



openFinance API Framework

Implementation Guidelines for Extended Services

AIS for Securities Accounts

Version 1.0

16 November 2022

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1 Introduction

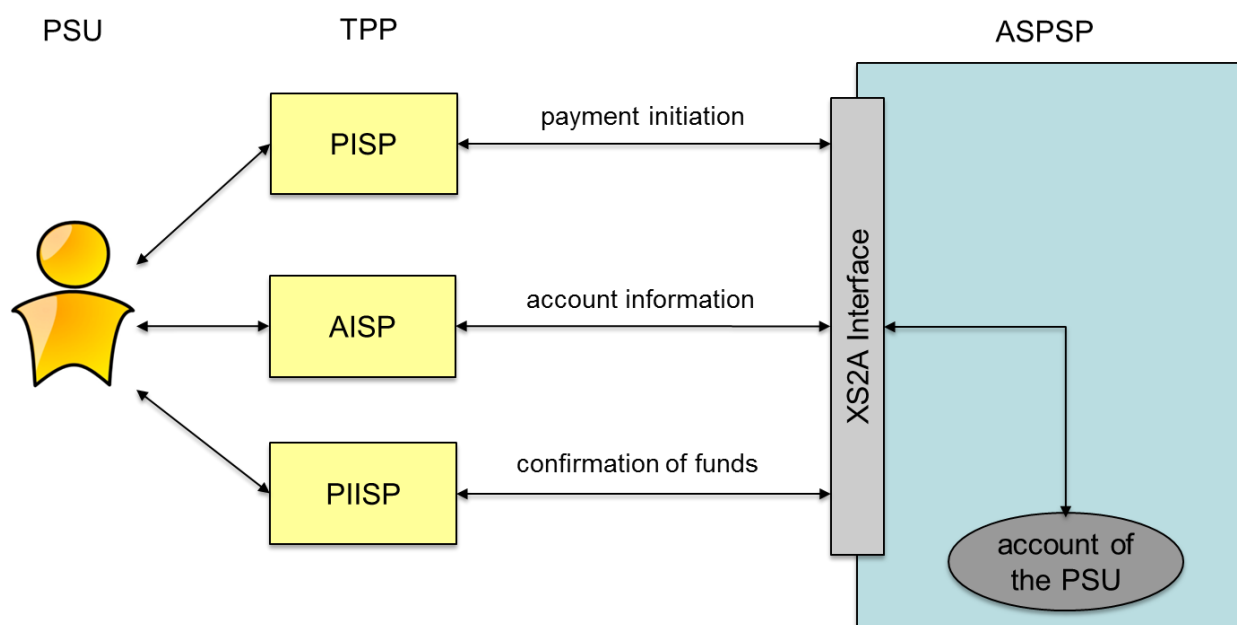
1.1 Background

With [PSD2] the European Union has published a new directive on payment services in the internal market. Member States had to adopt this directive into their national law until 13th of January 2018.

Among others [PSD2] contains regulations of new services to be operated by so called Third Party Payment Service Providers (TPP) on behalf of a Payment Service User (PSU). These new 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 of the Availability of Funds service to be used by Payment Instrument Issuing Service Provider (PIISP) TPP as defined by article 65 of [PSD2].

For operating the new services a TPP needs to access the account of the PSU which is usually managed by another PSP called the Account Servicing Payment Service Provider (ASPSP). As shown in the following figure, an ASPSP has to provide an interface (called "PSD2 compliant Access to Account Interface" or short "XS2A Interface") to its systems to be used by a TPP for necessary accesses regulated by [PSD2]:



Further requirements on the implementation and usage of this interface are defined by a Regulatory Technical Standard (short RTS) from the European Banking Authority (short EBA), published in the Official Journal of the European Commission.

Initially, an account was assumed to be a payment account. Recently, special endpoints for card accounts, (single) cards, savings and loan accounts have also been defined. Meanwhile, the current endpoints do not provide a data model to cover the relevant information of a securities account.

This point will be addressed in the following extension of the AIS protocol. For this aim, new endpoints will be defined for **securities accounts**.

Also an extension of the consent model to restrict access to only accounts of one type (e.g. savings accounts or loan accounts) will be defined. This extension will be compatible to other extensions with a similar aim.

To achieve this, three downward compatible changes will be made to the protocol:

1. A mechanism to specifically request access to only one accountType is defined.
2. New endpoints are defined to specifically request information on securities accounts.

Remark: Within the data model of version 2, the issue of addressing accounts and access rights for consent establishment will be solved in a more precise way, allowing for more detailed and straightforward consent establishment.

1.2 XS2A Interface Specification

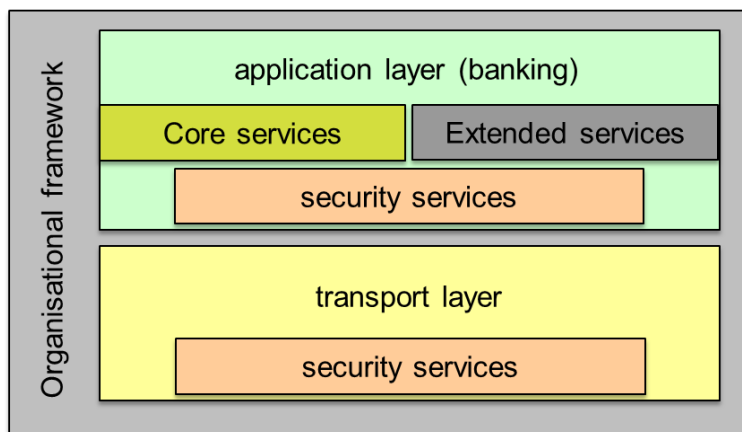
This document is an extension of the NextGenPSD2 XS2A Specification which defines a standard for an XS2A Interface and by this reaching interoperability of the interfaces of ASPSPs at least for the core services defined by [PSD2].

The XS2A Interface is designed as a B2B interface between a TPP server and the ASPSP server. For the time being, the protocol defined in this document is a pure client-server protocol, assuming the TPP server being the client, i.e. all API calls are initiated by the TPP. In future steps, this protocol might be extended to a server-server protocol, where also the ASPSP initiates API calls towards the TPP.



