

THE *Berlin* GROUP

A EUROPEAN STANDARDS INITIATIVE



## openFinance API Framework

### Data Dictionary

Version 2.3.1

11 December 2025

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## 1 Introduction

### 1.1 From Core XS2A Interface to openFinance API

With [PSD2] the European Union has published a directive on payment services in the internal market. Among others [PSD2] contains regulations on services to be operated by so called Third Party Payment Service Providers (TPP) on behalf of a Payment Service User (PSU). These services are

- Payment Initiation Service (PIS) to be operated by a Payment Initiation Service Provider (PISP) TPP as defined by article 66 of [PSD2],
- Account Information Service (AIS) to be operated by an Account Information Service Provider (AISP) TPP as defined by article 67 of [PSD2], and
- Confirmation on the Availability of Funds Service (FCS) to be used by a Payment Instrument Issuing Service Provider (PIISP) TPP as defined by article 65 of [PSD2].

To implement these services (subject to PSU consent) a TPP needs to access the account of the PSU. The account is managed by another PSP called the Account Servicing Payment Service Provider (ASPSP). To support the TPP in accessing the accounts managed by an ASPSP, each ASPSP has to provide an "access to account interface" (XS2A interface). Such an interface has been defined in the Berlin Group NextGenPSD2 XS2A Framework.

This XS2A Framework is now broadened to extended services and developed into a Version 2 API family. This interface is addressed in the following as **openFinance API**. This openFinance API differs from the XS2A interface in several dimensions:

- The extended services might not rely anymore solely on PSD2.
- Other important regulatory frameworks which apply are e.g. GDPR.
- The openFinance API can address different types of **API Clients** as access clients, e.g. TPPs regulated by an NCA according to PSD2, or corporates not regulated by an NCA.
- The extended services might require contracts between the access client and the ASPSP.
- While the client identification at the openFinance API can still be based on eIDAS certificates, they do not need to be necessarily PSD2 compliant eIDAS certificates.
- The extended services might require e.g. the direct involvement of the access client's bank for KYC processes.

**Note:** The notions of API Client and ASPSP are used because of the technical standardisation perspective of the openFinance API. These terms are analogous to "asset broker" and "asset holder" resp. in the work of the ERPB on a SEPA API access scheme.

**Note:** In implementations, the API services of several ASPSPs might be provided on an aggregation platform. Such platforms will be addressed in the openFinance API Framework as "API provider".

The following account access methods are covered by this framework:

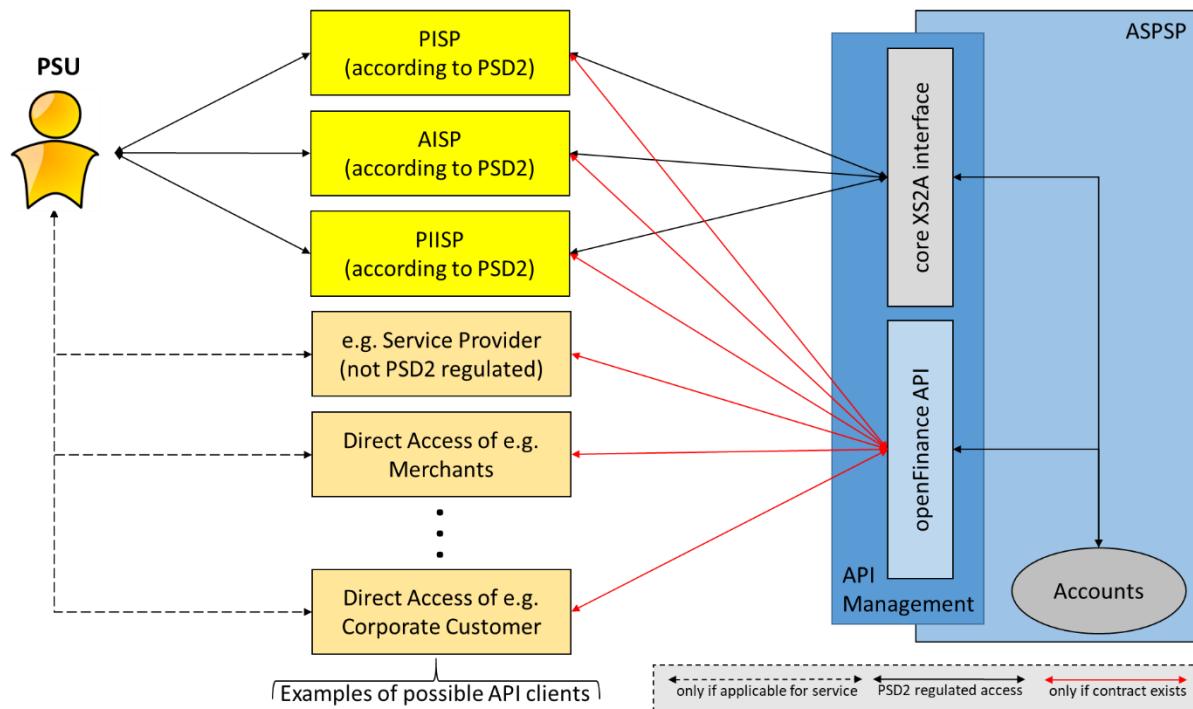


Figure 1: Core XS2A API and openFinance API

## 1.2 Data Dictionary for the openFinance API Framework

This document specifies the complex data structure to support the core XS2A API Services as well as the consent API specified for the openFinance API Framework. Also first V2 Premium Services are already covered.

Future V2 Premium Services will rely on this data dictionary as well, but might also define their own set of complex data structures which are not supported yet in the current version of the data dictionary.

## 1.3 Document Structure

This document covers complex data types in Section 2 and code lists in Section 3.

## 1.4 Document History

Version	Change/Note	Approved
2.0	Initial version of data dictionary for the openFinance API Framework Version 2	05 October 2023 openFinance TF
2.1	Updating the dictionary for attributes from Extended Payment Services, Extended Account Information Services, RTP Services, Push AIS Services, Admin Services as well as Discovery Services.	08 February 2024 openFinance TF
2.2	Updates related to openFinance API Framework Release 2.1  Details of the changes are covered in section 5.1	31 July 2024 openFinance TF
2.2.1	Introducing new data attributes and codes for the Mandate API.  Updated Message Codes and some minor Errata  Details of the changes are covered in Section 5.2	21 October 2024 oFA TF
2.2.2	Introducing new attributes for extensions of the Discovery Services for new services  Introducing new data attributes for the new VOP Services and the Document Services.  Updated several code sets, some minor errata.  Addes some attributes in several Data Types used in Discovery Services to support new features from the openFinance API Release 2.1.  Details on the changes are covered in Section 5.3	16 December 2024 oFA TF

<b>Version</b>	<b>Change/Note</b>	<b>Approved</b>
2.2.3	<p>Added new data types and code lists for the new VOP Service and VOP integration into payment services.</p> <p>Added related attributes in the data types needed for the Discovery API</p> <p>Changed methodology of dash based attributes to lowerCamelCase for header parameters which are transported in the payload of the Discovery API.</p> <p>Errata</p> <p>Details of the changes are contained in Section 5.4</p>	24 January 2025 oFA TF
2.2.4	<p>Several new complex data types and code lists are added, which are needed for Extended Account Information Service – Account Statement (XAIS-STAT)</p> <p>Capital letters have been corrected in serval attributes.</p> <p>Details of the changes are included in Section <a href="#">5.5</a></p>	17 April 2025 oFA TF
2.2.5	<p>Several new complex data types are added for the purpose of providing solutions to the change requests 120 and 127, ie. supporting more account owner information in AIS and introducing "hybrid" address types in combinging address lines with structured address attributes.</p> <p>Structured status data model has been adapted to support better reference on original transaction information.</p> <p>Several errata.</p>	
2.2.6	Adusted some Mandate API related code lists to external ISO20022 code lists.	

<b>Version</b>	<b>Change/Note</b>	<b>Approved</b>
	Added originalEnd2EndId to the extended payment status data model.  Added some clarifications	
2.3	Adjusted the Standing Order Details  A detailed change log is contained in Section 5.8	31 October 2025
2.3.1	Added a new data type "Subscription Entry and Status", to enable the bank to show a subscription with all entries including the related entry status.  A detailed change log is contained in Section 5.9.	11 Dec 2025

**RFU:** Please note that the Berlin Group openFinance API Framework is still under constant development. Technical issues, which are already in discussion within the Berlin Group openFinance working structure are mentioned in this document by "RFU" indicating "Remark for Future" to make the reader aware of upcoming potential changes.

## 2 Complex Data Types

In the following constructed data types are defined as used within the openFinance API Framework.

**NOTE:** Some of the data models have been changed from Version 1.3.x to Version 2.x of the openFinance API Framework. All attributes, where changes in subabttributes applied, are marked by yellow colour.

**NOTE:** It is indicated below each data type, in which openFinance API Framework Implementation Guidelines the related data type is used in attributes of API requests and API responses on **first** level.

**NOTE:** The NISP project is a project platform to support NextGenPSD2 APIs and in future also openFinance APIs. This project platform had a.o. worked on an ASPSP testcase catalogue. This testcase catalogue is generic due to the potential variants of NextGenPSD2 APIs and so-called "Implementer Options" were defined for an ASPSP configuration spreadsheet to support derivation of test cases from the generic test case catalogue. During this derivation, the implementer options supported filtering the relevant test cases applicable to an implementation following the defined configuration. Since these Implementer Options are also used by ASPSP to partially document the PSD2 API implementations and since the NISP project has submitted some of the test case related work related to discovery services to the Berlin Group, the data types definded within the context of discovery services [oFA-Disc] below use "(IOx1, ..., xn)" in the attribute description column to indicate that the addressed attribute is related to NISP Implementer Option 1 to NISP Implementer Option n, where n>=1. In future versions, these references will be deleted.

### 2.1 Account Access

Attribute	Type	Condition	Description
payments	Array of Account Access Rights	{Or Optional	<p>Addressing required access rights to current accounts.</p> <p>The array may not be empty.</p>
cards	Array of Account Access Rights	Or Optional	<p>Addressing required access rights to single cards accounts. The array may not be empty.</p>
cardAccounts	Array of Account Access Rights	Or Optional	<p>Addressing required access rights to card reconciliation accounts.</p> <p>The array may not be empty.</p>

Attribute	Type	Condition	Description
savings	Array of Account Access Rights	Or Optional	<p>Addressing required access rights to saving accounts.</p> <p>The array may not be empty.</p>
loans	Array of Account Access Rights	Or Optional	<p>Addressing required access rights to loan accounts.</p> <p>The array may not be empty.</p>
securities	Array of Account Access Rights	Or Optional}	<p>Addressing required access rights to security accounts.</p> <p>The array may not be empty.</p>

This data type is used in [oFA-Con].

## 2.2 Account Access Rights

The account access rights as posted by the API Client.

Attribute	Type	Condition	Description
account	Account Reference	Conditional	Is mandated if the consentType equals "detailed", not supported otherwise
rights	List of Access Rights Codes	Mandatory	

This data type is used in [oFA-Con] and by this document.

## 2.3 Account Access Rights Extended

The account access rights as provided by the ASPSP.

Attribute	Type	Condition	Description
account	Account Reference	Conditional	Provided after customer authentication if not already submitted by the API Client itself.

Attribute	Type	Condition	Description
rights	List of Access Rights Codes	Mandatory	
_links	Links	Optional	A hyperlink to the endpoint of the related account category.

This data type is used in [oFA-Con] and by this document.

## 2.4 Account Access and Authorisation Rights

Attribute	Type	Condition	Description
account	Account Reference	Mandatory	
rights	Array of Access Right Codes	Mandatory	Defines the reading rights on the related account identified above.
Limits	Array of Limit	Optional	Defines the limits applicable only to this account.
paymentAuthorisations	Array of Product Rights	Optional	Defines authorisation related rights on level of dedicated payment products including specific limits.  Empty array, if no payment right is provided.
paymentCancellations	Array of Product Rights	Optional	Defines payment cancellation rights on level of dedicated payment products.  Empty array, if no payment cancellation right is provided.

This data type is used in [oFA-Disc].

## 2.5 Account Access and Authorisation Rights1

Attribute	Type	Condition	Description
account	Account Reference	Mandatory	

Attribute	Type	Condition	Description
rights	Array of Access Right Codes	Mandatory	
paymentAuthorisations	Array of Product Rights	Mandatory	Defines authorisation related rights on level of dedicated payment products including specific limits.

This data type is used in [oFA-Disc].

## 2.6 Account Access Extended

Attribute	Type	Condition	Description
payments	Array of Account Access Rights Extended	{Or Optional	Addressing required access rights to current accounts.  The array may not be empty.
cards	Array of Account Access Rights Extended	Or Optional	Addressing required access rights to card accounts. The accounts can be card reconciliation accounts as well as single credit cards, dependent of the AIS offer of the ASPSP.  The array may not be empty.
savings	Array of Account Access Rights Extended	Or Optional	Addressing required access rights to saving accounts.  The array may not be empty.
loans	Array of Account Access Rights Extended	Or Optional	Addressing required access rights to loan accounts.  The array may not be empty.
securities	Array of Account	Or	Addressing required access rights to security

Attribute	Type	Condition	Description
	Access Rights Extended	Optional}	accounts. The array may not be empty.

This data type is used in [oFA-Con].

## 2.7 Account Details

**Remark:** The ASPSP shall give at least one of the account reference identifiers listed as optional below.

Attribute	Type	Condition	Description
resourceId	Max70Text	Mandatory	This is the data element to be used in the path when retrieving data from a dedicated account.
iban	IBAN	Optional	IBAN of the account.
bban	BBAN	Optional	BBAN of the account. This data elements is used for payment accounts which have no IBAN.
msisdn	Max35Text	optional	An alias to access a payment account via a registered mobile phone number. This alias might be needed e.g. in the payment initiation services. . The support of this alias must be explicitly documented by the ASPSP for the corresponding API Calls.
other	Generic Account Identification	Conditional	An alias with a proprietary coding
currency	Currency Code	Mandatory	Account currency
ownerName	Max140Text	Optional	Name of the legal account owner. If there is more than one owner, then e.g. two names might be noted here.  For a corporate account, the corporate name is used for this attribute.

Attribute	Type	Condition	Description
			<p>Even if supported by the ASPSP, the provision of this field might depend on the fact whether an explicit consent to this specific additional account information has been given by the PSU.</p> <p><b>NOTE:</b> This attribute is deprecated for a later version.</p>
ownerNames	Array of Account Owner	Optional	<p>List of owner names together with a role, where applicable.</p> <p><b>NOTE:</b> This attribute is deprecated for a later version.</p>
owner	Account Owner	Optional	The party that legally owns the account.
owners	Array of Account Owner	Optional	List of account owners
name	Max70Text	Optional	Name of the account, as assigned by the ASPSP, in agreement with the account owner in order to provide an additional means of identification of the account.
displayName	Max70Text	Optional	Name of the account as defined by the PSU within online channels.
product	Max35Text	Optional	Product Name of the Bank for this account, proprietary definition
cashAccountType	Cash Account Type	Optional	ExternalCashAccountType1Code from ISO 20022
status	Account Status Code	Optional	Account status. If this field is not used, than the account is available in the sense of this specification.
bic	BICFI	Optional	The BIC associated to the account.
linkedAccounts	Max70Text	Optional	This data attribute is a field, where an ASPSP can name a cash account

Attribute	Type	Condition	Description
			associated to the described account, e.g. in case of a securities account or a card account.
usage	Max4 Text	Optional	Specifies the usage of the account - PRIV: private personal account - ORGA: professional account
details	Max500 Text	Optional	Specifications that might be provided by the ASPSP - characteristics of the account - characteristics of the relevant card
balances	Array of Balances	Conditional	
tariffs	Max1000Text	Optional	Currently only supported for securities accounts:  Text information on tariffs related to this securities account.
applicableFees	Array of Securities Account Fee	Optional	Currently only supported for securities accounts:  Array of elements, each representing one fee (rule) that is individually applicable for this Securities account. If, for example, an ASPSP applies a standard "managementFee" X, but the consumer negotiated a discount D, an element should represent (X-D), but neither X nor D.
interest	Array of Interest	Optional	Currently only supported for savings accounts and loan accounts:  A set of interest rates associated to this account, e.g. interests for savings or credits.
relatedDates	Account related Dates	Optional	Currently only supported for savings accounts and loan accounts:

Attribute	Type	Condition	Description
			Dates related to this account, e.g. start Date of a loan in case of a loan account.
collateralsInvolved	Boolean	Optional	<p>Currently only supported for loan accounts:</p> <p>Is set to true if a collateral is involved securing the loan (e.g. security deposit, physical collaterals like houses, cars). More information might be provided under the "details" attribute.</p>
guaranteeInvolved	Boolean	Optional	<p>Currently only supported for loan accounts:</p> <p>Is set to true in case of specific collaterals where a guarantee of payment of the loan is given by a different person.</p>
_links	Links	Optional	<p>Links to the account, which can be directly used for retrieving account information from this dedicated account.</p> <p>Links to "balances" and/or "transactions"</p> <p>These links are only supported, when the corresponding consent has been already granted.</p>

This data type is used in [oFA-IG-Com], [oFA-IG-XAIS].

## 2.8 Account Information Indicator

Attribute	Type	Condition	Description
messageNameId	Max35Text	Optional	Specifies the message name identifier of the message that will be used to provide additional details.
messageId	Max35Text	Optional	Specifies the identification of the message that will be used to provide additional details.

## 2.9 Account Interest

Attribute	Type	Condition	Description
typeCode	Interest Type Code	{Or Optional}	INDY for Intraday interest OVRN Overnight for overnight interest as the only permitted codes.
typeProprietary	Max35Text	Or Optional}	
rate	Array of Rate	Optional	
fromDateTime	ISODate Time	Optional	
toDateTime	ISODate Time	Optional	
reason	Max35Text	Optional	specifies the reason for the interest
tax	Tax	Optional	

### Example

```
"interest": [
    {"type": "OVRN",
     "rate": [
         {"typePercentage": 5.2,
          "validityRange":
              {"toAmount": {
                  "boundaryAmount": {"currency": "EUR", "amount": "-10.000"}
                  "included": false}
              },
              {"typePercentage": 4.2,
               "validityRange": "fromToAmount": {
                   "fromAmount": {
                       "boundaryAmount": {"currency": "EUR", "amount": "-10.000"},
                       "included": true}
                   "toAmount": {
                       "boundaryAmounts": {"currency": "EUR", "amount": "0"},
                       "included": false}
               }
           }
       ]
   }
]
```

]

## 2.10 Account Owner

Attribute	Type	Condition	Description
name	Max70Text	Mandatory	Account owner name
role	Max35Text	Optional	The following proprietary codes are used:  "owner", "legalRepresentative", "authorisedUser"
postalAddress	Postal Address	Optional	Information that locates and identifies a specific address, as defined by postal services.
identification	Party Identification	Optional	Unique and unambiguous identification of a party
countryOfResidence	Country Code	Optional	Country in which a person resides. In case of a company, it is the country from which the affairs of that company are directed.  <b>Constraints:</b>  The code is checked against the list of country names obtained from the United Nations (ISO 3166 Alpha-2 code).
contactDetails	Contact Details	Optional	Set of elements used to indicated how to contact the party.

This data type is used in [oFA-IG-Com].

## 2.11 Account Reference

This type is containing any account identification which can be used on payload-level to address specific accounts. The ASPSP will document which account reference type it will support. Exactly one of the attributes defined as "conditional" shall be used.

**Remark:** The currency of the account is needed, where the currency is an account characteristic identifying certain sub-accounts under one external identifier like an IBAN. These sub-accounts are separated accounts from a legal point of view and have separated balances, transactions etc.

Attribute	Type	Condition	Description
iban	IBAN	Conditional	
bban	BBAN	Conditional	This data elements is used for payment accounts which have no IBAN.
pan	Max35Text	Conditional	Primary Account Number (PAN) of a card, can be tokenised by the ASPSP due to PCI DSS requirements.
maskedPan	Max35Text	Conditional	Primary Account Number (PAN) of a card in a masked form.
msisdn	Max35Text	Conditional	An alias to access a payment account via a registered mobile phone number.
other	Generic Account Identification	Conditional	An alias with a proprietary coding
typeCode	Cash Account Type	{Or - Optional}	Remark: Shall not be used in the consent model, since account category provides enough information for the ASPSP.
typeProprietary	Max35Text	Or – Optional}	Remark: Shall not be used in the consent model, since account category provides enough information for the ASPSP.
currency	Currency Code	Optional	ISO 4217 Alpha 3 currency code
proxy	Proxy Account Identification	Conditional	
name	Max70Text	Optional	Name of the account

Attribute	Type	Condition	Description
owner	Party Description2	Optional	
servicer	Financial Institution Identification	Optional	

### Example

```
"account": {
    "iban": "DE62210500001234567890",
    "typeCode": "CACC",
    "currency": "EUR",
    "owner": {
        "name": "Name Kontoinhaber",
        "postalAddress": {
            "streetName": "Schlossallee",
            "postCode": "53113",
            "townName": "Bonn"
        }
    }
}
```

This data type is used in [oFA-IG-Com],[oFA-PFSM]. [oFA -IG-PAIS], [oFA-IG-VOP].

## 2.12 Account Reference1

Attribute	Type	Condition	Description
iban	IBAN	Conditional	
bban	BBAN	Conditional	This data element is used for payment accounts which have no IBAN.
pan	Max35Text	Conditional	Primary Account Number (PAN) of a card, can be tokenised by the ASPSP due to PCI DSS requirements.
maskedPan	Max35Text	Conditional	Primary Account Number (PAN) of a card in a masked form.
currency	Currency Code	Optional	ISO 4217 Alpha 3 currency code

This data type is used in [oFA-PFSM].

## 2.13 Account Reference2

Attribute	Type	Condition	Description
iban	IBAN	Mandatory	
currency	Currency Code	Optional	ISO 4217 Alpha 3 currency code

## 2.14 Account Reference3

Attribute	Type	Condition	Description
iban	IBAN	Conditional	
bban	BBAN	Conditional	This data element is used for payment accounts which have no IBAN.
other	Generic Account Identification	Conditional	An alias with a proprietary coding
currency	Currency Code	optional	ISO 4217 Alpha 3 currency code

This data type is used in [oFA-PFSM].

## 2.15 Account Reference4

Attribute	Type	Condition	Description
iban	IBAN	Optional	
other	Generic Account Identification	Optional	

## 2.16 Account related Dates

Attribute	Type	Condition	Description
contractStartDate	ISODate	Optional	Start of the account contract.
contractEndDate	ISODate	Optional	End of the account contract.
contractAvailabilityDate	ISODate	Optional	Next Date where money can be taken off a saving account without loss of interest, if initiated now (in case of a saving account).  Next Date where a loan can be fully repaid without any extra fee.

## 2.17 Account Report

Attribute	Type	Condition	Description
booked	Array of transactions	Conditional	Shall be contained if bookingStatus parameter is set to "booked", "both" or "all".
pending	Array of transactions	Optional	Not contained if the bookingStatus parameter is set to "booked" or "information".
information	Array of transactions	Optional	Only contained if the bookingStatus is set to "information" or "all" and if supported by ASPSP.
_links	Links	Mandatory	The following links might be used within this context: <ul style="list-style-type: none"> <li>• account (mandatory)</li> <li>• first (optional)</li> <li>• next (optional)</li> <li>• previous (optional)</li> <li>• last (optional)</li> </ul>

This data type is used in [oFA-IG-Com].

## 2.18 Account Resource Reference

Attribute	Type	Condition	Description
resourceId	UUID	Conditional	To be used in authorisation processes, when updating a resource by an account.

This data type is used in [oFA-PFSM]

## 2.19 Accrued Interest

Represents the accrued interest by a securities position:

Attribute	Type	Condition	Description
daysAccrued	Number	Optional	Specifies the number of days used for calculating the accrued interest amount.
amounts	Array of Amount	Optional	Amount of the accrued interest. Each item represents the same monetary value in different currencies, e.g. account currency, currency of the security's denomination.

## 2.20 Additional Information Indicator

Attribute	Type	Condition	Description
messageNameIdentification	Max35Text	Optional	Specifies the message name identifier of the message that will be used to provide additional details.
messageIdentification	Max35Text	Optional	Specifies the identification of the message that will be used to provide additional details.

## 2.21 Additional Party Information

Attribute	Type	Condition	Description
tradeName	Max70Text	Optional	Trade name of the related party. For display to the PSU only.
merchantCategoryCode	Merchant Category Code	Optional	Merchant Category Code as assigned by ISO:
logoUrl	Max2048 Text	Optional	A hyperlink to the logo of the party.
geoLocation	GEO Location	Optional	
merchant Logo	String	n.a.	Base 64 coded graphic. Reserved for future extensions.

## 2.22 Additional Request Information

Attribute	Type	Condition	Description
paymentConditions	Payment Conditions	optional	Conditions for the execution of the payment.
creationDateTime	ISODateTime	optional	creationDateTime of the originator
requestedExpiry DateTime	ISODateTime	mandatory	Date and Time at which this request expires.
originatorPspld	Financial Institution Identification	Optional	Originator payment service provider in case of indirect participation regarding a related API Access Scheme or bilateral contract
receiverPspld	Financial Institution Identification	Conditional	Receiving payment service provider as defined by an API Access Scheme or bilateral contracts in case of not addressing the receiving institution directly. It is

Attribute	Type	Condition	Description
			mandatory in case where the technical API Provider is not the receiver as such.

This data type is used in [oFA-IG-VOP].

## 2.23 Additional Request Information1

Attribute	Type	Condition	Description
originatorPspld	Financial Institution Identification	Optional	Originator payment service provider in case of indirect participation regarding a related API Access Scheme or bilateral contract

This data type is used in [oFA-Con], [oFA-PFSM].

## 2.24 Address

Attribute	Type	Condition	Description
streetName	Max70Text	Optional	
buildingNumber	String	Optional	
townName	String	Optional	
postCode	String	Optional	
country	Country Code	Mandatory	

## 2.25 Agent Description

Attribute	Type	Condition	Description
financialInstitutionId	Financial Institution Identification	mandatory	

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
branchIdentificationId	Max35Text	Optional	Unique and unambiguous identification of a branch of a financial institution.
branchIdentificationName	Max140Text	Optional	Name by which an agent is known and which is usually used to identify that agent.

## 2.26 Agent Description1

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
financialInstitutionId	Financial Institution Identification	mandatory	

This data type is used in [oFA-PFSM].

## 2.27 Agent Description2

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
financialInstitutionId	Financial Institution Identification1	mandatory	

This data type is used in [oFA-PFSM].

## 2.28 Amendment Information Details

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
originalMandateId	Max35Text	Optional	Mandatory of change occur in "Mandate Identification" otherwise not to be used.
originalCreditorSchemeld	Party Description4	Optional	Mandatory of change occur in "Creditor Scheme Identification" otherwise not to be used.

Attribute	Type	Condition	Description
originalDebtorAccount	Account Reference4	Optional	Mandatory if changes occur in "Debtor Account" otherwise not to be used.
originalDebtorAgent	Agent Description2	Optional	If changes occur in debtor agent and SMNDA is not used in "originalDebtorAccount"

## 2.29 Amount

Attribute	Type	Condition	Description
currency	Currency Code	Mandatory	ISO 4217 Alpha 3 currency code
amount	String	Mandatory	<p>The amount given with fractional digits, where fractions must be compliant to the currency definition. Up to 14 significant figures. Negative amounts are signed by minus.</p> <p>The decimal separator is a dot.</p> <p><b>Example:</b> Valid representations for EUR with up to two decimals are:</p> <ul style="list-style-type: none"> <li>• 1056</li> <li>• 5768.2</li> <li>• -1.50</li> <li>• 5877.78</li> </ul>

This data type is used in [oFA-IG-Com], [oFA-PFSM], [oFA-IG-XPIS].., [oFA-IG-RTP].

## 2.30 Amount dependent Rate

Attribute	Type	Condition	Description
percentage	String	Mandatory	<p>The (signed) rate of the interest.</p> <p>Up to 20 significant figures. The decimal separator is a dot.</p>

Attribute	Type	Condition	Description
			Trailing zeroes must be truncated.
fromAmount	Amount	Optional	Amount from which the interest rate applies.
toAmount	Amount	Optional	Amount up to which the interest rate applies.

**Remark:** ISO 20022 is defining Percentage as a decimal type, where 5.0 expresses 5% interest rate. This specification is using a signed percentage to be able to express also negative percentage codes, i.e. -1.2 will express -1,2% of interest.

## 2.31 Amount Details

Attribute	Type	Condition	Description
instructedAmount	Amount and Exchange Details	Optional	
transactionAmount	Amount and Exchange Details	Optional	
counterValueAmount	Amount and Exchange Details	Optional	
announcedPosting Amount	Amount and Exchange Details	Optional	

**Remark:** Proprietary Amount is not supported.

### Example:

```
"amountDetails":  
{  
  "instructedAmount":
```

```
{
  "currency": "DKK",
  "amount": "123.50",
  "sourceCurrency": "DKK",
  "targetCurrency": "EUR",
  "exchangeRate": "7.47",
},
"transactionAmount":
{
  "currency": "EUR",
  "amount": "16.53",
  "sourceCurrency": "DKK",
  "targetCurrency": "EUR",
  "exchangeRate": "7.60",
}
}
```

## 2.32 Amount and Exchange Details

Attribute	Type	Condition	Description
currency	Currency Code	Mandatory	ISO 4217 Alpha 3 currency code
amount	String	Mandatory	<p>The amount given with fractional digits, where fractions must be compliant to the currency definition. Up to 14 significant figures. Negative amounts are signed by minus.</p> <p>The decimal separator is a dot.</p> <p><b>Example:</b> Valid representations for EUR with up to two decimals are:</p> <ul style="list-style-type: none"> <li>• 1056</li> <li>• 5768.2</li> <li>• -1.50</li> <li>• 5877.78</li> </ul>
sourceCurrency	Currency Code	Optional	Currency from which an amount is to be converted in a currency conversion.
exchangeRate	String	Optional	Factor used to convert an amount from one currency into another. This reflects the price at which one currency was bought with another currency.

Attribute	Type	Condition	Description
			<b>Note:</b> If this field is present, then also the field sourceCurrency must be provided.
unitCurrency	Currency Code	Optional	Currency in which the rate of exchange is expressed in a currency exchange. In the example 1EUR = xxxCUR, the unit currency is EUR.
targetCurrency	Currency Code	Optional	Currency into which an amount is to be converted in a currency conversion.
quotationDate	ISODate	Optional	Date at which an exchange rate is quoted.
contractId	String	Optional	Unique identification to unambiguously identify the foreign exchange contract.

