

MoneyTransfer Transaction DDA

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# **MoneyTransfer Transaction Data Delivery Agreement for Money Transfer Companies**

**Data Delivery Agreement  
of *De Nederlandsche Bank***

**DNB-public**

**Version 2.0**

**DNB-GLO-CODE:**

**DNB\_TZ\_MTRXX\_GLO\_K**

## Contents

1	Data delivery agreement .....	2
1.1	Subject of the agreement.....	2
1.2	Reference documents.....	2
1.3	Data delivery, global overview .....	3
1.4	Data quality strategy .....	4
1.5	Reporting companies' responsibilities/obligations .....	4
1.6	DNB's responsibilities/obligations .....	5
1.7	Changes to the agreement .....	5
1.8	Administrative processing .....	5
2	File delivery specifications.....	6
2.1	Deliveries and files for each data delivery agreement.....	6
2.2	Access to DNB's DLR .....	6
2.3	money_transfer_file.csv file interface .....	6
2.3.1	money_transfer_file.csv file description (metadata).....	6
2.3.2	money_transfer_file.csv .....	7
2.4	Validation strategy .....	9
2.4.1	Logical model basic constraints .....	10
2.4.2	Logical model custom constraints.....	11
2.4.3	Validation processing and feedback .....	12
2.4.4	Solving data quality issues.....	12
2.5	Submission process.....	13
2.5.1	Money transfer reporting obligations, Digitaal Loket Rapportages (DLR) .....	13
2.5.2	Money transfer data delivery feedback .....	13
2.5.3	Resubmission.....	14
3	The Logical data model .....	15
3.1	Logical data model.....	15
3.1.1	Optional attributes and relations .....	15
3.2	Mapping the delivery to the logical data model .....	16
3.3	Adjustments and deliveries with retroactive effect.....	16
4	Agreements .....	16
4.1	Changes to the agreement .....	16
	Appendix A – Blocking Rules that lead to a direct rejection of the delivery .....	18
	Appendix B – Signaling and Plausibility Rules that might lead to a new obligation to resubmit....	18
	Appendix C – Naming conventions and abbreviations .....	19

## 1 DATA DELIVERY AGREEMENT

### 1.1 Subject of the agreement

This agreement enables the delivery of money transfer transaction files of money transfer companies to De Nederlandsche Bank (DNB). 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 money transfer companies towards DNB, and □ changes to the agreement.

### 1.2 Reference documents

Document	URL
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Logical Data Model	<a href="https://www.dnb.nl/statistiek/digitaal-loket-rapportages/toezicht-rapportages/betaalinstellingen-enelektronischgeldinstellingen/index.jsp">https://www.dnb.nl/statistiek/digitaal-loket-rapportages/toezicht-rapportages/betaalinstellingen-enelektronischgeldinstellingen/index.jsp</a>
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How the files/documents contained in the GLO relate to each other is described in the table below.

**Please be advised** that the GLO (or Data Delivery Agreement) is much more than just this **GLO document**, and only when you have correctly implemented all aspects of the entire **GLO-set** of files and documents will you be able to achieve technical compliance.

GLO	
Document	Description
GLO-Document	<b>TZ_MoneyTransfer_Data_Exchange_-_GLO_&lt;date&gt;_&lt;version&gt;.pdf</b> (this document)  Technical (management) information concerning the gegevensleveringsovereenkomst (Data Delivery Agreement). Additional to specifications, this document contains all references and user instructions on information/documents/files necessary to correctly compose a file delivery compliant with the GLO. Also meant for data-specialists.
Data model specification	<b>DNB_TZ_MTRXX_GLO_K_DataModel_specifications.xlsx</b>  Data model specification in an Excel document. Meant as a reference for data specialists. Contains references for fields, schema's, validations, entities, codes, relationships, data types, value lists, etc.
Release notes	<b>Release Notes_&lt;version&gt;.xlsx</b>  Excel sheet which lists all changes from version to version in the GLO.

### 1.3 Data delivery, global overview

Global description of the process:

- DNB determines the Money Transfer data-exchange specifications (Data Delivery Agreement, Logical Data Model);
- DNB publishes these specifications on the website of DNB;
- Money transfer companies use this information to operationalize the data exchange;
- DNB publishes the Money Transfer data-exchange obligations in DNB's DLR;
- Money transfer companies have secure access to DNB's DLR where they can view the obligation;
- Money transfer companies upload the data exchange files to DLR;
- 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 DNB's DLR;
- Designated (by the money transfer company) employees will receive a notification; □ Money transfer companies can view these outcomes (and status) in DNB's DLR.