The Interoperability Framework defines operational rules, requirements on the data model and a process description in [XS2A-OR].

This document details the standard in defining messages and detailed data structures for **extended services** of the XS2A Interface. For the specification the two layers shown in the following figure are distinguished:



This document now describes how the existing services for account information can be extended to provide account information on securities accounts. Therefore, new endpoints are defined in order to provide the information.

Remark for Future: Please note that the Berlin Group NextGenPSD2 XS2A interface is still under constant development. Technical issues, which are already in discussion within the Berlin Group NextGenPSD2 working structure are mentioned in this document by "Remark for Future" to make the reader aware of upcoming potential changes.

1.3 Document History

| Version | Change/Note | Approved |
|-----------|---|-------------------------------|
| 0.9_DRAFT | Final Draft for Market Consultation | 01 July 2022 |
| 1.0_ | Adjustment by introducing transaction related fees and fee rules on account level | 16 November by openFinance TF |
| | | |



2 Character Sets and Notations

For definition on character Sets and Notations as well as for request and response notations refer to Chapter 2 of [XS2A-IG].

2.1 Additional Notations

As an extension of the notations in Chapter 3 in [XS2A-IG], the following conditions may be used. The additional conditions apply to both, requests from the client to the server as well as responses from the server to the client:

| Attribute | Type | Condition | Description |
|-----------|------|----------------|-------------|
| | | {Or | |
| | | Or | |
| | | Or} | |
| | | {Or – Optional | |
| | | Or – Optional | |
| | | Or – Optional} | |

- {Or: The **first** element in a sequence of elements of which **exactly one** has to be included.
- Or: An element in a sequence of elements of which **exactly one** has to be included. The element is **neither the first nor the last** within this sequence.
- Or}: The **last** element in a sequence of elements of which **exactly one** has to be included.
- {Or – Optional: The **first** element in a sequence of elements of which **at most one** may be included.
- Or – Optional: An element in a sequence of elements of which **at most one** may be included. The element is **neither the first nor the last** within this sequence.
- Or – Optional}: The **last** element in a sequence of elements of which **at most one** may be included.

3 Transport Layer

For details on the transport Layer, please refer to Chapter 3 in [XS2A-IG].



4 Application Layer: Guiding Principles

The following extension will define requests for a TPP to get information on securities accounts. Securities accounts, their positions, transactions and orders are addressed via newly defined endpoints.

4.1 Sealing Requirements

The ASPSP may require the TPP to sign request messages. This requirement shall be stated in the ASPSP documentation. The signing requirements are defined in [XS2A-IG]. No specific requirements are defined for the Account Information Services on securities accounts.

4.2 Specifics in Submission of Consents

In order to achieve a maximum compatibility with the already existing data model, the consent data model will not be changed. Still, for securities accounts new types need to be defined (see section 4.3). Access rights to these new endpoints will be derived from already existing access rights as described in section 4.3.

Like a (regular payment) account, specific securities accounts can be addressed in a consent request by identifying the account by its IBAN. In some cases, a securities account might not be connected to any globally defined identifier. Therefore, the additional element "other" is used, which might be provided instead of or in addition to an IBAN thereby identifying the specific account, for which a consent is requested. The "other" element has already been introduced for domestic purposes in [XS2A-DOM-IG].

As a third / fourth way to establish a securities specific consent, the TPP can request a bank-offered consent or a global consent but restricting the requested access to a certain type of account. The type of account is identified by the data element cashAccountType. As the corresponding ISO code set does not provide a code for securities accounts, a proprietary code needs to be defined by the ASPSP or local regulation.

Within corresponding examples of this document, the code "SCTS" will be used to indicate securities accounts.

Examples for Establish Consent Requests

Remark: No specific requirements for responses, for examples for responses cp. Section 6.3.1 of [XS2A-IG].

Request for a dedicated consent on transactions and balances of a dedicated securities account (uniquely identified by its IBAN)

POST <https://api.testbank.com/v1/consents>

Content-Type: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
PSU-IP-Address: 192.168.8.78
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date: Sun, 06 Aug 2017 15:05:37 GMT

```
{
  "access": {
    "balances": [
      { "iban": "DE40100100103307118608" }, /* positions of a
securities account
    ],
    "transactions": [
      { "iban": "DE40100100103307118608" }, /* transactions and orders
of a securities account
    ]
  },
  "recurringIndicator": true,
  "validUntil": "2017-11-01",
  "frequencyPerDay": 4
}
```

Request for a dedicated consent on transactions and balances of a dedicated securities account identified by a proprietary id (here "Depotnummer")

POST <https://api.testbank.com/v1/consents>

Content-Type: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
PSU-IP-Address: 192.168.8.78
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date: Sun, 06 Aug 2017 15:05:37 GMT

```
{
  "access": {
    "balances": [
      { "other": {
        "identification": "123456789012",
        "schemeNameProprietary": "Depotnummer",
        "issuer": "testbank"
      }
    ]
  },
  "transactions": [
    { "other": {
      "identification": "123456789012",
```

```

        "schemeNameProprietary": "Depotnummer",
        "issuer": "testbank"
    }
} ]
},
"recurringIndicator": true,
"validUntil": "2017-11-01",
"frequencyPerDay": 4
}

```

Request for access to all securities accounts with a common, dedicated IBAN

POST <https://api.testbank.com/v1/consents>

```

Content-Type:      application/json
X-Request-ID:      99391c7e-ad88-49ec-a2ad-99ddcb1f7756
PSU-IP-Address:    192.168.8.78
PSU-User-Agent:    Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date:              Sun, 06 Aug 2017 15:05:37 GMT

```

```

{
  "access": {
    "balances": [
      { "iban": "DE40100100103307118608" }, /* balances / positions of
an account irrespective of its type
      { "iban": "DE02100100109307118603",
        "cashAccountType": "SCTS" /* balances / positions of all
securities accounts behind this IBAN
      }
    ],
    "transactions": [
      { "iban": "DE02100100109307118603",
        "cashAccountType": "SCTS" } /* transactions / orders of all
securities accounts behind this IBAN
      ]
    },
    "recurringIndicator": true,
    "validUntil": "2017-11-01",
    "frequencyPerDay": 4
  }
}