### 2.33 Amount Range

Attribute	Type	Condition	Description
fromAmount	Boundary Amount	{Or	
toAmount	Boundary Amount	Or	
fromToAmount	FromTo Amount Range	Or	
equalAmount	Amount	Or	
notEqualAmount	Amount	Or}	

## 2.34 API Instance Parameters

Attribute	Type	Condition	Description
apiName	Max35Text	Mandatory	"Berlin Group openFinance", "giroAPI", "EPC SPAA", "Berlin Group XS2A", "Berlin Group Direct Access".  More entries might be added by the API Provider.
releaseVersion	Max35Text	Mandatory	Release version, not necessary connected to the standard version.
validFrom	ISODate	Optional	
validTo	ISODate	Optional	
releaseNote	Max2000Text	Optional	Offers a summary on the new release.
_links	Links	Mandatory	A list of hyperlinks to be recognised by the TPP. The actual hyperlinks used in the response depend on the dynamical decisions of the ASPSP when processing the request.  Remark: All links can be relative or full links, to be decided by the ASPSP.  The following valid values for links are supported: <ul style="list-style-type: none"><li>- aspspParameters</li><li>- aspspContacts</li><li>- aspspDowntimes</li></ul>

This data type is used in [oFA-Disc].

## 2.35 ASPSP API Access

Attribute	Type	Condition	Description
lastUpdate	ISODateTime	Mandatory	Last Update in one of the attributes of entities referenced by links provided in apilInstances
aspssName	Max70Text	Mandatory	Name ASPSP:
aspssBranch	Max70Text	Optional	Branch or Division in case of multiple APIs per ASPSP which relate to different branches/divisions
aspssChannel	Max70Text	Optional	Online Channel in case of multiple APIs per ASPSP Online Channel, e.g. "small corporates" or "retail".
aspssIdentifications	Array of BICFI	Mandatory	All bank identifications which are covered by the addressed API.
clearingSystemMemberId	Clearing System Member Identification	Optional	
accessScheme	Max35Text	Optional	Scheme-identification
aspssDescription	Max140Text	Mandatory	Description of API provider party.
validFrom	ISODate	Optional	
validTo	ISODate	Optional	
contacts	Array of Contact	Optional	
_links	Links	Optional	<p>A list of hyperlinks to be recognised by the API Client. The actual hyperlinks used in the response depend on the dynamical decisions of the ASPSP when processing the request.</p> <p>Remark: All links can be relative or full links, to be decided by the ASPSP.</p>

Attribute	Type	Condition	Description
			<p>The following valid values for links are supported:</p> <ul style="list-style-type: none"> <li>- aspspContacts</li> <li>- apInstances</li> </ul>

This data type is used in [oFA-Disc].

## 2.36 Authentication Object

Attribute	Type	Condition	Description
authenticationType	Authentication Type	Mandatory	Type of the authentication method.
authenticationVersion	String	Conditional	Depending on the "authenticationType". This version can be used by differentiating authentication tools used within performing OTP generation in the same authentication type. This version can be referred to in the ASPSP's documentation.
authenticationMethodId	Max35Text	Mandatory	An identification provided by the ASPSP for the later identification of the authentication method selection.
name	String	Mandatory	<p>This is the name of the authentication method defined by the PSU in the Online Banking frontend of the ASPSP. Alternatively this could be a description provided by the ASPSP like "SMS OTP on phone +49160 xxxx 28".</p> <p>This name shall be used by the TPP when presenting a</p>

Attribute	Type	Condition	Description
			list of authentication methods to the PSU, if available.
explanation	String	Optional	detailed information about the SCA method for the PSU

This data type is used in [oFA-Con], [oFA-IG-Com], [oFA-PFSM] [oFA-IG-XPIS].

## 2.37 Authentication Type

More authentication types might be added during implementation projects and documented in the ASPSP documentation.

Name	Description
SMS OTP	An SCA method, where an OTP linked to the transaction to be authorised is sent to the PSU through a SMS channel.
CHIP OTP	An SCA method, where an OTP is generated by a chip card, e.g. an OTP derived from an EMV cryptogram. To contact the card, the PSU normally needs a (handheld) device. With this device, the PSU either reads the challenging data through a visual interface like flickering or the PSU types in the challenge through the device key pad. The device then derives an OTP from the challenge data and displays the OTP to the PSU.
PHOTO OTP	An SCA method, where the challenge is a QR code or similar encoded visual data which can be read in by a consumer device or specific mobile app.  The device resp. the specific app then derives an OTP from the visual challenge data and displays the OTP to the PSU.
PUSH OTP	An OTP is pushed to a dedicated authentication APP and displayed to the PSU.
SMTP OTP	An OTP is sent via email to the PSU.

## 2.38 Availability

Attribute	Type	Condition	Description
numberOfDays	Integer	{Or}	
actualDate	ISODate	Or}	
amount	Amount	Mandatory	

## 2.39 Balance

Attribute	Type	Condition	Description
balanceAmount	Amount	Mandatory	
balanceType	Balance Type	Mandatory	
creditLimitIncluded	Boolean	Optional	A flag indicating if the credit limit of the corresponding account is included in the calculation of the balance, where applicable.
lastChangeDateTime	ISODateTime	Optional	This data element might be used to indicate e.g. with the expected or booked balance that no action is known on the account, which is not yet booked.
referenceDate	ISODate	Optional	indicates the date of the balance
lastCommitted Transaction	Max35Text	Optional	entryReference of the last committed transaction to support the TPP in identifying whether all PSU transactions are already known.

This data type is used in [oFA-IG-Com].

## 2.40 Balance Statement

Attribute	Type	Condition	Description
typeCode	Balance Code	Mandatory	short ISO Code
subTypeCode	Balance Sub Code	Optional	ExternalBalanceSubtype1Code
creditLine	Array of Credit Line	Optional	
amount	Amount	Mandatory	
date	ISODate	{Or Optional}	Indicates the date of the balance.
dateTime	ISO DateTime	Or Optional	
availability	Array of Availability	Optional	

### Example

```
"balance": [ {
    "typeCode": "PRCD",
    "amount": {
        "currency": "EUR",
        "amount": "1120.72"
    },
    "date": "2020-08-31"
}, {
    "typeCode": "CLBD",
    "amount": {
        "currency": "EUR",
        "amount": "7994.04"
    },
    "date": "2020-08-31"
} ]
```

## 2.41 Batch Information

Attribute	Type	Condition	Description
messageld	Max35Text	Optional	Point to point reference, as assigned by the sending party, to unambiguously identify the batch of transactions.
paymentInformationId	Max35Text	Optional	Unique identification, as assigned by a sending party, to unambiguously identify the payment information group within the message.
numberOfTransactions	Integer	Optional	Number of individual transactions included in the batch.
totalAmount	Amount	Optional	Total amount of money reported in the batch entry.

## 2.42 Binary Document

Base64 encoding of the binary file representing the enclosed document or template, such as a PDF file, image file, XML file, MT message. The maximum size of the binary document is 10MB.

## 2.43 Boundary Amount

Attribute	Type	Condition	Description
boundaryAmount	Amount	Mandatory	
included	Boolean	Mandatory	

## 2.44 Cash Deposit

Attribute	Type	Condition	Description
noteDenomination	Amount	Mandatory	

Attribute	Type	Condition	Description
numberNotes	Max15Text	Mandatory	Only numeric text.
amount	Amount	Mandatory	

## 2.45 Card Account Details

Attribute	Type	Condition	Description
resourceId	String	Mandatory	This is the data element to be used in the path when retrieving data from a dedicated account.
maskedPan	Max35Text	Mandatory	Primary Account Number (PAN) of the main card in masked form..
currency	Currency Code	Mandatory	Account currency
ownerName	Max140Text	Optional	<p>Name of the legal account owner. If there is more than one owner, then e.g. two names might be noted here.</p> <p>For a corporate account, the corporate name is used for this attribute.</p> <p>Even if supported by the ASPSP, the provision of this field might depend on the fact whether an explicit consent to this specific additional account information has been given by the PSU.</p>
Name	Max70Text	Optional	Name of the account, as assigned by the ASPSP, in agreement with the account owner in order to provide an additional means of identification of the account.
displayName	Max70Text	Optional	Name of the account as defined by the PSU within online channels.
product	Max35Text	Optional	Product Name of the Bank for this account, proprietary definition

Attribute	Type	Condition	Description
debitAccounting	Boolean	Optional	If true, the amounts of debits on the reports are quoted positive with the related consequence for balances.  If false, the amount of debits on the reports are quoted negative.
status	String	Optional	Account status. The value is one of the following: <ul style="list-style-type: none"><li>• "enabled": account is available</li><li>• "deleted": account is terminated</li><li>• "blocked": account is blocked e.g. for legal reasons</li></ul> If this field is not used, than the account is available in the sense of this specification.
usage	Max140 Text	Optional	Specifies the usage of the account <ul style="list-style-type: none"><li>- PRIV: private personal account</li><li>- ORGA: professional account</li></ul>
details	Max1000 Text	Optional	Specifications that might be provided by the ASPSP <ul style="list-style-type: none"><li>- characteristics of the account</li><li>- characteristics of the relevant card</li></ul>
creditLimit	Amount	Optional	Defines the credit limit of the PSU aggregated for all cards related to this card account in total.
balances	Array of Balances	Optional	The specific card account balances associated to this card accounts.
_links	Links	Optional	Links to the cardAccount, which can be directly used for retrieving account information from this dedicated account.  Links to "balances" and/or "cardTransactions"

Attribute	Type	Condition	Description
			These links are only supported, when the corresponding consent has been already granted.

This data type is used in [oFA-IG-Com].

## 2.46 Card Account Report

Attribute	Type	Condition	Description
booked	Array of Card Transactions	Conditional	Shall be contained if bookingStatus parameter is set to "booked" or "both".
pending	Array of Card Transactions	Optional	Not contained if the bookingStatus parameter is set to "booked".
_links	Links	Mandatory	<p>The following links might be used within this context:</p> <ul style="list-style-type: none"> <li>• cardAccount (mandatory when providing transaction reports on card reconciliation accounts under /card-accounts)</li> <li>• card (mandatory when providing transaction reports on single card entry level under /cards)first (optional)</li> <li>• next (optional)</li> <li>• previous (optional)</li> <li>• last (optional)</li> </ul>

This data type is used in [oFA-IG-Com].

## 2.47 Card Transactions

Attribute	Type	Condition	Description
cardTransactionId	Max35Text	Optional	Unique end to end identity.
terminalId	Max35Text	Optional	Identification of the Terminal, where the card has been used.
transactionDate	ISODate	Optional	date of the actual card transaction
acceptorTransaction DateTime	ISODate Time	Optional	Timestamp of the actual card transaction within the acceptance system
bookingDate	ISODate	Optional	booking date of the related booking on the card account
valueDate	ISODate	Optional	Date at which assets become available to the account owner in case of a credit entry, or cease to be available to the account owner in case of a debit entry.  For card transactions this is the payment due date of related booked transactions of a card.
transactionAmount	Amount	Mandatory	The amount of the transaction as billed to the card account.
grandTotalAmount	Amount	Optional	Total amount of the instalment including charges, insurance and taxes in addition to the funded amount.
currencyExchange	Array of Report Exchange Rate	Optional	For card accounts, this often is restricted by the ASPSP to use only one exchange rate.
originalAmount	Amount	Optional	Original amount of the transaction at the Point of Interaction in original currency

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
markupFee	Amount	Optional	Any fee related to the transaction in billing currency.
markupFeePercentage	String	Optional	Percentage of the involved transaction fee in relation to the billing amount, e.g. "0.3" for 0,3%
cardAcceptorId	Max35Text	Optional	Identification of the Card Acceptor (e.g. merchant) as given in the related card transaction.
cardAcceptorName	Max70Text	Optional	Name of the Card Acceptor (e.g. merchant) as provided in the related card transaction
cardAcceptorAddress	Address	Optional	Address of the Card Acceptor as given in the related card transaction.
cardAcceptorPhone	Phone Number	Optional	Merchant phone number
merchantCategoryCode	Merchant Category Code	Optional	Merchant Category Code of the Card Acceptor as given in the related card transaction.
maskedPAN	Max35Text	Optional	The masked PAN of the card used in the transaction.
transactionDetails	Max1000Text	Optional	Additional details given for the related card transactions.
invoiced	Boolean	Optional	Flag indicating whether the underlying card transaction is already invoiced.
proprietaryBankTransactionCode	Max35Text	Optional	proprietary bank transaction code as used within a community or within an ASPSP e.g. for MT94x based transaction reports

## 2.48 Card Transaction

Attribute	Type	Condition	Description
card	Card Type	Optional	
transaction	Card Transaction Details	Optional	

## 2.49 Card Transaction Details

Attribute	Type	Condition	Description
paymentContext	Payment Context Type	Optional	Context of the card payment transaction.
sequenceNumber	Max35Text	Optional	
transactionDateTime	ISODateTime	Optional	Local date and time of the transaction assigned by the POI (Point Of Interaction).
poId	Max35Text	Optional	Identification of the POI (Point Of Interaction) performing the transaction.
authorisationCode	Max8Text	Optional	Value assigned by the authorising party.
saleReferenceId	Max35Text	Optional	Global reference of the sale transaction for the sale system.
transactionType	Card Transaction Type	Optional	Type of transaction being undertaken for the main service.

## 2.50 Card Type

Attribute	Type	Condition	Description
cardBrand	Max35Text	Optional	

Attribute	Type	Condition	Description
maskedPAN	Max30Text	Optional	
cardHolderName	Max45Text	Optional	

## 2.51 Challenge

Attribute	Type	Condition	Description
image	String	Optional	PNG data (max. 512 kilobyte) to be displayed to the PSU, Base64 encoding, cp. [RFC4648].  This attribute is used only, when PHOTO OTP or CHIP OTP is the selected SCA method.
data	Array of Strings	Optional	A collection of challenge data
imageLink	String	Optional	A link where the ASPSP will provide the challenge image for the TPP.
otpMaxLength	Integer	Optional	The maximal length for the OTP to be typed in by the PSU.
otpFormat	String	Optional	The format type of the OTP to be typed in. The admitted values are "characters" or "integer".
additional Information	String	Optional	Additional explanation for the PSU to explain e.g. fallback mechanism for the chosen SCA method. The TPP is obliged to show this to the PSU.

This data type is used in [oFA-Con] , [oFA-IG-Com], [oFA-PFSM] [oFA-IG-XPIS].

## 2.52 Charges

Attribute	Type	Condition	Description
totalChargesAnd TaxAmount	Amount	Mandatory	

Attribute	Type	Condition	Description
record	Array of Charges Record	Optional	

## 2.53 Charges Record

Attribute	Type	Condition	Description
amount	Amount	Mandatory	
chargesIncluded Indicator	Boolean	Optional	Indicates whether the charge should be included in the amount or is added as pre-advice.
typeCode	Charge Type	Optional	ExternalChargeType1code
rate	Percentage Rate	Optional	
bearer	Bearer Code	Optional	ChargeBearerType1Code
agent	Agent Description	Optional	
tax	Tax	Optional	

## 2.54 Clearing System Member Identification

Attribute	Type	Condition	Description
memberId	Max35Text	Optional	Identification of a member of a clearing system.
clearingSystemIdentificationCode	Clearing System Identification Code	{Or Optional -	Identification of a clearing system, in a coded form as published in an external list.

Attribute	Type	Condition	Description
clearingSystemIdentificationProprietary	Max35Text	Or – Optional}	Identification code for a clearing system, that has not yet been identified in the list of clearing systems.

This data type is used in [oFA-Disc].

## 2.55 Client Message Information

Attribute	Type	Condition	Description
category	String	Mandatory	Only "ERROR" or "WARNING" permitted
code	Message Code	Mandatory	
path	String	Conditional	Path of the element of the request message which provoked the error message, if applicable
text	Max500Text	Optional	Additional explaining text.

This data type is used in [oFA-IG-Com], [oFA-PFSM], [oFA-IG-XPIS], [oFA-IG-RTP]

## 2.56 Contact

Attribute	Type	Condition	Description
contactType	Contact Type	Mandatory	
name	Max70Text	Optional	
postalAddress	Postal Address	Optional	
contactDetails	Contact Details	Optional	

This data type is used in [oFA-Disc].

## 2.57 Contact Details

Attribute	Type	Condition	Description
namePrefix	Name Prefix Code	Optional	Specifies the terms used to formally address a person.
name	Max70Text	Optional	Name by which a party is known and which is usually used to identify that party.
phoneNumber	Max35Text	Optional	pattern \+[0-9]{1,3}-[0-9()]+\-[1,30]
mobileNumber	Max35Text	Optional	pattern \+[0-9]{1,3}-[0-9()]+\-[1,30]
faxNumber	Max35Text	Optional	pattern \+[0-9]{1,3}-[0-9()]+\-[1,30]
emailAddress	Max70Text	Optional	Address for electronic mail (e-mail).
emailPurpose	Max35Text	Optional	Purpose for which an email address may be used.
jobTitle	Max35Text	Optional	Title of the function.
responsibility	Max35Text	Optional	Role of a person in an organisation.
department	Max35Text	Optional	Identification of a division of a large organisation or building.
preferredMethod	Preferred Method	Optional	Preferred method used to reach the contact.

## 2.58 Corporate Action

Attribute	Type	Condition	Description
eventType	Max35Text	Mandatory	
eventid	Max35Text	Mandatory	

## 2.59 Credit Entries

Attribute	Type	Condition	Description
numberOfEntries	Max15Text	Optional	Only numeric text is permitted.
sum	Decimal Number	Optional	The sum of credit entries.

## 2.60 Credit Line

Attribute	Type	Condition	Description
included	Boolean	Mandatory	
typeCode	Credit Line Type	{Or Optional}	short ISO Code
typeProprietary	Max35Text	Or Optional}	
amount	Amount	Optional	amount of the credit line.
date	ISODate	{Or Optional}	Date of the credit line provided, when multiple credit lines may be provided.
dateTime	ISO DateTime	Or Optional}	Date/Time of the credit line provided, when multiple credit lines may be provided.

## 2.61 Creditor Details and Account

Attribute	Type	Condition	Description
creditor	Party Description	Mandatory	
creditorAccount	Account Reference	Mandatory	

This data type is used in [oFA-Con].

## 2.62 Creditor Reference Information

Attribute	Type	Condition	Description
reference	Max35Text	Mandatory	The actual reference.
referenceTypeCode	Creditor Reference Type Code	{Or - Optional}	Type of the reference, provided as code.
referenceTypeProprietary	Max35Text	Or – {Optional}	Type of the reference, provided in proprietary encoding.
referenceIssuer	Max35Text	Optional	Issuer of the reference.

## 2.63 Debit Entries

Attribute	Type	Condition	Description
numberOfEntries	Max15Text	Optional	Only numeric text is permitted.
sum	Decimal Number	Optional	The sum of debit entries.

## 2.64 Details Tax

Attribute	Type	Condition	Description
creditor	Tax Creditor	Optional	Party on the credit side of the transaction to which the tax applies.
debtor	Tax Debtor	Optional	Party on the debit side of the transaction to which the tax applies.
administrationZone	Max35Text	Optional	The territorial part of the country to which the tax is related.

Attribute	Type	Condition	Description
referenceNumber	Max140Text	Optional	Tax reference information that is specific to a tax agency.
method	Max35Text	Optional	Method underlying how the tax payment is performed.
totalTaxableBaseAmount	Amount	Optional	Total amount of money on which the tax is based.
totalTaxAmount	Amount	Optional	Total amount of money as a result of the calculation of the tax.
date	ISODate	Optional	Date by which the tax is due.
sequenceNumber	Integer	Optional	Sequential number of the tax report.
record	Array of Tax Record	Optional	Record of the tax details.

## 2.65 Direct Debit Transaction (Mandate Information)

Attribute	Type	Condition	Description
mandateRelatedInformation	Mandate Related Information	Mandatory	
creditorSchemeld	Party Description3	Optional	<u>SDD:</u> Identification = Creditor-Identifier (CI) "schemeNameProprietary" : "SEPA"

This data type is used in [oFA-PFSM].

## 2.66 Duration

Attribute	Type	Condition	Description
fromDate	ISODate	Mandatory	
toDate	ISODate	Optional	

## 2.67 Enclosed File

Attribute	Type	Condition	Description
typeCode	Document Type Code	{Or Optional}	Type of document or template.
typeProprietary	Max35Text	Optional Or}	Proprietary document type definition.
identification	Max35Text	Mandatory	Identification of the document or template.
issueDate	ISODate	{Or	Issue date of the document.
issueDateTime	ISODateTime	Or}	Issue date and time of the document.
name	Max140Text	Optional	Name of document or transaction, for example, tax invoice.
languageCode	Language Code	Optional	Unique identifier for a language used in the document.
formatCode	Document Format Code	{Or	Format of the document or template, such as PDF, XML, XSLT.
formatProprietary	Max35Text	Or}	Proprietary format encoding.
formatProprietary SchemeName	Max35Text	Optional	May be used only if also formatProprietary is used.
formatProprietary Issuer	Max35Text	Optional	May be used only if also formatProprietary is used.
fileName	Max140Text	Optional	Technical name of the file.
digitalSignature	Party And Signature	Optional	Digital signature of the enclosed binary file.

Attribute	Type	Condition	Description
			<b>Note:</b> Not supported for now. Might be added later in case of market needs.
enclosure	Binary Document	Mandatory	Base64 encoding of the binary file representing the enclosed document or template, such as a PDF file, image file, XML file, MT message.

This data type is used in [oFA-PFSM].

## 2.68 Entry

The following shows differences with first level transaction data attributes, green colour shows attributes which are also used in the same way in transactions.

Attribute	Type	Condition	Description
entryReference	Max35Text	Optional	Unique reference for the entry.
amount	Amount	Mandatory	transactionAmount for transactions
reversalIndicator	Boolean	Optional	Indicates whether or not the entry is the result of a reversal.
statusCode	Entry Status Code	Mandatory	Status of an entry on the books of the account servicer.
bookingDate	ISODate	{Or Optional}	Date when an entry is posted to an account on the account servicer's books.
bookingDateTime	ISODateTime	Or Optional}	Date and time when an entry is posted to an account on the account servicer's books.
valueDate	ISODate	{Or Optional}	Date at which assets become available to the account owner in case of a credit entry, or cease to be available to the account owner in case of a debit entry.

Attribute	Type	Condition	Description
valueDateTime	ISODateTime	Or Optional}	Date and time at which assets become available to the account owner in case of a credit entry, or cease to be available to the account owner in case of a debit entry.
accountServicerReference	Max35Text	Optional	Unique reference as assigned by the account servicing institution to unambiguously identify the entry.
availability	Array of Availability	Optional	
bankTransactionCode	Bank Transaction Code	Optional	Set of elements used to fully identify the type of underlying transaction resulting in an entry.
bankTransactionCodeProprietary	Max35Text	Optional	Set of proprietarily defined elements used to fully identify the type of underlying transaction resulting in an entry.
bankTransactionCodeIssuer	Max35Text	Optional	Issuer of the proprietary bank transaction code.
commisionWaverIndicator	Boolean	Optional	Indicates whether the transaction is exempt from commission.
additionallInformationIndicator	Additional Information Indicator	Optional	Indicates whether the underlying transaction details are provided through a separate message, as in the case of aggregate bookings.
amountDetails	Amount Details	Optional	Provides information on the original amount.

Attribute	Type	Condition	Description
charges	Charges	Optional	Provides information on the charges, pre-advised or included in the entry amount.
technicalInputChannelCode	Input Channel Code	Optional	Channel used to technically input the instruction related to the entry.
interest	Transaction Interest	Optional	Provides details of the interest amount included in the entry amount.
cardTransaction	Card Transaction	Optional	Provides details of the card transaction included in the entry amount, when globalised by the account servicer.
additionalEntryInformation	Max500Text	Optional	gibt es nicht bei Transactions
entryDetails	Entry Details1	Optional	<b>NOTE:</b> Deviation from ISO20022, since Array is never used.

This data Type is used in [IoFA-IG-XAIS](#).

```
"entry" : [ {
    "entryReference" : "aaaaaa",
    "amount" : {
        "currency" : "EUR",
        "amount" : "100.00"
    },
    "statusCode" : "BOOK",
    "bookingDate" : "2020-08-31T00:00:00Z",
    "valueDate" : "2020-08-31T00:00:00Z",
    "accountServicerReference" : "Bankreferenz",
    "bankTransactionCode" : "PMNT-RCDT-ESCT",
    "bankTransactionCodeProprietary" : "166",
    "bankTransactionCodeProprietaryIssuer" : "DK",
    "additionalEntryInformation" : "SEPA GUTSCHRIFT",
    "entryDetails" : [ {
        "transactionDetails" : [ {
            "references" : {

```

```

        "endToEndId" : "Ende-zu-Ende-Id des Ueberweisenden"
    },
    "amount" : {
        "currency" : "EUR",
        "amount" : "100.00"
    },
    "bankTransactionCode" : "PMNT-RCDT-ESCT",
    "bankTransactionCodeProprietary" : "NTRF+166",
    "bankTransactionCodeProprietaryIssuer" : "DK",
    "relatedParties" : {
        "debtor" : {
            "party" : {
                "name" : "Herr Überweisender"
            }
        },
        "debtorAccount" : {
            "iban" : "DE21500500001234567897"
        },
        "creditor" : {
            "party" : {
                "name" : "Herr Kontoinhaber"
            }
        }
    },
    "relatedAgents" : {
        "debtorAgent" : {
            "financialInstitutionId" : {
                "bicfi" : "SKUEDEFFXXX"
            }
        },
        "creditorAgent" : {
            "financialInstitutionId" : {
                "bicfi" : "BANKDEEFFXXX"
            }
        }
    },
    "purposeCode" : "GDDS",
    "remittanceInformationUnstructured" : [ "Rechnungsnr. 4711 vom
20.08.2020" ]
}
]
}
}

```

## 2.69 Entry Details

This data type describe entry details of a batch booking entry. The details are restricted to data attributes relevant in this case.

Attribute	Type	Condition	Description
references	References	Optional	might contain the endToEndId as well as the new UETR field
creditor	Party Description	Optional	Name and potentially an identification of the creditor if a "Debited" transaction
transactionAmount	Amount	Mandatory	The amount of the transaction as billed to the account.
currencyExchange	Array of Report Exchange Rate	Optional	
creditor Account	Account Reference	Conditional	
creditorAgent	Agent Description1	Optional	Proprietary identifications might be provided under financialInstitutionId/other
ultimate Creditor	Party Description4	Optional	
debtor	Party Description	Optional	Name and potentially identification of the debtor if a "Credited" transaction
debtorAccount	Account Reference	Conditional	
debtorAgent	Agent Description1	Optional	Proprietary identifications might be provided under financialInstitutionId/other
ultimateDebtor	Party Description4	Optional	

Attribute	Type	Condition	Description
remittance Information Unstructured	Array of Max140Text	Optional	
remittance Information Structured	Array of Remittance	Optional	
purposeCode	Purpose Code	Optional	

## 2.70 Entry Details1

Attribute	Type	Condition	Description
batch	Batch Information	Optional	Provides details on batched transactions.
transactionDetails	Array of Transaction Detail	Optional	Provides information on the underlying transaction(s).

## 2.71 Equivalent Amount

Attribute	Type	Condition	Description
amount	Amount	Mandatory	<p>Amount of money to be transferred between the debtor and creditor, before the deduction of charges, expressed in the currency of the debtor's account, and to be transferred in a different currency.</p> <p><b>Usage:</b> The first agent will convert the equivalent amount into the amount to be transferred.</p>

Attribute	Type	Condition	Description
currencyOfTransfer	Currency Code	Mandatory	Specifies the currency of the to be transferred amount, which differs from the currency of the debtor's account.

## 2.72 Error Information

This is a data element to support the declaration of additional errors in the context of [RFC7807].

Attribute	Type	Condition	Description
title	Max70Text	Optional	Short human readable description of error type. Could be in local language. To be provided by ASPSPs.
detail	Max500Text	Optional	Detailed human readable text specific to this instance of the error. Xpath might be used to point to the issue generating the error in addition.  <b>RFU:</b> In future, a dedicated field might be introduced for the Xpath.
code	Message Code	Mandatory	Message code to explain the nature of the underlying error.

This data type is used in [oFA-PFSM].

## 2.73 Evaluated Amount

This data structure represents an evaluated amount (without indicating the method of evaluation) when an unambiguous balance cannot be provided, but an evaluation, e.g. the total value of a securities deposit:

Attribute	Type	Condition	Description
amount	Amount	Mandatory	Amount which is the result of the corresponding evaluation.
evaluationDateTime	ISODateTime	{Or}	Date / date and time of the evaluation.
evaluationDate	ISODate	Or}	

## 2.74 Evaluated Price

This data structure represents an evaluated price (e.g. of a security) when an unambiguous balance cannot be provided, but an evaluation, e.g. the total value of a securities deposit

Attribute	Type	Condition	Description
amount	Amount	{Or}	If the price is evaluated as an amount, amount of the price in its respective currency.
percentage	String	Or}	Percentage of the price with (optional) fractional digits. Up to 20 significant figures. Negative amounts are signed by minus.  The decimal separator is a dot.  Trailing zeroes must be truncated.
priceDateTime	ISODateTime	{Or}	Date / date and time of the evaluation of this price.
priceDate	ISODate	Or}	
priceType	Type of Price Code	Optional	Type of the price.
sourceOfPrice	Source of Price	Optional	Indicates the source of the respective price.
description	Max500Text	Optional	Additional description of the source of price. E.g., if the source of price indicates a local market, the ASPSP can include the local market's name in this field.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
exchangeRates	Array of Report Exchange Rate	Optional	Relevant exchange rates for the determined price.

## 2.75 Extended Party Description

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
name	Max140Text	Optional	Name of the party.
postal address	Postal Address	Optional	Postal Address of the party.
identification	Party Identification	Optional	Identification of the party.
countryOf Residence	Country Code	Optional	Country in which a person resides (the place of a person's home). In the case of a company, it is the country from which the affairs of that company are directed.
contactDetails	Contact Details	Optional	Set of elements used to indicate how to contact the party.

## 2.76 Financial Institution Identification

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
bicfi	BICFI	optional	Code allocated to a financial institution.
clearingSystemMemberId	Clearing System Member Identification	optional	Information used to identify a member within a clearing system.
name	Max140Text	optional	Name of the financial institution
postalAddress	Postal Address	Optional	Postal Address of the financial institution.

Attribute	Type	Condition	Description
other	Generic Financial Institution Identification	Optional	Unique identification of an organisation, as assigned by an institution, using an identification scheme.

## 2.77 Financial Institution Identification1

Attribute	Type	Condition	Description
bicfi	BICFI	Mandatory	Code allocated to a financial institution.

## 2.78 Financial Instrument Identification

This data structure represents financial instrument identification.

