	255	code
4	entity_type_code	Variable multibyte (255)	255	code
5	attribute_combination_code	Variable multibyte (255)	255	code
6	checksum	Variable multibyte (255)	255	medium sized string

### 2.3.4 attribute\_delivery.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"reporting_reference_date";"logical_data_model_code";"entity_type_code";"attribute_code";"checksum"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	reporting_reference_date	Date		reporting reference date
3	logical_data_model_code	Variable multibyte (255)	255	code
4	entity_type_code	Variable multibyte (255)	255	code
5	attribute_code	Variable multibyte (255)	255	code
6	checksum	Variable multibyte (255)	255	medium sized string

### 2.3.5 contract.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrved_agnt_cd";"cntrct_id";"reporting_reference_date";"dt_incpn"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrved_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	dt_incpn	Date		date

### 2.3.6 counterparty.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"counterparty_identifier";"reporting_reference_date";"country";"protection_provider_indicator";"legal_entity_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	counterparty_identifier	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	country	Characters (2)	2	ISO 3166 Country
5	protection_provider_indicator	Variable characters (50)	50	protection provider indicator
6	legal_entity_indicator	Variable characters (50)	50	legal entity indicator



### 2.3.7 credit\_card\_debt\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"off_blnc_sht_amnt"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	off_blnc_sht_amnt	Decimal (12,0)	12	euro amount (non-negative) with exclusions

### 2.3.8 credit\_lines\_other\_than\_revolving\_credit\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"off_blnc_sht_amnt"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	off_blnc_sht_amnt	Decimal (12,0)	12	euro amount (non-negative) with exclusions

### 2.3.9 creditor\_instrument\_data.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"entty_rl";"counterparty_identifier";"cntrct_id";"instrmnt_id";"reporting_reference_date"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	entty_rl	Variable characters (25)	25	counterparty-instrument role type
4	counterparty_identifier	Variable characters (60)	60	identifier domain
5	cntrct_id	Variable characters (60)	60	identifier domain
6	instrmnt_id	Variable characters (60)	60	identifier domain
7	reporting_reference_date	Date		reporting reference date

### 2.3.10 current\_account\_instrument\_with\_credit\_limit.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"off_blnc_sht_amnt"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	off_blnc_sht_amnt	Decimal (12,0)	12	euro amount (non-negative) with exclusions

## 2.3.11 debtor.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"entty_rl";"counterparty_i dentifier";"reporting_reference_date";"current_debtor _s_employment_status";"inception_date_of_first_inst rument_for_investing_in_rre";"debtor_past_due_indic ator";"current_toetsinkomen";"date_of_current_toetsi nkomen";"total_assets";"date_of_total_assets";"total_ liabilities";"date_of_total_liabilities";"date_of_current_ debtor_s_employment_status"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	entty_rl	Variable characters (25)	25	counterparty-instrument role type
3	counterparty_identifier	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	current_debtor_s_employment_status	Variable multibyte (255)	255	code
6	inception_date_of_first_instrument_for_in vesting_in_rre	Date		date with exclusions
7	debtor_past_due_indicator	Variable characters (50)	50	debtor past due indicator
8	current_toetsinkomen	Decimal (12,0)	12	euro amount (positive and negative)
9	date_of_current_toetsinkomen	Date		date
10	total_assets	Decimal (12,0)	12	euro amount (positive and negative)
11	date_of_total_assets	Date		date
12	total_liabilities	Decimal (12,0)	12	euro amount (positive and negative)
13	date_of_total_liabilities	Date		date
14	date_of_current_debtor_s_employment_s tatus	Date		date

## 2.3.12 debtor\_default\_data.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"entty_ rl";"counterparty_identifier";"reporting_reference_dat e";"default_status_of_the_counterparty"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	entty_rl	Variable characters (25)	25	counterparty-instrument role type
4	counterparty_identifier	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	default_status_of_the_counterparty	Variable multibyte (255)	255	code

## 2.3.13 debtor\_past\_due.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"entty_rl";"counterparty_i dentifier";"reporting_reference_date";"arrear_for_the_ debtor"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	entty_rl	Variable characters (25)	25	counterparty-instrument role type
3	counterparty_identifier	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	arrear_for_the_debtor	Decimal (12,0)	12	euro amount (non-negative) with exclusions

## 2.3.14 debtor\_instrument\_data.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"entty_ rl";"counterparty_identifier";"cntrct_id";"instrmnt_id";"r eporting_reference_date";"other_debts_at_inception" ;"household_type_instrument_data_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	entty_rl	Variable characters (25)	25	counterparty-instrument role type
4	counterparty_identifier	Variable characters (60)	60	identifier domain
5	cntrct_id	Variable characters (60)	60	identifier domain
6	instrmnt_id	Variable characters (60)	60	identifier domain
7	reporting_reference_date	Date		reporting reference date
8	other_debts_at_inception	Decimal (12,0)	12	euro amount (non-negative) with exclusions
9	household_type_instrument_data_indicator	Variable characters (50)	50	household type-instrument data indicator

### 2.3.15 domestic\_immovable\_property.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"prtctn_id";"reporting_reference_date";"postal_code";"iso_3166_1_alpha_2_cd"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	prtctn_id	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	postal_code	Short integer		postal code numeric
5	iso_3166_1_alpha_2_cd	Characters (2)	2	ISO 3166 Country

### 2.3.16 drawn\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"dt_sttlmnt";"trnsfrd_amnt"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	dt_sttlmnt	Date		date with exclusions
7	trnsfrd_amnt	Decimal (12,0)	12	euro amount (non-negative) with exclusions

### 2.3.17 dutch\_legal\_entity.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"counterparty_identifier";"reporting_reference_date";"national_identifier"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	counterparty_identifier	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	national_identifier	Variable multibyte (50)	50	national identifier

### 2.3.18 dutch\_natural\_person.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"counterparty_identifier";"reporting_reference_date";"national_identifier"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	counterparty_identifier	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	national_identifier	Variable multibyte (50)	50	national identifier

### 2.3.19 ead\_model\_contract.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"reporting_reference_date";"ead_model_id";"regulatory_ead";"regulatory_el";"regulatory_rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	ead_model_id	Variable multibyte (255)	255	medium sized string
6	regulatory_ead	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
7	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
8	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.20 ead\_model\_debtor.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"entty_rl";"counterparty_identifier";"reporting_reference_date";"ead_model_id";"regulatory_ead";"regulatory_el";"regulatory_rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	entty_rl	Variable characters (25)	25	counterparty-instrument role type
3	counterparty_identifier	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	ead_model_id	Variable multibyte (255)	255	medium sized string
6	regulatory_ead	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
7	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
8	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.21 ead\_model\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"ead_model_id";"regulatory_ead";"regulatory_el";"regulatory_rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	ead_model_id	Variable multibyte (255)	255	medium sized string
7	regulatory_ead	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
8	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
9	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.22 entity\_type\_delivery.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"reporting_reference_date";"logical_data_model_code";"entity_type_code";"checksum";"rowcount"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	reporting_reference_date	Date		reporting reference date
3	logical_data_model_code	Variable multibyte (255)	255	code
4	entity_type_code	Variable multibyte (255)	255	code
5	checksum	Variable multibyte (255)	255	medium sized string
6	rowcount	Integer		

### 2.3.23 financial\_data.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"otstndng_nmnl_amnt";"bwdpt_amnt";"periodic_repayment_due";"periodic_interest_payment_due";"next_intrst_rt_reset_dt";"cumulative_repayments";"cumulative_prepayments";"annlsd_agrd_rt";"accrued_interest";"exit_status";"dflt_stts";"securitized_instrument_indicator";"past_due_instrument_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	otstndng_nmnl_amnt	Decimal (12,0)	12	euro amount (non-negative)
7	bwdpt_amnt	Decimal (12,0)	12	euro amount (non-negative) with exclusions
8	periodic_repayment_due	Decimal (12,0)	12	euro amount (non-negative)
9	periodic_interest_payment_due	Decimal (12,0)	12	euro amount (non-negative)
10	next_intrst_rt_reset_dt	Date		date with exclusions
11	cumulative_repayments	Decimal (12,0)	12	euro amount (non-negative)
12	cumulative_prepayments	Decimal (12,0)	12	euro amount (non-negative)
13	annlsd_agrd_rt	Decimal (12,0)	12	real number (positive or negative) with exclusions
14	accrued_interest	Decimal (12,0)	12	euro amount (non-negative) with exclusions
15	exit_status	Variable multibyte (255)	255	code
16	dflt_stts	Variable multibyte (255)	255	code
17	securitized_instrument_indicator	Variable characters (50)	50	securitisation indicator
18	past_due_instrument_indicator	Variable characters (50)	50	past due instrument indicator

### 2.3.24 household.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"counterparty_identifier";"reporting_reference_date";"household_type_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	counterparty_identifier	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	household_type_indicator	Variable characters (50)	50	household type indicator

### 2.3.25 immovable\_property.csv

#	Header	Data type	Details
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1	"reporting_agent_identifier";"prtctn_id";"reporting_reference_date";"immovable_property_type";"protection_valuation_type";"iso_3166_1_alpha_2_cd"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.
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#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	prtctn_id	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	immovable_property_type	Variable multibyte (255)	255	code
5	protection_valuation_type	Variable multibyte (255)	255	code
6	iso_3166_1_alpha_2_cd	Characters (2)	2	ISO 3166 Country

### 2.3.26 impaired\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrsvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"accumulated_impairment_amount"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrsvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	accumulated_impairment_amount	Decimal (12,0)	12	euro amount (non-negative)

### 2.3.27 instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrsvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"inception_date_of_the_instrument";"household_income_at_inception";"crncy_dnmntn";"pymnt_frncy";"product_name";"product_label";"tp_inrst_rt";"intrst_rt_at_origin";"intrst_rt_rst_frncy";"intrst_rt_rst_interval_at_org";"loan_to_value_at_inception";"legal_final_maturity_date_at_inception";"legal_final_maturity_date";"commitment_amount_at_inception";"outstanding_nominal_amount_at_inception";"typ_amrtstn";"bsi_class";"typ_instrmnt";"corep_class";"buy_to_let";"credit_conversion_factor";"drawn_instrument_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrsvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	inception_date_of_the_instrument	Date		date
7	household_income_at_inception	Decimal (12,0)	12	euro amount (non-negative) with exclusions
8	crncy_dnmntn	Characters (3)	3	ISO 4217 Currency
9	pymnt_frncy	Variable multibyte (255)	255	code
10	product_name	Variable multibyte (255)	255	medium sized string
11	product_label	Variable multibyte (255)	255	medium sized string
12	tp_inrst_rt	Variable multibyte (255)	255	code
13	intrst_rt_at_origin	Decimal (12,0)	12	real number (positive or negative)
14	intrst_rt_rst_frncy	Variable multibyte (255)	255	code
15	intrst_rt_rst_interval_at_org	Variable multibyte (255)	255	code
16	loan_to_value_at_inception	Decimal (12,0)	12	real number (non-negative) with exclusions
17	legal_final_maturity_date_at_inception	Date		date with exclusions
18	legal_final_maturity_date	Date		date with exclusions
19	commitment_amount_at_inception	Decimal (12,0)	12	euro amount (non-negative) with exclusions

20	outstanding_nominal_amount_at_inception	Decimal (12,0)	12	euro amount (non-negative)
21	typ_amrtstn	Variable multibyte (255)	255	code
22	bsi_class	Variable multibyte (255)	255	code
23	typ_instrmnt	Variable multibyte (255)	255	code
24	corep_class	Variable multibyte (255)	255	code
25	buy_to_let	Variable multibyte (255)	255	code
26	credit_conversion_factor	Decimal (8,0)	8	credit conversion factor
27	drawn_instrument_indicator	Variable characters (50)	50	drawn instrument indicator

### 2.3.28 instrument\_past\_due.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"arrrs";"date_of_past_due_for_the_instrument"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	arrrs	Decimal (12,0)	12	euro amount (non-negative)
7	date_of_past_due_for_the_instrument	Date		date

### 2.3.29 instrument\_subject\_to\_securitisation.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"pool_id";"account_status_dt";"typ_trnsfr"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	pool_id	Variable characters (60)	60	identifier domain
7	account_status_dt	Date		date
8	typ_trnsfr	Variable multibyte (255)	255	code

### 2.3.30 instrument\_protection\_received\_data.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"reporting_reference_date";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"prtctn_id";"protection_valuation_approach_at_inception";"original_protection_value";"date_of_original_protection_value";"protection_allocated_value"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	reporting_reference_date	Date		reporting reference date
3	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
4	cntrct_id	Variable characters (60)	60	identifier domain
5	instrmnt_id	Variable characters (60)	60	identifier domain
6	prtctn_id	Variable characters (60)	60	identifier domain
7	protection_valuation_approach_at_inception	Variable multibyte (255)	255	code
8	original_protection_value	Decimal (12,0)	12	euro amount (non-negative) with exclusions
9	date_of_original_protection_value	Date		date
10	protection_allocated_value	Decimal (12,0)	12	euro amount (non-negative)



### 2.3.31 joint\_liability.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"entty_rl";"counterparty_identifier";"cntrct_id";"instrmnt_id";"reporting_reference_date";"joint_liability_amount"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	entty_rl	Variable characters (25)	25	counterparty-instrument role type
4	counterparty_identifier	Variable characters (60)	60	identifier domain
5	cntrct_id	Variable characters (60)	60	identifier domain
6	instrmnt_id	Variable characters (60)	60	identifier domain
7	reporting_reference_date	Date		reporting reference date
8	joint_liability_amount	Decimal (12,0)	12	euro amount (non-negative)

### 2.3.32 legal\_entity.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"counterparty_identifier";"reporting_reference_date";"lei";"name";"dutch_legal_entity_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	counterparty_identifier	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	lei	Variable characters (20)	20	string with strictly 20 characters
5	name	Variable multibyte (1024)	1024	name
6	dutch_legal_entity_indicator	Variable characters (50)	50	Dutch legal entity indicator

### 2.3.33 lgd\_model\_contract.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"reporting_reference_date";"lgd_model_id";"lgd_be";"cure_probability";"lgd_downturn";"regulatory_downturn_lgd";"regulatory_el";"regulatory_rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	lgd_model_id	Variable multibyte (255)	255	medium sized string
6	lgd_be	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
7	cure_probability	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
8	lgd_downturn	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
9	regulatory_downturn_lgd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
10	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
11	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.34 lgd\_model\_debtor.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"entty_rl";"counterparty_identifier";"reporting_reference_date";"lgd_model_id";"lgd_be";"cure_probability";"lgd_downturn";"regulatory_downturn_lgd";"regulatory_el";"regulatory_rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.



