Nordea

Message flow and use of XML ISO20022 Messages

Corporate eGateway

Table of contents

1 PURPOSE OF THIS GUIDE 1

2 INTRODUCTION 1

2.1 THE XML ISO20022 MESSAGE STRUCTURE 2

3 PROCESS FLOW AND VERIFICATION METHODS BY NORDEA'S MESSAGE CENTRE 3

4 SPECIFIC HANDLING OF MESSAGES IN NORDEA'S MESSAGE CENTRE 9

4.1 SPECIFICATION OF THE USE OF THE ISO20022 XML SYNTAX RULES 9
4.2 CHARACTER SET AND ENCODING 9
4.3 XML MESSAGE VERSIONS SUPPORTED 9
4.4 MESSAGE ACCEPTANCE 10
4.5 ERROR MESSAGES 11
4.6 SPECIAL FOR THE PAYMENT STATUS REPORT FOR CREDIT TRANSFER INITIATION MESSAGES 11
4.7 DUPLICATE CHECK 12
4.7.1 Rejections 12

5 CHANGES WITHIN CORPORATE EGATEWAY 13

5.1 DEFINITION OF THE CHANGES 13

Version change history

Version	Date	Description of the changes
Version 1.2	2015-02-09	Description of XML Direct Debit in general included in the document. Chapter 4.3: XML new message versions added Chapter 4.7: Changes in description of duplicate detection at Transaction level.
Version 1.3	2025.12.15	Baltic countries removed Broken links fixed

1 Purpose of this guide

This guide is intended for technical persons when implementing the XML ISO20022 Message Implementation guides for Corporate eGateway.

The intention of this guide is to give a brief introduction to how an XML ISO20022 message is constructed and how Corporate eGateway is processing the messages in particular areas, ie. duplicate control, error messages etc.

The guide should primarily be read by technical persons with a good knowledge about creating and programming different formats for ERP systems and/or converter programs.

2 Introduction

This chapter specifies how the Message Implementation Guides (MIGs) are documented. It specifies the notation, terminology and abbreviations used for describing the message structure and usage of components and elements in the messages.

For basic information on the XML ISO20022 ISO20022 messages, please see *General Information:* https://www.iso20022.org/

2.1 The XML ISO20022 message structure

All data transmitted in XML ISO2022 messages are organised in *components* and *elements*. A message component is a collection of related data elements. Both component and element is identified by an opening and closing tags. The combination of opening and closing tags with the data is called an element. In ISO 20022 the use of short tag names (like <PstlAdr> to represent a postal address) is also part of the syntax.

For example: Company "ACME NV.", postal address "Amstel 344, Amsterdam, The Netherlands" is expressed in ISO 20022 XML with Name element and Postal Address component (containing in this case street name, building number, town name and country code elements) as follows:

```
<Nm>ACME NV.</Nm>
<PstlAdr>
        <StrtNm>Amstel</StrtNm>
        <BldgNb>344</BldgNb>
        <TwnNm>Amsterdam</TwnNm>
        <Ctry>NL</Ctry>
</PstlAdr>
```

The message format description is contained in an XML schema. An XML schema sets out the permitted structure for an XML document (or message). It defines, amongst other things, which elements are allowed in a document, the order in which they should appear, the format (or data type) of the element, which are mandatory and which are optional. [1]

[1] ISO 20022 for Dummies, John Wiley & Sons, Ltd 2010. Available: http://www.iso20022.org/

3 Process flow and verification methods by Nordea's Message Centre

Nordea's Message Centre acts as the receiver for files sent by customers and it provides feedback from validation and processing of files. It is important to have full understanding of what and how Nordea's Message Centre performs validation of all messages including the security part.

