

Casper

SWIFT USER GUIDE

Information document for Casper
clients using the SWIFT network

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INTRODUCTION

Since October 2020, the National Bank of Belgium (NBB) is using a highly secured application named Casper.

As the SWIFT messages are treated automatically by Casper, a correct use of standards will facilitate a straight through processing.

This user guide provides information on the standards used in the messages exchanged between Casper and its clients connected through the SWIFT network.

Readers are nevertheless advised to consult the SWIFT User Handbook for full information on the general standards defined by SWIFT.

The user guide first describes the environments that will be used for working with the application. In the next chapter, the formatting of MT messages will be discussed. Some information on the future shift from MT to MX messages will be provided in the third chapter.

1 ENVIRONMENTS

1.1 TESTING

User Acceptance Testing (UAT) is the final phase of any software development life cycle before the go-live stage in production.

At this stage, clients are asked to complete the acceptance tests as realistically as possible in order to ensure that all functions work as expected: particularly those concerning the processing of SWIFT messages and payments with the corresponding mailing and reporting.

By testing and discovering the functionalities, clients will get used to the new application. This will also give an indication whether their internal processes are compatible with the new application or which adjustments should be provided by them in order to be so.

This user guide provides the information for clients that are communicating with Casper through SWIFT messages.

Please note that the BIC to address MTs in the UAT environment is different from the production BIC. The BIC to be used in UAT is NBBEBEB0203.

1.2 PRODUCTION

The production environment is the live environment with which users directly interact after the go-live of Casper.

The BIC to address MTs in the production environment is NBBEBEBB203.

2 MT MESSAGES

Casper interacts with its clients through SWIFT messages in either ISO15022 format (MT messages) or ISO20022 format (MX messages).

In this guide, the messages received by Casper (from its clients) will be called “incoming” messages while the messages sent from Casper (to its clients) are called the “outgoing” messages.

If duly formatted, the incoming SWIFT payment messages¹ will automatically generate payments. The accounts to be debited and credited are derived from the incoming message information fields.

Basically, the information for the account to be debited will be taken from field 53B and the first BIC through several fields -either 56,57,58,59 (following the SWIFT validation rules)- is used to determine the credit account.

Note that since March,20 2023, **BIC11 must be used**. BIC8 will not be accepted anymore.

Important to note is that field 32A is a key field in the payment message and for Casper:

- the value date must be a working day between the system date and 30 calendar days later;
- the currency must be “EUR”.

Once the SWIFT message has passed the validation tests, a payment will be created and processed in Casper. In the event of a negative outcome, the message will be rejected and an MT199 or MT299 -depending on the incoming message type- will be returned by Casper to the sender of the rejected message.

Please also note that the end of day procedures of Casper will reject payments that are still waiting to be executed on that specific date (= value date in field 32A) because of an insufficient balance on the account(s) to be debited.

¹ Payment messages: MT103, MT200 and MT202

2.1 SWIFT MESSAGES SENT TO CASPER BY THE CLIENTS (INCOMING)

Some information on the general structure of the SWIFT message will be provided before entering into the details of the payment blocks (depending on the message type). Then, the creation of payments in Casper will be discussed and lastly some information on other (non payments) types of SWIFT messages will be provided.

2.1.1 GENERAL INFORMATION ON MT STRUCTURE

The main blocks of the messages that clients will send to Casper are:

Basic Header	
Block Identifier	Format
1:	<i>Receiver's BIC</i> = NBBE B EBX203 ²

Application Header	
Block Identifier	Format
2:	<i>Sender's BIC</i> = your BIC ³

User Header	
Block Identifier	Format
3:	<u>{113} Banking priority</u> Casper won't prioritise messages, this tag will not be taken into account <u>{119} Validation flag (STP tag)</u> Casper does not differentiate <i>STP</i> and <i>non-STP</i> messages <u>{121} Unique end-to-end transaction reference</u> This is a mandatory tag

Payments	
Block Identifier	Format
4:	This block contains all the information related to the payment, depending on the message type (MT); the structure will be described in the next point

Trailer	
Block Identifier	Format
5:	The PDM 'Possible duplicate message' and PDE 'Possible duplicate emission' will not be treated straight through by Casper; a manual intervention by the NBB staff is required.