#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	entty_rl	Variable characters (25)	25	counterparty-instrument role type
3	counterparty_identifier	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	lgd_model_id	Variable multibyte (255)	255	medium sized string
6	lgd_be	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
7	cure_probability	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
8	lgd_downturn	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
9	regulatory_downturn_lgd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
10	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
11	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.35 lgd\_model\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"lgd_model_id";"lgd_be";"cure_probability";"lgd_downturn";"regulatory_downturn_lgd";"regulatory_el";"regulatory_rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	lgd_model_id	Variable multibyte (255)	255	medium sized string
7	lgd_be	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
8	cure_probability	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
9	lgd_downturn	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
10	regulatory_downturn_lgd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
11	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
12	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.36 lgd\_model\_protection\_received.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"prtctn_id";"reporting_reference_date";"lgd_model_id";"estimated_recovery_amount";"estimated_dt_recovery_amount"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	prtctn_id	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	lgd_model_id	Variable multibyte (255)	255	medium sized string
5	estimated_recovery_amount	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
6	estimated_dt_recovery_amount	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.37 natural\_person.csv

#	Header	Data type	Details
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1	"reporting_agent_identifier";"counterparty_identifier";"reporting_reference_date";"year_of_birth";"dutch_natural_person_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.
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#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	counterparty_identifier	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	year_of_birth	Short integer		year
5	dutch_natural_person_indicator	Variable characters (50)	50	Dutch natural person indicator

### 2.3.38 natural\_person\_instrument\_data.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrved_agnt_cd";"entty_rl";"counterparty_identifier";"cntrct_id";"instrmnt_id";"reporting_reference_date";"debtors_employment_status_at_inception";"income_at_inception";"date_of_income_at_inception"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrved_agnt_cd	Variable characters (60)	60	identifier domain
3	entty_rl	Variable characters (25)	25	counterparty-instrument role type
4	counterparty_identifier	Variable characters (60)	60	identifier domain
5	cntrct_id	Variable characters (60)	60	identifier domain
6	instrmnt_id	Variable characters (60)	60	identifier domain
7	reporting_reference_date	Date		reporting reference date
8	debtors_employment_status_at_inception	Variable multibyte (255)	255	code
9	income_at_inception	Decimal (12,0)	12	euro amount (non-negative)
10	date_of_income_at_inception	Date		date

### 2.3.39 non\_fixed\_interest\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrved_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"rfnc_rt_ancrdt_cllctn_rfnc_rt_value";"rfnc_rt_ancrdt_cllctn_maturity_value";"intrst_rt_sprd"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrved_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	rfnc_rt_ancrdt_cllctn_rfnc_rt_value	Variable multibyte (255)	255	code
7	rfnc_rt_ancrdt_cllctn_maturity_value	Variable multibyte (255)	255	code
8	intrst_rt_sprd	Decimal (12,0)	12	real number (positive or negative)

### 2.3.40 observed\_agent\_delivery.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrved_agnt_cd";"reporting_reference_date"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrved_agnt_cd	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date

### 2.3.41 originator\_secured\_instrument\_data.csv

#	Header	Data type	Details
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1	"reporting_agent_identifier";"instrmnt_id";"obsrsvd_agnt_cd";"reporting_reference_date";"cntrct_id";"counterparty_identifier";"entty_rl"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.
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#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	instrmnt_id	Variable characters (60)	60	identifier domain
3	obsrsvd_agnt_cd	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	cntrct_id	Variable characters (60)	60	identifier domain
6	counterparty_identifier	Variable characters (60)	60	identifier domain
7	entty_rl	Variable characters (25)	25	counterparty-instrument role type

## 2.3.42 other\_loans\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrsvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"off_bln c_sht_amnt"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrsvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	off_bln c_sht_amnt	Decimal (12,0)	12	euro amount (non-negative) with exclusions

## 2.3.43 overdraft\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrsvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"current_account_type"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrsvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	current_account_type	Variable characters (50)	50	current account type

## 2.3.44 pd\_model\_contract.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrsvd_agnt_cd";"cntrct_id";"reporting_reference_date";"pd_model_id";"initial_pd";"regulatory_pd";"regulatory_el";"regulatory_rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrsvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	pd_model_id	Variable multibyte (255)	255	medium sized string
6	initial_pd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
7	regulatory_pd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
8	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
9	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.45 pd\_model\_debtor.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"entty_rl";"counterparty_i dentifier";"reporting_reference_date";"pd_model_id";" initial_pd";"regulatory_pd";"regulatory_el";"regulatory _rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	entty_rl	Variable characters (25)	25	counterparty-instrument role type
3	counterparty_identifier	Variable characters (60)	60	identifier domain
4	reporting_reference_date	Date		reporting reference date
5	pd_model_id	Variable multibyte (255)	255	medium sized string
6	initial_pd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
7	regulatory_pd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
8	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
9	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.46 pd\_model\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrsvd_agnt_cd";"cntrct _id";"instrmnt_id";"reporting_reference_date";"pd_mo del_id";"initial_pd";"regulatory_pd";"regulatory_el";"re gulatory_rwa"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrsvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	pd_model_id	Variable multibyte (255)	255	medium sized string
7	initial_pd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
8	regulatory_pd	Decimal (7,0)	7	real number from 0 to 1 with 6 decimals with exclusions
9	regulatory_el	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions
10	regulatory_rwa	Decimal (20,0)	20	real number of 20 numbers with 2 decimals with exclusions

### 2.3.47 postal\_code\_region.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"reporting_reference_dat e";"postal_code";"country"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	reporting_reference_date	Date		reporting reference date
3	postal_code	Short integer		postal code numeric
4	country	Characters (2)	2	ISO 3166 Country

### 2.3.48 protection\_provider\_protection\_received.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"reporting_reference_dat e";"counterparty_identifier";"prtctn_id"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	reporting_reference_date	Date		reporting reference date
3	counterparty_identifier	Variable characters (60)	60	identifier domain
4	prtctn_id	Variable characters (60)	60	identifier domain

#### 2.3.49 protection\_received.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"prtctn_id";"reporting_reference_date";"typ_prtctn";"prtctn_vl";"typ_prtctn_vl";"protection_valuation_approach";"date_of_protection_value";"cumulative_additional_premiums_deposits";"immovable_property_indicator"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	prtctn_id	Variable characters (60)	60	identifier domain
3	reporting_reference_date	Date		reporting reference date
4	typ_prtctn	Variable multibyte (255)	255	code
5	prtctn_vl	Decimal (12,0)	12	euro amount (non-negative)
6	typ_prtctn_vl	Variable multibyte (255)	255	code
7	protection_valuation_approach	Variable multibyte (255)	255	code
8	date_of_protection_value	Date		date
9	cumulative_additional_premiums_deposits	Decimal (12,0)	12	euro amount (non-negative) with exclusions
10	immovable_property_indicator	Variable characters (50)	50	immovable property indicator

#### 2.3.50 recognised\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrsvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"accumulated_write_offs";"final_loss_amount";"impairment_assessment_method"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrsvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	accumulated_write_offs	Decimal (12,0)	12	euro amount (non-negative)
7	final_loss_amount	Decimal (12,0)	12	euro amount (non-negative) with exclusions
8	impairment_assessment_method	Variable multibyte (255)	255	code

#### 2.3.51 reporting\_agent\_delivery.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"reporting_reference_date"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	reporting_reference_date	Date		reporting reference date

#### 2.3.52 revolving\_credit\_other\_than\_overdrafts\_and\_credit\_card\_debt\_instrument.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrsvd_agnt_cd";"cntrct_id";"instrmnt_id";"reporting_reference_date";"off_bln_c_sht_amnt"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	cntrct_id	Variable characters (60)	60	identifier domain
4	instrmnt_id	Variable characters (60)	60	identifier domain
5	reporting_reference_date	Date		reporting reference date
6	off_blns_sht_amnt	Decimal (12,0)	12	euro amount (non-negative) with exclusions

### 2.3.53 servicer\_instrument\_data.csv

#	Header	Data type	Details
1	"reporting_agent_identifier";"obsrvd_agnt_cd";"entty_rl";"counterparty_identifier";"cntrct_id";"instrmnt_id";"reporting_reference_date"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
1	reporting_agent_identifier	Variable characters (60)	60	identifier domain
2	obsrvd_agnt_cd	Variable characters (60)	60	identifier domain
3	entty_rl	Variable characters (25)	25	counterparty-instrument role type
4	counterparty_identifier	Variable characters (60)	60	identifier domain
5	cntrct_id	Variable characters (60)	60	identifier domain
6	instrmnt_id	Variable characters (60)	60	identifier domain
7	reporting_reference_date	Date		reporting reference date

## 2.4 Validation strategy

The validation strategy of the submitted data is closely related to the overall data quality strategy as described in paragraph 1.5.

Validations on the data delivery set are performed asynchronously and (limited) with data outside the data delivery set (e.g. validation on reference data). The bulk of all blocking validations are modelled in the logical data model. Blocking validations (that affect the status of the data delivery obligation) on top of that are explicitly stated in Appendix A. Appendix B states the signalling validation rules that will not affect the data delivery obligation status, but can however lead to a call for resubmission.

To summarize the validation strategy of the data delivery:

- Blocking findings will result in non-acceptance of the data delivery obligation
- Signalling findings will result in acceptance of the data delivery obligation<sup>7</sup>

There are three categories of validations that will lead to an evaluation of the data delivery (requirements) in the event of findings. In the table below these categories, the severity and types of feedback are described.

Type	Description	Source	Action	Feedback
I. Logius checks	Paragraph 1.3.1	Delivery of data to DNB using Logius Digipoort	Blocking	Delivery notification Logius (XML, MIME)
II. DNB technical, structure & administrative checks	Paragraph 1.4.9	Delivery of data to DNB using Logius Digipoort	Blocking	Logius database (400, 410) & DNB Digital Reporting Portal
III (a) Logical - Domain	Do the attributes comply with the size, type and domain constraints?	logical data model + Appendix A	Blocking	DNB Digital Reporting Portal (XML)
III (b) Logical - Tuple	Do the value of attributes comply with constraints?	Appendix A	Blocking or Signalling	DNB Digital Reporting Portal (XML)
III (c) Logical – Entity	Do the entities comply with the uniqueness (or key) constraints ?	logical data model	Blocking	DNB Digital Reporting Portal (XML)
III (d) Logical - Model	Generally speaking, model constraints need other entities to evaluate the rule. eg. referential integrity requirements of the logical data model (model constraints), subtype constraints and specialisation model constraints <sup>8</sup> ?	logical data model + Appendix A	Blocking Or Signalling	DNB Digital Reporting Portal (XML)

<sup>7</sup> As stated in paragraph 1.5 a fulfillment of the delivery obligation (status=accepted) might still result in a request for resubmission.

<sup>8</sup> Although highly related to each other, there is a subtle difference between a subtype constraint and a specialisation model constraint. The first evaluates the correct referential value, the second evaluates the correct attributes per subtype.



## 2.4.1 Validation processing & feedback

Technical validations will be processed sequentially, when a blocking finding is encountered, processing will stop and no further evaluation will be performed.

Logical validations will be processed on the complete RRE data-exchange.

Feedback on technical validations will be straightforward (e.g. XML header violation, no open requirement available, etc.). Feedback on logical validations will be published in the DNB Digital Reporting Portal as an XML file containing all violations. If however, these violations result in huge amounts of data of the same type of error, there will be some compression.

## 2.5 Completeness of delivery

All deliveries are a full snapshot of the source, deltas are not requested.

## 2.6 Submission process

The submission process is explained in the next paragraphs.

### 2.6.1 RRE reporting requirements, Digital Reporting Portal (DLR)

DNB publishes all agreements and reporting requirements for banks in its Digital Reporting Portal.

### 2.6.2 Logius Digipoort connection criteria

The RRE data submission is to be effected through Logius' Digipoort platform, which provides a secure data delivery service between businesses and public bodies. The ultimate objective of Digipoort is to reduce the administrative burdens for businesses and public bodies using smart, digital solutions for operational processes.

### 2.6.3 RRE data delivery feedback

Following a RRE data-exchange by the bank, there are a number of feedback moments.

1. Logius, the transporter's service provider, sends a notice of receipt (XML in MIME). This means the transporter has received the data delivery and the majority of validations done by Logius are ok or not ok. If there is a faulty XML header, Logius will have to contact the bank. The transporter (i.e. Logius) provides a track and trace functionality (messageID) to enable data tracking. Passing Logius validation will result in Logius pushing the AnaCredit dataexchange to DNB.
2. DNB sends a delivery confirmation notification to Logius (XML in MIME) notifying the transporter that the data-exchange has been received and whether or not it passed DNB's technical validations. Logius will translate this message to a status 400 (technical validation OK) or a status 410 (technical validation ERROR). All validation feedback (status and files) by DNB will also be made available and viewable in the DNB Digital Reporting Portal.
3. The RRE data-exchange from banks, through Logius, received by DNB and the technical validations by DNB can be tracked in the Logius track & trace database which is accessible via an API by using the messageID provided in the initial Logius delivery conformation.
4. After the DNB technical validations have been executed, the logical validations will commence. Feedback on these validations is not communicated through Logius, but will be made available in the DNB Digital Reporting Portal.
5. Notifications of validation results by DNB can be send to the responsible person within the bank if he/she has been properly registered in the DNB Digital Reporting Portal.



