

# Reference Data Management 2311

for SAP Master Data Governance

## Object Documentation

### Exchange Rates



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## 1 Introduction

### 1.1 Exchange Rates in General

The general concept of exchange rates is fairly easy to grasp. An exchange rate simply determines, how many units of a currency you can buy with a given amount of another currency.

If, for example, the exchange rate between EUR and USD is currently 1,09 then 1.00 EUR can buy you 1.09 USD.



Figure 1: Currency Symbols

This example, however, may be a bit oversimplified, as in the real world we have to deal with several ways of specifying exchange rates. The most important ones are:

**Quotation:** There are two different quotations for exchange rates. In a direct quotation, the domestic currency forms the base, meaning that the value of the foreign currency is defined in units of the domestic currency. As a European citizen, the direct exchange rate for EUR/USD would be e.g. 0.91. In an indirect quotation, this definition is swapped, and the value of the domestic currency is defined in units of the foreign currency. In the same example, the exchange rate for EUR/USD is now 1.09. Note that direct and indirect rates can be easily converted by calculating  $\frac{1}{\text{rate}}$ . This comes in handy later on.

**Bid & Ask:** There are two different values for each exchange rate. The example-currency pair (in this case indirect) is often quoted like this: EUR/USD 1.090-1.094. In this case, the former price represents the Bid price. It is the price at which other instances are willing to buy the currency. The latter price, however, represents the Ask price. It is the price at which other instances are willing to sell the currency.

#### Other important types:

- Real Exchange Rate (RER): considers the purchasing power of a currency
- Fixed or Floating Rate: determines if the exchange rate is fixed or flexible
- Currency Peg: indicator if one currency is pegged to another

Basically, every exchange rate system nowadays is floating, meaning the rates are subject to change. This makes exchange rates a unique kind of Reference Data, as Reference Data is (usually) alternated rarely. Therefore, anyone who is in demand of accurate exchange rates will need to update them on a regular (daily) basis. This is, where providers such as the ECB, Thomson Reuters, Bloomberg, Telerate or the SAP itself come into play. These instances publish updates for exchange rates frequently.

## 1.2 Exchange Rates in Itego RDM

### 1.2.1 General Functionality

The following image gives an overview over the four main functionalities of the Exchange Rates object.

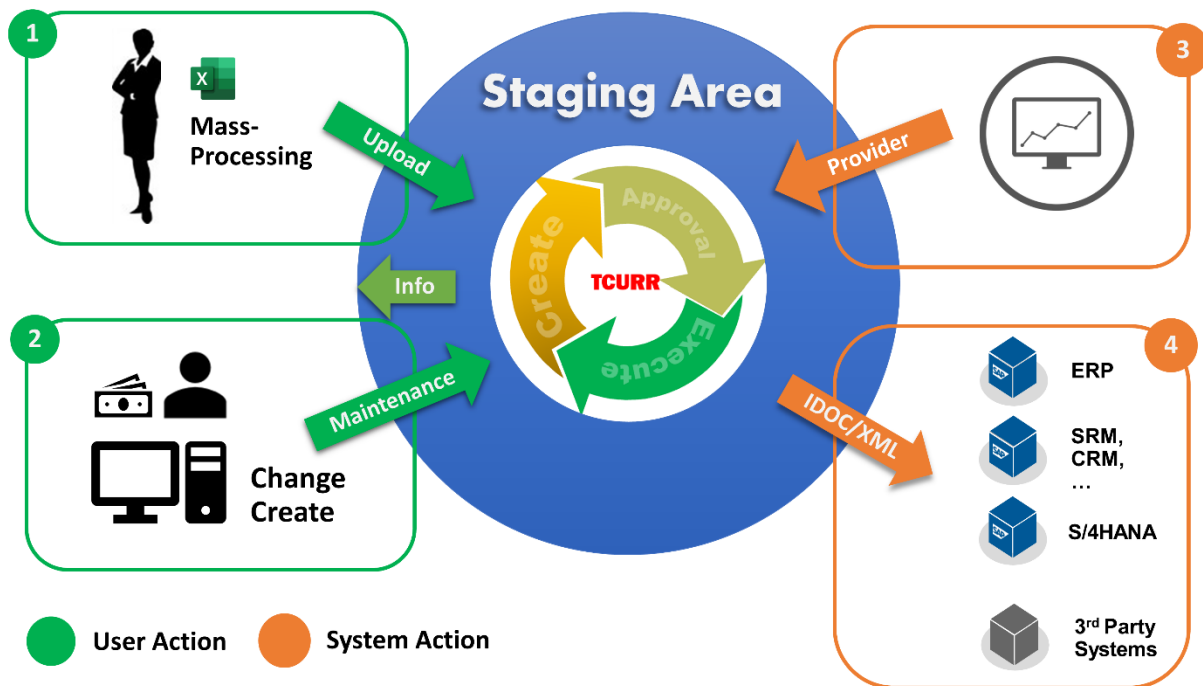


Figure 2: Functional Overview Itego RDM – Exchange Rates

Itego RDM provides four main functionalities, which all allow for maintenance, import or export of Exchange Rates within the MDG RDM tables (view section 1.2.2). The data, which is maintained through these functionalities, always passes through the Local Staging Area (LSA), and is activated according to the workflow, that is determined for each Rate (workflow explained in section 1.2.4).

An overview of the four functionalities is provided with the following headings.

#### 1.2.1.1 Mass Processing (Upload)

Mass processing allows the user to create or change multiple Exchange Rates at once. In this case, the data is transferred via either a .txt or a .csv file. The upload application can be configured according to the file structure the file uses. Mass processing comes in handy when attempting to load big amounts of data into the system at once, e.g. for the initial load when configuring RDM. Application explained in section 3.3.

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#### *1.2.1.2 Change & Create Requests*

Change and create requests within MDG RDM are used frequently. MDG RDM allows for a consistent management for all relevant tables, that are used to maintain Exchange Rates. Application explained in sections 3.1 (create) and 3.2 (change).

#### *1.2.1.3 Datafeed*

Datafeed refers to the process of importing Exchange Rates from external sources, such as the ECB via the Datafeed interface. Itego RDM provides a special report that works with every data provider for Exchange Rates. The report validates the imported Exchange Rates and creates one or two change requests, depending on your choices of the import type (view section 2.6.1). Application explained in section 2.

#### *1.2.1.4 Distribution to Other Systems*

MDG RDM also allows for an export/distribution of Exchange Rates to other systems, SAP or non-SAP. Within SAP systems (especially ERP), this distribution works via so-called "intermediate documents" (IDocs). Data, which is transferred to third party systems, is usually exported as a .csv or .txt file, following a preconfigured file structure.

## 1.2.2 Relevant Tables

The following image names all the relevant tables for maintaining exchange rates and shows the relationships between them. An explanation of each table is listed below.

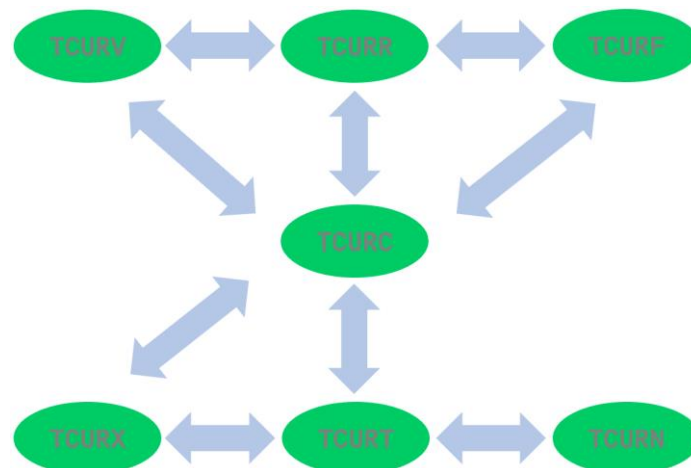


Figure 3: Dependencies between tables

**TCURV** - Exchange rate types for currency translation: The exchange rate type is used to store exchange rates for different purposes on the same date in the system. (e.g. bid, ask, average rate)

**TCURR** – Exchange rates: The exchange rate relations for the currency conversion are only displayed here (ASK=ask, BID=bid, MID=average rate)

**TCURF** – Ratio for exchange Rate: The exchange rate relation for currency conversion is defined per exchange rate type and per currency pair. You can define a different exchange rate type for special currency pairs

**TCURC** – Currency Codes: You need entries in the currency table for all currencies that occur in your business transactions

**TCURX** – Decimal places of the currencies: Currencies can have a different number of decimal places

**TCURT** – Descriptions of Currency Codes: Long -and short text which describes the Currency Code closer

**TCURN** – Quotations: For each currency pair, the exchange rate is set in direct quotation or indirect quotation. The indirect quotation indicates the exchange rate how many foreign currency units correspond to one domestic currency unit (euro). In the so-called direct quotation, however, the exchange rate indicates how much a foreign currency unit is worth in €.

### 1.2.3 Available Attributes in MDG RDM

Itego RDM includes the following attributes to properly maintain Exchange Rates:

<b>Attribute</b>	<b>Description</b>
Exchange Rate (Type)	Exchange Rate (Type)
Currency (from)	Currency value from
Currency (to)	Currency value to
Valid from	Valid from
Alt. exch.rate type	Alternative Exchange Rate type
Alt.e/r type valid fr.	Alternative e/r type valid from
Exchange Rate	Exchange Rate
Quotation type	Quotation type
Ratio (from)	Ratio (from)
Ratio (to)	Ratio (to)

Special attention should be paid to the attributes Exchange Rate (Type) & Currency (from/to) and their options. Available currencies are the ones you maintained in the Currency Object in RDM. Available Exchange Rate Types are delivered by SAP. The standard-set is listed below.

<b>Exchange Rate (Type)</b>	<b>Usage, Description</b>
100*	Reference value = group value
1001	Current exchange rate
1002	Average exchange rate
1003	Historical exchange rate
1004	Current exch. rate prior year
200*	Reference value = group value
2001	Current exchange rate
2002	Average exchange rate
2003	Historical exchange rate
2004	Current exch. rate prior year
B	Standard translation at bk.selling rate
EURO	EMU regulation, fixed exchange rates
EURX	EMU regulation, variable exchange rates
G	Standard translation at bank buying rate
I	Intrastat exchange rate type
M	Standard translation at average rate
MCA	Multi Currency Account
P	Standard translation for cost planning

## 1.2.4 Available Change Request Types

Relevant standard change request types are:

CR Type	Description	Properties, Comments
ICR1S01	Create Exchange Rate and activate	Create, 1-step
ICR1S02	Process Exchange Rate and activate	Change, 1-step
ICR2S01	Create Exchange Rate with approval	Create, 2-step
ICR2S02	Process Exchange Rate with approval	Change, 2-step
ICR3S01	Create Exchange Rate with proc. and appr	Create, 3-step
ICR3S02	Process Exchange Rate with proc and appr	Change, 3-step

Message Type (IDoc): /ITR/CUR\_EXRA

These change request types above are provided for every object in RDM. More information about them can be found in the Functional Documentation of RDM. Therefore, they are of no greater interest for this documentation. However, Itego provides three more change request types, which are made for use in the data import process of Exchange Rates (explained in section 2).

- 1. CR for direct update:** With this change request, the data it contains is distributed automatically to all eight relevant tables. It is used for releasing all the issue-free import data as quickly and efficiently as possible, without it having to pass through the RDM MDG workflow.
- 2. CR for normal checks:** This change request is also used to store all the data which contains no issues. Unlike CR 1 however, this change request passes through the MDG RDM workflow before being released. It instructs the user to simply check on the data and then release the request.
- 3. CR for error processing:** This change request is used to store all the data which failed the validation after a data import. It has to pass through the 3-step MDG RDM workflow, meaning, that it needs to be approved by both a data specialist and a data steward before being released. In the approval process, the change request instructs the user(s) to check and modify the data before releasing it.

As you may have noticed, the change requests 1 and 2 are both made for processing data, which passed validation on the first attempt. This implies, that for a Datafeed process, you will have to decide, whether you want to use CR 1 or CR 2 in said process. For a guide on how to do so, and a brief overview of each CRs advantages and disadvantages, please view section 2.6.1.



## 2 Maintenance via Datafeed

### 2.1 The Datafeed Process

Itego Reference Data Management (RDM) for SAP MDM provides a standardized solution to manage the entire table environment consistently and in a single process. The main part of the process itself can be described by the image below.

