Constructing a Model Portfolio

M⦿RNINGSTAR Direct

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Constructing a Model Portfolio

In this exercise guide, you will learn how to leverage some of the key features in Morningstar Direct, including the following tasks:

- Build your own portfolio from an Investment List
- Modify an existing portfolio
- How to handle Cash positions

The first step in creating a portfolio is to identify its investments. Once you have gone through your selection process, you can save those investments in an **Investment List** for easy access.

There are 3 main sections in Portfolio Management: **Model Portfolios** (for your portfolios, **Custom Benchmarks** (for mixed indices), and **Accounts** (for returns series or holdings import). The process for creating either item is similar.

We will be working with the **Model Portfolios** section. To create a new **Model Portfolio**, do the following:

1. In Morningstar Direct, select the **Portfolio Management** tab. The **Accounts** section is selected by default.
2. Click on **Model Portfolios**.
3. From the toolbar, click **New**. The **Model Portfolio Basics** window opens.

Exercise 1: Creating a Model Portfolio
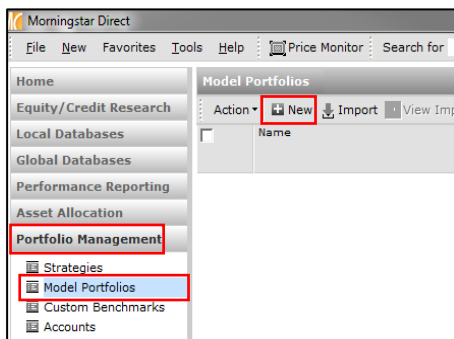
Be sure to select the correct tab and icon

4. Under **Name**, type **"My Portfolio"**.
5. Using the **Currency** drop-down menu, select **Euro** (or the currency of your choice).
6. Under Risk Free Proxy, set the risk-free rate of your choice using the magnifying glass.
7. Under **Portfolio ID**, type **"Portfolio123"**.
8. Under **Rebalancing frequency**, select **Monthly**.
9. Under **Performance calculation start date**, select **First Portfolio Date**.

Name	My Portfolio
Combined series	○ Yes ● No
Combined series:Yes	
Base series	
Operator	Arithmetic Addition
Second series	
Combined series:No	
Currency	Euro
Benchmark 1	MSCI Europe NR EUR
Benchmark 2	MSCI World NR EUR
Risk free proxy	Euribor 3 Month EUR
Portfolio ID	Portfolio123
Performance source	Calculated based on underlying positions
Management fee effective period	Entire period Custom period
Management fee %	
Fee applied*	Annually
Performance series	Daily
Rebalancing frequency	Monthly
Rebalancing based on	Calendar Period End
Performance calculation start date	First Portfolio Date

Enter/select information as appropriate

10. Choose your rebalancing frequency. In this exercise, we will use the information in **bold**.

Rebalancing Frequency	Rebalancing based on	Performance Calculation Start Date	Missing TNA Handling
Buy and Hold	-	Enter the date of those positions in the Holdings Entry dialogue box	
Monthly/Daily /Quarterly/ Semi-Annually/Ann ually	Calendar Period End: on the end period date (E.g; month end if monthly if monthly is selected) Rolling Period based on Portfolio Date: on the same day in the next period	First Portfolio Date: select specific date Earliest Available: date of the inception date of the oldest constituent Earliest Common: common period	
Monthly – Total Net Assets	-	-	Infer forward in time Infer backward in time Roll previous value forward
Buy and Hold – Total Net Assets	-	-	Infer forward in time Infer backward in time Roll previous value forward

☞ **Note:** Rebalancing with Monthly – Total Net Assets means the portfolio is rebalanced each month in proportion to the TNAs of the share classes as of that month end.

☞ **Note:** Rebalancing with Buy and Hold – Total Net Assets means the weightings are automatically updated as the latest month end date changes.

11. Click **Save**. The **Holdings Entry** dialogue box opens.

☞ **Note:** Regarding benchmarks: you have access to the **Market Indexes** database, as well as access to **Morningstar Indices**.

☞ **Note:** As mentioned earlier on in this document, Portfolio Management also allows you to create your own **Custom Benchmarks**. You can therefore go to **Portfolio Management > Custom Benchmarks** and create your own mixed index, following the same instructions as to create a Model Portfolio.

You are now able to select the investments for your Model Portfolio. You can select investments from an existing Investment List, or simply select your funds by looking for their **ISIN** or **SecId**.

Exercise 2: Selecting Constituents from an existing Investment List

☞ **Note:** It is recommended to use **SecId** (unique identifier) when working with investments such as ETFs or currency share classes that have the same ISIN as identifier.

There are three main tabs in the **Holdings Entry** dialogue box:

► **Stock/Fund**: select from the Stocks and Funds databases
► **Fixed Income**: select from the Bonds database
► **Cash**: select custom cash securities (set up in **Security Definition Master**)

To select investments, do the following:

1. Under the **Stock/Fund** tab, click **Add**. The **Add Holdings** dialogue box opens.

Click here to select investments
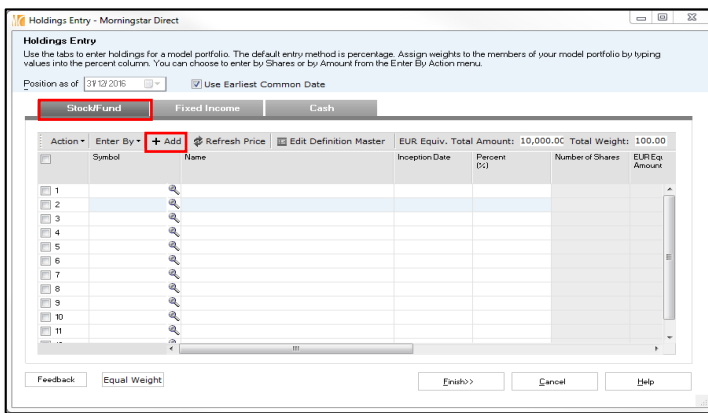
2. At the top of the dialogue box, select the **My Lists** radio button.

☞ **Note:** You can also select **Universes** and access the Morningstar databases, or **My Searches** and access your saved **Search Criteria**.