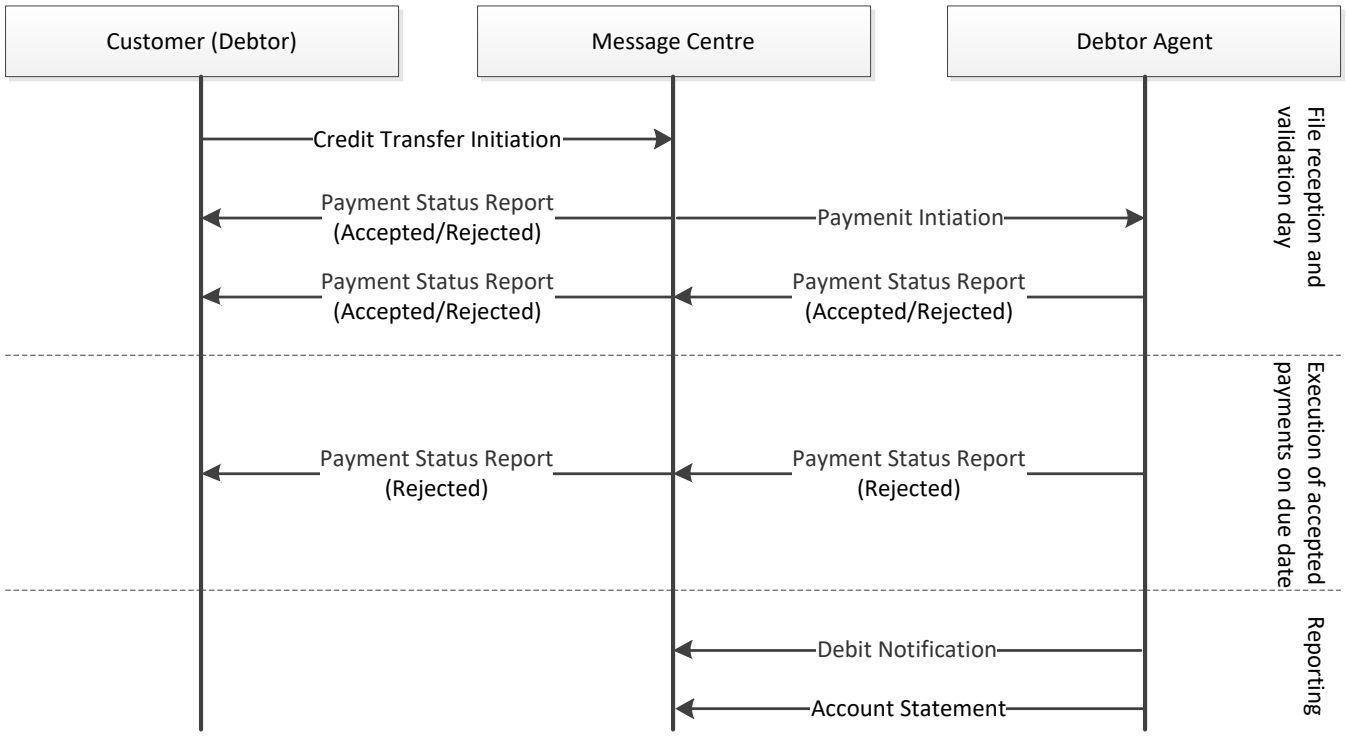
Explanation: Available combination of offered formats, security and channels for XML

Communication Protocol	Security		Comment
	Nordea eID (PKI based certificate)	**PGP**	
SFTP	No	Yes	DSA keys
SWIFTNet FileAct	No	Yes	Uses own PKI based certificate
AS2	No	Yes	X509 Certificate issued by Symantec/Verisign
Web Services	Yes	No	-

Scenario 1: Normal Message flow

The diagrams presented in this document are presenting the message flows regarding CreditTransferInitiation. The flows are similar for DirectDebitInitiation when the customer is the Creditor.

For detailed message flow for Direct Debits, see Functional Specification for Nordea XML Direct Debit.



Credit Transfer Initiation message containing payment orders are sent from the Customer to the Message Centre. The Credit Transfer Initiation is secured by using one of the offered security solutions by Nordea. When the payments are received properly at the Message Centre and encrypted signature(s) are verified, the file is accepted and Payment Status Report is created.