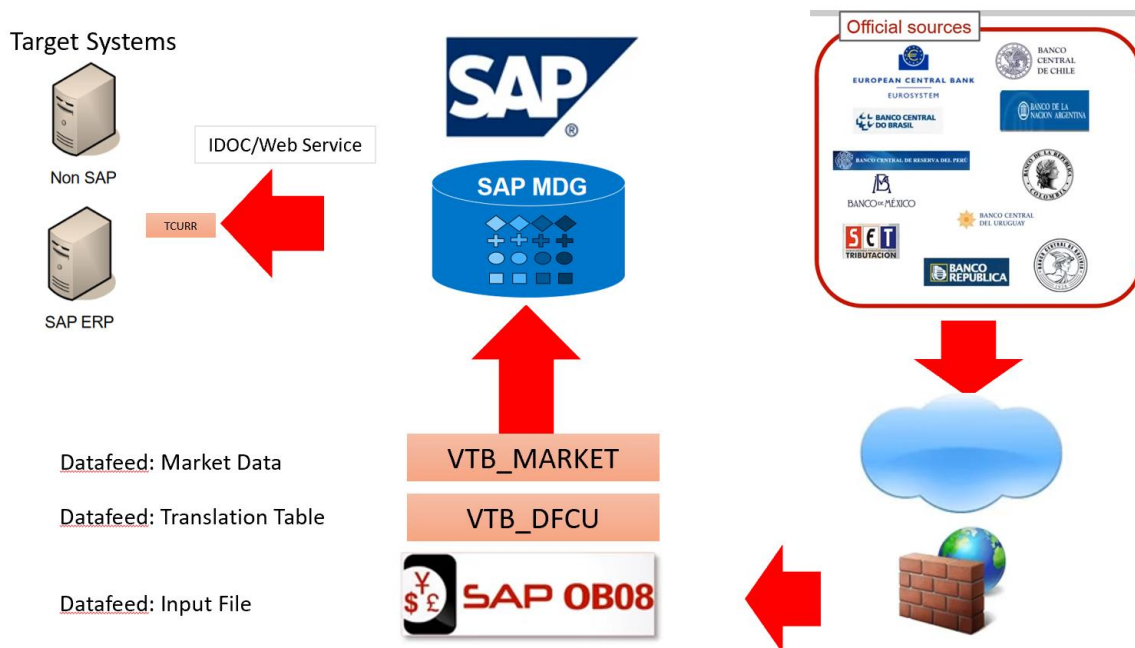


Figure 4: The data import process

**1 – Importing Exchange Rates:** The user first gets to choose between a source from which the exchange rates should be imported (e.g. ECB, Thomson Reuters, Bloomberg, Telerate, Sap, etc.). These exchange rates are then delivered by a provider. Available providers are FINISS, Infoaval, Opentrade, Reuters, ReutersWeb and Telerate. Each provider usually collects data from several of the above-mentioned sources and imports it into the tables VTB\_MARKET and (for translation purposes) VTB\_DFCU.

**2 – Validating:** In the second step, the user runs a report which is implemented in the common job-network. The report itself runs a validation of the Exchange Rates in the VTB\_MARKET table. It also creates one to three (depending on the configuration) change requests to activate the rates. If an exchange rate carries issues that require further evaluation (e.g. extreme deviation, suspicious date or time, etc.), it is automatically added to the "ERROR" change request. If an Exchange Rate carries no issues, it can either be activated directly, without passing through MDG RDM, or be put in a separate "issue-free" change request.

**3 – Editing:** In the third step, the user gets to edit the rates which raised an issue in the validation in MDG and (depending on step 2) approve the issue-free Rates. The Exchange Rates will then be distributed to the corresponding tables.

In addition to this import procedure, Itego RDM – as always – offers a standard workflow solution for the governance of Exchange Rates. Via the overview page in RDM, the user is able to manually create or alternate Exchange Rates. The available change request types can include up to three instances, which are: Requester, Data Specialist, Data Steward. The scheme below shows, how these roles are used for change requests.

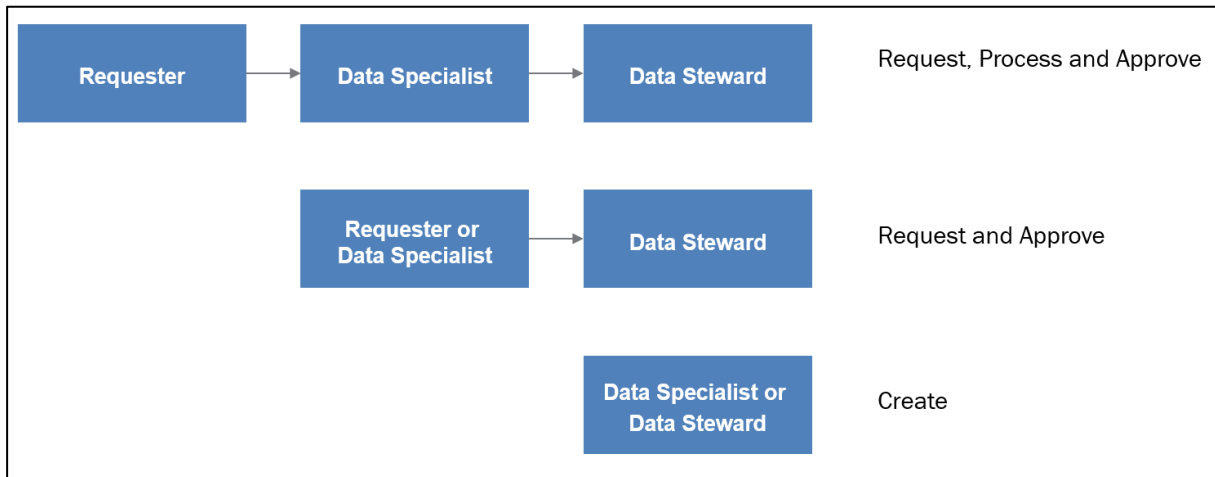
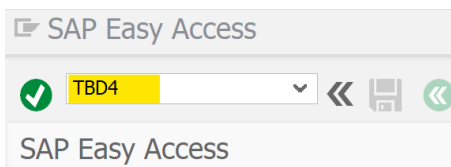


Figure 5: Workflow variants in RDM

## 2.2 Importing Exchange Rates

Please note that a prerequisite of starting an import is, that *all* rates are contained in the customizing of the datafeed interface. If this is not the case, the entire interface is unable to run. Contact your provider for further details about the imported rates.

To start the entire process, the user has to log into the SAP GUI and execute the transaction TBD4.



The “Datafeed: Request Current Market Data” program will pop up, allowing you to make the following selections:

Datafeed: Request Current Market Data

Currencies  
 Securities  
 Interest Rates  
 Indexes  
 Forex Swap Rates  
 Commodities (Daily Basis)

Exchange Rate Volatilities  
 Security Price Volatilities  
 Interest Rate Volatilities  
 Index Volatilities  
 General Volatilities  
 Commodities (Time Basis)

Market Data Selection

1st Key Definition:    
 2nd Key Definition:    
 Instrument Property:    
 For Volatilities: Term:

Datafeed

Name:    
 Request Mode:  Synchronou  Transactional (Asynchronous)

Output Control

Output List of Results  All  Errors  Correct Results  
 Save Market Data in System Permanently If Defined in Customizing  
 Layout:

The "Market Data Class" Group lets you choose between the types of market data that you want to import. For importing Exchange Rates, we will have to check the "Currencies" box.

Market Data Class

Currencies  
 Securities  
 Interest Rates  
 Indexes  
 Forex Swap Rates  
 Commodities (Daily Basis)

Exchange Rate Volatilities  
 Security Price Volatilities  
 Interest Rate Volatilities  
 Index Volatilities  
 General Volatilities  
 Commodities (Time Basis)

The "Market Data Selection" Group can be left blank

In the "Datafeed" Group, you need to choose the provider of the actual data. In our case, we are going to use provider FINISS. When applying this documentation, you will have to choose the provider, which is accessible to you. It can be found via F4-help.

Data Pro	Source	Description
FINISS	F	FINISS Interface
Infoaval	F	
Opentrade	F	Opentrade Interface
Reuters	F	Reuters SSL Interface
ReutersWeb	F	Reuters Web Interface
Telerate	F	DJ/Bridge Rate Feed Engine

The import mode needs to be set to "Synchronou"

Datafeed	
Name	FINISS
Request Mode	<input checked="" type="radio"/> Synchronou <input type="radio"/> Transactional (Asynchronous)

For the last group, "Output Control", you will have to pay attention to the "Save Market Data in System Permanently If Defined in Customizing" checkbox, which needs to be unchecked.

Output Control	
<input checked="" type="checkbox"/> Output List of Results <input checked="" type="radio"/> All <input type="radio"/> Errors <input type="radio"/> Correct Results	
<input type="checkbox"/> Save Market Data in System Permanently If Defined in Customizing	
Layout	

This leaves us with a filled-out transaction which can be executed:

Datafeed: Request Current Market Data	
Market Data Class	
<input checked="" type="checkbox"/> Currencies <input type="checkbox"/> Securities <input type="checkbox"/> Interest Rates <input type="checkbox"/> Indexes <input type="checkbox"/> Forex Swap Rates <input type="checkbox"/> Commodities (Daily Basis)	<input type="checkbox"/> Exchange Rate Volatilities <input type="checkbox"/> Security Price Volatilities <input type="checkbox"/> Interest Rate Volatilities <input type="checkbox"/> Index Volatilities <input type="checkbox"/> General Volatilities <input type="checkbox"/> Commodities (Time Basis)
Market Data Selection	
1st Key Definition	<input type="text"/>
2nd Key Definition	<input type="text"/>
Instrument Property	<input type="text"/>
For Volatilities: Term	<input type="text"/>
Datafeed	
Name	FINISS
Request Mode	<input checked="" type="radio"/> Synchronou <input type="radio"/> Transactional (Asynchronous)
Output Control	
<input checked="" type="checkbox"/> Output List of Results <input checked="" type="radio"/> All <input type="radio"/> Errors <input type="radio"/> Correct Results	
<input type="checkbox"/> Save Market Data in System Permanently If Defined in Customizing	
Layout	

TBD4 will then import and pre-validate the Exchange Rates. If the program detects any issues with a Rate, a message window such as the following is going to pop up. It is going to show you how many issues it detected.

SAP			
Datafeed: Display messages			
Typ	It	Message text	LTxt
●	001	Refresh incomplete	?

When taking a look at this message, you can either hit for more information on the issue, or hit for technical data of the message itself.

Afterwards, you can confirm by pressing and a table containing all the imported data will be shown:

Datafeed: Request Current Market Data

Mkt data - 29.05.2020, 05:29:42 o'clock User: BACKF

Market data class: 01 Currencies Data source: FINISS

From curr.	To-Currency	Cat.	Date	Time	Value	"Fr" ratio	To factor	Indir.Quot	Cur	UoM	Put/Cal
<input type="checkbox"/>	AMD	EUR	M	28.05.2020	22:30:00	0,00188	AMD	1	1	X	
<input type="checkbox"/>	AMD	USD	M	28.05.2020	22:30:00	0,00207	AMD	1	1	X	
<input type="checkbox"/>	AUD	EUR	M	28.05.2020	00:00:00			1	1		
X		99									
<input type="checkbox"/>	EUR	AMD	M	28.05.2020	22:30:00	532,98000	USD	1	1		
X											
<input type="checkbox"/>	EUR	RON	M	28.05.2020	22:30:00	4,84350	USD	1	1		
<input type="checkbox"/>	RON	EUR	EURFX	28.05.2020	22:30:00	0,20646	RON	1	1	X	
<input type="checkbox"/>	RON	EUR	M	28.05.2020	22:30:00	0,20646	RON	1	1	X	
<input type="checkbox"/>	RON	USD	M	28.05.2020	22:30:00	0,22744	RON	1	1	X	
<input type="checkbox"/>	USD	AMD	M	28.05.2020	22:30:00	483,82000	USD	1	1		
X											
<input type="checkbox"/>	USD	BRL	M	28.05.2020	22:30:00	5,31000	USD	1	1		
<input type="checkbox"/>	USD	RON	M	28.05.2020	22:30:00	4,39680	USD	1	1		

Transfer Statistics

	Successful	Warnings	Error
Market data class: 01 Currencies	11	0	1
Overall	11	0	1

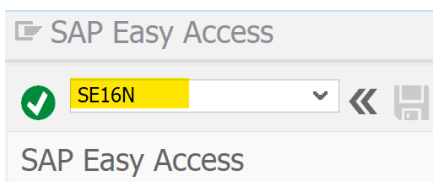
You can now view the data of the Exchange Rate that failed the validation (and the ones who passed). According to this table, the pair AUD/EUR raises an issue, meaning, it will be put into a separate change request.

