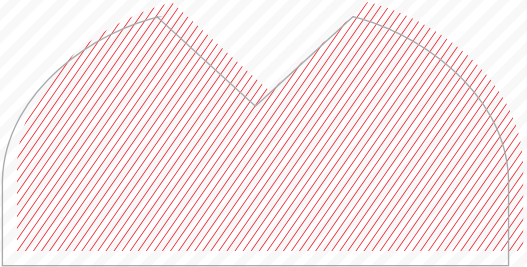
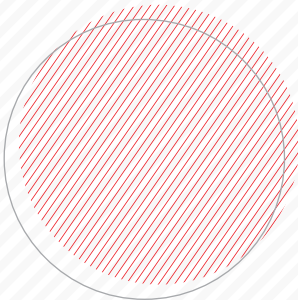
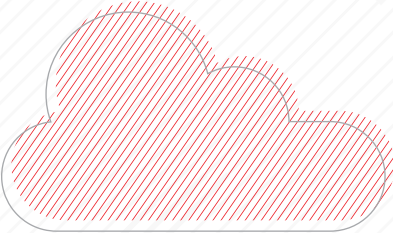
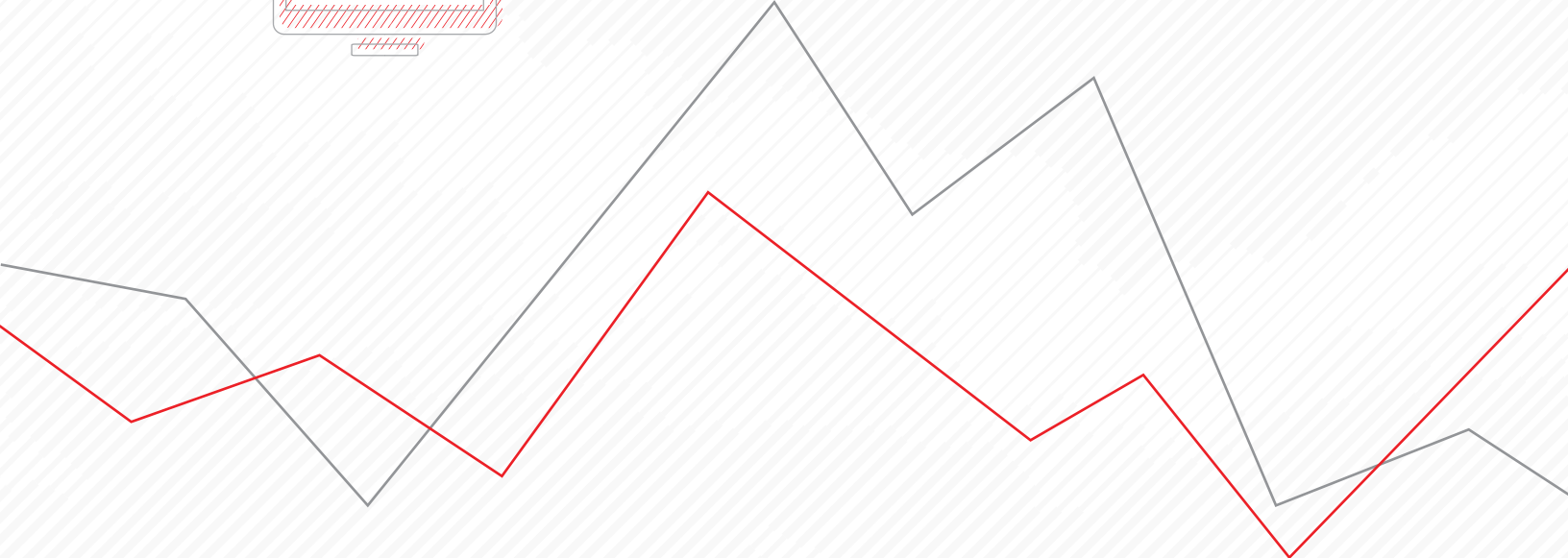


Workshop Training Guide
Morningstar Direct



MORNINGSTAR Direct



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Viewing the Market through the Lens of Morningstar DirectSM

In this workshop, you will learn how to leverage some of the key features in Morningstar DirectSM in the following lessons:

- ▶ Reviewing stock sector performance
- ▶ Evaluating asset flow data in Morningstar Direct
- ▶ Identifying funds with consistent top performance
- ▶ Using portfolio attribution to understand performance
- ▶ Managing a portfolio in Morningstar Direct
- ▶ Using Presentation Studio to compare model portfolios

Class Overview

In this workshop, you will work in several Morningstar Direct modules

The screenshot displays the Morningstar Direct interface. At the top, there's a navigation menu with options like 'File', 'New', 'Favorites', 'Tools', 'Help', and 'QuoteSpeed'. Below this is a search bar and a 'Send us feedback' button. The main area is divided into several sections:

- Left Panel:** A sidebar with 'Folders' and 'Performance Reporting' sections. Under 'Folders', there are options like 'Advanced Exa', 'All Reports', 'Inbox', 'Archive', and 'Templates'. Under 'Performance Reporting', there are 'Reports' and 'Batches'.
- Table:** A table listing various funds with columns for 'Name', 'Return (Cumulative)', 'Peer group %', 'Return (Annualized)', 'Peer group %', 'Return (Annualized)', and 'Peer group %'. The table is filtered for 'US OE Small Value' funds.
- Bottom Left:** A table titled 'Small Value Approved' with columns for 'Name', 'Benchmark', 'Report', 'Active Reth-Unclassif', 'Selection N-Unclassif', 'Allocation N-Unclassif', 'Active Reth-Cash', and 'Selection N-Cash'. It lists several funds under the 'US OE Small Value' category.
- Bottom Right:** A series of charts and graphs. One chart shows 'Estimated Net Asset Flows in \$Millions (Month-End) - Share Class' with a bar chart. Another shows 'Estimated Net Asset Flow in \$Millions (Month-End) - Fund' with a bar chart. A third chart shows 'Over/Under Benchmark Performance' with a line graph comparing 'US Small Instl' to a benchmark.

Reviewing Stock Sector Performance

Overview

You can sometimes find and present the same information in Morningstar Direct in more than one way. How you deliver the information is both a matter of choice, and the skills you have with the software. This scenario allows you to find the same set of data multiple ways, as well as present it in more than one fashion.

Scenario

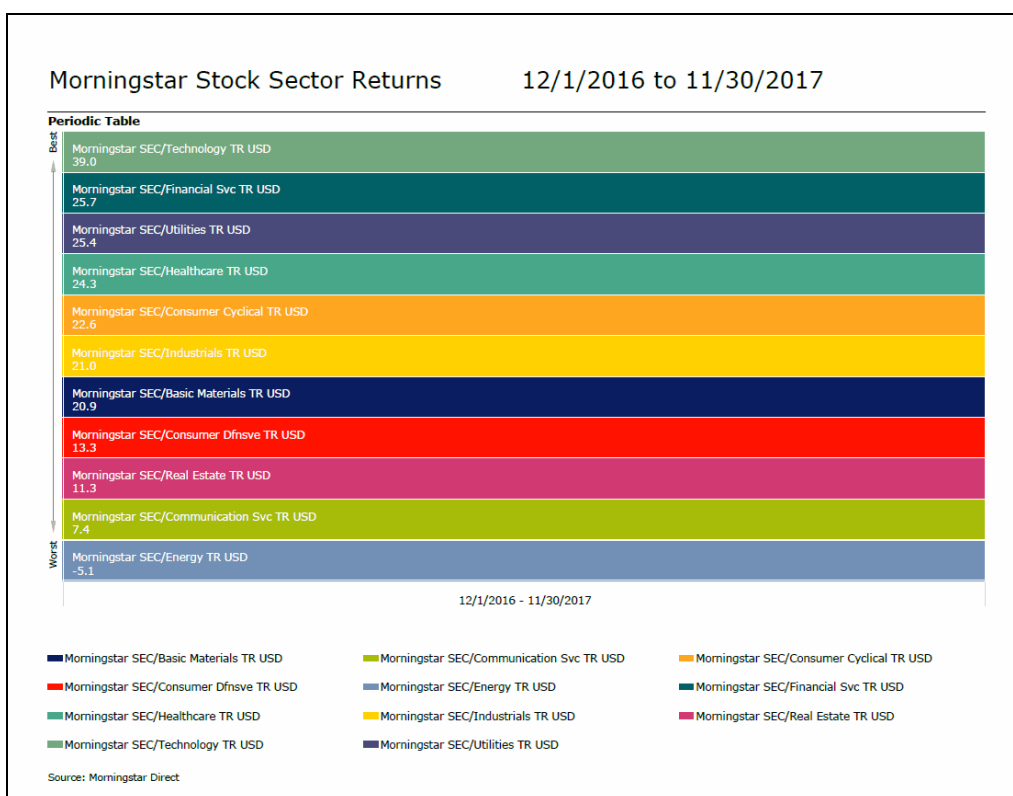
As part of a review of fund flow data, your manager has asked you to identify how the various Morningstar stock sectors have performed during the trailing one-year period. Your manager, however, did not specify whether this information should be presented graphically, or as a set of data.

Solution

In Presentation Studio, you will illustrate stock sector performance by creating a workbook template and including the Markets Periodic Table. You will need to customize it to show the Morningstar Stock Sectors and only the trailing one-year time period.

In the event your manager prefers to see this information as a data set, you will also use the Workspace module to create a list of indexes tied to the stock sectors, and save the list in a view showing returns data.

Data presented via a report may be more easily understood than seeing it in a grid view



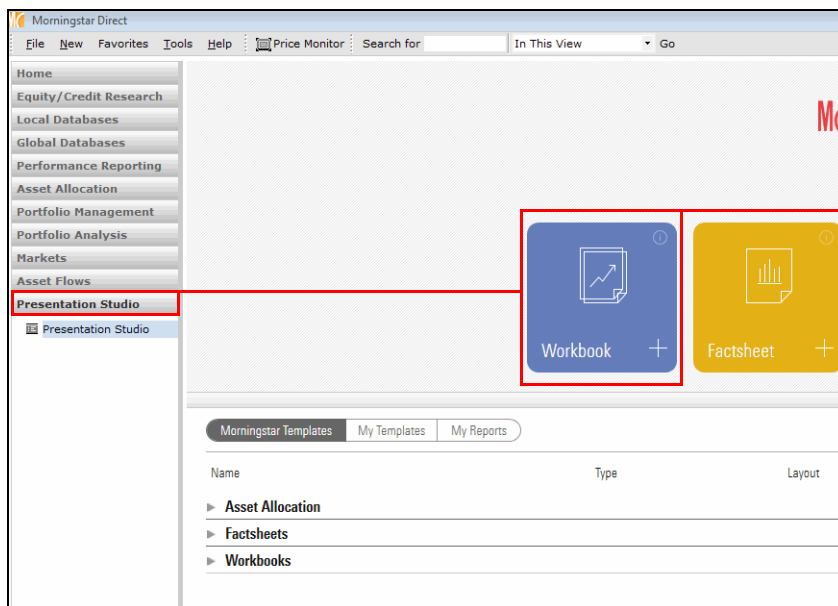
You need to know how the various Morningstar stock sectors have performed over the past year, and show this as a ranking. First, you must decide what will represent the stock sectors. In Morningstar Direct, no such item as “Stock Sector returns” exists natively. Instead, you need find a set of indexes that tracks these sectors.

Exercise 1: Creating a workbook template in Presentation Studio

The Presentation Studio module has a component that allows you to display sector index data. You could create either a Workbook or Factsheet template to display this report; you will have to decide which version of the report you think looks better. The following instructions guide you through the process of creating a workbook template to show the trailing one-year performance for the Morningstar stock sectors.