Select your Investment List and click **Go**

Click on **Add All** to select all investments
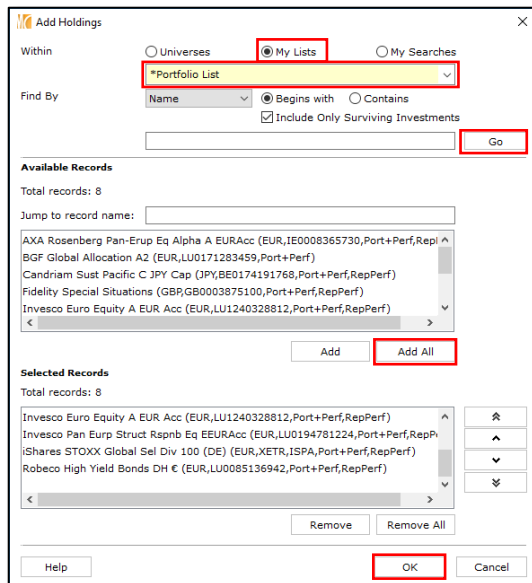
3. Click **OK** to close the dialogue box.

Back on the **Holdings Entry** dialogue box, we want to add some cash to our portfolio. But we first need to create the cash position in Security Definition Master in order for it to be recognised in the right currency.

Exercise 3: Creating a Custom Cash Position

To create a cash position, do the following:

1. From the **Holdings Entry** window, click the **Cash** tab.
2. Click **Edit Definition Master**. The **Definition Master** window opens on screen.
3. From the toolbar, click **Security Wizard**.

4. Under **Security Type**, select **Cash and Cash equivalents**.
5. In the **Description**, **CUSIP**, **ISIN**, and **Symbol** fields, type **Cash EUR**.
6. Under **Base Currency**, select **Euro Member Countries, Euro**.
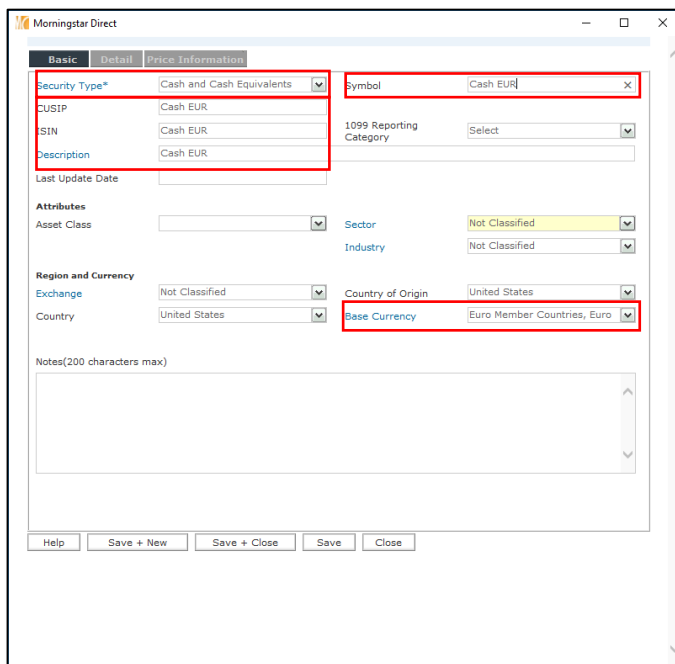
7. Click **Save + Close** and click **OK** on the prompt.

You are returned to the Definition Master window.

Note the new Cash position in Euro currency.
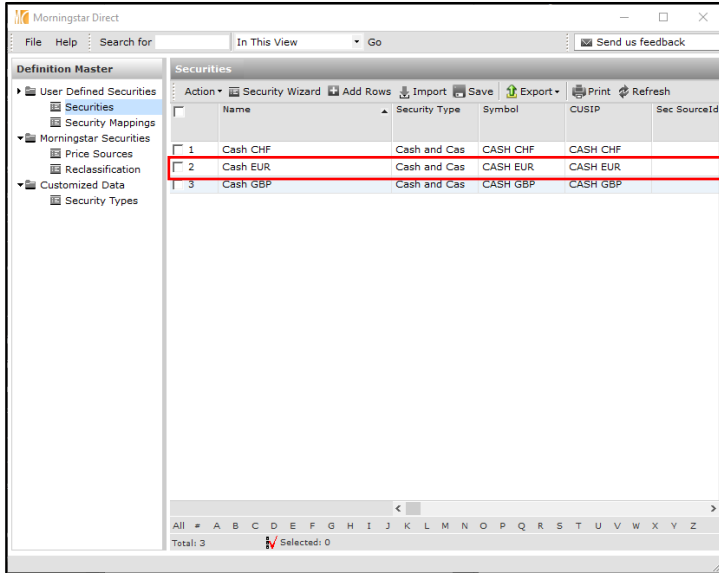
8. Close the window to return to the Holdings Entry window.
9. Click **Add**. The **Add Holdings** dialogue box opens.
10. In the **Search** field, type **cash eur**, click **Go**.
11. Select your custom cash and click **Add**.
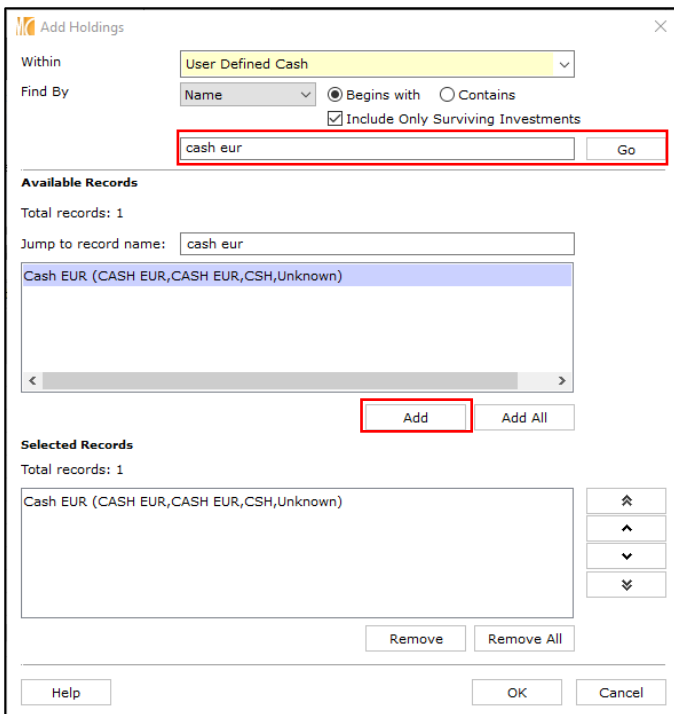
Add your cash position

12. Click **OK**.

Back in the **Holdings Entry** window, we can now allocate weights to our positions.