By pressing in the menu bar, you can delete selected entries (not advised)

By pressing or you can extract the table into an Excel-spreadsheet or other file

By using you can manage the table layouts

The table VTB\_MARKET (and VTB\_DFCU) now contains the imported data. If you want to double-check this, you can execute transaction SE16N and enter the table VTB\_MARKET or VTB\_DFCU:



General Table Display

Background Number of Entries All Entries

Table: **VTB\_MARKET**

Text table:  No texts

Layout:  Maintain entries

Maximum no. of hits: 500

Selection Criteria

Fld name	O..	Fr.Value	To value	More	Output

Hit Execute

You can now view the updated VTB\_MARKET table:

VTB\_MARKET: Display of Entries Found

Search in Table: VTB\_MARKET Datafeed: Market data

Number of hits: 17

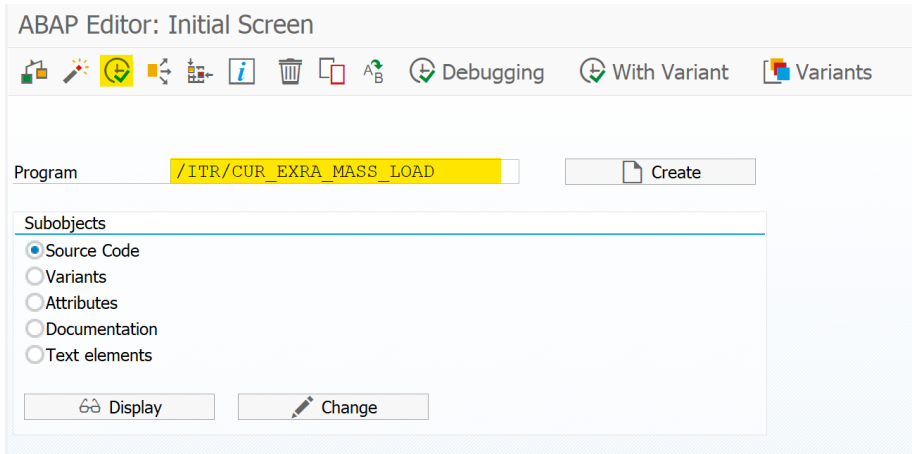
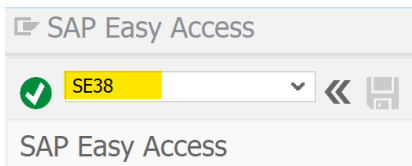
Runtime: 0 Maximum no. of hits: 500

Class	Key	Rate type	Data	Prov.	Add. key	Meta	class	Class	Key	Key	Status	ID	Message	Refresh	Update	Flag	Supplier	Con	ID	Con	Country	Date	Time	Value	Currency	"Fr"	ratio	To-factor
01	AMD	EUR	M	FINISS								0										28.05.2020	22:30:00	0.00188	AMD	1	1	
01	AMD	USD	M	FINISS								0		X								28.05.2020	22:30:00	0.00207	AMD	1	1	
01	AUD	EUR	M	FINISS							99	0	Rate not cont	X								00:00:00				1	1	
01	BRL	EUR	M	FINISS								0										28.05.2020	22:30:00	0.17096	BRL	1	1	
01	CAD	PLN	EURX	Infoaval							E	0	Maintain tran	X								13.03.2020	19:05:00	2.83124	CAD	1	1	
01	EUR	AFN	EURX	Infoaval								0		X								13.03.2020	19:05:00	84.50840	EUR	1	1	
01	EUR	AMD	M	FINISS								0		X								28.05.2020	22:30:00	532.98000	USD	1	1	
01	EUR	AMD	M	FINISS							W	0	Abw 2 % Lim	X								28.05.2020	22:30:00	532.98000	USD	1	1	
01	EUR	RON	M	FINISS								0										28.05.2020	22:30:00	4.84350	USD	1	1	
01	RON	EUR	EURX	FINISS								0										28.05.2020	22:30:00	0.20646	RON	1	1	
01	RON	EUR	M	FINISS								0										28.05.2020	22:30:00	0.20646	RON	1	1	
01	RON	USD	M	FINISS								0										28.05.2020	22:30:00	0.22744	RON	1	1	
01	USD	AMD	M	FINISS								0		X								28.05.2020	22:30:00	483.82000	USD	1	1	
01	USD	AMD	M	FINISS							W	0	Abw 1- % Li	X								22.05.2020	22:30:00	481.64000	USD	1	1	
01	USD	BRL	M	FINISS								0										28.05.2020	22:30:00	5.31000	USD	1	1	
01	USD	EUR	EURX	Infoaval								0		X								13.03.2020	19:05:00	0.90058	USD	1	1	
01	USD	RON	M	FINISS								0										28.05.2020	22:30:00	4.39680	USD	1	1	

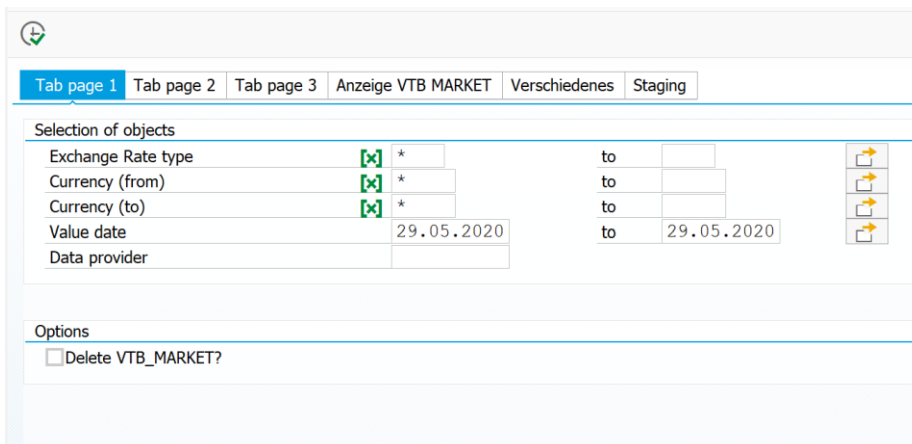
### 2.3 Processing the Imported Data

To process the imported data, you need to run the special report for this case.

Open transaction SE38 and run the report / ITR/CUR\_EXRA\_ MASS\_LOAD:



The following window should pop up (date will vary):



The program itself consists out of six tabs, which allow you to configure the validation process and the creation of the change requests.

In Tab Page 1, you get to choose, which Rates you want to have processed. This determination is set by five categories: Exchange Rate (Type); Currency (from); Currency (to); Date; Provider. If you want to process all the Exchange Rates you previously imported in step 2.2, a simple \* is going to select everything. After this selection was made, you will have to choose, if the VTB\_MARKET table is to be deleted after the processing. In this case, we are going to let the table remain as it is.

SAP

Selection of objects

Exchange Rate type	<input checked="" type="checkbox"/> *	to	<input type="text"/>	<input type="button" value="→"/>
Currency (from)	<input checked="" type="checkbox"/> *	to	<input type="text"/>	<input type="button" value="→"/>
Currency (to)	<input checked="" type="checkbox"/> *	to	<input type="text"/>	<input type="button" value="→"/>
Value date	28.05.2020	to	28.05.2020	<input type="button" value="→"/>
Data provider	FINISS			

Options

Delete VTB\_MARKET?

You can then select the second tab:

CR-Typen		CR-Notizen	
ICR1SL1	CR-Typ (DIRECT)	TCURR is directly updated.	Notiz (DIRECT)
ICR3SL1	CR-Typ (OK)	Please check the data and release CR!	Notiz (OK)
ICR3SL1	CR-Typ (ERROR)	Please correct error entries!	Notiz (ERROR)

CR-Langtexte	
CR for direct TCURR update	Bezeichnung (DIRECT)
CR for normal checks	Bezeichnung (OK)
CR for error processing	Bezeichnung (ERROR)

Tab page 2 lets you set three options, all regarding the change requests which are created after the valuation. / ITR/CUR\_EXRA\_MASS\_LOAD differentiates between three types of Exchange Rates in VBT\_MARKET.

The first type (DIRECT) includes objects which passed the validation and are flagged as "direct activation" in VTB\_MARKET. Objects will be activated in the relevant tables in MDG without even passing through the MDG RDM workflow.

The second type (OK) includes objects which passed the validation and are not flagged as "direct activation". All the objects are collected in a change request which has to be approved in the MDG RDM workflow.

The third type (ERROR) includes objects which did not pass the validation. All objects are collected in a change request which has to be edited and approved in the MDG RDM workflow. Please refer to section 2.6.1 for more info about this classification.



For now, you can leave the requests like this:

CR-Typen	
ICR1SL1	CR-Typ (DIRECT)
ICR3SL1	CR-Typ (OK)
ICR3SL1	CR-Typ (ERROR)

The other two groups let you configure the description and the long text for the corresponding change request. We are going to use the standard configuration:

CR-Notizen	
TCURR is directly updated.	Notiz (DIRECT)
Please check the data and release CR!	Notiz (OK)
Please correct error entries!	Notiz (ERROR)

CR-Langtexte	
CR for direct TCURR update	Bezeichnung (DIRECT)
CR for normal checks	Bezeichnung (OK)
CR for error processing	Bezeichnung (ERROR)

You can then select Tab page 3. It lets you double-check the data that will pass through MDG RDM (namely the VTB\_MARKET-Data after the validation).

SAP

Tab page 1 | Tab page 2 | **Tab page 3** | Anzeige VTB MARKET | Verschiedenes | Staging

Records selected : 00000012

Client	Class	Key	Key	Rate	Type	Data	Pro	Add. key	Meta	clas	Class	Key	Key	Stat	ID	Warning/error message	Refres	Update flag	Supplier	Con	ID
100	01	AMD	EUR	M	FINISS										0						
100	01	AMD	USD	M	FINISS										0		X				
100	01	BRL	EUR	M	FINISS										0						
100	01	EUR	AMD	M	FINISS										0		X				
100	01	EUR	AMD	M	FINISS								W		0	Abw 2 % Limit 1 % Letzter Kurs 520,81000 Letztes Datum 27.05.202	X				
100	01	EUR	RON	M	FINISS										0						
100	01	RON	EUR	EURX	FINISS										0						
100	01	RON	EUR	M	FINISS										0						
100	01	RON	USD	M	FINISS										0						
100	01	USD	AMD	M	FINISS										0		X				

On Tab page 4, you can check the VTB\_MARKET table as it is right now (before the validation)

SAP

Tab page 1 | Tab page 2 | Tab page 3 | **Anzeige VTB MARKET** | Verschiedenes | Staging

Records selected : 0000012

Cl.	ClassKey	Key	Rate	type	Data	Prov.	Add.	key	Meta	class	ClassKey	Key	Status	ID	Warning/error	message	Refresh	Update	Flag	Supplier	Con	ID
100	01	AMD	EUR	M	FINISS									0								
100	01	AMD	USD	M	FINISS									0								X
100	01	BRL	EUR	M	FINISS									0								
100	01	EUR	AMD	M	FINISS									0								X
100	01	EUR	AMD	M	FINISS								W	0	Abw 2 %	Limit 1 %	Letzter Kurs	520,81000	Letztes Datum	27.05.2020	X	
100	01	EUR	RON	M	FINISS									0								
100	01	RON	EUR	EURX	FINISS									0								
100	01	RON	EUR	M	FINISS									0								
100	01	RON	USD	M	FINISS									0								
100	01	USD	AMD	M	FINISS									0								X

Tab page 5 contains shortcuts to helpful (but not necessary) transactions throughout the datafeed process

SAP

Tab page 1 | Tab page 2 | Tab page 3 | Anzeige VTB MARKET | **Verschiedenes** | Staging

Kurse

Sonstiges

- **OB08**: Shows the current Exchange Rates in the system
- **TBD4**: Releases imported Exchange Rates into the market data buffer (view section 2.2)
- **Market Data-IMG**: Displays the IMG for Market Data
- **Show GenericIdoc**: after defining filter criteria in this transaction, you can view the IDocs which are used to distribute the Exchange Rates between/to the tables
- **NWBC**: Opens the Net Weaver Business Client
- **RDM-IMG**: opens the IMG for RDM

Tab page 5 (staging) lets you check all the (in)active data in MDG

SAP

Tab page 1 Tab page 2 Tab page 3 Anzeige VTB MARKET Verschiedenes **Staging**

Records selected : 00000421

Curr	from	Valid from	EXRT	Approv. By	Approved At	Approved By	AltEValidFrom	Exch. Rate	Quotation	Ratio	Ratio	Changed On	Changed By	Created On	Created By
AED	EUR	01.01.2001	EURX	BACKF	28.05.2020 10:48:23	Felix Back		/3,48000	2	1	1			26.03.2020 14:16:24	HOEWLERD
AED	JPY	01.01.2001	M	SCORYG	28.05.2020 23:39:51	Gerhard Scory		31,18700	1	1	1			26.03.2020 14:16:24	HOEWLERD
AED	KWD	01.01.2001	M	SCORYG	28.05.2020 23:39:51	Gerhard Scory		0,07761	1	1	1	23.04.2020 13:59:24	HOEWLERD	26.03.2020 14:16:24	HOEWLERD
AED	USD	01.01.2001	M	SCORYG	28.05.2020 23:39:51	Gerhard Scory		/3,68000	2	1	1			26.03.2020 14:16:24	HOEWLERD
AFN	ARS	31.12.1999	I	BACKF	11.05.2020 11:48:53	Felix Back		/0,30000		0	0			11.05.2020 09:33:06	BACKF
AMD	EUR	27.05.2020	M	SCORYG	28.05.2020 23:39:51	Gerhard Scory		/0,00188	2	1	1	28.05.2020 08:43:46	BACKF	28.05.2020 08:15:56	BACKF
AMD	EUR	26.05.2020	M	SCORYG	28.05.2020 23:39:51	Gerhard Scory		/0,00189	2	1	1			27.05.2020 05:50:00	BACKF
AMD	EUR	25.05.2020	M	SCORYG	28.05.2020 23:39:51	Gerhard Scory		/0,00190	2	1	1			26.05.2020 13:20:13	BACKF
AMD	EUR	22.05.2020	M	SCORYG	28.05.2020 23:39:51	Gerhard Scory		/0,00190	2	1	1	26.05.2020 07:23:27	SCORYF	23.05.2020 16:08:00	SCORYF
AMD	EUR	18.05.2020	M	SCORYG	28.05.2020 23:39:51	Gerhard Scory		/0,00190	2	1	1			19.05.2020 10:33:06	BACKF

After having checked all the tabs, you can press to execute the report, a window similar to this should pop up:

SAP

Tab page 1 **Tab page 2** Tab page 3 Anzeige VTB MARKET Verschiedenes Staging

Selection of objects

Exchange Rate type	<input checked="" type="checkbox"/>	*		to		
Currency (from)	<input checked="" type="checkbox"/>	*		to		
Currency (to)	<input checked="" type="checkbox"/>	*		to		
Value date			28.05.2020	to	28.05.2020	
Data provider			FINISS			

Options

Delete VTB\_MARKET?

