

Incoming reference payments

Service description

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Use of reference number in invoices

An invoicing company identifies invoices sent to its customers through a reference number. With this number, the invoicing company matches an incoming payment to an outstanding invoice.

The reference number can be formed of the customer number and the invoice number. One option is to use only the customer number as the reference number if the payment is always the same and amortises the oldest receivable. In rents and maintenance charges the apartment number can be used as the reference number.

Finnish banks check the reference number in connection with payments in accordance with the Finnish and international standards. If the reference number complies with these standards, it is reported to the invoicer as a reference number. If the reference number does not comply with either standard, it is reported as a payment message.

Forming the reference number

In accordance with the calculation rule set in the standard, a check digit is calculated for the number sequence chosen as the reference number. The purpose is to check the validity of the number sequence in the payment services offered by the bank and in the customer's financial administration systems.

Finnish reference number

A Finnish reference number must include at least 4 numbers and at most 19 numbers defined by the invoicer and a check digit calculated for them.

A short reference number decreases typing errors. Avoid unnecessary padding zeros.

The check digit is calculated by multiplying the numbers in the number sequence defined by the invoicer with weights 7, 3 and 1, beginning from the right. The products are aggregated and the sum is detracted from the next figure ending with a zero. The remainder is the check digit.

Instructions on the structure of Finnish reference numbers are published on the website of the Federation of Finnish Financial Services at www.fkl.fi under Themes/SEPA - Single Euro Payments Area/Technical documents.

International reference number

The international reference number is the same as the creditor reference in the ISO 11649, which can be found on the website of the International Organization for Standardization (ISO). Finnish banks have published a guide on the global structured creditor reference, which has been published on the website of the Federation of Finnish Financial Services at www.fkl.fi under Themes/SEPA - Single Euro Payments Area/Technical documents.

Nordea

Invoicers who have customers in Finland must form the creditor reference on the basis of the Finnish reference number in order to enable the use of the creditor reference also in systems that only check Finnish reference numbers.

Invoicers who have customers abroad must state the creditor reference in the invoice or payment form. The creditor reference must be accompanied with instructions stating that it is absolutely necessary to include the creditor reference in the payment.

The use of a standardised reference number is not as common in other countries as it is in Finland. However, it is expected that the ISO 11649 standard will promote this practice of identifying invoices primarily through a reference number defined by the invoicer, which is already widespread in Finland and other Nordic countries.

A reference number included in payments paid abroad is in most cases transmitted as a message in international payment systems. Even though in this case the payment is not matched automatically against the sales ledger, it is still easier for the invoicer to match a payment with the reference number than with the payer's free-text message.

How to include the reference number in the invoice

Invoice template

Guides and example templates published by the Federation of Finnish Financial Services contain detailed instructions on how to print the reference number on paper invoices and credit transfer forms.

E-invoice

In e-invoices the reference number is a mandatory item and it may be a Finnish reference number or a global creditor reference. The data elements to be used are described in the implementation guidelines of the Finvoice standard.

Bar code and QR code

The reference number must be included in the bar code or QR code that may be printed on the invoice. Instructions are available on the website of the Federation of Finnish Financial Services under Themes/SEPA - Single Euro Payments Area/Technical documents.

Reporting of reference payments

In order for the bank to be able to report payments to the invoicer as reference payments, the account used in invoicing must be defined as a reference account in the bank.

When payments are made into the reference account through various payment systems, the payer is advised to key in the reference number when making the payment and the validity of the reference number will be checked.

The invoicer chooses the way the reference payments are reported on the basis of the system it uses for updating the sales ledger.

Nordea

Reference payments on the account statement

Payments identified with a reference number are reported on the account statement as individual deposits and their corrections as individual withdrawals. The invoicer monitors sales receivables using the account statement or updates the incoming reference payments from the account statement to its financial administration system, which matches the payments to outstanding invoices in the sales ledger.

Reference payments transaction list

Individual reference payments are delivered in a separate file based on which the system used by the invoicer matches the payments against the sales ledger. Reference payments transaction list is created on every entry date.

The account statement only shows the value-date-specific aggregate amounts per entry date. The periodical account statement may contain many aggregate amounts of reference payments, as reference payments are summed up and the file containing them is created at the end of every entry date.

File formats

The separate reference payments transaction list is created in Nordea's system based on the invoicer's choice either as an XML file or as an ASCII file.

The XML file is based on the message description camt.054.001.02 published by the International Organization for Standardization (ISO).

