PORTMAN
Fund Management

How to get started

Vitec Aloc/IC
Version 1.0
This document is based on the underlying system PORTMAN 7.25

VITEC

Contents

1. Introduction

Fund of Funds is an add-on to the Fund management module and helps managing Funds in a flexible hierarchical structure. Asset managers with multiple Funds obtain a comprehensive overview of ownerships and risk across assets by using X-ray.

For using 'Fund of Funds' you need to have access to both 'Fund management' and 'Fund of Funds'.

2. Overview and functionality

Fund of Funds consists of three functions:

1. Fund of Funds structure for managing the structure
2. Transaction generator for allocating transactions
3. Fund of Funds X-ray for portfolio review

Fund of Funds are managed in a flexible hierarchical tree structure illustrating ownership between the Funds. When managing the structure there are a few rules to follow.

1. A fund can be owned by several Funds (shared ownership)
2. A fund can own a fund at the same level as the fund itself (across ownership)
3. A fund can be owned by other Funds at different levels (arbitrary ownership)
4. Circular references are not allowed

Before it is possible to set up the Fund of Funds structure, all Funds and investment certificates must exist in PORTMAN.

2.1. Basic data

As a minimum, you need to add a fund with related portfolios and bank accounts, an instrument (investment certificate) and make a relation between fund and instrument. In PORTMAN, basic data for a fund is:

1. A client or investment association with category set to 'Fund' need to have (as a minimum)
   - o Two portfolios
     - ▪ Issuing portfolio
     - ▪ Asset portfolio
   - o Two accounts (one for each portfolio)
     - ▪ Bank account
   - o Two depositories (one for each portfolio)
2. An investment certificate

It is possible to have multiple accounts and depositories in the Asset portfolio as well as having multiple asset portfolios in a fund.

2.1.1. Adding a new fund
In PORTMAN a new fund is added by using 'Client administration'. You need to go through three mandatory steps and one optional:

1. Add a new client
2. Add Issuing portfolio, account and depository
3. Add Asset portfolio, account and depository
4. Optional – add extra portfolio, account and depository

Go to Appendix A if you want to see how to set up basic data for a fund.

2.1.2. Adding a new Investment certificate
An Investment certificate is added by using 'Basic data etc. for securities' => 'Investment certificate'.
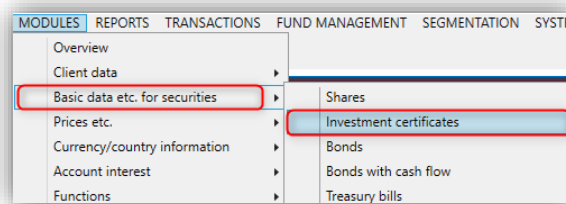
Add the basic data for the Investment certificate and remember to assign all the needed basic data for reporting and e.g. export of data.

2.1.3. Making new Funds visible in the Fund of Funds structure

It is not possible to set up the structure before Funds are added and made available in Fund management. To do that, choose:

1. Menu │ Fund management │ Settings
2. From 'Mutual Funds' right-click to add and setup the fund for Fund management
   Mandatory fields to be setup:
   a. Trust type = Mutual fund
   b. Type of fund = select from picklist (Share or Interest)

Before the Fund can be seen in the Fund of Funds structure, you need to set up a relation between the new fund and the investment certificate.

This is done by using XML-import and after a successful import, the fund will show up in the Fund of Funds structure. Go to Appendix B for a description of the XML-format.

2.2. Fund of Funds structure

Fund of Funds structure shows the ownership(s) between Funds and is set up by establishing relations between the available Funds. When the structure is set up, it is easier to ensure that the right path through the fund levels is used when an investment is made.

When selecting a fund in 'Investment strategy', it is possible to drill-down in the Fund of Funds ownership structure (1) and for each level to see which other Funds the selected fund owns - Child Funds (2) - and which Funds the selected fund is owned by - Parent Funds (3).