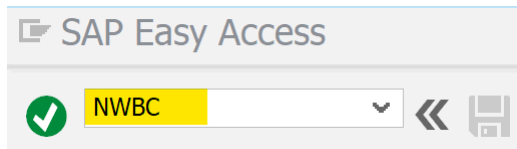
Records selected : 00000009

Change	Key	Key	Rate type	Data Prov.	Date	Time	Value	Indir.Quot
5746	ERRO	EUR	AMD	M	FINISS	20200528	223000	532.98000
5747	MANU	AMD	EUR	M	FINISS	20200528	223000	0.00188 X
5747	MANU	BRL	EUR	M	FINISS	20200528	223000	0.17096 X
5747	MANU	EUR	RON	M	FINISS	20200528	223000	4.84350
5747	MANU	RON	EUR	EURX	FINISS	20200528	223000	0.20646 X
5747	MANU	RON	EUR	M	FINISS	20200528	223000	0.20646 X
5747	MANU	RON	USD	M	FINISS	20200528	223000	0.22744 X
5747	MANU	USD	BRL	M	FINISS	20200528	223000	5.31000
5747	MANU	USD	RON	M	FINISS	20200528	223000	4.39680

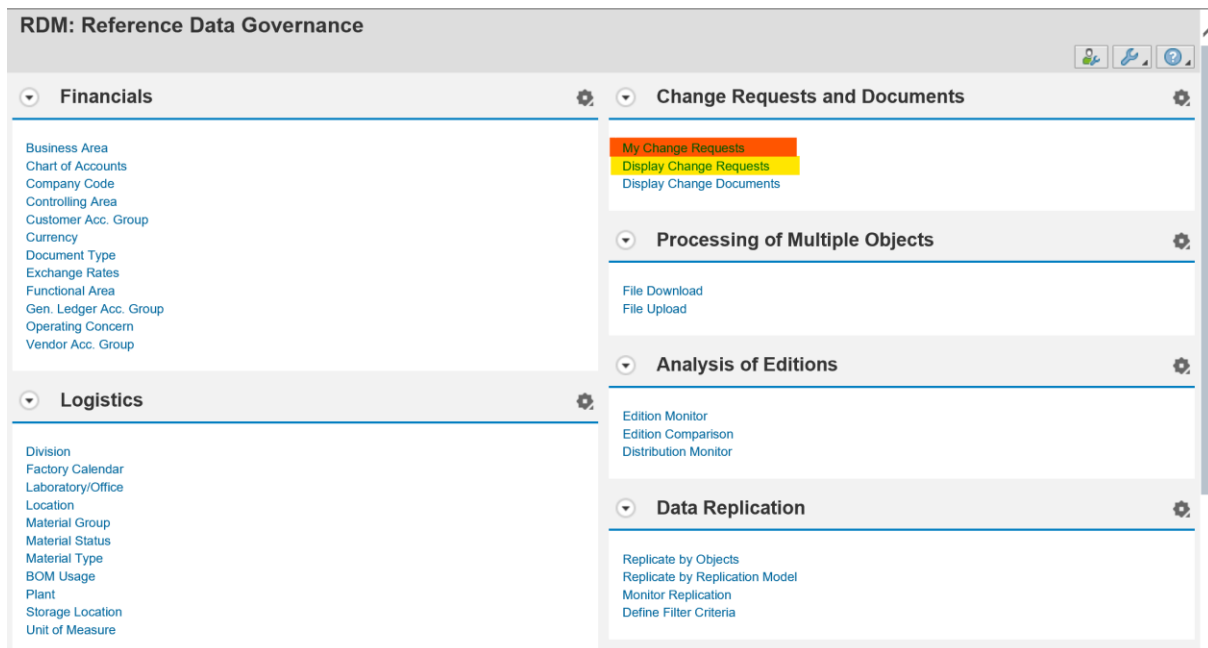
The two change requests have been created and now need approval in the next step

## 2.4 Approving and Editing the Change Requests

This process is started by opening the Net Weaver Business Client. This can be done by executing transaction NWBC:



You will be shown a page that looks similar to the one below. You can access the created change requests by clicking on "Display Change Requests" (yellow) under "Change Requests and Documents". Alternatively, if it was your user who ran the /ITR/CUR\_EXRA\_ MASS\_LOAD report, you can also click on "My Change Requests" (orange).



You will be shown a page similar to the one below. It contains two change requests which both need approval. As labeled, the yellow-marked change request contains all the Exchange Rates which passed the validation on the first attempt and do not need to be checked on again. The orange-marked change request contains all the Rates which raised an issue in the validation and need to be checked again.

Display Change Requests						
<a href="#">Print Preview</a> <a href="#">↺</a> <a href="#">New Selection</a>						
Change Requests						
View: <span>[Standard View]</span> <a href="#">Print Version</a> <a href="#">Export</a> <a href="#">Workflow Log</a>						
Change Request	Description	Status	Changed On	Changed By	Type	
5747	CR for normal checks FINISS	To be Processed	29.05.2020	Felix Back	Load Curr ExRt, process and activate	
5746	CR for error processing FINISS	To be Processed	29.05.2020	Felix Back	Load Curr ExRt, process and activate	

### 2.4.1 Issue-Free Request

In the first step, we are going to approve the issue-free change request. In order to do this, we are going to click on the change request number (5747). You will be shown the overview tab of the change request

Process Change Request	
<a href="#">Save</a> <a href="#">Finalize Processing</a> <a href="#">Send for Revision</a> <a href="#">Close</a> <a href="#">Read Only</a> <a href="#">Print Preview</a> <a href="#">Check</a> <a href="#">Run Validation</a> <a href="#">Validation Log</a> <a href="#">Related Services</a>	
Change Request	5747    Type Load Curr ExRt, process and activate    Status To be Processed
Overview	
<a href="#">Changes</a> <a href="#">Notes</a> <a href="#">Attachments</a>	
General Data	
Processing:	You are the processor of the change request
*Description:	CR for normal checks FINISS
Priority:	<input type="text"/>
Created On:	29.05.2020 09:03:23
Changed On:	29.05.2020 09:03:55
Finalized On:	
Due Date:	<input type="text"/>
Created By:	Felix Back
Changed By:	Felix Back
Finalized By:	
Notes / Attachments	
Notes:	1 note(s) exist(s)
Attachments:	1 attachment(s) exist(s)
Objects	
Entity Type	Number
Exchange Rate (Type)	8

You can view the other tabs which contain more information about the change request. The "Changes" tab shows a table, containing all the changes that the request will make.

Overview **Changes** Notes Attachments

Show Objects of Entity Type: Exchange Rate (Type)

**Exchange Rate (Type): Objects to Be Changed**

Print Version Export Single Processing Mass Change Add Row Delete Row(s) Display Changes

Curr from	Description	Curr to	Description	Valid from	ExRT	Changed
AMD	Armenian Dram	EUR	European Euro	28.05.2020	M	✓
BRL	Brazilian Real	EUR	European Euro	28.05.2020	M	✓
EUR	European Euro	RON	Romanian Leu	28.05.2020	M	✓
RON	Romanian Leu	EUR	European Euro	28.05.2020	EURX	✓
RON	Romanian Leu	EUR	European Euro	28.05.2020	M	✓
RON	Romanian Leu	USD	United States Dollar	28.05.2020	M	✓
USD	United States Dollar	BRL	Brazilian Real	28.05.2020	M	✓
USD	United States Dollar	RON	Romanian Leu	28.05.2020	M	✓

[Refresh](#)

The "Notes" tab shows, notes that have been added to the request:

Overview Changes **Notes** Attachments

Note:

**29.05.2020 09:03:24 Felix Back**

Please check the data and release CR!

The "Attachments" tab by standard contains a plain text file which lists the details of the change request as a simple text. In our case, it looks like this:

M	AMD	EUR	20200528	223000	0.00188	X
M	BRL	EUR	20200528	223000	0.17096	X
M	EUR	RON	20200528	223000	4.84350	
EURX	RON	EUR	20200528	223000	0.20646	X
M	RON	EUR	20200528	223000	0.20646	X
M	RON	USD	20200528	223000	0.22744	X
M	USD	BRL	20200528	223000	5.31000	
M	USD	RON	20200528	223000	4.39680	

After having checked everything, you can click on Run Validation and then Finalize Processing

- AMD / EUR / M / 20200528 Dev 10.538 % Limit 1 % Last rate /0,20000 Last date 27.05.2020 .
- You have finalized the processing of change request 5747

Close the page

In this case the role of the Data Steward is operated by the same user. In a real scenario, this distribution would be split between two or more different users. To approve the change request, you have to click on the same request in the menu again:

**Display Change Requests**

Print Preview New Selection

**Change Requests**

View: [Standard View] Print Version Export Workflow Log

Change Request	Description	Status	Changed On	Changed By	Type
5747	CR for normal checks FINISS	To be approved	29.05.2020	Felix Back	Load Curr ExRt, process and activate
5746	CR for error processing FINISS	To be Processed	29.05.2020	Felix Back	Load Curr ExRt, process and activate

As you have already checked the changes, you can directly click on in the menu bar without validating again. The Exchange Rates are then activated in all necessary tables. In a two-user-scenario, you could alternate the change request again or send it for revision.

AMD / EUR / M / 20200528 Dev 10.538 % Limit 1 % Last rate /0,20000 Last date 27.05.2020 .

You have approved change request 5747

## 2.4.2 Issue-Request

Approving the Issue containing request works the same way as for the issue-free change request (described in section 2.4.1)

The change request OVP is structured the same way as the request in 2.4.1. The only difference is, that the "Changes" tab shows the Exchange Rates which contain issues and have to be checked.

**Process Change Request**

Save Finalize Processing Send for Revision Close Read Only Print Preview Check Run Validation Validation Log Related Services

Change Request 5746 Type Load Curr ExRt, process and activate Status To be Processed

Overview **Changes** Notes Attachments

Show Objects of Entity Type: Exchange Rate (Type)


**Exchange Rate (Type): Objects to Be Changed**

Print Version Export Single Processing Mass Change Add Row Delete Row(s) Display Changes

Curr from	Description	Curr to	Description	Valid from
EUR	European Euro	AMD	Armenian Dram	28.05.2020

---

After confirming the Exchange Rates, you have to release the change request by performing the same steps as above again:  →

 You have finalized the processing of change request 5746

Then open the change request again and click on

 You have approved change request 5746

The imported Exchange Rates are now distributed to all relevant tables.



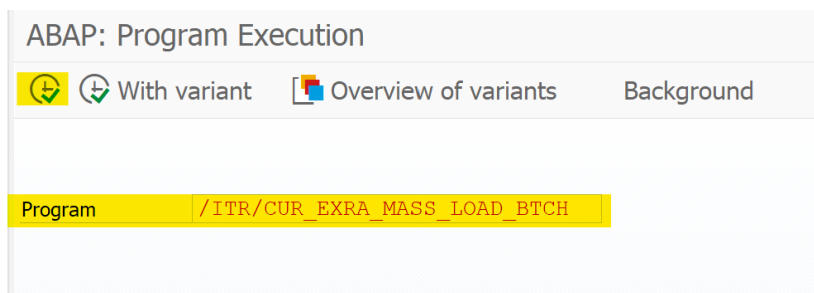
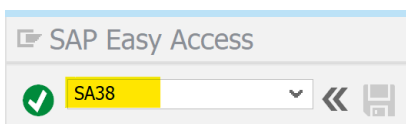
## 2.5 Creating a Job (Batch Report)

The import process shown in the previous sections 2.1 - 2.3 (not including section 2.4) forms the foundation of the Exchange Rate object in RDM. As the intended use of this process is an automated, daily import, Itego provides a batch version of the report / ITR/CUR\_EXRA\_MASS\_LOAD: / ITR/CUR\_EXRA\_MASS\_LOAD\_BTCH.

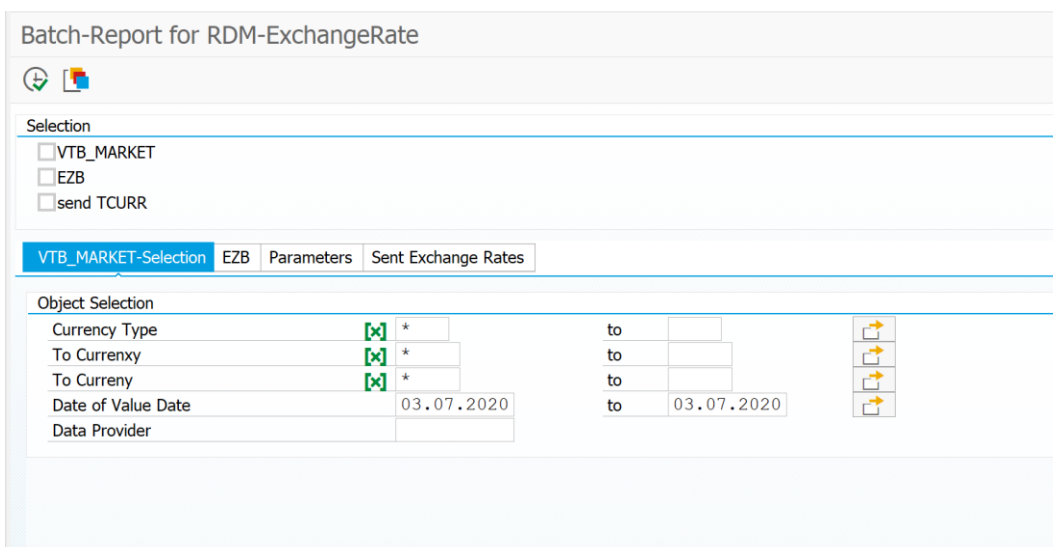
In conjunction with the job functionalities of the SAP system, this solution forms a powerful tool for automatically importing Exchange Rates while still being able to process them through the MDG-RDM workflow.