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

## 1.4 Data quality strategy

In the context of data exchanges, there is always a trade-off between the requirement to submit data and the requirement to meet the standards concerning data quality. 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, which is often incurred downstream to make the data fit the purpose.

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

- Parties down the chain can prove without doubt they are able to meet the technical requirements through validation rules used to determine the acceptance of the delivery (2.4);
  - [1] a reporting requirement in DNB's DLR(administrative check)
  - [2] a file structure specification as described in the Data Delivery Agreement (Structure check)
  - [3] a specified and formalised data model (3.1) which specifies explicitly all the blocking and signaling validation rules (constraints) within the data delivery set;
- there is a category of validation rules that are labelled as 'signaling', meaning potentially blocking;<sup>1</sup>
- reporting companies are informed as soon as possible with regard to blocking validation results if a delivery cannot be accepted, subsequently the delivery is not accepted. When the reporting company passes the blocking validation rules, it has met its delivery obligation. This however does not automatically mean the delivery is of sufficient data quality;
- reporting companies are informed about the results of signaling rules – the delivery will be accepted; informing reporting companies allows them to start improving their internal processing chain/data quality;
- having accepted a data delivery, DNB can also conduct checks that involve other data than the data delivered, these plausibility rules are also labelled as 'signaling' and, if applicable, are stated in appendix A;
- signaling rules may require resubmission, i.e. an obligation to resubmit data.

Please note that process data of data deliveries which cannot be validated will be administered for management information purposes.

## 1.5 Reporting companies' responsibilities/obligations

The reporting company undertakes the required actions to:

- enable access to DNB's DLR;
- 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 and with no delay if it is unable to deliver the data by the specified deadline;
- deliver data in accordance with the applicable delivery requirements (including delivery deadlines) until the validation rules are met;
- provide information in case plausibility analyses prompt DNB to request a clarification;
- comply with requests for resubmission.

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<sup>1</sup> This means that they initially have a warning status (and do not affect the acceptance of the delivery) but should be addressed and improved.

## 1.6 DNB's responsibilities/obligations

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

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

- blocking validation results (see paragraph 2.4 for details):
  - *technical*: is/are the incoming file(s) technically compliant regarding DNB specifications (decryption, unzipping, etc)
  - *administrative*: is the incoming data delivery content 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 blocking and signaling validation rules;
- feedback on plausibility checks in case DNB requires additional information after evaluating the results of plausibility checks;
- If possible, specific feedback on data quality issues through manual inspection.

## 1.7 Changes to the agreement

In the event of changes to the agreement, the procedure described in section 4.1 (Changes to the agreement) is followed.

## 1.8 Administrative processing

DNB publishes this document under reference A020-113714706-184.

## 2 FILE DELIVERY SPECIFICATIONS

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

This section describes the content of the money transfer data exchange. The file interfaces and files are specified below. The following tables list the files that must be reported under this DDA. Reporting companies deliver data on the basis of *not more than* the applicable DDA.

GLO code <sup>2</sup>	Frequency	Source file
DNB_TZ_MTRXX_GLO_K	Quarterly	A csv file for each entity in the file interface model.

All files must be submitted, even when there is no content, see below.

.csv files to be included in the delivery	container
money_transfer_file.csv	X

### 2.2 Access to DNB's DLR

All money transfer data exchange agreements and requirements, the data deliveries, their statuses and the validation results are published in DNB's DLR. Reporting companies are required to have access to this portal. Instructions are published on the DNB website<sup>3</sup>.

### 2.3 money\_transfer\_file.csv file interface

This section describes the metadata aspects of .csv files. Reporting companies must deliver one file for each entity. In case of the money transfer data exchange this is 1 .csv file. In addition, an exhaustive list of attributes is provided that is to be delivered for each file. All .csv files must at least contain the column headers of the respective entity, even if there are no records to report for that entity.