When the Payment Status Report has reached the Customer it implies that the Message Centre acknowledges receipt of the message and assumes responsibility for further processing of the transactions. The payment orders will then be processed (converted to domestic or international formats) by the Message Centre and transmitted to the Ordered Banks for execution.

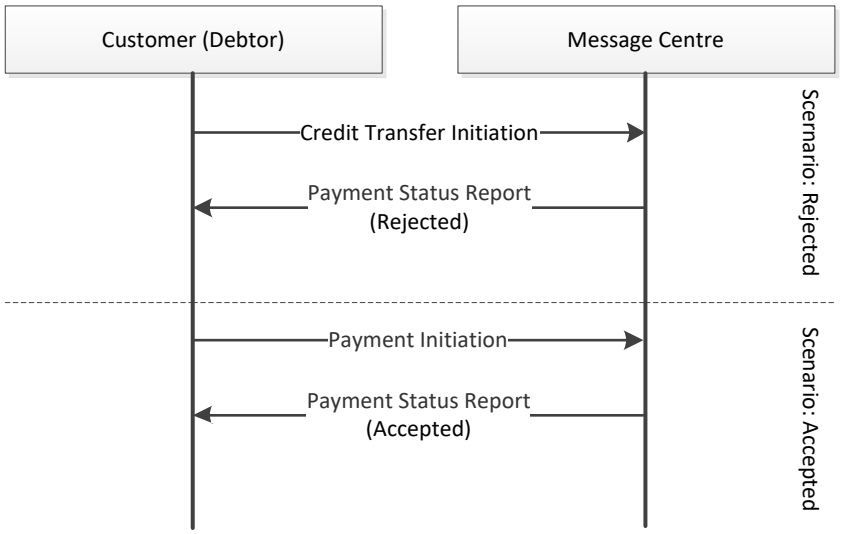
A Payment Status Report message is sent to the customer as soon as possible after receipt of the message, depending on the option chosen by the Customer. This Payment Status Report reflects the status after validation on input day and may contain either rejected instructions or both accepted and rejected instructions. Rejected instructions are not booked or processed.

Note 1: Nordea's Message Centre only creates an accepted Payment Status Report if the **whole message** is correct and no errors are detected. A rejected Payment Status Report is only created in

relation to the business message, e.g. the payment messages, but never for the security on its own, see below.

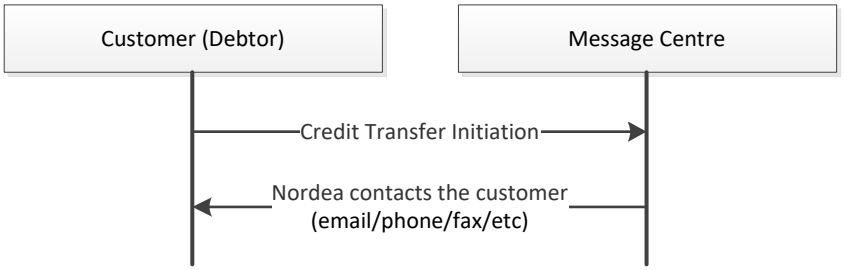
Note 2: If a message is incomplete or incorrect, Nordea may but is not obliged to inform the customer of the incompleteness or incorrectness and to provide the Customer with information concerning the problem. All of the corrections and changes to the message must always be carried out by the Customer. See also Duplicate detection.

Scenario 2: Invalid schema



'Schema error' is detected in a Credit Transfer Initiation message when the message is received by the Message Centre. A negative Payment Status Report is then returned, rejecting the message. A reference to the message identification and the element in the message where the error occurred is included in the negative Payment Status Report.
The Customer must locate and correct the error and if necessary contact Customer Support for help. Then the Customer must send the corrected message to the Message centre. Payment order level and credit transactions level will contain the same reference numbers as the originals.