```

Request for a bank driven consent, restricted to the related securities accountsPOST <https://api.testbank.com/v1/consents>

Content-Type application/json
X-Request-ID 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
PSU-IP-Address 192.168.8.78
PSU-User-Agent Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date Sun, 06 Aug 2017 15:05:37 GMT

```
{ "access":  
  { "balances": [],  
    "transactions": [],  
    "restrictedTo": ["SCTS"] },  
  "recurringIndicator": true,  
  "validUntil": "2017-11-01",  
  "frequencyPerDay": 4  
}
```

Request for a global consent, restricted to cash account types (ignoring securities accounts)POST <https://api.testbank.com/v1/consents>

Content-Type application/json
X-Request-ID 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
PSU-IP-Address 192.168.8.78
PSU-User-Agent Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date Sun, 06 Aug 2017 15:05:37 GMT

```
{ "access":  
  { "allPSD2": "allAccounts",  
    "restrictedTo": ["CACC"]  
  },  
  "recurringIndicator": true,  
  "validUntil": "2017-11-01",  
  "frequencyPerDay": 4  
}
```

Remark: The latter example is relevant only in communities or for ASPSP which are offering the endpoints different from cash accounts (e.g. securities accounts, savings accounts, loan accounts, card accounts). In other markets, this restriction attribute is not supported.

Multicurrency Accounts

For securities accounts, there are no specific multicurrency accounts defined. Securities of various currencies can be connected to the same securities account.

4.3 API Access Methods for Securities Endpoints

As described in chapter 4.2, the consent data model is not fundamentally changed. However, the securities AIS endpoints are not always straightforwardly associated with one of the three access rights "accounts", "balances" and "transactions". Therefore, column "access rights" indicates for each endpoint / resource which access right needs to be included in the corresponding consent in order to request the resource.

Remark: Consents that have been established for all access rights imply access to all endpoints / resources listed below.

| Endpoints/ Resources | Method | Condition | Access right | Description |
|---|--------|-----------|-----------------|---|
| securities-accounts | GET | Mandatory | accounts | Read all identifiers of the securities accounts, to which an access has been granted to through the /consents endpoint by the PSU. In addition, relevant information about the accounts and hyperlinks to corresponding account information resources are provided if a related consent has been already granted. Section 5.1. |
| securities-accounts/ {securities-account-id} | GET | Mandatory | accounts | Give detailed information about the addressed securities account Section 5.2 |
| securities-accounts/ {securities-account-id}/positions | GET | Mandatory | balances | Give an overview of the positions contained in the addressed securities account. Section 5.3 |
| securities-accounts/ {securities- | GET | Mandatory | transactions | Read transaction lists of the addressed securities account. For a given account, additional parameters are |

| Endpoints/ Resources | Method | Condition | Access right | Description |
|---|--------|-----------|-----------------|--|
| account-id/ transactions | | | | <p>e.g. the attributes "dateFrom" and "dateTo".</p> <p>In the context of securities "transactions" refers to movement of positions that have already taken place, such as buying transactions, selling transactions. Orders that the PSU has placed for this account will not be reported under "transactions". Instead, orders will be available under an additional "orders" endpoint.</p> <p>Monetary movements that originated in a security (such as dividends) are currently not supported by the interface. They are not part of this endpoint and no specific endpoint for such movements is defined. However, a later version might extend the service by including a way to request monetary movements related to securities.</p> <p>Section 5.4</p> |
| securities-accounts/{ securities-account-id}/ transactions/ {transaction-id} | GET | Optional | transactions | <p>Read transaction details of an addressed transaction.</p> <p>Section 5.5</p> |
| securities-accounts/ {securities-account-id}/ orders | GET | Mandatory | transactions | <p>Read order lists of a given securities account.</p> <p>Section 5.6</p> |
| securities-accounts/ {securities-account-id}/ | GET | Optional | transactions | <p>Read order details of an addressed order.</p> <p>Section 5.7</p> |

| Endpoints/ Resources | Method | Condition | Access right | Description |
|-------------------------|--------|-----------|-----------------|-------------|
| orders/ {order-id} | | | | |

4.4 Additional Error Information

In addition to the error messages defined in [XS2A-IG], section 14.11, the following additional error information is needed for the extended service securities accounts:

| Message Code | HTTP Response Code | Description |
|-----------------------------------|--------------------------|--|
| 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. |

4.5 Status Information

Status Information for the AIS within the Establish Consent Process

No specific consent status information needed for the extended service for securities accounts.

5 New Message Types for Securities Accounts

New message types / endpoints are defined for this extended service as follows.

5.1 Read Securities Accounts List

Overall, this service will provide the same information on a PSU's securities accounts as the Read Account List service provides for a regular payment account.

5.1.1 Request

Call

```
GET /v1/securities-accounts?{query-parameters}
```

Reads a list of securities accounts potentially with additional information. It is assumed that a consent of the PSU to this access is already given and stored on the ASPSP system. The addressed list of securities accounts depends then on the stored consent addressed by consentId, respectively the OAuth2 access token.

Query Parameters

| Attribute | Type | Condition | Description |
|--------------------|--------|-----------|--|
| evaluationCurrency | String | Optional | <p>ISO Alpha-3 currency code to request evaluation of the balances in a specific currency.</p> <p>This query parameter might be ignored by the ASPSP, if evaluation is not supported for variable currencies or does not support evaluation in the requested currency.</p> |

Request Header

| Attribute | Type | Condition | Description |
|----------------|--------|-------------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |
| PSU-IP-Address | String | Conditional | <p>The forwarded IP Address header field consists of</p> <p>the corresponding HTTP request IP Address field between PSU and TPP. It shall be contained if and only if this request was actively initiated by the PSU.</p> |
| Consent-ID | String | Mandatory | Identification of the corresponding consent as granted by the PSU. |
| Authorization | String | Conditional | Is contained only, if an OAuth2 based SCA was performed in the corresponding mandate transaction or if OAuth2 has been used in a pre-step. |

Request Body

No request body.