1. Assign **5%** to your cash.

2. Click the **Stock/Fund tab**.
3. Assign the following weights to the remaining holdings:

Fund	Weight
AXA Rosenberg Pan-Eurp Eq Alp A EUR	12.5
BGF Global Allocation A2	10
Candriam Sust Pacific C Acc	15
Fidelity Special Situations	10
Invesco Euro Equity A EUR Acc	12.5
Invesco European Growth Equity E	10
iShares STOXX Global Sel Div 100 (DE)	15
Robeco High Yield Bonds DH EUR	10
Cash EUR	5

4.   Using the calendar next to **Position as of**, set the date to **01/01/2016**.
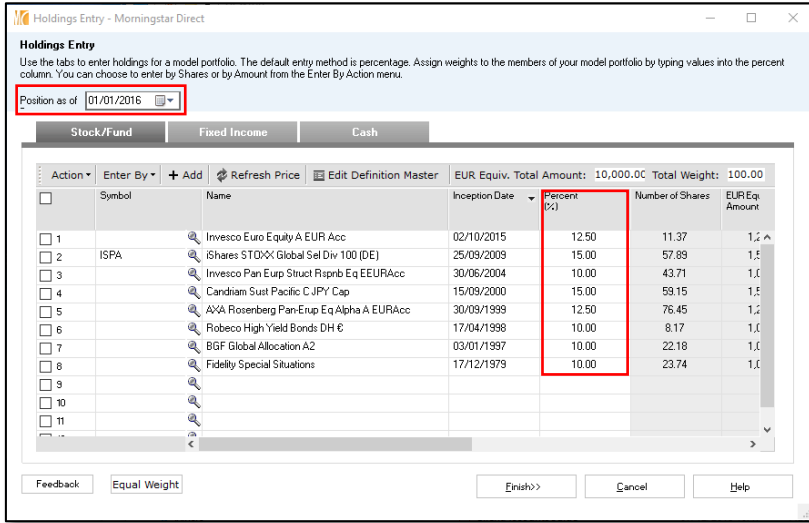
Enter weights and set the date to 01/01/2016

☞   **Note:** You can enter positions by weight, amount or number of shares. To do so, click **Enter By** and select the appropriate option.

1.   Click **Finish**.

Your portfolio is now saved and opens on screen.
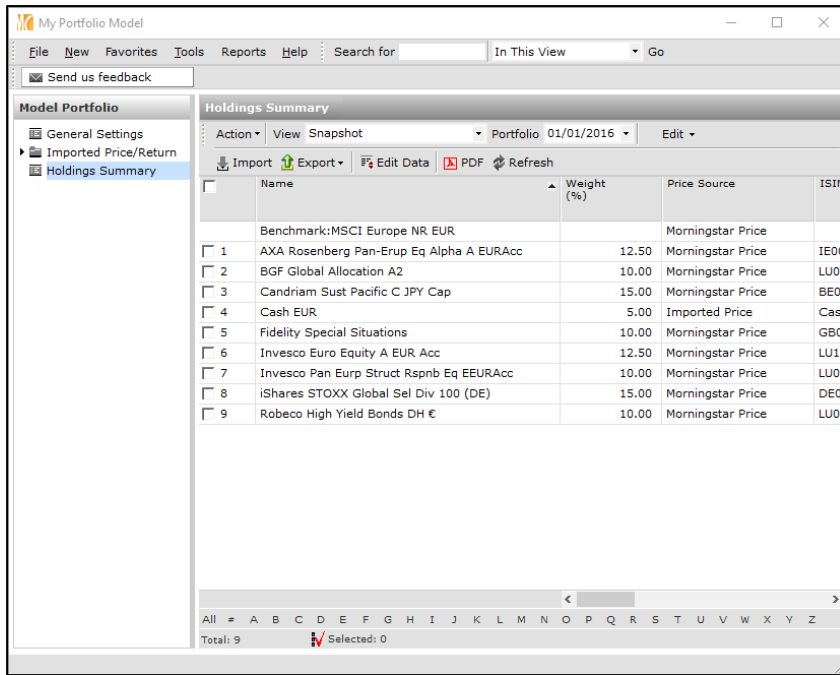
We now want to record a change in our portfolio over time. We will therefore create a new date with the composition of the portfolio on this date and time.

To record a change in the portfolio, do the following:

1. From the toolbar in your Model Portfolio window, click on the arrow next to **Edit > New Portfolio**.

*Click on the arrow and then on **New Portfolio***
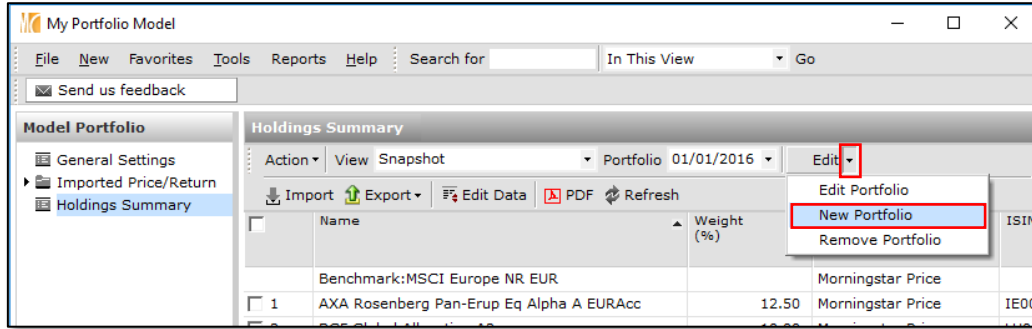
2. The **Portfolio Date Selection** dialogue box opens.
3. Enter the date of the change in positions allocation: **15/06/2016**.
4. Select **Modify Constituents from an Existing Portfolio** to copy the previously selected constituents.
5. Select **Retain Weights** to work with weights.
6. Choose the original portfolio date you want to work with (only one in this case).
7. Click **OK**.
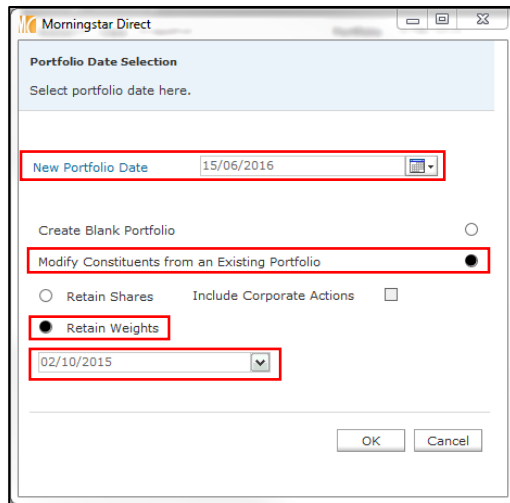
Use the highlighted options

You are taken back to the **Holdings Entry** dialogue box. We want to remove the last security from our portfolio.