Scenario 3: Security violation / security problems

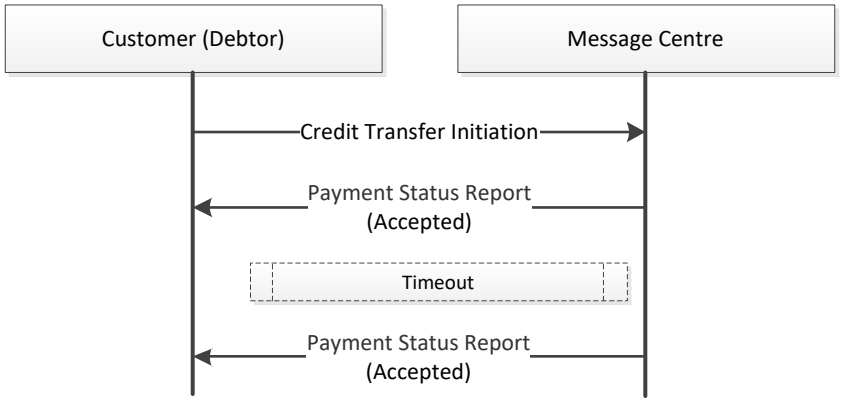


If the interchange fails security verification at the Message Centre, a phone call, e-mail or fax will be returned to the security contact persons specified by the Customer.

The following points are defined as a security violation:

- Unsuccessful verification of signature(s)
- Unsuccessful decryption of used security
- Missing security

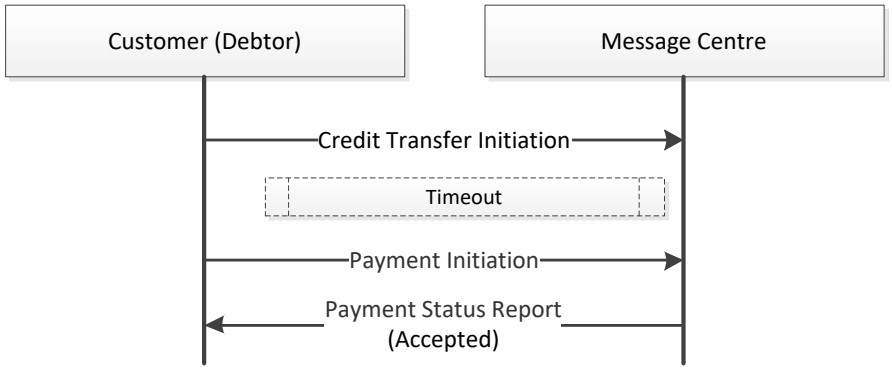
Scenario 4: Lost Payment Status Report, re-transmission of Payment Status Report



If the Customer does not receive any Payment Status Report for a sent payment order, within the timeframe specified, the Customer must locate the problem and take contact to the Customer Support.

- The Message Centre will re-send the Payment Status Report until a communication receipt is received.

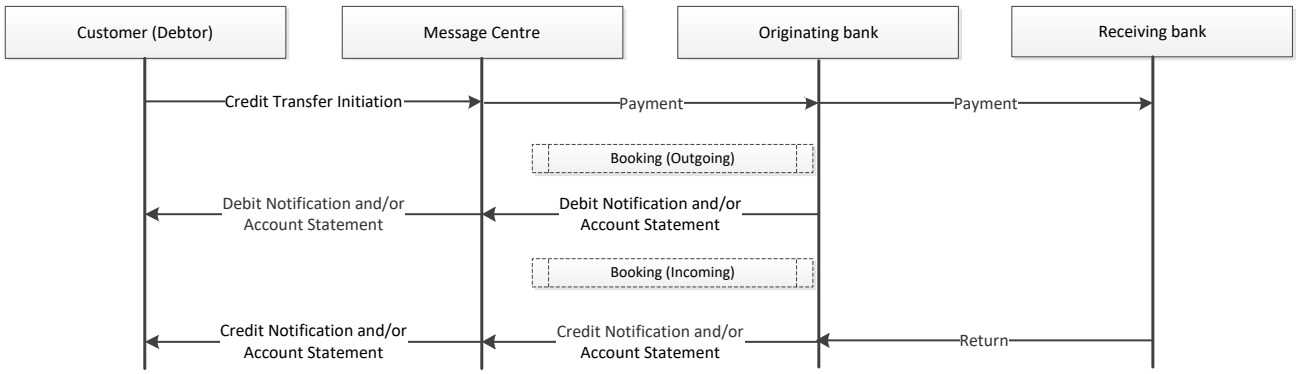
Scenario 5: Lost Credit Transfer Initiation, re-transmission of Credit Transfer Initiation



If the Customer does not receive Payment Status Report for a transmitted interchange within the timeframe specified, the Customer must locate the problem (contact Customer Support etc.) and then re-transmit the interchange.