5.1.2 Response

Response Code

HTTP Response Code equals 200.

Response Header

| Attribute | Type | Condition | Description |
|--------------|------|-----------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |

Response Body

| Attribute | Type | Condition | Description |
|--------------------|--------------------------|-----------|--|
| securitiesAccounts | Array of Account Details | Mandatory | <p>Descriptions of the accessible securities accounts.</p> <p>As "Account Details", the extended data model described in section 6.1.1 will be used.</p> |

5.1.3 Example

Request (without PSU involvement)

GET <https://api.testbank.com/v1/securities-accounts?evaluationCurrency=EUR>

```

Accept:                application/json
X-Request-ID:          99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Consent-ID:            qwer3456tzui7890
PSU-User-Agent:        Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date:                  Thu, 29 Oct 2020 15:05:37 GMT

```

Response

HTTP/1.x 200 Ok

X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756

Content-Type: application/json

Date: Thu, 29 Oct 2020 15:05:38 GMT

```
{
  "securitiesAccounts":
    [{
      "resourceId": "3dc3d5b3-7023-4848-9853-f5400a64e81g",
      "other": {"identification": "MyProprietaryID-0001"},
      "currency": "EUR",
      "ownerName": "Paul Simpson",
      "name": "Securities 1a",
      "balances": [
        {
          "balanceAmount" : { "currency" : "EUR", "amount" : "22901.00" },
          "balanceType": "closingBooked"
        },
        {
          "balanceAmount": { "currency" : "EUR", "amount" : "22910.00" },
          "balanceType": "interimAvailable",
          "referenceDateTime" : "2020-10-29T14:00:00.011Z"
        }
      ],
      "_links":
        {
          "securitiesAccount": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g" },
          "positions": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/positions" },
          "transactions": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/transactions" },
          "orders": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/orders" }
        }
      },
    {
      "resourceId": "3dc3d5b3-7023-4848-9853-f5400a64e813",
      "other": {"identification": "MyProprietaryID-0002"},
      "currency": "EUR",
      "ownerName": "Paul Simpson",
      "name": "Securities 1b",
      "balances": [
```

```

    {
      "balanceAmount" : { "currency" : "EUR", "amount" : "1000.00" },
      "balanceType": "closingBooked"
    },
    {
      "balanceAmount": { "currency" : "EUR", "amount" : "987.60" },
      "balanceType": "interimAvailable",
      "referenceDateTime" : "2020-10-29T14:00:00.011Z"
    }
  ],
  "_links":
  {
    "securitiesAccount": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e813 " },
    "positions": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e813/positions" },
    "transactions": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e813/transactions" },
    "orders": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e813/orders" }
  }
}

```

5.2 Read Securities Account Details

5.2.1 Request

Call

GET /v1/securities-accounts/{securities-accounts-id}?{query-parameters}

Reads details about a securities account. It is assumed that a consent of the PSU to this access is already given and stored on the ASPSP system. The addressed details of this account depends then on the stored consent addressed by consentId, respectively the OAuth2 access token.

Path Parameters

| Attribute | Type | Description |
|-----------------------|--------|---|
| securities-account-id | String | This identification is denoting the addressed securities account. The securities-account-id is retrieved by using a |

| Attribute | Type | Description |
|-----------|------|--|
| | | "Read Securities Account List". The securities-account-id is the "resourceId" attribute of the securities account structure. Its value is constant at least throughout the lifecycle of a given consent. |

Query Parameters

| Attribute | Type | Condition | Description |
|--------------------|--------|-----------|--|
| evaluationCurrency | String | Optional | <p>ISO Alpha-3 currency code to request evaluation of the balances in a specific currency.</p> <p>This query parameter might be ignored by the ASPSP, if evaluation is not supported for variable currencies or does not support evaluation in the requested currency.</p> |

Request Header

| Attribute | Type | Condition | Description |
|----------------|--------|-------------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |
| PSU-IP-Address | String | Conditional | The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It shall be contained if and only if this request was actively initiated by the PSU. |
| Consent-ID | String | Mandatory | Identification of the corresponding consent as granted by the PSU. |
| Authorization | String | Conditional | Is contained only, if an OAuth2 based SCA was performed in the corresponding mandate transaction or if OAuth2 has been used in a pre-step. |

Request Body

No request body.

5.2.2 Response

Response Code

HTTP Response Code equals 200.

Response Header

| Attribute | Type | Condition | Description |
|--------------|------|-----------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |

Response Body

| Attribute | Type | Condition | Description |
|-------------------|-----------------|-----------|--|
| securitiesAccount | Account Details | Mandatory | Description of the addressed securities account. |

Remark: The same syntactical structure is used to transport securities account information as (payment) account information.

5.2.3 Example

Request (without PSU involvement)

```
GET https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g
```

```
Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Consent-ID: qwer3456tzui7890
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date: Thu, 29 Oct 2020 15:05:37 GMT
```


Response

HTTP/1.x 200 Ok

X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756

Content-Type: application/json

Date: Thu, 29 Oct 2020 15:05:38 GMT

```
{
  "securitiesAccount": {
    {
      "resourceId": "3dc3d5b3-7023-4848-9853-f5400a64e81g",
      "other": {
        "identification": "123456789012",
        "schemeNameProprietary": "Depotnummer",
        "issuer": "testbank"
      },
      "ownerName": "Paul Simpson",
      "name": "Securities 1",
      "product": "Securities Account",
      "status": "enabled",
      "applicableFees": [
        {
          "typeCode": "managementFee"
          "feeRules": [
            { "amount": { "currency": "EUR", "amount": "10.00" } }
          ]
          "applicableFrom": "2020-01-01"
          "applicableTo": "2025-12-31"
        },
        {
          "typeCode": "courtage"
          "feeRules": [
            {
              "toBaseAmount": { "currency": "EUR", "amount": "19999.99" },
              "percentage": "1.0",
              "minimumAmount": { "currency": "EUR", "amount": "10.00" }
            },
            {
              "fromBaseAmount": { "currency": "EUR", "amount": "20000.00" },
              "percentage": "0.8",
              "maximumAmount": { "currency": "EUR", "amount": "300.00" }
            }
          ]
        }
      ]
    }
  }
}
```

```

    ]
  }
]
"balances": [
  {
    "balanceAmount" : { "currency" : "EUR", "amount" : "22901.00" },
    "balanceType": "closingBooked"
  },
  {
    "balanceAmount": { "currency" : "EUR", "amount" : "22910.00" },
    "balanceType": "interimAvailable",
    "referenceDateTime" : "2020-10-29T14:00:00.011Z"
  }
],
"_links":
{
  "positions": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/positions" },
  "transactions": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/transactions" },
  "orders": {"href": "/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/orders" }
}
}

