Exchange specifications for SELMA reporting

VERSION: 1.6

DATE: 2017-04-06

Contents

■ Version history

Version	Date	Description
1.0	2016-03-14	First version
1.1	2016-05-18	Changes regarding: 1. the Report file name (First three parts) 2. the Report file content (Changed KeyFamily and removed Institution)
1.2	2016-05-26	FYI: The Sample files now contains all valid combinations and five trade dates.
1.3	2016-07-04	Changed the e-mail address definition (The user name parts "institution" and "report type" has switched places with each other)
1.4	2017-01-17	Added section describing File Transfer Service, mail notification and specified maximum file size.
1.5	2017-01-20	Added User Credential section. Added paragraph regarding certificate warning.
1.6	2017-04-06	Changed in the Connection Options section - all connection details will be provided separately. Updated links to the SELMA Reporting website. Made some small editorial adjustments.

Introduction

In the new routine for reporting turnover statistics the reporting institutions are expected to create a report file (XML) and deliver it to the Riksbank at a dedicated address.

This document describes the technical requirements and specifications.

■ Report file name

The Report file shall have a unique name according to the following:

KeyFamily-ContentType-ReportType_Reporter-Receiver-Period-Timestamp.xml

File name part	Value	Description
KeyFamily	"RB_OMS1"	Fixed
ContentType	"DATA"	Fixed
ReportType	"FI" *or* "FX"	Reference to the corresponding Report.
"and"	"_"	"Separator", chr(95)
Reporter	Relevant value from FI or FX code list for Reporters.	The name of the reporting institution.
Receiver	"RB"	Fixed (RB = the Riksbank)
Period	"XXXX"	Fixed (Not in use for SELMA)
Timestamp	Date and time, Ex. 20160307091532000	The date and time when the Report file was created. Shall contain 17 digits and be expressed according to the following format: "yyyymmddhhmmss000"

The different parts shall be separated with "-", chr(45).

The file extension shall be ".xml".

Examples:

Fixed income market (FI): RB_OMS1-DATA-FI_NDA-RB-XXXX-20160307091532000.xml

Foreign exchange market (FX): RB_OMS1-DATA-FX_DDB-RB-XXXX-20160308123045000.xml

Report file content

Fixed income (FI) report

The combination of values in the specification below is just an example, for a full list of valid combinations please see the FI report sample file (SampleFI.xml) at the Reporting SELMA website.

XML	Definition
`<?xml version="1.0" encoding="UTF-8"?>`	**Mandatory** Fixed

`<StatisticsReport`
 	
    `xmlns=http://www.riksbank.se/schemas/rbi/transactions/Selma.xsd`
 	
`>`
	Mandatory
	
	Start of FI report.
	
	    Fixed (*Attributes defining "XML namespaces" to be used*)

`<Observation_FI`
 	
    `Type="OUTC"`
    `KeyFamily="RB_OMS1"`
    `Frequency="D"`
    `Adjustment="N"`
    `Conditioning="NA"`
    `Value="AMO"`
    `Contract="SP"`
    `Counterparty="PRIMM"`
    `Asset="GVB"`
    `Market="FI"`
    `Transaction="P"`
`>`
 	
    `<Period>2016-10-31</Period>`
    `<Amount>1</Amount>`
`</Observation_FI>`
	Mandatory
	
	Start of FI observation
	
	    The following attributes define the Series Key for the observation:
	
	    Fixed (*outcome*)
	    Fixed (*turnover statistics*)
	    Fixed (*daily data*)
	    Fixed (*not adjusted*)
	    Fixed (*not applicable*)
	    Fixed (*amount*)
	    Relevant value from FI code list for Contract
	    Relevant value from FI code list for Counterparty
	    Relevant value from FI code list for Asset
	    Relevant value from FI code list for Market
	    Relevant value from FI code list for Transaction
	
	    `>`
	
	    Trade date in format "yyyy-mm-dd".
	    Amount expressed as an integer greater than zero (0).
	End of FI observation

`</StatisticsReport>`	**Mandatory** End of FI report

Foreign exchange (FX) report

The combination of values in the specification below is just an example, for a full list of valid combinations please see the FX report sample file (SampleFX.xml) at the Reporting SELMA website.

XML	Definition
<?xml version="1.0" encoding="UTF-8"?>	**Mandatory** Fixed

<StatisticsReport
 	
   xmlns=http://www.riksbank.se/schemas/rbi/transactions/Selma.xsd
 	
>
	Mandatory
	
	Start of FX report.
	