- A re-transmission is an exact copy of an original multiple Credit Transfer Initiation. This implies that all references within the Credit Transfer Initiation message including the message identification and payment identifications will be exactly the same as in the original Credit Transfer Initiation.

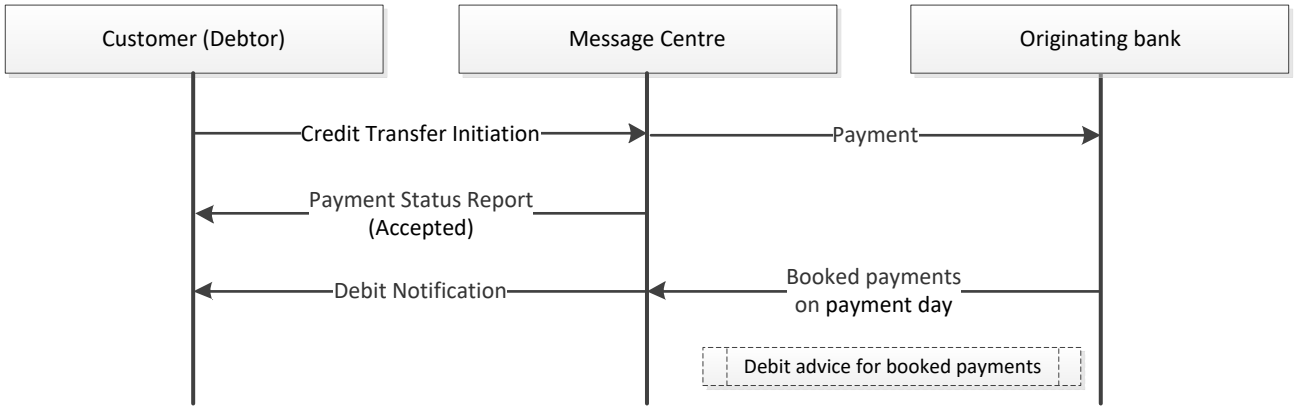
Scenario 6: Booked payments returned by the beneficiary's bank



The Receiving Bank may reject a payment that is accepted and booked by Nordea. This payment will be reported to the Customer as a debit transaction in the Debit Notification and/or in Account Statement Message.

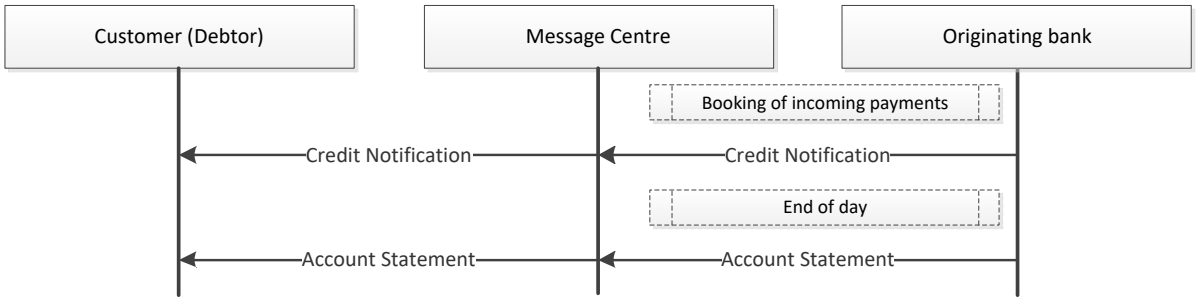
In the next step the returned payment will be booked to the account and this will be shown as a credit transaction in the Credit Notification and/or Account Statement Message sent by the Message Centre to the Customer. The Customer must re-book the payment by sending a new Credit Transfer Initiation to the Message Centre.