The ASCII file complies with an old record description labelled KTL defined by Finnish banks.

ISO 20022 camt.054 message

The camt.054 message can be used to report both deposits and withdrawals. Incoming reference payments can be updated directly to the sales ledger by using it.

The message is global and system suppliers regardless of the country can use it in their software development. The standard covers global needs and the descriptions and implementation guidelines related to the messages are freely available. ISO is responsible for maintaining the messages and for publishing new versions.

It is possible to report with the camt.054 message all details of SEPA payments provided by the payer, including the details of invoices and credit notes batched in accordance with the AOS2 description.

The global creditor reference (ISO 11649), the account number in the IBAN format and the filing code of SEPA payments can be transmitted in full.

This service description contains those data elements that are used by Nordea when it creates a camt.054 message for a reference account with summation.

Finnish KTL

The KTL record description has not been updated to correspond to the new SEPA payment data or data format changes.

The account numbers are in the BBAN format and the filing code cannot be transmitted in full.

It is only possible to report reference numbers complying with the Finnish standard in a KTL record's reference field. This is why invoicers operating in Finland should create the global creditor reference based on the Finnish reference number.

A KTL record does not report invoices and credit notes which the payer has paid in accordance with SEPA AOS2 description, even if they were identified with a reference number.

File retrieval

A reference payment file is created at the end of each entry date, and it can be retrieved from the file transfer service at 3.00 in the morning on the day following the entry date at the latest.

The maximum size of XML files retrieved using the WebServices protocol is 50 MB.

File transfer file types

NDCAMT54L	Reference payment file in XML format
KTL	Reference payment file in ASCII format

Storage period

Incoming reference payment files are stored in the file transfer for 18 months after the creation date. A file which has already been retrieved can be re-retrieved during the storage period. After the storage period, it is no longer possible to get the reference payments in an electronic format, so the bank will reproduce the customer's requests on paper. The customer must prepare for the delivery period and fee required by manual work.

Other instructions

Nordea's instructions

There are additional instructions on file retrieval on Nordea's website. There is also a reference number calculator, which can be used for calculating reference numbers in the Finnish and global format for invoices. The instructions are available at nordea.fi on the corporate customers' pages.

- File transfer service description and deadlines
- Reference number calculator

Nordea

Instructions from the Federation of Finnish Financial Services

There are instructions on how to use and print credit transfer forms on the website of the Federation of Finnish Financial Services. The instructions are available at fkl.fi under Themes/SEPA - Single Euro Payments Area/Technical documents.

- Bank transfer guidelines
- Credit transfer forms (on the Finnish pages only)
- QR code (on the Finnish pages only and only in Finnish)
- Barcode

ISO 20022

The International Organization for Standardization has published on its website instructions on implementing ISO 20022 messages as well as schema files that can be used for checking the message format. Information on standardisation and messages is available at www.iso20022.org.

The message Nordea uses in Finland in reporting incoming reference payments entered into accounts is BankToCustomerDebitCreditNotification V 02 Message and its schema name is <camt.054.001.02>.

XML message description

Message item	XML tag	Mult	Content example	Comment
A. GroupHeader	<GrpHdr>	[1..1]		
MessageIdentification	<MsgId>	[1..1]	20110210-0000001	Identifier given when the file is created
CreationDateTime	<CreDtTm>	[1..1]	2011-02-11T06:03:00Z	Creation time according to retrieval
MessageRecipient	<MsgRcpt>	[0..1]		Not in use
MessagePagination	<MsgPgtn>	[0..1]		Not in use
B. Notification	<Ntfctn>			
Identification	<Id>	[1..1]	20110210-123456-001	Unique identifier for at least 3 months
ElectronicSequenceNumber	<ElctrncSeqNb>	[0..1]	001	Consecutive numbering within one year
LegalSequenceNumber	<LglSeqNb>	[0..1]		Not in use
CreationDateTime	<CreDtTm>	[1..1]	2011-02-10T00:00:00Z	Transaction report's creation date and time
FromDate	<FrToDt>	[0..1]		Incoming reference payments are reported daily.
FromDateTime	<FrDtTm>	[1..1]	2011-02-10T00:00:00Z	Reporting date
ToDateTime	<ToDtTm>	[1..1]	2011-02-10T00:00:00Z	Reporting date
Account	<Acct>	[1..1]		
Identification	<Id>	[1..1]		
IBAN	<IBAN>	[1..1]	FI8529501800030574	Account number
Currency	<Ccy>	[0..1]	EUR	Account currency
Name	<Nm>	[0..1]	Oy Company Ab	Name of the account
Owner	<Ownr>	[0..1]		
Name	<Nm>	[0..1]	Oy Company Ab	Account holder's name
OrganisationIdentification	<OrgId>	[1..1]		
Other	<Othr>			
Identification	<Id>	[1..1]	99999992	Account holder's ID
SchemeName	<SchmeNm>	[0..1]		ID format
Code	<Cd>	[1..1]	BANK	BANK = code given to the customer by the bank
Servicer	<Svcr>	[0..1]		
FinancialInstitutionIdentification	<FinInstnId>	[1..1]		
BIC	<BIC>	[1..1]	NDEAFIHH	Account holding bank's BIC
TransactionsSummary	<TxSummary>	[0..1]		Information on transaction amounts on summary level
TotalCreditEntries	<TtlCdtNtries>	[0..1]		
NumberOfEntries	<NbOfNtries>	[0..1]	20	Number of deposits in the