```

5.3 Read Securities Account Positions

5.3.1 Request

Call

GET /v1/securities-accounts/{securities-accounts-id}/positions

This message reads the portfolio of a securities account.

Path Parameters

| Attribute | Type | Description |
|-----------------------|--------|--|
| securities-account-id | String | This identification is denoting the addressed securities account. The securities-account-id is retrieved by using a "Read Securities Account List" call. The securities-account-id |

| Attribute | Type | Description |
|-----------|------|---|
| | | is the "resourceId" attribute of the account structure. Its value is constant at least throughout the lifecycle of a given consent. |

Query Parameters

No specific query parameter.

Request Header

| Attribute | Type | Condition | Description |
|----------------|--------|-------------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |
| PSU-IP-Address | String | Conditional | The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It shall be contained if and only if this request was actively initiated by the PSU. |
| Consent-ID | String | Mandatory | Identification of the corresponding consent as granted by the PSU. |
| Authorization | String | Conditional | Is contained only, if an OAuth2 based SCA was performed in the corresponding mandate transaction or if OAuth2 has been used in a pre-step. |

Request Body

No request body.

5.3.2 Response

Response Code

HTTP Response Code equals 200.

Response Header

| Attribute | Type | Condition | Description |
|--------------|------|-----------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |

Response Body

| Attribute | Type | Condition | Description |
|-------------------|------------------------------|-----------|---|
| securitiesAccount | Account Reference | Optional | Identifier of the addressed securities-account. Remark for Future: Might be mandated in a later version. |
| reportDateTime | ISODateTime | Mandatory | Date and time of the report. That is, all listed positions are provided in their quantity within the account as reflected by the ASPSP at the reportDateTime. Might differ from the current date and time in situations where a real time information of the deposit's positions is not available. |
| balances | Array of Balance | Optional | Calculated value of all securities in account currency. For the usage of "Balance" items compare chapter 6.1.3. |
| positionList | Array of Securities Position | Mandatory | If the deposit does not contain any positions, the "positionList" element must contain an empty array. |

5.3.3 Example

Request (without PSU involvement)

GET https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/positions

```
Accept:          application/json
X-Request-ID:    99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Consent-ID:      qwer3456tzui7890
PSU-User-Agent:  Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date:           Fri, 25 Mar 2022 15:05:37 GMT
```

Response

```
HTTP/1.x 200 Ok
X-Request-ID:    99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Content-Type:    application/json
Date:           Fri, 25 Mar 2022 15:05:38 GMT
```

```
{
  "securitiesAccount":
  {
    "iban": "DE2310010010123456788"
  }
  "reportDateTime": "2022-03-25T00:00:00.000Z"
  "balances": [
    {
      "balanceAmount": { "currency": "EUR", "amount": "22901.00" },
      "balanceType": "closingBooked"
    },
    {
      "balanceAmount": { "currency": "EUR", "amount": "22910.00" },
      "balanceType": "interimAvailable",
      "referenceDateTime": "2020-10-29T14:00:00.011Z"
    }
  ],

  "positionList": [
    {
      "financialInstrument": {
```

```

    "isin": "DE000BASF111",
    "name": "BASF SE Namens-Aktien o.N.",
    "normalisedPrice": {
      "amount": { "currency": "EUR", "amount": "70.88" },
      "priceDateTime" : "2022-03-25T00:00:00.000Z",
      "priceType" : "MRKT",
      "sourceOfPrice" : { "type": "LMAR", "mic": "XETR" }
    }
  },
  "unitsNumber": 100,
  "balanceType": "AVAI",
  "averageBuyingPrice": { "currency": "EUR", "amount": "60.17" }
},
{
  "financialInstrument": {
    "isin": "DE000A0Z2ZZ5",
    "name": "freenet AG Namens-Aktien o.N.",
    "normalisedPrice": {
      "amount": { "currency": "EUR", "amount": "29.88" },
      "priceDateTime" : "2022-03-25T00:00:00.000Z",
      "priceType" : "MRKT",
      "sourceOfPrice" : { "type": "LMAR", "mic": "XETR" }
    }
  },
  "unitsNumber": 200,
  "balanceType": "AVAI",
  "averageBuyingPrice": { "currency": "EUR", "amount": "30.17" }
}},
{
  "financialInstrument": {
    "isin": "XS1893631769",
    "name": "VOLKSWAGEN FINANCIAL SERVICES AG 2,25% 18/26",
    //percentage sign not in the official character set,
    //but might still be used by ASPSP
    "normalisedPrice": {
      "percentage": "99.855" ,
      "priceDateTime" : "2022-03-25T00:00:00.000Z",
      "priceType" : "MRKT",
      "sourceOfPrice" : { "type": "LMAR", "mic": "XETR" }
    }
  },
  "unitsNominal": { "currency": "EUR", "amount": "10000.00" },
  "balanceType": "AVAI",
  "totalBuyingPrice": { "currency": "EUR", "amount": "10100.00" }
}

```

```

    ]
}

```

5.4 Read Securities Account Transaction List

5.4.1 Request

Call

```
GET /v1/securities-accounts/{securities-account-id}/transactions?{query-parameters}
```

This message reads the transaction list from a given securities account addressed by "securities-account-id". Transactions in this context only refer to events that include the movement of securities.