- Child fund
  Shows the fund(s) the selected fund owns
- Parent fund
  Shows the fund(s) which owns the selected fund

To ensure a clear structure, each level has its own colour (4) – in the example Level 1 = red, Level 2 = green etc.
Furthermore, it is possible to build more than one ownership structure, if more is needed - each white arrow (5) shows the top level of an ownership structure of Fund of Funds.
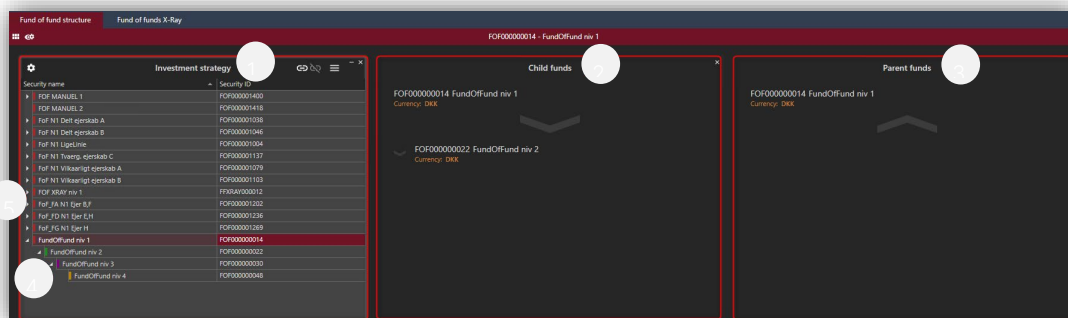
There are three possible functions to use when setting up the structure.

1. Attach a fund to the structure
2. Detach a fund to the structure
3. Filter fund

Attach a fund to the structure (Ctrl+Alt+T)
As mentioned earlier it is possible to set up different ownerships / relations

1. Shared ownership - a fund owned by several Funds
2. Across ownership - a fund owns another fund at the same level as the fund itself
3. Arbitrary ownership - a fund can be owned by different other Funds at different levels

All available Funds will show up in an overlay and you just need to select the fund you want to relate to the selected fund (you can use the Filter row to find the needed fund).
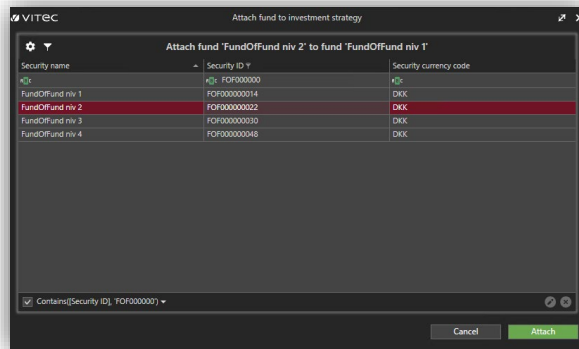
The result of Attach is that the structure is set up step-by-step.
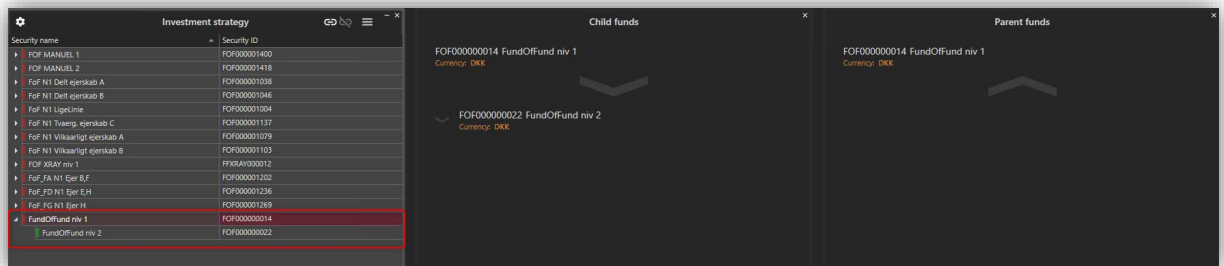
Detach a fund to the structure (Ctrl+Alt+D)

The selected fund will disappear from the structure but will still be available in the list of all available Funds if you want to attach the fund somewhere else in the structure.

Filter fund
If you want a quick overview of where a fund is included in the Fund of funds structures, you can use this function. Select the fund you want to find and right-click to use the function 'Filter fund'.