² Note that position 8 of the BIC depends on the environment (cfr.point 2)

³ Idem

2.1.2 SWIFT PAYMENT MESSAGES

The SWIFT messages should be formatted according to the SWIFT standards. In addition, if the MT messages meet the Casper standards described in the tables below, they will generate payments in a fully automatic way. The use of the main tags in the payment block (4:) will be illustrated with some examples.

If Casper cannot determine the account to debit or to credit, the incoming SWIFT message will automatically be rejected.

2.1.2.1 MT103: Single customer credit transfer

Although there are two kinds of MT103: with or without STP (identifiable by tag 119), Casper will not differentiate between them. On the credit side Casper will consider three credit fields, two of which must be present. Please note that there are two options for the use of the mandatory field 59.

	Field		Presence	Option	BIC11	Account	Name
DEBIT	53	Sender's Correspondent	Mandatory	B	Forbidden	Mandatory BExx10000xxxxxxx	
	56	Intermediary Institution	Optional	A	Mandatory	Forbidden	
CREDIT	57	Account with Institution	Mandatory	A	Mandatory	Optional	
	59	Beneficiary Customer	Mandatory	A F or empty	Mandatory	Mandatory Mandatory	

Example 1: Beneficiary in Casper

```

:20:190904-000345951
:23B:CRED
:32A:190904EUR1523509,85
:33B:EUR1523509,85
:50A:/BE00100003456789
AAAABEBBXXX
:53B:/BE00100009876543
:57A: NBBEBEBB203
:59A:/BE00100001234567
AAAABEBBXXX
:70:LEVEL 4/9/2019
:71A:SHA

```

Example 2: Beneficiary in TARGET2

:20:190904-000345951
:23B:CRED
:32A:190904EUR1523509,85
:33B:EUR1523509,85
:50A:/BE00100003456789
AAAABEBBXXX
:53B:/BE00100009876543
:56A:CCCCBEBBXXX
:57A:NNNNL22XXX
:59:/NL00DDDD0123456789
N-Company
:70:LEVEL 4/9/2019
:71A:SHA

2.1.2.2 MT200: Financial institution transfer for own account

There are two ways to fill in the MT200 information. The option chosen determines how Casper will derive the credit account from the information in the MT200:

Option A

	Field		Presence	Option	BIC11	Account
CREDIT	53	Sender's Correspondent	Mandatory	B	Forbidden	Mandatory BExx10000xxxxxxx
	56	Intermediary	Optional	A	Mandatory	Forbidden
DEBIT	57	Account with Institution	Mandatory	A	Mandatory	Optional

OR

Option B

	Field		Presence	Option	BIC11	Account
CREDIT	53	Sender's Correspondent	Mandatory	B	Forbidden	Mandatory BExx10000xxxxxxx
	56	Intermediary	Forbidden			
DEBIT	57	Account with Institution	Mandatory	A	Mandatory NBBEBEBB203	Mandatory BExx10000xxxxxxx ⁴

Example 1: Beneficiary in TARGET2

```

:20:B9I05REPGJ822EBS
:32A:190905EUR22246,77
:53B:/BE00100009876543
:56A:CCCCBEBBXXX
:57A:BBBBBE22XXX

```

Example 2: Beneficiary in Casper

```

:20:B9I05REPGJ822EBS
:32A:190905EUR22246,77
:53B:/BE00100009876543
:57A:/BE00100001234567
NBBEBEBB203