Path Parameters

| Attribute | Type | Description |
|-----------------------|--------|--|
| securities-account-id | String | This identification is denoting the addressed securities account. The securities-account-id is retrieved by using a "Read Securities Account List" call. The securities-account-id is the "resourceId" attribute of the account structure. Its value is constant at least throughout the lifecycle of a given consent. |

Query Parameters

Remark: Compared to Requests for balances in other AIS services, the query parameter **bookingStatus** is not supported:

| Attribute | Type | Condition | Description |
|-----------|---------|-------------|--|
| dateFrom | ISODate | Conditional | <p>Starting date (inclusive the date dateFrom) of the transaction list, mandated if no delta access is required .</p> <p>dateFrom always relates to one of the dates covered by element Securities related Date or Time.</p> <p>The ASPSP shall provide a documentation, which type of date is used.</p> |

| Attribute | Type | Condition | Description |
|--------------------|---------|---------------------------------------|--|
| dateTo | ISODate | Optional | End date (inclusive the date dateTo) of the transaction list, default is "now" if not given. Might be ignored if a delta function is used. |
| entryReferenceFrom | String | Optional if supported by API provider | <p>This data attribute is indicating that the AISP is in favour to get all transactions after the transaction with identification entryReferenceFrom alternatively to the above defined period. This is a implementation of a delta access.</p> <p>If this data element is contained, the entries "dateFrom" and "dateTo" might be ignored by the ASPSP if a delta report is supported.</p> |
| deltaList | Boolean | Optional if supported by API provider | <p>This data attribute is indicating that the AISP is in favour to get all transactions after the last report access for this PSU on the addressed account. This is another implementation of a delta access-report.</p> <p>This delta indicator might be rejected by the ASPSP if this function is not supported.</p> <p>If this data element is contained, the entries "dateFrom" and "dateTo" might be ignored by the ASPSP if a delta report is supported.</p> |

Request Header

| Attribute | Type | Condition | Description |
|----------------|--------|-------------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |
| PSU-IP-Address | String | Conditional | The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It |

| Attribute | Type | Condition | Description |
|---------------|--------|-------------|--|
| | | | shall be contained if and only if this request was actively initiated by the PSU. |
| Consent-ID | String | Mandatory | Identification of the corresponding consent as granted by the PSU. |
| Authorization | String | Conditional | Is contained only, if an OAuth2 based SCA was performed in the corresponding mandate transaction or if OAuth2 has been used in a pre-step. |

Request Body

No request body.

5.4.2 Response

Response Code

HTTP Response Code equals 200.

Response Header

| Attribute | Type | Condition | Description |
|--------------|------|-----------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |

Response Body

A JSON response is defined as follows:

| Attribute | Type | Condition | Description |
|-------------------|-------------------|-----------|---|
| securitiesAccount | Account Reference | optional | Identifier of the addressed securities account. Remark for Future: It is recommended to use this data element. The condition might |

| Attribute | Type | Condition | Description |
|--------------|---------------------------------|-----------|---|
| | | | change to "mandatory" in a next version of the specification. |
| transactions | Array of Securities Transaction | Optional | As a distinction between "booked", "pending" and "information" type of transactions does not make sense for securities, this intermediary level is omitted |
| _links | Links | Optional | <p>A list of hyperlinks to be recognised by the TPP.</p> <p>Type of links admitted in this response:</p> <p>"first": Navigation link for paginated transaction lists.</p> <p>"next:" Navigation link for paginated transaction lists.</p> <p>"previous": Navigation link for paginated transaction lists.</p> <p>"last": Navigation link for paginated transaction lists.</p> |

5.4.3 Example

Request (without PSU involvement)

GET <https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/transactions?dateFrom=2022-03-01>

```

Accept:                application/json
X-Request-ID:          99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Consent-ID:            qwer3456tzui7890
PSU-User-Agent:        Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date:                  Fri, 25 Mar 2022 15:05:37 GMT

```

Response

HTTP/1.x 200 Ok

X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756

Content-Type: application/json

Date: Fri, 25 Mar 2022 15:05:38 GMT

```
{
  "securitiesAccount": {
    {
      "iban": "DE2310010010123456788"
    },
    "transactions": [
      {
        "transactionId": "1234567",
        "relevantDates": [
          { "type": "transactionDate", "dateAndTime": "2022-02-28T17:00:05.000Z"},
          { "type": "effectiveSettlementDate", "date": "2022-03-01"}
        ],
        "financialInstrument": {
          "isin": "DE000BASF111",
          "name": "BASF SE Namens-Aktien o.N."
        },
        "unitsNumber": 100,
        "_links": { "transactionDetails": {"href": "https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/transactions/1234567" } }
      },
      {
        "transactionId": "1234568",
        "relevantDates": [
          { "type": "effectiveSettlementDate", "date": "2022-03-01"}
        ],
        "financialInstrument": {
          "isin": "US1912161007",
          "name": "Coca-Cola Registered Shs"
        },
        "unitsNumber": -100,
        "_links": { "transactionDetails": {"href": "https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/transactions/1234568" } }
      }
    ]
  }
}
```

```
}
```

5.5 Read Securities Transaction Details

5.5.1 Request

Call

```
GET /v1/securities-accounts/{securities-account-id}/transactions/{transaction-id}
```

Reads transaction details from a given transaction addressed by "transactionId" on a given securities account addressed by "securities-account-id". This call is only available on transactions as reported in a JSON format.

Path Parameters

| Attribute | Type | Description |
|-----------------------|--------|--|
| securities-account-id | String | This identification is denoting the addressed securities account. The securities-account-id is retrieved by using a "Read Securities Account List" call. The securities-account-id is the "resourceId" attribute of the account structure. Its value is constant at least throughout the lifecycle of a given consent. |
| transaction-id | String | This identification is given by the attribute transactionId of the corresponding entry of a transaction list. |

Query Parameters

No Query Parameters.