Attribute	Type	Condition	Description
isin	ISIN	{Or}	ISIN of the financial Instrument.  The primitive ISIN type is defined as in ISO20022.
otherId	Generic Financial Instrument Identification	Or}	If an ISIN is not available, the ASPSP may instead include an identification by other means.
name	Max70Text	Optional	Name of the financial instrument.
normalisedPrice	Evaluated Price	Optional	Price per unit of the financial instrument in case of a price amount. Percentage price otherwise.  If used in the context of a securities transaction, the price here shall indicate the applied price (without fees) for the trade.  Note: Not applicable to account statement

Attribute	Type	Condition	Description
description	Max140Text	Optional	<p>Textual description of the financial instrument.</p> <p>Usage rule: description is considered to be the last choice to describe the financial instrument, in case neither isin nor at least one instance of otherId is present.</p>

**Remark:** Publicly available information on the financial instrument like interests (e.g. in the case of bonds), various dates (maturity date, issue date,...) or details on options are intentionally not supported by the data model. Individual markets might extend the definition, for example to meet certain regulatory requirements.

## 2.79 FromTo Amount Range

Attribute	Type	Condition	Description
fromAmount	Boundary Amount	Mandatory	
toAmount	Boundary Amount	Mandatory	

## 2.80 FromToDate

This data structure represents a timeperiod.

Attribute	Type	Condition	Description
fromDateTime	ISODateTime	Mandatory	Date and time at which the period starts.
toDateTime	ISODateTime	Mandatory	Date and time at which the period ends.

This data type is used in [oFA-Disc]

## 2.81 Generic Account Identification

Attribute	Type	Condition	Description
identification	Max35Text	Mandatory	Unique and unambiguous identification of an account.
schemeName Code	Account Identification Code	{Or - Optional}	An entry provided by an external ISO code list
schemeName Proprietary	Max35Text	Or – Optional}	A scheme name defined in a proprietary way.
issuer	Max35Text	Optional	Issuer of the identification

## 2.82 Generic Financial Instrument Identification

This data structure represents the identification of a financial instrument by means other than ISIN.

Attribute	Type	Condition	Description
identification	Max35Text	Mandatory	Identification of a security.
suffix	Max16Text	Optional	Identifies the suffix of the security identification.
typeCode	External Financial Instrument Identification Type Code	{Or	Unique and unambiguous identification source, as assigned via a pre-determined code list.
typeProprietary	Max35Text	Or}	Unique and unambiguous identification source using a proprietary identification type.

## 2.83 Generic Financial Institution Identification

Attribute	Type	Condition	Description
identification	Max35Text	Mandatory	Unique and unambiguous identification of a financial institution.
schemeName Code	Financial Institution Identification Code	{Or - Optional}	An entry provided by an external ISO code list
schemeName Proprietary	Max35Text	Or – Optional}	A scheme name defined in a proprietary way.
issuer	Max35Text	Optional	Issuer of the identification

## 2.84 Generic Organisation Identification

Attribute	Type	Condition	Description
identification	Max35Text	Mandatory	Unique and unambiguous identification of an organisation.
schemeName Code	Organisation Identification Code	{Or - Optional}	An entry provided by an external ISO code list
schemeName Proprietary	Max35Text	Or – Optional}	A scheme name defined in a proprietary way.
issuer	Max35Text	Optional	Issuer of the identification

## 2.85 Geo Location

Format using [RFC2426], i.e. GEO:<latitude>;<longitude >.

This data type is used in [oFA-PFSM].

## 2.86 href Type

Attribute	Type	Condition	Description
href	String	Mandatory	

## 2.87 Index

Attribute	Type	Condition	Description
index	Max35Text	Optional	Though arbitrary text is technically supported, it is recommended to use the following keywords:  "CPI" – customer Price Index  "FC" – foreign currency  "other" – for others, not clearly specified index relations.
rootIndexValue	Max35Text	Optional	A number (represented as a string) giving the basic index value which is the basis for the loan contract.
exchangeRate	Amount dependent Rate	Optional	Intended for usage in case of index = "FC".
additional Information	Max500Text	Optional	Explanations e.g. to specify index = "other".

## 2.88 Initiation

Initiation provides informations about entries in an /initiations sub resource of a payment resource.

Attribute	Type	Condition	Description
initiationId	Max35Text	Mandatory	resource identification of the addressed payment initiation.

Attribute	Type	Condition	Description
instructedAmount	Amount	Mandatory	Instructed Amount of the addressed initiation.
transactionStatus	Transaction Status	Mandatory	Status of the addressed initiation.
_links	Links	Mandatory	links of href type "paymentInitiation"

This data type is contained in [oFA-IG-XPIS].

## 2.89 Interest

Attribute	Type	Condition	Description
type	Interest Type Code3	Optional	Type of the interest. Currently, interests are distinguished between those with fixed rates ("FIXD") and those with rates derived from an index ("INDE").
relatedIndices	Array of Index	Optional	List of indices related to the interest rate.
rate	Array of Amount dependent Rate	Mandatory	An array of interest rates, which might apply to different amount ranges.
fromDateTime	ISODateTime	Optional	The date from which this interest rate is applicable. If no exact time is applicable, 00:00:00 is chosen as time definition.
toDateTime	ISODateTime	Optional	The date until this interest rate is applicable. If no exact time is applicable, 23:59:59 is chosen as time definition.
reason	Max35Text	Optional	<p>Specifies the reason of the interest.</p> <p>Though arbitrary text is technically supported, it is recommended to use the following keywords with pre-defined meaning:</p> <ul style="list-style-type: none"> <li>- <b>arrears:</b> The addressed interest rate applies only in case of arrears.</li> </ul>

Attribute	Type	Condition	Description
			<ul style="list-style-type: none"> <li>- <b>alternateRateMaximumOf:</b> The addressed alternate interest rate applies in case where this rate implies a higher interest in a dedicated interest period than the regular interest rate provided without reason element.</li> <li>- <b>alternateRateMinimumOf:</b> The addressed alternate interest rate applies in cases where this rate implies a lower interest in a dedicated interest period than the regular interest rate provided without reason element.</li> </ul> <p>ASPSPs may define further keywords and shall publish them in their documentation.</p>
change Mechanism	Max1024Text	Optional	An explanation of a mandated change mechanism.

## 2.90 Interest Record

Attribute	Type	Condition	Description
amount	Amount	Mandatory	
typeCode	Interest Type Code	Optional	InterestType1Code
rate	Rate	Optional	
fromDateTime	ISODateTime	Optional	
toDateTime	ISODateTime	Optional	
reason	Max35Text	Optional	
tax	Tax	Optional	

## 2.91 Lean Account Report

Attribute	Type	Condition	Description
booked	Array of transactions	Conditional	booked entries on the related account
pending	Array of transactions	Optional	pending entries on the related account
information	Array of transactions	Optional	information entries related to the addressed account.

This data type is used in [oFA -IG-PAIS].

## 2.92 Limit

Attribute	Type	Condition	Description
limitType	Limit Type	Mandatory	
limitAmount	Amount	Mandatory	

## 2.93 Links

The structure of Links is conform to [HAL].

Attribute	Type	Condition	Description
scaRedirect	href Type	Optional	A link to an ASPSP site where SCA is performed within the Redirect SCA approach.
scaOAuth	href Type	Optional	The link refers to a JSON document specifying the Oauth details of the ASPSP's authorisation server. JSON document follows the definition given in [RFC 8414].
confirmation	href Type	Optional	"confirmation": Might be added by the ASPSP if either the "scaRedirect" or "scaOAuth" hyperlink is returned in the same response message. This hyperlink defines the URL to the resource which needs to be updated with

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
			<ul style="list-style-type: none"> <li>• a confirmation code as retrieved after the plain redirect authentication process with the ASPSP authentication server or</li> <li>• an access token as retrieved by submitting an authorization code after the integrated Oauth based authentication process with the ASPSP authentication server.</li> </ul>
creditorNameConfirmation	href Type	Optional	A link to an endpoint, where the submitted payment needs to be confirmed explicitly for execution after a verification of payee process has detected a deviation in the creditor account/creditor name pair. If this hyperlink is provided, the addressed payment will not be executed without a related confirmation.
startAuthorisation	href Type	Optional	A link to an endpoint, where the authorisation of a transaction or the authorisation of a transaction cancellation shall be started with a POST command. No specific data is needed for this process start.
startAuthorisationWithPsuIdentification	href Type	Optional	The link to an endpoint where the authorisation of a transaction or of a transaction cancellation shall be started, where PSU identification shall be uploaded with the corresponding call.
updatePsuIdentification	href Type	Optional	The link to the payment initiation or account information resource, which needs to be updated by the PSU identification if not delivered yet.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
startAuthorisationWithProprietaryData	hrefType	Optional	A link to the endpoint, where the authorisation of a transaction or of a transaction cancellation shall be started, and where proprietary data needs to be updated with this call. The TPP can find the scope of missing proprietary data in the ASPSP documentation.  The usage of this hyperlink is not further specified in the specification but is used analogously to e.g. the startAuthorisationWithPsuIdentification hyperlink.
updateProprietaryData	href Type	Optional	The link to the payment initiation or account information resource, which needs to be updated by the proprietary data.
startAuthorisationWithPsuAuthentication	href Type	Optional	The link to an endpoint where the authorisation of a transaction or of a transaction cancellation shall be started, where PSU authentication data shall be uploaded with the corresponding call.
updatePsuAuthentication	href Type	Optional	The link to the payment initiation or account information resource, which needs to be updated by a PSU password and eventually the PSU identification if not delivered yet.
startAuthorisationWithEncryptedPsuAuthentication	href Type	Optional	The link to an endpoint where the authorisation of a transaction or of a transaction cancellation shall be started, where encrypted PSU authentication data shall be uploaded with the corresponding call.
updateEncryptedPsuAuthentication	href Type	Optional	The link to the payment initiation or account information resource, which needs to be updated by an encrypted PSU password and eventually the PSU identification if not delivered yet.
startAuthorisationWithAuthenticationMethodSelection	href Type	Optional	This is a link to an endpoint where the authorisation of a transaction or of a transaction cancellation shall be started, where the selected SCA method shall be uploaded with the corresponding call.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
selectAuthenticationMethod	href Type	Optional	This is a link to a resource, where the TPP can select the applicable second factor authentication methods for the PSU, if there were several available authentication methods.
startAuthorisationWith TransactionAuthorisation	href Type	Optional	A link to an endpoint, where an authorisation of a transaction or a cancellation can be started, and where the response data for the challenge is uploaded in the same call for the transaction authorisation or transaction cancellation at the same time in the Embedded SCA Approach.
authoriseTransaction	href Type	Optional	The link to the payment initiation or consent resource, where the "Transaction Authorisation"Request" is sent to. This is the link to the resource which will authorise the payment or the consent by checking the SCA authentication data within the Embedded SCA approach.
updateResourceByDebtorA ccountResource	href Type	Optional	A link to a payment related resource which needs to be updated by an account, referenced by a resource identification.
self	href Type	Optional	The link to the payment initiation resource created by the request itself.  This link can be used later to retrieve the transaction status of the payment initiation.
status	href Type	Optional	A link to retrieve the status of the transaction resource.
transactionfees	hrefType	Optional	The link is to the status resource.  This link is only added within the authorisation process in case fee information is available via the status resource.
scaStatus	href Type	Optional	A link to retrieve the status of the authorisation or cancellation-authorisation sub-resource.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
account	href Type	Optional	A link to the resource providing the details of one account
savingsAccount	href Type	Optional	A link to the resource providing the details of a savings account.
loanAccount	href Type	Optional	A link to the resource providing the details of a loan account.
balances	href Type	Optional	A link to the resource providing the balance of a dedicated account.
transactions	href Type	Optional	A link to the resource providing the transaction history of a dedicated account.
cardAccount	href Type	Optional	A link to the resource providing the details of one card account.
cardTransactions	href Type	Optional	A link to the resource providing the transaction history of a dedicated card account.
transactionDetails	href Type	Optional	A link to the resource providing details of a dedicated transaction.
ibanCheck	href Type	Optional	A link to the endpoint offering the addressed iban check result.
paymentInitiation	href Type	Optional	A link to an initiation related to a payment resource.
securitiesAccount	href Type	Optional	A link to the resource providing the details of one securitiesAccount.
positions	href Type	Optional	A link to the resource providing the list of positions of one securitiesAccount.
orders	href Type	Optional	A link to the resource providing the list of orders of one securitiesAccount.
orderDetails	href Type	Optional	A link to the resource providing details of one specific order.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
relatedOrders	Array of href Type	Optional	An array of links to request order details of related orders related to the order that is represented by the data structure containing this element (e.g. other orders that originated from the same order split as this order).
relatedTransactions	Array of href Type	Optional	An array of links to request securities transaction details of transactions that resulted from this order.
subscription	href Type	Optional	A link to the resource providing the details of a subscription for Push AIS Services.
entryStatusRevoked	Array of href Type	Optional	Links to entry endpoints where the entry status is revoked.
first	href Type	Optional	Navigation link for paginated account reports.
next	href Type	Optional	Navigation link for paginated account reports.
previous	href Type	Optional	Navigation link for paginated account reports.
last	href Type	Optional	Navigation link for paginated account reports.
download	href Type	Optional	Download link for huge AIS data packages.
paymentInitiation	href Type	Optional	link to an initiation related to a payment resource.
confirmInitiation	href Type	Optional	link to a confirmation endpoint, where a payment initiation needs to be confirmed explicitly by the API Client for execution.

This data type is part of the API Framework definition, introduced in [oFA-PFSM], but used in all Implementation Guidelines (not further specified here).

## 2.94 Mandate Related Information

Attribute	Type	Condition	Description
mandateId	Max35Text	Mandatory	
dateOfSignature	ISO Date	Mandatory	
amendmentInformationDetails	Amendment Information Details	Optional	
electronicSignature	Max1025Text	Optional	Only used for e-mandates

## 2.95 Mandate Type

Attribute	Type	Condition	Description
localInstrumentCode	Local Instrument Code	{Or	External List e.g. Core, B2B, DDMC (for electronic mandate)
localInstrumentProprietary	Max35Text	Or}	
serviceLevelCode	Service Level Code	{Or Optional	External code
serviceLevelProprietary	Max35Text	Or Optional}	
categoryPurposeCode	Category Purpose	{Or Optional	External List
categoryPurposeProprietary	Max35Text	Or Optional}	
classificationCode	Classification Code	{Or Optional	FIXE, USGB, VARI (internal code)
classificationProprietary	Max35Text	Or Optional}	

## 2.96 Market Identification

Attribute	Type	Condition	Description
mic	Max4Text	{Or	ISO 10383 code of the market place.
market Identifier Proprietary	Max35Text	Or}	Proprietary identifier of the market place.

## 2.97 Occurrences

Attribute	Type	Condition	Description
sequenceType	Sequence Type	Mandatory	RCUR, OOFF
frequencyType	Frequency Code	Optional	
duration	Duration	Optional	Length of time for which the mandate remains valid.
firstCollectionDate	ISODate	Optional	Date of the first collection of a direct debit as per the mandate.
finalCollectionDate	ISODate	Optional	Date of the final collection of a direct debit as per the mandate.

## 2.98 Organisation Identification

Attribute	Type	Condition	Description
anyBIC	BIC	{Or	A code allocated to a business entity or to a financial institution by a Registration Authority under an international identification scheme.
lei	LEI	Or	Legal Entity Identifier.

Attribute	Type	Condition	Description
others	Array of Generic Organisation Identification	Or}	Unique identification of an organisation, as assigned by an institution, using an identification scheme.

## 2.99 Original and Current Face Amount

Attribute	Type	Condition	Description
faceAmount	Amount	Mandatory	Quantity expressed as an amount representing the face amount, that is, the principal of a debt instrument.
amortisedValue	Amount	Mandatory	Quantity expressed as an amount representing the current amortised face amount of a bond, for example, a periodic reduction/increase of a bond's principal amount.

## 2.100 Original Transaction Information and Status

Attribute	Type	Condition	Description
originalInstructionId	Max35Text	Conditiona l	Unique identification, as assigned by the original instructing party for the original instructed party, to unambiguously identify the original instruction.
originalEndToEndId	Max35Text	Conditiona l	Unique identification, as assigned by the original initiating party to unambiguously identify the original transaction
originalUetr	UUID	Conditiona l	Universally unique identifier to provide the original end-to-end reference of a payment transaction.

Attribute	Type	Condition	Description
transactionStatus	Transaction Status	Mandatory	Specifies the status of a transaction, as published in an external payment transaction status code list.
statusReasonInformationCode	Status Reason Code	{Or-Optional}	Provides detailed information on the status reason.
statusReasonInformationProprietary	Max35Text	Or Optional}	Proprietary additional information on the reason for e.g. rejecting the request.  Remark: If an ISO Code is available it should be used instead of Proprietary Reasons. Further restrictions could be defined by API Access Schemes.
statusReasonAdditionalInformation	Max105Text	Optional	Further details on the status reason.
originalTransactionReference	Original Transaction Reference	Optional	Key elements used to identify the original transaction that is being referred to.

This data type is used in [oFA-IG-Com].

## 2.101 Original Transaction Information and VOP Status

The data type defined below is an extension of the data type Original Transaction Information and Status defined above. The attributes with yellow background are added.

Attribute	Type	Condition	Description
originalInstructionId	Max35Text	Conditional	Unique identification, as assigned by the original instructing party for the original instructed party, to unambiguously identify the original instruction.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
originalEndToEndId	Max35Text	Conditional	Unique identification, as assigned by the original initiating party to unambiguously identify the original transaction
originalUetr	UUID	Conditional	Universally unique identifier to provide the original end-to-end reference of a payment transaction.
transactionStatus	Transaction Status	Mandatory	Specifies the status of a transaction, as published in an external payment transaction status code list.
statusReasonInformationCode	Status Reason Code	{Or-Optional}	Provides detailed information on the status reason.
statusReasonInformationProprietary	Max35Text	Or Optional}	<p>Proprietary additional information on the reason for e.g. rejecting the request.</p> <p>Remark: If an ISO Code is available it should be used instead of Proprietary Reasons. Further restrictions could be defined by API Access Schemes.</p>
statusReasonAdditionalInformation	Max105Text	Optional	Further details on the status reason.
originalTransactionReference	Original Transaction Reference	Optional	Key elements used to identify the original transaction that is being referred to.
creditorNameMatch	Party Name Match Code	Conditional	Will be provided, if an account/ owner name match was requested, if the related code in the interbank VOP service was "CMTC", "NMTC" or "NOAP" ,i.e. if the singleTransactionStatus also equals "RVCM"

Attribute	Type	Condition	Description
creditorOrganisationIdMatch	Party Identification Match Code	Conditional	Will be provided, if an account/ owner identification match was requested and if the related code in the interbank VOP service was "NMTC" or "NOAP", i.e. if the singleTransactionStatus also equals "RVCM".
matchedCreditorName	Max140Text	Optional	Provided only in case of "CMTC" as code in creditorNameMatch

This data type is used in [oFA-IG-VOP].

## 2.102 Original Transaction Reference

Attribute	Type	Condition	Description
instructedAmount	Amount	{Or Optional}	
equivalentAmount	Equivalent Amount	Optional Or}	
creditor	Party Description	Optional	
creditorAccount	Account Reference	Optional	
ultimateCreditor	Party Description	Optional	

## 2.103 Parameters API Security

Attribute	Type	Condition	Description
messageSigningRequired	Boolean	Mandatory	<p>Mandate the API Client to sign the requests on application level.</p> <ul style="list-style-type: none"> <li>• True: The fields x-jws-signature and Digest have to be included in the message</li> </ul>

Attribute	Type	Condition	Description
			<p>header. In addition, the TLS Certificate is used on transport layer.</p> <ul style="list-style-type: none"> <li>• False: Only the TLS Certificate on the transport layer is used. The ASPSP has to ensure that a check of access rights can be performed. This check has to be done previous to changing the transport layer and access right information which are contained in the certificate being potentially removed, e.g. by firewalls. (IO1)</li> </ul>
messageSigningCertificate Mandated	Boolean	Mandatory	Indicates whether the ASPSP mandates the API Client to include the certificate used for message signing into the message (as part of the JWS Protected Header).
supportedMessageSignature Algorithms	Array of Signature Algorithm Code	Conditional	Array [] containing one or more identifier indicating signature algorithms according to RFC7518, i.e. RS256, PS512, etc. applicable to http message signing.
scaMethods	Array of Authenticati on Type	Mandatory	Supported SCA Methods (IO11)
scaApproaches	Array of SCA Approach Type	Mandatory	<p>One or several of the following values:</p> <ul style="list-style-type: none"> <li>• Decoupled</li> <li>• Embedded</li> <li>• Oauth2</li> <li>• Redirect</li> </ul> (IO5)
scaApproaches MethodsMapping	SCA Approach Methods Mapping	Optional	<p>Configuration of supported SCA methods per applicable SCA Approaches</p> <ul style="list-style-type: none"> <li>• Decoupled</li> <li>• Embedded</li> <li>• Oauth2</li> <li>• Redirect</li> </ul>

Attribute	Type	Condition	Description
			<ul style="list-style-type: none"> <li>ASPSP-Channel (IO12)</li> </ul>
oauth2PrestepRequired	Boolean	Mandatory	<p>Oauth2 required as a pre-step for PSU authentication (of the first factor)</p> <p>The ASPSP faces the following options:</p> <ul style="list-style-type: none"> <li>True: The ASPSP requires a Oauth2 prestep before sending the first request to the openFinance or XS2A API. The API Client has to perform an Oauth2 based authorization prior to the openFinance service request. This authorisation covers only the first factor of an SCA of the full (simple) authorisation if no second factor is used, e.g. in case of exemptions.</li> <li>If an Oauth2 prestep is used, the field Authorization in the header has to carry the bearer token Oauth2 authorization.</li> </ul> <ul style="list-style-type: none"> <li>False: No Oauth2 prestep is used.</li> </ul>
oauth2PrestepMetadataUri	Max140Text	Optional	The URI of the Oauth implementation Metadata information.
oauth2OfflineScopeRequired	Boolean	Optional	Defines, whether the Oauth scope "offline_access" needs to be supported when addressing the API where the PSU is not online.
scaProcessFlowRequirement	SCA Process Flow Requirement Code	Optional	<p>There are some options regarding the SCA process flow: there are various points in the process flow where the selection of the SCA method could be performed.</p>
			(IO9)

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
clientExplicitAuthorisationPreferenceSupported	Boolean	Mandatory	Indicates whether the ASPSP will not start the authorisation implicitly, if the header parameter Client-Explicit-Authorisation-Preferred equals true.
supportedStartAuthorisationHyperlinks	Array of Max35Text	Mandatory	All "startAuthorisationXXX" hyperlinks supported in this API.  If the Array is empty, start authorisation is not supported in this API instance.  (IO39)
supportedUpdateAuthorisationHyperlinks	Array of Max35Text	Mandatory	All "updateAuthorisationXXX" hyperlinks supported in this API.  If the Array is empty, update authorisation is not supported in this API instance.
firstFactorViaApiForDecoupledScaRequired	Boolean	Mandatory	In case of a decoupled SCA approach, parts of the PSU authentication might still be required via the API.  There are essentially two variants for the implementation:  False i.e. PSSU Identification sufficient:  Only the PSU-Id is transmitted via the API. Information beyond that are not transferred via the API.  True: (OF-)Authentication required:  The first factor of the SCA is handled via the API. The remaining part of the SCA is not processed via the API.  (IO14)
supportedBodySignatureAlgorithms	Array of Signature Algorithm Code	Conditional	Array [] containing one or more identifier indicating signature algorithms according to RFC7518, i.e. RS256,

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
			PS512, etc. applicable to body signing algorithms.
passwordEncryptionRequired	Boolean	Mandatory	PSU Authentication data delivered via the XS2A-Interface (Embedded Approach) shall be encrypted at application level.  (IO40)
supportedKeyEncryptionAlgorithms	Array of Key Encryption Algorithm Code	Conditional	Array [] containing one or more identifier indicating encryption algorithms for key encryption according to RFC7518, i.e. RSAES-OAEP, RSA-OAEP-256, etc.
supportedContentEncryptionAlgorithms	Array of Content Encryption Algorithm Code	Conditional	Array [] containing one or more identifier indicating encryption algorithms for encryption of the content according to RFC7518, i.e. A256GCM, etc.
implicitTransactionAuthorisationSupported	Boolean	Mandatory	Implicit start of transaction authorisation supported.  (IO38)
psuNameInAuthorisationSupported	Boolean	Mandatory	Indicates, whether providing of the PSU Name in the authorisation sub resource is supported.  (IO68)
clientScaPreferenceSupported	Boolean	Mandatory	Indicates whether the header Client-SCA-Approach-Preference is recognised by the ASPSP.  (IO71)

## 2.104 Parameters Payment Service

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed payment initiation service, e.g. "XMDPIS", where the configuration data below relates to.
serviceVersion	Max10Text	Mandatory	Version of Implementation Guidelines of the addressed service, e.g. "2.1".
statusNotificationSupported	Boolean	Mandatory	Indicates whether the status notification function as specified in [oFA-PFSM] is supported for the related resources.
psuHeaderData	PSU Header Data	Mandatory	Defines whether PSU ID, Type etc are mandated by the ASPSP in the first transaction request.
confirmationRequired	Boolean	Mandatory	The confirmation step in authorization Redirect SCA or OAuth2 SCA Approach required for this service.  (IO57)
psuAccountSelectionSupported	Boolean	Mandatory	The ASPSP offers to select the PSU account in a second step after a password has been presented.
multiLevelScaSupported	Boolean	Mandatory	Indicates, whether the service is offered as a service mandating a multi-level authorisation for some PSU.  (IO27)
scaForCancellationRequired	Boolean	Conditional	<p>It is optional to require an SCA to cancel the related payment service.</p> <ul style="list-style-type: none"> <li>• True: SCA can be required for payment cancellations where applicable. The ASPSP is free to drop the SCA in some cases.</li> <li>• False:</li> </ul>

Attribute	Type	Condition	Description
			<p>SCA is not required to cancel payments of the related service.</p> <p>Attribute not provided: Cancellation of the related service is not supported. (IO26)</p>
supportedStatusFormats	Array of Max35Text	Mandatory	<p>Supported codes:</p> <p>"JSON",</p> <p>"JSON-Extended",</p> <p>"pain.002.0x.0x", where x is instantiated with the correct values.</p> <p>(IO44)</p>
psuNameInStatusSupported	Boolean	Mandatory	<p>Indicates whether the psuName is provided in resource status.</p> <p>(IO67)</p>
clientVopRequestedSupported	Boolean	Mandatory	<p>Indicates, whether the steering of integration of VOP into payment initiation is supported.</p>
clientVopReuestIdSupported	Boolean	Conditional	<p>Indicates whether the ASPSP will support the header Client-VOP-Request-ID.</p> <p>This is only provided, if the clientVopRequestedSupported attribute equals true</p>
clientVopRequestIdMandated	Boolean	Conditional	<p>Indicates whether the ASPSP mandates the API Client to use the Client-VOP-Request-Id if VOP is applicable to the related product <b>and</b> if VOP has not been opted out.</p> <p>This is only provided, if the clientVopRequestedSupported attribute equals true</p>

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
jsonPaymentProducts	Array of Payment Product JSON	Optional	List of supported JSON based payment products. With related product specific additional information.  (IO2, IO3, IO4)
xmlPaymentProducts	Array of Payment Product XML	Optional	List of supported XML based payment products.
textPaymentProducts	Array of Payment Product Text	Optional	List of supported text based payment products.
debtorNameReturned	Boolean	Mandatory	Indicates whether the ASPSP will return the debtor name in JSON/XML based payment initiations after successful SCA.  (IO58)
fundsAvailableSupported	Boolean	Optional	This attribute indicates whether the attribute "fundsAvailable" is supported in payment status.
transactionFeesSupported	Boolean	Mandatory	Transaction fees transported via the openFinance API in Payment Initiation Services.  (IO10)
supportedScaExemptions	Array of SCA Exemption Code	[0..*]	Exemptions from SCA are possible in general. An ASPSP has to decide whether and if so under which condition to allow for an exemption from SCA for payment initiation. The applied condition is arbitrary but it has to be exactly one condition that determines the scenario for an SCA exemption.

Attribute	Type	Condition	Description
			<p>Empty array implies that SCA exemption is not supported.</p> <p>No entry of this field implies no information.</p> <p>(IO22)</p>
minLead	Integer	Optional	The minimum of bank working days from the current date which is needed for the requested execution date.
maxLead	Integer	Optional	The maximum of calendar days from the current date which is supported for the requested execution date.
maximumExpiryDays Reservation	Integer	Optional	The maximum expiry interval for a reservation of funds.
supportedExecutionPeriods	Array of Event Frequency Code	Optional	Supported event frequency codes for recurring payments.
supportedMaximum ExecutionDay	Integer	Optional	<p>Only relevant for recurring payments.</p> <p>Either 30 or 31 as possible values. If 30 is the maximum execution day in a month, then "ultimo" is not supported as value.</p>
supportedExecutionRules	Array of Max35Text	Optional	The supported values are "preceding" and "following".
supportedAccountReference	Array of Account Reference Code	Mandatory	<p>List of account reference codes which are supported for the debtor account.</p> <p>(IO18)</p>
accountCurrencyCode Required	Boolean	Mandatory	Defines whether the PSU account identification mandates the currency code for identification.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
multiCurrencyAccountsSupported	Boolean	Mandatory	The ASPSP supports multi-currency accounts for payment initiation services.  (IO17)
supportedAdditionalCharacterSetTextfields	Array of Max1Text	Mandatory	Characters in addition to the standard character set as defined in[oFA-PFSM], which are accepted in the payment API for text fields (names, address and remittance information). If the array is empty, no additional characters are permitted in the API.
transformedAdditionalCharacterSetTextfields	Array of Max1Text	Optional	Additional Characters accepted for text fields within payments (see above), which are transformed into a different character/characters in addition.
supportedCountryCodes	Array of Country Codes	Optional	List of country codes for cross-border payment products.
supportedCurrencyCodes	Array of Currency Code	Optional	List of currencies which are accepted for cross-border payments.  (IO52)
supportedInstructionCodes	Array of Instruction Code	Optional	Specifies further instructions concerning the processing of a payment instruction, provided by the sending clearing agent to the next agent(s).
batchBookingFlagSupported	Boolean	Optional	if equals true, then the ASPSP will book the bulk transactions following this flag.
maximumNumberTransactions	Integer	Optional	maximum number of transactions in a bulk payment
totalAmountRequired	Boolean	Optional	Applicable only for bulk payments

Attribute	Type	Condition	Description
_links	Links	Mandatory	The endpoint of the addressed payment service.

This data type is used in [oFA-Disc].