#### 2.3.1 money\_transfer\_file.csv file description (metadata)

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

Metadata	
<b>File name:</b>	money_transfer_file.csv
<b>Selection:</b>	All executed and non-executed send and receive transactions of the money transfer company differentiated by the service providing agency.
<b>File format:</b>	CSV (semicolon delimited)
<b>Character set:</b>	UTF-8
<b>Field separator:</b>	; (semicolon, ASCII number: 59)

<sup>2</sup> The abbreviation GLO is the Dutch translation of the data delivery agreement and translates to "gegevensleveringsovereenkomst". To enhance compatibility on DNB side when providing support, the term GLO code is used in favour of its English translation.

<sup>3</sup> <https://www.dnb.nl/statistiek/digitaal-loket-rapportages/algemeen/index.jsp>

<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>	" (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" (the word <u>test</u> is enclosed in inverted commas of ascii numbers: 147 and 148) Example 2: The string with double quotation marks: That was an "error" then becomes: "That was an \"error\"" (the word <u>error</u> is enclosed double quotation marks of ascii numbers: 34)
<b>Text field format:</b>	Free text (unless otherwise specified)
<b>Null values<sup>4</sup>:</b>	::
<b>Date field delimiter:</b>	No delimiter (optionally the text field delimiter is allowed; when applied, it must be applied on each row)
<b>Date format:</b>	ISO 8601 format, YYYY-MM-DD (e.g. 2020-03-09 for March 9 <sup>th</sup> 2020)
<b>Date &amp; Time format:</b>	YYYY-MM-DD hh:mm:ss[.nnnnnn] (e.g. 2020-03-09 15:13:42 for March 9 <sup>th</sup> 2020 at 13 minutes and 42 seconds past 3 in the afternoon)
<b>Numeric field delimiter:</b>	No delimiter (optionally the text field delimiter is allowed; when applied, it must be applied on each row)
<b>Numeric format:</b>	Numeric fields such as amounts, percentages or chances must not contain thousand separators. Both dot (.) and comma (,) will be interpreted as a decimal separator. All these values must be entered in numbers with 2 decimals, i.e. NNNNNNNNNN,NN or NNNNNNNNNN.NN (no leading or trailing zeros, no maximum length). <input type="checkbox"/> Amounts in euros must be entered in euros (1000 euros = 1000,00 euro) Negative numbers are preceded by a minus sign (-) Positive numbers are not preceded by a plus sign (+).

### 2.3.2 money\_transfer\_file.csv

#	Header	Data type	Details
1	"dnb_registration_number";"company_name";"agency_code";"agency_name";"agency_street";"agency_house_number";"agency_postal_code";"agency_place";"agency_country_code";"transaction_number";"transaction_type";"transaction_status";"transaction_date";"net_amount_in_euro";"payment_method";"customer_first_name";"customer_surname";"customer_date_of_birth";"customer_address_street";"customer_address_house_number";"customer_address_postal_code";"customer_address_place";"customer_address_country_code";"third_person_first_name";"third_person_surname";"third_person_country_code"	Alpha-numeric	Semicolon-separated string of all column names. Field names are put in double quotation marks.

#	Column name (attribute)	Data type	Length	Details
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<sup>4</sup> There's no distinction between null values (NULL) and empty value's (""), both are treated as NULL, hence null value's may also be delimited with the text field delimiter.

1	dnb_registration_number	Variable characters (20)	20	Registration number of reporting entity with DNB
2	company_name	Variable multibyte (255)	255	The name of the reporting entity
3	agency_code	Variable characters (50)	50	The unique code of the agency
4	agency_name	Variable multibyte (255)	255	Name of the agency that executed the transaction
5	agency_street	Variable multibyte (255)	255	Address street name of the agency that executed the transaction
6	agency_house_number	Variable multibyte (255)	255	Address house number of the agency that executed the transaction
7	agency_postal_code	Variable multibyte (255)	255	Address postal code of the agency that executed the transaction
8	agency_place	Variable multibyte (255)	255	Address place of the agency that executed the transaction
9	agency_country_code	Characters (2)	2	Country code of the agency that executed the transaction, in ISO 3166-1 alpha-2 format.
10	transaction_number	Variable characters (255)	255	Internal code for identification of the transaction
11	transaction_type	Variable characters (10)	10	The type of transaction which can either be a value from the type of transfer domain.  See LDM Domain Lists for allowed values.
12	transaction_status	Variable characters (20)	20	The status of the transaction which can only be a value of the transaction status domain.  See LDM Domain Lists for allowed values.
13	transaction_date	Date & Time		Date and time on which the transaction was executed.  For each data delivery to DNB the transaction date must be a valid date in the delivery reporting period.  Therefore a validation rule is applied on the transaction date.
14	net_amount_in_euro	Decimal (16,2)	16	Amount in euros.
15	payment_method	Variable characters (10)	10	The payment method of the transaction which may only be a value of the payment method domain.  See LDM Domain Lists for allowed values.
#	Column name (attribute)	Data type	Length	Details
17	customer_first_name	Variable multibyte (255)	255	First name of the customer.
18	customer_surname	Variable multibyte (255)	255	Surname of the customer.
19	customer_date_of_birth	Date		Date of birth of the customer.
20	customer_address_street	Variable multibyte (255)	255	Street of the address provided by the customer.
21	customer_address_house_number	Variable multibyte (255)	255	Housenumber of the address provided by the customer.
22	customer_address_postal_code	Variable multibyte (255)	255	Postal code of the address provided by the customer.
23	customer_address_place	Variable multibyte (255)	255	Place (City/Town) of the address provided by the customer.