Request Header

| Attribute | Type | Condition | Description |
|----------------|--------|-------------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |
| PSU-IP-Address | String | Conditional | The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It |

| Attribute | Type | Condition | Description |
|---------------|--------|-------------|--|
| | | | shall be contained if and only if this request was actively initiated by the PSU. |
| Consent-ID | String | Mandatory | Identification of the corresponding consent as granted by the PSU. |
| Authorization | String | Conditional | Is contained only, if an OAuth2 based SCA was performed in the corresponding mandate transaction or if OAuth2 has been used in a pre-step. |

Request Body

No request body.

5.5.2 Response

Response Code

HTTP Response Code equals 200.

Response Header

| Attribute | Type | Condition | Description |
|--------------|------|-----------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |

Response Body

A JSON response is defined as follows:

| Attribute | Type | Condition | Description |
|--------------------|------------------------|-----------|-------------|
| transactionDetails | Securities Transaction | Mandatory | |

5.5.3 Example

Request (without PSU involvement)

GET https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/transactions/1234568

Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Consent-ID: qwer3456tzui7890
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date: Fri, 25 Mar 2022 15:05:37 GMT

Response

HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Content-Type: application/json
Date: Fri, 25 Mar 2022 15:05:38 GMT

```
{
  "transactionDetails":
  {
    "transactionId": "1234568",
    "relevantDates": [
      { "type": "transactionDate", "dateAndTime": "2022-03-10T19:22:05.000Z"},
      { "type": "effectiveSettlementDate", "date": "2022-03-01"}
    ],
    "financialInstrument": {
      "isin": "US1912161007",
      "name": "Coca-Cola Registered Shs"
    },
    "unitsNumber": -100,
    "placeOfTrade": { "mic": "XETR"},
    "amountIncludesFees": true,
    "amountIncludesTaxes": false,
    "amount": { "currency": "EUR", "amount": "5202.00"},
    "unitsNumberBeforeTx": 100,
    "unitsNumberAfterTx": 0
  }
}
```

5.6 Read Securities Order List

5.6.1 Request

Call

```
GET /v1/securities-accounts/{securities-account-id}/orders
```

Reads all orders that are still kept in the ASPSP's data base. The ASPSP may restrict the response values (e.g. restriction to all orders that are still active or all orders that were inactivated no earlier than last month). These restrictions must be documented by the ASPSP in its general documentation of the ASPSP's interface for securities.

Path Parameters

| Attribute | Type | Description |
|-----------------------|--------|--|
| securities-account-id | String | This identification is denoting the addressed securities account. The securities-account-id is retrieved by using a "Read Securities Account List" call. The securities-account-id is the "resourceId" attribute of the account structure. Its value is constant at least throughout the lifecycle of a given consent. |

Query Parameters

Remark: Compared to Requests for balances in other AIS services, the query parameter **bookingStatus** is not supported:

| Attribute | Type | Condition | Description |
|-----------|---------|-----------|---|
| dateFrom | ISODate | Optional | Starting date (inclusive the date dateFrom) of the transaction list, mandated if no delta access is required . dateFrom always relates the creation date of the order. |
| dateTo | ISODate | Optional | End date (inclusive the date dateTo) of the transaction list, default is "now" if not given. Might be ignored if a delta function is used. |

| Attribute | Type | Condition | Description |
|-------------|---|-----------|--|
| orderStatus | Comma separated list of Order Status Code | Optional | <p>Restricts the result to orders that are currently assigned to one of the status values provided in this query parameter.</p> <p>If the parameter is not provided, orders are provided without restriction to their respective status.</p> |

Request Header

| Attribute | Type | Condition | Description |
|----------------|--------|-------------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |
| PSU-IP-Address | String | Conditional | The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It shall be contained if and only if this request was actively initiated by the PSU. |
| Consent-ID | String | Mandatory | Identification of the corresponding consent as granted by the PSU. |
| Authorization | String | Conditional | Is contained only, if an OAuth2 based SCA was performed in the corresponding mandate transaction or if OAuth2 has been used in a pre-step. |

Request Body

No request body.

5.6.2 Response

Response Code

HTTP Response Code equals 200.

Response Header

| Attribute | Type | Condition | Description |
|--------------|------|-----------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |

Response Body

A JSON response is defined as follows:

| Attribute | Type | Condition | Description |
|-------------------|---------------------------|-----------|--|
| securitiesAccount | Account Reference | Optional | Identifier of the addressed securities account. Remark for Future: It is recommended to use this data element. The condition might change to "mandatory" in a next version of the specification. |
| orders | Array of Securities Order | Optional | List of orders placed for this securities account. |
| _links | Links | Optional | A list of hyperlinks to be recognised by the TPP. Type of links admitted in this response: "first": Navigation link for paginated order lists. "next:" Navigation link for paginated order lists. "previous": Navigation link for order transaction lists. "last": Navigation link for paginated order lists. |

5.6.3 Example

Request (without PSU involvement)

GET https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/orders

Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Consent-ID: qwer3456tzui7890
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date: Fri, 25 Mar 2022 15:05:37 GMT

Response

HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Content-Type: application/json
Date: Fri, 25 Mar 2022 15:05:38 GMT

```
{
  "securitiesAccount":
  {
    "iban": "DE2310010010123456788"
  },
  "orders": [
    {
      "orderId": "1234567",
      "side": "buy",
      "financialInstrument": {
        "isin": "DE000BASF111",
        "name": "BASF SE Namens-Aktien o.N."
      },
      "unitsNumber": 100,
      "orderStatus": "filed",
      "_links": {
        "orderDetails": {"href": "https://api.testbank.com
/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g
/orders/1234567" },

```

```

      "relatedTransactions": [{ "href": "https://api.testbank.com
/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g
/transactions/1234567" }] }
    },
    {
      "orderId": "1234568",
      "side": "buy",
      "financialInstrument": {
        "isin": "DE0007480204",
        "name": "Deutsche EuroShop AG Namens-Aktien o.N."
      },
      "unitsNumber": 200,
      "orderStatus": "acceptedForBidding",
      "_links": { "orderDetails": { "href":
"https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-
f5400a64e81g/orders/1234568" } }
    },
  ]
}

```

5.7 Read Securities Order Details

5.7.1 Request

Call

GET /v1/securities-accounts/{securities-account-id}/orders/{orderId}

Reads order details from a given order addressed by “orderId” on a given securities account addressed by "securities-account-id".