```

⁴ Must be an active account in Casper

2.1.2.3 MT202: General financial institution transfer

	Field		Presence	Option	BIC11	Account
DEBIT	53	Sender's Correspondent	Mandatory	B	Forbidden	Mandatory BExx10000xxxxxxx
	56	Intermediary	Optional	A	Mandatory	Forbidden
CREDIT	57	Account with Institution	Optional	A	Mandatory	Optional
	58	Beneficiary Institution	Mandatory	A	Mandatory	Optional

Example 1: Beneficiary in Casper

```

:20:0028134000520778
:21:259251
:32A:190906EUR15471141,77
:52A: CCCCBEBBXXX
:53B:/BE99100001234567
:57A: NBBEBEBB203
:58A:/BE00DDDD012345689
DDDDEEEXXX

```

Example 2: Beneficiary in TARGET2

```

:20:0028134000520778
:21:259251
:32A:190906EUR15471141,77
:52A: CCCCBEBBXXX
:53B:/BE00100009876543
:56A: EEEEEBEBBXXX
:57A: NNNNLL22XXX
:58A:/ NL00DDDD012345689
DDDNL2UXXX

```

2.1.3 CREATION OF CASPER PAYMENTS

2.1.3.1 Debit Account

The account to be debited will be determined on the basis of specific criteria:

- field 53B-IBAN format following the CASPER account's structure BExx10000xxxxxxx;
- the sender's BIC11.

Casper will check that the (IBAN) account in field 53B is linked to the sender's BIC in its static data. If the account to debit cannot be determined, or doesn't belong to the sender of the message, the incoming SWIFT message will be rejected.

2.1.3.2 Beneficiary

To determine the counterparty to credit, the application will, depending on the message type, extract from fields 56-57-58-59:

- the first active Casper IBAN if there is one;
- the first BIC11 which is not NBBEBEBBXXX⁵ if there is one.

2.1.3.3 Additional information

It is strongly recommended to use the SWIFT standard codes in order to avoid any manual intervention that would be causing a delay in the automated systems.

Please also note that Casper will not treat field 72 using code word /REC/. So, if present in the incoming message, it will not be conveyed to the outgoing message.

Instead, clients may use the code word /BNF/ which will be sent to the beneficiary of the payment. When this code is present in field 72 of the incoming message, the codeword and its related details will be passed on unchanged in field 72 of the subsequent message in the payment chain.

⁵ Note that position 8 of the BIC depends on the environment (cfr.point 2)

2.1.4 OTHER TYPES OF SWIFT MESSAGES

All other types of SWIFT messages (not described above) will not be treated automatically by Casper, but will require a manual intervention by the NBB staff (in 4 eyes).

The timely execution of these messages can therefore not be guaranteed and will depend on both staff availability and system time constraints:

- MTn92: - MT192: request for cancellation of MT103
- MT292: request for cancellation of MT202

The cancellation of the payment cannot be guaranteed as the payment may already have been executed at the moment of treatment of the cancellation request message.

- MT210: the follow-up of the message cannot be guaranteed: an incoming SWIFT payment message that contains errors will not be corrected based on the content of a corresponding MT210 message;
The NBB will neither ensure the receipt of funds announced by customers via the MT210, which could lead to the non-execution (rejection) of payments waiting for sufficient funds at the end of the day (cfr. point 2, last §).

2.2 SWIFT MESSAGES RECEIVED FROM CASPER BY CLIENTS (OUTGOING)

Casper will receive MT103 and MT202 messages from TARGET2 for its clients. These will be translated into Casper payments (cfr. point 2.1.3) and booked on the Casper account of the client. For a specific type of client, an outgoing SWIFT payment message will be created, based on the executed Casper payment and the information in the original SWIFT message (coming from TARGET2). These payment messages are described under point 2.2.1.

Clients may ask for a MT900 *confirmation of debit* and a MT910 *confirmation of credit* in order to be notified of movements on their account(s) in Casper.

Casper clients can also receive MT950 *Statement* and MTn99 *Free Format* SWIFT messages.