The following section explains how to set up an automated import, using the example of data provided by the ECB.

To get started, execute transaction SA38, enter the program / ITR/CUR\_EXRA\_MASS\_LOAD\_BTCH and press execute



The batch report is structured similar to the online report described in section 2.3. Therefore, the guide below focuses on the creation of variants and jobs, rather than the report itself.



For the creation of the job, you will need to create two variants in the report. One of them will import the data from the ECB, and one of them will process the data and create the change requests.

For the first variant, select the "EZB" checkbox under "Selection" and open the EZB tab:

**Selection**

VTB\_MARKET  
 EZB  
 send TCURR

VTB\_MARKET-Selection
EZB
Parameters
Sent Exchange Rates

**General Data**

Date in Source	03.07.2020
Prefix in VTB_MARKET	RDM-EZB
<input type="checkbox"/> Valid the following day	
Currency Type	EURX
From currency	<input checked="" type="checkbox"/> *
To Currency	EUR
Variance in percent	10

**Data Source**

<input checked="" type="radio"/> RFC-Destination	
<input type="radio"/> Local Workstation	

For the "Date in Source" field, leave the current date.

**General Data**

Date in Source	02.07.2020
Prefix in VTB_MARKET	RDM-EZB
<input type="checkbox"/> Valid the following day	

In the selection below, you can specify, which Exchange Rates you want to import. The EZB only provides Exchange Rates for EUR.

The "Variance in percent" field lets you enter a numeric value between 0 and 100. This number specifies, from which deviation of the previous day the validation raises a warning

Currency Type	EURX
From currency	<input checked="" type="checkbox"/> *
To Currency	EUR
Variance in percent	20

For the "RFC-Destination", you have to enter "EZBRFC"

**Data Source**

<input checked="" type="radio"/> RFC-Destination	EZBRFC
<input type="radio"/> Local Workstation	

This leaves us with a filled-out tab/transaction, which can be saved as a variant.

Batch-Report for RDM-ExchangeRate

Selection

VTB\_MARKET  
 EZB  
 send TCURR

VTB\_MARKET-Selection **EZB** Parameters Sent Exchange Rates

General Data

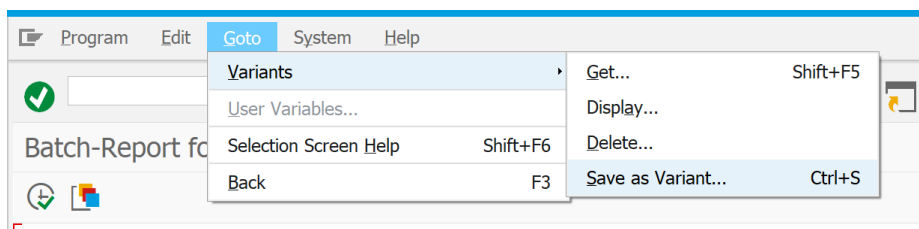
Date in Source 07.07.2020  
 Prefix in VTB\_MARKET RDM-EZB  
 Valid the following day

Currency Type EURX  
 From currency \*  
 To Currency EUR  
 Variance in percent 20

Data Source

RFC-Destination EZBRFC  
 Local Workstation

To create a variant, press Goto → Variants → Save as variant in the menu bar (or hit Ctrl+S):



Enter a name and description for the variant and press on save :

Variant Attributes

Variant Name Demo 1  
 Description EZB Rates import all

Only for Background Processing  
 Protect Variant  
 Only Display in Catalog  
 System Variant (Automatic Transport)

Technical name

The variant has now been saved.

To create the second of the two variants, navigate back to the VTB\_MARKET-Selection and select the VTB\_MARKET checkbox under "Selection".

Batch-Report for RDM-ExchangeRate

Selection

VTB\_MARKET

EZB

send TCURR

VTB\_MARKET-Selection | EZB | Parameters | Sent Exchange Rates

Object Selection

Currency Type	<input checked="" type="checkbox"/>	*	to		<input type="button" value="→"/>
To Currency	<input checked="" type="checkbox"/>	*	to		<input type="button" value="→"/>
To Currency	<input checked="" type="checkbox"/>	*	to		<input type="button" value="→"/>
Date of Value Date		07.07.2020	to	07.07.2020	<input type="button" value="→"/>
Data Provider					

In our case, we need to match the Object Selection settings with the ones we made in the EZB tab, and then select RDM-EZB as the data provider:

Batch-Report for RDM-ExchangeRate

Selection

VTB\_MARKET

EZB

send TCURR

VTB\_MARKET-Selection | EZB | Parameters | Sent Exchange Rates

Object Selection

Currency Type	<input checked="" type="checkbox"/>	EURX	to		<input type="button" value="→"/>
To Currency	<input checked="" type="checkbox"/>	*	to		<input type="button" value="→"/>
To Currency	<input checked="" type="checkbox"/>	EUR	to		<input type="button" value="→"/>
Date of Value Date		07.07.2020	to	07.07.2020	<input type="button" value="→"/>
Data Provider		RDM-EZB			

This selection needs to be saved as the second variant (same procedure as above).

Variant Attributes

Variant Attributes

Use Screen Assignment

Variant Name: Demo 2

Description: EZB process rates

Screen Assignment

Created	Selection Screen
<input checked="" type="checkbox"/>	1000
<input checked="" type="checkbox"/>	1010

Only for Background Processing  
 Protect Variant  
 Only Display in Catalog  
 System Variant (Automatic Transport)

Technical name

Objects for selection screen

Selection	Screen Field name	Type	Protect field	Hide field	Hide field	'TO' Save field without values	Switch	GPA off	Required field	Selection variable	Option Name of Variable (Input Only Using F4)
<input checked="" type="checkbox"/>	1.000 VTB_MARKET	P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.000 EZB	P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.000 send TCURR	P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.010 Currency Type	S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.010 To Currency	S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.010 To Currency	S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.010 Date of Value Date	S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.010 Data Provider	P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Variant DEMO 2 saved

After having configured the two variants, you can close the report and move on to the creation of a background job. For the sake of simplicity, this tutorial will use the job wizard.

To start the job wizard, execute transaction SM36

SAP Easy Access

SM36

Press on Job Wizard:

Define Background Job

Start condition Step Job selection Own jobs **Job wizard** Standard jobs

General Data

Job Name

Job Class: C

Status: Scheduled

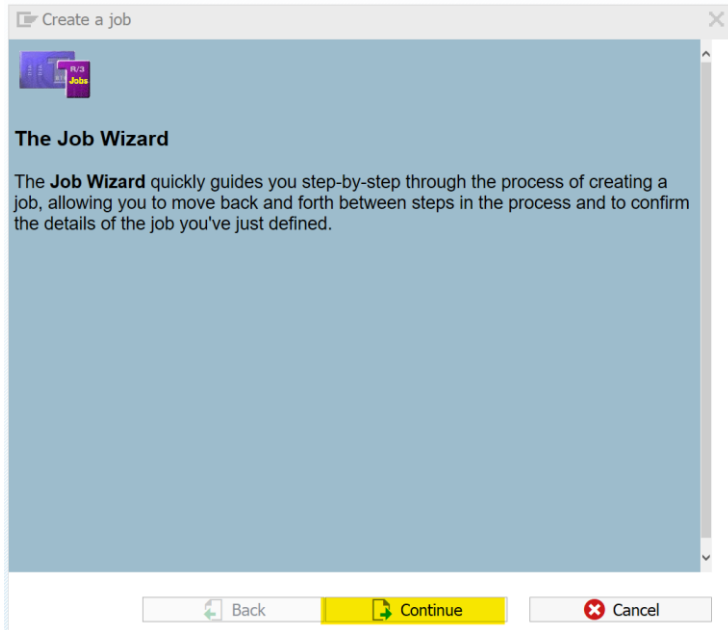
Target:  Spool List Recipient

Job Start

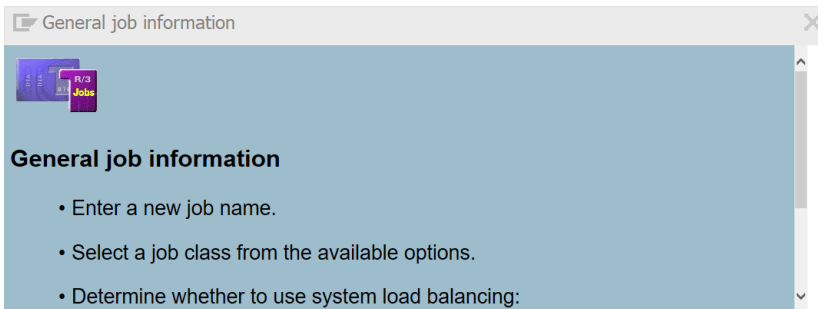
Job Frequency

Job Steps

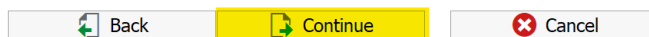
The following window pops up. You can press on continue:



On the "General job information" page, you simply have to define a name for the job, and a priority:



Job Name:	Demo EZB import
Job Class	C - Low priority
Job Status:	Scheduled
Target	(optional)



As the report /ITR/CUR\_EXRA\_MASS\_LOAD\_BTCH is an ABAP-program, you need to select "ABAP program step" on the upcoming page:

- ABAP program step
- External command as a step
- External program as a step

Job View

Back Continue Cancel

On the upcoming page, you have to enter the name of the batch-report and the name of the first (!) variant:

ABAP Program Name	/ITR/CUR_EXRA_MASS_LOAD_BTCH
Variant:	DEMO 1
Execution language:	EN

Print Parameters

Spool list recipients

Back Continue Cancel

Afterwards, select the "Add additional steps" checkbox and continue:

Add additional steps (optional)

Back Continue Cancel

Again, select the "ABAP Program" option:

- ABAP program step
- External command as a step
- External program as a step

Job View

Back Continue Cancel

Then enter the name of the batch-report (/ITR/CUR\_EXRA\_MASS\_LOAD\_BTCH) and the name of the second(!) variant and continue twice:

ABAP Program Name	/ITR/CUR_EXRA_MASS_LOAD_BTCH
Variant:	DEMO 2
Execution language:	EN

Print Parameters

Spool list recipients

Back Continue Cancel

For your job to run periodically at a fixed time of the day, select "Date/time" on the upcoming page:

- Immediately
- Date/time
- After job
- After event
- At operation mode switch
- Start on workday
- Do not release job

Job View

Back Continue Cancel



Select a date and a time for "Scheduled start", to define the day (and time) on which the job will be executed for the first time. Then tick the "Period" checkbox:

---

Scheduled start	<input type="text" value="08.07.2020"/>	<input type="text" value="13:30:00"/>
Latest start	<input type="text"/>	<input type="text"/>

Periodic jobs	Restriction
<input checked="" type="checkbox"/> Period	<input type="checkbox"/> Sunday/Holiday <input type="button" value="i"/>

<input type="button" value="Back"/>	<input checked="" type="button" value="Continue"/>	<input type="button" value="Cancel"/>
-------------------------------------	----------------------------------------------------	---------------------------------------

Select the periodicity for the job:

---


Hourly  
 Daily  
 Weekly  
 Monthly  
 None of the above

<input type="button" value="Back"/>	<input checked="" type="button" value="Continue"/>	<input type="button" value="Cancel"/>
-------------------------------------	----------------------------------------------------	---------------------------------------

Job has been created:

Set job



You have successfully finished defining the following job:

**Job name** : DEMO EZB IMPORT  
**Job class** : C - Low priority  
**Target server** :  
**Step(s) defined** :  
1./ITR/CUR\_EXRA\_MASS\_LOAD\_BTCH--2./ITR/CUR\_EXRA\_MASS\_L  
**Start condition** : Start at date/time:08.07.2020--13:30:00

-----

To finalize this process and actually create the job in the system, choose **Done**.  
To revise the job definition, choose **Back**.  
To cancel the entire process, choose **Cancel**.

-----

Back Complete Cancel

✔ Job DEMO EZB IMPORT saved with status: Released

## 2.6 Additional Infos

### 2.6.1 Import Types

There are two options of processing the exchange rates which have been imported via Data-feed. With RDM, you get to choose between two options of how RDM deals with the imported rates.