## 2.6.4 Process and statuses

It's important to distinguish between (1) the reception, validation, feedback and delivery of the RRE data exchange by Logius and (2) the subsequent process of reception, validation and feedback of the RRE data exchange by DNB.

*Ad 1) reception, validation, feedback and delivery by Logius*

- Bank sends RRE data
- Logius validates and send delivery conformation, (XML, MIME) – including message ID
- Logius pushes RRE data to DNB

*Ad 2) reception, validation and feedback by DNB*

When Logius sent DNB a delivery notification of the data exchange, communications relating to the status of a delivery can at all times be consulted in the DNB Digital Reporting Portal. There are two types of statuses:

1. The status of the reporting obligation: "you must deliver the RRE data for data delivery set <date>".
2. The delivery status: "you have submitted a delivery under a reporting obligation". This means that a single reporting obligation can have multiple deliveries in case of validation errors.

When a bank submits a RRE dataexchange to Logius, passed the Logius validations and passed the DNB technical validations, the delivery status in the DNB Digital Reporting Portal is set to **Received**. The requirement status remains **Open**. The bank cannot make a new submission under the same requirement as long as the validation process is ongoing (status=**Received**)<sup>9</sup>.

When the RRE dataexchange passed the DNB technical validations a delivery notification is send back to Logius. Logius will process this notification into either a status 400 or a status 410. A status 410 in Logius (technical status=ERROR) will also result in a delivery status **Not Accepted**. The DNB Digital Reporting Portal will show the reason for this error. The bank can now correct the error and resubmit under the same reporting obligation.

If the DNB technical validation passed successfully, the Logius database will show a status 400 and the delivery status will remain to be **Received**. Now the logical validations are being processed.

All the logical validations (blocking and signalling) will be executed. If there is a violation of a blocking rule, the delivery status will be set to **Not Accepted**. The status of the obligation will remain to be **Open**. Banks can view the validation results in the DNB Digital Reporting Portal, correct the error and resubmit the data.

If there are no blocking findings, the delivery status is set to **Accepted** and the obligation status is set to **Completed**. The bank has successfully met the RRE obligation.

Violation of signalling rules will not result in a **Not Accepted** delivery<sup>10</sup>. They might result in a new obligation for a resubmission.

## 2.6.5 Other signalling rules<sup>11</sup> and plausibility rules

Blocking validations and signalling validations of data within the data delivery set are checked and dealt with automatically when the delivery arrives (see 2.4). Contrary to signalling rules that require data outside the data delivery set and plausibility rules that need a non-automated interpretation. These rules do not influence the reporting obligation or delivery status, they are separately reported and could lead to either enquiries with the bank or a new obligation to resubmit data.

<sup>9</sup> Sending in a new RRE data exchange for the same obligation (reporting ID, reporting reference date, datadelivery code) while the status of the previous delivery is **Received**, will result in a validation error of the newly submitted data exchange.

<sup>10</sup> In time, these signalling rules are meant to be changed to 'blocking'.

<sup>11</sup> These are signalling rules that require data outside the scope of the data delivery set.

A special type of signalling rule is the plausibility rule which is less automated; such a rule is often based on detailed analyses and combining data with alternative data sources, etc. Moreover, the outcomes cannot be established in advance. They may provide a plausible explanation, which may or may not have been put forward by the reporting agent.

The outcomes of this type of rules are published in the Digital Reporting Portal.

A list of these other signalling rules is provided in Appendix B.

## 2.6.6 Validation of completeness

The metadata checksum file is part of the files to be submitted. For each entity type, the required type of checksum is listed. For now, no checksum is requested, only, a logical row count is requested for each entity type. This count indicates the number of instances of an entity type that is appropriate for this entity type in accordance with the logical data model.

Please note that this concerns all entities in the logical data model including reference data and entity types like "entity type delivery" and not only those in the physical data deliveries: the logical data model also requires a row count and checksum for those entity types that do not have a corresponding .csv file to be delivered.

### 2.6.6.1 Example of a check on a physical delivery

E.g. the reporting agent must report on exactly 100,000 instruments. The instrument.csv file contains 100,000 rows, excluding the header. The row count for the logical entity is 100,000. The entity type delivery lists a row count of 100,000 for the "instrument" entity type.

DNB checks that  $100000 = 100000$  and accepts the delivery.

### 2.6.6.2 Example of a check on a logical delivery

The entity type "instrument not past due" does not have its own specific features or relations, and therefore does not require physical delivery. However, the logical checksum of all not past due instruments must be delivered.

For example, the reporting agent must report on exactly 100,000 instruments (with 100,000 financial data), 10,000 of which are instrument past due and 90,000 are instrument not past due (100,000-10,000).

These files must be reported:

1. instrument.csv with 100,000 records
2. financial\_data.csv with 100,000 records
3. instrument\_past\_due.csv with 10,000 records

These records must be reported in the entity type delivery:

Entity type	Rowcount
Instrument	100,000
financial data	100,000
instrument past due	10,000
instrument not past due	90,000

DNB checks that instrument.csv contains 100,000 rows, that financial\_data.csv contains 100,000 rows, that instrument\_past\_due contains 10,000 rows and that 90,000 rows in instrument.csv logically consist of instruments not past due.

### 2.6.6.3 Check on primary key

The LDM has entity types that allow DNB to ask for checks on combinations of attributes. This mechanism is primarily meant to check the integrity of primary keys of the entity types in the logical data model.

Currently, no checks of these types are foreseen, since DNB will rely instead on the hashing of the csv files themselves, in combination of the checks on the referential integrity as specified in the logical data model. This entails that the file attribute\_combination\_delivery.csv must be reported as an empty file. Nevertheless, the header is mandatory.

#### 2.6.6.4 Check on sums

The LDM has entity types that allow DNB to ask for checking totals, like the sum of all commitment amounts at inception. This is to be reported in the entity type attribute delivery.

Currently, no checks of these types are planned, since DNB anticipates that the hashing of primary keys and the row counts and hashing of entity types will give sufficient evidence on the integrity of the transmitted data. This entails that the file attribute\_delivery.csv must be reported as an empty file. Nevertheless, the header is mandatory.

#### 2.6.7 Resubmission

In some cases, even after extensive analysis by DNB, the submitted RRE data set may turn out to be incorrect<sup>12</sup> (see also Section 2.6.5). If the cause is a signalling or plausibility rule (Appendix B), the agent in question is contacted to provide an explanation. If, based on this explanation, the data submitted is found to be incorrect, DNB can demand a resubmission. A new reporting obligation for the period in question will then be created in the Digital Reporting Portal.

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<sup>12</sup> Whereas data validations mainly concern the delivery, the scope of consistency and plausibility rules stretches beyond single deliveries. The **Completed** status means that the delivery complies with validation rules. Non-compliance with consistency or plausibility rules may lead to a resubmission being required.

### 3 DATA DELIVERY SPECIFICATIONS

After the data from the files have been processed in the file interface, they are validated against the normalised logical data model of the interface and then loaded into it. The interface is described below.

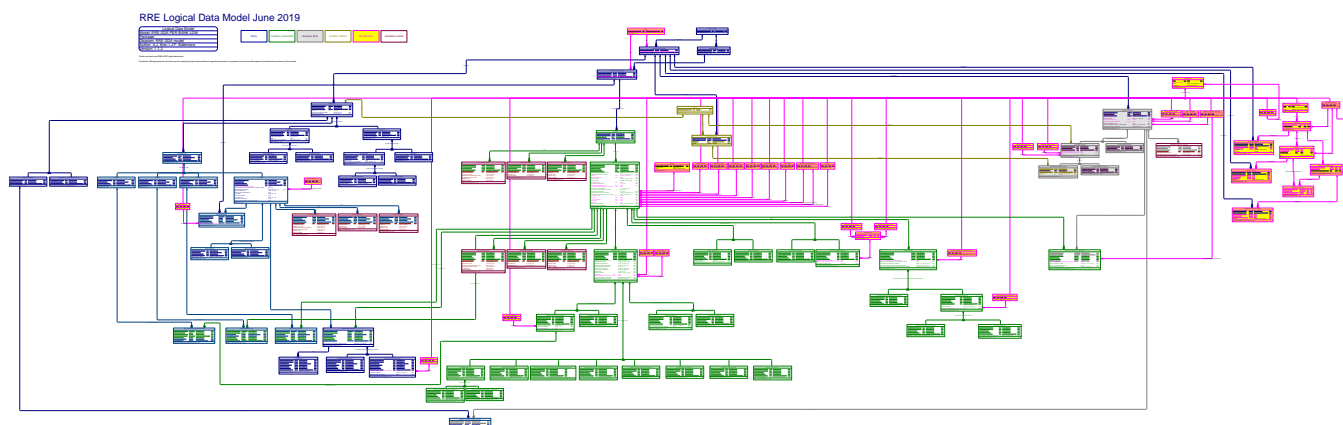
#### 3.1 Process description

The RRE Reporting Manual describes which instruments and counterparties must be reported on, as well as the data that must be reported. The reporting population is also listed.

#### 3.2 Logical data model

The link below refers to the RRE web page within the Digital Reporting Portal on the DNB website, where a zip file can be downloaded containing a description of the logical data model in HTML format. The logical data model describes all entity types, their structure and interrelations.

Link: <https://www.dnb.nl/statistiek/digitaal-loket-rapportages/statistische-rapportages/banken/residential-real-estate-rre/index.jsp>



#### 3.3 Dealing with “Non-applicable” attribute values in the logical data model

There are three different ways in which the reporting of “Non-applicable” is dealt with in the logical data model.

The first type covers those situations where the applicability of an attribute is inherent in the arrangement between the observed agent and its involved parties. These “Non-applicable” values have in the LDM a domain extension denoting the possibility of a “Non-applicable” value.

In the second type of situations, there are subtypes within the LDM that take care of the “Non-applicable” situations. For example, the attribute ‘arrear for the instrument’ can only be reported on ‘instrument past due’.

And the third type of situations occurs when introducing subtyping would create more complexity than it would solve. For these situations, a business rule is introduced to indicate under which conditions the value “Non-applicable” is allowed.

#### 3.4 Mapping the delivery to the logical data model

This section describes the fields and tables that are shown for the attributes and entities in the file interface, i.e. which fields from which tables are visible for which entities and attributes.

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
accounting_data.csv	reporting_agent_identifier	accounting data	reporting agent identifier
accounting_data.csv	obsrvd_agnt_cd	accounting data	observed agent identifier
accounting_data.csv	cntrct_id	accounting data	contract identifier

accounting_data.csv	instrmnt_id	accounting data	instrument identifier
accounting_data.csv	reporting_reference_date	accounting data	reporting reference date
accounting_data.csv	frbrnc_stts	accounting data	status of forbearance and renegotiation
accounting_data.csv	dt_frbrnc_stts	accounting data	date of the forbearance and renegotiation status
accounting_data.csv	cumulative_recoveries_since_default	accounting data	cumulative recoveries since default
accounting_data.csv	cumulative_unsecured_recoveries_since_default	accounting data	cumulative unsecured recoveries since default
accounting_data.csv	fully_derecognised_instrument_being_served_indicator	accounting data	fully derecognised instrument being serviced indicator

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
attribute_combination_delivery.csv	reporting_agent_identifier	attribute combination delivery	reporting agent identifier
attribute_combination_delivery.csv	reporting_reference_date	attribute combination delivery	reporting reference date
attribute_combination_delivery.csv	logical_data_model_code	attribute combination delivery	logical data model_code
attribute_combination_delivery.csv	entity_type_code	attribute combination delivery	entity type code
attribute_combination_delivery.csv	attribute_combination_code	attribute combination delivery	attribute combination code
attribute_combination_delivery.csv	checksum	attribute combination delivery	checksum

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
attribute_delivery.csv	reporting_agent_identifier	attribute delivery	reporting agent identifier
attribute_delivery.csv	reporting_reference_date	attribute delivery	reporting reference date
attribute_delivery.csv	logical_data_model_code	attribute delivery	logical data model_code
attribute_delivery.csv	entity_type_code	attribute delivery	entity type code
attribute_delivery.csv	attribute_code	attribute delivery	attribute code
attribute_delivery.csv	checksum	attribute delivery	checksum

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
contract.csv	reporting_agent_identifier	contract	reporting agent identifier
contract.csv	obsrvd_agnt_cd	contract	observed agent identifier
contract.csv	cntrct_id	contract	contract identifier
contract.csv	reporting_reference_date	contract	reporting reference date
contract.csv	dt_incpn	contract	inception date

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
counterparty.csv	reporting_agent_identifier	counterparty	reporting agent identifier
counterparty.csv	counterparty_identifier	counterparty	counterparty identifier
counterparty.csv	reporting_reference_date	counterparty	reporting reference date
counterparty.csv	country	counterparty	country
counterparty.csv	protection_provider_indicator	counterparty	protection provider indicator
counterparty.csv	legal_entity_indicator	counterparty	legal entity indicator