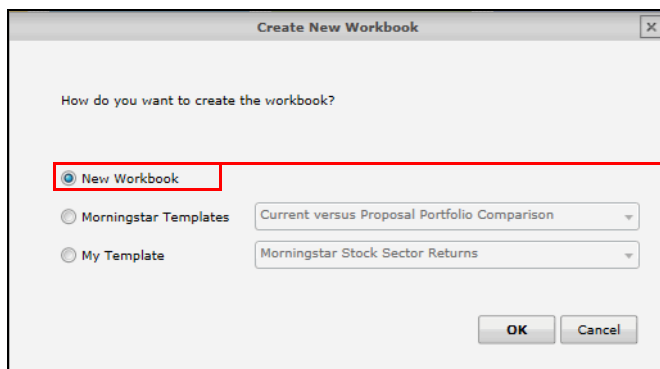
To create a Presentation Studio workbook template, do the following:

1. If a Presentation Studio template is open, **close** it.
2. From the left navigation pane, select the **Presentation Studio** module.
3. Click the **Workbook** icon. The Create New Workbook dialog box opens.



To click the Workbook icon, you must first select the Presentation Studio module

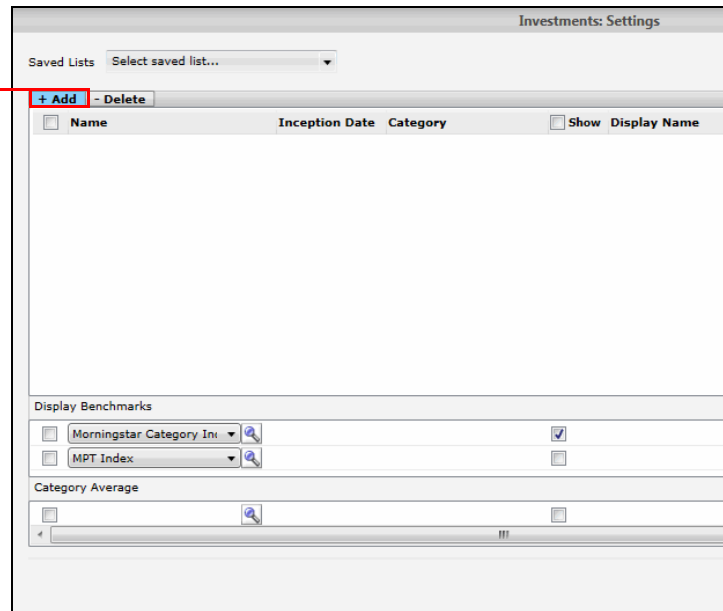
4. The option for New Workbook should be selected. Click **OK**. The Investments: Settings dialog box opens.



This option should be selected automatically

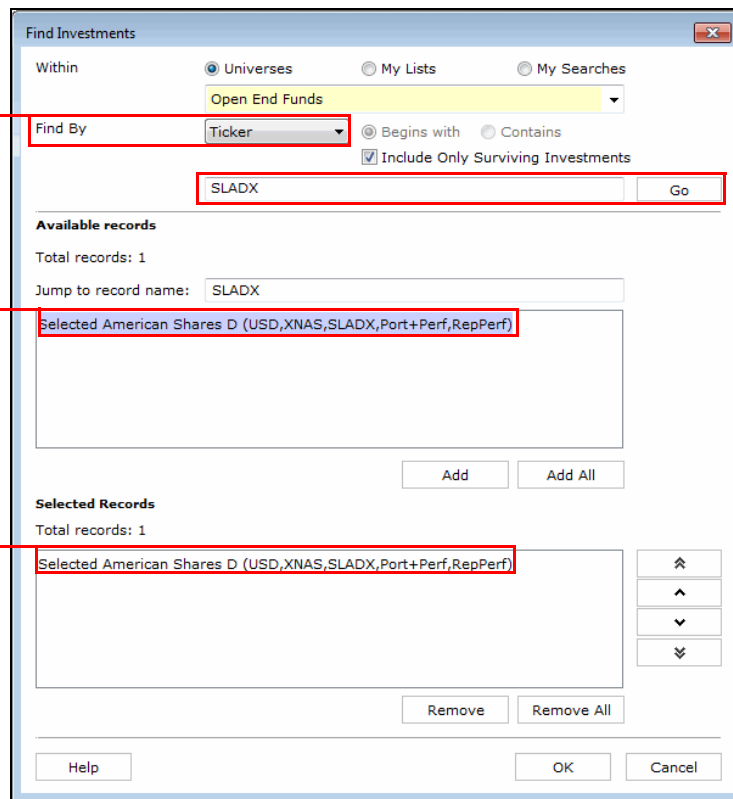
- Click **+Add**. The Find Investments dialog box opens.

Click **+Add** to add investments to a report



- From the **Find By** drop-down field, select **Ticker**.
- In the search field, type **SLADX**, then click **Go**. Selected American Shares D appears in the Available Records list.
- To select the fund, **double-click its name** (Selected American Shares D). Selected American Shares D appears in the Selected Records list.

Be sure to select Ticker from this drop-down field before entering a ticker in the search field



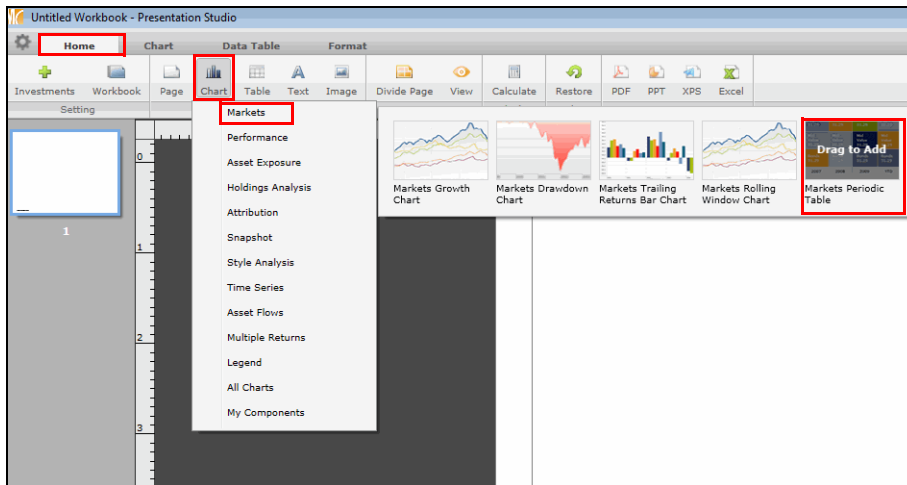
When you double-click a fund name in the Available Records list, it appears here (the Selected Records list)

9. Click **OK** to close the Find Investments dialog box.
10. Click **OK** to close the Investments: Settings dialog box. The workbook template opens in a new window.

Now that the blank report template has been created, you can add a component to depict the stock sectors' performance. Do the following:

1. If the Home tab at the top of the Presentation Studio window is not selected, **select** it.
2. From the toolbar, from the **Chart** drop-down field, select **Markets**. A set of Markets charts opens to the right.
3. Drag the **Markets Periodic Table** to a blank space in the template.

Exercise 2: Adding the Markets Periodic Chart to the template



Note the highlighted selections

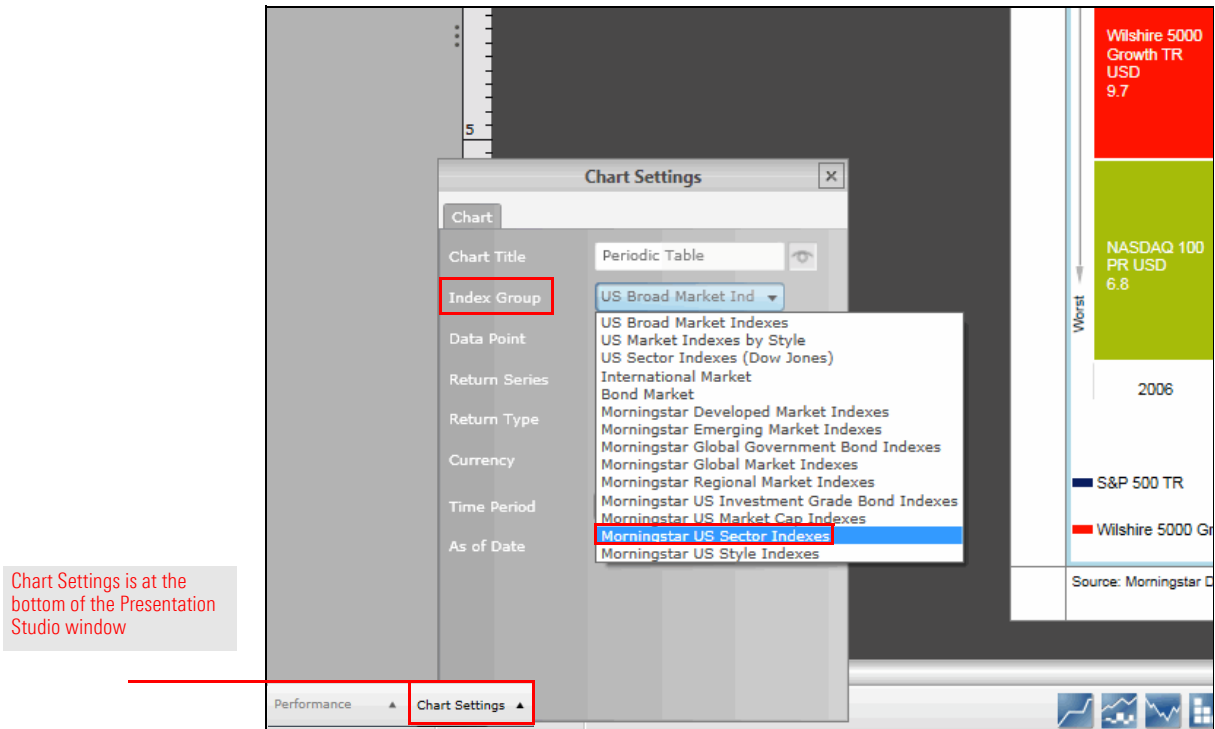
Exercise 3: Modifying the Markets Periodic Chart

By default, the Markets Periodic Chart shows the performance of four different US-equity-based indexes for the trailing five-year period. You need to do the following:

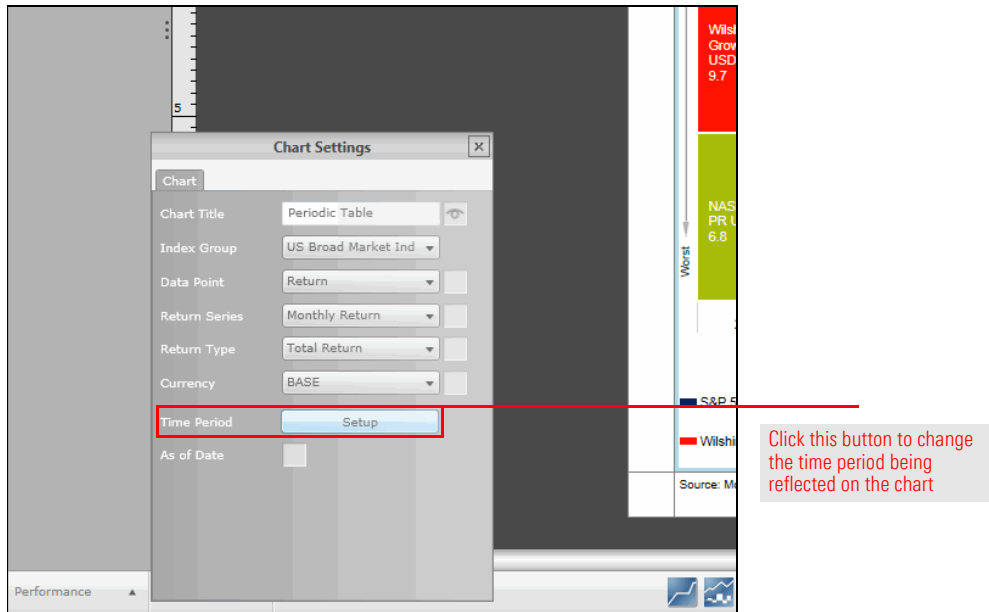
- ▶ select a different set of indexes, and
- ▶ change the time period being to the trailing one-year period.