24	customer_address_country_code	Characters (2)	2	The country (code) of the address provided by the customer, in ISO 3166-1 alpha-2 format.
25	third_person_first_name	Variable multibyte (255)	255	First name of the third party of the transaction. This is the party not initiating this transaction line (but the receiving or sending counterparty)
26	third_person_surname	Variable multibyte (255)	255	Surname of the third party of the transaction. This is the party not initiating this transaction line (but the receiving or sending counterparty)
27	third_person_country_code	Characters (2)	2	Country code of the third party of the transaction, in ISO 3166-1 alpha-2 format. This is the party not initiating this transaction line (but the receiving or sending counterparty)

## 2.4 Validation strategy

The validation strategy of delivery is closely related to the overall data quality strategy as described in paragraph 1.4.

To summarize the validation strategy of the delivery:

- Blocking violations will result in the status 'not-accepted' in DLR of the delivery, the status of the reporting obligation remains open;
- Absence of blocking violations will result in the status 'accepted' of the delivery and the reporting obligation will be fulfilled;
- Signaling violations have no effect on the status of the delivery nor on the status of the reporting obligation<sup>5</sup>.

There are three categories of validations that will lead to an evaluation of the delivery and reporting obligation. In the table below these categories, the severity and types of feedback are described.

Type	Description	Source	Action	Feedback
I. DNB technical, structure and administrative checks	See Paragraph 2.3	Delivery of data through upload in DLR	Blocking	DNB's DLR
II. Logical model basic constraints	Do the entity attribute values comply with datatypes, domain enumerations, mandatoriness? Are the primary or alternate keys unique within the entity? Do the entity relationships comply with the cardinalities?	logical data model + Report Model constraints	Blocking	DNB's DLR (XML)

<sup>5</sup> As stated in paragraph 1.4, successful completion of a reporting obligation (status = accepted) might still result in a request for resubmission.

III (a). Logical model custom constraints - Domain	Do single entity attribute values comply with the custom constraints that are not enforced by the basic constraints, like (exceptional) formats, patterns, iso standards?	logical data model + Appendix A + Report Model constraints	Blocking or Signaling	DNB's DLR (XML)
III (b). Logical model custom constraints - Tuple	Do combination of entity attribute values comply with custom constraints?	logical data model + Appendix A + Report Model constraints	Blocking or Signaling	DNB's DLR (XML)
III (c) Logical model custom constraints - Entity	Do multiple records within a single entity comply with the custom constraints?	logical data model + Appendix A + Report Model constraints	Blocking or Signaling	DNB's DLR (XML)
III (d) Logical model custom constraints - Model	Generally speaking, model constraints need other entities to evaluate the rule. e.g. referential integrity	logical data model + Appendix A	Blocking or Signaling	DNB's DLR (XML)
Type	Description	Source	Action	Feedback
	requirements of the logical data model (other model constraints, subtype constraints and specialisation model constraints <sup>6</sup> )	+ Report Model constraints		

### 2.4.1 Logical model basic constraints

These requirements basically make up the logical data model and can be seen as the lowest level of data quality that DNB expects. Violation of these constraints will by default be blocking. Exceptions (empty column) can exist on datatype and attribute enumeration constraints.