## 2.105 Parameters Account Information Service

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed account information service, e.g. "AIS-PAY" "AIS-CAC", where the configuration data below relates to.
supportedAccessRightCodes	Array of Access Right Code	Mandatory	Array of access right codes which might be used when submitting a consent to an account information service related to the addressed AIS service.  (IO30,54,56)
supportedReportFormats	Array of Max35Text	Optional	supported scheme names for XML based payment initiation, e.g. "camt.05x.0x.0x" as well as "JSON" and "MT94x".  (IO31)
globalStatementsSupported	Boolean	Mandatory	Defines whether statements on a dedicated endpoint /statements as introduced in [oFA-IG-XAIS] are supported within this service type or not.
supportedEndpoints	Array of Max35Text	Mandatory	"accountDetails", "balances", "transactions", "statements", "orders"as permitted values for the array entries.  (IO59, 61)

Attribute	Type	Condition	Description
supportedQueryParameters Balances	Array of Max35Text	Mandatory	Query parameters supported for balances.  "dateFrom" as potential value.  (IO66)
supportedQueryParameters Transactions	Array of Max35Text	Mandatory	Query parameters supported for transactions.  "dateFrom", "dateTo", "entryReferenceFrom", "bookingStatus", "deltaList", "withBalance", "pageSize" as potential values  (IO32,33)
maxPageSize	Integer	Conditional	Delivers the maximum page size in numbers of transactions to be reported.  To be provided if the pageSize query parameter is supported.
supportedBookingStatusCode	Array of Max35Text	Conditional	IF the bookingStatus is supported for the addressed service, this attribute is mandated. It provides all booking status codes supported as query parameters.  ""booked", "pending", "both", "information", "all" as potential values.
supportedQueryParameters Accounts	Array of Max35Text	Mandatory	Query parameters supported for account list/details.  Potential values are "withBalance" and "evaluationCurrency".  (IO32)
multiCurrencyAccountDetails	Max35Text	Optional	"aggregation", "sub-account" "aggregationAndSub-account" for potential solutions offered for account

Attribute	Type	Condition	Description
			details in case of multi-currency accounts (IO41)
supportedInterestReasons	Array of Max35Text	Conditional	<p>Shows all supported values for interest reasons defined for the data type Interest for account types with an interest definition.</p> <p>Shall be used in case the reason attribute is used at all.</p>
countingOfAisRequests	Max35Text	Mandatory	<p>This attribute is defining the way of counting a 4 times a day counting for PSU not present (cp. [EBA-RTS])</p> <p>"none": no dedicated AIS request counting is performed for this service.</p> <p>"timeslot": Counting is done by aggregating all related account information endpoint accesses in a certain time interval as one access.</p> <p>"byEndpointCall": Counting is done by allowing for each endpoint 4 times access per day, counting them explicitly by endpoint.</p> <p>(IO47)</p>
maximumInformationInterval	Integer	Mandatory	<p>Maximum addressable transaction information of the past, interval in days.</p> <p>Might be further restricted on account level.</p>
supportedBalanceTypes	Array of Balance Type	Mandatory	<p>Balance Types supported.</p> <p>(IO34,64,65)</p>
creditLineIncludedSupported	Boolean	Mandatory	
standingOrdersSupported	Boolean	Mandatory	

Attribute	Type	Condition	Description
supportedPageSize	Integer	Optional	
fileDownloadRequired	Boolean	Mandatory	Transaction list offered only as download link in case of too high volumes. (IO36,35)
signedAccountInformationSupported	Boolean	Mandatory	Signature on body level as defined in [oFA-PFSM].
supportedSignatureAlgorithms	Array of Signature Algorithm Code	Conditional	Array [] containing one or more identifier indicating signature algorithms according to RFC7518, i.e. RS256, PS512, etc.
encryptedAccountInformationSupported	Boolean	Mandatory	Encryption on application level supported by the ASPSP as defined in [oFA-PFSM] and if a related certificate has been provided by the API Client.
_links	Links	Mandatory	The endpoint of the addressed account information service, e.g. of the related "/accounts" endpoint.

This data type is used in [oFA-Disc].

## 2.106 Parameters Consent Service

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed account information service, e.g. "CONS-AIS"
statusNotificationSupported	Boolean	Mandatory	Indicates whether the status notification function as specified in [oFA-PFSM] is supported for the related resources.
psuHeaderData	PSU Header Data	Mandatory	Defines whether PSU ID, Type etc are mandated by the ASPSP in the first transaction request.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
confirmationRequired	Boolean	Mandatory	The confirmation step in authorization Redirect SCA or Oauth2 SCA Approach required for this service.  (IO57)
multiLevelScaSupported	Boolean	Mandatory	Indicates, whether the service is offered as a service mandating a multi-level authorisation for some PSU.  (IO27)
inconsistentConsentRejected	Boolean	Optional	Indicates, whether an inconsistent consent is rejected before PSU authentication, e.g. where the PSU ID does not match the required IBAN.  (IO53)
supportedAccountReference	Array of Account Reference Code	Mandatory	List of account reference codes which are supported for the account in the related account category in consents of type "detailed".  (IO60,62)
psuNameInResourceSupported	Boolean	Optional	Indicates whether the psuName is provided in resource status. (Only relevant for Version 1.3.x).  (IO67)
psuNameInStatusSupported	Boolean	Mandatory	Indicates whether the psuName is provided in authorisation status.
frequencyPerDay	Integer	Conditional	The maximum frequency offered for access without PSU being online. Only relevant for account information consent.
consentValidityDays	Integer	Optional	Maximum consent validity days without the validity being restricted by the ASPSP, if applicable.
supportedConsentTypes	Array of Consent Type Code	Mandatory	

Attribute	Type	Condition	Description
multiCurrencyAccountsSupported	Boolean	Mandatory	The ASPSP supports multi-currency accounts in the consent API.  (IO17)
revocationViaAspspSupported	Boolean	Mandatory	Indicates whether the ASPSP supports the revocation of a consent by the PSU via the ASPSP.  (IO51)
supportedAccessRightCodes	Array of Access Right Code	Optional	Array of access right code admitted for the related consent, if it is not a consent on AIS. In the latter case, the supported access right codes are specific to the account type, which is why it is defined within the AIS information.
_links	Links	Mandatory	The endpoint of the addressed consent service e.g. for "/consents/account-information"

This data type is used in [oFA-Disc].

## 2.107 Parameters Funds Confirmation Service

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed funds confirmation service "COF"
cardNumberSupported	Boolean	Mandatory	Indicates whether the card number can be used for addressing the account in addition. If true and if the addressed account is a multicurrency account, then the card will address the related sub-account of the consent process, where the card number has been used.

This data type is used in [oFA-Disc].

## 2.108 Parameters Mandate Services

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed mandate service, e.g. "MAN", where the configuration data below relates to.
serviceVersion	Max10Text	Mandatory	Version of Implementation Guidelines of the addressed service, e.g. "2.1".
statusNotificationSupported	Boolean	Mandatory	Indicates whether the status notification function as specified in [oFA-PFSM] is supported for the related resources.
psuHeaderData	PSU Header Data	Mandatory	Defines whether PSU ID, Type etc are mandated by the ASPSP in the first transaction request.
confirmationRequired	Boolean	Mandatory	The confirmation step in authorization Redirect SCA or OAuth2 SCA Approach required for this service.  (IO57)
psuAccountSelectionSupported	Boolean	Mandatory	The ASPSP offers to select the PSU account in a second step after a password has been presented.
multiLevelScaSupported	Boolean	Mandatory	Indicates, whether the service is offered as a service mandating a multi-level authorisation for some PSU.  (IO27)
scaForCancellationRequired	Boolean	Conditional	<p>It is optional to require an SCA to cancel the related payment service.</p> <ul style="list-style-type: none"> <li>• True: SCA can be required for payment cancellations where applicable. The ASPSP is free to drop the SCA in some cases.</li> <li>• False:</li> </ul>

Attribute	Type	Condition	Description
			<p>SCA is not required to cancel payments of the related service.</p> <p>Attribute not provided: Cancellation of the related service is not supported. (IO26)</p>
psuNameInStatusSupported	Boolean	Mandatory	<p>Indicates whether the psuName is provided in resource status.</p> <p>(IO67)</p>
debtorNameMandated	Boolean	Mandatory	Default is "true".
debtorNameReturned	Boolean	Mandatory	<p>Indicates whether the ASPSP will return the debtor name in submitted mandates after successful SCA.</p> <p>(IO58)</p>
minLead	Integer	Optional	The minimum of bank working days from the current date which is needed for the first collection date.
maxLead	Integer	Optional	The maximum of calendar days from the current date which is supported for the first collection date.
supportedExecutionPeriods	Array of Frequency Code	Optional	Supported frequency codes for mandates.
supportedAccountReference	Array of Account Reference Code	Mandatory	<p>List of account reference codes which are supported for the debtor account.</p> <p>(IO18)</p>
supportedAdditionalCharacter SetTextfields	Array of Max1Text	Mandatory	Characters in addition to the standard character set as defined in [oFA-PFSM], which are accepted in the payment API for text fields (names, address and remittance information).

Attribute	Type	Condition	Description
			If the array is empty, no additional characters are permitted in the API.
transformedAdditionalCharacterSetTextfields	Array of Max1Text	Optional	Additional Characters accepted for text fields within payments (see above), which are transformed into a different character/characters in addition.
_links	Links	Mandatory	The endpoint of the addressed mandate service.

This data type is used in [oFA-Disc].

## 2.109 Parameters Document Services

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed document service, e.g. "XDOC"
statusNotificationSupported	Boolean	Mandatory	Indicates whether the status notification function as specified in [oFA-PFSM] is supported for the related resources.
supportedAdditionalCharacterSetTextfields	Array of Max1Text	Mandatory	Characters in addition to the standard character set as defined in [oFA-PFSM], which are accepted in the payment API for text fields (names, address and remittance information). If the array is empty, no additional characters are permitted in the API.
transformedAdditionalCharacterSetTextfields	Array of Max1Text	Optional	Additional Characters accepted for text fields within payments (see above), which are

Attribute	Type	Condition	Description
			transformed into a different character/characters in addition.
_links	Links	Mandatory	The endpoint of the addressed rtp service.

This data type is used in [oFA-Disc].

## 2.110 Parameters Push AIS Service

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed Push AIS sub service, "XAIPS-XX[X]", e.g. "XAIPS-RTP".
statusNotificationSupported	Boolean	Mandatory	Indicates whether the status notification function as specified in [oFA-PFSM] is supported for the related resources.
psuHeaderData	PSU Header Data	Mandatory	Defines whether PSU ID, Type etc are mandated by the ASPSP in the first transaction request.
confirmationRequired	Boolean	Mandatory	The confirmation step in authorization Redirect SCA or Oauth2 SCA Approach required for this service.  (IO57)
multiLevelScaSupported	Boolean	Mandatory	Indicates, whether the service is offered as a service mandating a multi-level authorisation for some PSU.  (IO27)

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
psuNameInStatusSupported	Boolean	Mandatory	Indicates whether the psuName is provided in authorisation status. (IO67)
apiClientSecondaryPushURISupported	Boolean	Mandatory	Support of secondary Push URI registration
staticCallbackTextSupported	Boolean	Mandatory	Pushing callback text supported.
callbackLinksSupported	Boolean	Mandatory	Pushing links to related account information entries supported.
pushEntriesSupported	Boolean	Mandatory	Pushing actual account information supported.
attributeFilteringSupported	Boolean	Mandatory	Support of attribute filers when pushing
documentForwardingSupported	Boolean	Mandatory	Support of pushing also documents related to the account information pushed.
supportedAccountEntryCriteria	Array of Max35Text	Optional	The list of supported Account Entry Trigger Criteria
supportedAccountStatementCriteria	Array of Max35Text	Optional	The list of supported Account Statement Trigger Criteria
supportedAccountBalanceCriteria	Array of Max35Text	Optional	The list of supported Account Balance Trigger Criteria
supportedRtpCriteria	Array of Max35Text	Optional	The list of supported RTP Trigger Criteria
_links	Links	Mandatory	The endpoint of the addressed subscription service.

This data type is used in [oFA-Disc].

## 2.111 Parameters Signing Basket Service

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed signing basket function "SGNB"
statusNotificationSupported	Boolean	Mandatory	Indicates whether the status notification function as specified in [oFA-PFSM] is supported for the related resources.
psuHeaderData	PSU Header Data	Mandatory	Defines whether PSU ID, Type etc are mandated by the ASPSP in the first transaction request.
confirmationRequired	Boolean	Mandatory	The confirmation step in authorization Redirect SCA or OAuth2 SCA Approach required for this service.  (IO57)
multiLevelSCASupported	Boolean	Mandatory	Indicates, whether the service is offered as a service mandating a multi-level authorisation for some PSU.  (IO27)
transactionGroupings	Array of Transaction Type	Mandatory	The maximum groups of transaction which might be grouped for authorisation. The constant "all" is indicating that there are no restrictions.  (IO25)

This data type is used in [oFA-Disc].

## 2.112 Parameters RTP Service

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed request to pay service, e.g. "X RTP"

Attribute	Type	Condition	Description
statusNotificationSupported	Boolean	Mandatory	Indicates whether the status notification function as specified in [oFA-PFSM] is supported for the related resources.
documentSupported	Boolean	Mandatory	Expresses, whether the transport of a document within the submitted RTP is supported.
jsonPaymentProducts	Array of Payment Product JSON	Mandatory	List of supported JSON based payment products. With related product specific additional information.
supportedAdditionalCharacterSetTextfields	Array of Max1Text	Mandatory	Characters in addition to the standard character set as defined in [oFA-PFSM], which are accepted in the payment API for text fields (names, address and remittance information). If the array is empty, no additional characters are permitted in the API.
transformedAdditionalCharacterSetTextfields	Array of Max1Text	Optional	Additional Characters accepted for text fields within payments (see above), which are transformed into a different character/characters in addition.
_links	Links	Mandatory	The endpoint of the addressed rtp service.

This data type is used in [oFA-Disc].

## 2.113 Parameters VOP Service

Attribute	Type	Condition	Description
serviceType	Service Type	Mandatory	The addressed Verification of Party service, e.g. "VOP-PAYEE"
statusNotificationSupported	Boolean	Mandatory	Indicates whether the status notification function as specified in [oFA-PFSM] is supported for the related resources.
supportedAdditionalCharacterSetTextfields	Array of Max1Text	Mandatory	Characters in addition to the standard character set as defined in [oFA-PFSM], which are accepted in the payment API for text fields (names, address and remittance information). If the array is empty, no additional characters are permitted in the API.
transformedAdditionalCharacterSetTextfields	Array of Max1Text	Optional	Additional Characters accepted for text fields within payments (see above), which are transformed into a different character/characters in addition.
_links	Links	Mandatory	The endpoint of the addressed rtp service.

This data type is used in [oFA-Disc].

## 2.114 .Party Description

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party.
postal address	Postal Address	Optional	Postal Address of the party.
identification	Party Identification	Optional	Identification of the party.
additionalPartyInformation	Additional Party Information	Optional	<p>Only supported in extended services for creditor related parties, if at all.</p> <p><b>NOTE:</b> This information will be neither put to the related interbank payment nor to account reports/statements and might only be used to display related information to the PSU during potential authorisation processes.</p>

This data type is used in many services.

## 2.115 Party Description1

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party.

This data type is used in [oFA-PFSM].

## 2.116 Party Description2

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party.
postal address	Postal Address	Optional	Postal Address of the party.

This data type is used in [oFA-PFSM]

### 2.117 Party Description3

Attribute	Type	Condition	Description
identification	Party Identification1	Optional	Identification of the party.

This data type is used in [oFA-PFSM], [oFA-IG-Adm].

### 2.118 Party Description4

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party.
identification	Party Identification	Optional	Identification of the party.

This data type is used in [oFA-IG-VOP].

### 2.119 Party Description5

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party.
postal Address	Postal Address1	Optional	Postal address of the party.

This data type is used in [oFA-PFSM] .

### 2.120 Party Description6

Attribute	Type	Condition	Description
name	Max140Text	Optional	Name of the party.
postal Address	Postal Address2	Optional	Postal Address of the party.

This data type is used in [oFA-PFSM].

## 2.121 Party Identification

Attribute	Type	Condition	Description
organisationId	Organisation Identification	{Or	An entry provided by an external ISO code list
privateId	Private Identification	Or }	A scheme name defined in a proprietary way.

**Note:** Only one of the entries is allowed.

This data type is used in [oFA -IG-PAIS].

## 2.122 Party Identification1

Attribute	Type	Condition	Description
privateId	Private Identification	Mandatory	A scheme name defined in a proprietary way.

## 2.123 Party Verification Request

Tag	Type	Usage	Description
uetr	UUID	Mandatory	Identifies this party identification request. Shall be a unique identifier.
partyAccount	Account Reference	Mandatory	The data type might be restricted by the ASPSP to e.g. "iban" use only, which would be Account Reference2 as data type.
partyAgent	Agent Description	Optional	
party	Party Description4	Mandatory	This structure shall contain the party name and/or a party identifier

This data type is used in [oFA-IG-VOP].

## 2.124 Party Verification Request and Response

Tag	Type	Usage	Description
uetr	UUID	Mandatory	Identifies this party identification request. Shall be a unique identifier.
partyAccount	Account Reference	Mandatory	The data type might be restricted by the ASPSP to e.g. "iban" use only, which would be Account Reference2 as data type.
partyAgent	Agent Description	Optional	
party	Party Description4	Mandatory	This structure shall contain the party name and/or a party identifier,
partyNameMatch	Party Name Match Code	Conditional	Only provided, if a party name has been provided and if the processing of the related interbank VOP request has been finalized already.
partyIdMatch	Party Identification Match Code	Conditional	Only provided, if a party identification has been provided and if the processing of the related interbank VOP request has been finalized already.
matchedName	Max140Text	Conditional	This attribute might be provided in case of a near match and contains the name as provided by the party agent.
additionallInformation	Max500Text	Optional	Should be human readable text.

This data type is used in [oFA-IG-VOP].

## 2.125 Party Verification Response

Attribute	Type	Condition	Description
uetr	UUID	Mandatory	Replies the uetr entry of the related request.

Attribute	Type	Condition	Description
partyNameMatch	Party Name Match Code	Conditional	Only provided, if a party name has been provided.
partyIdMatch	Party Identification Match Code	Conditional	Only provided, if a party identification has been provided.
matchedName	Max140Text	Conditional	This attribute might be provided in case of a near match and contains the name as provided by the party agent.
additionalInformation	Max500Text	Optional	Should be human readable text.

This data type is used in [oFA-IG-VOP].

## 2.126 Payment Conditions

Attribute	Type	Condition	Description
amountModificationAllowed	Boolean	optional	Indicates if the debtor is allowed to pay a different amount than the requested amount.
earlyPaymentAllowed	Boolean	optional	Indicates if the debtor is allowed to pay before the requested execution date.

## 2.127 Payment Context Type

Attribute	Type	Condition	Description
cardPresent	Boolean	Optional	
cardDataEntryMode	Card Data Entry Mode	Optional	

## 2.128 Payment Exchange Rate

Attribute	Type	Condition	Description
unitCurrency	Currency Code	Optional	Currency in which the rate of exchange is expressed in a currency exchange. In the example 1EUR = xxxCUR, the unit currency is EUR.
exchangeRate	String	Optional	Factor used to convert an amount from one currency into another. This reflects the price at which one currency was bought with another currency.
contractIdentification	Max35Text	Optional	Unique identification to unambiguously identify the foreign exchange contract.
rateType	Exchange Rate Type Code	Optional	Specifies the type used to complete the currency exchange.  Only SPOT, SALE and AGRD is allowed.

This data type is used in [oFA-PFSM].

## 2.129 Payment Identification

Attribute	Type	Condition	Description
instructionId	Max35Text	Optional	Unique identification as assigned by an instructing party for an instructed party to unambiguously identify the instruction.
endToEndId	Max35Text	Optional	
uetr	UUID	Optional	Universally unique identifier to provide an end-to-end reference of a payment transaction.  It is recommended to use time-based version (version 1) and variant 8,9,a or b of the UUID as defined in [RFC4122] for UUID fields such as uetr.

This data type is used in [oFA-PFSM], [oFA-IG-XPIS].

## 2.130 Payment Identification1

Attribute	Type	Condition	Description
endToEndId	Max35Text	Optional	Unique identification assigned by the initiating party to unambiguously identify the transaction. This identification is passed on, unchanged, throughout the entire end-to-end chain

This data type is used in [oFA-PFSM] .

## 2.131 Payment Product JSON

Attribute	Type	Condition	Description
pathProductName	Max35Text	Mandatory	path definition of the related JSON formatted product, e.g. "sepa-credit-transfers"
supportedJSONPaymentsAttributes	Array of Max35Text	Mandatory	<p>Supported payment attributes (first level attributes) for the addressed product.</p> <p>In [oFA-PFSM] first level attributes for single payments e.g. "paymentIdentification", "creditorAccount", "instructedAmount" are defined. These attributes may come with a full data type, e.g. "Payment Identification" or with a restricted data type, e.g. "Payment Identification 1".</p> <p>This array defines, which of these attributes are accepted within this service. It further supports that the related attributes are presented with the potential restriction, e.g.</p>

Attribute	Type	Condition	Description
			<p>by "paymentIdentification" for the data type "Payment Identification" or by "paymentIdentification_1" for the data Type "Payment Identification 1".</p> <p>Remark: By this definition, the discovery services define implicitly level one and level two of the data structure. It is the choice of the API Clients to ignore the implicit definition of the level 2 definition, if this is not needed for the supported use cases. For bulk or multi-bulk payments data structures defined in the related attributes might be defined on a lower level. However, this field still defines, whether the related attribute is supported (with the related potential restriction in the data type), potentially on a lower level.</p> <p>(IO21)</p>
debtorAccountMandated	Boolean	Mandatory	<p>If true, the debtor account shall be used within this service.</p> <p>If false, the usage of the attribute is optional for the API client.</p>
supportedPurposeCodes	Array of Purpose Code	Mandatory	A list of the supported purpose codes for the related product.
finalStatusCodes	Array of Transaction Status	Mandatory	<p>Final transaction stati for the related product.</p> <p>(IO45)</p>

## 2.132 Payment Product XML

Attribute	Type	Condition	Description
pathProductName	Max35Text	Mandatory	path definition of the related XML formatted product, e.g. "pain.001-sepa-credit-transfers"
supportedVersions	Array of Max35Text	Mandatory	Additional information on format versions supported, e.g. different XML schemas like "pain.001.01.09"
supportedPurposeCodes	Array of Purpose Code	Mandatory	A list of the supported purpose codes for the related product.
finalStatusCodes	Array of Transaction Status	Mandatory	Final transaction stati for the related product.  (IO45)

## 2.133 Payment Products Text

Attribute	Type	Condition	Description
pathProductName	Max35Text	Mandatory	Path definition of the related text formatted product, e.g. "dtazv" which stands for a legacy German text based payment format for cross-border payments.  The related values are defined on domestic level only., cp. [oFA-DomDef]
supportedVersions	Max35Text	Optional	The related values are defined on domestic level only., cp. [oFA-DomDef].
finalStatusCodes	Array of Transaction Status	Mandatory	Final transaction stati for the related product.  (IO45)

## 2.134 Payment Return Reason

Attribute	Type	Condition	Description
originalBankTransactionCode	Bank Transaction Code	Optional	
originalBankTransactionCodeProprietary	Max35Text	Optional	
originalBankTransactionCodeIssuer	Max35Text	Optional	
originator	Party Description	Optional	
reasonCode	Return Reason Code	{Or Optional}	ExternalReturnReason1Code
reasonProprietary	Max35Text	Optional Or}	
additionalInformation	Array Max105Text	Optional	

## 2.135 Person Identification

Attribute	Type	Condition	Description
identification	Max35Text	Mandatory	Unique and unambiguous identification of a person.
schemeNameCode	Person Identification Code	{Or - Optional}	An entry provided by an external ISO code list
schemeNameProprietary	Max35Text	Or – Optional}	A scheme name defined in a proprietary way.

Attribute	Type	Condition	Description
issuer	Max35Text	Optional	Issuer of the identification

## 2.136 Postal Address (Either Structured or Unstructured Address)

Attribute	Type	Condition	Description
addressLines	Array of Max140Text	{Or - Optional}	<p>At most seven entries are permitted. May only be used, if none of the structured address elements "streetName", "buildingNumber", "postcode" or "townName" is used.</p> <p><b>Remark:</b> For SEPA transactions this is further restricted to a maximum of 1 entry.</p>
department	Max70Text	Or – Optional}	Identification of a division of a large organisation or building.
subDepartment	Max70Text		Identification of a sub-division of a large organisation or building.
streetName	Max70Text		Name of a street or thoroughfare.
buildingNumber	Max16Text		Number that identifies the position of a building on a street.
buildingName	Max35Text		Name of the building or house.
floor	Max70Text		Floor or storey within a building.
postBox	Max16Text		Numbered box in a post office, assigned to a person or organisation, where letters are kept until called for.
room	Max70Text		Building room number.
postCode	Max16Text		Identifier consisting of a group of letters and/or numbers that is added

Attribute	Type	Condition	Description
			to a postal address to assist the sorting of mail.
townName	Max35Text		Name of a built-up area, with defined boundaries, and a local government.  Usage Rule: If address lines are not used, this attribute is mandatory.
townLocationName	Max35Text		Specific location name within the town.
districtName	Max35Text		Identifies a subdivision within a country sub-division.
countrySubDivision	Max35Text		Identifies a subdivision of a country such as state, region, county.
country	Country Code	Optional	Nation with its own government.  Usage Rule: If address lines are not used, this attribute is mandatory.

**Remark:** The elements of the structured address information marked by "Optoinal Or}" may only be used, if the element "addressLines" is not used.

## 2.137 Postal Address1 (Hybrid Address)

Attribute	Type	Condition	Description
addressLines	Array of Max140Text	Optional	At most two entries are permitted. May only be used, if none of the structured address elements "streetName", "buildingNumber", "postcode" or "townName" is used.
department	Max70Text	Optional	Identification of a division of a large organisation or building.
subDepartment	Max70Text	Optional	Identification of a sub-division of a large organisation or building.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
streetName	Max70Text	Optional	Name of a street or thoroughfare.
buildingNumber	Max16Text	Optional	Number that identifies the position of a building on a street.
buildingName	Max35Text	Optional	Name of the building or house.
floor	Max70Text	Optional	Floor or storey within a building.
postBox	Max16Text	Optional	Numbered box in a post office, assigned to a person or organisation, where letters are kept until called for.
room	Max70Text	Optional	Building room number.
postCode	Max16Text	Optional	Identifier consisting of a group of letters and/or numbers that is added to a postal address to assist the sorting of mail.
townName	Max35Text	Mandatory	Name of a built-up area, with defined boundaries, and a local government.  Usage Rule: If address lines are not used, this attribute is mandatory.
townLocationName	Max35Text	Optional	Specific location name within the town.
districtName	Max35Text	Optional	Identifies a subdivision within a country sub-division.
countrySubDivision	Max35Text	Optional	Identifies a subdivision of a country such as state, region, county.
country	Country Code	Mandatory	Nation with its own government.

### 2.138 Postal Address2 (Structured Address)

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
department	Max70Text	Optional	Identification of a division of a large organisation or building.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
subDepartment	Max70Text	Optional	Identification of a sub-division of a large organisation or building.
streetName	Max70Text	Optional	Name of a street or thoroughfare.
buildingNumber	Max16Text	Optional	Number that identifies the position of a building on a street.
buildingName	Max35Text	Optional	Name of the building or house.
floor	Max70Text	Optional	Floor or storey within a building.
postBox	Max16Text	Optional	Numbered box in a post office, assigned to a person or organisation, where letters are kept until called for.
room	Max70Text	Optional	Building room number.
postCode	Max16Text	Optional	Identifier consisting of a group of letters and/or numbers that is added to a postal address to assist the sorting of mail.
townName	Max35Text	Mandatory	<p>Name of a built-up area, with defined boundaries, and a local government.</p> <p>Usage Rule: If address lines are not used, this attribute is mandatory.</p>
townLocationName	Max35Text	Optional	Specific location name within the town.
districtName	Max35Text	Optional	Identifies a subdivision within a country sub-division.
countrySubDivision	Max35Text	Optional	Identifies a subdivision of a country such as state, region, county.
country	Country Code	Mandatory	Nation with its own government.

## 2.139 Private Identification

Attribute	Type	Condition	Description
birthDate	ISODate	Optional	
provinceOfBirth	Max35Text	Optional	
cityOfBirth	Max35Text	Optional	
countryOfBirth	Country Code	Optional	
others	Array of Person Identification	Conditional	<p>Unique identification of a person, as assigned by an institution, using an identification scheme.</p> <p>Shall be used if none of the above attributes is used.</p>

## 2.140 Product Rights

Attribute	Type	Condition	Description
product	Payment Product	Mandatory	payment product definitions as used in the URI for payment initiation
signingClass	Singing Class	Mandatory	
limits	Array of Limit	Optional	Limits applying to the authorisation of related payment products.

## 2.141 Proprietary Price

Attribute	Type	Condition	Description
type	Max35Text	Mandatory	
price	Amount	Mandatory	

## 2.142 Proprietary Quantity

Attribute	Type	Condition	Description
type	Max35Text	Mandatory	
quantity	Max35Text	Mandatory	

## 2.143 Proxy Account Identification

Attribute	Type	Condition	Description
typeCode	Proxy Account Type Code	{Or optional} -	Type of the proxy identification
typeProprietary	Max35Text	Or – optional}	
identification	Max2048Text	mandatory	

## 2.144 PSU Credentials

Attribute	Type	Condition	Description
password	String	Conditional	Contains a password in plaintext.
encryptedPassword	String	Conditional	Is used when a password is encrypted on application level.

This data type is used in [oFA-PFSM].

## 2.145 PSU Data

Attribute	Type	Condition	Description
psuld	Max140Text	Mandatory	
psuldType	PSU Id Type	Optional	
psuName	Max140Text	Mandatory	
psuAddress	Postal Address	Optional	

Attribute	Type	Condition	Description
privateld	Private Identification	Optional	
psuCorporateld	Max140Text	Optional	
psuCorporateldType	PSU Corporate Id Type	Optional	
scaMethods	Array of Authentication Type	Optional	
limits	Array of Limit	Optional	Global limits of the PSU.