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Message item	XML tag	Mult	Content example	Comment
				message
Sum	<Sum>	[0..1]	EUR15065.23	Total sum of deposits in the message
TotalDebitEntries	<TtlDbtNtries>	[0..1]		
NumberOfEntries	<NbOfNtries>	[0..1]	2	Number of correction entries in the message
Sum	<Sum>	[0..1]	EUR56.00	Total sum of correction entries in the message
Entry	<Ntry>	[0..n]		
EntryReference	<NtryRef>	[0..1]		Not in use
Amount	<Amt>	[1..1]	2000.05	Total sum of incoming reference payments/Total sum of correction entries
CreditDebitIndicator	<CdtDbtInd>	[1..1]	CRDT	CRDT = deposit DBIT = withdrawal
ReversalIndicator	<RvslInd>	[0..1]	True	False = normal transaction True = correction
Status	<Sts>	[1..1]	BOOK	BOOK = entered into the account
BookingDate	<BookgDt>	[0..1]		
Date	<Dt>	[0..1]	2010-09-30	Entry date
ValueDate	<ValDt>	[0..1]		
Date	<Dt>	[0..1]	2010-09-30	Value date
AccountServicerReference	<AcctSvcrRef>	[0..1]	1009302588CEAA0001	Filing code given by the bank NB! Total sum of incoming reference payments does not have a filing code.
BankTransactionCode	<BkTxCd>	[1..1]		
Domain	<Domn>	[0..1]		
Code	<Cd>	[1..1]	PMNT	PMNT = payments
Family	<Fmly>	[1..1]		
Code	<Cd>	[1..1]	RCDT	RCDT = received credit transfers NTAV = not available
SubFamilyCode	<SubFmlyCd>	[1..1]	ESCT	ESCT = SEPA credit transfer NTAV = not available
EntryDetails	<NtryDtls>	[0..n]		
TransactionDetails	<TxDtls>	[0..n]		
References	<Refs>	[0..1]		
AccountServicerReference	<AcctSvcrRef>	[0..1]	1009302588CEAA0001	Filing code given by the bank
EndToEndIdentification	<EndToEndId>	[0..1]	20100920-E00005	Identifier originated from a SEPA payment

Message item	XML tag	Mult	Content example	Comment
AmountDetails	<AmtDtls>	[0..1]		
TransactionAmount	<TxAmt>	[0..1]	120.05	Transaction amount
BankTransactionCode	<BkTxCd>	[0..1]		
Domain	<Domn>	[0..1]		
Code	<Cd>	[1..1]	PMNT	PMNT = payments
Family	<Fmly>	[1..1]		
Code	<Cd>	[1..1]	IDDT	RCDT = credit transfers
SubFamilyCode	<SubFmlyCd>	[1..1]	PMDD	ESCT = SEPA payments
RelatedParties	<RltsPties>	[0..1]		
Debtor	<Dbtr>	[0..1]		Payer's details
Name	<Nm>	[0..1]	Payer Matt Matthews	Payer's name
Identification	<id>	[0..1]		
OrganisationIdentification or PrivateIdentification	<Orgld> <Prvtld>	[1..1]		Identification is delivered in the element <Orgld> when the payer is a company and in the element <Prvtld> when the payer is a private person.
BICOrBei or Other	<BICorBEI>	[0..1]	NDEAFIHH	The element BICorBEI includes the ISO 9362 code
	<Othr>	[0..1]		
Identification	<Id>	[1..1]	FI99999992	Relevant party's ID
SchemeName	<SchmeNm>	[0..1]		
Code	<Cd>	[1..1]	SOSE	Codes: ISO external code list Most common codes: SOSE = personal identity number ARNU = foreign personal identity number BANK = code given to the customer by the bank CUST = customer number TXID = ID given by the tax authority
UltimateDebtor	<UltmtDbtr>	[0..1]		When the payer is paying on behalf of another person, information on the original payer can be entered into this item.
Name	<Nm>	[0..1]	Payer Mary Matthews	Name of the original payer
Identification	<id>	[0..1]		
OrganisationIdentification or PrivateIdentification	<Orgld> <Prvtld>	[1..1]		Identification is delivered in the element <Orgld> when the payer is a company and in the