The structure will immediately be adjusted - showing only the branches where the selected fund is included.
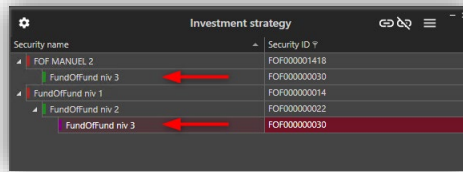
Filter information appears at the bottom of the card (1) and to get back to the original view, the filter is easily suppressed (2) or removed (3).
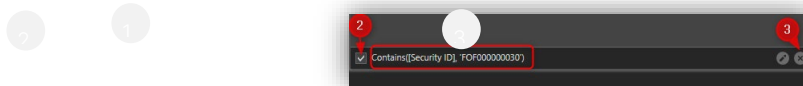
Setting up the structure by using import

It is also possible to set up the fund/ownership structure by using XML-import. However, it is recommended to use the client, if the Funds have advanced relationships with many dependencies.
Import is done via XML import with the instrument as key.

Note that the Funds must be written in the correct order, meaning that Funds owned by other Funds must be written first in the XML-file, as the references otherwise will not be created. During the import, continuous validation is made i.e. no circular references are created and that Funds only refer to other Funds at the same or underlying level.

Go to Appendix B for a description of the XML-format.

2.3. Transaction generator

If you want to allocate transactions down through the Fund structure, the easiest way is to use the transaction generator. The transaction generator helps you to choose a legal part through the fund levels and making sure that NAV is calculated equally and correctly at all levels.

This function is activated in the menu bar - 'Fund Management' => 'Administration' => 'Transactions'.
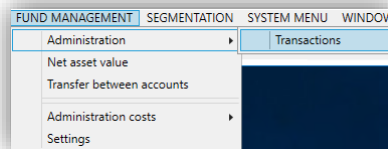
From 'Transactions – Funds' you can to choose the fund in which the allocation should be made from the top to the lowest level. When a fund is selected (1), it moves to the right (2) and at the same time the left column changes and shows the available Funds in the next level (Funds owned by the "moved fund").

After having set up the path for the investment, you need to type in trade date, value date and the cash amount (3) before it is possible see the involved portfolios and accounts (4) and a preview of the transactions to be registered (5).

To optimize the process, it is possible to have a tab for each amount to be allocated – use 'New tab' (6).
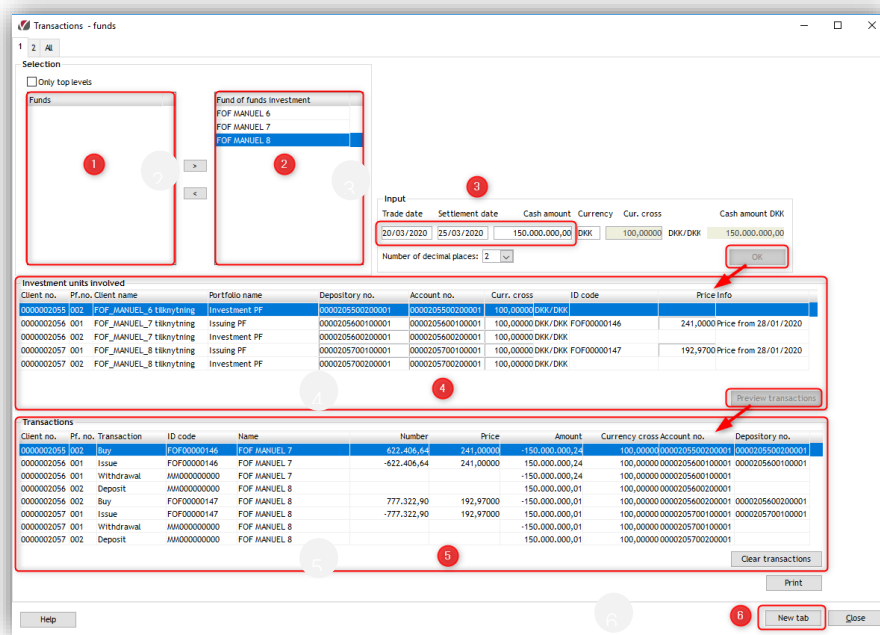
When all cash amounts to be allocated are typed in, choose the tab called 'All' (1) for a summary of all the transactions ready for approval and registration (2). Before the final approval you can print an audit document including all transactions (3).
Approval of transactions is done by pressing 'Save transactions' (4).
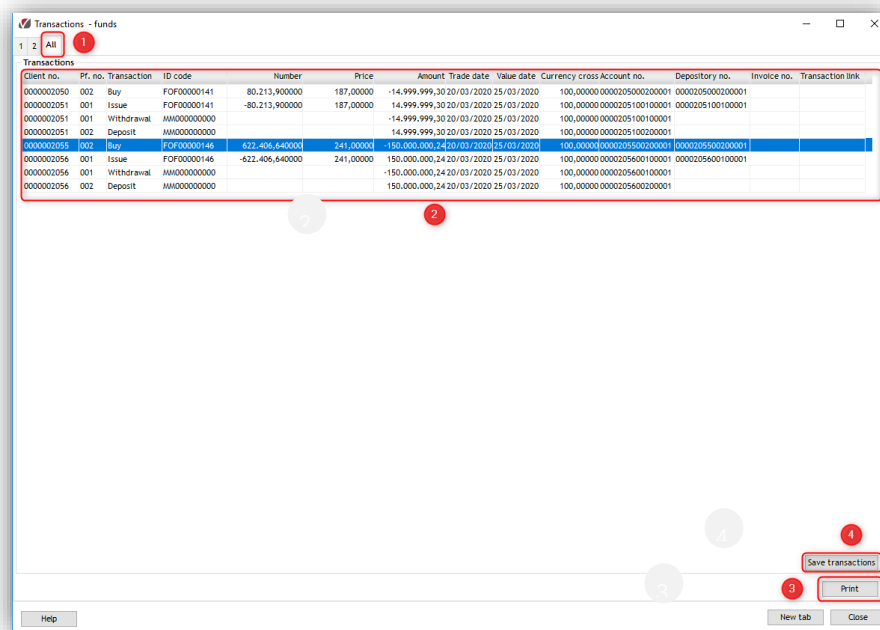
When all transactions are registered in PORTMAN, positions of the funds are updated in Position overview.