## 2.146 PSU Header Data

Attribute	Type	Condition	Description
psuldRequired	Boolean	Mandatory	<p>The ASPSP is providing whether the PSU-ID is mandatory for all of the following requests (if supported):</p> <ul style="list-style-type: none"> <li>• Payment Initiation Request</li> <li>• Consent Request</li> <li>• Payment Cancellation</li> <li>• Signing Basket</li> <li>• Subscription for Push AIS (IO15)</li> </ul>
psuldTypeRequired	Boolean	Mandatory	<p>The PSU-ID-Type is necessary if different types of identifiers are allowed by the ASPSP to login and the ASPSP is either not able or does not want to identify the type from the content of the field PSU-ID. Usual examples for a PSU-ID-Types are:</p>

Attribute	Type	Condition	Description
			<ul style="list-style-type: none"> <li>• Username</li> <li>• Customer reference number</li> <li>• Account reference, e.g. an IBAN or MSISDN</li> <li>• email address</li> </ul> <p>The ASPSP has to decide whether the PSU-ID-TYPE (additional to the PSU-ID) is mandatory in all of the following requests where supported</p> <ul style="list-style-type: none"> <li>• Payment Initiation Request</li> <li>• Consent Request</li> <li>• Payment Cancellation</li> <li>• Signing Basket</li> <li>• Subscription Request</li> </ul> <p>(IO16)</p>
supportedPsuldTypes	Array of PSU ID Type	Conditional	Shall be supported, if psu-id-typeRequired equals true.
psuCorporate-idRequired	Boolean	Mandatory	PSU-Corporate-ID required in transaction initiation message, if a corporate account is affected  (IO19)
psuCorporateIdTypeRequired	Boolean	Mandatory	PSU-Corporate-ID-TYPE required in message, if a corporate account is affected  (IO20)
supportedPsuCorporateIdTypes	Array of PSU	Conditional	Shall be supported, if psu-corporate-id-typeRequired equals true.

Attribute	Type	Condition	Description
	Corporate ID Type		

## 2.147 PSU Id Type

Attribute	Type	Condition	Description
psuldType	Max35Text	Mandatory	A supported PSU-Id-Type.
description	Max250Text	Optional	Additional description of the addressed PSU-Id-Type.

## 2.148 PSU Corporate Id Type

Attribute	Type	Condition	Description
psuCorporateIdType	Max35Text	Mandatory	A supported PSU-Corporate-Id-Type.
description	Max250Text	Optional	Additional description of the addressed PSU-Corporate-Id-Type.

## 2.149 Push Account Entry Parameters

Attribute	Type	Condition	Description
accountEntryCriteria	Push Account Entry Trigger Criteria	Optional	<p>This attribute is defining the account entries to be pushed to the API Client push URL: All entries which are fulfilling <b>all</b> the criteria listed in this attribute will be pushed.</p> <p>If the attribute is not provided, all account entries will be pushed.</p>
acceptedFormat	Mime Type Code	Mandatory	This attribute describes the mime type which is supported for pushing the account entries by the API Client. If there is no match with the mime types offered by the ASPSP,

Attribute	Type	Condition	Description
			the subscription is rejected with a dedicated error code.
preferredAttributes	Array of Max35Text	Optional	These attributes are the preferred ones for every account entry to be pushed. The ASPSP might ignore this preference. Only attributes of the first level of Type Transactions as defined in [oFA-IG-Com] might be used.
documentsPreferred	Boolean	Optional	<b>RFU:</b> This data element indicates that the API Client prefers to also receive documents attached to an account entry. This data attribute might be ignored by the ASPSP.

This data type is used in [oFA -IG-PAIS].

## 2.150 Push Account Entry Trigger Criteria

Attribute	Type	Condition	Description
bankTransactionCodePatterns	Array of Bank Transaction Code Pattern	optional	<p>The criterion is fulfilled if the bankTransactionCode of the related account entry matches one of the bank transaction codes or code patterns (see the following paragraph) defined by this list.</p> <p>Any particle of the Bank Transaction Code triple might be replaced by the "?????" character, indicating that all sub family codes apply. However, at least one particle of the triple must be stated explicitly (e.g. "????-CCRD-????").</p>
proprietaryBankCodes	Array of Max35Text	Optional	The criterion is fulfilled if the proprietaryBankTransactionCode of the related account entry equals one of the proprietary bank

Attribute	Type	Condition	Description
			transaction codes defined by this list.
accountEntryStatus	Account Entry Status	Optional	<p>The criterion is fulfilled if the account entry has the related status booked or pending respectively.</p> <p><b>Note:</b> Entries might be pushed twice in case where this criterion is not provided if the transactionStatus is changed from pending to booked in the account system.</p>
maximumAmount	Amount	Optional	The criterion is fulfilled if the (absolute value of the) transactionAmount of the related account entry is provided in the same currency and if the transactionAmount is less or equal to the amount provided in this attribute.
minimumAmount	Amount	Optional	The criterion is fulfilled if the (absolute value of the) transactionAmount of the related account entry is provided in the same currency and if the transactionAmount is greater or equal to the amount provided in this attribute.
debtorAccount	Account Reference	Optional	The criterion is fulfilled if the counterparty account of the related account entry is a debtor account and equals the account defined in this attribute.
creditorAccount	Account Reference	Optional	The criterion is fulfilled if the counterparty account of the related account entry is a creditor account

Attribute	Type	Condition	Description
			and equals the account defined in this attribute.
creditDebitIndicator	Credit Debit Code	Optional	The criterion is fulfilled if the related account entry is a credit as defined in this attribute, or a debit respectively.
endToEndId	Max35Text	Optional	The criterion is fulfilled if the endToEndId of the related accountpayment entry equals the string provided in this attribute.
purpose	Purpose Code	Optional	The criterion is fulfilled if the related account entry has a purpose code equal to the code provided in this attribute.
remittanceInformation Unstructured	Max140Text	Optional	The criterion is fulfilled if the related account entry has an unstructured remittance information where the string provided in this attribute is contained as a substring. When comparing substrings, the usage of small or capital letters is ignored.

## 2.151 Push Account Statements Parameters

Attribute	Type	Condition	Description
accountStatementCriteria	Push Account Statement Trigger Criteria	Mandatory	This attribute is defining the account statements to be pushed to the API Client push URI: Every time, the criteria listed in this attribute are all fulfilled, the current account statement of the related account is pushed.

This data type is used in [oFA -IG-PAIS].

## 2.152 Push Account Statement Trigger Criteria

Attribute	Type	Condition	Description
reports	Max35Text	{OR	<p>One of the values ""MT942" or one of the camt.052 versions offered in the Discovery API should be used, e.g. "camt.052.001.02", "BG.JSON2.0". The criterion is fulfilled if a related report is available. If the related report format is not supported, then the ASPSP is rejecting the subscription with a dedicated error code.</p>
notifications	Max35Text	OR	<p>One of the values "MT941", "MT900", "MT910" or camt.054 versions.</p> <p>If the related notification format is not supported, then the ASPSP is rejecting the subscription with a dedicated error code.</p>
statements	Max35Text	OR}	<p>One of the values "MT940", and "camt.053", "BG.JSON2.0" shall be used. The criterion is fulfilled if a related statement is available.</p> <p>If the related statement format is not supported, then the ASPSP is rejecting the subscription with a dedicated error code.</p>
event	Max35Text	Optional	<p>Only the value "afterGeneration" may be used. The criterion is fulfilled if the related report is generated and made available to the PSU in the online channel.</p>
times	Array of ISO Time	Optional	<p>The value is provided in format "hh:mm:ss". The criterion is fulfilled if the current local ASPSP time is</p>

Attribute	Type	Condition	Description
			<p>matching one of the defined times in the list of times.</p> <p>The list shall not be empty.</p>

## 2.153 Push Balance Parameters

Attribute	Type	Condition	Description
balanceCriteria	Push Balance Trigger Criteria	Mandatory	This attribute is defining the balance information to be pushed to the API Client push URI: Every time, a balance is fulfilling all the criteria listed in this attribute it is pushed.

This data type is used in [oFA -IG-PAIS].

## 2.154 Push Balance Trigger Criteria

Attribute	Type	Condition	Description
balanceAmount	Amount	Optional	The criterion is fulfilled if the current balance of type balanceType provided below fulfills the balanceOperator requirement provided below together with the provided balanceAmount in this attribute and where the last provided balance did not fulfill it.
balanceOperator	Max35Text	Optional	<p>Must be one of the following codes:</p> <ul style="list-style-type: none"> <li>• less,</li> <li>• lessOrEqual,</li> <li>• greaterOrEqual,</li> <li>• greater</li> </ul>
balanceType	Balance Type	Optional	<p>This criterion is fulfilled if the balance is of this type.</p> <p>If the related balance type is not supported for the addressed account, then the ASPSP is</p>

Attribute	Type	Condition	Description
			rejecting the subscription with a dedicated error code.
creditLimitIncluded	Boolean	Optional	<p>This criterion is fulfilled if the related current balance is provided with the credit limit included (if this attribute is true) or not (if this attribute is false).</p> <p>If the attribute is true and if the related balance type defined above is not applicable to the condition whether a credit limit is included then the subscription is rejected with a dedicated error code.</p>
times	Array of ISO Time	Optional	<p>The value is provided in format "hh:mm:ss". The criterion is fulfilled if the current local ASPSP time is matching one of the defined times in the list of times.</p> <p>The list shall not be empty.</p>

## 2.155 Push RTP Parameters

Attribute	Type	Condition	Description
rtpCriteria	Push RTP Trigger Criteria	Optional	<p>This attribute is defining the incoming RTP requests to be pushed to the API Client push URI: All RTPs which are fulfilling all the criteria listed in this attribute will be pushed.</p> <p>If the attribute is not provided, all RTPs will be pushed as soon as they are arriving at the ASPSP's system.</p>
acceptedFormat	Mime Type Code	Mandatory	This is defining the mime type. If the requested mime type is not supported by the ASPSP, the

Attribute	Type	Condition	Description
			<p>request is rejected. If not used, then the ASPSP is choosing the mime type.</p> <p>At a minimum the ASPSP shall support a JSON mime type.</p>
documentsPreferred	Boolean	Optional	<p><b>RFU:</b> This data element indicates that the API Client prefers to also receive documents attached to an RTP. This data attribute might be ignored by the ASPSP.</p>

This data type is used in [oFA -IG-PAIS].

## 2.156 Push RTP Trigger Criteria

Attribute	Type	Condition	Description
event	Max35Text	Optional	"afterReception" is the only supported value.
timeToExpire	Integer	Optional	only forward incoming RTP with an expiry timestamp within that period, where the period is defined by the number of minutes as provided in this attribute. This criterion is meant to forward only short term RTPs.
expiryReminder	Boolean	Optional	This criterion is fulfilled if a long term RTP is still not confirmed 2 days before the RTP expires.

## 2.157 Quantity

Attribute	Type	Condition	Description
unit	Decimal Number	{Or	
faceAmount	Amount	Or	

Attribute	Type	Condition	Description
amortisedValue	Amount	Or{}	

## 2.158 Rate

Attribute	Type	Condition	Description
typePercentage	Percentage Rate	{Or Optional}	
typeOther	Max35Text	Or Optional{}	
validityRange	Amount Range	Optional	Amount range, where the interest rate is applicable.

## 2.159 Remittance

The remittance type will be re-defined in version 2 to be able to support more complex requirements. This is not downwards compatible.

Attribute	Type	Condition	Description
referredDocumentInformation	Referred Document Information	Optional	Set of elements used to identify the documents referred to in the remittance information.
creditorReferenceInformation	Creditor Reference Information	Optional	Reference information provided by the creditor to allow the identification of the underlying documents.
additionalRemittanceInformation	Array of Max140Text	Optional	Additional information to be displayed to the PSU e.g. within authorisation processes. This will not be used in related interbank payments.

This data type is used in [oFA-PFSM], [oFA-IG-XPIS].

## 2.160 Remittance Reports

Attribute	Type	Condition	Description
referredDocumentInformation	Array of Referred Document Information	Optional	Set of elements used to identify the documents referred to in the remittance information.
referredDocumentAmount	Remittance Amount	Optional	
creditorReferenceInformation	Creditor Reference Information	Optional	Reference information provided by the creditor to allow the identification of the underlying documents.
invoicer	Party Description	Optional	
invoicee	Party Description	Optional	
taxRemittance		Optional	
garnishmentRemittance		Optional	
additionalRemittanceInformation	Array of Max140Text	Optional	Additional information to be displayed to the PSU e.g. within authorisation processes. This will not be used in related interbank payments.

## 2.161 Remittance Location

Attribute	Type	Condition	Description
method	Method Code	Mandatory	
electronicAddress	Max2048Text	Option	Electronic address to which an agent is to send the remittance information.

Attribute	Type	Condition	Description
postalAddress	Party Description2	Optional	

## 2.162 References

Attribute	Type	Condition	Description
accountServicer Reference	Max35Text	Optional	
instructionId	Max35Text	Optional	Unique identification as assigned by an instructing party for an instructed party to unambiguously identify the instruction.
endToEndId	Max35Text	Optional	
uetr	UUID	Optional	Universally unique identifier to provide an end-to-end reference of a payment transaction.  It is recommended to use time-based version (version 1) and variant 8,9,a or b of the UUID as defined in [RFC4122] for UUID fields such as uetr.
mandateId	Optional	Optional	direct debit related mandate.
checkNumber	Max35Text	Optional	

## 2.163 References Statement

Attribute	Type	Condition	Description
messageld	Max35Text	Optional	
accountServicer Reference	Max35Text	Optional	
paymentInformationId	Max35Text	Optional	

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
instructionId	Max35Text	Optional	Unique identification as assigned by an instructing party for an instructed party to unambiguously identify the instruction.
endToEndId	Max35Text	Optional	
uetr	UUID	Optional	Universally unique identifier to provide an end-to-end reference of a payment transaction.  It is recommended to use time-based version (version 1) and variant 8,9,a or b of the UUID as defined in [RFC4122] for UUID fields such as uetr.
transactionId	Max35Text	Optional	
mandateId	Max35Text	Optional	direct debit related mandate.
checkNumber	Max35Text	Optional	
clearingSystemReference	Max35Text	Optional	Unique reference as defined by clearing system.
accountOwnerTransactionId	Max35Text	Optional	Unambiguous identification of the securities transaction as known by the securities account owner (or the instructing party managing the account).
accountServicerTransactionId	Max35Text	Optional	Unambiguous identification of the securities transaction as known by the securities account servicer.
marketInfrastructureTransactionId	Max35Text	Optional	Identification of a securities transaction assigned by a market infrastructure other

Attribute	Type	Condition	Description
			than a central securities depository, for example, Target2-Securities.
processingId	Max35Text	Optional	Identification of the securities transaction assigned by the processor of the instruction other than the securities account owner, the securities account servicer and the market infrastructure.

## 2.164 Referred Document Information

Attribute	Type	Condition	Description
typeCode	Referred Document Type Code	{Or - Optional}	Specifies the type of referred document, provided as code.
typeProprietary	Max35Text	Or – Optional}	Specifies the type of referred document, provided in proprietary encoding.
typeIssuer	Max35Text	Optional	Issuer of the document type.
number	Max35Text	Optional	Unique and unambiguous identification of the referred document.
relatedDate	ISO Date	Optional	Date associated with the referred document.

## 2.165 Related Agents

Attribute	Type	Condition	Description
instructingAgent	Agent Description	Optional	
instructedAgent	Agent Description	Optional	

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
debtorAgent	Agent Description	Optional	
creditorAgent	Agent Description	Optional	
intermediaryAgent1	Agent Description	Optional	
intermediaryAgent2	Agent Description	Optional	
intermediaryAgent3	Agent Description	Optional	
receivingAgent	Agent Description	Optional	
deliveringAgent	Agent Description	Optional	
issuingAgent	Agent Description	Optional	
settlementPlace	Agent Description	Optional	

## 2.166 Related Dates

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
acceptanceDateTime	ISODateTime	Optional	
tradeActivityContractualSettlementDate	ISODate	Optional	
tradeDate	ISODate	Optional	
interbankSettlementDate	ISODate	Optional	
startDate	ISODate	Optional	
endDate	ISODate	Optional	

Attribute	Type	Condition	Description
transactionDateTime	ISODateTime	Optional	

## 2.167 Related Document Information

Attribute	Type	Condition	Description
resourceId	UUID	Mandatory	
relationCode	Max35Text	{Or	"parentDocument"  <b>RFU:</b> In future, replacements might be supported, if underlying use cases have been clarified with the market demand side.
relationProprietary	Max35Text	Or}	

This code is used in [oFA-IG-Doc].

## 2.168 Related Parties

Attribute	Type	Condition	Description
initiatingParty	Party Description	{Or	
initiatingPartyAgent	Agent Description	Or}	
debtor	Party Description	{Or	
debtorAgent	Agent Description	Or}	
debtorAccount	Account Reference		
ultimateDebtor	Party Description	{Or	

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
utlimateDebtorAgent	Agent Description	Or}	
creditor	Party Description	{Or	
creditorAgent	Agent Description	Or}	
creditorAccount	Account Reference	Optional	
ultimateCreditor	Party Description	{Or	
ultimateCreditorAgent	Agent Description	Or}	
tradingParty	Party Description	{Or	
tradingPartyAgent	Agent Description	Or}	

## 2.169 Related Price

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
dealPriceTypeYielded	Boolean	{Or	
dealPriceTypeValueType	Price Value Type Code	Or	
dealPriceValueRate	Percentage Rate	Or	
dealPriceValueAmount	Amount	Or	
proprietary	Array of Proprietary Price	Or}	

## 2.170 Related Remittance

Attribute	Type	Condition	Description
remittanceIdentifciation	Max35Text	Optional	
remittanceLoactionDetails	Array of Remittance Location	Optional	Set of elements used to provide information on the location and/or delivery of the remittance information

## 2.171 Related Quantities

Attribute	Type	Condition	Description
quantity	Quantity	{Or	
originalAndCurrentFaceAmount	Original and Current Face Amount	Or	
proprietary	Proprietary Quantity	Or}	

## 2.172 Referred Mandate Document Information

Attribute	Type	Condition	Description
typeCode	Referred Document Type Code	{Or – Optional	Specifies the type of referred document, provided as code.
typeProprietary	Max35Text	Or – Optional}	Specifies the type of referred document, provided in proprietary encoding.
typeIssuer	Max35Text	Optional	Issuer of the document type.
number	Max35Text	Optional	Unique and unambiguous identification of the referred document.

Attribute	Type	Condition	Description
creditorReference	Max35Text	Optional	Unique and unambiguous identification as assigned by the creditor to the referred document shared with the debtor for its own reference.
relatedDate	ISO Date	Optional	Date associated with the referred document.

## 2.173 Regulatory Reporting

Attribute	Type	Condition	Description
debitCreditReportingIndicator	Regulatory Reporting Type Code	Optional	Identifies whether the regulatory reporting information applies to the debit side, to the credit side or to both debit and credit sides of the transaction.
detailsCode	Max35Text	Optional	Specifies the nature, purpose, and reason for the transaction to be reported for regulatory and statutory requirements in a coded form.
detailsInformation	Array of Max35Text	Optional	Additional details that cater for specific domestic regulatory requirements.

This data type is used in [oFA-PFSM].

## 2.174 Report Exchange Rate

Attribute	Type	Condition	Description
sourceCurrency	Currency Code	Mandatory	Currency from which an amount is to be converted in a currency conversion.
exchangeRate	String	Mandatory	Factor used to convert an amount from one currency into another. This reflects

Attribute	Type	Condition	Description
			the price at which one currency was bought with another currency.
unitCurrency	Currency Code	Mandatory	Currency in which the rate of exchange is expressed in a currency exchange. In the example 1EUR = xxxCUR, the unit currency is EUR.
targetCurrency	Currency Code	Mandatory	Currency into which an amount is to be converted in a currency conversion.
quotationDate	ISODate	Mandatory	Date at which an exchange rate is quoted.
contractIdentification	Max35Text	Optional	Unique identification to unambiguously identify the foreign exchange contract.

## 2.175 RTP Details

Attribute	Type	Condition	Description
paymentConditions	Payment Conditions	optional	Conditions for the execution of the payment.
creationDateTime	ISODateTime	optional	creationDateTime of the originator
requestedExpiry DateTime	ISODateTime	mandatory	Date and Time at which this request expires.
originatorPspld	Financial Institution Identification	Optional	Originator payment service provider in case of indirect participation regarding a related API Access Scheme or bilateral contract

## 2.176 Safekeeping Account

Attribute	Type	Condition	Description
identification	Max35Text	Mandatory	
typeld	4Text	Optional	

Attribute	Type	Condition	Description
typeLssuer	Max35Text	Optional	
typeSchemeName	Max35Text	Optional	
name	Max70Text	Optional	

## 2.177 SCA Approach Methods Mapping

Attribute	Type	Condition	Description
scaApproach	SCA Approach Type	Mandatory	
scaMethods	Array of Authentication Type	Mandatory	

## 2.178 Securities Account Fee

Represents a Fee rule that is applicable to a securities account:

Attribute	Type	Condition	Description
typeCode	Securities Fee Type Code	{Or	Type of the fee as a code. Might be adjusted in the future based on market experience.
typeProprietary	Max35Text	Or}	Type of the fee as a proprietary string.
feeRules	Array of Securities Account Fee Rule	Mandatory	Array of fee rules. Each rule represents how the amount of the fee is determined either explicitly by stating the amount or implicitly by providing a percentage,

Attribute	Type	Condition	Description
			<p>minimum and maximum amount.</p> <p>This array will usually only contain one entry to represent the whole rule. Only in the case of the fee being calculated as a tiered percentage, several entries are included to represent the several tiers of the fee rule.</p>
applicableFrom	ISODate	Optional	<p>First date, when this fee is applicable.</p> <p>If not present, the fee is applicable starting with the creation of this account / the latest reporting date supported by the ASPSP.</p>
applicableTo	ISODate	Optional	<p>Last date, when this fee is applicable.</p> <p>If not present, the fee is applicable indefinitely.</p>
additionalInformation	Max500Text	Optional	

## 2.179 Securities Account Fee Rule

Attribute	Type	Condition	Description
amount	Amount	{Or}	Amount of the fee.
percentage	String	Or{}	<p>Percentage of the fee.</p> <p>Up to 20 significant figures. The decimal separator is a dot.</p>

Attribute	Type	Condition	Description
			Trailing zeroes must be truncated. Fee as a percentage.
fromBaseAmount	Amount	Optional	To be used for fees where a tiered percentage is used to calculate the fee relative to an implicitly defined base amount (such as a transaction's volume being the base amount for a courtage).
toBaseAmount	Amount	Optional	<p>The range of one tier is defined as all applicable entities with base amounts X and</p> $\text{fromBaseAmount} \leq X \leq \text{toBaseAmount}.$ <p>In any array of fee rules, only one of these entries may be missing the "fromBaseAmount" element (indicating that the rule represented by this entry is used without a lower bound to the base amount) and only one entry may be missing the "toBaseAmount" element (indicating that the rule represented by this entry is applied without an upper limit to the base amount).</p> <p>In cases, where the fee is not calculated as a tiered percentage, only one entry in array "feeRules" is included. This entry must be missing both subelements</p>

Attribute	Type	Condition	Description
			"fromBaseAmount" and "toBaseAmount".
minimumAmount	Amount	Optional	Minimum amount of the fee in each billing period / for each billed event if applicable.
maximumAmount	Amount	Optional	Maximum amount of the fee in each billing / for each billed event period if applicable.

## 2.180 Securities Order

Attribute	Type	Condition	Description
orderId	String	Optional	<p>Can be used as access-ID in the API, where more details on an order is offered.</p> <p>If this data attribute is provided, this shows that the API Client can get access on more details about this transaction using the Read Securities Order Details Request.</p> <p><b>Remark:</b> Implementers might want to anticipate future services supporting placement or revocation of orders via the openFinance API. It is therefore recommended to define the orderId in a way that it will also identify an order in the case of a placement / revocation.</p>
side	Securities Order Side	Mandatory	Type of transaction that is associated with this order.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
financialInstrument	Financial Instrument Identification	Mandatory	Financial instrument the order refers to.
unitsNumber Order	Number	{Or	Nominal or numeric quantification of the financial instrument that is ordered.
unitsNominal Order	Amount	Or}	
unitsNumber Display	Number	{Or – Optional	Nominal or numeric quantification of the order that shall be displayed.
unitsNominal Display	Amount	Or - Optional}	
placeOfTrade	Market Identification	Optional	
limitPrice Amount	Amount	{Or- Optional	Limit price displayed as an amount.
limitPrice Percent	String	Or – Optional}	<p>Limit price displayed as a percentage rate.</p> <p>Up to 20 significant figures.</p> <p>The decimal separator is a dot.</p> <p>Trailing zeroes must be truncated.</p>
stopPrice Amount	Amount	{Or- Optional	Stop price displayed as an amount.
stopPrice Percent	String	Or – Optional}	<p>Stop price displayed as a percentage rate.</p> <p>Up to 20 significant figures.</p> <p>The decimal separator is a dot.</p> <p>Trailing zeroes must be truncated.</p>

Attribute	Type	Condition	Description
tradingSessionIndicator	Trading Session Type Code	Optional	
typesOfOrder	Array of Type of Order Code	Optional	One or more codes to indicate characteristics of the order.
timeInForce	Order Time Limit Code	Optional	If the order is restricted by a time limit, the type time limit is indicated by a value of the corresponding code set.
expiryDate	ISODate	{Or - Optional}	Expiry date of the order if applicable.
expiryDateTime	ISODatetime	Or – Optional}	Expiry date and time of the order if applicable.
relatedCashAccount	Account Reference	Optional	If the execution of this order implies the transfer of money, cash account to be affected by this transfer from the PSU's side.
orderSplit	Boolean	Optional	Value true indicates that this order is the result of an order split. Missing values indicate "false".
orderModifiable	Boolean	Optional	Value true indicates that this order can (still) be modified. Missing values indicate "false".
orderStatus	Order Status Code	Mandatory	
details	Max500Text	Optional	Additional details to the position
_links	Links	Optional	The following types of links are supported:  "relatedOrders": An <b>array</b> of links to request order details of related orders (e.g. other

Attribute	Type	Condition	Description
			<p>orders that originated from the same order split as this order).</p> <p>"relatedTransactions": An <b>array</b> of links to request securities transaction details of transactions that resulted from this order.</p> <p>"orderDetails": <b>Single</b> link for retrieving details on this specific order.</p>

## 2.181 Securities Position

This data structure represents one position within a securities account:

Attribute	Type	Condition	Description
financialInstrument	Financial Instrument Identification	Mandatory	Financial Instrument that is contained in this position.
unitsNumber	Number	{Or}	Nominal or numeric quantification of the financial instrument within this position,
unitsNominal	Amount	Or}	negative values for short positions.
externalIdentifier	Max35Text	Optional	Name or identifier with an intrinsic meaning for the PSU to be displayed.
safekeepingPlace	BICFI	Optional	BIC of the place where the securities are safe-kept, physically or notionally.
safekeepingCountry	Country Code	Optional	Country where the securities are safe-kept.

Attribute	Type	Condition	Description
balanceType	SecuritiesBalanceTypeCode	Optional	<p>Specifies the nature of the securities or investment fund balance.</p> <p>Type of balance in case of multiple positions for the same financial instrument for further distinction.</p> <p><b>Remark:</b> In consequence, several positions with the same financial instrument may occur in one position list, having different values of balanceType".</p>
averageBuyingPrice	Amount	Optional	Average buying price of the position excluding any fees or taxes.
averageSellingPrice	Amount	Optional	Average selling price of the position, e.g. in case of a short position Price excluding any fees or taxes.
totalBuyingPrice	Amount	Optional	In case of bonds, an average buying price does not make sense. Therefore, the total buying price excluding any fees or taxes can be displayed instead.
estimatedCurrentValue	Evaluated Amount	Optional	Estimated value of the position and timestamp of the estimation.
accruedInterest	Accrued Interest	Optional	Accrued interest by the position.
currencyExchange	Array of Report Exchange Rate	Optional	The ASPSP might include exchange rates e.g. if the security is denoted in another currency than the account itself.

Attribute	Type	Condition	Description
Details	Max500Text	Optional	Additional details describing the position.

## 2.182 Securities related Date or Time

Attribute	Type	Condition	Description
type	String	Mandatory	Type of the date / date time. The following values are pre-defined: <ul style="list-style-type: none"> <li>• effectiveSettlementDate,</li> <li>• settlementDate,</li> <li>• valueDate,</li> <li>• performanceDate,</li> <li>• bookingDate,</li> <li>• transactionDate</li> </ul>
date	ISODate	{Or}	
dateAndTime	ISODateTime	Or}	

## 2.183 Securities Transaction

Attribute	Type	Condition	Description
transactionId	String	Optional	Can be used as access-ID in the API, where more details on a transaction is offered. If this data attribute is provided, this shows that the API Client can get access on more details about this transaction using the Read Transaction Details Request.
entryReference	Max35Text	Optional	Identification of the transaction as used e.g. for

Attribute	Type	Condition	Description
			reference for deltafunction on application level.
relevantDates	Array of Securities related Date or Time	Mandatory	At least one entry containing a pre-defined date type must be present.
financialInstrument	Financial Instrument Identification	Mandatory	Financial instrument that was transferred within the transaction.
orderId	String	Optional	Resource Id of the order resource that triggered this transaction, if applicable.
unitsNumber	Number	{Or	Nominal or numeric quantification of the financial instrument that has been transferred within this transaction.
unitsNominal	Amount	Or}	Negative values indicate that the respective quantity of the financial instrument has been taken from the securities account, positive values indicate that the quantity has been added.
transactionTypeCode	Transaction Activity Code	{Or	Type of the transaction as code or as a proprietary string.
transactionTypeProprietary	Max35Text	Or}	
placeOfTrade	Market Identification	Optional	
amountIncludesFees	Boolean	Optional	Indicates whether the transactionAmount (see below) is including fees.  Default: false.

Attribute	Type	Condition	Description
amountIncludesTaxes	Boolean	Optional	<p>Indicates whether the transactionAmount (see below) is including taxes.</p> <p>Default: false.</p>
transactionAmount	Amount	Optional	<p>Transaction amount for the transferred security for the PSU. Potential fees or taxes are reflected as indicated by elements "amountIncludesFees" and "amountIncludesTaxes".</p> <p><b>Remark:</b> The price denoted here is the price for the whole lot of securities within this transaction, not for a single item.</p>
relatedFees	Array of Securities Transaction Fee	Optional	<p>Only allowed if amountIncludesFees = true. In that case, the structure contains details of the fees that have been applied to this transaction (and therefore represent additional costs of the transaction beyond the transactionAmount).</p> <p>Fees with positive amount are debited by the PSU, only in the rare case of a fee credited to the PSU (e.g. in case of a reversal) negative amounts are used.</p>
currencyExchange	Array of Report Exchange Rate	Optional	The ASPSP might include exchange rates e.g. if the transaction has been settled in another currency than the PSU's currency.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
reversal Indicator	Boolean	Optional	Indicates whether it is the reversal of a previously reported movement.  Default: false
reversed TransactionId	String	Optional	"transactionId" of the reversed transaction, if applicable and supported by the ASPSP.
unitsNumber BeforeTx	Number	{Or - Optional}	Nominal or numeric quantification of the financial instrument within the primary position before the transaction, negative values for short positions.
unitsNominal BeforeTx	Amount	Or - Optional }	Nominal or numeric quantification of the financial instrument within the primary position after the transaction, negative values for short positions.
unitsNumber AfterTx	Number	{Or - Optional}	
unitsNominal AfterTx	Amount	Or - Optional }	
accruedInterest	Accrued Interest	Optional	Accrued interest of the position to make transparent what the PSU really lost within this transaction.
details	Max500Text	Optional	Additional details to the transaction.
_links	Links	Optional	The following types of links are supported:  "transactionDetails": Single link for retrieving details on this specific transaction.