To accomplish these tasks, do the following:

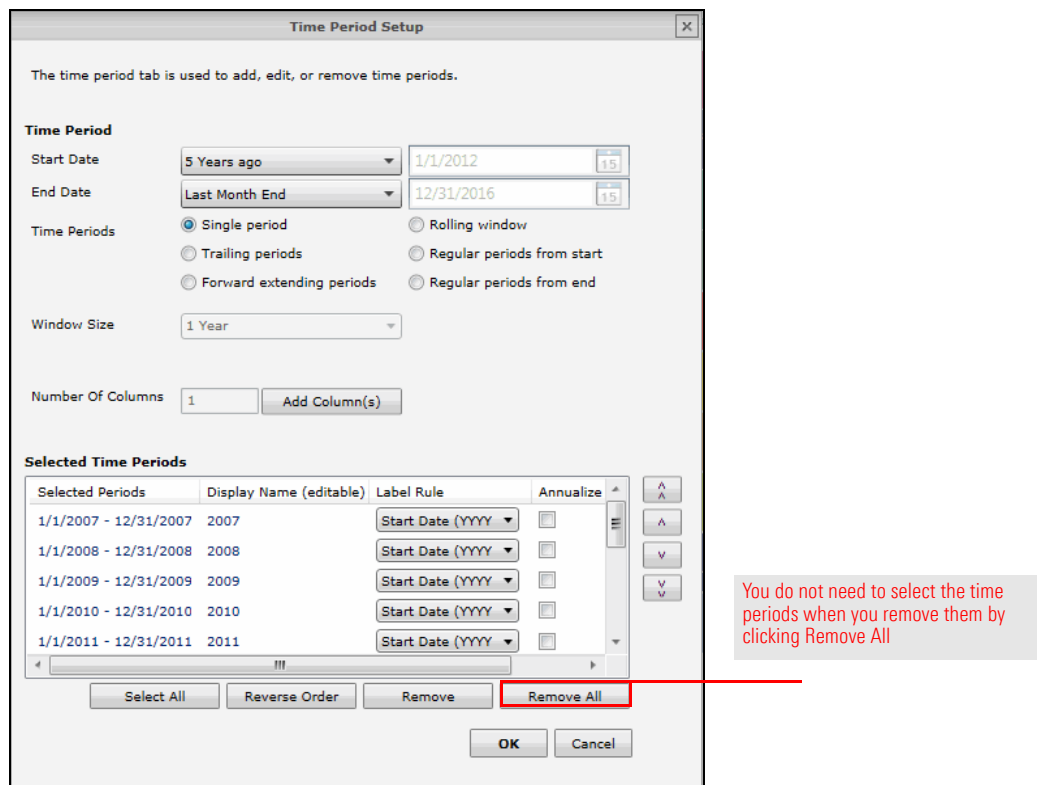
1. In the bottom-left corner of the Presentation Studio window, click **Chart Settings**. The Chart Settings window opens.
2. From the **Index Group** drop-down field, select **Morningstar US Sector Indexes**. The component shown in the template updates to reflect this selection.



- Click **Chart Settings** again, and this time click the **Setup** button in the Time Period field. The Time Period Setup dialog box opens.



- Because you want to depict only one time period on the chart, start by removing all time periods. Near the bottom of the Time Period Setup dialog box, click the **Remove All** button.



5. From the **Start Date** drop-down field, select **1 Year Ago**. The End Date should still display Last Month End.
6. To the right of the Number of Columns field, click **Add Column(s)**.

Note the highlighted selections

The time period tab is used to add, edit, or remove time periods.

Time Period

Start Date: 5 Years ago (highlighted) | 12/1/2012

End Date: Last Month End (highlighted) | 11/30/2017

Time Periods:

- Single period
- Rolling window
- Trailing periods
- Regular periods from start
- Forward extending periods
- Regular periods from end

Window Size: 1 Year

Number Of Columns: 1 | Add Column(s) (highlighted)

Selected Time Periods

Selected Periods	Display Name (editable)	Label Rule	Annualize	R
12/1/2016 - 11/30/2017	12/1/2016 - 11/30/2017	Start Date to End	<input type="checkbox"/>	

Buttons: Select All, Reverse Order, Remove, Remove All, OK, Cancel

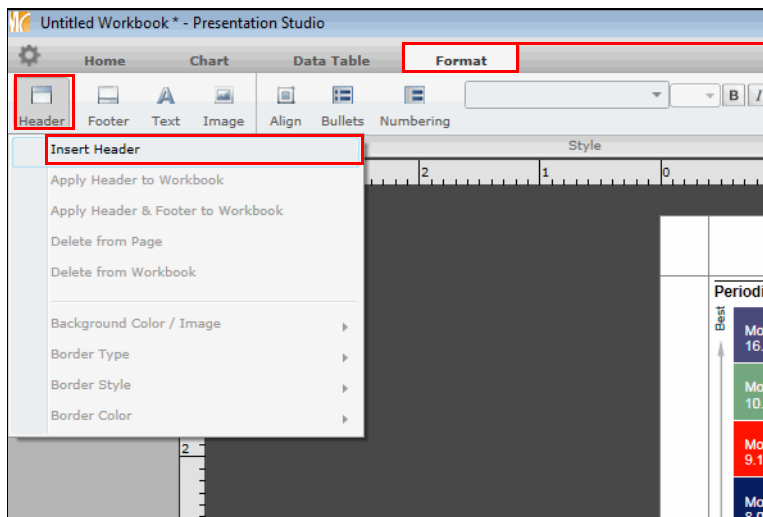
7. Click **OK**. The Time Period Setup dialog box closes. In the template, the Markets Periodic Table component updates to reflect this choice.

The report now reflects both the data and the time period you want. You could generate a PDF from here and send it to your manager, but a header at the top of the report would help someone who wasn't involved in creating it understand what the report is depicting.

Exercise 4: Adding a header to the report

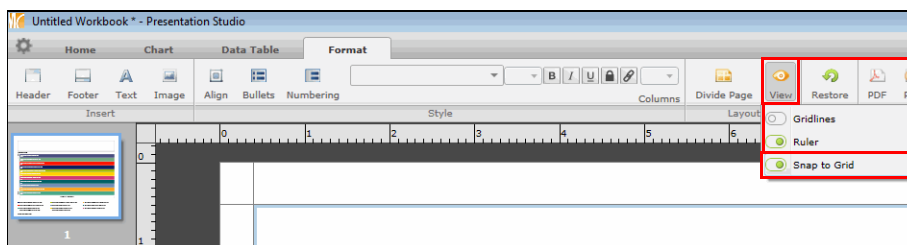
To add a header to the report, do the following:

1. At the top of the Presentation Studio window, select the **Format** tab.
2. From the toolbar, from the **Header** drop-down field, select **Insert Header**. A header is inserted at the top of the page.



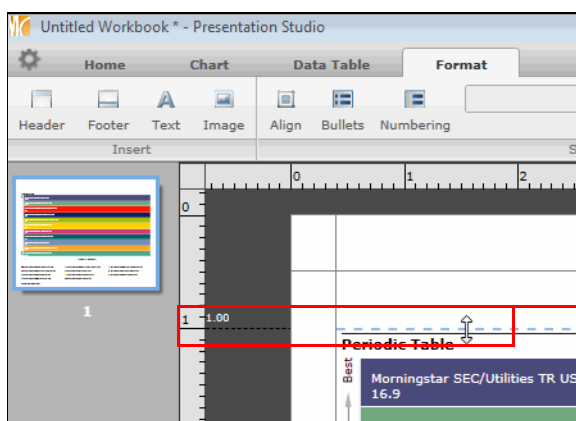
Be sure to select the correct tab in order to insert a header on the report

3. From the toolbar, from the **View** drop-down field, select **Snap to Grid** to turn on this feature.



Snap to Grid makes it easier to resize and align components on a page

4. Use your mouse to **drag** the bottom border of the header so the header takes up just **1.00** inch of space.

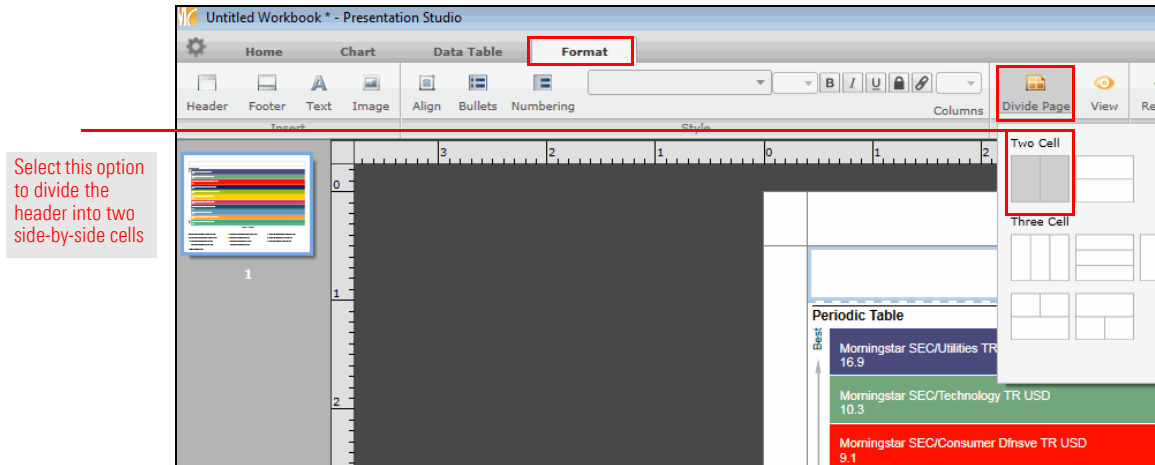


The location of the header's bottom border is shown on the left (vertical) ruler

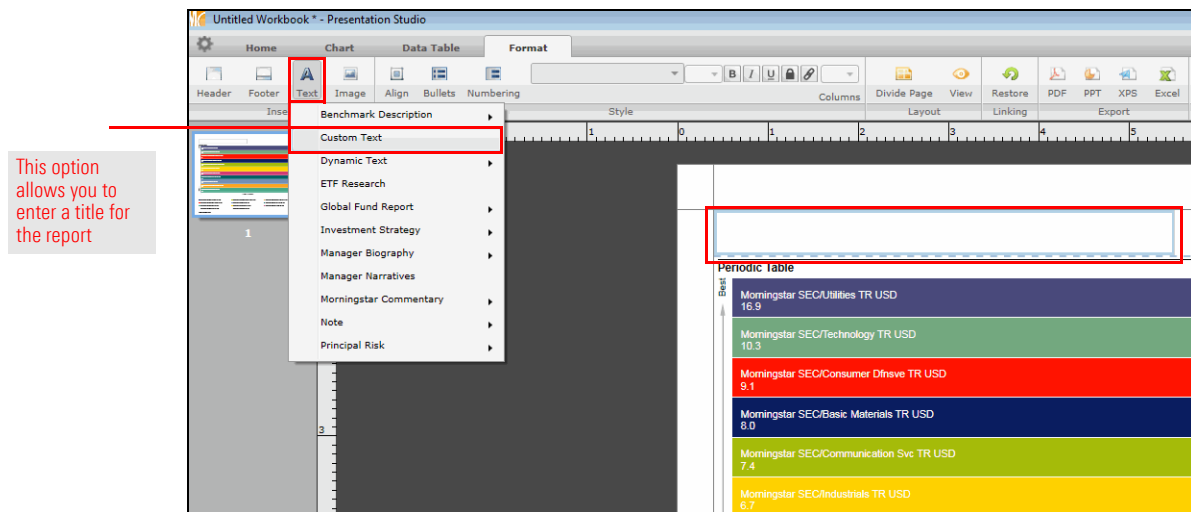
Exercise 5: Adding a name to the header

To add a report name to the header, do the following:

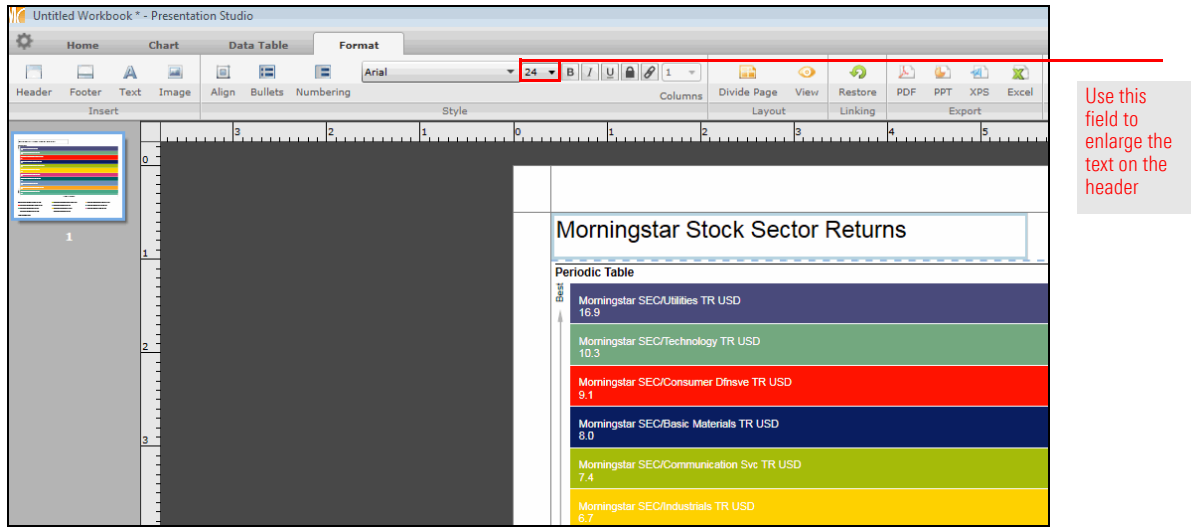
1. From the toolbar, from the **Divide Page** drop-down field, select the **Two Cell** option with the vertical divider. The header area now has two cells. You will place the report title in the left cell, and the time period in the right cell.