2.4. Fund of Funds X-ray

Based on the fund structure, it is possible to review the underlying Funds/investments at each level in the Fund of fund structure.
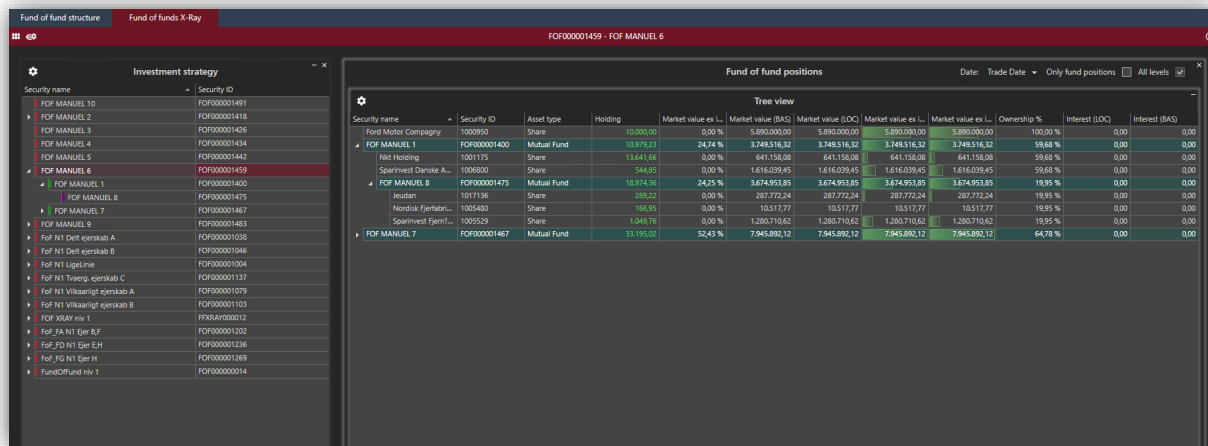
The green-coloured rows show which of the positions that are Funds and which that are investments in other instruments.

When selecting a fund from 'Investment strategy' (1), it is possible to review the fund in two different views.