#### 2.6.1.1 Variant 1

Variant 1 allows for a direct activation of the Exchange Rates which passed the validation on the first attempt. The report `/ITR/CUR_EXRA_MASS_LOAD` checks the `VTB_MARKET` table if the user selected the direct activation in transaction TBD4. If the corresponding field in `VTB_MARKET` is checked as true, the report does not create a change request. Instead, it automatically activates the Exchange Rates in the corresponding tables. The data does not run through MDG in any way, which allows a fast and unbureaucratic activation. The Exchange Rates which do not pass the first validation are still being loaded in a change request. This variant can be selected by unticking the "Save Market Data in System Permanently If Defined in Customizing" checkbox in transaction TBD4.

#### 2.6.1.2 Variant 2

Variant 2 creates two change requests. One of them is – as always – a container for the Exchange Rates which failed the first validation and have to be approved through MDG RDM. The second request, however, collects all the Rates which passed the validation. This change request is then also passed through MDG RDM. The user gets to choose, if it is to be activated automatically, or if it needs a Data Specialists approval first. This may make the process a bit slower but also allows the operator to accurately monitor every kind of data that is activated and not just the objects that failed the first validation. This variant can be selected by ticking the "Save Market Data in System Permanently If Defined in Customizing" checkbox in transaction TBD4 and is again executed by report `/ITR/CUR_EXRA_MASS_LOAD`.

### 2.6.2 Validation

Before an Exchange Rate is ready to be activated in MDG RDM and the corresponding tables, it needs to be validated first. Depending on the chosen import type (view section 2.6.1), an imported Exchange Rate can run through up to three validations before being activated. This ensures a high-level consistency amongst all rates and also ensures that no incorrect data makes its way into MDG RDM and the tables. The Validation is executed by the "Z-Report". The steps it performs to validate the Exchange Rates are listed below.

1. Sorting of the Exchange Rates (by Currency (from) / Currency (to) / Extra Type)
2. Deletion of the previous Exchange Rates
3. Checking the percentage deviation

- 
4. Checking if price date is equal to import date
  5. Checking if the Exchange Rate type is correct
  6. Checking if the correct ratios are being used
  7. Checking if the requested values in the translation table VTB\_DFCU (customizing) are available in the Datafeed interface (provider)
  8. Checking if the quotation of the Exchange Rate matches the one in table TCURN.

### 3 Manual Maintenance

Due to the high frequency of changes and the sheer number of Rates there is, manually governing Exchange Rates is not the main focus of the Exchange Rate object. However, Itego, as always, provides the possibility to manually create, change and load data via the RDM workflow.

Unlike the other objects in RDM, manually edited objects do not have to be manually released through the Staging Area (transaction /ITR/STAGING). Instead, this is done automatically to ensure a high consistency through all relevant tables.

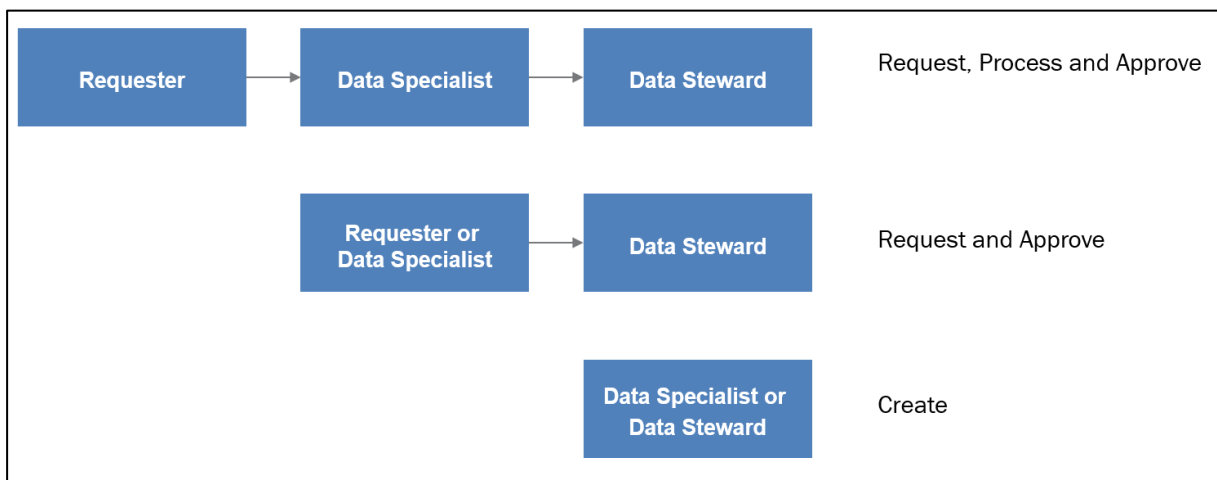


Figure 5: Workflow variants in RDM

### 3.1 Creating an Exchange Rate

To create a new Exchange Rate, start in the NWBC main menu. For the sake of simplicity, this guide shows a one-step process.

Under "Financials" click on "Exchange Rates". After pressing on "Search" on the following page, it will look like this:

Pendin...	ExRt...	Valid from	Changed On	Created On	Created By	Exch Rate	Currency (from)	Ratio(fr...
	EURX	01.01.2001		26.03.2020 15:16:24	HOEWLERD	/3,48000	AED	1
	M	01.01.2001		26.03.2020 15:16:24	HOEWLERD	31,18700	AED	1
	M	01.01.2001	23.04.2020 15:59:24	26.03.2020 15:16:24	HOEWLERD	0,07761	AED	1
	M	01.01.2001		26.03.2020 15:16:24	HOEWLERD	/3,68000	AED	1
	I	31.12.1999		11.05.2020 11:33:06	BACKF	/0,30000	AFN	0
	M	28.05.2020	29.05.2020 09:03:24	29.05.2020 08:55:44	BACKF	/0,00188	AMD	1
	M	27.05.2020	28.05.2020 10:43:46	28.05.2020 10:15:56	BACKF	/0,00188	AMD	1

Press on and choose the one-step create request in the pop-up window

**Available Change Request Types**   X

**List of Available Change Request Types**

Change Request Type Description
Create Curr ExRt and activate
Create Curr ExRt with approval
Create Curr ExRt with proc. and appr.

A page similar to the one below will open up

The screenshot shows the 'Process Object with MDG' application window. The main title is 'Change Request' with an 'Edit' button. The form is divided into several sections: 'General Data' (Change Request ID: 5876, Description, Priority, Due Date, Reason), 'Process Data' (Status: Changes to Be Executed, Current Workitem: New Change Request, Created On/By: 10.06.2020 14:29:47 Felix Back), 'Audit Information' (Created On, Changed On, Approved At, Created By, Changed By, Approved By), and 'Currency Exchange Rates' (Exchange Rate (Type), valid from, From Currency, To Currency, Indirect/Direct quot exch rate, Ratio (from/to)).

Under the “General Data” section, you can add info to the so-called “change request header”, including a description, priority for the change request, a due date and a reason. In addition to this, the “Notes” tab lets you add a text to the change request, the “Attachments” tab allows a file to be attached to the request. Fill out these fields according to the workflow standards in your company.

**Change Request** [Edit](#)

**General** | Notes | Attachments

General Data	Process Data
Change Request ID: 5876	Status: Changes to Be Executed
* Description: Demo Creation	Current Workitem: New Change Request
Priority: <input type="text"/>	Created On/By: 10.06.2020 14:29:47 <a href="#">Felix Back</a>
Due Date: <input type="text"/>	
Reason: <input type="text"/>	

The "Audit Information" section can be ignored for now, as it will only become relevant once the object has already been created.

In the "Currency Exchange Rates" section you are going to enter the actual data, which the object, that will be created, is going to contain. Here is an example:

**Currency Exchange Rates** [Edit](#)

\* Exchange Rate (Type): M

\* valid from: 10.06.2020

\* From Currency: EUR

\* To Currency: AUD

Indirect quot exch rate:

Direct quot exch rate: 0,62000

Ratio (from):  1

Ratio (to):  1

The last section, "Attachments", allows for metadata (files or links) to be attached to the object. Unlike the attachments of the change request header, the metadata is attached to the actual object, meaning, it is also visible after the object has been created. To attach a file/link, simply click on [File](#) or [Link](#) and fill out the requested fields. Example:

**Attachments** [Edit](#) [Delete](#) [File](#) [Link](#)

Actions	Type	Title	Size	Added By	Language	Comment	Link
		The Australian Dollar	1 KB	Felix Back	EN	Infos about Australia's curr	
		The European Euro	1 KB	Felix Back	EN	Infos about Europe's curren	

After being done, you can press on "Check" in the top left corner to check, if the data in your change request is valid. If that is the case, you can submit the change request by pressing on "Submit" in the top left corner:



**Process Object with MDG**

Save Submit Check Undo Redo

**Change Request** Edit

General Notes Attachments

**General Data**

Change Request ID: 5876

\*Description: Demo Creation

Priority: [dropdown]

Due Date: [calendar]

Reason: [dropdown]

**Process Data**

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 10.06.2020 14:29:47 Felix Back

**Audit Information**

Audit Information

Created On: [input] Created By: [input]

Changed On: [input] Changed By: [input]

Approved At: [input] Approved By: [input]

**Currency Exchange Rates** Edit

\*Exchange Rate (Type): M

\*valid from: 10.06.2020

\*From Currency: EUR

\*To Currency: AUD

Indirect quot exch rate: [input]

Direct quot exch rate: 0.62000

Ratio (from): 1

Ratio (to): 1

**Attachments** Edit Delete File Link

A message such as this one pops up:

**Process Object with MDG**

Save Cancel Change Documents Workflow Log

✔ No errors found

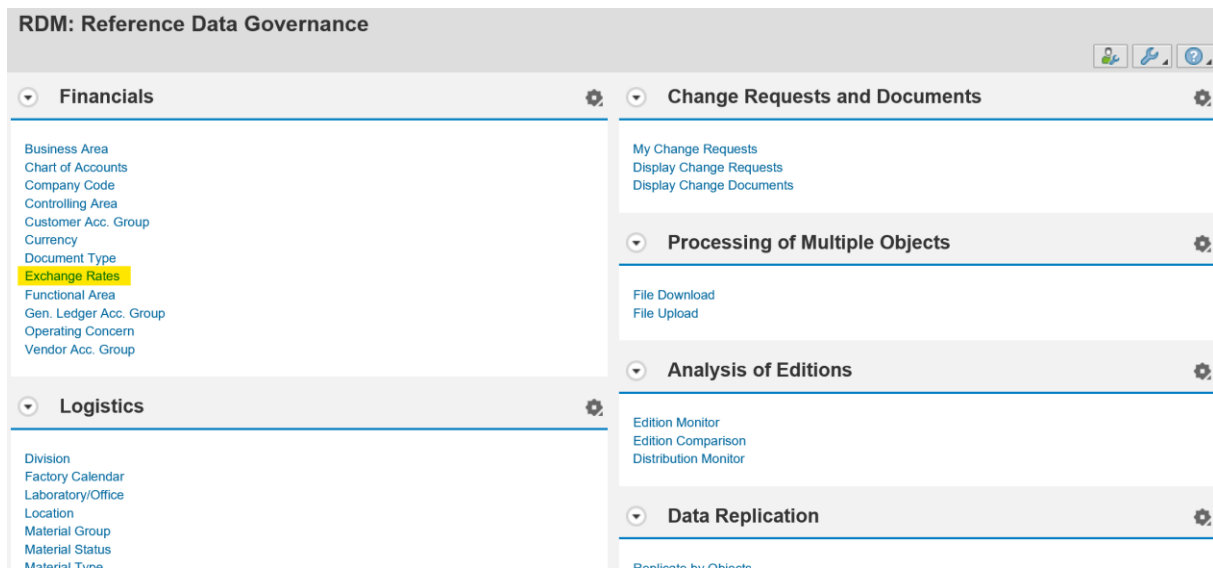
✔ You have submitted change request 5876

The Exchange Rate has now been created

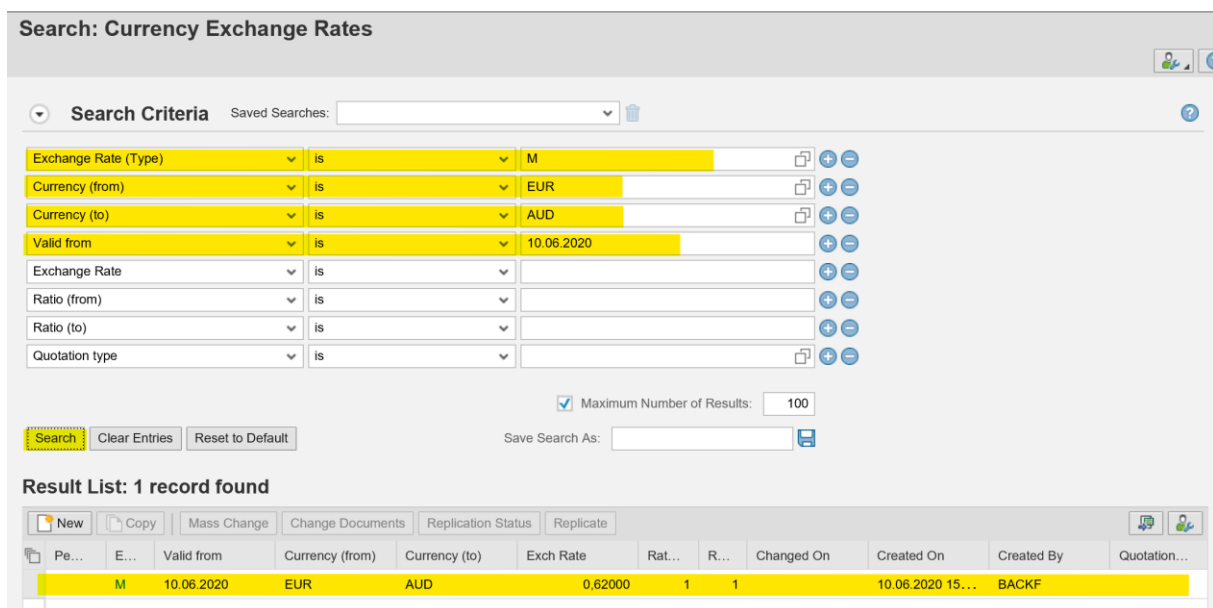
### 3.2 Editing an Exchange Rate


The process of editing an Exchange Rate will be demonstrated using the Exchange Rate, created in section 3.1.