Path Parameters

| Attribute | Type | Description |
|-----------------------|--------|--|
| securities-account-id | String | This identification is denoting the addressed securities account. The securities-account-id is retrieved by using a "Read Securities Account List" call. The securities-account-id is the "resourceId" attribute of the account structure. Its value is constant at least throughout the lifecycle of a given consent. |
| orderId | String | This identification is given by the attribute orderId of the corresponding entry of a securities order list. |

Query Parameters

No Query Parameters.

Request Header

| Attribute | Type | Condition | Description |
|----------------|--------|-------------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |
| PSU-IP-Address | String | Conditional | The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It shall be contained if and only if this request was actively initiated by the PSU. |
| Consent-ID | String | Mandatory | Identification of the corresponding consent as granted by the PSU. |
| Authorization | String | Conditional | Is contained only, if an OAuth2 based SCA was performed in the corresponding mandate transaction or if OAuth2 has been used in a pre-step. |

Request Body

No request body.

5.7.2 Response

Response Code

HTTP Response Code equals 200.

Response Header

| Attribute | Type | Condition | Description |
|--------------|------|-----------|---|
| X-Request-ID | UUID | Mandatory | ID of the request, unique to the call, as determined by the initiating party. |

Response Body

A JSON response is defined as follows:

| Attribute | Type | Condition | Description |
|--------------|------------------|-----------|--|
| orderDetails | Securities Order | Mandatory | Details of the requested securities order. |

5.7.3 Example

Request (without PSU involvement)

```
GET https://api.testbank.com/v1/securities-accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/transactions/1234568
```

```
Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Consent-ID: qwer3456tzui7890
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)
Gecko/20100101 Firefox/54.0
Date: Fri, 25 Mar 2022 15:05:37 GMT
```

Response

```
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
Content-Type: application/json
Date: Fri, 25 Mar 2022 15:05:38 GMT
```

```
{
  "orderId": "1234568",
  "side": "buy",
  "financialInstrument": {
    "isin": "DE0007480204",
    "name": "Deutsche EuroShop AG Namens-Aktien o.N."
  },
  "unitsNumber": 200,
  "placeOfTrade": { "mic": "XETR" },
  "limitPriceAmount": { "currency": "EUR", "amount": "36.50" },
  "typesOfOrder": [ "limitOrder", "allOrNone" ],
```

```
"timeInForce": "goodForMonth",
"expiryDateTime": "2022-03-31T23:59:59.999+1:00",
"relatedCashAccount": { "iban": "DE40100100103307118608" }
"orderModifyable": true,
"orderStatus": "acceptedForBidding"
}
```



6 Complex Data Types

To support the more detailed selection of consents existing Data types must be extended. This chapter describes the new data type definitions. Changes to the existing definition are highlighted.

6.1 Extension of existing Data Types

6.1.1 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, cp. [XS2A-IG], Section 6.5.3 or Section 6.5.4 below. |
| iban | IBAN | Optional | This data element can be used in the body of the Consent Request Message for retrieving account access consent from this account, cp. [XS2A-IG], Section 6.3.1.1. |
| bban | BBAN | Optional | This data element can be used in the body of the Consent Request Message for retrieving account access consent from this account, cp. [XS2A-IG], Section 6.3.1.1. This data elements is used for payment accounts which have no IBAN. |
| msisdn | Max35Text | optional | An alias to access an account via a registered mobile phone number. This alias might be needed e.g. in the payment initiation service, cp. [XS2A-IG], Section 5.3.1. The support of this alias must be explicitly documented by the ASPSP for the corresponding API Calls. |
| other | Other Type | Conditional | In cases where the criteria listed above (IBAN, BBAN, MSISDN) are not provided to identify an instance of the respective account type (e.g. a securities account), the ASPSP shall |

| Attribute | Type | Condition | Description |
|-----------------|-------------------|-----------|---|
| | | | include a proprietary ID of the respective account that uniquely identifies the account for this ASPSP. |
| currency | Currency Code | Mandatory | Account currency. If the securities account does not have a dedicated account currency, code "XXX" is used. |
| 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 ASPSP for this account, proprietary definition |
| cashAccountType | Cash Account Type | Optional | ExternalCashAccountType1Code from ISO 20022. Might be extended by an additional code to indicate securities accounts. A global definition of a code for securities accounts is intentionally not provided by this document. |

| Attribute | Type | Condition | Description |
|----------------|---------------------------------|-------------|---|
| status | String | Optional | <p>Account status. The value is one of the following:</p> <ul style="list-style-type: none"> • "enabled": account is available • "deleted": account is terminated • "blocked": account is blocked e.g. for legal reasons <p>If this field is not used, than the account is available in the sense of this specification.</p> |
| bic | BICFI | Optional | The BIC associated with the account. |
| linkedAccounts | Max70 Text | Optional | This data attribute is a field, where an ASPSP can name a cash account associated with the securities account. |
| usage | Max4 Text | Optional | <p>Specifies the usage of the account</p> <ul style="list-style-type: none"> • PRIV: private personal account • ORGA: professional account |
| details | Max500 Text | Optional | <p>Specifications that might be provided by the ASPSP</p> <ul style="list-style-type: none"> • characteristics of the account • characteristics of the securities account • characteristics of the relevant card |
| balances | Array of Balance | Conditional | To provide an estimated total value of the positions under this account. |
| tariffs | Max1000Text | Optional | Text information on tariffs related to this securities account. |
| applicableFees | Array of Securities Account Fee | Optional | <p>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</p> |

| Attribute | Type | Condition | Description |
|-----------|-------|-----------|--|
| | | | element should represent (X-D), but neither X nor D. |
| _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 "positions", "orders" and/or "transactions"</p> <p>These links are only supported, when the corresponding consent has been already granted. For the used link keywords, see section 6.1.4.</p> |

6.1.2 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 can be used for accounts when no IBAN is provided. |
| 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. |