2. If header cell on the left is not selected, **select** it. From the toolbar, from the **Text** drop-down field, select **Custom Text**.



3. **Double-click** the left header cell and type **Morningstar Stock Sector Returns**.
4. Select the **text** you just typed by pressing **<CTRL>+<A>**. The text is now highlighted.
5. From the toolbar, from the **Font Size** drop-down field, select **24**.

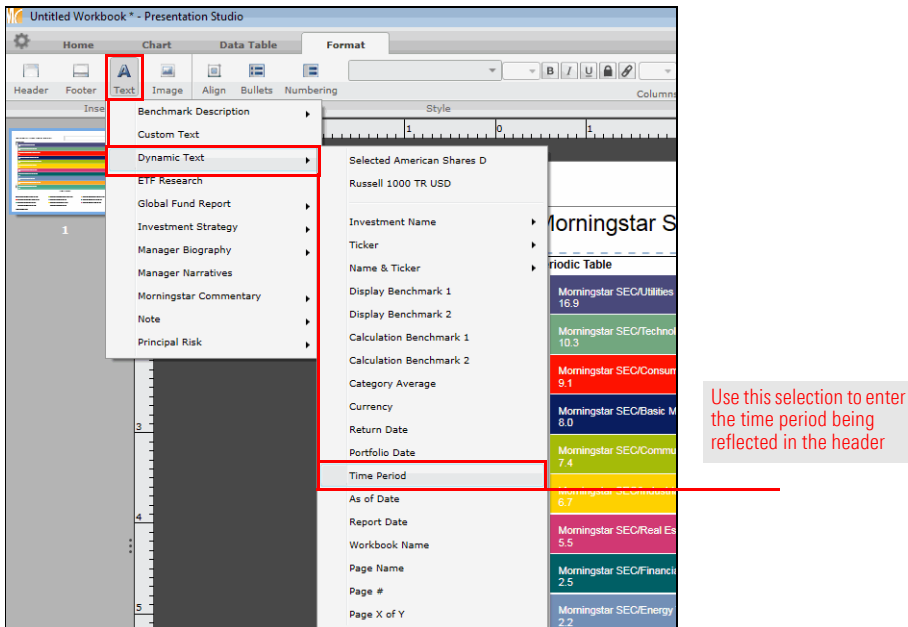


When entering a time period in the header, if you use a dynamic date here rather than manually typing the date, the report can be updated without you having to manually change the date.

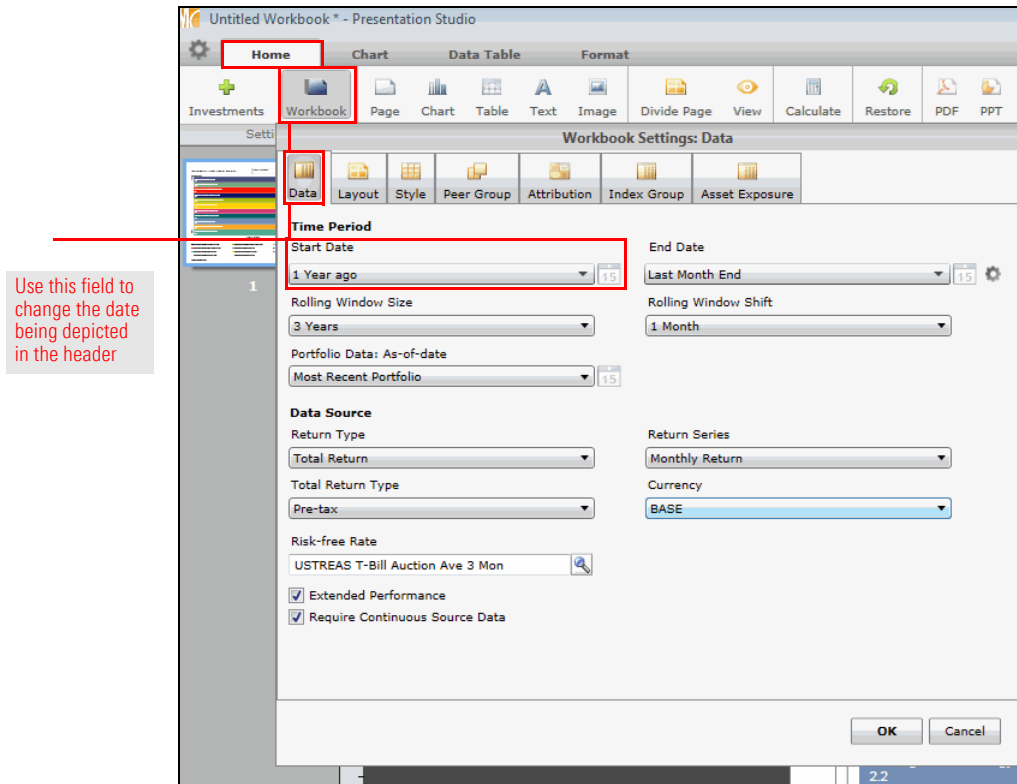
Exercise 6: Adding a dynamic date to the header

To enter a time period for the report without having to manually type the date, do the following:

1. Select the **header cell** to the right of the report title cell.
2. From the toolbar, from the **Text** drop-down field, select **Dynamic Text... Time Period**. The time period for the template is entered in the cell. Note, however, that this is not the same date being depicted in the component.



3. To change the date in the header, select the **Home** tab at the top of the Presentation Studio window.
4. Click the **Workbook** icon. The Workbook Settings: Data window opens.
5. The Data tab should be selected. From the **Start Date** drop-down field, select **1 Year Ago**.



6. Click **OK**. The Workbook Settings: Data window and the time period date in the header updates to reflect your choices.
7. Click the **date** in the right header cell. It changes to display [Time Period].
8. Select the date by pressing **<CTRL>+<A>**. [Time Period] is now highlighted.
9. Select the **Format** tab, then from the **Font Size** drop-down field, select **24**.
10. **Click** outside the cell to see the date displayed in the cell.

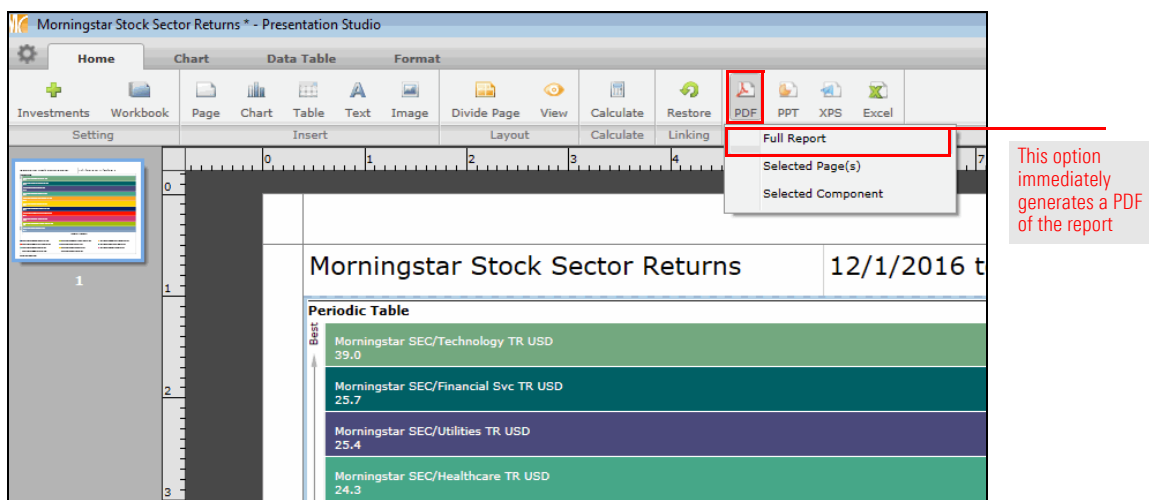
When you save a Presentation Studio template, you have the following choices:

- ▶ You can save your work as a template. This method allows you to re-use the template for any investment(s) you want in the future. A report based on a template does not reflect the investment(s) you selected at the time you created the template. The downside to saving a Presentation Studio file as a template is that you will always have to select an investment when opening the file. This will add some extra clicks to the process of editing the report.
- ▶ You can save your work as a report. The file will open much faster because the system already knows what investment(s) should be associated with the report. The downside to saving your Presentation Studio file as a report is that if you do want to change the investments being depicted on the report, you will have to manually select them.

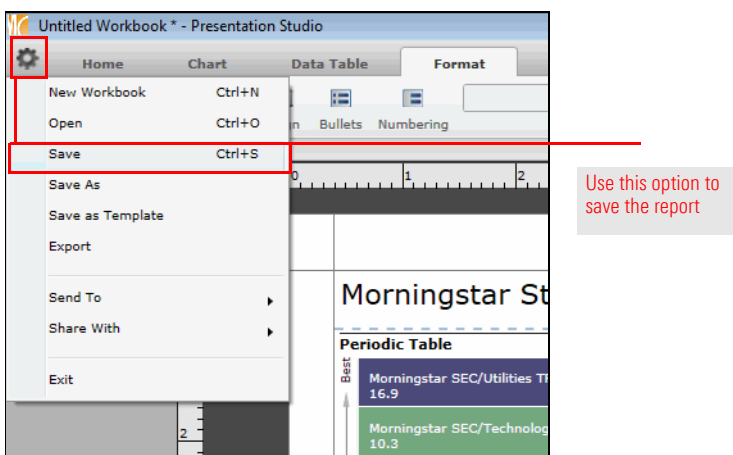
Exercise 7: Generating and saving the report template

To see this file as a PDF and save it as a report, do the following:

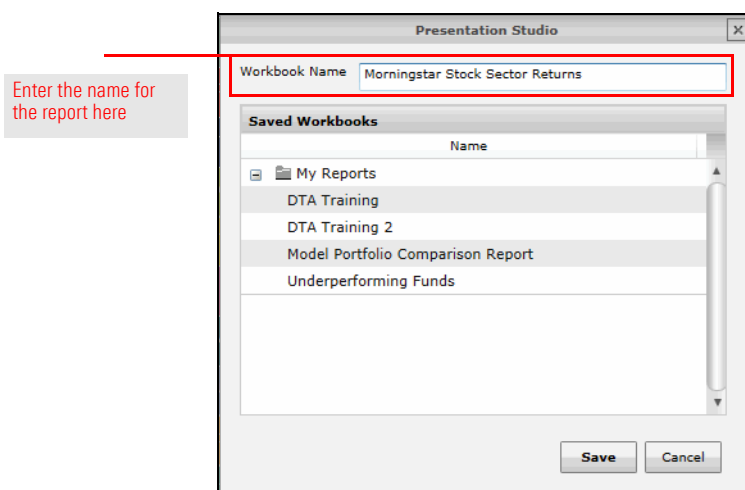
1. From the toolbar at the top of the Presentation Studio window, from the **PDF** drop-down field, select **Full Report**.



2. From the toolbar at the top of the Presentation Studio window, from the **gear** drop-down field, select **Save**. The Presentation Studio dialog box opens.