	   Fixed (*Attributes defining "XML namespaces" to be used*)

<Observation_FX
 	
  Type="OUTC"
  KeyFamily="RB_OMS1"
  Frequency="D"
  Adjustment="N"
  Conditioning="NA"
  Value="AMO"
  Contract="SP"
  Counterparty="REP"
  Asset="SEKEUR"
  Market="FX"
  Transaction="PC"
>
 	
  <Period>2016-10-31</Period>
  <Amount>1</Amount>
</Observation_FX>
	Mandatory
	
	Start of FX observation
	
	The following attributes define the Series Key for the observation:
	
	  Fixed (*outcome*)
	  Fixed (*turnover statistics*)
	  Fixed (*daily data*)
	  Fixed (*not adjusted*)
	  Fixed (*not applicable*)
	  Fixed (*amount*)
	  Relevant value from FX code list for Contract
	  Relevant value from FX code list for Counterparty
	  Relevant value from FX code list for Asset
	  Relevant value from FX code list for Market
	  Relevant value from FX code list for Transaction
	
	  Trade date in format "yyyy-mm-dd".
	  Amount expressed as an integer greater than zero (0).
	End of FX observation

</StatisticsReport>	**Mandatory** End of FX report

■ **E-mail address**

For the Riksbank to be able to send report acknowledgements, the reporting institutions are required to create and maintain one static e-mail address (e-mail group) per report type (FI and/or FX) according to the following:

selma_[report type]_[institution] @[domain name].[top-level domain]

E-mail address part	Description
User Name consists of the following parts: selma report type institution	Fixed "fi" *or* "fx" Relevant value from FI or FX code list for Institution.
domain name	The domain name of the reporting institution.
top-level domain	The top-level domain name of the reporting institution.

The User Name parts shall be separated with "_", chr(95).

Examples:

  For FI Report: selma_fi_nda@nordea.com

  For FX Report: selma_fx_seb@seb.se

Other requirements

1. Turnover statistics for the FI and FX markets shall be reported in separate Report files. (*Will be validated by using the XML Schema*)

2. A Report file shall contain at least one observation. (*Will be validated by using the XML Schema*)

3. A Report file shall contain just one (1) observation (row) per Series Key and Period (Trade date). (*Will be validated by the Riksbank, see Validation of the Report file*)

4. Amount shall be reported as SEK Millions. (*Cannot be validated*)

5. File size should not be greater than 10 MB. (Please note that no validation is made in File Transfer Service. Validation is made in the back end system)

■ User Credentials

User name and password are generated by the Riksbank and distributed to the Reporting Institutions. Only predefined IP addresses will be allowed through to the File Transfer Service.

It is the responsibility of the Reporting Institution to make sure only authorized personnel have access to their password. It is recommended that the Reporting Institution request a new password from the Riksbank if personnel with information of the password leave the reporting institution.

Connection Options

There are two ways of connecting and sending/uploading a file to the File Transfer Service, either via a web browser (HTTPS) or via an SFTP client. For both options users may use the same credentials (user name and password).

SFTP client

Using a SFTP client, provide the following information.

Host: (provided separately)

Port: (provided separately)

User Name: (provided separately)

Password: (provided separately)

Upon successful login a host key with a fingerprint will be presented. The value of the fingerprint will also be provided separately.

Web browser (HTTPS)

Using a web browser, type in the following URL and user credentials.

URL: (provided separately)

User Name: (provided separately)

Password: (provided separately)

Once the page is loaded the web browser may show a warning that the hash algorithm SHA-1 used for the certificate is unsafe. This warning can be ignored. The hash algorithm will be changed in the coming version of the certificate. No other warnings should appear.

■ Transfer Procedure

The user may login to the File Transfer Service by either using a web browser or an SFTP client. File transfer may be automated on the user side when using SFTP client log in, when using HTTPS upload is manual (please see example pictures below).
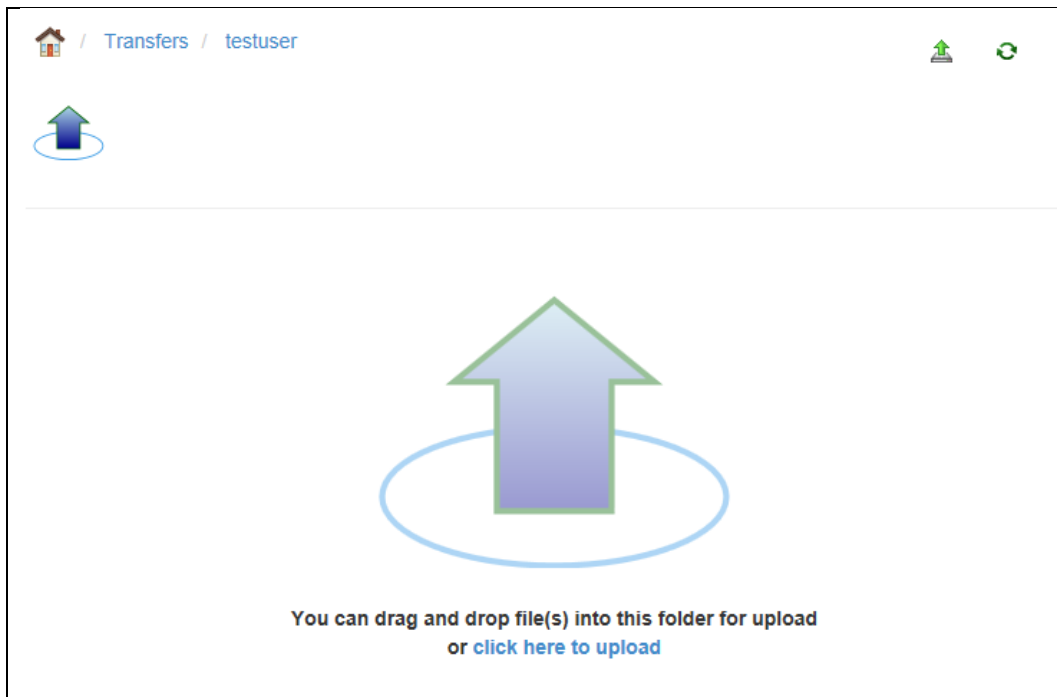
SFTP client