1. Tree view (2)
   Shows the underlying investments in a tree structure
2. Table view (3)
   Shows the underlying investments in a table view, making it easier to set up your own view
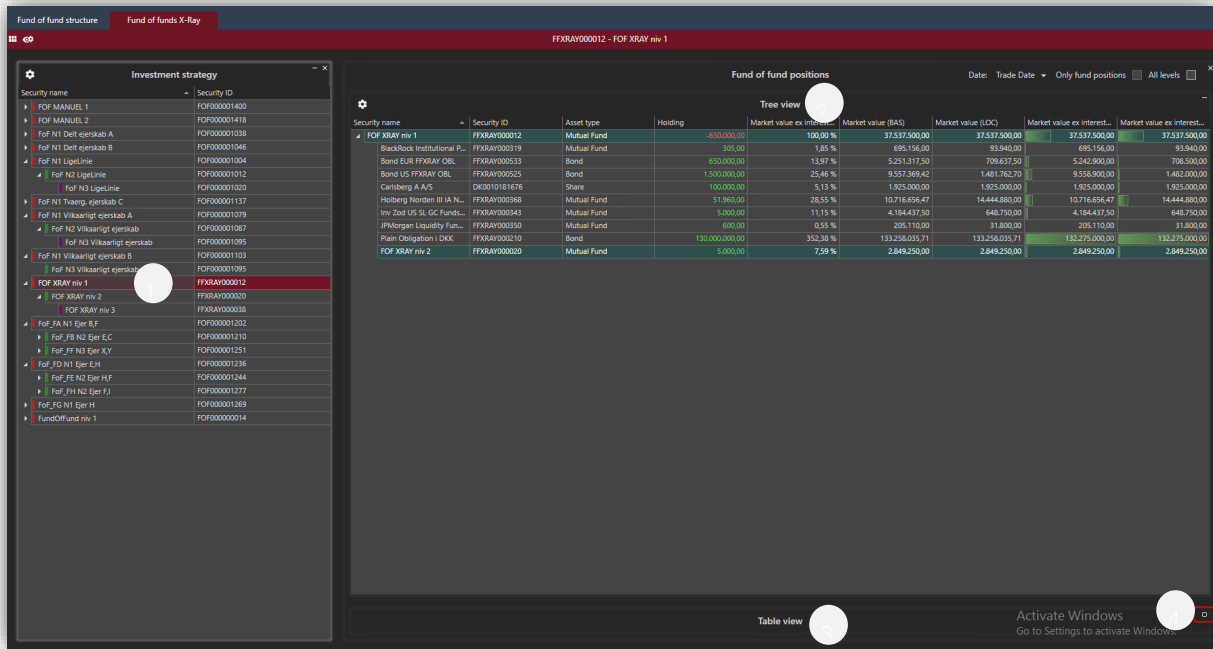
In both Tree view and Table view, the green-coloured rows indicate which positions that are Funds and which that are investments in other instruments.

2.4.1. Options

By using the options in the right upper corner, it is possible to determine how much to show of the branch and which date the calculated values should be based on.

1. Date
   a. Trade data
   b. Value date
2. Only fund positions
   a. Only Funds
   b. Funds and other investments/portfolios
3. All levels
   a. From selected parent down to the lowest level
   b. From selected parent and one level down
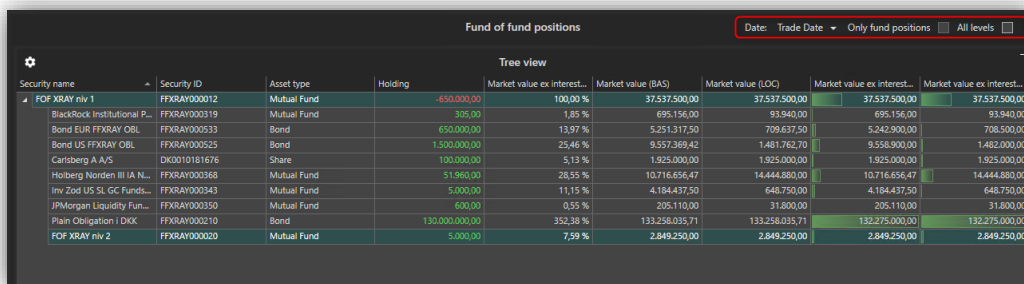
Option 2 and 3 can be combined showing exactly what you want to see. The table below shows the result of the combinations.