These constraints can be categorized as follows:

- **Attribute datatype**  
Constraint validation: does the provided value match the target datatype?  
Action controles: Skip row (default), empty column  
Threshold: 0 (=blocking)
- **Attribute mandatory**  
Constraint validation: is there a value provided?  
Action controles: Skip row  
Threshold: 0 (=blocking)
- **Attribute enumeration (domain)**  
Constraint validation: does the provided value match one of the domain values?  
Action controles: No action, skip row (default), empty column  
Threshold: 0 (=blocking)
- **Primary key**  
Constraint validation: is the provided key unique within the entity?  
Action controles: Skip row

<sup>6</sup> Although closely 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.

- Threshold: 0 (=blocking)
- **Alternate key**  
Constraint validation: is the provided key unique within the entity?  
Action controles: Skip row  
Threshold: 0 (=blocking)
- **Parent relationship exists**  
Constraint validation: does a record exist in the parent entity with the same key?  
Action controles: No action  
Threshold: 0 (=blocking)
- **Child relationship exists**  
Constraint validation: does a record exist in the child entity with the same key?  
Action controles: No action  
Threshold: 0 (=blocking)

Because of cascading violations, which cause added complexity to finding the root cause of violations when attributes are input for custom validations, DNB does not apply exceptions (empty column) or signaling constraints (high/unlimited threshold) on any of the basic constraints. However for the purpose of allowing room for data quality improvement some basic constraints are not implemented as a basic constraint, but as a custom constraint (e.g. dmc0000 for mandatory attributes).

#### 2.4.2 Logical model custom constraints

These requirements are also referred to as the (logical) validation rules. These constraints exist for all (business) rules where the logical data model's basic constraints are not sufficient to enforce the desired data quality or where the basic constraint is too strict, while there is room for improvement over time.

Scenarios where basic constraints are not sufficient:

- Mutually exclusiveness check between supertypes and subtypes  
Constraint validation: does the record of the supertype only exist in the corresponding subtype entity and not in (any of) the other subtype entitie(s)?
- Completeness check between supertypes and subtypes  
Constraint validation: does each record of the supertype exist in any of its subtype entities?

Scenarios where basic constraints are too strict:

- Mandatory values for non key attributes.  
The mandatory option on databases is very strict and thus always blocking when violated. When allowing room for improvement of data quality on entity attribute values, the mandatory option can be disabled and replaced by a logical custom validation that simply checks if a value is provided. This allows DNB to control the action (signaling or blocking).
- Mandatory relationship for child entities.  
Typically this flexibility is desired in situations where DNB allows room for improvement of the data quality, instead of blocking the data delivery.

Other scenarios

When designing logical data models there is always the trade off between modelling in more detail which increases the complexity of the data model in terms of entities, subtype entities and relationships or "hiding" the complexity in business rules, which keeps the model easy to understand, but increases the need for potentially complex validation rules. For money transfer data DNB has decided to keep the model as simple as possible.

All other custom constraints are a way of enforcing data quality or signaling data quality issues.

The custom constraints can be categorised on the level on which they're executed:

- **Attribute Level (domain model constraints)**  
 Constraint validation: does the attribute value match the restrictions?  
 Action controls: No action (default), skip row, empty column  
 Threshold: 999999999 (default) (=signaling)
- **Record Level (tuple model constraints)**  
 Constraint validation: does a record level combination of attributes match the restrictions?  
 Action controls: No action (default), skip row  
 Threshold: 999999999 (default) (=signaling)
- **Entity Level<sup>7</sup> (entity type constraints)**  
 Constraint validation: does an entity level combination of records match the restrictions?  
 Action controls: No action  
 Threshold: 999999999 (default) (=signaling)
- **Model Level**  
 Constraint validation: does a combination of multiple entities and multiple rows match the restrictions?
  - **other model constraints**  
 Action controls: No action  
 Threshold: 0 (=blocking) or 999999999 (=signaling)
  - **specialisation constraints**  
 Action controls: No action  
 Threshold: 0 (=blocking) ○
  - **sub set model constraints<sup>8</sup>**  
 Action controls: No action  
 Threshold: 0 (=blocking) or 999999999 (=signaling)

A full list of custom constraints / validation rules can be found in the Logical data model or in Appendix A (signaling rules)

### 2.4.3 Validation processing and feedback

Technical validations will be processed sequentially. When a violation is encountered, processing will stop and no further validations will be performed.

Logical validations will be processed on the complete MoneyTransfer data-exchange. This means that all constraints will be validated. A side effect of this full validation is that data quality issues that require skipping record(s) in each step of the validation process can trigger violations in following steps. To limit these cascading effects DNB has decided not to allow signaling basic constraint validations, hence the LDM's basic constraints + the custom blocking validation rules are the collection of the minimum required data quality rules.