3. In the **Workbook Name** field, type **Morningstar Stock Sector Returns**.



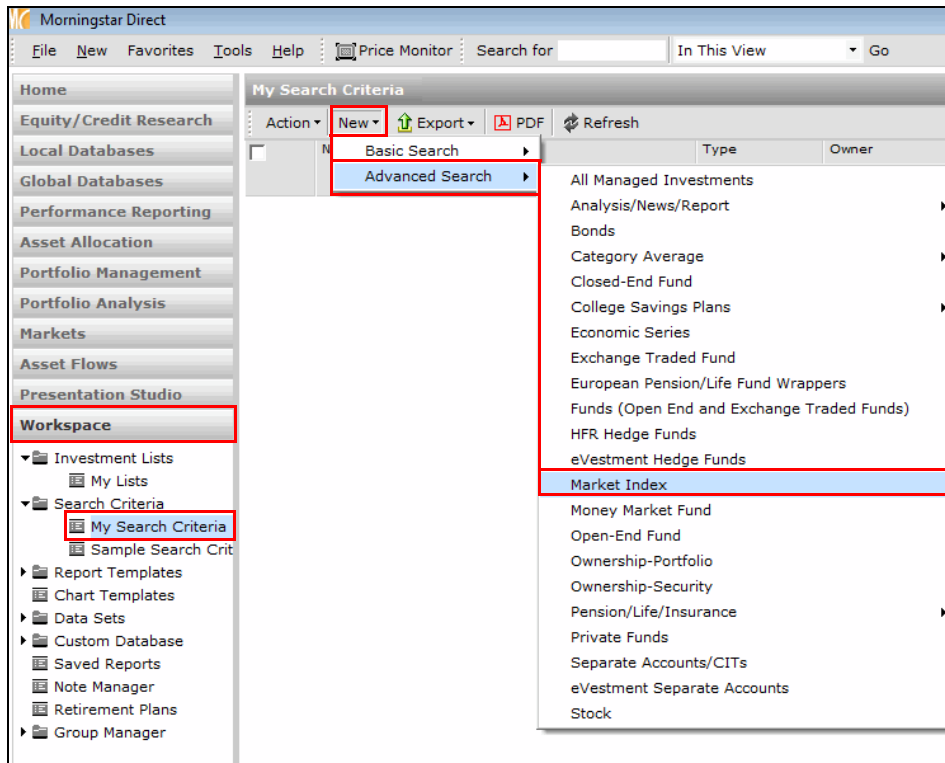
4. Click **Save**.
5. **Close** the Presentation Studio window.

The Presentation Studio report is a great asset for depicting the performance of stock sectors over the past year, but it is possible your manager will ask to see the information as a list, instead of the graphic representation you created in Presentation Studio.

Exercise 8: Saving the stock sector indexes to a list

In order to make the stock sector data available as a list, you will use the Workspace module. You first have to find the correct indexes, select them, and then save them to a list. Do the following:

1. In the left navigation pane, select the **Workspace** module, click the **Search Criteria** folder to expand it, then select the **My Search Criteria** page.
2. From the toolbar above the grid, from the **New** drop-down field, select **Advanced Search...Market Index**. The search by criteria dialog box opens.

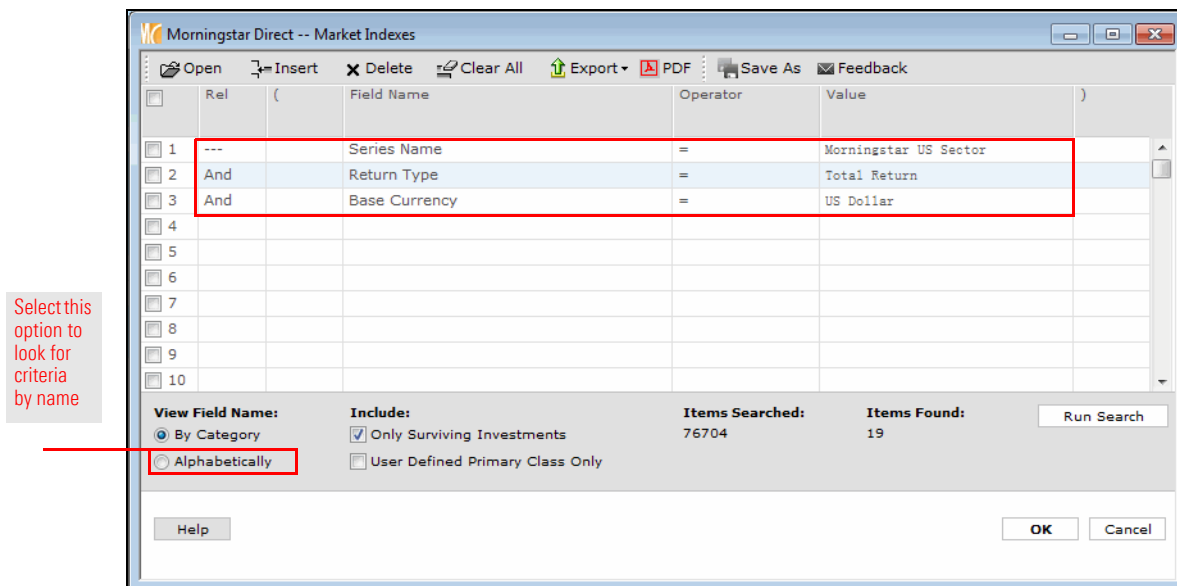


Use the highlighted selections to begin building your search

3. **Create** a search with the following criteria:

Note: Selecting the **Alphabetically** button in the lower-left corner of the dialog box can help find the criteria more quickly.

Rel	Field Name	Operator	Value
--	Series Name	=	Morningstar US Sector
And	Return Type	=	Total Return
And	Base Currency	=	US Dollar



4. After entering the criteria, operators, and values, click **OK**.
5. From the header row at the top of the grid view, click the **checkbox** to the left of the Name column. All rows from the search should now be selected.
6. **Uncheck** the box next to the following indexes:

- ▶ Morningstar US Bas Mat & Energy TR USD
- ▶ Morningstar US Energy Capped TR USD
- ▶ Morningstar US Commun Svc Capped TR USD
- ▶ Morningstar US Fin Svc & RE TR USD
- ▶ Morningstar US Cyclcl Sup Sec TR USD
- ▶ Morningstar US Snstve Sup Sec TR USD, and
- ▶ Morningstar US Dfnsve Sup Sec TR USD
- ▶ Morningstar US Tech & Commun Svc TR USD.

7. **Confirm** all the following rows (11 in total) are still selected:

- ▶ Morningstar US Basic Materials TR USD
- ▶ Morningstar US Healthcare TR USD
- ▶ Morningstar US Commun Svc TR USD
- ▶ Morningstar US Industrials TR USD
- ▶ Morningstar US Consumr Cyclcl TR USD
- ▶ Morningstar US Real Estate TR USD
- ▶ Morningstar US Consumr Dfnsve TR USD
- ▶ Morningstar US Technology TR USD, and
- ▶ Morningstar US Energy TR USD
- ▶ Morningstar US Utilities TR USD.
- ▶ Morningstar US Financial Services TR USD
- ▶

- From the toolbar above the grid view, from the **Action** drop-down field, select **Save As... Investment List**. The Save As dialog box opens.

The screenshot shows the Morningstar Direct interface. The 'Action' menu is open, and 'Save As' is selected, which has opened a sub-menu where 'Investment List' is highlighted. The table below shows 19 rows of search results, with rows 10 through 19 selected. At the bottom of the window, a status bar indicates 'Total: 19' and 'Selected: 11'.

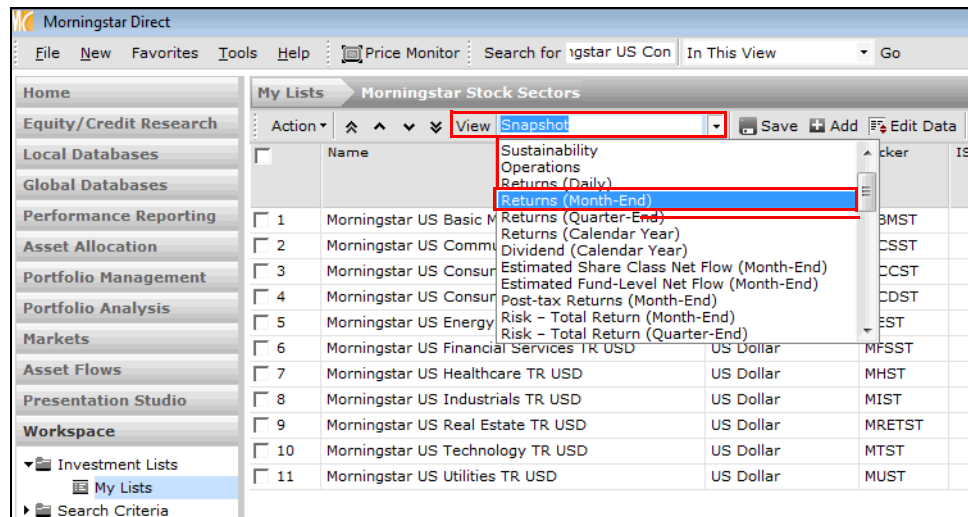
	Name	
	Energy TR USD	Morningstar Index Series
	rials TR USD	Morningstar Index Series
	vc Capped TR USD	Morningstar Index Series
	vc TR USD	Morningstar Index Series
	yclcl TR USD	Morningstar Index Series
	fnsvs TR USD	Morningstar Index Series
7	Morningstar US Cyclcl Sup Sec TR USD	Morningstar Index Series
8	Morningstar US Dfnsvs Sup Sec TR USD	Morningstar Index Series
9	Morningstar US Energy Capped TR USD	Morningstar Index Series
10	Morningstar US Energy TR USD	Morningstar Index Series
11	Morningstar US Fin Svc & RE TR USD	Morningstar Index Series
12	Morningstar US Financial Services TR USD	Morningstar Index Series
13	Morningstar US Healthcare TR USD	Morningstar Index Series
14	Morningstar US Industrials TR USD	Morningstar Index Series
15	Morningstar US Real Estate TR USD	Morningstar Index Series
16	Morningstar US Snstvs Sup Sec TR USD	Morningstar Index Series
17	Morningstar US Tech & Commun Svc TR USD	Morningstar Index Series
18	Morningstar US Technology TR USD	Morningstar Index Series
19	Morningstar US Utilities TR USD	Morningstar Index Series

- In the **Name** field, type **Morningstar Stock Sectors**, then click **OK**.

The 'Save As' dialog box is shown. The 'Name' field is highlighted with a red box and contains the text 'Morningstar Stock Sectors'. Below the name field is a list box labeled 'My Investment Lists' which is currently empty. At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons.

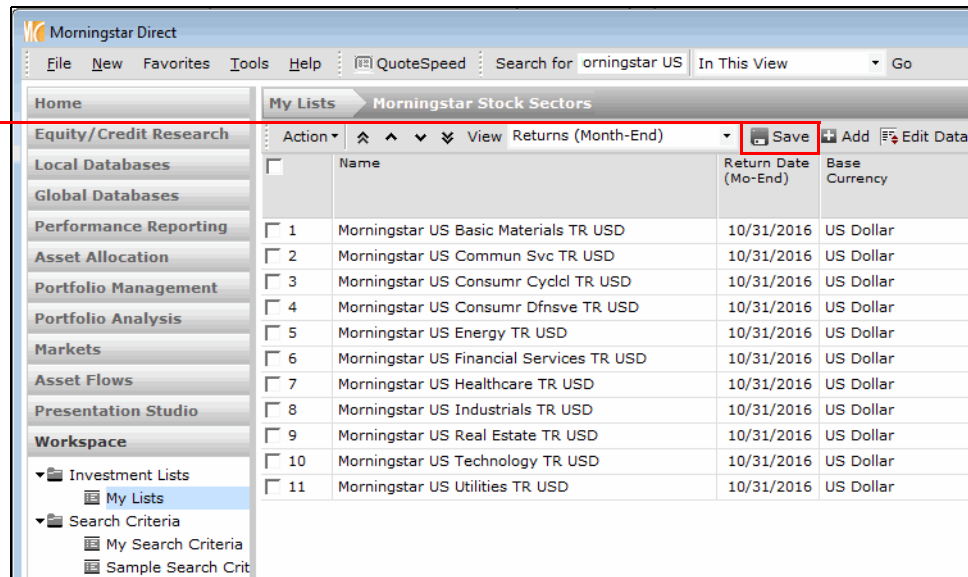
- From the **View** drop-down field, select **Returns (Month End)**. You can scroll right to see the values in the Total Return 1 Yr (Mo-End) USD column.