## 2.184 Securities Transaction Fee

Attribute	Type	Condition	Description
typeCode	Securities Fee Type Code	{Or	
typeProprietary	Max35Text	Or}	
amount	Amount	Mandatory	
_links	Links	Optional	<p>Links to resources, where the ASPSP can provide additional information on the fee, e.g. an overview on the general fee rules of the underlying securities account.</p> <p>Currently no specific href types are defined in this context.</p>

## 2.185 Source of Price

Attribute	Type	Condition	Description
type	Market Type Code	Mandatory	
mic	Max4Text	{Or - Optional	If the type indicates local Market (Code: "LMAR"), the identification of the market should additionally be included here.
market Identifier Proprietary	Max35Text	Or - Optional }	Technically, Source of Price is an extension of Market Identification.

## 2.186 Standing Order Details

Standing orders have a double face related to the openFinance API: they may be initiated and managed as part of a PIS service or are accessed/operated via AIS services. The attributes contained in standing order details depend in which context the standing order is addressed.

If no clarifications are made, the attributes listed below may be used for both AIS and PIS purposes. The description will indicate, if an attribute is only used in AIS or only used in PIS scenarios.

First, any attribute of the underlying payment product as defined in [oFA-PFSM] may be used in the context of AIS and PIS. In addition, the following attributes are used:

Attribute	Type	Condition	Description
payment product	String	Mandatory	<p>Only included for AIS.</p> <p>This yields the payment product of the standing order resource.</p>
paymentId	UUID	Mandatory	<p>Only included for AIS.</p> <p>Resource Identifier of the standing order resource.</p>
startDate	ISODate	{Or}	<p>The first applicable day of execution starting from this date the first payment was/will be executed.</p>
startDateTime	ISODateTime	Or}	<p>The first applicable day and time of execution starting from this timestamp.</p> <p>This attribute is only applicable to instant payments. Seconds and milli seconds might be ignored by the ASPSP.</p> <p>The ASPSP might restrict the implementation to startDate. This restriction will be part of the ASPSP documentation.</p>
endDate	ISODate	{Optional Or}	<p>The last applicable day of execution</p> <p>If not given, it is an infinite standing order.</p>
endDateTime	ISODateTime	Optional Or}	<p>The last applicable day and time of requested execution.</p> <p>This attribute is only applicable to instant payments.</p>

Attribute	Type	Condition	Description
			<p>If none of the attributes is given, it is an infinite standing order.</p> <p>The ASPSP might restrict the implementation to endDate. This restriction will be part of the ASPSP documentation.</p>
displayName	Max70Text	Optional	Name of the standing order defined by the PSU and displayed within the online channels
executionRule	Execution Rule Code	Optional	"following" or "preceding" supported as values. This data attribute defines the behavior when a transaction date resulting from a standing order falls on a weekend or bank holiday. The payment is then executed either the "preceding" or "following" working day.
withinAMonthFlag	Boolean	Optional	<p>This element is only used in case of frequency equals "Monthly".</p> <p>If this element equals false it has no effect. If this element equals true, then the execution rule is overruled if the day of execution would fall into a different month using the execution rule.</p> <p><b>Example:</b> executionRule equals "preceding", dayOfExecution equals "02" and the second of a month is a Sunday. In this case, the transaction date would be on the last day of the month before. This would be overruled if withinAMonthFlag equals true and the payment is processed on Monday the third of the Month.</p> <p><b>Remark:</b> This attribute is rarely supported in the market.</p>

Attribute	Type	Condition	Description
frequency	Event Frequency Code	Mandatory	The frequency of the recurring payment resulting from this standing order.
monthsOfExecution	Array of Max2Text	Conditional	<p>The format is following the regular expression \d{1,2}. The array is restricted to 11 entries. The values contained in the array entries shall all be different and the maximum value of one entry is 12.</p> <p>This attribute is contained if and only if the frequency equals "MonthlyVariable".</p> <p>Example: An execution on January, April and October each year is addressed by ["1", "4", "10"].</p>
multiplicator	Numerical	Optional	<p>This is multiplying the given frequency resulting the exact frequency, e.g.</p> <p>Frequency=weekly and multiplicator=3 means every 3 weeks.</p> <p><b>Remark:</b> This attribute is rarely supported in the market.</p>
dayOfExecution	Max2Text	Optional	<p>"31" is ultimo.</p> <p>The format is following the regular expression \d{1,2}.</p> <p>Example: The first day is addressed by "1".</p> <p>The date is referring to the time zone of the ASPSP.</p>
limitAmount	Amount	Conditional	<p>limitAmount</p> <p>Amount limit for fund skimming, e.g. skim all funds above this limit to savings account, i.e. typically a specific periodic payments with fixed remaining amount rather than fixed transaction amount.</p>

Attribute	Type	Condition	Description
			<p>Amount may be zero as well as below zero, i.e. negative.</p> <p>Constraints: transactionAmount needs to be zero and bankTransactionCode needs to specify PMNT-MCOP-OTHR for fund skimming</p>

## 2.187 Statement

Attribute	Type	Condition	Description
identification	Max35Text	Mandatory	Unique identification, as assigned by the account servicer, to unambiguously identify the account statement.
pageNumber	Integer	Optional	Page Number.
lastPageIndicator	Boolean	Optional	Indicates the last page.
electronicSequenceNumber	Integer	Optional	<p>Sequential number of the statement, as assigned by the account servicer.</p> <p>Usage: The sequential number is increased incrementally for each statement sent electronically.</p>
legalSequenceNumber	Integer	Optional	Legal sequential number of the statement, as assigned by the account servicer. It is increased incrementally for each statement sent.
creationDateTime	ISODateTime	Optional	Date and time at which the statement was created.
fromDateTime	ISODateTime	Optional	<p>Date and time at which the period starts.</p> <p><b>Remark:</b> The value 00:00:00 should be used for expressing that only the date is relevant</p>

Attribute	Type	Condition	Description
toDateTime	ISODateTime	Optional	Date and time at which the period ends  <b>Remark:</b> The value 24:00:00 should be used for expressing that only the date is relevant.
account	Account Reference4	Mandatory	Unambiguous identification of the account to which credit and debit entries are made.
relatedAccount	Account Reference	Optional	Identifies the parent account of the account, for which the statement has been issued.
interest	Array of Account Interest	Optional	Provides general interest information that applies to the account at a particular moment in time.
balance	Array of Balance Statement	Mandatory	Set of elements used to define the balance as a numerical representation of the net increases and decreases in an account at a specific point in time.
transactionSummary	Transaction Summary	Optional	Provides transaction summary Information
entry	Array of Entry	Mandatory	One array element specifies an entry in the report.

This data Type is used in [\[oFA-IG-XAIS\]](#).

## 2.188 Structured Additional Transaction Information

Attribute	Type	Condition	Description
transactionStatus	Transaction Status	Mandatory	
transactionCreated	User Entry	Optional	
transactionAuthorised	Array of User Entry	Optional	

Attribute	Type	Condition	Description
transactionCancelled	Array of User Entry	Optional	

## 2.189 Structured Additional Information

Attribute	Type	Condition	Description
standingOrderDetails	Standing Order Details	{OR}	Details of underlying standing orders.
rtpDetails	RTP Details	OR}	Details of underlying incoming RTPs

## 2.190 Subscription Entry

Attribute	Type	Condition	Description
accountId	Account Reference	Mandatory	This is the account from which related entries shall be pushed.
validUntil	ISODate	Optional	Requested validity period of the service.
subscriptionEntryName	Max35Text	Optional	Name of the subscription entry
subscriptionEntryId	String	Conditional	Forbidden in HTTP Requests, e.g. <i>Initiate Subscription Request</i> and in an <i>Add a Subscription Entry</i> Request by the TPP (as this is assigned by the ASPSP). Mandatory in each entry of a response from an ASPSP.
apiClientPrimaryPushURI	Max256Text	Mandatory	The URI where related account information shall be pushed to.

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
apiClientSecondaryPushURI	Max256Text	[Optional if supported]	The URI where related account information shall be pushed to if the primary push URI is not reachable.  If this attribute is used by the API Client and the ASPSP is not supporting this feature, then the request will be rejected with a dedicated additional error information.
callbackWithLinkPreferred	Boolean	Optional	API Client prefers to receive hyperlinks pointing to the related account information element if the related subservice criteria are met.
callbackWithStaticTextPreferred	Boolean	Optional	API Client prefers to get informed by static text if the related subservice criteria are met.
staticCallbackText	Max140Text	Optional	The text to be provided by the ASPSP in case static text is sent if the related subservice criteria are met.
pushAccountEntryParameters	Push Account Entry Parameters	{Or	Parameters for a subscription entry for the Push Account Entry Service.
pushAccountStatementParameters	Push Account Statement Parameters	Or	Parameters for a subscription entry for the Push Account Statement Service.
pushBalanceParameters	Push Balance Parameters	Or	Parameters for a subscription entry for the Push Balance Information Service.

Attribute	Type	Condition	Description
pushRtpParameters	Push RTP Parameters	Or}	Parameters for a subscription entry for the Push RTP Information Service.

This data type is used in [oFA -IG-PAIS].

## 2.191 Subscription Entry and Status

Attribute	Type	Condition	Description
accountId	Account Reference	Mandatory	This is the account from which related entries shall be pushed.
validUntil	ISODate	Optional	Requested validity period of the service.
subscriptionEntryName	Max35Text	Optional	Name of the subscription entry
subscriptionEntryId	String	Mandatory	Identificiaton of the related entry
subscriptionEntryStatus	Subscription Entry Status	Mandatory	
apiClientPrimaryPush URI	Max256Text	Optional	The URI where related account information shall be pushed to.  <b>Note:</b> The delivery of this attribute by the ASPSP might depend on the API Channel and whether it is delivered on aggregation vs. details level
apiClientSecondaryPush URI	Max256Text	Optional	The URI where related account information shall be pushed to if the primary push URI is not reachable.  If this attribute is used by the API Client and the ASPSP is

<b>Attribute</b>	<b>Type</b>	<b>Condition</b>	<b>Description</b>
			not supporting this feature, then the request will be rejected with a dedicated additional error information.
callbackWithLinkPreferred	Boolean	Optional	API Client prefers to receive hyperlinks pointing to the related account information element if the related subservice criteria are met.
callbackWithStaticTextPreferred	Boolean	Optional	API Client prefers to get informed by static text if the related subservice criteria are met.
staticCallbackText	Max140Text	Optional	The text to be provided by the ASPSP in case static text is sent if the related subservice criteria are met.
pushAccountEntryParameters	Push Account Entry Parameters	{Optional Or}	Parameters for a subscription entry for the Push Account Entry Service.  <b>Note:</b> The delivery of this attribute by the ASPSP might depend on the API Channel and whether it is delivered on aggregation vs. details level
pushAccount StatementParameters	Push Account Statement Parameters	Optional Or	Parameters for a subscription entry for the Push Account Statement Service.
pushBalanceParameters	Push Balance Parameters	Optional Or	Parameters for a subscription entry for the Push Balance Information Service.
pushRtpParameters	Push RTP Parameters	Optional Or}	Parameters for a subscription entry for the Push RTP Information Service.

Attribute	Type	Condition	Description
_links	Links	Optional	The hyperlink of href type "entry" should be added if not all entry data was delivered in the related response message.

This data type is used in [oFA -IG-PAIS].

## 2.192 Subscription Identification and Link

Attribute	Type	Condition	Description
subscriptionId	Max70Text	Mandatory	Identification of the generated subscription.
subscriptionStatus	Max35Text	Mandatory	Status of the related subscription.
_links	Links	Mandatory	A hyperlink of type "subscription".

This data type is used in [oFA -IG-PAIS].

## 2.193 Tax

Attribute	Type	Condition	Description
identification	Max35Text	Optional	
rate	Percentage Rate	Optional	
amount	Amount	Optional	

## 2.194 Tax Amount

Attribute	Type	Condition	Description
rate	Rate	Optional	Rate used to calculate the tax.

Attribute	Type	Condition	Description
taxableBaseAmount	Amount	Optional	Amount of money on which the tax is based.
totalAmount	Amount	Optional	Total amount as a result of the calculation of the tax record.
details	Array of Tax Details	Optional	Provides details on the tax period and amount

## 2.195 Tax Authorisation

Attribute	Type	Condition	Description
title	Max35Text	Optional	Title of position of the debtor or their representatives.
name	Max140Text	Optional	Name of the debtor or their representatives.

## 2.196 Tax Creditor

Attribute	Type	Condition	Description
taxId	Max35Text	Optional	Tax identification number of the creditor
registrationId	Max35Text	Optional	Unique identification, assigned by an organization, to identify a party.
taxType	Max35Text	Optional	Type of the tax payer

## 2.197 Tax Debtor

Attribute	Type	Condition	Description
taxId	Max35Text	Optional	Tax identification number of the debtor

Attribute	Type	Condition	Description
registrationId	Max35Text	Optional	Unique identification, assigned by an organization, to identify a party.
taxType	Max35Text	Optional	Type of the tax payer
authorisation	Tax Authorisation	Optional	Details of the authorised tax paying party.

## 2.198 Tax Details

Attribute	Type	Condition	Description
period	Tax Period	Optional	Provides details on the period of time of the related tax payment.
amount	Amount	Mandatory	Tax amount related to the specified period.

## 2.199 Tax Period

Attribute	Type	Condition	Description
year	ISODate	Optional	Year of the related tax payment.
type	Tax Record Period Code	Optional	Identification of the period related to the tax payment.
fromToDate	ISODateTime	Optional	Start and end date of the tax report.

## 2.200 Tax Record

Attribute	Type	Condition	Description
type	Max35Text	Optional	High level code to identify the type of the tax details.
category	Max35Text	Optional	Specifies the tax code as published by the tax authority.
categoryDetails	Max35Text	Optional	Provides further details on the tax category code.
debtorStatus	Max35Text	Optional	Code provided by local authority to identify the status of the party that has drawn up the settlement document.
certificateId	Max35Text	Optional	Identification number of the tax report as assigned by the taxing authority.
formsCode	Max35Text	Optional	Identifies on which template the tax report to be provided in a coded form.
period	Tax Period	Optional	Provides details on the period of time of the related tax payment.
taxAmount	Tax Amount	Optional	Provides information of the amount of the tax record.
additionalInformation	Max140Text	Optional	Further details of the tax record.

## 2.201 Total Credit Entries

Attribute	Type	Condition	Description
numberOfEntries	Max15Text	Optional	Only numeric text is permitted.
sum	Decimal Number	Optional	The sum of total credit entries.

## 2.202 Total Debit Entries

Attribute	Type	Condition	Description
numberOfEntries	Max15Text	Optional	Only numeric text is permitted.
sum	Decimal Number	Optional	The sum of total debit entries.

## 2.203 Total Entries

Attribute	Type	Condition	Description
numberOfEntries	Max15Text	Optional	Only numeric text is permitted.
sum	Decimal Number	Optional	The sum of total individual entries.
totalNetEntry	Total Net Entry	Optional	The debit or credit amount of the netted amounts of all credit and debit entries.

## 2.204 Total Entries Per Bank Transaction Code

Attribute	Type	Condition	Description
numberOfEntries	Max15Text	Optional	Only numeric text is permitted.

Attribute	Type	Condition	Description
sum	Decimal Number	Optional	The sum of total individual entries.
totalNetEntry	Total Net Entry	Optional	The debit or credit amount of the netted amounts of all credit and debit entries.
creditEntries	Credit Entries	Optional	Number of individual credit entries for the bank transaction code
debitEntries	Debit Entries	Optional	Number of individual debit entries for the bank transaction code
forecastIndicator	Boolean	Optional	Indicated whether the bank transaction code is related to booked or forecast items
bankTransactionCode	Bank Transaction Code	Mandatory	Set of elements used to fully identify the type of transaction resulting in an entry
availability	Array of Availability	Optional	Indicated when the booked amount of money will be available
date	ISODate	{Or Optional}	Date of the transaction summary
dateTime	ISODateTime	Or Optional}	Date and time of the transaction summary

## 2.205 Total Net Entry

Attribute	Type	Condition	Description
amount	Amount	Mandatory	Amount of the netted amount of all debit and credit entries.
creditDebitIndicator	Credit Debit Code	Mandatory	Indicated whether the amount is a debit or credit amount.

## 2.206 Transactions

Attribute	Type	Condition	Description
transactionId	String	Optional	<p>Can be used as access-ID in the API, where more details on an transaction is offered. If this data attribute is provided this shows that the AIS can get access on more details about this transaction using the GET Transaction Details Request.</p> <p><b>Remark:</b> ASPSPs should ensure that transactionID, if provided, is unique relative to the account that PSU is accessing, in order to ensure the quality of the data provided to the API Client.</p>
entryReference	Max35Text	Optional	Is the identification of the transaction as used e.g. for reference for delta function on application level. The same identification as for example used within camt.05x messages.

Attribute	Type	Condition	Description
batchIndicator	Boolean	Optional	If this indicator equals true, then the related entry is a batch entry.
batchNumberOfTransactions	Integer	Conditional	Shall be used if and only if the batchIndicator is contained and equals true.
references	References	Optional	Might contain the payment identification attributes endToEndId as well as the new UETR field.  In addition it is including accountServiceReference, mandateId, checkId (all level 1 fields in V1.3.x).
localInstrumentCode	Local Instrument Code	{Or Optional}	User community specific instrument as a code provided by ISO20022.
localInstrumentProprietary	Max35Text	Or Optional}	User community specific instrument as a proprietary attribute.
bookingDate	ISODate	Optional	The Date when an entry is posted to an account on the ASPSPs books.
valueDate	ISODate	Optional	Date at which assets become available to the account owner in case of a credit entry, or cease to be available to the account owner in case of a debit entry.  Usage: If entry status is pending and value date is present, then the value date refers to an

Attribute	Type	Condition	Description
			expected/requested value date.
transactionAmount	Amount	Mandatory	The amount of the transaction or batch as billed to the account.
currencyExchange	Array of Report Exchange Rate	Optional	
amountDetails	Amount Details	Optional	Additional information to the transaction amount.
interbankSettlement Date	ISODate	Optional	Date on which the amount of money ceases to be available to the agent that owes it and when the amount of money becomes available to the agent to which it is due.
cardTransaction	Card Transaction	Optional	Card transaction details in case of an underlying card transaction.
creditor	Party Description	Optional	Name and potentially an identification of the creditor if a "Debited" transaction
creditor Account	Account Reference	Conditional	Account of the payee.
creditorAgent	Agent Description1	Optional	Proprietary identifications might be provided under financialInstitutionId/other
ultimate Creditor	Party Description4	Optional	Only name and identification is supported for now for this party.

Attribute	Type	Condition	Description
debtor	Party Description	Optional	Name and potentially an identification of the debtor if a "Credited" transaction
debtorAccount	Account Reference	Conditional	
debtorAgent	Agent Description1	Optional	Proprietary identifications might be provided under financialInstitutionId/other
ultimateDebtor	Party Description4	Optional	
remittance Information Unstructured	Array of Max140Text	Optional	
remittance Information Structured	Array of Remittance	Optional	
entryDetails	Array of Entry Details	Optional	Might be used by the ASPSP to transport details about transactions within a batch.
additionalTransactionInformation	Max500Text	Optional	Might be used by the ASPSP to transport additional transaction related information to the PSU
additionallInformation Structured	Structured Additional Information	Conditional	<p>Is used if and only if the bookingStatus entry equals "information".</p> <p>Every active standing order related to the dedicated payment account result into one entry.</p> <p>Each received RTP result into one entry.</p>

Attribute	Type	Condition	Description
additionalTransactionInformationStructured	Structured Additional Transaction Information	Optional	Data about the transactional process of submission, authorisation and/or cancellation of the underlying payment.
purposeCode	Purpose Code	Optional	
bankTransactionCode	Bank Transaction Code	Optional	<p>Bank transaction code as used by the ASPSP and using the sub elements of this structured code defined by ISO20022.</p> <p>For standing order reports the following codes are applicable:</p> <ul style="list-style-type: none"> <li>"PMNT-ICDT-STDO" for credit transfers,</li> <li>"PMNT-IRCT-STDO" for instant credit transfers</li> <li>"PMNT-ICDT-XBST" for cross-border credit transfers</li> <li>"PMNT-IRCT-XBST" for cross-border real time credit transfers and</li> <li>"PMNT-MCOP-OTHR" for specific standing orders which have a dynamical amount to move left funds e.g. on month end to a saving account</li> </ul>
bankTransactionCodeProprietary	Max35Text	Optional	proprietary bank transaction code as used within a community or within an ASPSP e.g. for MT94x based transaction

Attribute	Type	Condition	Description
			reports. Renaming of the attribute to adapt to statements.
balanceAfter Transaction	Balance	Optional	This is the balance after this transaction. Recommended balance type is interimBooked.
_links	Links	Optional	The following links could be used here:  transactionDetails for retrieving details of a transaction.

This data type is used in [oFA-IG-Com].

## 2.207 Transaction Detail

Attribute	Type	Condition	Description
references	References Statement	Optional	Might contain the payment identification attributes endToEndId as well as the new UETR field.  In addition it is including e.g. accountServiceReference, mandateId, checkNumber
amount	Amount	Mandatory	transactionAmount for transactions
amountDetails	Amount Details	Optional	
availability	Array of Availability	Optional	
bankTransactionCode	Bank Transaction Code	Optional	

Attribute	Type	Condition	Description
bankTransactionCodeProprietary	Max35Text	Optional	
bankTransactionCodeIssuer	Max35Text	Optional	Issuer of the proprietary bank transaction code.
bankTransactionCodeProprietaryIssuer	Max35Text	Optional	Issuer of the proprietary bank transaction code.
charges	Charges	Optional	
interest	Transaction Interest	Optional	
relatedParties	Related Parties	Optional	
relatedAgents	Related Agents	Optional	
localInstrumentCode	Local Instrument Code	{Or Optional}	
localInstrumentProprietary	Max35Text	Or Optional}	
purposeCode	Purpose Code	Optional	
relatedRemittanceInformation	Array of Related Remittance	Optional	Provides information related to the handling of the remittance information by any of the agents in the transaction processing chain.
remittanceInformationUnstructured	Array of Max140Text	Optional	
remittanceInformationStructured	Array of Remittance Reports	Optional	

Attribute	Type	Condition	Description
relatedDates	Related Dates	Optional	
relatedPrice	Related Price	Optional	
relatedQuantities	Array of Related Quantity	Optional	Set of elements used to identify the related quantities, such as securities, in the underlying transaction.
financialInstrumentId	Financial Instrument Identification	Optional	
tax	Details Tax	Optional	
returnInformation	Payment Return Reason	Optional	
corporateAction	Corporate Action	Optional	
safekeepingAccount	Safekeeping Account	Optional	
cashDeposit	Array of Cash Deposit	Optional	
cardTransaction	Card Transaction	Optional	
additionalTransactionInformation	Max500Text	Optional	

## 2.208 Transaction Interest

Attribute	Type	Condition	Description
totalInterestAndTaxAmount	Amount	Optional	

Attribute	Type	Condition	Description
record	Array of Interest Record	Optional	

## 2.209 Transaction Summary

Attribute	Type	Condition	Description
totalEntries	Total Entries	Optional	The total number and sum of credit and debit entries.
totalCreditEntries	Total Credit Entries	Optional	The total number and sum of credit entries
totalDebitEntries	Total Debit Entries	Optional	The total number and sum of debit entries
totalEntriesPerBankTransactionCode	Array of Total Entries Per Bank Transaction Code	Optional	The total number and sum of entries per bank transaction code

## 2.210 User Parameter

Attribute	Type	Condition	Description
userData	PSU Data	Mandatory	
accountAccessRights	Array of Account Access and Authorisation Rights	Mandatory	

This data type is used in [oFA-Disc].

## 2.211 User Entry

Attribute	Type	Condition	Description
user	Max70Text	Mandatory	
dateTime	ISODateTime	Mandatory	

### 3 Code Lists

**NOTE:** It is indicated below each code, in which openFinance API Framework Implementation Guidelines the related data type is used in attributes of API requests and API responses on **first** level.

#### 3.1 Access Rights Codes

The current list of access right codes. This might be further extended.

Codes	Description
ais	covers details, balances and transactions
accountDetails	covers generic account product information details
balances	Allow to retrieve balances of the addressed account.
transactions	Allow to retrieve transactions of the addressed account.
orders	Allow to retrieve orders from an addressed order book related to a securities account.
ownerName	Allow to retrieve the owner name/owner names related to this account.  <b>Note:</b> This access right is deprecated for a later version of the specification in analogy to changing the ownerName(s) attributes to owner(s).
owner	Allow to retrieve the owner/owners related to this account.
psuName	Allow to retrieve the PSU name related to the consent authorisation.
psuLeanIdentification	Allow to retrieve the PSU Name as well as PSU identification related data from the PSU parameters, e.g. birth date, address or passport ID.
trustedBeneficiaries	Allow to retrieve the list of trusted beneficiaries related to this account.
initiatePayments	Allow to initiate payments with the related token.
fundsConfirmations	Allows to access an addressed account for a funds confirmation check.

<b>Codes</b>	<b>Description</b>
userParameters	Allows to access the PSU's user parameters applicable to the account configuration.
ibanChecks	Allows to access a restricted version of the user parameters related to signing rights.
corporateParameters	RFU Will be supported in future.
accountCheckParameters	Allows to access restricted user parameters e.g. role definitions of the PSU related to the account.

### 3.2 Account Entry Status

<b>Code</b>	<b>Description</b>
booked	Entry is booked on the account.
pending	Entry is pending, funds might be reserved or not.

### 3.3 Account Reference Code

<b>Attribute</b>	<b>Description</b>
iban	
bban	
msisdn	
pan	
maskedPan	
proxy-<proxytype>	with proxytype being of Type Account Identification Code

### 3.4 Account Status Code

<b>Code</b>	<b>Description</b>
enabled	account is available

Code	Description
deleted	account is terminated
blocked	account is blocked e.g. for legal reasons

### 3.5 Balance Type

The following balance types are excluding credit limits unless the creditLimitIncluded element is present and equals true in the corresponding balance element.

**Remark:** This definition is following ISO20022 logic for defining balance types.

Type	Description
closingBooked	<p>Balance of the account at the end of the pre-agreed account reporting period. It is the sum of the opening booked balance at the beginning of the period and all entries booked to the account during the pre-agreed account reporting period.</p> <p>For card-accounts, this is composed of</p> <ul style="list-style-type: none"> <li>• invoiced, but not yet paid entries</li> </ul>
expected	<p>Balance composed of booked entries and pending items known at the time of calculation, which projects the end of day balance if everything is booked on the account and no other entry is posted.</p> <p>For card accounts, this is composed of</p> <ul style="list-style-type: none"> <li>• invoiced, but not yet paid entries,</li> <li>• not yet invoiced but already booked entries and</li> <li>• pending items (not yet booked)</li> </ul>
openingBooked	<p>Book balance of the account at the beginning of the account reporting period. It always equals the closing book balance from the previous report.</p>
interimAvailable	<p>Available balance calculated in the course of the account 'servicer's business day, at the time specified, and subject to further changes during the business day. The interim balance is calculated on the basis of booked credit and debit items during the calculation time/period specified.</p> <p>For card-accounts, this is composed of</p>

Type	Description
	<ul style="list-style-type: none"> <li>• invoiced, but not yet paid entries,</li> <li>• not yet invoiced but already booked entries</li> </ul>
interimBooked	Balance calculated in the course of the account servicer's business day, at the time specified, and subject to further changes during the business day. The interim balance is calculated on the basis of booked credit and debit items during the calculation time/period specified.
forwardAvailable	Forward available balance of money that is at the disposal of the account owner on the date specified.
nonInvoiced	Only for card accounts, to be defined yet.

### 3.6 Card Data Entry Mode

Type	Description
CICC	EMV based
ECTL	EMV based contactless
MGST	Magnetic Stripe
PHYS	Manual Entry
BRCD	Barcode

This is following an ISO20022 Code: CardsDataReading1Code

### 3.7 Card Transaction Type

Type	Description
AGGR	Aggregation of low payments
DCCV	Dynamic currency conversion (DCC)
GRTT	Card Payment with gratuity
INSP	Instalment payment

Type	Description
LOYT	Loyalty services
NRES	No show after reservation
PUCO	Purchase and corporate data
RECP	Recurring Payment
SOAF	Solicited available funds
UNAF	Unsolicited available funds
VCAU	Voice authorisation

This is following ISO20022 Code: CardPaymentServiceType2Code

### 3.8 Charge Bearer

Type	Description
DEBT	All transaction charges are to be borne by the debtor.
CRED	All transaction charges are to be borne by the creditor.
SHAR	In a credit transfer context, means that transaction charges on the sender side are to be borne by the debtor, transaction charges on the receiver side are to be borne by the creditor. In a direct debit context, means that transaction charges on the sender side are to be borne by the creditor, transaction charges on the receiver side are to be borne by the debtor.
SLEV	Charges are to be applied following the rules agreed in the service level and/or scheme.

This is following ChargeBearerType1Code from ISO20022.

This code is used in [oFA-DomDef].

### 3.9 Classification Code

MandateClassification1Code from ISO20022.

### 3.10 Consent Status

Code	Description
received	The consent data have been received and are technically correct. The data is not authorised yet.
rejected	The consent data have been rejected e.g. since no successful authorisation has taken place.
partiallyAuthorised	The consent is due to a multi-level authorisation, some but not all mandated authorisations have been performed yet.
valid	The consent is accepted and valid for GET account data calls and others as specified in the consent object.
revokedByPsu	The consent has been revoked by the PSU towards the ASPSP.
expired	The consent expired.
terminatedByTpp	The corresponding TPP has terminated the consent by applying the DELETE method to the consent resource.
replacedByTpp	The corresponding TPP has terminated the (recurring) consent implicitly by submitting a new (recurring) consent.

The ASPSP might add further codes. These codes then shall be contained in the ASPSP's documentation of the XS2A interface.

This code is used in [oFA-Con], [oFA-PFSM].