Feedback on technical validations will be straightforward (e.g. XML header violation, no reporting obligation with status open available, etc.). Feedback on logical validations will be published in DNB's DLR as an XML file containing all violations. If however, these violations result in huge amounts of data of the same type of error, the violations will be summarized.

### 2.4.4 Solving data quality issues

The feedback report on the logical validations can be used to find the root cause of the data quality issue. Each basic constraint violation that causes the row to be skipped (in parent entities) will cause relationship errors and potentially also custom constraint violations. Therefore the order in which to solve data quality issues is the same as the order of the basic constraint list in chapter 2.4.1. In the event that there is no other root cause then the relationship error itself is the root

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<sup>7</sup> The entity type constraint is similar as an other model constraint, with the difference that an entity type constraint requires 1 entity as input whereas the other model constraint typically requires input from multiple entities.

<sup>8</sup> Both specialisation model constraints (spc) and sub set model constraints (smc) are specific types of other model constraints, meaning they require multiple entities as input.

cause. Due to the cascading effects it's important to focus on solving all basic constraint violations first, before attempting to resubmit the dataset.

## 2.5 Submission process

The submission process is explained in the next paragraphs.

### 2.5.1 Money transfer reporting obligations, Digitaal Loket Rapportages (DLR)

DNB publishes all agreements and reporting obligations for reporting companies in its DLR. Money transfer companies can only submit data if the relevant reporting obligation is published in DNB's DLR and the status is "open".

### 2.5.2 Money transfer data delivery feedback

Following a money transfer data-exchange by the reporting company, there are a number of feedback moments.

1. All validation feedback (status and files) by DNB will be made available and viewable in DNB's DLR.
2. After the DNB technical validations have been executed, the logical validations will commence. Feedback on these validations will also be made available in DNB's DLR.
3. Notifications of validation results by DNB can be sent to the responsible person within the reporting company if he/she has been properly registered in DNB's DLR.

### 2.5.3 Resubmission

There are two types of resubmissions:

- [1] When a money transfer data-exchange is **Not Accepted** by DNB, the reporting company will resubmit the *complete* files<sup>9</sup> under the same reporting obligation.
- [2] When a money transfer data-exchange is **accepted** by DNB, the reporting company can only resubmit a subsequent data exchange under a new reporting obligation.

*In some cases, even after extensive analysis by DNB, the submitted money transfer data-exchange may turn out to be incorrect<sup>10</sup> (see also Section 1.6). If the cause is a signaling or plausibility rule (appendix A), the reporting company 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 will then be created in DNB's DLR.*

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<sup>9</sup> Only complete files are accepted, only submitting corrected data is not permitted.

<sup>10</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 THE LOGICAL DATA MODEL