8. Tick the checkbox next to the name of the last security in your list.
9. Go to **Action > Delete Rows**.

Use the highlighted options

10. Assign 15% to **Fidelity Special Situations** and **BGF Global Allocation A2**.
11. Click **Finish**.

The change in portfolio composition has now been recorded. You can use the **Portfolio** drop-down menu to toggle between the dates.

Use this drop-down menu to toggle between dates

Close the **Model Portfolio** window by clicking on the red cross in the top-right corner.
You are taken back the Model Portfolios section of Portfolio Management.

We want to assign a mixed benchmark to this model portfolio. To do that, we first need to create it. The steps are the same as when you create a Model Portfolio, but you would do so in the Customer Benchmarks section.

To create a Custom Benchmark, do the following:

1. From the Portfolio Management section in the Navigation panel, click Custom Benchmarks.
2. Click **New**. The **Benchmarks Basics** window opens.
3. Under **Name**, type **"My Benchmark"**.
4. Set the **Currency** to **Euro**.
5. Using the **Rebalancing frequency** drop-down menu, select **Monthly**.
6. Using the **Performance calculation start date** drop-down menu, select **Earliest Common**.
7. Click **Save**. The **Holdings Entry** window opens.
8. Click **Add** and select the following indices and weights:

Benchmark	SecId	Weights %
Cat 50%Barclays US Agg TR&50%FTSE Wld TR	XIUSA04GT8	15
FTSE AllSh TR GBP	XIUSA04CGI	10
ICE BofA Gbl HY Constnd TR HEUR	FOUSA06W37	20
MSCI AC Asia Pacific NR USD	XIUSA04EW7	10
MSCI Europe Large NR EUR	F00000UX0N	35
MSCI World High Dividend Yield NR USD	FOUSA06OZ9	10

Position as of 05/06/2007

	Stock/Fund	Fixed Income	Cash

Action ▾ | Enter By ▾ | ＋ Add | ⟳ Refresh Price | 🖹 Edit Definition Master | EUR Equiv. Total Amount: 10,000.

	Symbol	Name	Inception Date	Percent (%)
☐ 1	🔍	Cat 50%Barclays US Agg TR&50%FTSE Wld TR	31/12/1993	15.00
☐ 2	🔍	FTSE AllSh TR GBP	31/12/1985	10.00
☐ 3	🔍	ICE BofA Gbl HY Constnd TR HEUR	31/12/1997	20.00
☐ 4	🔍	MSCI AC Asia Pacific NR USD	31/12/1998	10.00
☐ 5	🔍	MSCI Europe Large NR EUR	05/06/2007	35.00
☐ 6	🔍	MSCI World High Dividend Yield NR USD	31/10/2006	10.00

9. Click **Finish**.

Your Custom Benchmark is saved. We can now assign it to the Model Portfolio we created.
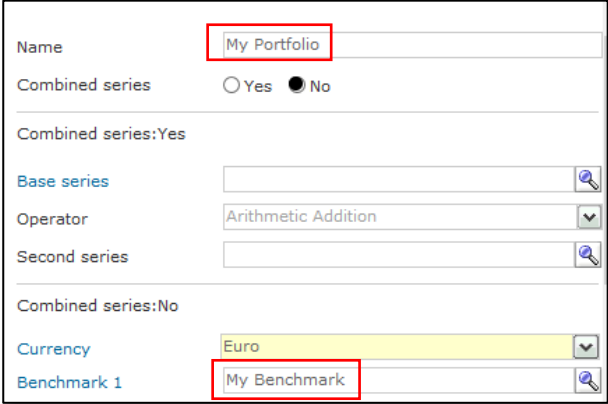
Assigning a Custom Benchmark to a Model Portfolio will ensure this both will display in Interactive Desktop charts and report generated from the Portfolio Management module.

To assign a Custom Benchmark to a Model Portfolio, do the following:

1. From the **Portfolio Management** section, click **Model Portfolios**.
2. Double-click on the Model Portfolio labelled **"My Portfolio"** to open it.
3. Click **General Settings** on the left navigation panel.
4. Under **Benchmark 1**, click the **magnifying glass**. The **Select Benchmark** window opens.
5. Using the drop-down menu, select **Custom Benchmarks**.
6. Click **Go**.
7. Select **"My Benchmark"**.
8. Click **OK**.
9. Scroll down and click **Save**.

Exercise 7: Assigning a Custom Benchmark to a Model Portfolio

The Custom Benchmark is now assigned to the Model Portfolio.

Name	My Portfolio
Combined series	○ Yes ● No
Combined series:Yes	
Base series	
Operator	Arithmetic Addition
Second series	
Combined series:No	
Currency	Euro
Benchmark 1	My Benchmark

We now want to see how this portfolio fairs against its benchmark in a growth chart.

To do so, do the following:

1. Tick the checkbox next to the portfolio you created.
2. Go to **Action > Interactive Charts > Desktop-based Charts > Growth**.
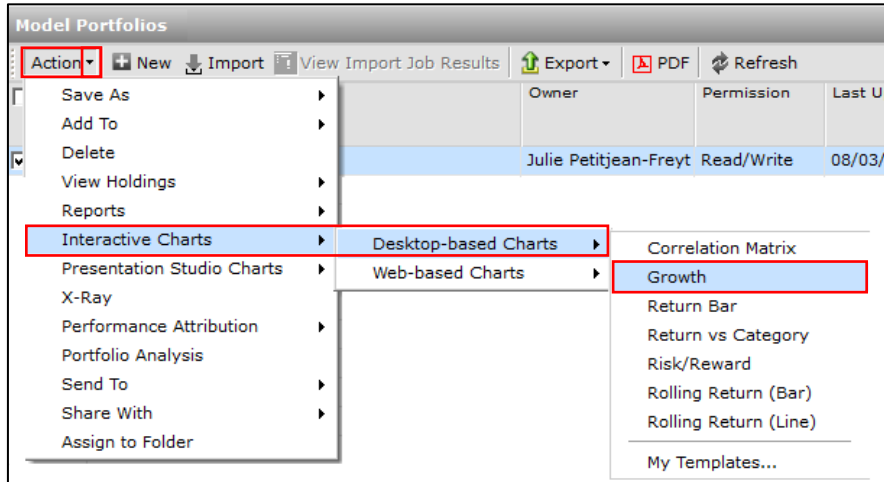
The **Growth** chart displays your portfolio as well as the benchmark you selected. Various options are available to customise the data, such as Chart View, Initial Value, Time Range, Currency, etc.
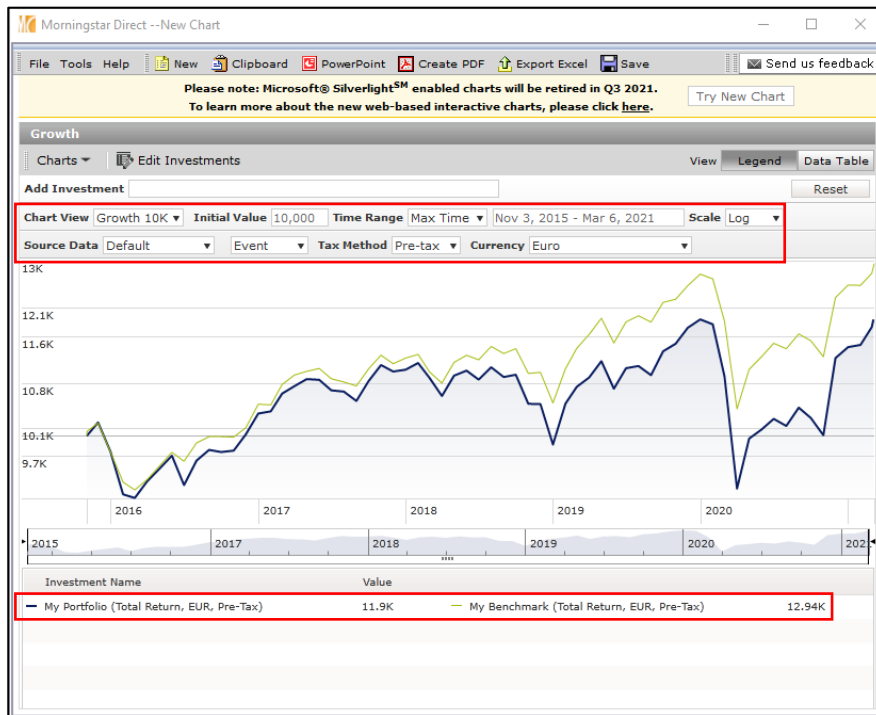
Note how both the Model Portfolio and its assigned Custom Benchmark are displayed on the chart.

You can easily generate a report for further quick analysis of your Model Portfolio. This report will give an overview of the portfolio exposure, risk and return, as well as the top 25 stocks within your portfolio.

Exercise 9: Generating the Portfolio Aggregation report

To generate this report, do the following:

1. From **Portfolio Management > Model Portfolios**, tick the checkbox next to your portfolio name.
2. Go to **Action > Reports > Portfolio Aggregation**.
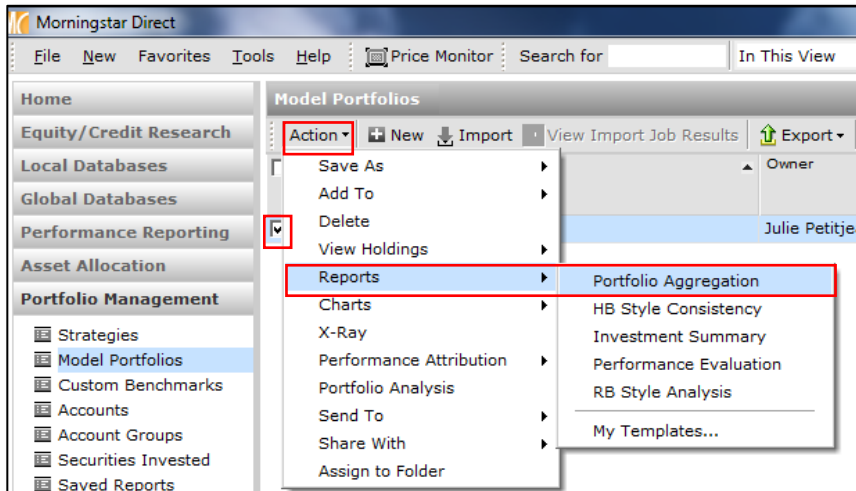
Select the **Portfolio Aggregation** report

The **Portfolio Aggregation** dialogue box opens. You will notice how the relevant Benchmark, Risk-Free rate and Currency assigned to the portfolio are selected.
You may decide to add a summary page for each constituent of your portfolio from the **Append constituent summary page** drop-down menu.

You can also select partial or all sections of the report.

3. Leave all options as shown in the screenshot below and click **OK**.
4. Click **No** on the prompt.
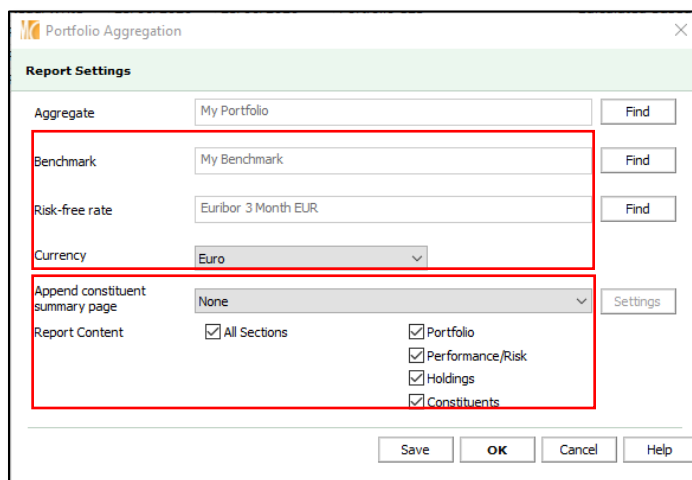
The Benchmark, Risk-Free rate and Currency settings are automatically filled in

Choose which information to display

The **Portfolio Aggregation** report opens. You can save it by clicking on the **Save**
icon that appears when hovering on the top of the page.