Scenario 7: Debit advice (Debit Notification) Message



A Credit Transfer Initiation is sent from the Customer to the Message Centre. After Nordea and/or the local service provider have processed the payment order, Debit Notification Message can be provided to the customer from Corporate eGateway, for reconciliation of the customer's supplier ERP system.
Note: Debit Notification can only be received for domestic payments from Nordic countries and for International payments only from Finland, Norway and Sweden.

Scenario 8: Credit advice and bank statement



Incoming payments with references to invoices will be reported in a Credit Notification immediately after booking.

If one credit transaction on an account represents many outstanding invoices, the references to all the invoices will be reported in a structured form in the Credit Notification, provided that the information is present in the credit advices.

4 Specific handling of messages in Nordea's Message Centre

4.1 Specification of the use of the ISO20022 XML syntax rules

ISO 20022 XML syntax rules must be used for all transmissions between the parties as described below:

4.2 Character set and encoding

The files sent to Nordea must be in UTF-8 format, using only the characters included in ISO-8859-1.

4.3 XML message versions supported

The messages supported by Corporate eGateway are ISO 20022 Maintenance release 2009 version.

Message usage	Message name	ISO 20022 schema name
Credit Transfer Initiation	CustomerCreditTransferInitiation	pain.001.001.03
Payment Status Report	CustomerPaymentStatusReport	pain.002.001.03
Customer Payment Reversal	CustomerPaymentReversal	pain.007.001.02
Direct Debit Initiation	CustomerDirectDebitInitiation	pain.008.001.02
Mandate Initiation Request	MandateInitiationRequest	pain.009.001.01
Mandate Cancellation Request	MandateCancellationRequest	pain.011.001.01
Mandate Acceptance Report	MandateAcceptanceReport	pain.012.001.03
Resolution of Investigation	ResolutionOfInvestgation	camt.029.001.03
Customer Payment Cancellation Request	Customer Payment Cancellation Request	camt.055.001.01
Account Statement	BankToCustomerStatement	camt.053.001.02
Debit Notification	BankToCustomerDebitNotification	camt.054.001.02
Credit Notification	BankToCustomerCreditNotification	camt.054.001.02

The message sent from the Customer to Nordea Message Centre is Credit Transfer Initiation message.

The messages sent from Nordea to the Customer are:

- Payment Status Report – acknowledgement of file reception and information on accepted / rejected payments
- Account Statement – account reporting
- Credit/Debit Notification – information or credited or debited transactions.
- Mandate Initiation Request - debtor initiated mandates in Sweden.

- Mandate Acceptance Report - new/cancelled mandates.
- Resolution of Investigation - accepted or rejected Direct Debit cancellations.

4.4 Message acceptance

All messages sent to Nordea's Message Centre are considered to be received by the receiving party when the transmitting party has received a technical validation acceptance message regarding the sent message. The technical validation acceptance message is implemented using a Payment Status Report message.

The transmitter of the messages is obliged to check that all technical validation acceptance messages are received for all sent files. If a technical validation message is not received, the file containing the messages must be re-transmitted. A re-transmission from either party must always be confirmed by Corporate eGateway, Service Support.

4.5 Error messages

When sending pain.001s and/or pain.008s to Corporate eGateway the following error types could potentially be identified:

Type of error	Type of response
Security error	Telephone and/or email (Corporate eGateway Support team)
Syntax error	Payment status report (pain.002)
Contents error	Payment status report (pain.002

4.6 Special for the Payment Status Report for Credit Transfer Initiation messages

For detailed Payment Status Report flow for Credit Transfer Initiation messages, please see sections 2.6 – 2.8 in Functional Specification for Payments at Nordea.com.