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

#### 3.1 Logical data model

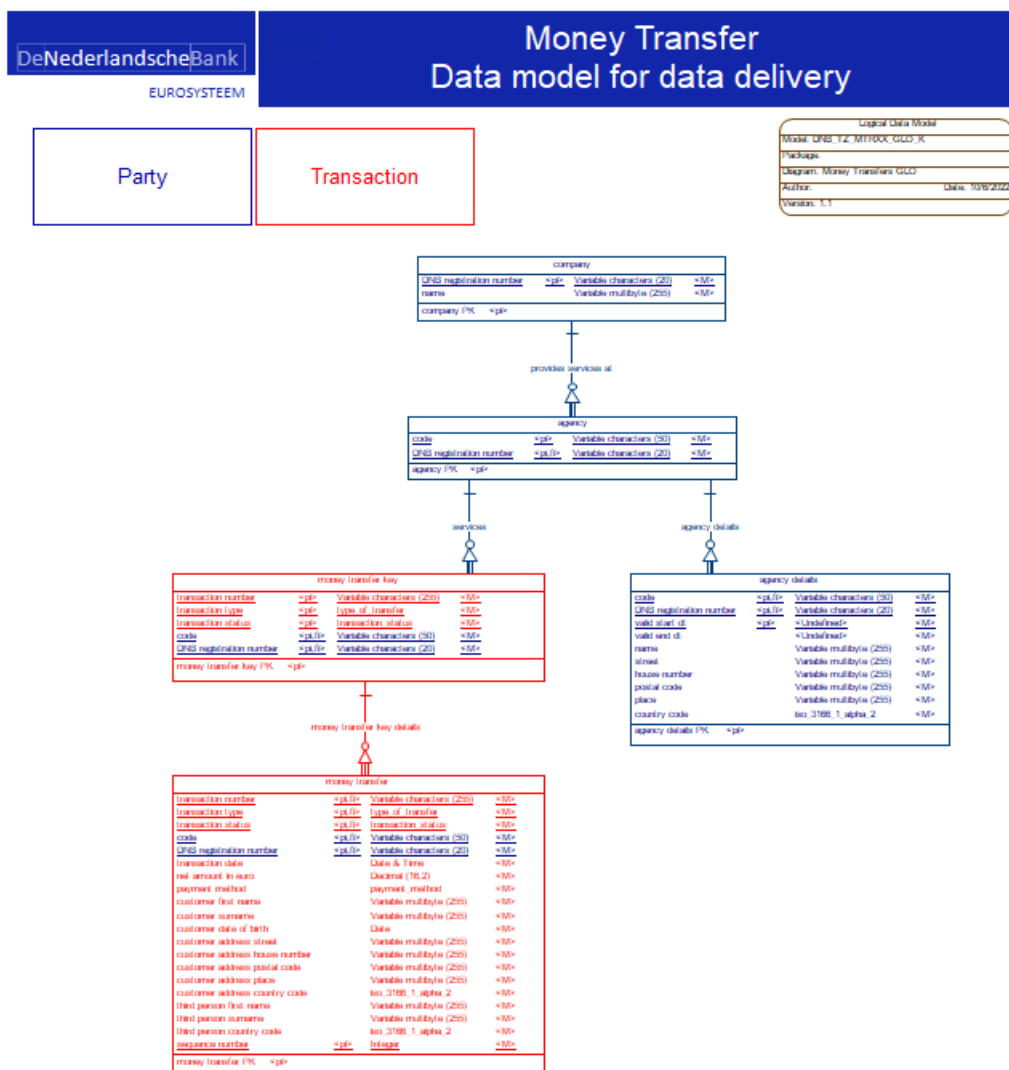


Figure 1 - Data model for delivery of Money Transfer data

The logical data model describes all entity types, their structure and interrelations. The logical data model is published in full on the DNB website.

Although great care has gone towards creating the logical data model and supporting documents, no guarantee can be given with regards to the technical correctness of the contents (for example with respect to the pseudocode).

##### 3.1.1 Optional attributes and relations

For all attributes and relations that are modelled as optional (i.o.w. not mandatory, or zero to 1, or zero to many) the following applies. In case the reporting company has this data available, it is

required for delivery. The optionality only implies that the reporting company is not required to have this data available yet.

For functional attributes that are required, the presence of a value is validated by a validation rule. (See Appendix A for signaling validation rules)

Also, for required child records (cardinalities 1-to-1 or 1-to-1..n), the existence of the child record is validated by validation rules.

(See Appendix A for b signaling validation rules (not exhaustive!))

### 3.2 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
money_transfer_file.csv	dnb_registration_number	company	DNB registration number
money_transfer_file.csv	company_name	company	name
money_transfer_file.csv	agency_code	agency	code
money_transfer_file.csv	dnb_registration_number	agency	DNB registration number
money_transfer_file.csv	agency_name	agency	name
money_transfer_file.csv	agency_street	agency	street
money_transfer_file.csv	agency_house_number	agency	house number
money_transfer_file.csv	agency_postal_code	agency	postal code
money_transfer_file.csv	agency_place	agency	place
money_transfer_file.csv	agency_country_code	agency	country code
money_transfer_file.csv	transaction_number	money transfer	transaction number
money_transfer_file.csv	transaction_type	money transfer	transaction type
money_transfer_file.csv	transaction_status	money transfer	transaction status
money_transfer_file.csv	agency_code	money transfer	code
money_transfer_file.csv	transaction_date	money transfer	transaction date
money_transfer_file.csv	net_amount_in_euro	money transfer	net amount in euro
money_transfer_file.csv	payment_method	money transfer	payment method
money_transfer_file.csv	customer_first_name	money transfer	customer first name
money_transfer_file.csv	customer_surname	money transfer	customer surname
money_transfer_file.csv	customer_date_of_birth	money transfer	customer date of birth
money_transfer_file.csv	customer_address_street	money transfer	customer address street
money_transfer_file.csv	customer_address_house_number	money transfer	customer address house number
money_transfer_file.csv	customer_address_postal_code	money transfer	customer address postal code
money_transfer_file.csv	customer_address_place	money transfer	customer address place
money_transfer_file.csv	customer_address_country_code	money transfer	customer address country code
money_transfer_file.csv	third_person_first_name	money transfer	third person first name
money_transfer_file.csv	third_person_surname	money transfer	third person surname
money_transfer_file.csv	third_person_country_code	money transfer	third person country code