All levels – un-checked	All levels – checked

Only fund positions – un-checked	Showing children and investments one level down from selected parent	Showing all Funds and all investments from parent fund down to the lowest level
Only fund positions – checked	Showing children one level down from selected parent	Showing all Funds (children) from parent fund down to the lowest level

2.4.2. Calculated values – definition

For each fund / investment following values is calculated:

	Description
Market value (BAS)	Market value in client currency
Market value (LOC)	Market value in security currency
Market value ex interest (BAS)	Market value excl. interest in client currency
Market value ex interest (LOC)	Market value excl. interest in security currency
Market value ex interest % (BAS)	Shows in percentage how much the fund contributes to the market value of the parent / owner
Interest (BAS)	Interest in client currency
Interest (LOC)	Interest in security currency
Ownership % (BAS)	Shows in percentage how much of the fund's issued amount is owned by the fund's parent / owner

3. Print or export of data

It is possible to export or print the Fund of Funds data to e.g. Excel if you need to do additional work on some or all the data.

Appendix A – How to set up basic data for a Fund

From Client administration, you can add a new fund and fill in basic data for the fund.

1. Add a new client
   Mandatory fields:
   a. Name (necessary for the structure)
   b. Category = Fund
   c. Currency = choose one from picklist
   d. Fund type = choose one from picklist (except 'Not fund')

2. Add issuing portfolio, account and depository
   a. Add portfolio
      Portfolio no (need to have the lowest portfolio no)
      Portfolio type = Issuing

b. Add account
   Type of account = Bank account
   Fund account = Currency default
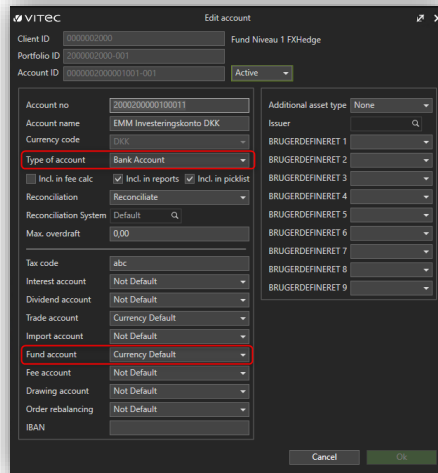
c. Add depository
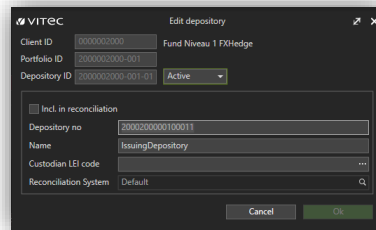
3. Add Asset portfolio, account and depository
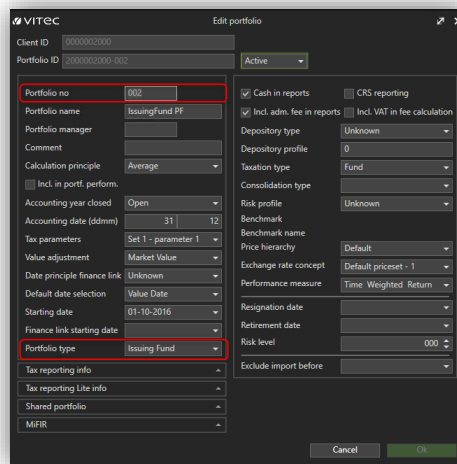
b. Add account
Type of account = Bank account
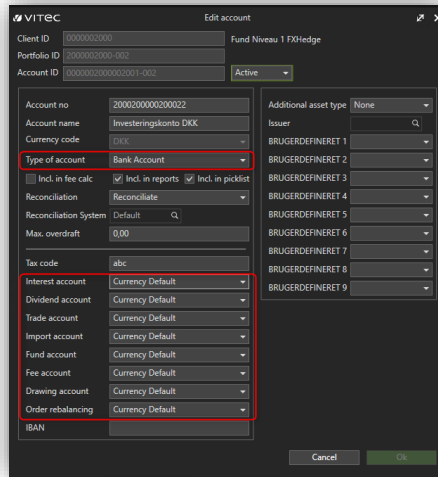
c. Add depository
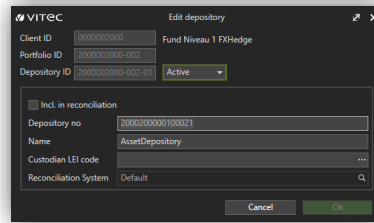
Optional – extra portfolio
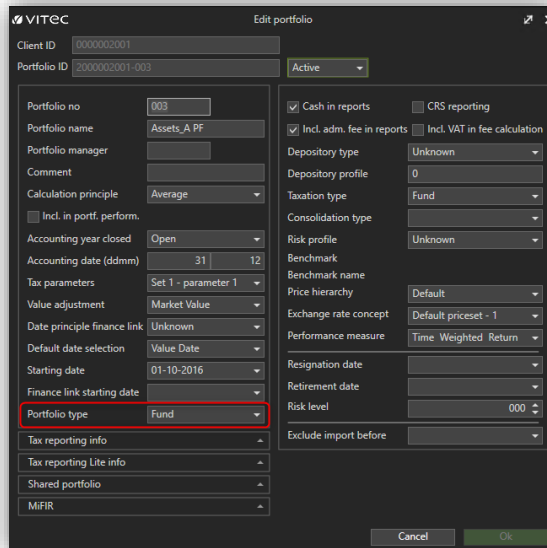
Appendix B – Import format