Message item	XML tag	Mult	Content example	Comment
				element <PrvtId> when the payer is a private person.
BICorBei or Other	<BICorBEI>	[0..1]	NDEAFIHH	The element BICorBEI includes the ISO 9362 code
	<Othr>	[0..1]		
Identification	<Id>	[1..1]	FI99999992	Relevant party's ID
SchemeName	<SchmeNm>	[0..1]		
Code	<Cd>	[1..1]	SOSE	Codes: ISO external code list Most common codes: SOSE = personal identity number ARNU = foreign personal identity number BANK = code given to the customer by the bank CUST = customer number TXID = ID given by the tax authority
UltimateCreditor	<UltmtCdtr>	[0..1]		When the payer pays to a finance company's account, information on the ultimate creditor can be entered into this item.
Name	<Nm>	[0..1]	Name of the finance company's customer	Name of the ultimate creditor
Identification	<id>	[0..1]		
OrganisationIdentification or PrivateIdentification	<OrgId> <PrvtId>	[1..1]		Identification is delivered in the element <OrgId> when the payer is a company and in the element <PrvtId> when the payer is a private person.
BICorBei or Other	<BICorBEI>	[0..1]	NDEAFIHH	The element BICorBEI includes the ISO 9362 code
	<Othr>	[0..1]		
Identification	<Id>	[1..1]	FI99999992	Relevant party's ID
SchemeName	<SchmeNm>	[0..1]		
Code	<Cd>	[1..1]	SOSE	Codes: ISO external code list Most common codes: SOSE = personal identity number ARNU = foreign personal identity number BANK = code given to the customer by the bank CUST = customer number TXID = ID given by the tax authority
RemittanceInformation	<RmtInf>	[0..1]		Information for matching the payment

Message item	XML tag	Mult	Content example	Comment
Structured	<Strd>	[0..1]		
CreditorReferenceInformation	<CdtrRefInf>	[0..1]		The Finnish reference number and the global creditor reference are transmitted as structured when the format of the reference is correct.
Type	<Tp>	[0..1]		
CodeOrProprietary	<CdOrPrtry>	[0..1]		
Code	<Cd>	[1..1]	SCOR	SCOR = structured communication reference
Reference	<Ref>		00000000000000001245	Finnish reference number
or				
Code	<Cd>		SCOR	SCOR = structured communication reference
Issuer	<Issr>		ISO	When the reference is in the global format, the data in this item is ISO.
Reference	<Ref>		RF332348236	Global credit reference (ISO 11649)
or				
Structured	<Strd>	[1..9]		First transaction in a bundle complying with the AOS2 description
ReferredDocumentInformation	<RfrdDocInf>	[0..1]		
Type	<Tp>	[0..1]		
CodeOrProprietary	<CdOrPrtry>	[1..1]		
Code	<Cd>	[1..1]	CINV	CINV = commercial invoice
ReferredDocumentAmount	<RfrdDocAmt>	[0..1]		
RemittedAmount	<RmtdAmt>	[0..1]	EUR2500.01	Invoice amount
CreditorReferenceInformation	<CdtrRefInf>	[0..1]		
Type	<Tp>	[0..1]		
CodeOrProprietary	<CdOrPrtry>	[1..1]		
Code	<Cd>	[1..1]	SCOR	SCOR = structured communication reference
Reference	<Ref>	[0..1]	000000000000000010016	Invoice's reference with leading zeros
Structured	<Strd>	[1..9]		Second transaction in a bundle complying with the AOS2 description
ReferredDocumentInformation	<RfrdDocInf>	[0..1]		
Type	<Tp>	[0..1]		
CodeOrProprietary	<CdOrPrtry>	[1..1]		
Code	<Cd>	[1..1]	CINV	CINV = commercial invoice
ReferredDocumentAmount	<RfrdDocAmt>	[0..1]		