Please note that a message will not necessarily contain all the fields mentioned in the tables, as some fields are optional. Examples of block 4: will be given for each message type.

2.2.1 SWIFT PAYMENT MESSAGES

2.2.1.1 MT103 Single customer credit transfer

Fields		Presence	Option	Casper specification
Sender				NBBEBEBB203
Receiver				Your BIC
Tag 119		Optional		STP or empty
Field 20	Sender's reference	Mandatory		Casper payment reference ⁶
Field 23	Bank operation code	Mandatory	B	"CRED" if manual input Reference received from TARGET
Field 23	Instruction code	Optional	E	
Field 32	Value Date Currency Interbank Settled Amount	Mandatory	A	Booking date Currency <i>EUR</i> Amount of the payment
Field 33	Currency Instructed Amount	Optional	B	Original currency and amount
Field 36	Exchange rate	Optional		
Field 50	Ordering customer	One is Mandatory	F K	<i>Party identifier/number/name and address</i> <i>Debit account/ account's name</i>
Field 52	Ordering institution	Optional	A	NBBEBEBB203
Field 53	Sender's correspondent	Mandatory	B	/C/your account
Field 56	Intermediary institution	Optional	A	<i>Party identifier/ identifier code</i>
Field 57	Account with institution	Optional	A	<i>Party identifier/ identifier code</i>
Field 59	Beneficiary customer	One is Mandatory	F	<i>Account/name and address</i> <i>Account/number/name and address</i>
Field 70	Remittance Information	Optional		Communication of the payment
Field 71	Details of charges	Mandatory	A	/SHA/BEN/OUR/
	Sender's charges	Optional	F	
	Receiver's charges	Optional	G	
Field 72	Sender to Receiver Information	Optional		/INS/sender of SWIFT msg/ ⁷
Field 77	Regulatory reporting	Optional	B	

⁶ Note: the structure of the Casper reference (YYMMDD12345678) is different from the reference in RECOUR

⁷ Field 72 of a message coming from TARGET2 will be reproduced in the message going to the client.

Example:

```
:20:YYMMDD12345678
:23B:CRED
:32A:190916EUR80000,
:33B:EUR80000,
:50K:/BECD123456789012
A-Company
Rotterdamstraat 92
ANTWERPEN
:52A:NBBEBEBB203
:53B:/C/BE00100009876543
:59:/BECD98765432108
B-Company
Brugstraat 31
9000 GENT
:70:+++001/0022/00333+++
:71A:SHA
:72:/INS/NBBEBEBB203
//6019259D2B400001
```

2.2.1.2 MT202 General financial institution transfer

Fields		Presence	Option	Casper specification
Sender				NBBEBEBB203
Receiver				Your BIC
Field 20	Transaction reference number	Mandatory		Casper payment reference
Field 21	Related reference	Mandatory		
Field 32	Value Date Currency Code Amount	Mandatory	A	Booking date Currency <i>EUR</i> Amount of the payment
Field 52	Ordering institution	Optional	A	NBBEBEBB203
Field 53	Sender's correspondent	Mandatory	B	/C/ your account
Field 56	Intermediary	Optional	A	<i>Party identifier/ identifier code</i>
Field 57	Account with institution	Optional	A	<i>Party identifier/ identifier code</i>
Field 58	Beneficiary institution	Mandatory	A	Sender of the SWIFT msg
Field 72	Sender to receiver information	Optional		<i>/INS/sender of SWIFT msg/</i>

Example

```

:20:YYMMDD12345678
:21:192701130
:32A:190916EUR2111,
:52A:NBBEBEBB203
:53B:/C/BE99100001234567
:58A:AAAABEBBXXX
:72:/BNF/ATTN:MR.HARRYWILLIAM
/INS/NBBEBEBB203/H01909105156762