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
credit_card_debt_instrument.csv	reporting_agent_identifier	credit card debt instrument	reporting agent identifier
credit_card_debt_instrument.csv	obsrvd_agnt_cd	credit card debt instrument	observed agent identifier
credit_card_debt_instrument.csv	cntrct_id	credit card debt instrument	contract identifier
credit_card_debt_instrument.csv	instrmnt_id	credit card debt instrument	instrument identifier
credit_card_debt_instrument.csv	reporting_reference_date	credit card debt instrument	reporting reference date
credit_card_debt_instrument.csv	off_blnc_sht_amnt	credit card debt instrument	off-balance sheet amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
credit_lines_other_than_revolving_credit_instrument.csv	reporting_agent_identifier	credit lines other than revolving credit instrument	reporting agent identifier

credit_lines_other_than_revolving_credit_instrument.csv	obsrvd_agnt_cd	credit lines other than revolving credit instrument	observed agent identifier
credit_lines_other_than_revolving_credit_instrument.csv	cntrct_id	credit lines other than revolving credit instrument	contract identifier
credit_lines_other_than_revolving_credit_instrument.csv	instrmnt_id	credit lines other than revolving credit instrument	instrument identifier
credit_lines_other_than_revolving_credit_instrument.csv	reporting_reference_date	credit lines other than revolving credit instrument	reporting reference date
credit_lines_other_than_revolving_credit_instrument.csv	off_blnc_sht_amnt	credit lines other than revolving credit instrument	off-balance sheet amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
creditor_instrument_data.csv	reporting_agent_identifier	creditor-instrument data	reporting agent identifier
creditor_instrument_data.csv	obsrvd_agnt_cd	creditor-instrument data	observed agent identifier
creditor_instrument_data.csv	entty_rl	creditor-instrument data	counterparty role
creditor_instrument_data.csv	counterparty_identifier	creditor-instrument data	counterparty identifier
creditor_instrument_data.csv	cntrct_id	creditor-instrument data	contract identifier
creditor_instrument_data.csv	instrmnt_id	creditor-instrument data	instrument identifier
creditor_instrument_data.csv	reporting_reference_date	creditor-instrument data	reporting reference date

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
current_account_instrument_with_credit_limit.csv	reporting_agent_identifier	current account instrument with credit limit	reporting agent identifier
current_account_instrument_with_credit_limit.csv	obsrvd_agnt_cd	current account instrument with credit limit	observed agent identifier
current_account_instrument_with_credit_limit.csv	cntrct_id	current account instrument with credit limit	contract identifier
current_account_instrument_with_credit_limit.csv	instrmnt_id	current account instrument with credit limit	instrument identifier
current_account_instrument_with_credit_limit.csv	reporting_reference_date	current account instrument with credit limit	reporting reference date
current_account_instrument_with_credit_limit.csv	off_blnc_sht_amnt	current account instrument with credit limit	off-balance sheet amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
debtor.csv	reporting_agent_identifier	debtor	reporting agent identifier
debtor.csv	entty_rl	debtor	counterparty role
debtor.csv	counterparty_identifier	debtor	counterparty identifier
debtor.csv	reporting_reference_date	debtor	reporting reference date
debtor.csv	current_debtor_s_employment_status	debtor	current debtor's employment status
debtor.csv	inception_date_of_first_instrument_for_investing_in_rre	debtor	inception date of first instrument for investing in RRE
debtor.csv	debtor_past_due_indicator	debtor	debtor past due indicator
debtor.csv	current_toetsinkomen	debtor	current toetsinkomen
debtor.csv	date_of_current_toetsinkomen	debtor	date of current toetsinkomen
debtor.csv	total_assets	debtor	total assets
debtor.csv	date_of_total_assets	debtor	date of total assets
debtor.csv	total_liabilities	debtor	total liabilities
debtor.csv	date_of_total_liabilities	debtor	date of total liabilities
debtor.csv	date_of_current_debtor_s_employment_status	debtor	date of current debtor's employment status

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
debtor_default_data.csv	reporting_agent_identifier	debtor default data	reporting agent identifier
debtor_default_data.csv	obsrvd_agnt_cd	debtor default data	observed agent identifier
debtor_default_data.csv	entty_rl	debtor default data	counterparty role
debtor_default_data.csv	counterparty_identifier	debtor default data	counterparty identifier
debtor_default_data.csv	reporting_reference_date	debtor default data	reporting reference date
debtor_default_data.csv	default_status_of_the_counterparty	debtor default data	default status of the counterparty

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
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debtor_past_due.csv	reporting_agent_identifier	debtor past due	reporting agent identifier
debtor_past_due.csv	entty_rl	debtor past due	counterparty role
debtor_past_due.csv	counterparty_identifier	debtor past due	counterparty identifier
debtor_past_due.csv	reporting_reference_date	debtor past due	reporting reference date
debtor_past_due.csv	arrear_for_the_debtor	debtor past due	arrear for the debtor

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
debtor_instrument_data.csv	reporting_agent_identifier	debtor-instrument data	reporting agent identifier
debtor_instrument_data.csv	obsrved_agnt_cd	debtor-instrument data	observed agent identifier
debtor_instrument_data.csv	entty_rl	debtor-instrument data	counterparty role
debtor_instrument_data.csv	counterparty_identifier	debtor-instrument data	counterparty identifier
debtor_instrument_data.csv	cntrct_id	debtor-instrument data	contract identifier
debtor_instrument_data.csv	instrmnt_id	debtor-instrument data	instrument identifier
debtor_instrument_data.csv	reporting_reference_date	debtor-instrument data	reporting reference date
debtor_instrument_data.csv	other_debts_at_inception	debtor-instrument data	other debts at inception
debtor_instrument_data.csv	household_type_instrument_data_indicator	debtor-instrument data	household type-instrument data indicator

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
domestic_immovable_property.csv	reporting_agent_identifier	domestic immovable property	reporting agent identifier
domestic_immovable_property.csv	prtctn_id	domestic immovable property	protection identifier
domestic_immovable_property.csv	reporting_reference_date	domestic immovable property	reporting reference date
domestic_immovable_property.csv	postal_code	domestic immovable property	postal code
domestic_immovable_property.csv	iso_3166_1_alpha_2_cd	domestic immovable property	country

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
drawn_instrument.csv	reporting_agent_identifier	drawn instrument	reporting agent identifier
drawn_instrument.csv	obsrved_agnt_cd	drawn instrument	observed agent identifier
drawn_instrument.csv	cntrct_id	drawn instrument	contract identifier
drawn_instrument.csv	instrmnt_id	drawn instrument	instrument identifier
drawn_instrument.csv	reporting_reference_date	drawn instrument	reporting reference date
drawn_instrument.csv	dt_stllmnt	drawn instrument	settlement date
drawn_instrument.csv	trnsfrd_amnt	drawn instrument	transferred amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
dutch_legal_entity.csv	reporting_agent_identifier	Dutch legal entity	reporting agent identifier
dutch_legal_entity.csv	counterparty_identifier	Dutch legal entity	counterparty identifier
dutch_legal_entity.csv	reporting_reference_date	Dutch legal entity	reporting reference date
dutch_legal_entity.csv	national_identifier	Dutch legal entity	national identifier

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
dutch_natural_person.csv	reporting_agent_identifier	Dutch natural person	reporting agent identifier
dutch_natural_person.csv	counterparty_identifier	Dutch natural person	counterparty identifier
dutch_natural_person.csv	reporting_reference_date	Dutch natural person	reporting reference date
dutch_natural_person.csv	national_identifier	Dutch natural person	national identifier

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
ead_model_contract.csv	reporting_agent_identifier	EAD model contract	reporting agent identifier
ead_model_contract.csv	obsrved_agnt_cd	EAD model contract	observed agent identifier
ead_model_contract.csv	cntrct_id	EAD model contract	contract identifier
ead_model_contract.csv	reporting_reference_date	EAD model contract	reporting reference date
ead_model_contract.csv	ead_model_id	EAD model contract	EAD model identifier
ead_model_contract.csv	regulatory_ead	EAD model contract	Regulatory EAD
ead_model_contract.csv	regulatory_el	EAD model contract	Regulatory EL
ead_model_contract.csv	regulatory_rwa	EAD model contract	Regulatory RWA



.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
ead_model_debtor.csv	reporting_agent_identifier	EAD model debtor	reporting agent identifier
ead_model_debtor.csv	entty_rl	EAD model debtor	counterparty role
ead_model_debtor.csv	counterparty_identifier	EAD model debtor	counterparty identifier
ead_model_debtor.csv	reporting_reference_date	EAD model debtor	reporting reference date
ead_model_debtor.csv	ead_model_id	EAD model debtor	EAD model identifier
ead_model_debtor.csv	regulatory_ead	EAD model debtor	Regulatory EAD
ead_model_debtor.csv	regulatory_el	EAD model debtor	Regulatory EL
ead_model_debtor.csv	regulatory_rwa	EAD model debtor	Regulatory RWA

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
ead_model_instrument.csv	reporting_agent_identifier	EAD model instrument	reporting agent identifier
ead_model_instrument.csv	obsrsvd_agnt_cd	EAD model instrument	observed agent identifier
ead_model_instrument.csv	cntrct_id	EAD model instrument	contract identifier
ead_model_instrument.csv	instrmnt_id	EAD model instrument	instrument identifier
ead_model_instrument.csv	reporting_reference_date	EAD model instrument	reporting reference date
ead_model_instrument.csv	ead_model_id	EAD model instrument	EAD model identifier
ead_model_instrument.csv	regulatory_ead	EAD model instrument	Regulatory EAD
ead_model_instrument.csv	regulatory_el	EAD model instrument	Regulatory EL
ead_model_instrument.csv	regulatory_rwa	EAD model instrument	Regulatory RWA

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
entity_type_delivery.csv	reporting_agent_identifier	entity type delivery	reporting agent identifier
entity_type_delivery.csv	reporting_reference_date	entity type delivery	reporting reference date
entity_type_delivery.csv	logical_data_model_code	entity type delivery	logical data model_code
entity_type_delivery.csv	entity_type_code	entity type delivery	entity type code
entity_type_delivery.csv	checksum	entity type delivery	checksum
entity_type_delivery.csv	rowcount	entity type delivery	rowcount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
financial_data.csv	reporting_agent_identifier	financial data	reporting agent identifier
financial_data.csv	obsrsvd_agnt_cd	financial data	observed agent identifier
financial_data.csv	cntrct_id	financial data	contract identifier
financial_data.csv	instrmnt_id	financial data	instrument identifier
financial_data.csv	reporting_reference_date	financial data	reporting reference date
financial_data.csv	otstndng_nmnl_amnt	financial data	outstanding nominal amount
financial_data.csv	bwdpt_amnt	financial data	bouwdpot amount
financial_data.csv	periodic_repayment_due	financial data	periodic repayment due
financial_data.csv	periodic_interest_payment_due	financial data	periodic interest payment due
financial_data.csv	next_intrst_rt_reset_dt	financial data	next interest rate reset date
financial_data.csv	cumulative_repayments	financial data	cumulative repayments
financial_data.csv	cumulative_prepayments	financial data	cumulative prepayments
financial_data.csv	annlsd_agrd_rt	financial data	interest rate
financial_data.csv	accrued_interest	financial data	accrued interest
financial_data.csv	exit_status	financial data	exit status
financial_data.csv	dflt_stts	financial data	default status of the instrument
financial_data.csv	securitized_instrument_indicator	financial data	securitized instrument indicator
financial_data.csv	past_due_instrument_indicator	financial data	past due instrument indicator

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
household.csv	reporting_agent_identifier	household	reporting agent identifier
household.csv	counterparty_identifier	household	counterparty identifier
household.csv	reporting_reference_date	household	reporting reference date
household.csv	household_type_indicator	household	household type indicator

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
immovable_property.csv	reporting_agent_identifier	immovable property	reporting agent identifier
immovable_property.csv	prtctn_id	immovable property	protection identifier



immovable_property.csv	reporting_reference_date	immovable property	reporting reference date
immovable_property.csv	immovable_property_type	immovable property	immovable property type
immovable_property.csv	protection_valuation_type	immovable property	protection valuation type
immovable_property.csv	iso_3166_1_alpha_2_cd	immovable property	country

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
impaired_instrument.csv	reporting_agent_identifier	impaired instrument	reporting agent identifier
impaired_instrument.csv	obsrvd_agnt_cd	impaired instrument	observed agent identifier
impaired_instrument.csv	cntrct_id	impaired instrument	contract identifier
impaired_instrument.csv	instrmnt_id	impaired instrument	instrument identifier
impaired_instrument.csv	reporting_reference_date	impaired instrument	reporting reference date
impaired_instrument.csv	accumulated_impairment_amount	impaired instrument	accumulated impairment amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
instrument.csv	reporting_agent_identifier	instrument	reporting agent identifier
instrument.csv	obsrvd_agnt_cd	instrument	observed agent identifier
instrument.csv	cntrct_id	instrument	contract identifier
instrument.csv	instrmnt_id	instrument	instrument identifier
instrument.csv	reporting_reference_date	instrument	reporting reference date
instrument.csv	inception_date_of_the_instrument	instrument	inception date of the instrument
instrument.csv	household_income_at_inception	instrument	household income at inception
instrument.csv	crncy_dnmntn	instrument	currency
instrument.csv	pymnt_frqncy	instrument	payment frequency
instrument.csv	product_name	instrument	product name
instrument.csv	product_label	instrument	product label
instrument.csv	tp_intrst_rt	instrument	interest rate type
instrument.csv	intrst_rt_at_origin	instrument	interest rate at inception
instrument.csv	intrst_rt_rst_frqncy	instrument	interest rate reset frequency
instrument.csv	intrst_rt_rst_interval_at_org	instrument	interest rate reset frequency at inception
instrument.csv	loan_to_value_at_inception	instrument	loan to value at inception
instrument.csv	legal_final_maturity_date_at_inception	instrument	legal final maturity date at inception
instrument.csv	legal_final_maturity_date	instrument	legal final maturity date
instrument.csv	commitment_amount_at_inception	instrument	commitment amount at inception
instrument.csv	outstanding_nominal_amount_at_inception	instrument	outstanding nominal amount at inception
instrument.csv	typ_amrtstn	instrument	amortisation type
instrument.csv	bsi_class	instrument	bsi class
instrument.csv	typ_instrmnt	instrument	type of instrument
instrument.csv	corep_class	instrument	corep class
instrument.csv	buy_to_let	instrument	buy-to-let
instrument.csv	credit_conversion_factor	instrument	credit conversion factor
instrument.csv	drawn_instrument_indicator	instrument	drawn instrument indicator