Message item	XML tag	Mult	Content example	Comment
RemittedAmount	<RmtdAmt>	[1..1]	EUR500.00	Invoice amount
AdditionalRemittanceInformation	<AddtlRmtInf>	[0..3]	INVOICE NARRATIVE	Free-form message
Structured	<Strd>	[1..9]		Third transaction in a bundle complying with the AOS2 description
ReferredDocumentInformation	<RfrdDocInf>	[0..1]		
Type	<Tp>	[0..1]		
CodeOrProprietary	<CdOrPrtry>	[1..1]		
Code	<Cd>	[1..1]	CREN	CREN = credit note
ReferredDocumentAmount	<RfrdDocAmt>	[0..1]		
CreditNoteAmount	<CdtNoteAmt>	[1..1]	EUR1500.00	Credit note amount
CreditorReferenceInformation	<CdtrRefInf>	[0..1]		
Type	<Tp>	[0..1]		
CodeOrProprietary	<CdOrPrtry>	[1..1]		
Code	<Cd>	[1..1]	SCOR	SCOR = structured communication reference
Reference	<Ref>	[0..1]	00000000000000010032	Credit note's reference with leading zeros
or				
RemittanceInformation	<RmtInf>	[0..1]		
ReferredDocumentInformation	<RfrdDocInf>	[0..1]		
Number	<Nb>	[0..1]	123	Invoice number
RelatedDate	<RltdDt>	[0..1]	2010-08-15	Invoice date
RelatedDates	<RltdDts>	[0..1]		
AcceptanceDateTime	<AcptncDtm>	[0..1]	2011-02-10T00:00:00Z	Payment date
ReturnInformation	<RtrInf>	[0..1]		
Reason	<Rsn>	[0..1]		

KTL record description

The file contains a batch record, transaction records and a sum record for each entry date and account. Records are separated from each other with record separators. Each record ends with the carriage return and line feed characters.

The **batch record** is specific to the account and entry date. It is formed when the agent's code, account number or the file creation date changes.

Field	Data	Required	Format	Length	Contents
1	Record code	Y	N	1	0
2	File creation date	Y	N	6	YYMMDD
3	Printout starting time	Y	N	4	HHMM
4	Dispatching bank	Y	AN	2	1 or 2 and space = Nordea
5	Agent's code	Y	AN	9	
6	Currency code	Y	AN	1	1 = EUR
7	Account holder's ID	Y	AN	9	
8	Reserved		AN	58	zeros
	TOTAL			90	

The **transaction record** contains the data on a single payment.

Field 1: the values of record code are 3 = reference payment, 7 = reference debit. The use of reference debit must be agreed separately.

Field 5: The filing code provided by the bank forming the transaction. The code may be 35 characters long at maximum and it cannot be reported in full length. The filing code is therefore cut from the end to contain 16 characters.

Field 7: Payer's abbreviated name.

Field 9: Source of the payer's name; its values are: A = customer, J = bank's register based on the account number, J = keyed in at the bank's branch.

Field 11: Adjustment code; its values are: 0 = normal transaction, 1 = correction.

Field 12: The payment's transmission method; its values are: A = from customer in electronic format or by self-service, J = formed in the bank's system, K = recorded by a bank officer at a branch.

Field	Data	Required	Format	Length	Contents
1	Record code	Y	N	1	3, 7
2	Account number	Y	N	14	
3	Entry date	Y	N	6	YYMMDD
4	Payment date	Y	N	6	YYMMDD
5	Filing code	Y	AN	16	
6	Reference	Y	N	20	
7	Payer's name abbreviation	Y	AN	12	
8	Currency code	Y	AN	1	1 = EUR
9	Source of name		AN	1	
10	Amount	Y	N	10	8 integers + 2 decimals
11	Adjustment code	Y	N	1	
12	Transmission method		AN	1	
13	Feedback code		AN	1	
	TOTAL			90	

The **sum record** contains the total amounts and numbers of preceding payments and their corrections.

Field	Data	Required	Format	Length	Contents
1	Record code	Y	N	1	9
2	Number of transactions	Y	N	6	
3	Amount of payments	Y	N	11	
4	Number of corrections		N	6	
5	Amount of corrections		N	11	
6	Not in use		N	6	
7	Not in use		N	11	
8	Reserved		AN	38	zeros
9	TOTAL			90	