Funds must be imported to be displayed in Fund of Funds (basic FoF-relation). Relations between the Funds can be imported or added directly in PORTMAN.

> ### Step 1 - Basic FoF-relation
> Need to be imported for the Funds to show up in Fund of Funds. After a successful import, it is possible to set up the Fund of Funds structure.
>
> ### Step 2 - (Fund-to-Fund)-relation
> Relations between Funds can be imported or added directly in PORTMAN.
> It is recommended to use the PORTMAN client to set up these relations, if advanced relationships with many dependencies are figuring.

Step 1 - Basic FoF-relation

Import ID:

PM_PMFOF_FUND_IMPORT

Possible methods:

1. AppendOrUpdate
   New entries will be added and existing entries will be updated
2. AppendOnly
   a. New entries will be added and existing entries is not affected
   b. UpdateOnly
      New entries are ignored and existing entries is not affected
3. Replace
   New entries will be added and existing entries will be updated. All 'not delivered entries' will be deleted.

Structure:

```
<funddata>
   <foffund>
      Instrument                  (Instrument identification)
      Clientid
      Issuing_portfolio_nbr
      Asset_portfolio_nbr
   </foffund>
</funddata>
```

Description of the elements in the entry of the XML import file:

Element	Instrument	
Description	SecurityID - Instrument identification The currency code must be valid in PORTMAN	
Format	String Minimum 1 char Maximum 20 char	
Element	<instrument></instrument>	
Attibutes	Source	Mandatory
	Description	Which ID code is used
	Valid values	InstrumentId Isin Sedol Cusip Reuter Bloomberg FigiExhangeLevel ExternalId1 ExternalId2 Unknown
	CCY	Optional
	Description	Listing currency of the security ID
	Format	Lenth 3 char (A-Z)
Mandatory	Yes	

Element	ClientID
Description	Client / Fund The client/fund must be valid in PORTMAN
Format	Integer Length 10 digits
Element	<clientid></clientid>
Mandatory	Yes

Element	Issuing_portfolio_nbr
Description	Issuing portfolio Must be created in PORTMAN with portfolio type = 'Issuing fund'
Format	Integer Length 3 digits (000-999)
Element	<issuing_portfolio_nbr></ issuing_portfolio_nbr>
Mandatory	Yes

Element	Asset_portfolio_nbr
Description	Issuer/asset portfolio

	Must be created in PORTMAN with Portfolio type = 'Issuing'
Format	Integer Length 3 digits (000-999)
Element	<asset_portfolio_nbr></ asset_portfolio_nbr>
Mandatory	Yes