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
instrument_past_due.csv	reporting_agent_identifier	instrument past due	reporting agent identifier
instrument_past_due.csv	obsrvd_agnt_cd	instrument past due	observed agent identifier
instrument_past_due.csv	cntrct_id	instrument past due	contract identifier
instrument_past_due.csv	instrmnt_id	instrument past due	instrument identifier
instrument_past_due.csv	reporting_reference_date	instrument past due	reporting reference date
instrument_past_due.csv	arrrs	instrument past due	arrear for the instrument
instrument_past_due.csv	date_of_past_due_for_the_instrument	instrument past due	date of past due for the instrument

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
instrument_subject_to_securitisation.csv	reporting_agent_identifier	instrument subject to securitisation	reporting agent identifier
instrument_subject_to_securitisation.csv	obsrvd_agnt_cd	instrument subject to securitisation	observed agent identifier

instrument_subject_to_securitisation.csv	cntrct_id	instrument subject to securitisation	contract identifier
instrument_subject_to_securitisation.csv	instrmnt_id	instrument subject to securitisation	instrument identifier
instrument_subject_to_securitisation.csv	reporting_reference_date	instrument subject to securitisation	reporting reference date
instrument_subject_to_securitisation.csv	pool_id	instrument subject to securitisation	name of pool/transaction
instrument_subject_to_securitisation.csv	account_status_dt	instrument subject to securitisation	date of securitisation
instrument_subject_to_securitisation.csv	typ_trnsfr	instrument subject to securitisation	type of securitisation

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
instrument_protection_received_data.csv	reporting_agent_identifier	instrument-protection received data	reporting agent identifier
instrument_protection_received_data.csv	reporting_reference_date	instrument-protection received data	reporting reference date
instrument_protection_received_data.csv	obsrvd_agnt_cd	instrument-protection received data	observed agent identifier
instrument_protection_received_data.csv	cntrct_id	instrument-protection received data	contract identifier
instrument_protection_received_data.csv	instrmnt_id	instrument-protection received data	instrument identifier
instrument_protection_received_data.csv	prtctn_id	instrument-protection received data	protection identifier
instrument_protection_received_data.csv	protection_valuation_approach_at_inception	instrument-protection received data	protection valuation approach at inception
instrument_protection_received_data.csv	original_protection_value	instrument-protection received data	original protection value
instrument_protection_received_data.csv	date_of_original_protection_value	instrument-protection received data	date of original protection value
instrument_protection_received_data.csv	protection_allocated_value	instrument-protection received data	protection allocated value

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
joint_liability.csv	reporting_agent_identifier	joint liability	reporting agent identifier
joint_liability.csv	obsrvd_agnt_cd	joint liability	observed agent identifier
joint_liability.csv	entty_rl	joint liability	counterparty role
joint_liability.csv	counterparty_identifier	joint liability	counterparty identifier
joint_liability.csv	cntrct_id	joint liability	contract identifier
joint_liability.csv	instrmnt_id	joint liability	instrument identifier
joint_liability.csv	reporting_reference_date	joint liability	reporting reference date
joint_liability.csv	joint_liability_amount	joint liability	joint liability amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
legal_entity.csv	reporting_agent_identifier	legal entity	reporting agent identifier
legal_entity.csv	counterparty_identifier	legal entity	counterparty identifier
legal_entity.csv	reporting_reference_date	legal entity	reporting reference date
legal_entity.csv	lei	legal entity	legal entity identifier
legal_entity.csv	name	legal entity	name
legal_entity.csv	dutch_legal_entity_indicator	legal entity	Dutch legal entity indicator

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
lgd_model_contract.csv	reporting_agent_identifier	LGD model contract	reporting agent identifier
lgd_model_contract.csv	obsrvd_agnt_cd	LGD model contract	observed agent identifier
lgd_model_contract.csv	cntrct_id	LGD model contract	contract identifier
lgd_model_contract.csv	reporting_reference_date	LGD model contract	reporting reference date
lgd_model_contract.csv	lgd_model_id	LGD model contract	LGD model identifier
lgd_model_contract.csv	lgd_be	LGD model contract	LGD best estimate
lgd_model_contract.csv	cure_probability	LGD model contract	probability of cure
lgd_model_contract.csv	lgd_downturn	LGD model contract	downturn LGD excluding add-ons
lgd_model_contract.csv	regulatory_downturn_lgd	LGD model contract	Regulatory downturn LGD
lgd_model_contract.csv	regulatory_el	LGD model contract	Regulatory EL
lgd_model_contract.csv	regulatory_rwa	LGD model contract	Regulatory RWA

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
lgd_model_debtor.csv	reporting_agent_identifier	LGD model debtor	reporting agent identifier
lgd_model_debtor.csv	entty_rl	LGD model debtor	counterparty role
lgd_model_debtor.csv	counterparty_identifier	LGD model debtor	counterparty identifier
lgd_model_debtor.csv	reporting_reference_date	LGD model debtor	reporting reference date
lgd_model_debtor.csv	lgd_model_id	LGD model debtor	LGD model identifier
lgd_model_debtor.csv	lgd_be	LGD model debtor	LGD best estimate
lgd_model_debtor.csv	cure_probability	LGD model debtor	probability of cure
lgd_model_debtor.csv	lgd_downturn	LGD model debtor	downturn LGD excluding add-ons
lgd_model_debtor.csv	regulatory_downturn_lgd	LGD model debtor	Regulatory downturn LGD
lgd_model_debtor.csv	regulatory_el	LGD model debtor	Regulatory EL
lgd_model_debtor.csv	regulatory_rwa	LGD model debtor	Regulatory RWA

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
lgd_model_instrument.csv	reporting_agent_identifier	LGD model instrument	reporting agent identifier
lgd_model_instrument.csv	obsrvd_agnt_cd	LGD model instrument	observed agent identifier
lgd_model_instrument.csv	cntrct_id	LGD model instrument	contract identifier
lgd_model_instrument.csv	instrmnt_id	LGD model instrument	instrument identifier
lgd_model_instrument.csv	reporting_reference_date	LGD model instrument	reporting reference date
lgd_model_instrument.csv	lgd_model_id	LGD model instrument	LGD model identifier
lgd_model_instrument.csv	lgd_be	LGD model instrument	LGD best estimate
lgd_model_instrument.csv	cure_probability	LGD model instrument	probability of cure
lgd_model_instrument.csv	lgd_downturn	LGD model instrument	downturn LGD excluding add-ons
lgd_model_instrument.csv	regulatory_downturn_lgd	LGD model instrument	Regulatory downturn LGD
lgd_model_instrument.csv	regulatory_el	LGD model instrument	Regulatory EL
lgd_model_instrument.csv	regulatory_rwa	LGD model instrument	Regulatory RWA

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
lgd_model_protection_received.csv	reporting_agent_identifier	LGD model-protection received	reporting agent identifier
lgd_model_protection_received.csv	prtctn_id	LGD model-protection received	protection identifier
lgd_model_protection_received.csv	reporting_reference_date	LGD model-protection received	reporting reference date
lgd_model_protection_received.csv	lgd_model_id	LGD model-protection received	LGD model identifier
lgd_model_protection_received.csv	estimated_recovery_amount	LGD model-protection received	estimated recovery amount
lgd_model_protection_received.csv	estimated_dt_recovery_amount	LGD model-protection received	estimated downturn recovery amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
natural_person.csv	reporting_agent_identifier	natural person	reporting agent identifier
natural_person.csv	counterparty_identifier	natural person	counterparty identifier
natural_person.csv	reporting_reference_date	natural person	reporting reference date
natural_person.csv	year_of_birth	natural person	year of birth
natural_person.csv	dutch_natural_person_indicator	natural person	Dutch natural person indicator

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
natural_person_instrument_data.csv	reporting_agent_identifier	natural person-instrument data	reporting agent identifier
natural_person_instrument_data.csv	obsrvd_agnt_cd	natural person-instrument data	observed agent identifier
natural_person_instrument_data.csv	entty_rl	natural person-instrument data	counterparty role
natural_person_instrument_data.csv	counterparty_identifier	natural person-instrument data	counterparty identifier
natural_person_instrument_data.csv	cntrct_id	natural person-instrument data	contract identifier
natural_person_instrument_data.csv	instrmnt_id	natural person-instrument data	instrument identifier

natural_person_instrument_data.csv	reporting_reference_date	natural person-instrument data	reporting reference date
natural_person_instrument_data.csv	debtors_employment_status_at_inception	natural person-instrument data	debtor's employment status at inception
natural_person_instrument_data.csv	income_at_inception	natural person-instrument data	income at inception
natural_person_instrument_data.csv	date_of_income_at_inception	natural person-instrument data	date of income at inception

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
non_fixed_interest_instrument.csv	reporting_agent_identifier	non-fixed interest instrument	reporting agent identifier
non_fixed_interest_instrument.csv	obsrvd_agnt_cd	non-fixed interest instrument	observed agent identifier
non_fixed_interest_instrument.csv	cntrct_id	non-fixed interest instrument	contract identifier
non_fixed_interest_instrument.csv	instrmnt_id	non-fixed interest instrument	instrument identifier
non_fixed_interest_instrument.csv	reporting_reference_date	non-fixed interest instrument	reporting reference date
non_fixed_interest_instrument.csv	rfrnc_rt_ancrdt_cllctn_rfrnc_r t_value	non-fixed interest instrument	reference rate_reference rate value
non_fixed_interest_instrument.csv	rfrnc_rt_ancrdt_cllctn_maturity_value	non-fixed interest instrument	reference rate_maturity value
non_fixed_interest_instrument.csv	intrst_rt_sprd	non-fixed interest instrument	interest rate spread/margin

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
observed_agent_delivery.csv	reporting_agent_identifier	observed agent delivery	reporting agent identifier
observed_agent_delivery.csv	obsrvd_agnt_cd	observed agent delivery	observed agent identifier
observed_agent_delivery.csv	reporting_reference_date	observed agent delivery	reporting reference date

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
originator_secured_instrument_data.csv	reporting_agent_identifier	originator-secured instrument data	reporting agent identifier
originator_secured_instrument_data.csv	instrmnt_id	originator-secured instrument data	instrument identifier
originator_secured_instrument_data.csv	obsrvd_agnt_cd	originator-secured instrument data	observed agent identifier
originator_secured_instrument_data.csv	reporting_reference_date	originator-secured instrument data	reporting reference date
originator_secured_instrument_data.csv	cntrct_id	originator-secured instrument data	contract identifier
originator_secured_instrument_data.csv	counterparty_identifier	originator-secured instrument data	counterparty identifier
originator_secured_instrument_data.csv	entty_rl	originator-secured instrument data	counterparty role

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
other_loans_instrument.csv	reporting_agent_identifier	other loans instrument	reporting agent identifier
other_loans_instrument.csv	obsrvd_agnt_cd	other loans instrument	observed agent identifier
other_loans_instrument.csv	cntrct_id	other loans instrument	contract identifier
other_loans_instrument.csv	instrmnt_id	other loans instrument	instrument identifier
other_loans_instrument.csv	reporting_reference_date	other loans instrument	reporting reference date
other_loans_instrument.csv	off_blnc_sht_amnt	other loans instrument	off-balance sheet amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
overdraft_instrument.csv	reporting_agent_identifier	overdraft instrument	reporting agent identifier
overdraft_instrument.csv	obsrvd_agnt_cd	overdraft instrument	observed agent identifier
overdraft_instrument.csv	cntrct_id	overdraft instrument	contract identifier
overdraft_instrument.csv	instrmnt_id	overdraft instrument	instrument identifier
overdraft_instrument.csv	reporting_reference_date	overdraft instrument	reporting reference date
overdraft_instrument.csv	current_account_type	overdraft instrument	current account type

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
pd_model_contract.csv	reporting_agent_identifier	PD model contract	reporting agent identifier
pd_model_contract.csv	obsrvd_agnt_cd	PD model contract	observed agent identifier
pd_model_contract.csv	cntrct_id	PD model contract	contract identifier

pd_model_contract.csv	reporting_reference_date	PD model contract	reporting reference date
pd_model_contract.csv	pd_model_id	PD model contract	PD model identifier
pd_model_contract.csv	initial_pd	PD model contract	Initial PD
pd_model_contract.csv	regulatory_pd	PD model contract	Regulatory PD
pd_model_contract.csv	regulatory_el	PD model contract	Regulatory EL
pd_model_contract.csv	regulatory_rwa	PD model contract	Regulatory RWA

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
pd_model_debtor.csv	reporting_agent_identifier	PD model debtor	reporting agent identifier
pd_model_debtor.csv	entty_rl	PD model debtor	counterparty role
pd_model_debtor.csv	counterparty_identifier	PD model debtor	counterparty identifier
pd_model_debtor.csv	reporting_reference_date	PD model debtor	reporting reference date
pd_model_debtor.csv	pd_model_id	PD model debtor	PD model identifier
pd_model_debtor.csv	initial_pd	PD model debtor	Initial PD
pd_model_debtor.csv	regulatory_pd	PD model debtor	Regulatory PD
pd_model_debtor.csv	regulatory_el	PD model debtor	Regulatory EL
pd_model_debtor.csv	regulatory_rwa	PD model debtor	Regulatory RWA

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
pd_model_instrument.csv	reporting_agent_identifier	PD model instrument	reporting agent identifier
pd_model_instrument.csv	obsrvd_agnt_cd	PD model instrument	observed agent identifier
pd_model_instrument.csv	cntrct_id	PD model instrument	contract identifier
pd_model_instrument.csv	instrmnt_id	PD model instrument	instrument identifier
pd_model_instrument.csv	reporting_reference_date	PD model instrument	reporting reference date
pd_model_instrument.csv	pd_model_id	PD model instrument	PD model identifier
pd_model_instrument.csv	initial_pd	PD model instrument	Initial PD
pd_model_instrument.csv	regulatory_pd	PD model instrument	Regulatory PD
pd_model_instrument.csv	regulatory_el	PD model instrument	Regulatory EL
pd_model_instrument.csv	regulatory_rwa	PD model instrument	Regulatory RWA