File should be transferred to a folder named [MARKET]_[INSTITUTION].

Web browser (HTTPS)

Click on a folder named [MARKET]_[INSTITUTION] and a new page will open (see picture 1).

Click on the "click here to upload"-link to upload the files.

Picture 1: File Upload Window

■ System acknowledgement

SFTP client

The user will get instant acknowledgement from the SFTP client in form of a return code.

Web Browser (HTTPS)

The user will get instant acknowledgement from the web browser in form of graphical feedback (see pictures below).

Picture 2: System feedback after successful file upload

Picture 3: System feedback after failed file upload

▉ Mail notification

Apart from the instant acknowledgement from systems front end (web browser or the SFTP client) the user will also get a delayed mail notification from the system back end once the uploaded file has been processed and validated.

The back end system will send out a confirmation mail within a minute from the time the file has been uploaded (Please see appendix for a description of File delivery acknowledgement).

If the uploaded file exceeds the maximum allowed size of 10 MB, it will be accepted by the front end system (no validation regarding size is made in the File Transfer Service) but will be rejected when validated in the systems back end. Depending on the size of the input file a number of a confirmation mails will be sent out (at least two). The first mail will inform the user that the input file is corrupt and all other subsequent mails will inform that the file is a duplicate. In the highly unlikely event that this should happed the file must be partitioned to a manageable size, renamed and resent.

Validation of the Report File

The reporting institutions are strongly encouraged to use the XML Schema to validate the Report file before sending it to the Riksbank.

The Riksbank will use the XML Schema but will also perform a number of additional validation checks before the data in the Report file will be loaded into the database.

For example, the Riksbank will check:

1. the Report file name.

2. that the Report file corresponds to the reporting Institution.

3. that there are no duplicate observations (rows).

■ Appendix

Mail notification - General examples

Mail notification for approved file transfer

Subject:	[SELMA - OK] – Notification for *<filename>*
To:	*<email>*
From:	SELMA-Acknowledgement-noreply@riksbank.se
Body:	Report has been successfully validated.
	Filename:
	<filename>
	Reported trade dates:
	<tradedates>
	Total number of trade observations:
	<obscount>
	SELMA Support
	Sveriges riksbank
	Tel +46 8 787 05 50
	selma@riksbank.se

<filename> = The filename

<email> = Reporters email-address

<tradedates> = All unique trade dates in the file

<obscount> = Number of observations in the file

◼ Mail notification for invalid filename

Subject:	[SELMA - NOK] – Notification for *<filename>*
To:	*<email>*
From:	SELMA-Acknowledgement-noreply@riksbank.se
Body:	The filename does not match the expected format. Filename: *<filename>* Reported trade dates: File content unknown Total number of trade observations: File content unknown SELMA Support Sveriges riksbank Tel +46 8 787 05 50 selma@riksbank.se

<filename> = The filename

<email> = Reporters email-address

■ Mail notification same file sent twice

Subject:	[SELMA - NOK] – Notification for *<filename>*
To:	*<email>*
From:	SELMA-Acknowledgement-noreply@riksbank.se
Body:	A file with an identical filename is already received. The file was not validated. Filename: *<filename>* Reported trade dates: File content unknown Total number of trade observations: File content unknown SELMA Support Sveriges riksbank Tel +46 8 787 05 50 selma@riksbank.se

<filename> = The filename

<email> = Reporters email-address

■ Mail notification not authorized reporter

Subject:	[SELMA - NOK] – Notification for *<filename>*
To:	*<email>*
From:	SELMA-Acknowledgement-noreply@riksbank.se
Body:	Reporter FI_*<reporterShortName>* is not authorized to send FX_*<reporterShortname>* report. Filename: *<filename>* Reported trade dates: File content unknown Total number of trade observations: File content unknown SELMA Support Sveriges riksbank Tel +46 8 787 05 50 selma@riksbank.se

<filename> = The filename

<email> = Reporters email-address

<reporterShortName> = The reporters three/four digit short name