```

2.2.2 OTHER TYPES OF SWIFT MESSAGES

2.2.2.1 MT900 Confirmation of debit

Fields		Presence	Option	Casper specification
Sender				NBBEBEBB203
Receiver				Your BIC
Field 20	Transaction reference number	Mandatory		Casper payment reference
Field 21	Related reference	Mandatory		If it is a Casper invoice: <i>"Invoice Casper"</i> If it is a settlement of interest: <i>"Interest"</i> If it is a user input: <i>reference of the ordering customer</i> or <i>"NONREF"</i>
Field 25	Account Identification	Mandatory		Your account
Field 32	Value Date Currency Code Amount	Mandatory	A	Booking date Currency <i>EUR</i> Amount of the payment
Field 52	Ordering institution	Optional	A	BIC ordering institution
Field 72	Sender to receiver information	Optional		

Example

```

:20:YYMMDD12345678
:21:260124
:25:BE99100001234567
:32A:190919EUR4500000,62
:52A:AAAABEBBXXX
:72:0/N REF: 260124
U/V REF: ECP-CAP-D53940
/REC/ EUR 4500000,62

```


2.2.2.2 MT910 Confirmation of credit

Fields		Presence	Option	Casper specification
Sender				NBBEBEBB203
Receiver				Your BIC
Field 20	Transaction reference number	Mandatory		Casper payment reference
Field 21	Related reference	Mandatory		If it is a Casper invoice: " <i>Credit note</i> "
				If it is a settlement of interest: " <i>Interest</i> "
				If it is a user input: <i>reference of the ordering customer</i> or " <i>NONREF</i> "
Field 25	Account identification	Mandatory		Your account
Field 32	Value Date Currency Code Amount	Mandatory	A	Booking date Currency <i>EUR</i> Amount of the payment
Field 50	Ordering customer	Only one must be mandatory	K	Debit account/ name/ address
Field 52	Ordering institution		A	BIC ordering institution
Field 72	Sender to receiver information	Optional		First two lines of field 50 and field 70 from SWIFT msg

Example

```

:20:YYMMDD12345678
:21:NONREF
:25:BE99100001234567
:32A:190916EUR2000000,
:52A:NBBEBEBB203
:72:/REC/O//BE98100001234578
//A-COMPANY
//BRUSSELS
TFT DU 550603 AU 550101
TRF 634.645

```

2.2.2.3 MT950 Statement

Statement fields depend on the type of payment. Users are advised to consult the “SWIFT Knowledge Center”⁸ which provides more precise details about format specifications, validation rules, usage rules and field specification for each MT message.

Fields		Presence	Option	Casper specification
Field 20	Transaction Reference Number	Mandatory		Casper payment reference
Field 25	Account Identification	Mandatory		Your account
Field 28	Statement Number/ Sequence number	Mandatory	C	
Field 60	Opening balance	Mandatory	F	Start balance
Field 61	Statements line	Mandatory		
	<i>Value date</i>			<i>Booking date (6x – yymmdd)</i>
	<i>Entry date</i>			<i>Booking date (4x – mmdd)</i>
	<i>D or C</i>			<i>Debit or Credit, following the type of payment</i>
	<i>Amount</i>			<i>Amount</i>
	<i>Transaction type</i>			<i>Following the type of payment</i>
	<i>reference account owner</i>			<i>Following the type of payment</i>
	<i>reference acc. serv. institution</i>			<i>Casper payment reference</i>
	<i>supplementary details</i>			<i>Depends on the type of payment</i>
Field 62	Closing balance (Booked funds)	Mandatory	M or F	Intermediary or EOD balance (day D)

Example

```

:20:YYMMDD12345678
:25:BE001000009876543
:28C:6/1
:60F:C200303EUR99986174,86
:61:2003040304D1382,72NTRFN/A//20030400026382
Daily Interest on deposit
:62F:C200304EUR99984792,14