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
postal_code_region.csv	reporting_agent_identifier	postal code region	reporting agent identifier
postal_code_region.csv	reporting_reference_date	postal code region	reporting reference date
postal_code_region.csv	postal_code	postal code region	postal code
postal_code_region.csv	country	postal code region	country

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
protection_provider_protection_received.csv	reporting_agent_identifier	protection provider-protection received	reporting agent identifier
protection_provider_protection_received.csv	reporting_reference_date	protection provider-protection received	reporting reference date
protection_provider_protection_received.csv	counterparty_identifier	protection provider-protection received	counterparty identifier
protection_provider_protection_received.csv	prtctn_id	protection provider-protection received	protection identifier

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
protection_received.csv	reporting_agent_identifier	protection received	reporting agent identifier
protection_received.csv	prtctn_id	protection received	protection identifier
protection_received.csv	reporting_reference_date	protection received	reporting reference date
protection_received.csv	typ_prtctn	protection received	type of protection
protection_received.csv	prtctn_vl	protection received	protection value
protection_received.csv	typ_prtctn_vl	protection received	type of protection value
protection_received.csv	protection_valuation_approach	protection received	protection valuation approach
protection_received.csv	date_of_protection_value	protection received	date of protection value
protection_received.csv	cumulative_additional_premiums_deposits	protection received	cumulative additional premiums/deposits
protection_received.csv	immovable_property_indicator	protection received	immovable property indicator*

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
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recognised_instrument.csv	reporting_agent_identifier	recognised instrument	reporting agent identifier
recognised_instrument.csv	obsrvd_agnt_cd	recognised instrument	observed agent identifier
recognised_instrument.csv	cntrct_id	recognised instrument	contract identifier
recognised_instrument.csv	instrmnt_id	recognised instrument	instrument identifier
recognised_instrument.csv	reporting_reference_date	recognised instrument	reporting reference date
recognised_instrument.csv	accumulated_write_offs	recognised instrument	accumulated write-offs
recognised_instrument.csv	final_loss_amount	recognised instrument	final loss amount
recognised_instrument.csv	impairment_assessment_method	recognised instrument	impairment assessment method

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
reporting_agent_delivery.csv	reporting_agent_identifier	reporting agent delivery	reporting agent identifier
reporting_agent_delivery.csv	reporting_reference_date	reporting agent delivery	reporting reference date

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
revolving_credit_other_than overdrafts_and_credit_card_debt_instrument.csv	reporting_agent_identifier	revolving credit other than overdrafts and credit card debt instrument	reporting agent identifier
revolving_credit_other_than overdrafts_and_credit_card_debt_instrument.csv	obsrvd_agnt_cd	revolving credit other than overdrafts and credit card debt instrument	observed agent identifier
revolving_credit_other_than overdrafts_and_credit_card_debt_instrument.csv	cntrct_id	revolving credit other than overdrafts and credit card debt instrument	contract identifier
revolving_credit_other_than overdrafts_and_credit_card_debt_instrument.csv	instrmnt_id	revolving credit other than overdrafts and credit card debt instrument	instrument identifier
revolving_credit_other_than overdrafts_and_credit_card_debt_instrument.csv	reporting_reference_date	revolving credit other than overdrafts and credit card debt instrument	reporting reference date
revolving_credit_other_than overdrafts_and_credit_card_debt_instrument.csv	off_blnc_sht_amnt	revolving credit other than overdrafts and credit card debt instrument	off-balance sheet amount

.csv filename	.csv column name	Entity type in logical data model	Attribute in logical data model
servicer_instrument_data.csv	reporting_agent_identifier	servicer-instrument data	reporting agent identifier
servicer_instrument_data.csv	obsrvd_agnt_cd	servicer-instrument data	observed agent identifier
servicer_instrument_data.csv	entty_rl	servicer-instrument data	counterparty role
servicer_instrument_data.csv	counterparty_identifier	servicer-instrument data	counterparty identifier
servicer_instrument_data.csv	cntrct_id	servicer-instrument data	contract identifier
servicer_instrument_data.csv	instrmnt_id	servicer-instrument data	instrument identifier
servicer_instrument_data.csv	reporting_reference_date	servicer-instrument data	reporting reference date

### 3.5 Mapping the overlapping entities and attributes of RRE and AnaCredit

The logical data model of RRE describes its entities as similar as possible as the logical data model of AnaCredit does. The legal basis of AnaCredit is the Regulation (EU) 2016/867 on the collection of granular credit and credit risk data (ECB/2016/13). The majority of RRE reporting agents are also reporting agents for AnaCredit. This section describes for which entities and attributes the logical data model of RRE overlaps with the logical data model of AnaCredit.

The two logical data models have the following entities (and thereby their underlying keys) in common:

- Accounting data
- Contract
- Counterparty
- Counterparty role
- Credit card debt instrument
- Credit lines other than revolving credit instrument
- Creditor
- Creditor-instrument data
- Current account instrument with credit limit
- Current account instrument with no credit limit
- Debtor
- Debtor default data
- Debtor-instrument data
- Domestic immovable property (in AnaCredit LDM the entity is called “collateral located in a reporting member state”)
- Drawn instrument
- Dutch legal entity
- Financial data
- Financial leases instrument
- Fixed interest instrument
- Foreign immovable property (in AnaCredit LDM the entity is called “collateral not located in a reporting member state”)
- Fully derecognised instrument being serviced
- Immovable property
- Impaired instrument
- Instrument
- Instrument not past due
- Instrument not subject to impairment
- Instrument not subject to securitisation
- Instrument past due
- Instrument subject to securitisation
- Instrument-protection received data
- Joint liability
- Legal entity
- Logical data model
- Non-fixed interest instrument
- Non-immovable property
- Non-protection providing counterparty
- Observed agent
- Observed agent delivery
- Originator
- Originator-securitized instrument
- Other loans instrument
- Overdraft instrument
- Protection provider
- Protection provider-protection received
- Protection received



- Recognised instrument
- Reporting agent
- Reporting agent delivery
- Reverse repurchase agreements instrument
- Revolving credit other than overdrafts and credit card debt limit
- Servicer
- Servicer-instrument data
- Trade receivables instrument
- Undrawn instrument

Please note that all keys (identifiers) included in the abovementioned entities should – content-wise – be the same for RRE and for AnaCredit. This should ensure that both datasets can be connected with each other, especially when – in the future – the scope of AnaCredit and RRE could overlap. At the moment, in RRE debtors could only belong to the sector households (other parties are out of scope), while in AnaCredit the sector households is out of scope as debtor. Ergo, at the moment, we do not expect that instruments will be reported in RRE and AnaCredit at the same time. However, counterparties which are legal entities could be reported in RRE and in AnaCredit (e.g. as creditor, originator, servicer or protection provider) and we do expect that these counterparties have the same counterparty identifier in both RRE and AnaCredit. This holds for all other keys as well, like the reporting agent identifier, observed agent identifier and protection identifier.

The following table lists the overlapping attributes between the two logical data models of RRE and AnaCredit. In the column remarks there is stated whether there are difference in the domain lists. In addition, please read the RRE Manual Part I and Part II closely, because some slight methodological differences might arise between attributes in RRE and AnaCredit due to the different scope and general methodology of RRE in relation to AnaCredit.

RRE			AnaCredit		Remarks
Attribute	Entity	Stage	Attribute	Entity	
Accrued interest	Financial data	2	Accrued interest	Financial data	
Accumulated impairment amount	Impaired instrument	2	Accumulated impairment amount	Impaired instrument	
Accumulated write-offs	Recognised instrument	1	Accumulated write-offs	Recognised instrument	
Amortisation type	Instrument	1	Amortisation type	Instrument	
Arrears for the instrument	Instrument past due	1	Arrears for the instrument	Instrument past due	
Commitment amount at inception	Instrument	2	Commitment amount at inception	Instrument	
Country	Address	1	Country	Address	
Cumulative recoveries since default	Accounting data	1	Cumulative recoveries since default	Accounting data	
Currency	Instrument	1	Currency	Instrument	
Date of original protection value	Instrument-protection received data	2	Date of original protection value	Protection received	In RRE the date of original protection value should be reported on the level of each instrument for which the protection is used
Date of past due for the instrument	Instrument past due	2	Date of past due for the instrument	Instrument past due	



Date of protection value	Protection received	1	Date of protection value	Protection received	
Default status of the counterparty	Debtor default data	1	Default status of the counterparty	Debtor default data	
Default status of the instrument	Financial data	1	Default status of the instrument	Financial data	
Drawn instrument indicator	Instrument	2	Drawn instrument indicator	Instrument	
Dutch legal entity indicator	Legal entity	1	Resident legal entity indicator	Legal entity	
Fully derecognised instrument being serviced indicator	Accounting data	1	Fully derecognised instrument being serviced indicator	Accounting data	
Immovable property indicator	Protection received	1	Immovable property indicator	Protection received	
Impairment assessment method	Recognised instrument	1	Impairment assessment method	Recognised instrument	
Inception date	Contract	1	Inception date	Contract	
Interest rate	Financial data	1	Interest rate	Financial data	
Interest rate reset frequency	Instrument	1	Interest rate reset frequency	Instrument	
Interest rate spread/margin	Non-fixed interest instrument	1	Interest rate spread/margin	Non-fixed interest instrument	
Interest rate type	Instrument	1	Interest rate type	Instrument	
Joint liability amount	Joint liability	1	Joint liability amount	Joint liability	
Legal entity identifier	Legal entity	2	Legal entity identifier	Legal entity	
Legal entity indicator	Counterparty	1	Legal entity indicator	Counterparty	Domain lists differ
Legal final maturity date	Instrument	2	Legal final maturity date	Instrument	
Name	Legal entity	1	Name	Foreign counterparty	
National identifier	Dutch legal entity, Dutch natural person	1	National identifier	Counterparty	
Next interest rate reset date	Financial data	2	Next interest rate reset date	Financial data	
Off-balance sheet amount	Current account instrument with credit limit, other loans instrument, revolving credit other than overdrafts and credit card debt instrument, credit lines	2	Off-balance sheet amount	Current account instrument with credit limit, other loans instrument, revolving credit other than overdrafts and credit card debt instrument, credit lines other than	

	other than revolving credit instrument, credit card debt instrument			revolving credit instrument, credit card debt instrument	
Original protection value	Instrument-protection received data	1	Original protection value	Protection received	In RRE the original protection value should be reported on the level of each instrument for which the protection is used
Outstanding nominal amount	Financial data	1	Outstanding nominal amount	Financial data	
Past due instrument indicator	Financial data	2	Past due instrument indicator	Financial data	
Payment frequency	Instrument	1	Payment frequency	Instrument	
Postal code	Address	1	Postal code	Address	
Protection allocated value	Instrument-protection received data	1	Protection allocated value	Instrument-protection received data	
Protection provider indicator	Counterparty	2	Protection provider indicator	Counterparty	
Protection valuation approach	Protection received	1	Protection valuation approach	Protection received	
Protection value	Protection received	1	Protection value	Protection received	
Reference rate_maturity value	Non-fixed interest instrument	1	Reference rate_maturity value	Non-fixed interest instrument	
Reference rate_reference rate value	Non-fixed interest instrument	2	Reference rate_reference rate value	Non-fixed interest instrument	
Securitized instrument indicator	Financial data	1	Securitized instrument indicator	Financial data	
Settlement date	Drawn instrument	1	Settlement date	Drawn instrument	
Status of forbearance and renegotiation	Accounting data	1	Status of forbearance and renegotiation	Accounting data	
Transferred amount	Drawn instrument	1	Transferred amount	Drawn instrument	
Type of instrument	Instrument	2	Type of instrument	Instrument	Domain lists differ
Type of protection	Protection received	2	Type of protection	Protection received	Domain lists differ
Type of protection value	Protection received	2	Type of protection value	Protection received	
Type of securitisation	Instrument subject to securitisation	2	Type of securitisation	Instrument subject to securitisation	

### 3.6 Delivery timelines

The following timelines apply for the different DDA codes:

DDA code	Frequency	Last day of acceptance	Example
DNB_STAT_RRE_GLO_K	Quarterly	Last day of the quarter + 1 calendar month	Q1 2019 last day = 2019-03-31 last date of acceptance= 2019-04-30

### 3.7 Adjustments and deliveries with retroactive effect

Reporting agents can only submit or resubmit reports if DNB has published a relevant reporting obligation. It is not possible for institutions to submit or resubmit reports without a relevant reporting obligation. Reporting obligations are published in the Digital Reporting Portal.

DNB may demand a resubmission for a previous period. It will publish a new reporting obligation for this purpose.

## 4 REFERENCE TABLES

Below is the list of reference tables that are available from DNB. The codes in these tables can be used for filtering and clustering in data deliveries.

The reference tables can occur in the logical data model. However, no mapping is available for the data between the file delivery and the delivery, as these are made available in other ways.

The reference tables can be found in the following files, which serve as a source for the initial entry of the entity types in the logical data model:

DNB is responsible for management and maintenance of the reference tables.

### 4.1 Reporting population and reference population

You can find the versions of the reporting and reference populations that must be used on DNB's RRE web page, as well as the required reporting agent and observed agent identifiers.