Change the data being depicted to this view



- From the toolbar above the grid view, click the **Save** icon. (Saving ensures that the next time the list is opened, the Returns view is displayed by default.)

Use this icon to make this layout the default option each time this list is opened



Evaluating Asset Flow Data in Morningstar Direct

The Asset Flows module in Morningstar Direct uses data from the SEC N-SAR form, as well as estimated data (provided by fund families to Morningstar) to understand changes in asset levels at the fund, category, strategy (active vs. passive), and firm levels. Not only can you see which items have net inflows vs. outflows, but you can also evaluate the size of the change relative to a fund itself, and measure investment trends as individuals and institutions adjust to market conditions.

Overview

Your manager is interested in learning about the impact to asset flows over the past year for non-sector-specific funds with significant exposure to the Energy sector. If a fund has a meaningful allocation to energy stocks and has underperformed in its category, did it also see large outflows as a consequence?

Scenario

You will use the Workspace and Asset Flows modules to find the funds most likely to have been affected by their exposure to the Energy sector, and what the impact has been on the asset flows of those funds.

Solution

Share Classes		Estimated Net Flow (\$Mil)					Organic Growth Rate % (TTM)	Query Mkt Sh%	Query Rank
Name	1-Mo	QTD	YTD	1-Yr		09-2017	09-2017		
1 Goldman Sachs Rising Dividend G...	(10)	(37)	(359)	(460)	(59.47)	(16.22)	14		
2 FPA Capital	(36)	(73)	(325)	(336)	(42.19)	(60.43)	17		
3 Hennessy Gas Utility Investor	(30)	(79)	(181)	(224)	(14.94)	(50.89)	16		
4 Voya Corporate Leaders Trust B	(14)	(68)	(158)	(200)	(19.76)	(24.04)	15		
5 Hartford Global Real Asset Y	(5)	(4)	(136)	(101)	(47.40)	(7.67)	10		
6 Brookfield Global Listed Infrastruc...	(9)	(11)	5	(90)	(33.66)	(15.77)	13		
7 Highland Global Allocation A	(9)	(26)	(59)	(75)	(23.88)	(14.82)	11		
8 Deutsche Global Infrastructure Instl	(9)	(26)	(9)	(55)	(7.53)	(15.03)	12		
9 Infrastructure Retail	0	(3)	(8)	(9)	(42.55)	(0.45)	8		
10 Reaves Utilities and Energy Infrac...	0	(1)	(5)	(5)	(10.46)	0.11	2		
11 CM Advisors	0	(2)	(1)	(5)	(6.95)	(0.29)	7		

The Asset Flows module allows you to monitor money moving into and out of funds

Exercise 9: Search for funds with high exposure to the Energy sector

To evaluate funds with meaningful exposure to the Energy sector that also underperformed in their category, you will search for funds that meet the following criteria:

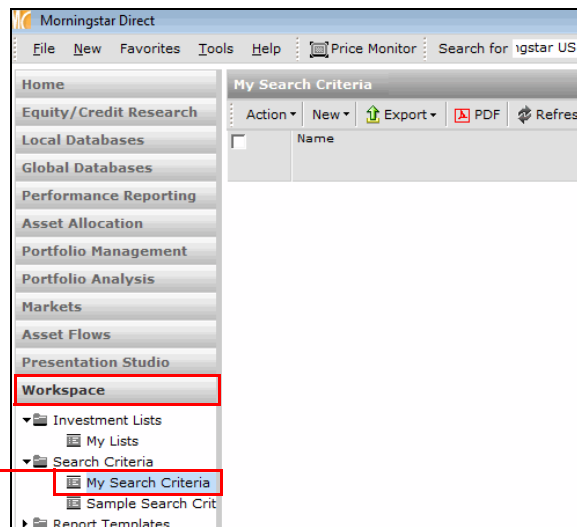
- ▶ They were in the bottom quartile of their category during the past year, and
- ▶ They had meaningful exposure to the Real Estate sector during that time.

(Additionally, you will exclude funds in certain energy-related categories, because these funds would be expected to under-perform due to high exposure to this sector.)

Do the following:

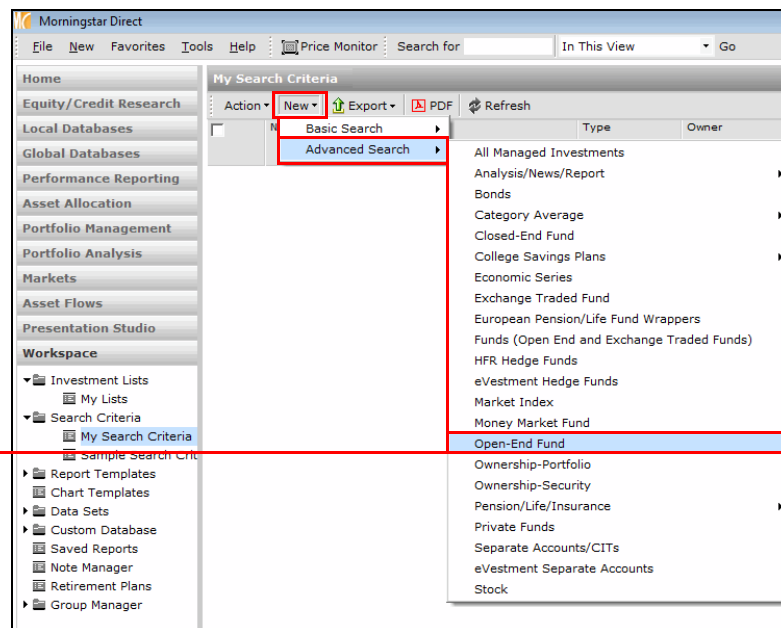
1. In the left navigation pane, be sure the **Workspace** module is selected.
2. Click the **Search Criteria** folder to expand it, then select **My Search Criteria**.

Use this page to create an advanced search



3. From the toolbar above the grid view, from the **New** drop-down field, select **Advanced Search... Open End Fund**. The Search Criteria dialog box opens.

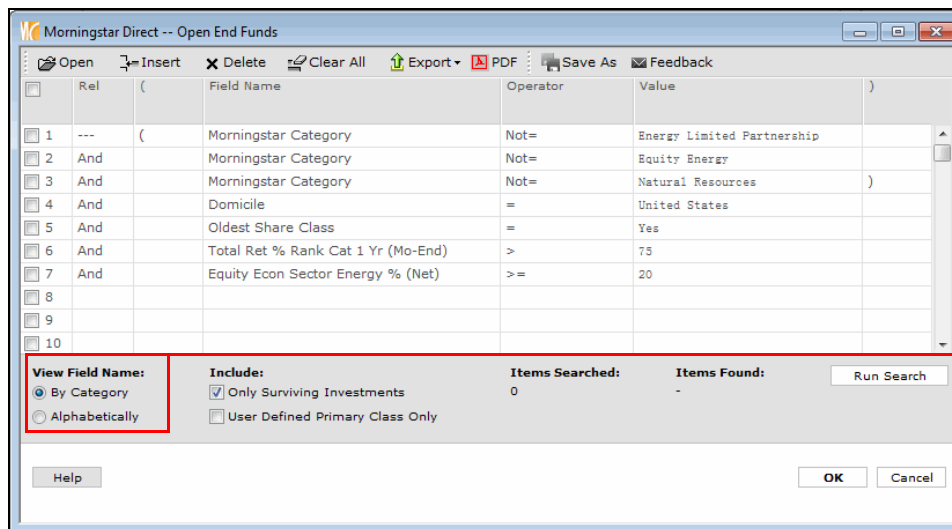
Use these options to begin the search



4. **Create** a search with the following criteria:

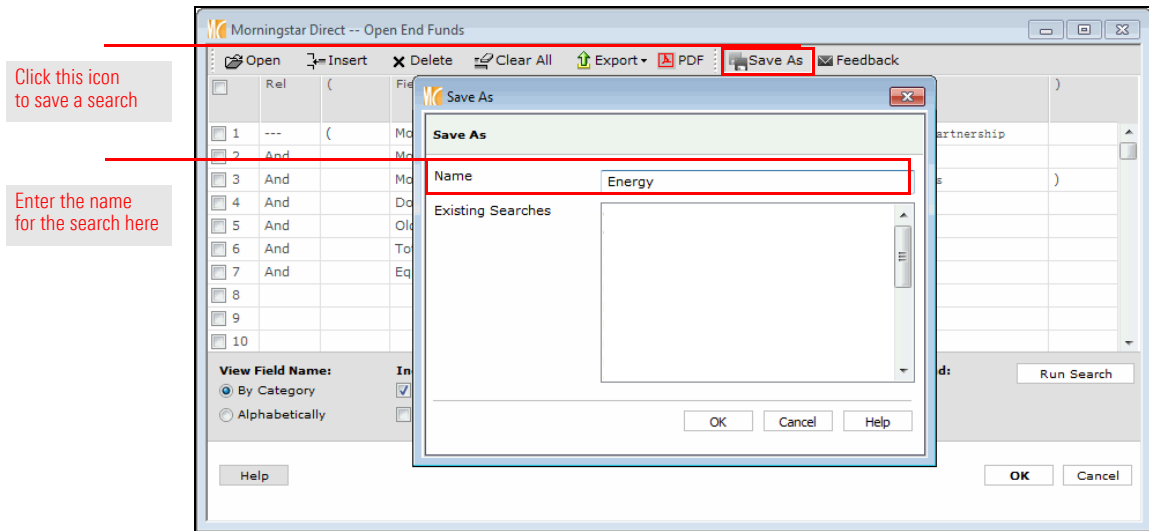
Note: Selecting the option button for **Alphabetically** in the bottom-left corner can help speed the search for various field names.

Rel	(Field Name	Operator	Value)
--	(Morningstar Category	Not=	Energy Limited Partnership	
And		Morningstar Category	Not=	Equity Energy	
And		Morningstar Category	Not=	Natural Resources)
And		Domicile	=	United States	
And		Oldest Share Class	=	Yes	
And		Total Ret % Rank Cat 1 Yr (Mo-End)	>	75	
And		Equity Econ Sector Energy % (Net)	>=	20	



If you cannot find the criteria by category, select the **Alphabetically** option to look for them by name

- To save the search, from the toolbar near the top of the dialog box, click **Save As**. The Save As dialog box opens.
- In the **Name** field, type **Energy**.



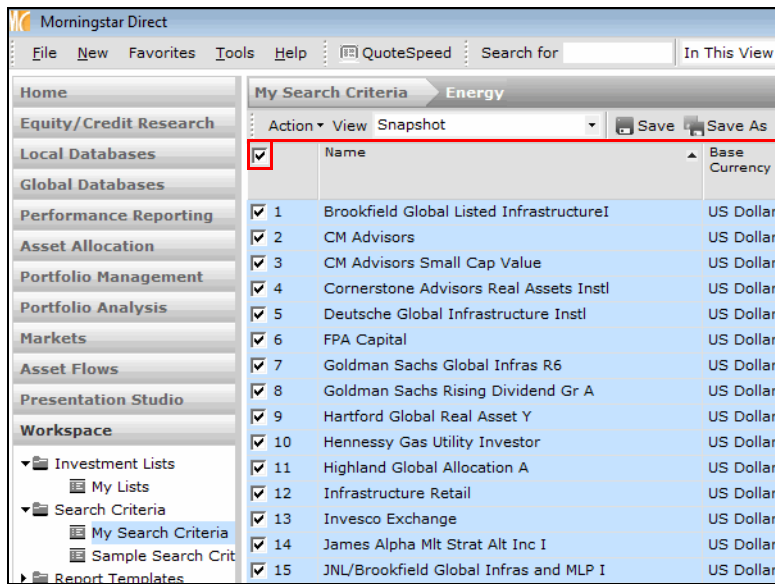
- Click **OK**. The Save As dialog box closes.
- Click **OK** again to close the Search dialog box and see your results.