An **Import** function is also available for Model Portfolios. This function can save you a tremendous amount of time in creating new Model Portfolios or updating existing ones. We are going to record additional changes over time for our current Model Portfolio.

Exercise 10: Using the Import function

To do so, you need to create an Excel file with the following information:

- ► **Date** – date of the positions
- ► **Portfolio Name** – name of your portfolio
- ► **Portfolio ID** – identifier you entered under General Settings
- ► **Identifier** – constituent's identifier
- ► **Holdings** – constituent's name
- ► **Weight (%)** – percentage of the position

    ☞ **Note:** You can also work with **Number of Shares/Amounts** instead of **Weights**.

Date	Portfolio Name	Portfolio ID	Identifier	Holdings	Weight (%)
21/09/2016	My Portfolio	Portfolio123	IE0008365730	AXA Rosenberg Pan-Eurp Eq Alp A EUR	15.00
21/09/2016	My Portfolio	Portfolio123	LU0171283459	BGF Global Allocation A2	7.50
21/09/2016	My Portfolio	Portfolio123	BE0174191768	Candriam Sust Pacific C Acc	15.00
21/09/2016	My Portfolio	Portfolio123	GB0003875100	Fidelity Special Situations	10.00
21/09/2016	My Portfolio	Portfolio123	LU1240328812	Invesco Euro Equity A EUR Acc	12.50
21/09/2016	My Portfolio	Portfolio123	LU0194781224	Invesco European Growth Equity E	12.50
21/09/2016	My Portfolio	Portfolio123	DE000A0F5UH1	iShares STOXX Global Sel Div 100 (DE)	12.50
21/09/2016	My Portfolio	Portfolio123	LU0085136942	Robeco High Yield Bonds DH EUR	7.50
21/09/2016	My Portfolio	Portfolio123	Cash EUR	Cash EUR	7.50
16/03/2017	My Portfolio	Portfolio123	IE0008365730	AXA Rosenberg Pan-Eurp Eq Alp A EUR	12.50
16/03/2017	My Portfolio	Portfolio123	LU0171283459	BGF Global Allocation A2	15.00
16/03/2017	My Portfolio	Portfolio123	BE0174191768	Candriam Sust Pacific C Acc	12.50
16/03/2017	My Portfolio	Portfolio123	GB0003875100	Fidelity Special Situations	10.00
16/03/2017	My Portfolio	Portfolio123	LU1240328812	Invesco Euro Equity A EUR Acc	10.00
16/03/2017	My Portfolio	Portfolio123	LU0194781224	Invesco European Growth Equity E	15.00
16/03/2017	My Portfolio	Portfolio123	DE000A0F5UH1	iShares STOXX Global Sel Div 100 (DE)	12.50
16/03/2017	My Portfolio	Portfolio123	LU0085136942	Robeco High Yield Bonds DH EUR	7.50
16/03/2017	My Portfolio	Portfolio123	Cash EUR	Cash EUR	5.00

The Portfolio Name and Portfolio ID ensure the correct Model Portfolio is updated

Note the various dates, indicating 2 changes in our portfolio

The file contains positions for the same portfolio, but with two different dates, which indicates a change in the positions on two different occasions.

To proceed with the import, do the following:

1. Download the file used in this exercise by clicking here.
2. From the Portfolio Management module under the Model Portfolios section, click **Import**.
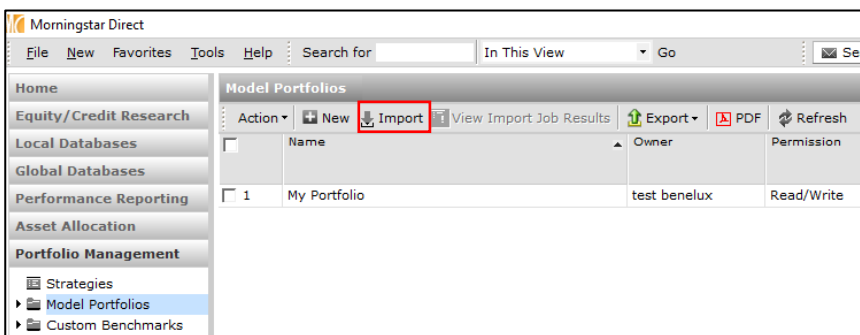
Click on **Import**

3. From the **Import** window, double-click on **Model Portfolio Holdings**. The **Model Portfolio Holdings** dialogue box opens.
4. **File Name**: browse to select your saved Excel file.
5. **Date format**: select the relevant format.
6. **Weight format**: in this example, we will select **Percentage Format**.
7. **Security ID Type** can be left on **Auto** Detect.
8. **Header Row** checkbox: leave it selected if your Excel file contains a header row.
9. Map the **Column Code** with the **Column No.** columns.

Model Portfolio Holdings

Model Portfolio Holdings

File Name	C:\Users\jpetitj\Desktop\Model Portfolio import.xlsx	🔍
Date Format	DD/MM/YYYY ∨	Weight Format	Percentage Forma ∨
Security ID Type	Auto Detect ∨
Header Row	☑

Select your file and any relevant settings

Available Templates

Column Code	Column No.
Portfolio Date	Column A (Date)
Portfolio Id	Column C (Portfolio ID)
Portfolio Name	Column B (Portfolio Name)
Holding Identifier	Column D (Identifier)
Holding Description	Column E (Holdings)
Share	Select...
Price	Select...
Market Value	Select...
Coupon	Select...
Maturity Date	Select...
Currency	Select...
Weight	Column F (Weight (%))

Click on the relevant row in the right column and a drop-down menu opens to map items

Import   Cancel

10. Click on **Import** and the **Blotter** opens.

The **Blotter** is a temporary space where your positions are held until you validate the information.

You will be notified of any errors or inconsistencies. In this example, a new user-defined security is highlighted in the left panel.