<https://www.dnb.nl/statistiek/digitaal-loket-rapportages/statistische-rapportages/banken/residential-real-estate-rre/index.jsp>

This spreadsheet contains the following reference data set:

- List of reporting agents

### 4.2 Reference data sets

You can find the versions of all reference data sets to be used on DNB's RRE web page:

<https://www.dnb.nl/statistiek/digitaal-loket-rapportages/statistische-rapportages/banken/residential-real-estate-rre/index.jsp>

The spreadsheet contains the following reference data sets:

- amortisation type
- attribute
- attribute combination
- attribute combination type
- bsi class
- buy-to-let
- corep class
- counterparty role
- country
- debtor past due indicator
- default status
- delivery control type
- drawn instrument indicator
- dutch legal entity indicator
- dutch natural person indicator
- employment status
- entity type
- exit status
- fully derecognised instrument being serviced indicator
- household type indicator
- household type-instrument data indicator
- immovable property indicator
- immovable property type
- impairment assessment method
- interest rate reset frequency
- interest rate type
- legal entity indicator

- logical data model
- payment frequency
- past due instrument indicator
- protection provider indicator
- protection valuation approach
- protection valuation type
- reference rate maturity type
- reference rate value type
- securitized instrument indicator
- status of forbearance and renegotiation
- type of instrument
- type of protection
- type of protection value
- type of securitisation

### 4.3 Metadata reference data sets

The sets containing the logical data model are included in the reference data sets listed in Section 0. Below is a more detailed description of the most important of these sets for reporting purposes. They are used to check the delivery. As described in Section 2.3.1, under “File integrity check”, a checksum is required for each entity type in the logical data model. The reference data sets describe the reference data required for automatic validation of the file delivery. See Section 2.6.6 for more information on automatic validation.

#### 4.3.1 List of entity types

This list matches the "entity type" list in the reference data set in terms of naming, codes and definitions. It indicates for each entity type whether a checksum is required. As stated in Section 2.6.6, a rowcount is required for all entity types.

#### 4.3.2 List of attributes

This lists the names of all attributes, including the type of checks required. In a followup version, the list will be extended with checks on various attributes, focusing on amount totals.

Currently, we do not require these checksums.

#### 4.3.3 List of attribute type combinations

This list contains all attribute type combinations within an entity type that require a checksum. At the moment this is limited to all composite key attributes, but this may be extended to other combination checks in a next version of this document.

Currently, we do not require these checksums.

## 5 AGREEMENTS AND CONTACT PERSONS

This section describes all agreements made in detail, so that anyone having to process the data can do so based on the following information.

### 5.1 Filing and storage

DNB complies with the applicable legislation and regulations with respect to filing and storage, and the relevant retention periods.

### 5.2 Contact data

No	Position	Name	email and/or telephone no.
1	Manager	Ms Lucie Pennings	<a href="mailto:rre@dnb.nl">rre@dnb.nl</a>
2	Domain expert	Mr Wim Goes	<a href="mailto:rre@dnb.nl">rre@dnb.nl</a>
3	Information analyst	Ms Iris Balemans	<a href="mailto:rre@dnb.nl">rre@dnb.nl</a>
4	Data architect	Mr Ronald Damhof	<a href="mailto:rre@dnb.nl">rre@dnb.nl</a>

### 5.3 Changes to the agreement

Changes to the Logical Data Model, Data Delivery Agreement and the Reference codes are communicated to all reporting agents. Subsequent versions (following version 1.0) will be accompanied by detailed release notes, stating the precise changes compared to a previous release.

## APPENDIX A – VALIDATION RULES THAT DETERMINE THE REPORTING OBLIGATION STATUS<sup>13</sup>

A list of all blocking validation rules for RRE datadeliveries is included in this appendix. These validations are additional to the explicitly modelled blocking validation rules that are already included in the logical data model.

The violation of a blocking validation rule will result in a **Non-accepted** status of the reporting obligation.

The result of the rules described in this paragraph as well as the blocking rules defined in the logical data model will automatically be communicated back to the reporting agent (see 2.4.1).

These validation rules are taken directly from the business rules that are defined in the logical data model, where they apply to the artefact that they act upon. Also, within the logical data model, there is a pseudo code expression giving hints on how to check the validity.

Code	Description	business rule classification	business rule scope	severity
dmc0001	The reporting reference date is always the last day of the quarter.	domain constraint	Checked within the data delivery	blocking
dmc0002	Mandatory constraint for the attribute 'bouwdepot amount' with Non-applicable allowed.	domain constraint	Checked within the data delivery	blocking
dmc0003	Mandatory constraint for attribute 'interest rate spread/margin' with Non-applicable allowed.	domain constraint	Checked within the data delivery	blocking
dmc0004	Mandatory constraint for attribute 'interest rate' with Non-applicable allowed.	domain constraint	Checked within the data delivery	blocking
dmc0005	Mandatory constraint for attribute 'legal final maturity date' with Non-applicable allowed.	domain constraint	Checked within the data delivery	blocking
dmc0006	Mandatory constraint for attribute 'cumulative additional premiums/deposits' with Non-applicable allowed.	domain constraint	Checked within the data delivery	blocking
dmc0007	Mandatory constraint for attribute 'next interest rate reset date' with Non-applicable allowed.	domain constraint	Checked within the data delivery	blocking
dmc0022	Mandatory constraint for attribute 'arrears for the debtor'.	domain constraint	Checked within the data delivery	blocking
dmc0023	Mandatory constraint for attribute 'other debts at inception'.	domain constraint	Checked within the data delivery	blocking
dmc0024	Mandatory constraint for attribute 'household income at inception'.	domain constraint	Checked within the data delivery	blocking
dmc0025	Mandatory constraint for attribute 'commitment amount at inception'.	domain constraint	Checked within the data delivery	blocking
dmc0026	Mandatory constraint for attribute 'accrued interest'.	domain constraint	Checked within the data delivery	blocking
dmc0027	Mandatory constraint for attribute 'cumulative recoveries since default'.	domain constraint	Checked within the data delivery	blocking
dmc0028	Mandatory constraint for attribute 'cumulative unsecured recoveries since default'.	domain constraint	Checked within the data delivery	blocking
dmc0029	Mandatory constraint for attribute 'estimated recovery amount'.	domain constraint	Checked within the data delivery	blocking
dmc0030	Mandatory constraint for attribute 'settlement date'.	domain constraint	Checked within the data delivery	blocking
dmc0031	Mandatory constraint for attribute 'transferred amount'.	domain constraint	Checked within the data delivery	blocking
dmc0032	Mandatory constraint for attribute 'final loss amount'.	domain constraint	Checked within the data delivery	blocking
dmc0033	Mandatory constraint for attribute 'off balance sheet amount'.	domain constraint	Checked within the data delivery	blocking
dmc0034	Mandatory constraint for attribute 'off balance sheet amount'.	domain constraint	Checked within the data delivery	blocking

<sup>13</sup> A list of all blocking and signalling validation rules is published on the DNB website in xls format as well

dmc0035	Mandatory constraint for attribute 'off balance sheet amount'	domain constraint	Checked within the data delivery	blocking
dmc0036	Mandatory constraint for attribute 'off balance sheet amount'	domain constraint	Checked within the data delivery	blocking
dmc0037	Mandatory constraint for attribute 'off balance sheet amount'	domain constraint	Checked within the data delivery	blocking
dmc0038	Mandatory constraint for attribute 'estimated downturn recovery amount'	domain constraint	Checked within the data delivery	blocking
dmc0039	The minimum age of granting instruments to natural persons is 18 years. The age at which the instrument is granted to the natural person can be calculated by relating the year of birth to the inception date of the instrument.	domain constraint	Checked within the data delivery	blocking
spc0001	impairment assessment method must correspond to the subtype that is used.	specialisation model constraint	Checked within the data delivery	blocking
spc0002	Legal entity indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0003	Counterparty role must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0004	Immovable property indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0005	Securitized instrument indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0006	Protection provider indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0007	Past due instrument indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0008	Dutch legal entity indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0009	Dutch natural person indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0010	Fully derecognised instrument being serviced indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0011	Country must correspond to the subtype that is used. Immovable property in The Netherlands is domestic and immovable property not in The Netherlands is foreign.	specialisation model constraint	Checked within the data delivery	blocking
spc0012	Debtor past due indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0013	Enumeration type must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0014	Household type indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0015	Household type-instrument data indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0016	Drawn instrument indicator must correspond to the subtype that is used	specialisation model constraint	Checked within the data delivery	blocking
spc0017	Interest rate type must correspond to the subtype that is used.	specialisation model constraint	Checked within the data delivery	blocking
spc0018	The type of instrument of the instrument of the financial data must correspond to the subtype that is used.	specialisation model constraint	Checked within the data delivery	blocking
spc0019	Current account type must correspond to the subtype that is used.	specialisation model constraint	Checked within the data delivery	blocking
tpc0007	if 'protection received'. 'type of protection' = "residential real estate collateral" or 'protection received'. 'type of protection' = "offices and commercial premises" or 'protection received'. 'type of protection' = "commercial real estate collateral" then 'protection received'. 'immovable property indicator' = "immovable property" else 'protection received'. 'immovable property indicator' = "non-immovable property"	tuple constraint	Checked within the data delivery	blocking



## APPENDIX B –SIGNALLING<sup>14</sup> & PLAUSIBILITY RULES THAT MIGHT LEAD TO A NEW OBLIGATION TO RESUBMIT

The rules listed in this appendix will not influence the status of the reporting obligation. It can however lead to a new obligation to resubmit the data for a given period.

Two types of signalling rules are identified:

- [1] Signalling rules that have a binary outcome (True/False);
- [2] Plausibility rules that need human interpretation. These rules should assess the plausibility of the RRE data reported. In general, these rules can consist of outlier detection based on predefined statistical thresholds and can also consist of consistency checks against other datasets, like BSI and MIR statistics. More information on these type of rules will follow as soon as possible.

These signalling and plausibility rules are derived directly from the business rules that are defined in the logical data model, where they are attached to the artefact that they act upon. Also, within the logical data model, there is a pseudo code expression giving hints on how to check the validity.

Code	Comment	business rule classification	business rule scope	severity
etc0001	This validation check ensures that the value reported for the 'date of protection value' attribute is consistent with the 'date of protection value' attribute over time. This means that a change in the date of protection value cannot change to a date in the past.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0002	This validation check ensures that the value reported for the 'type of protection' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0003	This validation check ensures that the value reported for the 'year of birth' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0004	The attribute 'inception date of first instrument for investing in RRE might have the value "Non-applicable". Once the attribute is applicable, the value should be changed from "Non-applicable" to the actual date of inception of the first instrument for investing in RRE and from then on it cannot be changed over time.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0005	This validation check ensures that the value reported for the 'other debts at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0006	This validation check ensures that the value reported for the 'household type-instrument data indicator' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling

<sup>14</sup> A list of all blocking and signalling validation rules is published on the DNB website in xls format as well

etc0007	This validation check ensures that the value reported for the 'household income at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0008	This validation check ensures that the value reported for the 'final maturity date at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0009	This validation check ensures that the value reported for the 'interest rate at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0010	This validation check ensures that the value reported for the 'interest rate reset frequency at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0012	This validation check ensures that the value reported for the 'currency' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0013	This validation check ensures that the value reported for the 'loan to value at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0014	This validation check ensures that the value reported for the 'commitment amount at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0015	This validation check ensures that the value reported for the 'outstanding nominal amount at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0016	This validation check ensures that the value reported for the 'type of instrument' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0017	This validation check ensures that the value reported for the 'amortisation type' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling

etc0018	This validation check ensures that the value reported for the 'country' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0019	This validation check ensures that the value reported for the 'postal code' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0020	This validation check ensures that the value reported for the 'household type indicator' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0021	This validation check ensures that the value reported for the 'debtor's employment status at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0022	This validation check ensures that the value reported for the 'income at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0023	The attribute 'date of income at inception' is not supposed to change over time  This validation check ensures that the value reported for the 'date of income at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0024	This validation check ensures that the value reported for the 'legal entity identifier' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0025	This validation check ensures that the value reported for the 'dutch legal entity indicator' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0026	This validation check ensures that the value reported for the 'national identifier' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0028	This validation check ensures that the value reported for the 'legal entity indicator' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the	entity type constraint	Checked with data outside of the data delivery	signalling

	value of the reported attribute cannot be changed.			
etc0029	This validation check ensures that the value reported for the 'original protection value' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0030	This validation check ensures that the value reported for the 'date of original protection value' attribute is consistent between the current reference date (T) and the previous available reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0032	This validation check ensures that once the value for the 'final loss amount' attribute is reported, the value is consistent between the current reference date (T) and the previous available reference date (T-1). This means that the value of the reported attribute cannot be changed anymore.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0033	This validation check ensures that the value reported for the 'immovable property indicator' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0035	This validation check ensures that the value reported for the 'protection valuation approach at inception' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0036	This validation check ensures that the value reported for the 'buy-to-let' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0037	This validation check ensures that if the attribute 'interest rate type' contains the value "Mixed", the value reported for the 'interest rate type' attribute is consistent between the current reporting reference date (T) and the previous available reporting reference date (T-1). This means that the value of the reported attribute cannot be changed.	entity type constraint	Checked with data outside of the data delivery	signalling
etc0038	Once a bouwdepot amount is reported with a certain amount, it can never be changed to value "Non-applicable" anymore.	entity type constraint	Checked within the data delivery	signalling
omc0002	Attribute 'next interest reset date' should be reported as "non-applicable" when the attribute 'interest rate reset frequency' is reported as "Non-applicable"	other model constraint	Checked within the data delivery	signalling
omc0003	If interest rate is "non-applicable" then interest rate type is "Non-applicable"	other model constraint	Checked within the data delivery	signalling
omc0004	if the outstanding nominal amount exceeds the amount which was committed in accordance with the contract under the instrument, the off-balance sheet amount to be reported is EUR 0	other model constraint	Checked within the data delivery	signalling
omc0006	In case of an instrument having the amortisation type bullet/interest-only, the	other model constraint	Checked within the data delivery	signalling