Now that the search has revealed the funds with a significant exposure to the Real Estate sector that underperformed in their category, you can save these items to a list. With the funds saved as a list, you can see them in the Asset Flows module; you cannot open a saved search from Workspace in the Asset Flows module.

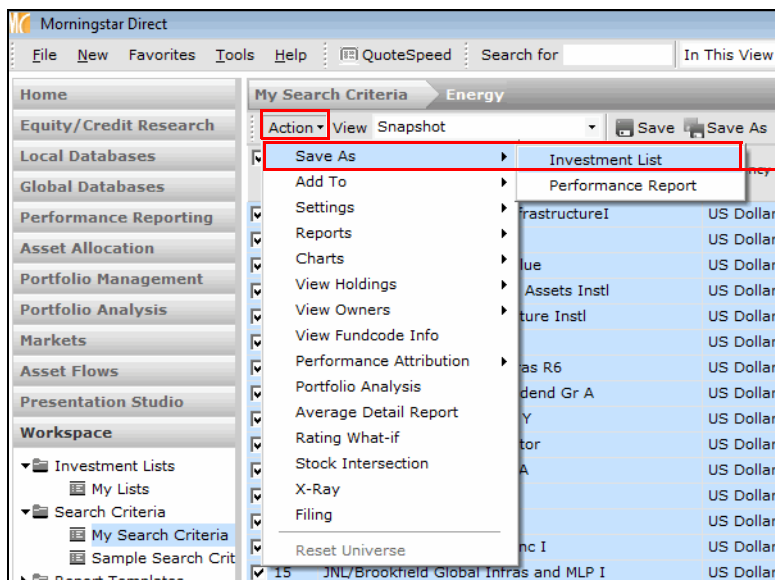
Exercise 10: Saving funds to a list

Do the following:

1. You should be looking at the results of your search in the Workspace module. To select all rows, click the **box** in the column header at the left. All rows are now selected.



2. From the **Action** drop-down field, select **Save As... Investment List**. The Save As dialog box opens.



3. In the **Name** field, type **Energy Exposure**.
4. Click **OK**.
5. When prompted to save your changes, click **No**. (This step simply ties the current data columns to the rows you've saved in your list.)

Exercise 11: Examining the asset flows for under-performing funds

Once you know the funds whose asset flows you want to evaluate, you can move to the Asset Flows module and begin the investigation.

Do the following:

1. From the left navigation pane, select the **Asset Flows** module. The Market Summary tab at the top is selected by default.
2. At the top of the Asset Flows pane, select the **Workspace** tab.
3. In the Saved Actions area, select the **Inv. List** tab.

The screenshot shows the Morningstar Direct interface. On the left, the navigation pane has 'Asset Flows' selected. The main content area has 'Workspace' selected at the top. A 'Saved Actions' section at the bottom has 'Inv. List' selected. Red callout boxes point to these elements with instructions: 'Select this tab in the Asset Flows pane' (pointing to 'Asset Flows' in the left pane), 'Be sure to select this tab' (pointing to 'Inv. List' in the Saved Actions section), and another pointing to the 'Workspace' tab at the top of the main content area.

4. Click the **Energy Exposure** list. A new window opens.

5. Click the **1-Yr** column header to sort from best to worst.
6. Click the **1-Yr** column header again, to sort from worst to best.

Morningstar Direct
Market: US Open-end ex MM ex FoF Eff. Date: 2017-09-30
Currency: USD Exclude Obsolete: Yes Active/Passive: All Funds
Share Class: Multiple View All

Share Classes Sub-view Estimated Net Flow (Current)

Name	Estimated Net Flow (\$Mil)				Organic Growth Rate % (TTM)	Query Mkt Sh%	Query Rank
	1-Mo	QTD	YTD	1-Yr			
1 Goldman Sachs Rising Dividend G...	(10)	(37)	(359)	(460)	(59.47)	(16.22)	14
2 FPA Capital	(36)	(73)	(325)	(336)	(42.19)	(60.43)	17
3 Hennessy Gas Utility Investor	(30)	(79)	(181)	(224)	(14.94)	(50.89)	16
4 Voya Corporate Leaders Trust B	(14)	(68)	(158)	(200)	(19.76)	(24.04)	15
5 Hartford Global Real Asset Y	(5)	(4)	(136)	(101)	(47.40)	(7.67)	10
6 Brookfield Global Listed Infrastruc...	(9)	(11)	5	(90)	(33.66)	(15.77)	13
7 Highland Global Allocation A	(9)	(26)	(59)	(75)	(23.88)	(14.82)	11
8 Deutsche Global Infrastructure Instl	(9)	(26)	(9)	(55)	(7.53)	(15.03)	12
9 Infrastructure Retail	0	(3)	(8)	(9)	(42.55)	(0.45)	8
10 Reaves Utilities and Energy Infras ...	0	(1)	(5)	(5)	(10.46)	0.11	2
11 CM Advisors	0	(2)	(1)	(5)	(6.95)	(0.29)	7

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Back Forward Save as an Investment List Advanced Search Export Print Close

7. To see the percentage of the fund's assets represented by this inflow or outflow, click the **Organic Growth Rate (TTM)** column header to sort from best to worst.
8. To sort from worst to best, click the **Organic Growth Rate (TTM)** column header again.

Exercise 12: Adding context to the fund flow data

The fund with the largest outflow over the past year belonged to the Large Growth category. How do its outflows compare to other funds in this category? To see the outflows from a Morningstar Category, do the following:

1. Select the **Market Summary** tab at the top of the page.
2. **Scroll down** until you see the grouping for Morningstar Categories.
3. In the Morningstar Categories section, click **Large Growth**. A new window opens.

Be sure this tab is selected

Click once on this category

The screenshot shows the Morningstar Direct interface. The 'Market Summary' tab is selected in the top navigation bar. The 'Asset Flows' section is active, displaying a table of Morningstar Categories ranked by 1-Mo Estimated Net Flow (\$Mil). The 'Large Growth' category is highlighted with a red box.

Top		Estimated Net Flow (\$Mil)			
Name	1-Mo	QTD	YTD	1-Yr	
US Fund Intermediate-Term Bond	10,752	10,752	65,880	93,049	
US Fund Foreign Large Blend	8,074	8,074	40,437	49,997	
US Fund Multisector Bond	2,807	2,807	19,348	21,043	
US Fund World Bond	2,697	2,697	19,552	19,137	
US Fund Ultrashort Bond	2,535	2,535	17,194	27,633	

Bottom		Estimated Net Flow (\$Mil)			
Name	1-Mo	QTD	YTD	1-Yr	
US Fund Large Growth	(6,887)	(6,887)	(37,107)	(87,936)	
US Fund Large Value	(4,187)	(4,187)	(25,322)	(35,604)	
US Fund Mid-Cap Blend	(2,499)	(2,499)	2,279	5,760	
US Fund High Yield Bond	(2,095)	(2,095)	(12,555)	(13,942)	
US Fund Large Blend	(1,915)	(1,915)	30,651	34,982	

- In the left pane, click **Funds**.
- Be sure the **Sub-view** field reads **Estimated Net Flow . . . Estimated Net Flow (Current)**.

Morningstar Direct
Market: US Open-end ex MM ex FoF Eff. Date: 2017-04-30
Currency: USD Exclude Obsolete: Yes Active/Passive: All Funds
Morningstar Category: US Fund Large Growth View All

Morningstar Categories
Fund Families
US Category Group
Institutional Categories
Active/Passive
Institutional
Distribution Channels
Morningstar Analyst Ratings
Morningstar Ratings
Stewardship Grades
Share Class Types
Share Classes

Funds Sub-view: Total Net Assets (Current)

Name	Estimated Net Flow (Current)	Estimated Net Flow (Monthly)	Estimated Net Flow (Quarterly)	Estimated Net Flow (Calendar Year)	Growth Rate	Market Appreciation	All Current Fields
1 American Funds Growth Fund of A...							
2 Fidelity® Contrafund® Fund							
3 American Funds AMCAP Fund	54,427	47,449	4.29	4.08	5.13	3	3
4 Vanguard PrimeCap Fund	52,331	45,030	4.12	3.87	6.51	4	4
5 T. Rowe Price Growth Stock Fund	49,867	43,503	3.93	3.74	5.06	5	5
6 T. Rowe Price Blue Chip Growth F...	37,448	30,742	2.95	2.64	11.64	6	7
7 Fidelity® Growth Company Fund	36,168	37,062	2.85	3.19	(10.56)	7	6
8 Vanguard Growth Index Fund	35,727	29,242	2.82	2.51	11.98	8	8
9 Harbor Capital Appreciation Fund	26,074	25,416	2.05	2.19	(5.98)	9	9
10 Fidelity Advisor® New Insights Fund	25,862	25,365	2.04	2.18	(6.55)	10	10
11 Fidelity® Blue Chip Growth Fund	20,991	19,110	1.65	1.64	0.67	11	11
12 American Funds New Economy Fund	16,173	14,661	1.27	1.26	1.10	12	14

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If needed, select this option from the drop-down field

Be sure this page is selected

- Click the **1-Yr** column header to sort from best to worst.
- Click the **1-Yr** column header again, to sort from worst to best. How does the fund with the largest outflows here compare to the fund from Exercise 11?

Note: In this view, funds are rolled up, and not broken out by share classes as when you were looking at funds from the list you saved.

Morningstar Direct
Market: US Open-end ex MM ex FoF Eff. Date: 2017-04-30
Currency: USD Exclude Obsolete: Yes Active/Passive: All Funds
Morningstar Category: US Fund Large Growth View All

Morningstar Categories
Fund Families
US Category Group
Institutional Categories
Active/Passive
Institutional
Distribution Channels
Morningstar Analyst Ratings
Morningstar Ratings
Stewardship Grades
Share Class Types
Share Classes

Funds Sub-view: Estimated Net Flow (Current)

Name	1-Mo	QTD	YTD	1-Yr	Organic Growth Rate % (TTM)	Query Mkt Sh%	Query Rank
26 Principal LargeCap Growth Fund	(26)	(26)	(347)	(1,087)	(42.62)	(0.45)	359
27 Goldman Sachs Rising Dividend G...	(60)	(60)	(324)	(1,033)	(33.07)	(1.05)	382
28 Delaware U.S. Growth Fund	(166)	(166)	(319)	(1,028)	(30.84)	(2.84)	400
29 Alger Spectra Fund	(44)	(44)	(288)	(980)	(18.15)	(0.75)	378
30 American Century Growth Fund	(7)	(7)	(237)	(973)	(13.20)	(0.12)	303
31 Invesco American Franchise	(62)	(62)	(312)	(952)	(10.92)	(1.05)	385
32 JHancock US Growth Fund	0	0	(8)	(944)	(94.97)	0.00	160
33 Voya Large Cap Growth Port	(61)	(61)	(388)	(943)	(15.78)	(1.05)	384
34 Alger Capital Appreciation Instl Fd	(50)	(50)	(514)	(934)	(25.54)	(0.86)	380
35 Franklin Growth Opportunities Fund	(38)	(38)	(208)	(868)	(70.98)	(0.66)	374
36 Principal LargeCap Growth F...	(105)	(105)	(168)	(853)	(12.12)	(1.80)	394

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Back Forward Advanced Search Export Print Close

Be sure to sort the data by the correct column

Be sure to move to the second page

- Close any Asset Flow windows that are open.

To see how the outflows from this Large Growth fund compare to that of others at its fund family, do the following:

1. With the Market Summary tab selected, **scroll** to the top so you can see the Fund Families grouping.
2. Click **Fidelity Investments**. A new window opens.