To work with user-defined securities, do the following:

1. From the **Securities** section, click **New User-Defined Securities**.
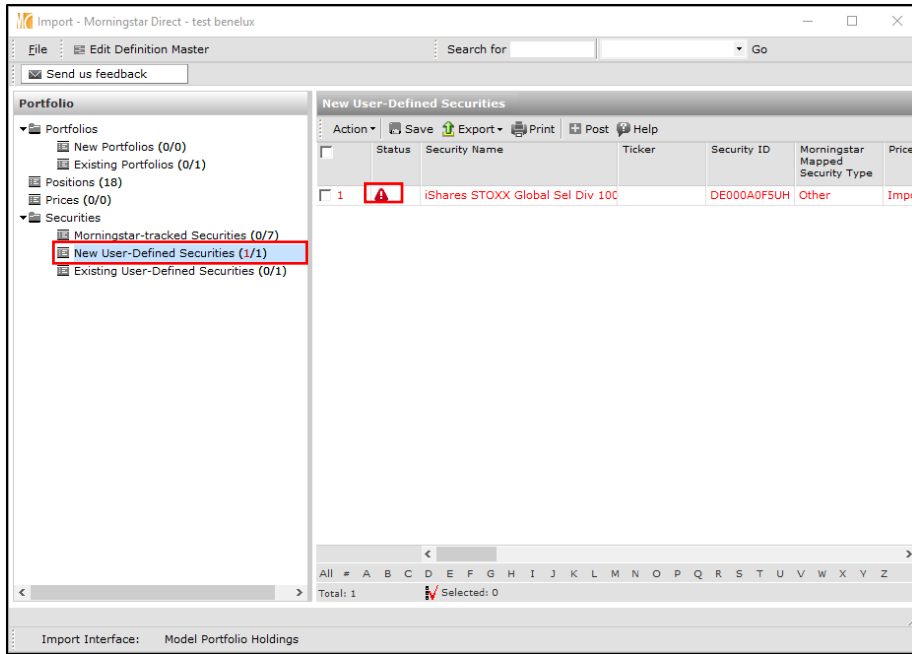
The iShares STOXX Global ETF is flagged in red with a warning sign.

When importing stocks and ETFs, you will be prompted to map the exchange for that particular investment. Once done, this will be mapped in Security Definition Master and you will not be required to do this again for this Model Portfolio.

2. Double-click on the red warning sign. The **Select the matching security** window opens.

☞ **Note:** The **Representative Performance Stream** column identifies the primary listing for this ETF.

3. Select the primary class, indicated by a Yes under the Representative Performance Stream column.

☞ **Note:** If you click **Save as User-Defined**, this will be saved in **Definition Master** and the system will remember this information during the next import for this model portfolio.

4. Click **OK**.
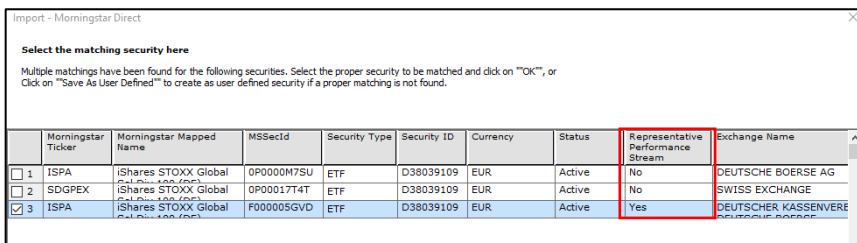
5.   Click **Save**.

A prompt confirms the changes were saved, and there is no more warning under **New User-Defined Securities** on the left navigation panel.

6.   From the toolbar, click **Post**.
7.   When prompted, click **OK** and close the **Import** window by clicking on the red cross in the top-right corner.

You are taken back to the **Model Portfolios** section.

Open your portfolio and notice how the dates were successfully recorded.

Stocks and ETFs are listed on multiple exchanges in the Morningstar Database.

When importing this type of investments using ISIN, you will be prompted to select the right exchange during the import process, as seen in .

Morningstar Direct offers a couple of options to deal with situation when importing Model Portfolios:

Appendix A: Tips when Importing ETFS and Stocks

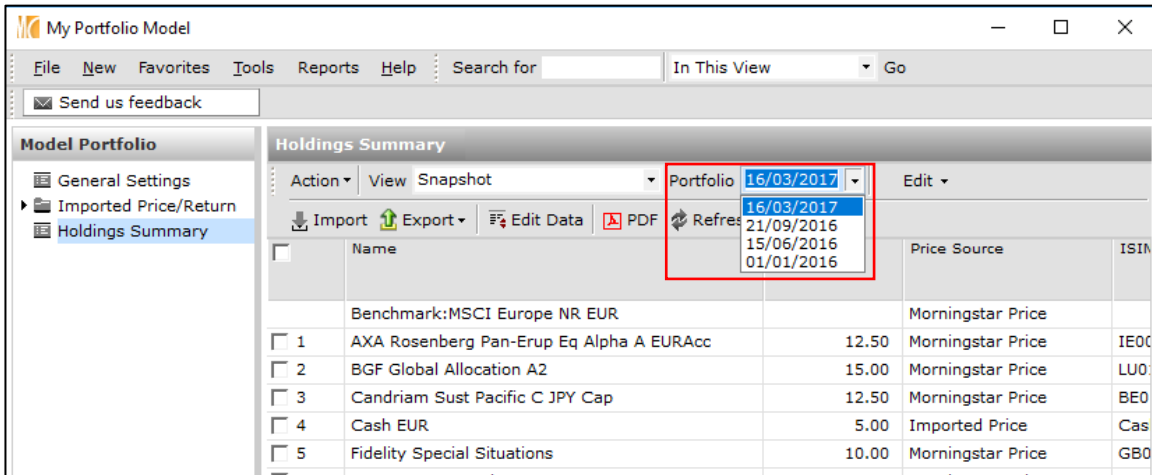► Use SecId as identifier during import: an ETF/Stock listed on multiple exchanges will have a different SecId depending on the exchange it's listed on. By using the SecId as identifier for the ETF/Stock on the specific exchange you require in your import file, Morningstar Direct will automatically select the appropriate exchange.