4.7 Duplicate check

The customer must avoid sending duplicates; Corporate eGateway will endeavour its best effort to detect such duplicates. Nordea's Message Centre will, however, perform a duplicate check on all Messages, that are received, but Corporate eGateway will not under any circumstances be liable for processing such duplicates if not detected by Nordea's Message Centre.

Duplicate check is performed on following elements:

CreditTransferInitiation:

Level	**Element**	**Tag**	**Mandatory/Optional**
Message	Message Identification	MsgId	Mandatory
Credit CreditTransferTransactionInformation	Instruction Identification or EndToEnd Identification	InstrId EndToEndId	Optional Mandatory

DirectDebitInitiation:

Level	**Element**	**Tag**	**Mandatory/Optional**
Message	Message Identification	MsgId	Mandatory
Credit	PaymentInformationIdentification	PmtInfId	Mandatory
Debit DirectDebitTransactionIdentification	Instruction Identification or EndToEnd Identification	InstrId EndToEndId	Optional Mandatory

If InstructionId is not present Nordea will use EndToEndId for duplicate check.

Transactions will be stored for duplicate check in Corporate eGateway for 90 days.

4.7.1 Rejections

When received in Corporate eGateway a message is split up into different files. For each country there will be a different file, one for domestic and one for international payment. Each file is processed separately. If duplicates are detected in a Message file the whole file may be rejected and may not be processed further. Corporate eGateway is however not liable for processing such duplicates if not detected by Nordea's Message Centre. The files containing the other transactions are processed as usual.

5 Changes within Corporate eGateway

Nordea continuously upgrades the XML messages used in the Corporate eGateway. This is done due to changes in the ISO 20022 standardisation, legislation requirements in each local country, changes of the local services used by Corporate eGateway, and/or due to new services that are incorporated into the Corporate eGateway service in order to facilitate a high functionality and quality towards its Customers.

5.1 Definition of the changes

Upgrades and/or changes performed by Corporate eGateway are divided into two (2) different definitions with corresponding time frames for the production date of needed changes.

Definition	**Production date**
Major Changes	Six (6) months
Minor Changes	Three (3) months

Nordea will inform its Customers of any upgrading and/or changes of Corporate eGateway that require actions to be taken by the Customers or has otherwise significance to the Customers.

Minor Changes (as defined below) of Corporate eGateway must be informed by Nordea to the Customer three (3) months before production date and Major Changes (as defined below) six (6) months before production date. The Customer is responsible for upgrading its software used towards Corporate eGateway in accordance with such announcement from Nordea.

All amendments or changes of the XML file format, which are considered major changes by Nordea are stated in the table below. Major changes are defined as changes that require when the Customer must open up the segments/elements or attributes within its own enterprise resource planning system in order to be able to handle (process) the messages received from Corporate eGateway or send messages to Corporate eGateway in a required manner.

All amendments or changes of the XML file format, which are considered minor changes are also stated in the table below. Minor changes are defined as changes where the customer does not need to use or recognise the segments/elements or attributes, when processing the message in question within the customer's own enterprise resource planning system or other changes that do not require major technical changes made by the Customer.

General changes of Corporate eGateway	**Effect**	**Explanation**
New XML syntax version	Major	
New/change of cut-off times	Minor	
New local services for Corporate eGateway	Minor	New services added by Nordea
Changes in text and/or explanations	Minor	
Changes of qualifiers/attributes	Minor	
Content changes of elements	Minor	e.g. field lengths etc.

XML Messages from the Customer to Corporate eGateway				
Changes of segments/elements/attributes for the message	**Status**	**From/To**	**Status**	**Effect**
New and/or removal	-	-	Optional	Minor
New and/or removal	-	-	Required	Major
Change	Optional	To	Required	Major
Change	Required	To	Optional	Minor

XML Messages from Corporate eGateway to the Customer				
Changes of segments/elements/attributes for the Message	**Status**	**From/To**	**Status**	**Effect**
New and/or removal	-	-	Optional	Minor
New	-	-	Required	Minor
Removal	-		Required	Major
Change	Optional	To	Required	Minor
Change	Required	To	Optional	Major