### 3.11 Consent Type Code

Code	Description
global	This consent type asks certain rights for dedicated account types without further detailing the accounts.
detailed	This consent type asks for access for dedicated accounts and dedicated rights.
aspssManaged	This consent type asks for access on certain account types for dedicated access rights. The accounts provisioned will be added during the authorisation process by the ASPSP.

Code	Description
accountList	<p>This consent type asks for the list of accounts for each addressed account type. In difference to other account information consents, this consent might be authorised by using one authentication factor only, if supported by the ASPSP.</p> <p>In addition to the "accountDetails" access rights, also other non-transactional access rights might be asked for. This might have an impact on the decision of the ASPSP to apply SCA or only one authentication factor of the PSU.</p>

This code is used by [oFA-Con].

### 3.12 Contact Type

Code	Description
technical	To be contacted in case of items related to the API implementation,
operational	To be contacted in case of topics related to operational issues.
business	To be contacted in case of business related topics on premium services.
security	To be contacted in case of IT security related topics.

### 3.13 Credit Debit Code

Code	Description
CRDT	Operation is an increase.
DBIT	Operation is a decrease.

### 3.14 Credit Transfer Payment Method Code

This code set corresponds to ISO 20022 PaymentMethod3Code:

Type	Description
TRF	Credit Transfer

Type	Description
CHK	Cheque
TRA	Transfer Advice  Remark: Currently not supported by the openFinance payment data model. The code "TRA" is only mentioned for completeness as it is defined in ISO20022.

This data type is used in [oFA-PFSM].

### 3.15 Creditor Reference Type Code

This code set is equivalent to the ISO 20022 definition DocumentType3Code:

Type	Description
RADM	Document is a remittance advice sent separately from the current transaction.
RPIN	Document is a linked payment instruction to which the current payment instruction is related, for example, in a cover scenario.
FXDR	Document is a pre-agreed or pre-arranged foreign exchange transaction to which the payment transaction refers.
DISP	Document is a dispatch advice.
PUOR	Document is a purchase order.
SCOR	Document is a structured communication reference provided by the creditor to identify the referred transaction.

### 3.16 Document Status

The following status codes are supported for document resources.

Code	Description
received	Document received, request syntactically okay.

<b>Code</b>	<b>Description</b>
rejected	Document rejected for several possible reasons.
accessible	Document has been made accessible for the addressed document receiver.
withdrawn	Submitted document has been withdrawn successfully before made accessible to the addressed document receiver.
replaced	<b>RFU:</b> Not yet fully defined.
expired	<b>RFU:</b> Not yet fully defined.

This code is used in [oFA-IG-Doc].

### 3.17 Exchange Rate Type Code

This code set is equivalent to the ISO 20022 definition ExchangeRateType1Code:

<b>Type</b>	<b>Description</b>
SPOT	Exchange rate applied is the spot rate.
SALE	Exchange rate applied is the market rate at the time of the sale.
AGRD	Exchange rate applied is the rate agreed between the parties.

### 3.18 Entry Status Code

The following codes of the ExternalEntryStatus1Code of ISO20022 are supported:

<b>Code</b>	<b>Type</b>	<b>Description</b>
BOOK	booked	<p>"Booked means that the transfer of money has been completed between account servicer and account owner.</p> <p>Usage: Status Booked does not necessarily imply finality of money as this depends on other factors such as the payment system used, the completion of the end-to-end transaction and the terms agreed between account servicer and owner.</p>

Code	Type	Description
		Status Booked is the only status that can be reversed."
PNDG	pending	"Booking on the account owner's account in the account servicer's ledger has not been completed.  Usage: this can be used for expected items, or for items for which some conditions still need to be fulfilled before they can be booked. If booking takes place, the entry will be included with status Booked in subsequent account report or statement. Status Pending cannot be reversed."
INFO	information	Entry is only provided for information, and no booking on the account owner's account in the account servicer's ledger has been performed.

### 3.19 Event Frequency Code

The following codes from the "EventFrequency7Code" of ISO 20022 are supported:

- Daily
- Weekly
- EveryTwoWeeks
- Monthly
- EveryTwoMonths
- Quarterly
- SemiAnnual
- Annual
- MonthlyVariable

This code is used in [oFA-IG-Com], [oFA-IG-XPIS].

### 3.20 Execution Rule Code

The following codes are supported:

- Preceding
- Following

This code is used in [oFA-IG-Com], [oFA-IG-XAIS] and [oFA-IG-XPIS].

### 3.21 Interest Type Code3

The following ISO definitions apply for these codes (based on ISO InterestType3code as defined for message type reda.006.001.01, but here, only a restricted code list is supported):

Code	Description
FIXD	<b>ISO 20022:</b> Indicates that the type of interest is fixed.  <b>Remark:</b> This is a fixed interest for the period defined either in the interest entry or implicitly by the contract period.
INDE	<b>ISO 20022:</b> Indicates that the type of interest is index.  <b>Remark:</b> This rate could relate e.g. to interest rates of central banks.

### 3.22 Limit Type

Attribute	Description
singleOrder	The limit applies to every transaction.
daily	It is the limit of transactions to be authorised aggregated during a day.
weekly	It is the limit of transactions to be authorised aggregated during a calendar week.
monthly	It is the limit of transactions to be authorised aggregated during a calendar month.

### 3.23 Mandate Setup Reason Code

This code is covered by the ISO20022 ExternalMandateSetupReason1Code.

**NOTE:** Currently, there is no external mandate setup reason code defined yet in ISO20022.

### 3.24 Method Code

Code	Name	Description
FAXI	Fax	Remittance advice information must be faxed.

Code	Name	Description
EDIC	ElectronicDataInterchange	Remittance advice information must be sent through Electronic Data Interchange (EDI).
URID	UniformResourceIdentifier	Remittance advice information needs to be sent to a Uniform Resource Identifier (URI). URI is a compact string of characters that uniquely identify an abstract or physical resource. URI's are the super-set of identifiers, such as URLs, email addresses, ftp sites, etc, and as such, provide the syntax for all of the identification schemes.
EMAL	EMail	Remittance advice information must be sent through e-mail.
POST	Post	Remittance advice information must be sent through postal services.
SMSM	SMS	Remittance advice information must be sent through by phone as a short message service (SMS).

This is RemittanceLocationMethod2Code in ISO20022.

### 3.25 Message Code

The permitted message error codes and related HTTP response codes are listed below. New services may introduce new Message Codes which are not yet reflected here.

#### 3.25.1 Service Unspecific HTTP Error Codes

Message Code	HTTP Response Code	Description
CERTIFICATE_INVALID	401	The contents of the signature/corporate seal certificate are not matching PSD2 general PSD2 or attribute requirements.
ROLE_INVALID	401	The TPP does not have the correct PSD2 role to access this service.
CERTIFICATE_EXPIRED	401	Signature/corporate seal certificate is expired.

Message Code	HTTP Response Code	Description
		Remark: If a resource has been created already, a related status reason code is used instead.
CERTIFICATE_BLOCKED	401	<p>Signature/corporate seal certificate has been blocked by the ASPSP or the related NCA.</p> <p>Remark: If a resource has been created already, a related status reason code is used instead.</p>
CERTIFICATE_REVOKED	401	<p>Signature/corporate seal certificate has been revoked by QSTP.</p> <p>Remark: If a resource has been created already, a related status reason code is used instead.</p>
CERTIFICATE_MISSING	401	<p>Signature/corporate seal certificate was not available in the request but is mandated for the corresponding.</p> <p>Remark: If a resource has been created already, a related status reason code is used instead.</p>
CLIENT_INVALID	401	Client certificate is valid but the related client is not contained in the related ASPSP or Scheme directory
CLIENT_INCONSISTENT	401	Client information is not consistent with related directory entries
API_CONTRACT_ID_INVALID	401	The contract identification is not (any more) valid, or does not match with the addressed service.
SIGNATURE_INVALID	401	Application layer eIDAS Signature for API Client authentication is not correct.

Message Code	HTTP Response Code	Description
SIGNATURE_MISSING	401	Application layer eIDAS Signature for API authentication is mandated by the ASPSP but is missing.
ROLE_INVALID	401	The TPP does not have the correct PSD2 role to access this service
FORMAT_ERROR	400	<p>Format of certain request fields are not matching the XS2A requirements. An explicit path to the corresponding field might be added in the return message.</p> <p>This applies to headers and body entries. It also applies in cases where these entries are referring to erroneous or not existing data instances, e.g. a malformed IBAN.</p>
PARAMETER_NOT_CONSISTENT	400	Parameters submitted by API Client are not consistent. This applies only for query parameters.
PARAMETER_NOT_SUPPORTED	400	The parameter is not supported by the API provider. This code should only be used for parameters that are described as "optional if supported by API provider."
PSU_CREDENTIALS_INVALID	401	The PSU-ID cannot be matched by the addressed ASPSP or is blocked, or a password resp. OTP was not correct. Additional information might be added.
SERVICE_INVALID	400 (if payload) 405 (if HTTP method)	The addressed service is not valid for the addressed resources or the submitted data.
SERVICE_BLOCKED	403	This service is not reachable for the addressed PSU due to a channel independent blocking by the ASPSP. Additional information might be given by the ASPSP.

Message Code	HTTP Response Code	Description
CORPORATE_ID_INVALID	401	The PSU-Corporate-ID cannot be matched by the addressed ASPSP.
CONSENT_UNKNOWN	403 (if path) 400 (if header)	The Consent-ID cannot be matched by the ASPSP relative to the API Client.
CONSENT_INVALID	401	The consent was created by this TPP but is not valid for the addressed service/resource.
CONSENT_EXPIRED	401	The consent was created by this TPP but has expired and needs to be renewed.
TOKEN_UNKNOWN	401	The OAuth2 token cannot be matched by the ASPSP relative to the TPP.
TOKEN_INVALID	401	The OAuth2 token is associated to the TPP but is not valid for the addressed service/resource.
TOKEN_EXPIRED	401	The OAuth2 token is associated to the TPP but has expired and needs to be renewed.
RESOURCE_UNKNOWN	404 (if account-id in path)  403 (if other resource in path)  400 (if payload)	The addressed resource is unknown relative to the API Client.  An example for a payload reference is creating a signing basket with an unknown resource identification.
RESOURCE_EXPIRED	403 (if path)  400 (if payload)	The addressed resource is associated with the TPP but has expired, not addressable anymore.
RESOURCE_BLOCKED	400	The addressed resource is not addressable by this request, since it is blocked e.g. by a grouping in a signing basket.

Message Code	HTTP Response Code	Description
TIMESTAMP_INVALID	400	Timestamp not in accepted time period.
PERIOD_INVALID	400	Requested time period out of bound.
SCA_METHOD_UNKNOWN	400	Addressed SCA method in the Authentication Method Select Request is unknown or cannot be matched by the ASPSP with the PSU.
SCA_INVALID	400	Method Application on authorisation resource (e.g. Confirmation Request) blocked since SCA status of the resource equals "failed".
STATUS_INVALID	409	The addressed resource does not allow additional authorisation.
CHANGE_INVALID	409	The addressed resource does not allow changes in the current status or another change process is running in parallel

### 3.25.2 PIS Specific HTTP Error Codes

Message Code	HTTP Response Code	Description
PRODUCT_INVALID	403	The addressed payment product is not available for the PSU .
PRODUCT_UNKNOWN	404	The addressed payment product is not supported by the ASPSP.
PAYMENT_FAILED	400	The payment initiation POST request failed during the initial process. Additional information may be provided by the ASPSP.
KID_MISSING	401	The payment initiation has failed due to a missing KID. This is a specific message code for the Norwegian market, where ASPSP can require the payer to transmit the KID.

Message Code	HTTP Response Code	Description
EXECUTION_DATE_INVALID	400	The requested execution date is not a valid execution date for the ASPSP.
CANCELLATION_INVALID	405	The addressed payment is not cancellable e.g. due to cut off time passed or legal constraints.

### 3.25.3 AIS Specific HTTP Error Codes

Message Code	HTTP Response Code	Description
CONSENT_INVALID	401	The consent definition is not complete or invalid. In case of being not complete, the bank is not supporting a completion of the consent towards the PSU.  Additional information will be provided.
CONSENT_TYPE_NOT_SUPPORTED	400	The consentType chosen in the consent object is not supported by the ASPSP.
SESSIONS_NOT_SUPPORTED	400	The combined service flag may not be used with this ASPSP.
CONTENT_TEMPORARILY_NOT_AVAILABLE	404	The contents of the response can (temporarily) not be obtained because a service, the interface depends on is currently not available.
ACCESS_EXCEEDED	429	The access on the account has been exceeding the consented multiplicity without PSU involvement per day.
REQUESTED_FORMATS_INVALID	406	The requested formats in the Accept header entry are not matching the formats offered by the ASPSP.

### 3.25.4 PIIS Specific Error Codes

Message Code	HTTP Response Code	Description
CARD_INVALID	400	Addressed card number is unknown to the ASPSP or not associated to the PSU.
NO_PIIS_ACTIVATION	400	The PSU has not activated the addressed account for the usage of the PIIS associated with the TPP.

### 3.25.5 Signing Basket Specific Error Codes

Message Code	HTTP Response Code	Description
REFERENCE_MIX_INVALID	400	The used combination of referenced objects is not supported in the ASPSPs signing basket function.
REFERENCE_STATUS_INVALID	409	At least one of the references is already fully authorised.

### 3.25.6 Push AIS specific Error Codes

Push Account Information service specific error codes are as follows:

Message Code	HTTP Response Code	Description
PRIOR_SUBSCRIPTION_AVAILABLE	409	The PSU/Corporate initiating the Push Account Information Service subscription already holds a subscription in the quadruple API Client/PSU/ASPSP/subservice or API Client/Corporate/ASPSP/subservice respectively or in the triple API Client/ASPSP/subservice in the case of direct access.

Message Code	HTTP Response Code	Description
SUBSCRIPTION_INVALID	400	Return this code in case the API Client tries to add a subscription entry, delete a subscription entry or a subscription itself where it had been deactivated already before.
SECONDARY_URI_NOT_SUPPORTED	400	An API Client is trying to register a secondary Push URI within a Push Account Information subscription, which is not supported by the ASPSP.
MIME_TYPE_NOT_SUPPORTED	400	An API Client is trying to define a Push Account Information subservice with one or several mime types, where none of the mime types is supported by the ASPSP for this subservice.
LIMIT_FOR_BALANCE_NOT_SUPPORTED	400	The subscription for a Push Balance Information Subservice is asking to involve a credit limit into the balance selection criteria, where the related balance does not support to include a related credit limit of the account.
ACCOUNT_CURRENCY_NOT_MATCHING	400	The API Client initiated a subscription where an amount is involved which is not matching the currency of the addressed account.
BALANCE_TYPE_NOT_SUPPORTED	400	The API Client initiated a subscription for a balance type that is not supported for the addressed account by the ASPSP.

This data type is used by [oFA-PFSM].

### 3.26 Mime Type Code

Code	Description
application/JSON	Mime type for body encoding in JSON syntax.

<b>Code</b>	<b>Description</b>
application/XML	Mime type for body encoding in XML syntax.
plain/text	Mime type for body encoding in text.

### 3.27 Name Prefix Code

Specifies the terms used to formally address a person.

<b>Code</b>	<b>Description</b>
DOCT	Doctor
MADM	Madam
MISS	Miss
MIST	Mister
MIKS	GenderNeutral

### 3.28 Onboarding Status

<b>Code</b>	<b>Description</b>
received	<p>The first POST has been received and the onboarding resource has been created.</p> <p>The check of the input parameter was successful. The services identified by serviceIds belong to the scheme identified by the schemaIds. The API Client is known. The necessary service contract has been signed and correspond to the ID given by serviceContractId.</p> <p>The confirmation of the price lists is necessary and not done until now.</p>
rejected	<p>The second step (PUT) with the confirmation of the price lists has been failed. This can be e.g. due to one of the following reasons:</p> <ul style="list-style-type: none"> <li>• apiClient not known or no match with QWAC.</li> </ul>

<b>Code</b>	<b>Description</b>
	<ul style="list-style-type: none"> <li>Necessary confirmation of conditions failed.</li> </ul>
expired	The status of the onboarding resource is set to expired on day validTo+1.
terminatedByApiClient	The status of the onboarding resource is set to terminatedByApiClient, if a DELETE request has been sent by the API Client.
terminatedByAspsp	The status of the onboarding resource is set to terminatedByAspsp, if the ASPSP has terminated the corresponding onboarding.
valid	The onboarding of the API Client to the services identified by serviceIds has been completed successfully. No changes of the validity since the onboarding has been completed.
validTimeRestricted	The onboarding of the API Client to the services identified by serviceIds has been completed successfully. The validity has been changed since the onboarding has been completed. The validTo parameter has been set to a date when the onboarding will expire. Reasons for this will be defined by the business logic.

This data type is used in [oFA-IG-Adm].

### 3.29 Order Status Code

Code set to identify the status of an order:

<b>Code</b>	<b>Description</b>
unknown	The status of this order can currently not be determined.
new	Outstanding order with no executions.
partiallyFilled	Outstanding order with executions and remaining quantity.
filled	Order completely filled, no remaining quantity.
doneForDay	Order not, or partially, filled; no further executions forthcoming for the trading day.
canceled	Cancelled order with or without executions.

<b>Code</b>	<b>Description</b>
replaced	Cancelled order due to a replacement with or without executions.
pendingCancel	Order with a request for cancellation pending. Does not indicate that the order has been cancelled.
stopped	Order has been stopped at the exchange. Used when guaranteeing or protecting a price and quantity.
rejected	Order has been rejected by sell-side (broker, exchange, ECN).  <b>Note:</b> An order can be rejected subsequent to order acknowledgment, i.e. an order can pass from "new" to "rejected" status.
suspended	Order has been placed in suspended state at the request of the client.
pendingNew	Order has been received by sell-side's (broker, exchange, ECN) system but not yet accepted for execution.
calculated	Order has been completed for the day (either filled or done for day). Commission or currency settlement details have been calculated.
expired	Order has been cancelled in broker's system due to time in force instructions.
acceptedForBidding	Order has been received and is being evaluated for pricing.
pendingReplace	Order with an Order Cancel/Replace Request pending.

### 3.30 Order Time Limit Code

Code set to identify the time an order shall be in force. Possible values:

<b>Code</b>	<b>Description</b>
day	<b>Day Order:</b> Limit order that is only good for the remainder of the trading day on which it is placed.
goodTillCancel	<b>Good till cancelled (GTC) Order:</b> Order that is working regardless of the time frame, until the order is explicitly cancelled. (Might still be subject of time limits from the ASPSP / broker).

Code	Description
atTheOpening	<b>At the Opening Order:</b> Order to be executed at the very beginning of the trading day.
immediateOrCancel	<b>Immediate or cancel (IOC) Order:</b> Order to be executed immediately and any unfilled portion be cancelled.
fillOrKill	<b>Fill or kill (FOK) Order:</b> Order that is directed to be executed immediately at the market or a specified price or canceled if not filled.
fillAndKill	<b>Fill and kill Order:</b> Order that can be filled partially or cancelled. If the order cannot be filled in its entirety at the specified premium, as much as possible of the order is filled and the rest is killed.
goodTillCrossing	<b>Good till Crossing (GTx) Order:</b> Order that is canceled prior to the market entering into an auction, or crossing phase.
goodTillDate	<b>Good till Day or Date (GTD) Order:</b> Order which remains active till its specified date, unless it has already been fulfilled or cancelled.
atTheClose	<b>At the Close Order:</b> Order to be executed at the end of the trading day, at the price available.
goodThroughCrossing	<b>Good through Crossing Order:</b> Order that is valid up till and including a crossing phase.
atCrossing	<b>At Crossing Order:</b> Order that is valid only during crossing (auction) phases.
goodForTime	<b>Good for Time (GFT) Order:</b> Order that is valid for a pre-defined time period.
goodForAuction	<b>Good for Auction (GFA) Order:</b> Order that is valid for an auction initiated by a trading firm.
goodForMonth	<b>Good for this Month (GFM) Order:</b> Order that is valid until the end of the current month, i.e. from the time of order submission until the end of the last trading day of the current month.

### 3.31 Party Name Match Code

Code	Description
MTCH	Match
NMTC	No match
CMTC	Close Match
NOAP	Validation check is not applicable

This code is used in [oFA-IG-VOP].

### 3.32 Party Identification Match Code

Code	Description
MTCH	Match
NMTC	No match
NOAP	Validation check is not applicable

This code is used in [oFA-IG-VOP].

### 3.33 Payment Product

The definition of payment products as used in URIs for payment initiation. The following table might be extended on domestic level. The encoding of the codes is Max35Text.

Attribute	Description
sepa-credit-transfers	
instant-sepa-credit-transfers	
cross-border-credit-transfers.	
target-2-payments	

### 3.34 Preferred Method

Preferred method used to reach the contact.

Code	Description
LETT	Letter
MAIL	Email
PHON	Phone
FAXX	Fax
CELL	MobileOrCellPhone

### 3.35 Priority Code

This code set is equivalent to the ISO 20022 definition Priority2Code:

Type	Description
HIGH	Priority level is high.
NORM	Priority level is normal.

This code is used in [oFA-PFSM].

### 3.36 Referred Document Type Code

This code set is equivalent to the ISO 20022 definition DocumentType6Code:

Type	Description
MSIN	Document is an invoice claiming payment for the supply of metered services, for example gas or electricity supplied to a fixed meter
CNFA	Document is a credit note for the final amount settled for a commercial transaction.

Type	Description
DNFA	Document is a debit note for the final amount settled for a commercial transaction.
CINV	Document is an invoice.
CREN	Document is a credit note.
DEBN	Document is a debit note.
HIRI	Document is an invoice for the hiring of human resources or renting goods or equipment.
SBIN	Document is an invoice issued by the debtor.
CMCN	Document is an agreement between the parties, stipulating the terms and conditions of the delivery of goods or services.
SOAC	Document is a statement of the transactions posted to the debtor's account at the supplier.
DISP	Document is a dispatch advice.
BOLD	Document is a shipping notice.
VCHR	Document is an electronic payment document.
AROI	Document is a payment that applies to a specific source document.
TSUT	Document is a transaction identifier as assigned by the Trade Services Utility
PUOR	Document is a purchase order.

### 3.37 Regulatory Reporting Type Code

Type	Description
CRED	Regulatory information applies to the credit side.

Type	Description
DEBT	Regulatory information applies to the debit side.
BOTH	Regulatory information applies to both credit and debit sides.

### 3.38 Request Status

Syntactically, the same codes are used as in Transaction Status, but with a different semantic, since the codes are related to a Request To Pay transaction and **not** to the corresponding payment.

Code	Description
ACCP	The request to pay has been explicitly accepted by the PSU.
ACWC	The request to pay has been explicitly accepted by the PSU with changes related to the execution date or the accepted amount.
RCVD	The request to pay data can be mapped to a PSU, no restrictions of the PSU related to payment requests apply and the payment request can be further processed.
PDNG	<ul style="list-style-type: none"> <li>• The request to pay transaction has not yet been mapped to a PSU, or</li> <li>• PSU related restrictions regarding request to pay functionality could not yet been checked</li> </ul>
RJCT	The request to pay has been rejected by either the API Server, the ASPSP or the PSU.

This code is used in [oFA-IG-RTP].

### 3.39 SCA Approach Type

Code	Description
Decoupled	Decoupled SCA Approach
Embedded	Embedded SCA Approach
OAauth2	Redirect SCA Approach based on OAuth2 protocol
Redirect	Plain Redirect Approach
Online-Channel	Asynchronous SCA Approach via ASPSP online channels

### 3.40 SCA Process Flow Requirement Code

Attribute	Description
psuAuthenticationRequired	The ASPSP will not select the SCA approach to be applied until the TPP has successfully updated the PSU Authentication or delivered an OAuth2 access token.
psuIdentificationRequired	The ASPSP mandates the PSU-ID for services involving SCA (like PIS, AIS, ...) before offering a SCA Selection.
scaMethodSelectionRequired	The ASPSP will not select the SCA approach to be applied until the PSU has selected the authentication method to be applied via the API Client.  Note: As the PSU is neither authenticated nor identified at this point, the ASPSP will offer the ASPSP-specific SCA methods. Accordingly, the PSU has to choose a method which is allowed to him.
none	The ASPSP is able to select the SCA approach to be applied without a preceding PSU Authentication, PSU Identification or Authentication Method Selection. This then could also be handled in the online channel during authorisation.

### 3.41 SCA Exemption Code

Code	Description
none	no SCA exemption supported for payment initiation.
lowValueTransactions	
paymentsToSelf	
transactionRiskAnalysis	
trustedBeneficiaries	

### 3.42 SCA Status

The following codes are defined for this data type.

<b>Code</b>	<b>Description</b>
received	An authorisation or cancellation-authorisation resource has been created successfully.
psuIdentified	The PSU related to the authorisation or cancellation-authorisation resource has been identified.
psuAuthenticated	The PSU related to the authorisation or cancellation-authorisation resource has been identified and authenticated e.g. by a password or by an access token.
scaMethodSelected	The PSU/TPP has selected the related SCA routine. If the SCA method is chosen implicitly since only one SCA method is available, then this is the first status to be reported instead of "received".
started	The addressed SCA routine has been started.
unconfirmed	SCA is technically successfully finalised by the PSU, but the authorisation resource needs a confirmation command by the TPP yet.
finalised	The SCA routine has been finalised successfully (including a potential confirmation command). This is a final status of the authorisation resource.
failed	The SCA routine failed. This is a final status of the authorisation resource.
exempted	SCA was exempted for the related transaction, the related authorisation is successful. This is a final status of the authorisation resource.

This data type is used in [oFA-PFSM].

### 3.43 Securing Method Code

This code is providing information about how an authorised amount is secured within the ASPSP.

<b>Code</b>	<b>Description</b>
reservationOfFunds	The bank is reserving the funds via a disposition of the amount on the account.

Code	Description
creditLine	The bank is reserving the funds via the usage of a credit line of the customer.
bankGuarantee	The bank is offering a payment guarantee.
consumerLoan	The payment is secured by a consumer loan.

This code is used in [oFA-IG-XPIS].

#### 3.44 Securities Fee Type Code

This code is providing information the type of a fee that is applicable to a securities account.

Code	Description
transactionFee	Fee that applies to a transaction within this securities account.
brokerageFee	Fee a broker charges to execute transactions or provide specialized services on behalf of clients.
managementFee	Fee levied by an investment manager for overseeing an investment fund.
courtage	Courtage
custodyFee	Fee charged by the ASPSP for safekeeping the securities within the securities account.
exchangeFee	Fee charged for transferring shares from one fund to another fund within the same group.
thirdPartyFee	Fees charged by a third party
otherFee	Fee that is not covered by any of the fee types above.

#### 3.45 Securities Order Side

Code set to identify the "side" / intended action for the respective order. Possible values:

<b>Code</b>	<b>Description</b>
buy	Order to buy.
sell	Order to sell.
subscription	Order for a subscription.
redemption	Order for a redemption.

### 3.46 Service Type

<b>Code</b>	<b>Description</b>
PIS	single payments
RPIS	periodic payments
BPIS	bulk payments
XFPIS	secured-payments
XDPIS	deferred-payments
XDFPIS	secured-deferred-payments
XMDPIS	multiple-deferred-payments
XMDFPIS	secured-multiple-deferred-payments
XRPIS	recurring-payments
XRFPIS	secured-recurring-payments
XMRPIS	multiple-recurring-payments
COF	funds confirmation
CONS-AIS	consent on account information
XCONS-DOC	consent for document services
XCONS-PSUP	consent on psu parameter information
XCONS-COF	consent for acceptance of COF requests

<b>Code</b>	<b>Description</b>
AIS	Account information for payment accounts
XAIS-LA	Account information for loan accounts
XAIS-SA	Account information for savings accounts
XAIS-CA	Account information for single cards
XAIS-SC	Account information for securities accounts
SGNB	Signing basket
MAN	Mandate service
DOC	Document service
XPAIS-AE	Push account information service for account entries
XPAIS-AB	Push account information service for account balances
XPAIS-AS	Push account information service for account statements
XPAIS-RTP	Push account information service for incoming RTP
RTP	Request to Pay
VOP	Verification of party

This code is used in [oFA -IG-PAIS]

### 3.47 .Signing Class

The definition of authorisation rights of a user.

<b>Attribute</b>	<b>Description</b>
singleSigning	User is entitled to sign related transactions on his/her own.
firstSigning	User is entitled to sign related transactions as a first signer.
secondSigning	User is only entitled to sign related transactions after a first signer has signed the transaction.
nonSpecifiedSigning	User is entitled to sign related transactions, without providing more detailed information about the related signing class.

Attribute	Description
transportSigning	User is only entitled to sign the submission of a related transaction, but not to authorise the related transaction.
none	User has no rights related submission or authorisation of related transactions.

### 3.48 Status Reason Code

At a minimum, the following codes from the ISO20022 ExternalStatusReasonCode1 list need to be supported by the ASPSP. The codes should only be used, if a related resource has been generated on API level, i.e. if a transaction status can be provided. Otherwise a related Message Code to be used in Error information would be sufficient.

Code	Name	ISO 20022 Definition and openAPI Remarks
AM04	InsufficientFunds	<p>Amount of funds available to cover specified message amount is insufficient.</p> <p><b>Remark:</b> Indicates that the reason for rejecting the payment is that the required funds have been found to be not available for the specific (e.g due to missing funds or due to configured limits) during processing after the initial acceptance of the payment initiation.</p>
AM21	LimitExceeded	Transaction amount exceeds limits agreed between bank and client.
BEXX	There are several codes identifying specific invalid data.	Several circumstances.
CN01	AuthorisationCancelled	Authorisation is cancelled.
DS0C	SignerCertificateRevoked	<p>The signer certificate is revoked.</p> <p><b>Remark:</b> Is used, if the signature/corporate seal certificate is revoked.</p>
DS0D	SignerCertificateNotValid	<p>The signer certificate is not valid (revoked or not active).</p> <p><b>Remark:</b> Is used, if the signature/corporate seal certificate is blocked by the ASPSP or if the certificate is expired.</p>
DS0A	DataSignRequested	<p>Data signature is required.</p> <p><b>Remark:</b> Is used, if a signing by a corporate seal/certificate is mandated by the ASPSP but is missing.</p>
DS04	OrderRejected	<p>The order was rejected by the bank side (for reasons concerning content)</p> <p><b>Remark:</b> Indicates that the reason for rejecting the payment is that the content of the payment</p>

<b>Code</b>	<b>Name</b>	<b>ISO 20022 Definition and openAPI Remarks</b>
		initiation has been found invalid during processing after the initial acceptance of the payment initiation.
FOCR	FollowingCancellationRequest	Return following a cancellation request.
SL11	CreditorNotOnWhitelistOfDebtor	Whitelisting service offered by the Debtor Agent; Debtor has not included the Creditor on its “Whitelist” (yet). In the Whitelist the Debtor may list all allowed Creditors to debit Debtor bank account.
TKSP	TokenSuspended.	Token found with suspended status.
TKXP	TokenExpired	Token expired.