On the NWBC launchpad click on “Exchange Rates” under “Financials”:





On the upcoming page, you can search for the Exchange Rate that you want to edit. This is done by simply pressing on . In addition to this, you can simplify the search by using the provided filters (as done below).



After pressing on the Exchange Rate, you want to edit, the overview page of the object pops up, on which you have to press on  :

**Process Object with MDG**


Save | Cancel | Undo | Redo |  | 

**Audit Information**

---

**Audit information**

Created On: 10.06.2020 15:26:47	Created By: BACKF	<a href="#">Felix Back</a>
Changed On:	Changed By:	
Approved At: 10.06.2020 15:26:48	Approved By: BACKF	<a href="#">Felix Back</a>

**Currency Exchange Rates** 





---





Exchange Rate (Type): M  
valid from: 10.06.2020

From Currency: EUR  
To Currency: AUD

Indirect quot exch rate:  
Direct quot exch rate: 0,62000

Ratio (from): 1  
Ratio (to): 1

**Attachments**    

Actions	Type	Title	Size	Added By	Language	Comment	Link
		The Australian Dollar	1 KB	Felix Back	EN	Infos about Australia's...	
		The European Euro	1 KB	Felix Back	EN	Infos about Europe's cu...	

Choose the workflow process, you wish to work with and press on "OK". (This documentation follows the 1-step process)

**Available Change Request Types**  

**List of Available Change Request Types**

Change Request Type Description
Process Curr ExRt and activate
Process Curr ExRt with approval
Process Curr ExRt with proc. and appr.

For an in-depth explanation on the segments on the upcoming page, view the explanation of the create-request page in section 3.1.

Provide a Description (or additional infos, according to the workflow standard in your company) of the change request.

**Change Request** [Edit](#)

**General** | Notes | Attachments

**General Data**

Change Request ID: 5879

\*Description: Updating Rate

Priority:

Due Date:

Reason:

**Process Data**

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 12.06.2020 09:01:27 [Felix Back](#)

The "Currency Exchange Rates" section only allows for changes of the actual rate, not of the Currencies or the "valid-from/to" date. This decision has been made based on the fact, that changing either one of those fields would technically create a new entry in the relevant tables for Exchange Rates. This, however, would conflict with the original purpose of this function: "Change".

Changes in this case:

**Currency Exchange Rates** [Edit](#)

\*Exchange Rate (Type): M

\*valid from: 10.06.2020

\*From Currency: EUR

\*To Currency: AUD

Indirect quot exch rate:

Direct quot exch rate: 0,62000

Ratio (from): 1

Ratio (to): 1

**Attachments** [Edit](#) [Delete](#) [File](#) [Link](#)



**Currency Exchange Rates** [Edit](#)

\*Exchange Rate (Type): M

\*valid from: 10.06.2020

\*From Currency: EUR

\*To Currency: AUD

Indirect quot exch rate:

Direct quot exch rate: 0,72000

Ratio (from): 1

Ratio (to): 1

**Attachments** [Edit](#) [Delete](#) [File](#) [Link](#)

If you wish, you can provide additional metadata to the object (explained in section 3.1):

**Attachments** [Edit](#) [Delete](#) [File](#) [Link](#)

Actions	Type	Title	Size	Added By	Language	Comment	Link
		The Australian Dollar	1 KB	Felix Back	EN	Infos about Australia's...	
		The European Euro	1 KB	Felix Back	EN	Infos about Europe's c...	



**Attachments** Edit Delete File Link

Actions	Type	Title	Size	Added By	Language	Comment	Link
		The Australian Dollar	1 KB	Felix Back	EN	Infos about Australia's curr	
		The European Euro	1 KB	Felix Back	EN	Infos about Europe's currer	
		Exchange Rates - Wikipedia		Felix Back	EN	Infos about Exchange Rate	<a href="https://en.wikipedia.org/">https://en.wikipedia.org/...</a>

After being done, you can press on "Check" in the top left corner to check, if the data in your change request is valid. If that is the case, you can submit the change request by pressing on "Submit" in the top left corner:

**Process Object with MDG** Save Submit Cancel Check Undo Redo Help

**Change Request** Edit

**General** **Notes** **Attachments**

**General Data**

Change Request ID: 5879

\*Description: Updating Rate

Priority:

Due Date:

Reason:

**Process Data**

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 12.06.2020 09:01:27 Felix Back

---

**Audit Information**

Audit Information	
Created On:	10.06.2020 15:26:47
Changed On:	
Approved At:	10.06.2020 15:26:48
Created By:	BACKF Felix Back
Changed By:	
Approved By:	BACKF Felix Back

---

**Currency Exchange Rates** Edit

\*Exchange Rate (Type): M

\*valid from: 10.06.2020

\*From Currency: EUR

\*To Currency: AUD

Indirect quot exch rate:

Direct quot exch rate: 0,72000

Ratio (from):  1

Ratio (to):  1

**Process Object with MDG**

Save Cancel Check Change Documents Workflow Log

No errors found

You have submitted change request 5879

The Exchange Rate has now been updated in all relevant tables.

### 3.3 File Upload for Exchange Rates

A file upload comes in handy when attempting to create or edit multiple Exchange Rates at once.

Prerequisite for a file upload is a file, which contains the Exchange Rates, you want to upload, listed according to the file structure that you are going to use. The file used in this documentation has the following content:

file_upload	12.06.2020 10:38	Textdokument	1 KB
-------------	------------------	--------------	------

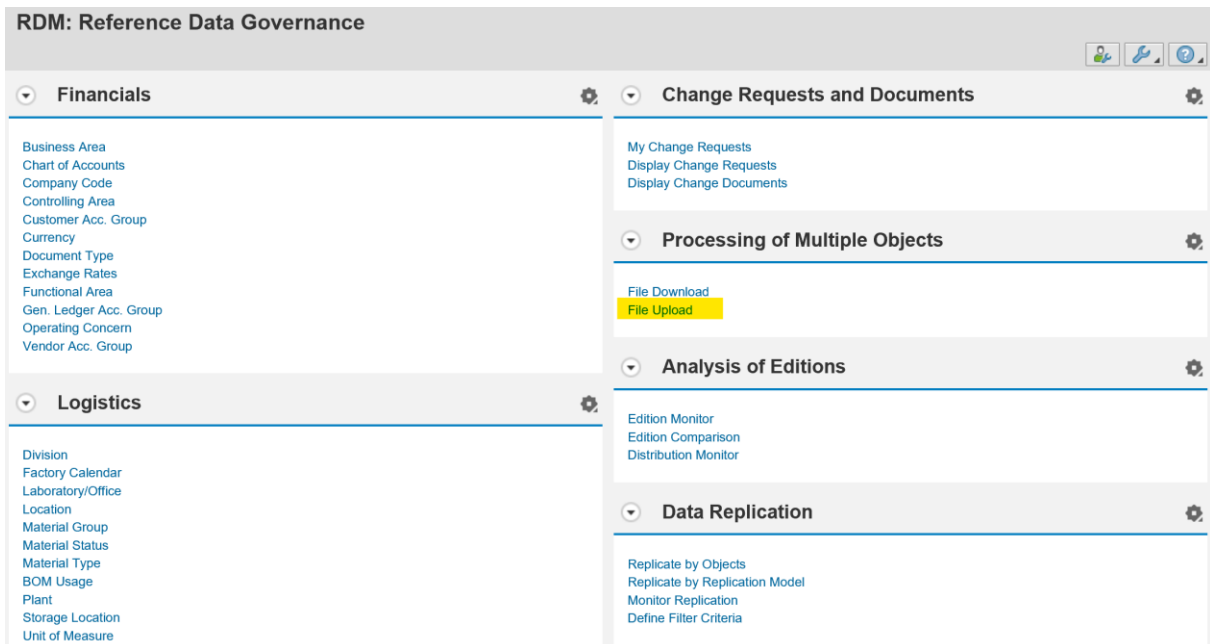
```

* Download
* Data Model: I1
* Entity Type: CUR_EXRA
* Variant: FB_EXRA
* User: BACKF
* Date: 20200612 / Time: 082346
* Selection:
* USMD_ENT_CRTD_BY EQ | BACKF |
*CUR_EXRA;CUR1FROM;CUR2TO;CUR3DATFR;EXCH_RATE;NOTATION;RATIO_FR;RATIO_TO

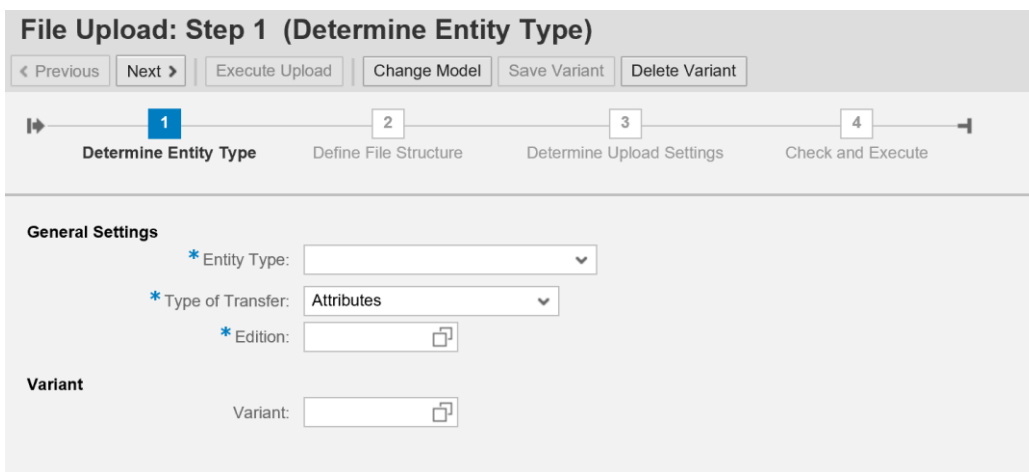
M;AUD;NZD;11.05.2020;0,90000;;0;0;
M;BRL;EUR;28.05.2020;/0,17096;2;1;1;
1004;BSD;BWP;01.01.2020;/100,00000;;0;0;
2003;EUR;AUD;01.02.2020;0,30000;;0;0;
B;EUR;AUD;06.05.1999;0,50000;;0;0;
M;EUR;BOB;03.06.2020;/8,67200;;0;0;
M;EUR;GBP;08.05.2020;0,90000;;1;1;
M;EUR;HKD;04.06.2020;/8,68300;;0;0;
M;EUR;JPY;08.05.2020;0,10000;;1;1;
M;EUR;RON;28.05.2020;4,84350;1;1;1;

```

To initiate the file upload, click on "File Upload" under "Processing of Multiple Objects" on the NWBC Launchpad:



The file upload application will open up:



It is advised to use a variant for the upload process. The variant has to contain the file structure which is used by the file, you are going to upload.

If you created a variant, simply enter its name into the "Variant" field.

If you haven't created a variant yet, follow this procedure: For "Entity Type" use "Exchange Rate (Type)", for "Type of Transfer" use "Attributes". The "Edition" field will disappear.

### File Upload: Step 1 (Determine Entity Type)

[Previous](#) **[Next >](#)**
[Execute Upload](#)
[Change Model](#)
[Save Variant](#)
[Delete Variant](#)

1 **Determine Entity Type**    2 Define File Structure    3 Determine Upload Settings    4 Check and Execute

---

**General Settings**

\* Entity Type: **Exchange Rate (Type)**

\* Type of Transfer: **Attributes**

**Variant**

Variant: **FB\_EXRA** **Upload Exchange Rates**

Click on [Next >](#)

Use the file structure of your variant or create a new structure by using the Add / Remove buttons. The file structure has to match the one, your document uses

### File Upload: Step 2 (Define File Structure)

[Previous](#) **[Next >](#)**
[Execute Upload](#)
[Save Variant](#)
[Delete Variant](#)

1 Determine Entity Type    2 **Define File Structure**    3 Determine Upload Settings    4 Check and Execute

---

**Available**

Entity Type / Attribute
<b>Alt. exch.rate type</b>
Alt.e/r type valid fr.
Approved At
Approved By
Approved By

**Selected**

Entity Type / Attribute
<b>▼ Header</b>
<b>▼ Data Row</b>
Exchange Rate (Type)
Currency (from)
Currency (to)
Valid from
Exchange Rate
Quotation type
Ratio (from)
Ratio (to)

[Add >](#)    [Remove](#)

Click on [Next >](#)



Fill out the fields as shown. Pay attention to the "File Name" field, in which you need to provide the path of the file, you are going to upload. It is advised to use the "Load File" button:

### File Upload: Step 3 (Determine Upload Settings)

< Previous
Next >
Execute Upload
Save Variant
Delete Variant

1  
Determine Entity Type

2  
Define File Structure

3  
**Determine Upload Settings**

4  
Check and Execute

**Upload Settings**

\* Upload Mode:

\* Conversion:

**File Store**

\* File System:

\* File Name:  Load File

**File Format**

\* Separator:

Comment Row:

Click on Next >

Starting on the upcoming popup, you get two options on how to process the file, you are going to upload.