An example

```
<import xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
xmlns="http://www.aloc.dk/pm/pmfof" xsi:schemaLocation="http://www.aloc.dk/pm/pmfof
pmfof_funddata.xsd">
<section id="PM_PMFOF_FUNDDATA_IMPORT" method="AppendOrUpdate">
<!--  Replace, AppendOrUpdate, AppendOnly, UpdateOnly  -->

<entry>
    <funddata>
            <foffund>
            <instrument source="InstrumentId" ccy="DKK">FOF000000014</instrument>
            <clientid>0000002000</clientid>
            <issuingportfolioid>0000002000-001</issuingportfolioid>
            <assetportfolioid>0000002000-002</assetportfolioid>
            </foffund>
    </funddata>
</entry>
<entry>
    <funddata>
            <foffund>
            <instrument source="InstrumentId" ccy="DKK">FOF000000022</instrument>
            <clientid>0000002001</clientid>
            <issuingportfolioid>0000002001-001</issuingportfolioid>
            <assetportfolioid>0000002001-002</assetportfolioid>
        </foffund>
    </funddata>
</entry>
</section>
</import>
```

Step 2 - (Fund-to-Fund)-relation

Import ID:
PM_PMFOF_FUND_IMPORT

Possible methods:
1. AppendOrUpdate
   New entries will be added and existing entries will be updated
2. AppendOnly
   a. New entries will be added and existing entries is not affected
   b. UpdateOnly
      New entries are ignored and existing entries is not affected

3. Replace
New entries will be added and existing entries will be updated. All 'not delivered entries will be deleted.

Structure:

```
<funddata>
    <foffund>
        Instrument                    (Instrument identification)
        Clientid
        Issuing_portfolio_nbr
        Asset_portfolio_nbr
        <subfundrelations>
            Instrument                (Instrument identification for sub-fund)
        </subfundrelations>
    </foffund>
</funddata>
```

Description of the elements in the entry of the XML import file:

Element	Instrument		
Description	SecurityID - Instrument identification The currency code must be valid in PORTMAN		
Format	String Minimum 1 char Maximum 20 char		
Element	<instrument></instrument>		
Attibutes	Source		Mandatory
		Description	Which ID code is used
		Valid values	InstrumentId Isin Sedol Cusip Reuter Bloomberg FigiExhangeLevel ExternalId1 ExternalId2 Unknown
	CCY		Optional
		Description	Listing currency of the security ID
		Format	Lenth 3 char (A-Z)
Mandatory	Yes		

Element	ClientID
Description	Client / Fund The client/fund must be valid in PORTMAN
Format	Integer Length 10 digits

Element	<clientid></clientid>
Mandatory	Yes

Element	Issuing_portfolio_nbr
Description	Issuing portfolio Must be created in PORTMAN with portfolio type = 'Issuing fund'
Format	Integer Length 3 digits (000-999)
Element	<issuing_portfolio_nbr></ issuing_portfolio_nbr>
Mandatory	Yes

Element	Asset_portfolio_nbr
Description	Issuer/asset portfolio Must be created in PORTMAN with Portfolio type = 'Issuing'
Format	Integer Length 3 digits (000-999)
Element	<asset_portfolio_nbr></ asset_portfolio_nbr>
Mandatory	Yes

An example

```
<import xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
xmlns="http://www.aloc.dk/pm/pmfof" xsi:schemaLocation="http://www.aloc.dk/pm/pmfof
pmfof_funddata.xsd">
<section id="PM_PMFOF_FUNDDATA_IMPORT" method="AppendOrUpdate">
<!--  Replace, AppendOrUpdate, AppendOnly, UpdateOnly  -->
<entry>
    <funddata>
        <foffund>
        <instrument source="InstrumentId" ccy="DKK">FOF000000022</instrument>
        <clientid>0000002001</clientid>
        <issuingportfolioid>0000002001-001</issuingportfolioid>
        <assetportfolioid>0000002001-002</assetportfolioid>
        </foffund>
    </funddata>
</entry>
<entry>
    <funddata>
        <foffund>
        <instrument source="InstrumentId" ccy="DKK">FOF000000014</instrument>
        <clientid>0000002000</clientid>
        <issuingportfolioid>0000002000-001</issuingportfolioid>
        <assetportfolioid>0000002000-002</assetportfolioid>
        </foffund>
        <subfundrelations>
        <instrument source="InstrumentId" ccy="DKK">FOF000000022</instrument>
```

```
        </subfundrelations>
    </funddata>
 </entry>
</section>
</import>
```