This code is used in [oFA-IG-Com], [oFA-PFSM]..

### 3.49 Subscription Status

<b>Code</b>	<b>Description</b>
received	The subscription data have been received and are technically correct. The data is not authorised yet.
rejected	The subscription data have been rejected e.g. since no successful authorisation has taken place.
partiallyAuthorised	The subscription is due to a multi-level authorisation, some but not all mandated authorisations have been performed yet.
valid	The subscription is accepted and valid for the related subscribed services as specified in the subscription object.
validInChange	The subscription is accepted and valid for the related subscribed services as specified in the subscription object. A new subscription entry has been submitted which is not yet (fully) authorised.
revokedByPsu	The subscription has been revoked by the PSU towards the ASPSP.
cancelledByAspss	The subscription has been cancelled by the ASPSP.
expired	The subscription expired.
terminatedByTpp	The corresponding TPP has terminated the subscription by applying the DELETE method to the subscription resource.

The ASPSP might add further codes. These codes then shall be contained in the ASPSP's documentation of the XS2A interface.

This code is used in [oFA-PFSM], [oFA -IG-PAIS].

### 3.50 Subscription Entry Status

Code	Description
received	The subscription data have been received and are technically correct. The data is not authorised yet.
rejected	The subscription data have been rejected e.g. since no successful authorisation has taken place.
partiallyAuthorised	The subscription is due to a multi-level authorisation, some but not all mandated authorisations have been performed yet.
valid	The subscription is accepted and valid for the related subscribed service as specified in the subscription object.
revokedByPsu	The subscription has been revoked by the PSU towards the ASPSP.
expired	The subscription expired.
terminatedByTpp	The corresponding TPP has terminated the subscription by applying the DELETE method to the subscription resource.

This code is used in [oFA-PFSM], [oFA -IG-PAIS].

### 3.51 Trading Session Type Code

Code set to identify the type of a trading session, in which an order shall be executed. Possible values:

Code	Description
auctions	Orders that are traded in regularly occurring auctions: orders are accumulated and executed on the basis of defined algorithms.

Code	Description
continuous	Orders that are executed directly against each other as they hit the marketplace.

### 3.52 Transaction Status

The transaction status is filled with codes of the ISO 20022 data table:

Code	Name	ISO 20022 Definition
ACCC	AcceptedSettlementCompleted	Settlement on the creditor's account has been completed.
ACCP	AcceptedCustomerProfile	Preceding check of technical validation was successful. Customer profile check was also successful.
ACSC	AcceptedSettlementCompleted	Settlement on the debtor's account has been completed. <b>Usage:</b> this can be used by the first agent to report to the debtor that the transaction has been completed. <b>Warning:</b> this status is provided for transaction status reasons, not for financial information. It can only be used after bilateral agreement
ACSP	AcceptedSettlementInProcess	All preceding checks such as technical validation and customer profile were successful and therefore the payment initiation has been accepted for execution.
ACTC	AcceptedTechnicalValidation	Authentication and syntactical and semantical validation are successful
ACWC	AcceptedWithChange	Instruction is accepted but a change will be made, such as date or remittance not sent.
ACWP	AcceptedWithoutPosting	Payment instruction included in the credit transfer is accepted without being posted to the creditor customer's account.
RCVD	Received	Payment initiation has been received by the receiving agent.
PDNG	Pending	Payment initiation or individual transaction included in the payment initiation is pending. Further checks and status update will be performed.

Code	Name	ISO 20022 Definition
RJCT	Rejected	Payment initiation or individual transaction included in the payment initiation has been rejected.
CANC	Cancelled	Payment initiation has been cancelled before execution
ACFC	AcceptedFundsChecked	Pre-ceeding check of technical validation and customer profile was successful and an automatic funds check was positive .
PATC	PartiallyAcceptedTechnical Correct	The payment initiation needs multiple authentications, where some but not yet all have been performed. Syntactical and semantical validations are successful.
PART	PartiallyAccepted	A number of transactions have been accepted, whereas another number of transactions have not yet achieved 'accepted' status. <b>Remark:</b> This code may be used only in case of bulk payments. It is only used in a situation where all mandated authorisations have been applied, but some payments have been rejected.
RVCM	ReceivedVerificationCompletedWithMismatches	The verification of party request for the payment counterparty result requires an explicit confirmation by the payer.
RVNC	ReceivedVerificationNotCompleted	The verification of party request is not yet completed.
RCVC	ReceivedVerificationCompleted	The verification of party request is completed, no further confirmation required.

This code is used in [oFA-IG-Com], [oFA-PFSM], [oFA-IG-RTP].

### 3.53 Transaction Type

Attribute	Description
payments	All payment types
payments.sepa-credit-transfers	All sepa credit transfers.

Attribute	Description
payments.cross-border-credit-transfers	Cross border payments.
consents	Consents, e.g. on AIS
subscriptions	subscriptions for Push AIS Services
all	All transaction types that need authorisation.

### 3.54 Type of Order Code

Code set to indicate characteristics of an order.

Code	Description
allOrNone	A round-lot market or limit-price order which must be executed in its entirety or not at all; unlike 'fill or kill', these orders are not cancelled if not executed as soon as received.
buyContraShortExempt	Order to buy contra short exempt.
buyContraShort	Order to buy contra short.
buyMinus	Order to buy at a price lower than the current market price. This is an order to buy a stated amount of a financial instrument provided that its price is not higher than the last sale if the last sale was a minus or zero minus tick, not higher than the last sale minus the minimum fractional change in the stock if the last sale was a plus or zero plus tick. The price limit indicates the highest price at which the order can be executed.
carefully	Order that is not to be executed as a whole because it may disturb the price.
combinationOrder	Order that is linked to another order to buy or sell and must be executed as a unit, both or none, or cancelled as a unit.
discretionary	Order where the executing broker or investment manager decides on the quantity or price.

Code	Description
doNotIncrease	Limit order to buy or stop order to sell or stop limit order that is not to be increased in shares on the ex-dividend date as a result of a stock dividend or distribution.
doNotReduce	Limit order to buy or stop order to sell, or stop-limit order to sell that is not to be reduced in price by the amount of an ordinary cash dividend. Applies only to ordinary stock dividends; should be reduced for other distributions.
icebergOrder	Type of limit order whose overall quantity is not transparent to the market. Rather, only a client-defined part of the order is shown to the market (the 'tip of the iceberg'). Upon execution of the first 'tip' (that is partial execution to the client while for the market it does not appear to be a 'partial') the system releases the next 'tip' of the same size to the market until the 'iceberg' has been melted down successfully. Different from a usual care order.
limitWith	Order to be executed at a limit price, with a round-lot (or board-lot) sales; valid only for odd lot orders.
limitWithout	Order to be executed at a limit price, without a round-lot (or board-lot) sales; valid only for odd lot orders.
limitOrder	Order to buy at the indicated price limit or lower or an order to sell at the indicated limit price or higher.
atMarket	Order to buy or sell a specified amount of a financial instrument at the quoted market price or better.
marketNotHeld	Order to buy or sell a specified amount of a financial instrument at the quoted market price or better with some discretion on the price limit.
marketToLimitOrder	Type of order that couples the high possibility of execution (Market Order) with a protection against unwanted price fluctuations (Limit Order).
marketUntilTouched	Order to buy or sell a specified amount of a financial instrument at the quoted market price or better with some discretion on the price limit.
notHeld	Order that may be executed in partials or outside the hours of the exchange or other exchange rules.

<b>Code</b>	<b>Description</b>
orderLie	Order that is related to another order where the second order may be cancelled without cancelling the first. Normally, the sell order must be executed before the buy order.
stopLimit	Stop order to buy (sell) that becomes a limit order at the limit price when the financial instrument trades at or above (below) the stop price after the order is submitted.
stopOrder	Order to buy that becomes a market order when the financial instrument trades at or above the stop price after the order is submitted or an order to sell which becomes a market order when the financial instrument trades at or below the stop price.
stopLoss	Order to sell that sets the sell price below the market price.
sellPlus	Order to sell a stated amount provided that the price is not lower than the last sale price if the last sale was a plus or zero plus tick and not lower than the last sale minus the minimum fractional change in the financial instrument if the last sale was a minus or zero minus tick.
sellShortExempt	Order to sell short which is exempt from short-sale rules.
sellShort	Order to sell a financial instrument that the seller does not own; a sale effected by delivering a financial instrument borrowed by or for the account of the seller.

### 3.55 VOP Bulk Status

<b>Code</b>	<b>Description</b>
received	Bulk technically received and bulk formatted correctly
pending	processing ongoing
rejected	Some processing errors have occurred which did not allow to process the requests.
completed	all verification results, requested in the vop bulk, are completed

This code is used in [oFA-IG-VOP].

### 3.56 Other ISO-related basic Types

The following codes and definitions are used from ISO 20022

- **Account Identification Code:** ExternalAccountIdentification1Code
- **Address Type Code:** AddressType2Code
- **Balance Code:** ExternalBalanceType1Code
- **Balance Sub Code:** ExternalBalanceSubType1Code
- **BBAN:** BBANIdentifier
- **Bearer Code:** ChargeBearerType1Code
- **BICFI:** BICFIIdentifier
- **Category Purpose Code:** ExternalCategoryPurpose1Code
- **Cash Account Type:** ExternalCashAccountType1Code
- **Charge Type Code:** ExternalChargeType1Code
- **Clearing System Identification Code:** ExternalClearingSystemIdentification1Code
- **Credit Line Type:** ExternalCreditLineType1Code
- **Document Format Code:** ExternalDocumentFormat1Code
- **Document Type Code:** ExternalDocumentType1Code
- **Entry Status Code:** ExternalEntryStatus1Code
- **Exchange Rate Type Code:** ExchangeRateType1Code
- **External Financial Instrument Identification Type Code:** ExternalFinancialInstrumentIdentificationType1Code (see [ISO20022\_SR])
- **External Local Instrument Code:** ExternalLocalInstrument1Code
- **Financial Institution Identification Code:** ExternalFinancialInstitutionIdentification1Code
- **Frequency Code:** Frequency6Code
- **IBAN:** IBAN2007Identifier

Pattern: [A-Z]{2}[0-9]{2}[A-Z0-9]{1,30}

- **Input Channel Code:** ExternalTechnicalInputChannel1Code
- **Interest Type Code:** InterestType1Code
- **Instruction Code:** Instruction3Code
- **ISIN:** ISINOct2015Identifier (see [ISO20022\_SR])  
Pattern: [A-Z]{2,2}[A-Z0-9]{9,9}[0-9]{1,1}
- **Language Code:** Code following ISO – 639-3 (three letter code)
- **LEI:** LEIIdentifier as defined in ISO 17442 "Financial Services - Legal Entity Identifier (LEI)".
- **Mandate Reason Code:** ExternalMandateReason1Code
- **Mandate Status:** ExternalMandateStatus1Code
- **Market Type Code:** MarketType4Code (see [ISO20022\_SR])
- **Merchant Category Code:** Category code conform to ISO 18245
- **Organisation Identification Code:** ExternalOrganisationIdentification1Code
- **Percentage Rate:** PercentageRate
- **PersonIdentificationCode:** ExternalPersonIdentification1Code
- **Phone Number:** PhoneNumber
- **Price Value Type Code:** PriceValueType1Code
- **Purpose Code:** ExternalPurpose1Code
- **Proxy Account Type Code:** ExternalProxyAccountType1Code
- **Return Reason Code:** ExternalReturnReason1Code
- **Sequence Type Code:** SequenceType3Code
- **Service Level Code:** ExternalServiceLevel1Code
- **Status Reason Code:** ExternalStatusReason1Code
- **Tax Record Period Code:** TaxRecordPeriod1Code

- **Transaction Activity Code:** TransactionActivity1Code (see [ISO20022\_SR])
- **Type of Price Code:** TypeOfPrice17Code (see [ISO20022\_SR])

The following code is a concatenated code from ISO20022

- **BankTransactionCode:** This code type is concatenating the three ISO20022 Codes Domain Code, Family Code and SubFamily Code by hyphens, resulting in "DomainCode"-“FamilyCode”-“SubFamilyCode”.

**Example:** PMNT-RCDT-ESCT defining a transaction assigned to the PayMeNT Domain (PMNT), belonging to the family of ReceivedCreDitTransfer (RCDT) that facilitated the EuropeanSEPACreditTransfer (ESCT)

To reflect a securities position's balance type, **SecuritiesBalanceTypeCode** is defined as the code list, containing all codes from ISO 20022 code lists

- SecuritiesBalanceType1Code (see [ISO20022\_IF])
- SecuritiesBalanceType2Code (see [ISO20022\_IF])
- SecuritiesBalanceType11Code (see [ISO20022\_SR])
- SecuritiesBalanceType12Code (see [ISO20022\_SR])

For all codes used in JSON structures, not the abbreviation defined for XML encoding, but the name of the code is used as value.

The following Codes are used from other ISO standards:

- **Currency Code:** Codes following ISO 4217 Alpha 3
- **Country Code:** Two characters as defined by ISO 3166

Further basic ISO data types:

- **ISODateTime:** A particular point in the progression of time defined by a mandatory date and a mandatory time component, expressed in either UTC time format (YYYY-MM-DDThh:mm:ss.sssZ) or local time with UTC offset format (YYYY-MM-DDThh:mm:ss.sss+/-hh:mm). These representations are defined in "XML Schema Part 2: Datatypes Second Edition - W3C Recommendation 28 October 2004" which is aligned with ISO 8601.
- **ISODate:** A particular point in the progression of time in a calendar year expressed in the YYYY-MM-DD format.

### **3.57 Additional Cryptographic Code Lists**

Codes to identify algorithms for signature generation and encryption shall be used as defined by [RFC7518]. At least the following codes have to be supported:

#### **Signature Algorithm Code**

##### **PS256**

for RSASSA-PSS using SHA-256 and MGF1 with SHA-256 (section 3.5 of [RFC7518])

#### **Key Encryption Algorithm Code**

##### **RSA-OAEP-256**

for RSAES OAEP using SHA-256 and MGF1 with SHA-256 (section 4.3 of [RFC7518])

#### **Content Encryption Algorithm Code**

##### **A256GCM**

for AEC in Galois/Counter Mode using 256-bit key (section 5.3 of [RFC7518])

## 4 References

### 4.1 Normative References

- [oFA-PFSM] openFinance API Framework, Protocol Functions and Security Measures, Version 2.3, 31 October 2025
- [EBA-RTS] Commission Delegated Regulation (EU) 2018/389 of 27 November 2017 supplementing Directive 2015/2366 of the European Parliament and of the Council with regard to Regulatory Technical Standards for Strong Customer Authentication and Common and Secure Open Standards of Communication, C(2017) 7782 final, published 13 March 2018
- [EBA-FR] Final Report, Draft Regulatory Technical Standards, amending Commission Delegated Regulation (EU) 2018/389 supplementing Directive (EU) 2015/2366 of the European Parliament and of the Council with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication, published 5 April 2022
- [eIDAS] Regulation (EU) No 910/2014 of the European Parliament and of the Council on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market, 23 July 2014, published 28 August 2014
- [ETSI PSD2] ETSI TS 119 495 V1.1.2; Electronic Signatures and Infrastructures (ESI); Sector Specific Requirements; Qualified Certificate Profiles and TSP Policy Requirements under the payment services Directive (EU) 2015/2366
- [PSD2] Directive (EU) 2015/2366 of the European Parliament and of the Council on payment services in the internal market, published 23 December 2015
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- [ISO20022\_IF] ISO 20022, Message Definition Report - Part 2 Investment Funds, February 2020
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- [RFC4648] Josefsson, S., "The Base16, Base32, and Base64 Data Encodings", October 2006, <https://tools.ietf.org/html/rfc4648>
- [RFC5843] Bryan, A, "Additional Hash Algorithms for HTTP Instance Digests", RFC 5843, DOI 10.17487/RFC5843, April 2010, <https://www.rfc-editor.org/info/rfc5843>
- [RFC6749] Hardt, D., "The OAuth 2.0 Authorization Framework", October 2012, <https://tools.ietf.org/html/rfc6749>
- [RFC7231] [R. Fielding, J. Reschke, Hypertext Transfer Protocol \(HTTP/1.1\): Semantics and Content](#)
- [RFC7518] JSON Web Algorithms (JWA), Request for Comments 7518, Internet Engineering Task Force (IETF), M. Jones (Microsoft), May 2015
- [RFC7807] M. Nottingham, Akamai, E. Wilde, „Problem Details for HTTP APIs“, March 2016, <https://tools.ietf.org/html/rfc7807>
- [RFC 8414] [M. Jones, N. Sakimura, J. Bradley; "OAuth 2.0 Authorization Server Metadata":](#)

## 4.2 Informative References

[oFA-IG-Com] openFinance API Framework, Implementation Guidelines, Compliance Services, Version 2.4, 31 October 2025

[oFA-IG-Doc] openFinance API Framework, Implementation Guidelines, (Standalone) Document Services, Version 1.0, 16 December 2024

[oFA-IG-Man] openFinance API Framework, Implementation Guidelines, Mandate Services, Version 2.0, 31 July 2025

[oFA-IG-VOP] openFinance API Framework, Implementation Guidelines, VOP Services, Version 1.1, 03 June 2025

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[oFA-IG-RTP] openFinance API Framework, Implementation Guidelines, Request to Pay Services, version 2.1, 18 October 2024

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## 5 Annex A: Change Log

### 5.1 Changes from Version 2.1 to Version 2.2

The following changes have been applied in version 2.2 relative to version 2.1:

Section	Change	Reason
Preamble	The licence conditions of Berlin Group have been removed.	To support the European community in re-using the openFinance data model, when not directly using openFinance APIs.
2.1	The attribute cardAccounts have been added.	single card accounts and reconciliation card accounts need now to be addressed explicitly in the consent. The former solution did not allow a proper differentiation.  Erratum
2.7	The attribute resourceId has been restricted from string to max70Text.	Clarification, as applied everywhere in the API Framework.
2.7	The description of the attribute ownerNames was extended.	Clarification
2.18	New data type to support the features of adding a debtor account to a resource.	CR 113
2.52	The spelling of the attribute clearingSystemIdentificationCode was corrected.	Erratum
2.88	Added the status reason to the initiation data attributes	Clarification.
2.93	Added an attribute to "Links" for indicating an update of a resource by a debtor account.	CR113
2.103	The attributes oauth2PrestepMetadataUri and oauth2OfflineScopeRequired have	Better support of documentation.

Section	Change	Reason
	been added to the API Security parameters.	
2.105	Added the value "pageSize" for supported query parameters in transactions	CR115
2.105	Added the attribute maxPageSize	CR115
2.137	Some attributes adapted to lowerCamelCase	Errata
3.56	Do not allow pure local time zone anymore (only with UTC offset).	CR111

## 5.2 Changes from Version 2.2 to Version 2.2.1

The following changes have been applied in version 2.2.1 relative to version 2.2:

Section	Change	Reason
2.66	New attribute "Duration" for Mandate API	Support of new service
0	New attribute "Extended Party Description" for Mandate API	Support of new service
2.95	New attribute "Mandate Type" for Mandate API	Support of new service
0	New attribute "Mandate Status" for Mandate API	Support of new service
2.97	New attribute "Occurrences" for Mandate API	Support of new service
2.98	Condition of attributes changed	Errata
2.168	New attribute "Referred Mandate Document information"	Support of new service

<b>Section</b>	<b>Change</b>	<b>Reason</b>
3.9	New "Classification code" for Mandate API	Support of new service
3.23	New "Mandate Setup Reason Code" for Mandate API	Support of new service
3.25.1	New codes "CLIENT_INVALID" and "CLIENT_INCONSISTENT"	Support error information for directory related issues
3.56	Added "Organisation Identification Code" and "Mandate Reason Code"	Errata and support of new service

### 5.3 Changes from Version 2.2.1 to Version 2.2.2

The following changes have been applied in version 2.2.2 relative to version 2.2.1:

<b>Section</b>	<b>Change</b>	<b>Reason</b>
2.97	Corrected Occurrences to Occurrences in the title  Changed the code OOF to OOFF in the description	Errata
2.104	New attribute psuAccountSelectionSupported	New feature resulting from CR113
2.108	new data Type Parameters Mandate Services	The new Mandate Services imply additions to the discovery services data model.
2.109	new data Type Parameters Document Services	The new Document Services imply additions to the discovery services data model.
2.112	corrected the description for attribute serviceType.  Added attributes for character set items	Errata

<b>Section</b>	<b>Change</b>	<b>Reason</b>
2.113	new data type Parameters VOP Services	The new VOP Services imply additions to the discovery services data model.
2.165	new data type Related Document Information	Needed for the new Document Services
2.168	data type of attribute type code was corrected	Erratum
3.16	new status code Document Status	Needed for the new Document Services
3.33	added the new Approach Type code "Online-Channel"	Needed as new SCA approach for asynchronous authorisations in online channels, introduced in the openFinance API Framework Release 2.1 e.g. for Mandate Services
3.48	added several Status Reason Codes	Needed for several services and related updates.
4.2	implementation guidelines for document, mandate and VOP services added.	New services
several	Replaced the notion of "Remark for Future" by "RFU"	harmonising both expressions used in the document before to one expression.

#### 5.4 Changes from Version 2.2.2 to Version 2.2.3

<b>Section</b>	<b>Change</b>	<b>Reason</b>
2.79	New data type From To Date	Needed for the Discovery API.
2.99	New data type for Compliance Specs for Extended Bulk Payment Status	New Function in Compliance Specs.
2.101	New data type for Compliance Specs for Extended Bulk Payment to add also the VOP Status	Integration of VOP Services into Payment Initiation.

Section	Change	Reason
2.103	Adding the value "ASPSP-Channel" to SCA approaches in Discovery APIs	Recognising the new SCA approach for asynchronous SCA in ASPSP online channels.
2.103	renaming the attribute client-explicit-authorisation-preferredSupported into clientExplicitAuthorisationPreferenceSupported and client-sca-preferenceSupported to clientScaPreferenceSupported	lowerCamelCase is used for header parameters if they appear in the Discovery API in the payload.
2.104	The value "JSON-Extended" has been added to the values for the attribute supportedStatusFormats.	Support of the new Extended Status endpoint needs to be defined.
2.104	Three attributes with prefix "clientVop" has been added.	Potential support of the VOP related header parameters needs to be defined.
2.123 2.124 2.125	Three new data types have been added to support bulk VOP requests and responses.	New VOP service.
2.145 to 2.148	Several header parameters which come as part of attributes in the Discovery API payload have been transformed from "-" syntax to lowerCamelCase	Enhance consistency and readability.
2.186	Timestamps have been added to Standing Order Details for startpoint and endpoint of a standing order for instant payments.	New function
3.25.1	Added new Message Code "API_CONTRACT_ID_INVALID"	Adding more information in case of a related error in premium Services
3.31, 3.32	Two new code lists have been added for VOP Results.	New VOP Service / VOP service integration
3.55	New code list for a VOP bulk status.	New VOP Service
3.56	Status Reason Code was added as ISO20022 External Code List, since it was missing.	Erratum

## 5.5 Changes from Version 2.2.3 to Version 2.2.4

Section	Change	Reason
2.8	Account Information Indicator added as a complex data type	Related to Account Statement
2.9	Account Interest added as a complex data type	Related to Account Statement
2.11	Three new attributes added for Account Reference	Related to Account Statement
2.31	Two new attributes added for Amount Details	Required for Entry in Statement
2.33	Amount Range added in complex data types	Required for Entry in Statement
2.38 2.40	Availability and Balance Statement added as complex data types	Required for Account Statement
0	Batch Information added in complex data types	Related to Account Statement
2.43 2.44	Boundary Amount and Cash Deposit added in complex data types	Required for Entry in Statement
2.49	New attributes added for Card Transaction Details	CR125
2.52	Charges and Charges Record added	CR125
2.53		
2.58 to 2.60	Corporate Action, Credit Line and Credit Entries added in complex data types	Related to Account Statement
2.63	Debit Entries and Details Tax are added as complex data types.	Related to Account Statement

<b>Section</b>	<b>Change</b>	<b>Reason</b>
2.64		
2.68 2.70	Entry and Entry Details1 added	Required for Account Statement
2.78	New attribute added for Financial Instrument Identification. The word Identification was also added to the name of the data type in the current version.	Modification for better readability.
2.79	fromTo Amount Range added	Required for Entry
2.90	Interest Record added	Required for Entries in Account Statement
0	Modification and addition in Mandate Status	CR126
2.99	Original and Current Face Amount added	Required for Entries in Account Statement
2.134	Payment Return Reason added	Required for Entries in Account Statement
2.141 2.142	Proprietary Price and Proprietary Quantity are added	Required for Entries in Account Statement
2.157 2.158	Quantity and Rate are added	Required for Entries in Account Statement
2.160 2.161	Remittance Reports and Remittance Location are added	Required for Entries in Account Statement
2.163	References Statement are added	Required for Entries in Account Statement
2.165 to 2.171	Related Agents, Related Dates, Related Parties Related Price, Related Remittance and Related Quantities are added in complex data types.	Required for Entries in Account Statement

<b>Section</b>	<b>Change</b>	<b>Reason</b>
2.176	Safekeeping Account added	Required for Account Statement
2.187	Statement ist added as a complex data type	Needed for Extended Account Information Service – Account Statement (XAIS-STAT)
2.193 to 2.200	Tax, Tax Amount, Tax Authorisation, Tax Creditor, Tax Debtor, Tax Details, Tax Period and Tax Record are newly added.	Related to Transaction Summary and Details in the Account Statement.
2.201 To 2.205	Total Credit Entries, Total Debit Entries, Total Entries, Total Entries Per Bank Transaction Code and Total Net Entry are newly added.	Attributes of Transaction Summary in Account Statement.
2.207 2.209	Transaction Detail, Transaction Interest and Transaction Summary are added.	Required for Account Statement
3.7	Card Transaction Type is added	CR124
3.18	Entry Status Code is added	Required for Entries in Account Statement
3.24	Method Code is added	Required for Entries in Account Statement
3.56	Balance Code, Balance Sub Code, Bearer Code, Charge Type Code, Info Channel Code, Interest Type Code, Percentage Rate, Price Value Type code, Return Reason Code and Entry Status Code and Tax Record Period Code are appended	Erratum
3.56	Bank Transaction Code was present two times, the first citing was wrong and is deleted. Bank Transaction Code is only available as XXXX-YYYY-ZZZZ.	Erratum

Section	Change	Reason
Overall	All attributes that start with capital letters were rewritten with small letters	Errata

## 5.6 Changes from Version 2.2.4 to Version 2.2.5

Section	Change	Reason
2.7	Two new attributes "owner" and "owners" are added in Account Details. Furthermore, ownerName and ownerNames are now deprecated for a later version. This supports the migration towards the use of a data model more compliant to ISO20022, as well as supporting the related CR:	CR120
2.10	Added four new attributes in Account Owner. There are postalAddress, identification, countryOfResidence and contactDetails, following ISO20022	CR120
2.20	Added Additional Information Indicator as a complex data type.	Erratum
2.68	corrected attribute technicalInputChannelCode	Erratum
2.76	corrected type entry of the attribute clearingSystemMemberId	Editorial erratum with textmarks in Word
2.93	creditorNameConfirmation added as attribute to Links	Support of VOP integration. A link provided in a response in case of an explicit confirmation of processing a payment regardless from the deviation identified in the VOP response regarding the creditor name
2.100	Added the attribute originalTransactionReference	Enable a reference to transaction also without payment identification.

Section	Change	Reason
2.101	Added the attribute originalTransactionReference and adjusted the attribute creditorName to matchedCreditorName	Enable a reference to transaction also without payment identification. VOP IG has been adjusted to make the distinction between creditorName as submitted and creditor name as responded from payee bank more evident.
2.102	new data type original transaction reference.	See the description above.
2.119 and 2.120	Two new complex data types "Party Description5" and "Party Description6" are added, allowing the ASPSP to determine the use of hybrid/structured addresses in payment initiations.	CR127
2.137 and 2.138	Two new complex data types "Postal Address1 (Hybrid Address)" and "Postal Address2 (Structured Address)" are added.	CR127
2.159	corrected Type of attribute referredDocumentInformation	Editorial erratum with textmarks in Word
3.1	The new access right code "owner" has been added, which will follow the old code "ownerNames", which will be deprecated soon.	CR120
3.20	Renamed Interest Type Code to Interest Type Code3 for differentiation for several interest type codes from the ISO20022.	Erratum
3.45	Added the missing service types SGNB, MAN, DOC, VOP in the list of service types	Editorial erratum
3.56	Added Bearer Code and Credit Line Type with additional correction to typos.	Errata

## 5.7 Changes from Version 2.2.5 to Version 2.2.6

Section	Change	Reason
Former Mandate Status type	Change of the definition of the Data Type "Mandate Status": no longer defined by proprietary code but by ISO 20022 codes	Simplification
2.49	Added descriptions to the attributes.	Clarification
2.100, 2.101	Added "originalEndToEnd" attribute	Support of VOP Integration
2.104, 2.186	Frequency code usage has been changed to Event Frequency Code	ISO20022 compliance
3.19	Renamed Frequency Code to Event Frequency Code	ISO20022 compliance.  To differentiate between standing orders Frequency Code and Mandate Frequency Code, which are slightly different in ISO20022.
3.25.1	Added the code CHANGE_INVALID	Erratum
3.56	Added Frequency Code, Mandate Reason Code and Mandate Status	For purposes of clarification and completeness.
Many sections	The payment formats definitions will be migrated to [oFA-PFSM] soon. This is already quoted here.	Editorial changes

## 5.8 Changes from Version 2.2.6 to Version 2.3

Section	Change	Reason
2.186	<p>Added attribute specific of the AIS or PIS character of standing orders to the Standing Order Details.</p> <p>Added the attribute “displayName” and the Payment Formats parameters given in [oFA-PFSM] to the Standing Order Details.</p>	Support integration of standing order services at the openFinance APIs.
4	Updated references	Clarification

## 5.9 Changes from Version 2.3 to Version 2.3.1

Section	Change	Reason
2.76	Correction of data type “Generic Financial Institution Identification” naming.	Typo
2.83	Correction of “Generic Financial Institution Identification” section title.  Correction of data type “Financial Institution Identfcation Code”.	Typos
2.105	The reference on the transaction data model for V2 document was exchanged by a reference to the new version of XAIS IGs.	Statements are now integrated in XAIS Implementation Guidelines, the other document is deprecated.
2.191	Added new data type for showing subscription entries together with the status. Most of the sub attributes are optional, since it will be an implementation decision which entry details are shown already on a subscription level.	Erratum
3.56	Correction of the “Financial Institution Identification Code”.	Erratum
4	References updated	Release Management