**Select or Create Change Request** ☐

Change Request:

Create Change Request
Transfer
Cancel

- If the file, you are going to upload, is imported directly from a provider, you can use the F4-Help on the "Change Request" field, and choose the provider. With this method, RDM will validate the uploaded data and keep them in a change request in the regular workflow.

**Select or Create Change Request** ☐

Change Request:

CR for error processing FINISS (5815) ▼

CR for error processing Infoaval (5759)

CR for error processing FINISS (5815)

CR for normal checks FINISS (5847)

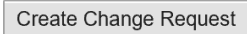
CR for normal checks RDM-EZB (5856)

CR for normal checks RDM-EZB (5868)

CR for normal checks RDM-EZB (5893)

Cancel

Press on "Transfer"

- If the file, you are going to upload, contains 3<sup>rd</sup> party data or doesn't need to be validated, you can click on  to create a standard change request (1, 2, or 3-step). Note that a standard change request does *not* include a validation of the imported data.

**Create Change Request** ☐ ✕

\* Type: Load Curr ExRt and activate ▼

\* Description: Extra Demo Load

Priority: ▼

Due Date:


Reason: ▼

Note:

OK Cancel

Press on "OK"

After having executed one of the above steps, you are directed to step 4, which (in the table at the bottom) allows you to review the data, you are going to upload.

You also get the chance to save a variant for future file uploads by pressing on  .

### File Upload: Step 4 (Check and Execute)

[Previous](#) [Next >](#) **Execute Upload** [Save Variant](#) [Delete Variant](#) ?

1 Determine Entity Type   
 2 Define File Structure   
 3 Determine Upload Settings   
 4 Check and Execute

---

**General Settings**

Entity Type: Exchange Rate (Type)

**Upload Settings**

Upload Mode: Overwrite or Add Records  
 Conversion: Execute Conversion  
 File Store: Presentation Server  
 File Name: C:\fakepath\file\_upload 1.txt  
 Separator: Semicolon  
 Comment Row: \*

**Data**

Show: All Rows

Exchange Rate (Type)	Currency (from)	Currency (to)	Valid from	Exchange Rate	Quotation type	Ratio (from)	Ratio (to)	Row Number
M	AUD	NZD	11.05.2020	0.90000		0	0	11
M	BRL	EUR	28.05.2020	/0.17096	2	1	1	12
1004	BSD	BWP	01.01.2020	/100.00000		0	0	13
2003	EUR	AUD	01.02.2020	0.30000		0	0	14
B	EUR	AUD	06.05.1999	0.50000		0	0	15
M	EUR	BOB	03.06.2020	/8.67200		0	0	16
M	EUR	GBP	08.05.2020	0.90000		1	1	17
M	EUR	HKD	04.06.2020	/8.68300		0	0	18
M	EUR	JPY	08.05.2020	0.10000		1	1	19
M	EUR	RON	28.05.2020	4.84350	1	1	1	20

After having reviewed the data, you can press on [Execute Upload](#) to upload.

### File Upload

- ✔ File is uploaded in change request 5900 (Extra Demo Load)
- ✔ 10 data rows transferred

**What would you like to do next?**

[Another File Upload](#)

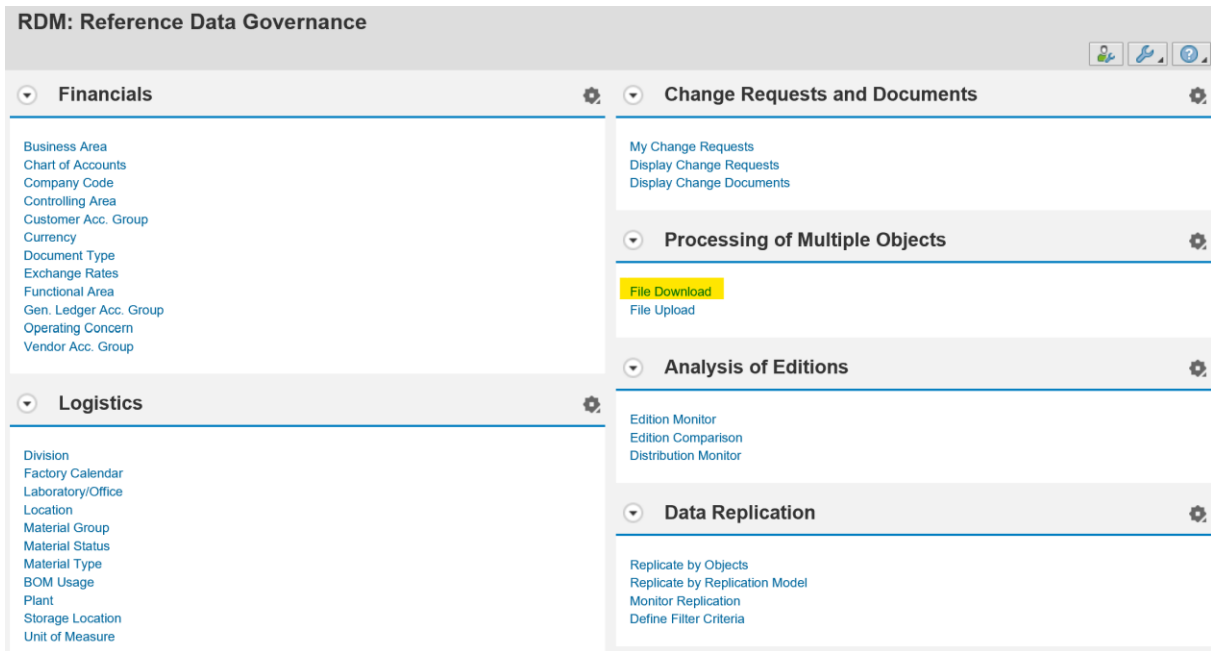
If you chose a direct approval change request in the second upload variant above, the file upload is finished.

If you chose a 2 or 3-step change request in the second upload variant above, you need to approve and/or process the change request according to the standard-workflow of Itego RDM.

If you chose any of the change requests in the first upload variant above, you need to validate and approve the change requests as described in section 2.4.

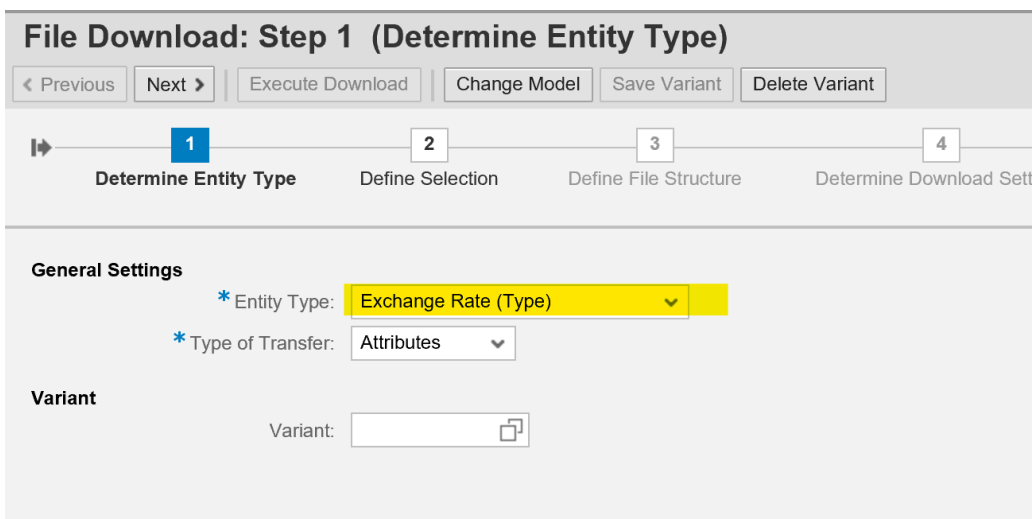
### 3.4 File Download for Exchange Rates

To start a file download, start on the NWBC launchpad and select “File Download” under “Processing of Multiple Objects”



In the process, you have to take five steps in order to end up with a downloaded file. When clicking on “File Download”, you start in step 1.

You have to enter the object, you want to download (Exchange Rate (Type)) in the “Entity Type” field.



Click on

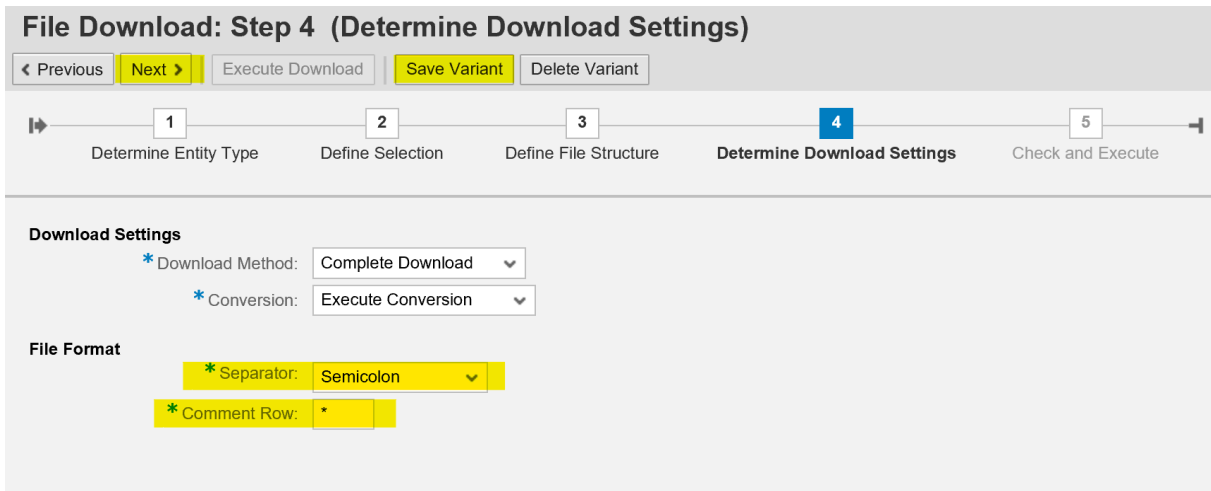
The second step lets you determine, which Exchange Rates you want to include into the file. You can filter or sort by any attribute of the Exchange Rates. As there is no “right or wrong” for filtering, the image below should simply be considered as an example.

Click on [Next >](#)

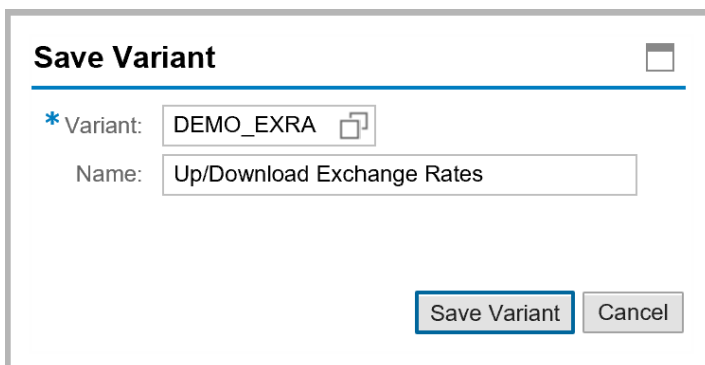
The third steps lets you configure the file structure (namely, the order, in which the attributes for each object are going to be listed in the file). You can do this, by clicking on an object on the left side, and moving it to the right side. It is important to have clicked on “Data Row” on the right side while doing this. Again, there is no right or wrong to this step, so the image below should just be considered as an example. Be sure to save the file structure for further usage.

Click on

In step 4, you can configure the download settings, and the format, the file is going to use. The download settings should be left as they are. The file format adjustments allow you to set the separator and the comment-sign to any valid string.



If you are planning on doing a file download, similar to this one, again, it is recommended to use the  button to create a variant. This variant will save all the settings from the previously taken steps for you to use again. It can be chosen in step 1. If the download is only done once, skip this step.



Click on

Step 5 is simply a confirmation page, on which you can double-check the download settings.

### File Download: Step 5 (Check and Execute)

[← Previous](#)
[Next >](#)
[Execute Download](#)
[Save Variant](#)
[Delete Variant](#)


1 Determine Entity Type   
 2 Define Selection   
 3 Define File Structure   
 4 Determine Download Settings   
 5 **Check and Execute**

---

**General Settings**

Entity Type: Exchange Rate (Type)

**Selection**


Currency (from):  EUR


**Download Settings**

Download Method: Complete Download  
 Conversion: Execute Conversion  
 Separator: Semicolon  
 Comment Row: \*

If everything is correct, press on [Execute Download](#) to execute the download.

## File Download

 49 data rows transferred

 File is ready for download

**What would you like to do next?**

[Display File](#)  
[Save File](#)

[Another File Download](#)

By clicking on "Display File", you can display the file, and by "Save File", you can save it to any directory, you wish.

The file download is now completed.