Date	Portfolio Name	Portfolio ID	Identifier	Holdings	Weight (%)
21/09/2016	My Portfolio	Portfolio123	IE0008365730	AXA Rosenberg Pan-Eurp Eq Alp A EUR	15.00
21/09/2016	My Portfolio	Portfolio123	LU0171283459	BGF Global Allocation A2	7.50
21/09/2016	My Portfolio	Portfolio123	BE0174191768	Candriam Sust Pacific C Acc	15.00
21/09/2016	My Portfolio	Portfolio123	GB0003875100	Fidelity Special Situations	10.00
21/09/2016	My Portfolio	Portfolio123	LU1240328812	Invesco Euro Equity A EUR Acc	12.50
21/09/2016	My Portfolio	Portfolio123	LU0194781224	Invesco European Growth Equity E	12.50
21/09/2016	My Portfolio	Portfolio123	F000005GVD	iShares STOXX Global Sel Div 100 (DE)	12.50
21/09/2016	My Portfolio	Portfolio123	LU0085136942	Robeco High Yield Bonds DH EUR	7.50
21/09/2016	My Portfolio	Portfolio123	Cash EUR	Cash EUR	7.50
16/03/2017	My Portfolio	Portfolio123	IE0008365730	AXA Rosenberg Pan-Eurp Eq Alp A EUR	12.50
16/03/2017	My Portfolio	Portfolio123	LU0171283459	BGF Global Allocation A2	15.00
16/03/2017	My Portfolio	Portfolio123	BE0174191768	Candriam Sust Pacific C Acc	12.50
16/03/2017	My Portfolio	Portfolio123	GB0003875100	Fidelity Special Situations	10.00
16/03/2017	My Portfolio	Portfolio123	LU1240328812	Invesco Euro Equity A EUR Acc	10.00
16/03/2017	My Portfolio	Portfolio123	LU0194781224	Invesco European Growth Equity E	15.00
16/03/2017	My Portfolio	Portfolio123	F000005GVD	iShares STOXX Global Sel Div 100 (DE)	12.50
16/03/2017	My Portfolio	Portfolio123	LU0085136942	Robeco High Yield Bonds DH EUR	7.50
16/03/2017	My Portfolio	Portfolio123	Cash EUR	Cash EUR	5.00

► Use the ETF/Stock listed on the primary exchange. There is an option you can select to automate this process:

1. Go to **File > Set User Preferences > Import tab.**
2. Select the checkbox for **Auto-Select Representative Performance Stream Investments.**

This option will automatically select ETFs and Stocks on their primary listing when importing Model Portfolios.

▶ Another option is to apply filters for Exchanges and Currencies when running an import.

When importing a model portfolio with ETFs/Stocks on various exchanges, you can assign a preferred order in your exchange and currency selection.

To use this function, do the following:

1. Go to **File > Set User Preferences > Import tab**.
2. Under the Choose your investment matching filter settings, click Set Exchange Filter.
3. Click **Add/Remove Exchanges**.
4. As an example, select the following exchanges:
   o Euronext Paris S.A., FRA
   o Euronext Amsterdam, NLD
   o Borse Berlin – Freiverkehr, DEU
5. Select **Import Match**.
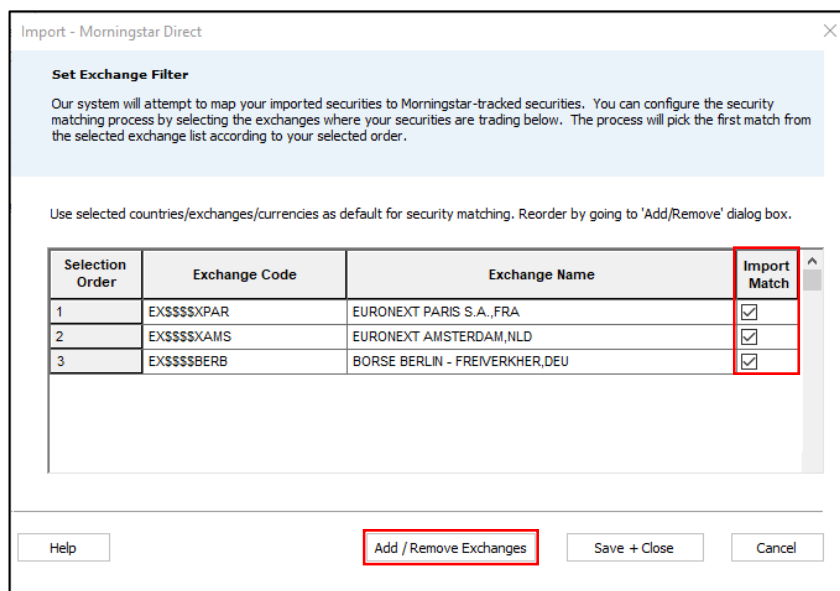
By setting up those filter options, any ETFs/Stocks listed on those exchanges will be mapped to them during import, in order of preference.

You could apply a similar mapping by currencies, which can be useful for multi-currency open-end funds sharing the same ISIN.

A Combined Series option exists for Accounts, Model Portfolios and Custom Benchmarks, but this tends to be more used for Custom Benchmarks.

Appendix B: Using Combined Series

Combined Series deal with manipulating return series rather than having holdings with different weights or market values like a traditional model.

The Combined Series options are as follows:

▸ Arithmetic Addition/Subtraction: add or subtract the returns of two series (usually used for combining indexes). For example, the S&P 500 returns 12% and the US Agg returns 2%. The combined series of these two would show a return of 14%.

▸ Geometric Addition/Subtraction: same as the above except that it takes compounding into account.

▸ Arithmetic Addition/Subtraction of a Constant: take a base series (usually an index) and add or subtract a constant value. This can be applied daily, monthly, quarterly, semi-annually or annually. For example, Euribor 3 Months returns +/- 2%.

▸ Geometric Addition/Subtraction of a Constant: same as the above except that it takes compounding into account.

▸ Currency Hedging: using derivatives to eliminate (hedge away) the risk of currency rates changing.

☞ **Note:** Important side note: Combined Series models cannot be added as a holding in another model. For weighted blends, you would create a non-combined series model and add the two underlying models as holdings, weighting them, for example, at 60% and 40%.

As an example, we will create an addition of 2% annually to a risk-free rate. Do the following:

1. From the Portfolio management module, click **Custom Benchmarks**.
2. Click **New**. The **Benchmark Basics** window opens.
3. In the **Name** field, type **"Euribor +2%"**.
4. Under **Combined Series**, click the **Yes** radio button to activate this function.

   ☞ **Note:** As you activate this function, all options under the **Combined Series: No** section are greyed out.

5. Under **Base Series**, click the magnifying glass. The **Select Series** window opens.
6. In the **Find By** search field, type **"Euribor 3 m"** (or any other risk-free name of your choice).
7. Click **Go**.
8. Select **Euribor 3 Month EUR**.
9. Click **OK**. You are returned to the **Benchmark Basics** window.

10. Using the **Operator** drop-down menu, select **Arithmetic addition of a constant**. The Constant % field appears.
11. In the **Content %** field, type **2**.
12. Using the **Per** drop-down menu, select **Annually**.

13. Click **Save**.

You have now created a custom benchmark composed of a risk-free rate +2% annually.