	cumulative repayments should not be zero on the reporting reference date on which the instrument has been fully redeemed, either via full repayment or refinancing.			
omc0007	This validation check ensures that the values reported for the 'protection value' attribute is consistent with the 'protection allocated value' attribute. This means that for any combination of instrument and protection, the protection allocated value cannot exceed the actual total value of the protection item. This however excludes cases where the type of protection value is a notional amount – which might have a higher market value (e.g. 2 year government bonds with negative yield).	other model constraint	Checked within the data delivery	signalling
omc0008	If there is more than one debtor taking part in an instrument, then for each debtor reported in the counterparty-instrument data set, a joint liabilities record must exist.	other model constraint	Checked within the data delivery	signalling
omc0009	If the debtor has at least one instrument that is a recognized instrument, then the debtor must have default data. If the debtor only has entirely derecognized instruments, then there should not be default data for the debtor.	other model constraint	Checked within the data delivery	signalling
omc0010	The settlement date of the drawn instrument must be either on the inception date of the contract, or later than the inception date of the contract.	other model constraint	Checked within the data delivery	signalling
omc0011	The legal final maturity date of the instrument must be either on the inception date of the contract, or later than the inception date of the contract.	other model constraint	Checked within the data delivery	signalling
omc0016	The reporting reference date must match the date given as the reporting reference date in the dnbmetadata.xml that is part of the data delivery set.	other model constraint	Checked within the data delivery	signalling
omc0017	The reporting agent identifier must match the identifier given as the reporting agent identifier in the dnbmetadata.xml that is part of the data delivery set.	other model constraint	Checked within the data delivery	signalling
omc0019	For each entity type E, the total number of rows of E must correspond to the value of the attribute 'rowcount' in the entity type 'entity type delivery' for E.	other model constraint	Checked within the data delivery	signalling
omc0023	In case the income at inception of all individual debtors (in this case natural persons) is reported as zero (i.e. "0") by the reporting agents, the attribute Income at inception in the natural person-instrument data entity should not be filled out for each unique natural person-instrument combination. Instead, the attribute Household income at inception should be filled out (with a value other than zero).	other model constraint	Checked within the data delivery	signalling
omc0024	For reported instruments having the "woninghypotheek" bsi class, the inception date of first instrument for investing in RRE must be filled with a valid date meaning it cannot have the value "Non-applicable"	other model constraint	Checked within the data delivery	signalling
omc0025	In case of an instrument having the amortisation type bullet/interest-only, the periodic repayment due should not be zero on the last reporting reference date before the legal final maturity date. On all reporting reference dates prior to the last reporting reference date before the legal final maturity date for this type of instrument, the periodic repayment due should be zero (i.e. "0").	other model constraint	Checked within the data delivery	signalling
omc0026	In case the income at inception of all individual debtors (in this case natural persons) is known to the reporting agents, the attribute Household income at	other model constraint	Checked within the data delivery	signalling

	inception should be filled out as zero (i.e. "0").			
omc0027	For a given reporting reference date, the joint liability amount recorded for each debtor-instrument combination in the Joint liability entity does not exceed the nominal outstanding amount reported in relation to the instrument in the Financial data entity corresponding to that reporting reference date. This means that the joint liability amount reported for each debtor cannot exceed the outstanding nominal amount.	other model constraint	Checked within the data delivery	signalling
omc0031	The value reported in the 'legal final maturity date' attribute cannot be earlier than the value reported in 'settlement date'. In principle, an instrument cannot reach its maturity before it has been settled i.e. before any funds have been disbursed.	other model constraint	Checked within the data delivery	signalling
omc0033	The value reported in the 'legal final maturity date' attribute cannot be earlier than the value reported in 'next interest rate reset date'. This means that the date of the net interest rate reset can only be before the instrument reaches its maturity.	other model constraint	Checked within the data delivery	signalling
omc0034	The value reported in the 'date of past due for the instrument' attribute cannot be earlier than the value reported in 'settlement date'. This means that an instrument can only become past due at or after the time when an amount has been disbursed.	other model constraint	Checked within the data delivery	signalling
omc0035	The value reported in the 'date of past due for the instrument' attribute cannot be earlier than the value reported in 'inception date'. This means that an instrument can only become past due at or after its inception date.	other model constraint	Checked within the data delivery	signalling
omc0036	The value reported in the 'next interest rate reset date' attribute cannot be earlier than the value reported in 'settlement date'. This means that an interest rate reset can only occur at or after the time when funds have been disbursed.	other model constraint	Checked within the data delivery	signalling
omc0037	The value reported in the 'next interest rate reset date' attribute cannot be earlier than the value reported in 'inception date'. This means that the interest rate reset date can only occur at or after the inception date of the instrument.	other model constraint	Checked within the data delivery	signalling
omc0038	If a synthetic securitisation has been reported in the 'type of securitisation' attribute, there must be a protection item (a record in protection received dataset) with one of the following values: "credit derivatives", "financial guarantees other than credit derivatives", "currency and deposits other than SEW and bankspaarrekeningen" or "securities" reported in the 'type of protection' attribute. This refers to the reporting of secondary collateral for synthetic securitisations.	other model constraint	Checked within the data delivery	signalling
omc0039	This validation check ensures that the same counterparty is not both a creditor and a debtor for the same instrument. This is performed by comparing a combination of unique identifiers with the role of the counterparty.	other model constraint	Checked within the data delivery	signalling
omc0040	This validation check ensures that the same counterparty is not both a creditor and a protection provider for the same instrument. This is performed by comparing a combination of unique	other model constraint	Checked within the data delivery	signalling

	identifiers with the role of the counterparty.			
omc004 1	For a given reporting reference date, the transferred amount reported for each instrument cannot exceed the outstanding nominal amount	other model constraint	Checked within the data delivery	signalling
omc004 2	This validation check ensures that for instruments which have a positive value reported in the 'transferred amount' attribute, a corresponding value exists in the 'outstanding nominal amount' attribute.	other model constraint	Checked within the data delivery	signalling
omc004 5	This validation check ensures that the value reported for the 'settlement date' attribute is consistent with the 'off-balance-sheet amount' attribute. This means that for instruments subject to RRE reporting, there must be a positive off-balance sheet amount if they have not yet been settled (i.e. disbursed).	other model constraint	Checked within the data delivery	signalling
omc004 6	This validation check ensures that the value reported for the 'settlement date' attribute is consistent with the 'outstanding nominal amount' attribute. This means that for instruments which have not yet been settled (and thus are undrawn) there is no nominal amount outstanding (i.e. the amount reported is zero).	other model constraint	Checked within the data delivery	signalling
omc004 7	If attribute 'type of securitisation' = "traditional securitisation" then the instrument belongs to subtype "fully derecognised instrument being serviced"	other model constraint	Checked within the data delivery	signalling
omc004 9	Detached or semi-detached house is not joined to any other house or is joined to only one house. This domain value can only be filled out in case the property is solely for residential use, i.e. the value of the attribute type of protection is "Residential real estate collateral".	other model constraint	Checked within the data delivery	signalling
omc005 0	Flat or apartment is a set of rooms for living in, especially on one floor of a building. This domain value can only be filled out in case the property is solely for residential use, i.e. the value of the attribute type of protection is "Residential real estate collateral".	other model constraint	Checked within the data delivery	signalling
omc005 1	Terraced house is joined to the houses on either side of it by joined walls (this includes so-called geschakelde woning, tussen- en hoekwoning). This domain value can only be filled out in case the property is solely for residential use, i.e. the value of the attribute type of protection is "Residential real estate collateral".	other model constraint	Checked within the data delivery	signalling
omc005 2	Full commercial use is property which is solely used as commercial property. This domain value can only be filled out in case the value of the attribute type of protection is either "Offices and commercial premises" or "Commercial real estate collateral"	other model constraint	Checked within the data delivery	signalling
omc005 3	When the inception date of a contract is higher than 31-12-2011, then the attributes 'interest rate reset frequency at inception', 'legal final maturity date at inception' and 'loan to value at inception' must be filled. In all other cases these attributes are optional and thus can be blank.	other model constraint	Checked within the data delivery	signalling
omc005 4	When the household type indicator has a certain value, either a natural person or a partnership, the same value must exist for household type-instrument data indicator.	other model constraint	Checked within the data delivery	signalling
omc006 8	Checks if the value reported for the 'date of the forbearance and renegotiation status' attribute is consistent with the	other model constraint	Checked within the data delivery	signalling



	'inception date' attribute. According to Part II of the AnaCredit Manual, p. 130, the date of the forbearance and renegotiation status for instruments cannot be earlier than their respective inception date.  ECB Validation identifier: CN0370			
omc0099	This validation check ensures that the amount of recognised impairments cannot be higher than the amount of principal and interest outstanding.	other model constraint	Checked within the data delivery	signalling
omc0101	regulatory EAD of the EAD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0102	regulatory RWA of the EAD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0103	probability of cure of the LGD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0104	Regulatory downturn LGD of the LGD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0105	regulatory RWA of the LGD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0106	regulatory EL of the EAD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0107	regulatory EL of the LGD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0108	downturn LGD excluding add-ons of the LGD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0109	regulatory EL of the PD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0110	LGD best estimate of the LGD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0111	Regulatory RWA of the PD model must be reported at least at one level; debtor, contract or instrument.	other model constraint	Checked within the data delivery	signalling
omc0112	regulatory PD of the PD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0113	initial PD of the PD model must be reported at least at one level; debtor, contract or instrument	other model constraint	Checked within the data delivery	signalling
omc0114	This business rule validates whether the observed agent is present in the published list of the reporting population. For each reporting agent identifier it is stated which observed agent identifiers should be reported. In this way reporting agents cannot report observed agent identifiers which are related to another reporting agent.	other model constraint	Checked within the data delivery	signalling
omc0115	Business rule to identify records with a 'financial data'. 'interest rate reset date' which has more than a 50 years difference compared to the 'instrument'. 'inception date of the instrument'	other model constraint	Checked within the data delivery	signalling
ssmc0001	The counterparty role debtor is always fulfilled by the counterparty household.	sub set model constraint	Checked within the data delivery	signalling
tpc0001	For instruments of mixed interest rate type, the interest rate reset frequency should always be "other frequency"	tuple constraint	Checked within the data delivery	signalling
tpc0005	Unless "Non-applicable" is reported, the next interest rate reset date cannot be earlier than the reporting reference rate	tuple constraint	Checked within the data delivery	signalling
tpc0006	interest rate reset frequency' should be reported as "Non-applicable" or "Other frequency" when the attribute 'interest rate type' is reported as "fixed"	tuple constraint	Checked within the data delivery	signalling



tpc0008	In case the protection received has 'type of protection' listed below, then the value to be filled out for attribute 'cumulative additional premiums/deposits' is reported as "Non-applicable".  - 'Nationale Hypotheek Garantie (NHG)' - 'Securities' - 'Loans' - 'Credit derivatives' - 'Financial guarantees other than credit derivatives' - 'Trade receivables' - 'Residential real estate collateral' - 'Offices and commercial premises' - 'Commercial real estate collateral' - 'Gold' - 'Other physical collaterals' - 'Other protection'	tuple constraint	Checked within the data delivery	signalling
tpc0009	The value reported in the 'reporting reference date' attribute cannot be earlier than the value reported in 'Inception date'. This means that the instrument has to be launched in order to be reported.	tuple constraint	Checked within the data delivery	signalling
tpc0010	The value reported in the 'reporting reference date' attribute cannot be earlier than the value reported in 'date of past due for the instrument'. This means that a past due date cannot be in the future.	tuple constraint	Checked within the data delivery	signalling
tpc0012	This validation check ensures that the 'reference date' attribute is consistent with the 'date of protection value' attribute. This means that the date on which the protection value was assessed cannot be in the future.	tuple constraint	Checked within the data delivery	signalling
tpc0013	Checks whether the value reported for the 'default status of the instrument' attribute is consistent with the 'arrear for the instrument' attribute. This means that for instruments that are defaulted because they are past due, the arrears are a positive amount.  In turn, this means that in the above case, the value of 'past due instrument indicator' must be "instrument past due". This implies that the entity type 'instrument past due' must be reported, and thus, the 'arrear for the instrument' attribute must be reported.	tuple constraint	Checked within the data delivery	signalling
tpc0014	In case, the attribute 'Cumulative recoveries since default' is filled out with a value larger than zero, the attribute 'Cumulative unsecured recoveries since default' cannot be reported as "Non-applicable"	tuple constraint	Checked within the data delivery	signalling
tpc0015	The cumulative unsecured recoveries since default can never be larger than the cumulative recoveries since default. This is because the cumulative unsecured recoveries since default are part within the cumulative recoveries since default.	tuple constraint	Checked within the data delivery	signalling
tpc0016	For a given reporting reference date, the bouwdepot amount reported for each instrument cannot exceed the outstanding nominal amount	tuple constraint	Checked within the data delivery	signalling
tpc0017	If the type of protection value is "notional amount", the protection valuation approach does not in fact apply, and therefore the value "other type of valuation" is reported.	tuple constraint	Checked within the data delivery	signalling
tpc0018	In case the attribute 'cumulative recoveries since default' is reported as "non-applicable" then the attribute 'cumulative unsecured recoveries since default' should also be reported as "Non-applicable".	tuple constraint	Checked within the data delivery	signalling

tpc0019	Checks if the value reported for the 'reference date' attribute is consistent with the 'date of the forbearance and renegotiation status' attribute. This means that the date of forbearance and renegotiation status of the instrument cannot be a date in the future.  ECB Validation identifier: CN0410	tuple constraint	Checked within the data delivery	signalling
tpc0020	Business rule to identify records having a bigger gap between legal final maturity date and inception date of the instrument than 50 years	tuple constraint	Checked within the data delivery	signalling

## APPENDIX C – NAMING CONVENTIONS AND ABBREVIATIONS

#	Title	Description
1	Case	file names, XML tags, entity types and attributes are given in lower case, unless explicitly indicated otherwise.
2	Underscore (_)	Spaces, asterisks "*", brackets "(" and ")" and slashes "/" and "\" in file names, XML tags, entities and attributes must always be replaced by an underscore, "_".
3	RRE	Capitals
4	..	..

#	Abbreviation	Meaning
1	CSV	Comma Separated Values
2	DDA	Data delivery agreement
3	DNB	De Nederlandsche Bank
4	GLO	[Dutch]Gegevens Leverings Overeenkomst – synonym DDA
5	LDM	Logical data model
6	LEI	Legal Entity Identifier
7	XML	Extensible Markup Language