```

⁸ <https://www2.swift.com/knowledgecentre/products/Standards%20MT>

<u>Transaction type</u>	<u>Initial operation</u>	<u>Reference account owner</u>	<u>Supplementary details</u>	
NTRF	Invoice Casper/Interest/ProRata	Reference for MT 9x0	Communication	
			Communication + « ProRata »	
	Stamp tax	Reference for MT 9x0	Communication + « Stamp Tax »	
	Other operation	Your reference	Communication	
“NONREF”		Original message Ref. <RmtInf><Ustrd>... </Ustrd></RmtInf>		
S103	Customer transfer	“NONREF”	Communication + for the D-operation: beneficiary	
			Communication + For DB operation: beneficiary	Communication + For CR operation: DB account name
	TRN of initial SWIFT	Field 70 + DB operation: beneficiary	Field 70 + CR operation: DB account name	
		/INS/Field 50 (name or Bic) + field 70		
S200	Financial institution transfer	Field 20	Communication	
S202	Financial transfer	Field 20	Communication For DB operation: field 58	Communication For CR operation: DB account name
		Field 20 + 21	“Liquidity transfer T2S”	
		Related reference	“Liquidity transfer T2S”	
		Related reference	Communication	
		Field 20	/INS/Field 52 (A or D) or Sender + field 72 Or INS/SENDER	
		Field 20	Return reason code + Error Field	
S204	Direct debit	Related reference	Communication	
			Communication + « Stamp Tax »	
			Communication + BIC debited on T2	
S900	Confirmation of debit	Field 20	Communication	
S910	Confirmation of credit	Field 20	Communication	

2.2.2.4 MTn99 Free Format Messages

2.2.2.4.1 MT199 and MT299

A SWIFT message received by Casper (from one of its clients) that does not comply with the validation rules, will be rejected. An MT199 or MT299 message (depending on the original payment type) will be sent to the client to inform him that his payment message has been rejected.

Fields		Presence	Casper specification
Field 20	Transaction Reference Number	Mandatory	/
Field 21	Related reference	Optional	/
Field 79	Narrative	Mandatory	/

Example

```
:20:YYMMDD12345678
:21:262125
:79:Your MT103DD. 2019-10-25T07:20:27.908TRN. 262125
does not meet the validation rules of Casper and has been
rejected.
Kind regards,
Payments and securities
```

2.2.2.4.2 MT999 End of year

Clients will receive a MT999 message containing the balance of their account on 31 December including the date of the last operation of that year.

```
ON 31/12/YY, THE BALANCE OF ACCOUNT
BEXX 1000 XXXX XXXX
IN THE NAME OF (-ACCOUNT NAME-)
AMOUNTS TO : X EUR.
THE LAST OPERATION INCLUDED IN THIS BALANCE
IS DATED dd/mm/yy.
.
SHOULD YOU HAVE ANY REMARKS REGARDING
THE ABOVE-MENTIONED DATA, OR MORE IN GENERAL,
SHOULD YOU HAVE ANY QUESTIONS ABOUT YOUR
ACCOUNT WITH THE NATIONAL BANK, DO NOT HESITATE
TO CONTACT US.
ADDRESS :
NATIONAL BANK OF BELGIUM
PAYMENTS AND SECURITIES,
BOULEVARD DE BERLAIMONT 14,
1000 BRUSSELS.
TEL.: +32 (0)2 221 39 11
SWIFT : NBBEBEBB203
```

3 MX MESSAGES

The Eurosystem T2-T2S consolidation project went live on 23 03 2023.

All participants will then be asked to communicate with TARGET2 with ISO20022-formatted messages (MX). As a TARGET2 participant, the NBB will send and receive -via Casper- MX messages to and from TARGET2.

As SWIFT is not going to abolish the MT messages immediately (this is foreseen in 2025), the use of the MT format will co-exist with the MX format for some time. However, clients are urged to make the transition to the MX format as soon as possible. Being more extensive than the MT messages, the transition of original MX messages (received from TARGET2) into MT messages (sent to Casper clients) will possibly lead to a loss of information in these MT messages.

More detailed information concerning this topic will be made available for the Casper clients later on.