### 3.3 Adjustments and deliveries with retroactive effect

Reporting companies can only submit or resubmit files if DNB has opened a relevant reporting obligation. It is not possible for reporting companies to submit or resubmit files without a relevant reporting obligation. Reporting obligations are published in DNB's DLR.

DNB may decide a resubmission is required. It will publish a new reporting obligation for this purpose.

## 4 AGREEMENTS

### 4.1 Changes to the agreement

Changes to the Logical Data Model, Data Delivery Agreement and the Reference codes are communicated to all money transfer companies. Subsequent versions (following version 1.0) will



be accompanied by detailed release notes, stating the precise changes compared to a previous release.

## APPENDIX A BLOCKING RULES THAT LEAD TO A DIRECT REJECTION OF THE DELIVERY

The rules listed in this appendix will cause the status of the reporting obligation to be rejected. It is required to fix the problem and resubmit the data for the given period.

The blocking rules below are directly derived from the business rules that are defined in the logical data model, where they are related to the artefact that they act upon.

Code	Name	Description	11 Server expression	Severity
_no_code_	dnb registration number must match the relates to code in DLR	It's only allowed to upload data for the company for which an obligation is open.  Therefore the DNB registration number must match the "relates to" code in DLR.	when dnb_registration_number = DLR.relates_to then "ok" else "error"	blocking

<sup>11</sup> The server expression is notated in pseudo-code, that serves as an explanatory hint on how the rule is implemented, hence how to solve violations of the rule.

## APPENDIX B SIGNALING AND 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 reporting obligation to resubmit the data for a given period.

The signaling and plausibility rules below are directly derived from the business rules that are defined in the logical data model, where they are related to the artefact that they act upon.

Code	Name	Description	12 Server expression	Severity
dmc0000	<attribute> dmc0000 value is mandatory	A value for the this attribute is mandatory.  This rule is applied on all attributes which are indicated as mandatory except on attributes that are (part of) primary or foreign keys.	when <attribute> is not <empty> then "ok" else "error"	signaling
dmc0001	<attribute> dmc0001 value is mandatory for executed money transfer	A value for the this attribute is mandatory when the transaction status is executed.  This rule is applied on all attributes which are indicated as mandatory except on attributes that are (part of) primary or foreign keys.	when transaction_status = "executed" and <attribute> is not <empty> then "ok" else "error"	signaling
dmc0002	<attribute> dmc0002 country code must be a valid value of iso country code 3166 alpha 2 standard	Reported country codes must be a valid value of iso country code 3166 alpha 2 standard	when [country code] in list [iso_country_code_3166_alpha_2] then "ok" else "error"	signaling

dmc0003	net amount in euro dmc0003 value may only contain 1 decimal point or comma	To prevent data conversion problems, the net amount in euro attribute may only be delivered with max 1 decimal character, being either point (.) or comma (,).  Any other character or multiple presentation characters will result in a violation of this rule.	when [net amount in euro] contains "." and [net amount in euro] contains "," then "error" else when count_char_in_string( [net amount in euro], "." > 1 then "error" else when count_char_in_string( [net amount in euro], "," > 1 then "error" else "ok" end	signaling
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<sup>12</sup> The server expression is notated in pseudo-code, that serves as an explanatory hint on how the rule is implemented, hence how to solve violations of the rule.

## APPENDIX C NAMING CONVENTIONS AND ABBREVIATIONS

#	Title	Description
1	Case	file names, XML tags, entity types and attributes are give 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, "_".

#	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	XML	Extensible Markup Language
7	MTR	Money Transfer
8	omc	Other model constraint
9	tmc	Tuple model constraint
10	dmc	Domain model constraint
11	etc	Entity type constraint
12	spc	Specialisation model constraint
13	smc	Sub set model constraint
14	DLR	Digitaal Loket Rapportages