Be sure the correct section displayed

Click this name to open a new window

Name	1-Mo	QTD	YTD	1-Yr
Vanguard	0.51	0.51	6.79	7.68
American Funds	(0.13)	(0.13)	0.08	(0.17)
Fidelity Investments	(0.23)	(0.23)	(1.25)	(1.45)
T. Rowe Price	(0.24)	(0.24)	(0.40)	(0.30)
Franklin Templeton Investments	(1.06)	(1.06)	(9.13)	(11.01)
Dimensional Fund Advisors	0.68	0.68	7.04	7.97
Pimco	(0.20)	(0.20)	(3.95)	(8.19)
JPMorgan	(0.49)	(0.49)	(2.94)	(2.97)
BlackRock	(0.06)	(0.06)	(2.13)	(3.59)
MFS	(0.09)	(0.09)	1.25	1.56

3. In the left pane, click **Funds**.

Be sure to select this page

Name	1-Mo	QTD	YTD	1-Yr	Organic Growth Rate % (TTM)	Query Mkt Sh%	Query Rank	#
1 Fidelity Investments	820	820	(1,846)	(15,214)	(1.24)	100.00	1	

- From the **Sub-view** drop-down field in the upper-right corner of the dialog box, be sure **Estimated Net Flow... Estimated Net Flow (Current)** is selected.

The screenshot shows the Morningstar Direct interface. At the top, it displays 'Market: US Open-end ex MM ex FoF', 'Eff. Date: 2017-07-31', 'Currency: USD', 'Exclude Obsolete: Yes', and 'Active/Passive: All Funds'. The 'Fund Family' is set to 'Fidelity Investments'. On the left, there is a navigation pane with categories like 'Fund Families', 'US Category Group', 'Morningstar Categories', etc. The main area shows a table of funds. A dropdown menu labeled 'Sub-view' is open, showing options: 'Estimated Net Flow (Current)', 'Estimated Net Flow', 'Estimated Net Flow (Monthly)', 'Growth Rate', 'Estimated Net Flow (Quarterly)', 'Market Appreciation', and 'Estimated Net Flow (Calendar Year)', 'All Current Fields'. A red box highlights the 'Sub-view' dropdown, and a callout box points to it with the text 'Note the options selected here'.

Name	1	2	3	4	5	6	7	8	9	10	11
Fidelity® Long-Term Treasury Bon...	1,301	1,301	1,750	1,750	7,112.05	158.70	1				
Fidelity® Contrafund® K6	920	920	922	922	112.20	2					
Fidelity® Series Commodity Strat...	914	914	368	855	28.46	111.49	3				
Fidelity® SAI US Large Cap Index...	680	680	2,851	4,927	203.61	82.91	4				
Fidelity® US Bond Index Fund	562	562	4,027	7,116	28.63	68.60	5				
Fidelity® 500 Index Fund	539	539	1,021	5,045	4.99	65.76	6				
Fidelity® Total Bond K6 Fund	475	475	500	500	57.94	7					
Fidelity® Low-Priced Stock K6 Fd	458	458	460	460	55.84	8					
Fidelity® Series Investment Grad...	317	317	1,668	2,376	10.19	38.68	9				
Fidelity® Value Discovery K6 Fund	297	297	298	298	36.25	10					
Fidelity® Total Market Index Fund	289	289	2,449	3,676	10.66	35.24	11				

- Click the **1-Yr** column header to sort from best to worst.
- Click the **1-Yr** column header again, to sort from worst to best. Where is the Large Growth fund you saw earlier in this exercise?
- Close** any Asset Flow windows that are open.

Identifying Funds with Consistent Top Performance

Overview

The Morningstar Rating for a fund is a starting point for evaluating a fund’s risk-adjusted performance, but it is also important to consider the consistency of a fund’s performance over time so you understand whether investors can rely on regular out-performance from the management team.

A performance report, which shows rows of investments and columns of data about those investments, allows you to show your manager the information being sought about funds with consistent performance. The Performance Reporting module in Morningstar Direct not only displays return and category rank data from multiple time periods more easily than in other parts of the application, but also allows you to use tools such as grouping, conditional formatting, and a scorecard to calculate results and present data in an easy-to-understand format.

In this sample performance report, you can see both conditional formatting and score columns

Folders		Consistent Large Growth Funds		Tools		Export		View Default		
Action	Save	Calculate	Edit	Undo	Locate	Tools	Export	View Default		
Ticker	Name	Report Currency: Base Currency	Morningstar Analyst Rating	1/1/2012 - 12/31/2014 (Rolling Window)	2/1/2012 - 1/31/2015 (Rolling Window)	Return (Annualized)	Peer group %	Return: Peer group % Score	Return (Annualized)	Peer group %
Report Search Criteria: Morningstar Category = Large Growth And Annual Report Net Expense Ratio < CAT AVG And Closed to New Inv Not= Yes And Sh										
▼ US Fund Large Growth										
1	ALLIX	AB Large Cap Growth I	Under Review	22.90	8	1.00	19.36	10		
2	MLCIX	BMO Large-Cap Growth I		21.86	16	1.00	18.99	13		
3	SBLYX	ClearBridge Large Cap Growth I	Bronze	23.72	4	1.00	20.53	4		
4	GTLX	Glenmede Large Cap Growth		24.64	2	1.00	20.68	4		
5	HGIYX	Hartford Core Equity Y		22.62	9	1.00	19.75	7		
6	HIAGX	Hartford Disciplined Equity HLS IA		22.89	8	1.00	20.00	6		
7	ADGIX	AB Core Opportunities I		20.53	38	0.00	18.10	26		
8	AGFIX	AB Growth I	Under Review	20.04	48	0.00	17.16	46		
9	AKRIX	Akre Focus Instl	Silver	21.57	20	1.00	19.01	13		
10	PGFIX	AllianzGI Focused Growth Institutional		21.49	22	1.00	18.60	19		
11	BRLGX	American Beacon Bridgeway Lg Cr Gr Instl		23.68	4	1.00	21.03	3		
12	RAFGX	American Funds AMCAP R6	Gold	21.48	22	1.00	18.39	22		
13	AMOMX	AQR Large Cap Momentum Style I	Bronze	20.36	41	0.00	18.75	16		
14	ATMOX	AQR TM Large Cap Momentum Style I					18.71	17		
15	BUFEX	Buffalo Large Cap		20.62	36	0.00	17.08	48		
16	CEYIX	Calvert Equity I		19.34	62	0.00	16.23	65		
17	DHAMX	Centre American Select Equity Inv		15.98	95	0.00	13.33	94		
18	CHAXX	Chase Growth Institutional		19.73	54	0.00	17.81	32		
19	CLQZX	Columbia Disciplined Growth Z		21.42	22	1.00	18.70	17		
20	CFGRX	Commerce Growth		19.56	58	0.00	16.29	64		
21	HRCMX	Eagle Capital Appreciation R5		21.69	19	1.00	18.54	20		
22	ESEIX	Eaton Vance Atlanta Capital Sel Eq I					16.82	54		
23		EQ/T. Rowe Price Growth Stock K		21.55	21	1.00	18.84	15		
24	KLCIX	Federated Kaufmann Large Cap Instl	Neutral	24.75	2	1.00	21.21	2		
25	EQPGX	Fidelity Advisor® Equity Growth I	Neutral	20.15	46	0.00	17.85	31		
26	FINSX	Fidelity Advisor® New Insights I	Silver	19.06	67	0.00	16.15	66		
27	FCAKX	Fidelity® Capital Appreciation K	Neutral	22.82	8	1.00	19.43	9		
28	FCNXX	Fidelity® Contrafund® K	Silver	19.69	55	0.00	17.21	45		
29	FEXKX	Fidelity® Export and Multinational K		17.20	89	0.00	14.42	87		
30	FGDKX	Fidelity® Growth Discovery K		20.47	39	0.00	18.12	26		
31	FLGEX	Fidelity® Large Cap Growth Enhanced Idx		20.38	40	0.00	17.71	33		


Creating a performance report consists of the following steps:


What is involved in creating a performance report?


1. Select the investments for the report.
2. Decide how the investments will be grouped together, what the investments on the report should be compared to, and select comparison and calculation benchmarks for the investments on the report.
3. Choose the time periods (trailing 1-year, rolling window, etc.) to display, and data points (Return, Category Rank) to display in each time period.
4. Choose supplementary information you want to include outside of the time periods.
5. Apply conditional formatting to call out important information.
6. Use a scorecard to calculate results over time.

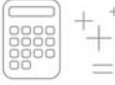
1  Select the investments for the report.

2  Decide how the investments will be grouped together, what the investments on the report should be compared to, and select comparison and calculation benchmarks for the investments on the report.

3  Choose the time periods (trailing 1-year, rolling windows, etc...) to display and data points (Return, Category Rank) to display in each time period.

4  Choose any supplementary information you want to include outside of the time periods.

5  Optionally, apply conditional formatting to call out important information.

6  Optionally, use a scorecard to calculate results over time.

Scenario

Your manager wants to understand the consistency of Large Growth open-end funds. Which of the funds have had truly reliable performance during the past five years? Your manager wants you to produce a report identifying consistent Large Growth funds. Each fund must meet the following criteria:

- ▶ still open to new investors
- ▶ an above-average Sharpe Ratio for the trailing five-year period when compared to their category peers
- ▶ an expense ratio below the category average
- ▶ a Downside Capture Ratio for the five-year period below 100, and
- ▶ only the cheapest share class of a fund should be considered.

The report should show returns and category ranks for rolling three-year periods, starting from five years ago through the most recent month end.

In the following exercises, a fund will be considered a consistent top performer if it has appeared in the top quarter of its category during all of the 25 time periods being considered. If a fund has a Morningstar Analyst Rating, your manager wants to see that, but funds are not required to have an analyst rating in order to be considered a top performer. Finally, the Sharpe Ratio should also be shown, but only for the most recent three-year period.

Solution

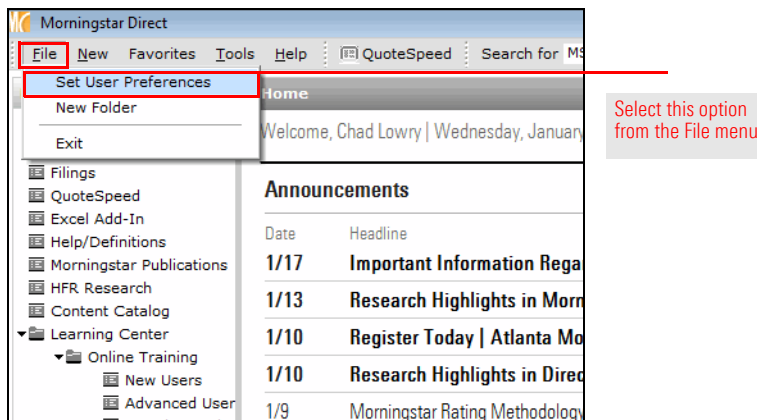
In this performance report, you will search for the investments to consider, then configure the performance report to retrieve the proper time periods and data points. Conditional formatting will be used to highlight both funds appearing in the top quartile for each time period, and the Morningstar Analyst Rating (where available). Finally, a scorecard will be employed to determine whether funds have consistently appeared in the top quartile of their respective Morningstar Category.

When creating an advanced search to find only one instance of a fund (rather than seeing all share classes of a fund), you have a number of options, including looking for the following:

- ▶ the oldest share class of a fund
- ▶ a specific share class for a fund, such as the A share, or
- ▶ the least expensive share class for a fund.

Before conducting an advanced search to look for the cheapest share class for a fund, you need to set the proper user preference to allow for this. Do the following:

1. From the menu bar at the top of the Morningstar Direct window, select **File...Set User Preferences**. The Set User Preferences window opens.



2. Select the **User Defined Primary** tab.
3. Select the row for **Annual Report Net Expense Ratio**, then click the **move to top** button. (The move to top button displays two up arrows.) This ensures this criterion takes precedence when conducting a search.
4. Be sure the word **Lowest** appears in the Choose column.

Be sure to select this tab

Use this button to move the selected item to the top of the list

The screenshot shows the 'Set User Preferences' dialog box with the 'User Defined Primary' tab selected. The 'User Defined Primary Criteria' section contains a table with the following data:

Order	Criteria in order of preference	Choose
1	Annual Report Net Expense Ratio	Lowest
2	Max Management Fee	Lowest
3	Institutional	Retail Preferred
4	Minimum Investment	Lowest
5	Performance Start Date	Oldest
6	Distribution Status	Accumulation Preferred
7	Currency	US Dollar
8	Hedging Policy	Unhedged
9	Share Class Size (latest)	Lowest

Next to the table are four buttons: a 'move to top' button (two up arrows), a 'move up' button (one up arrow), a 'move down' button (one down arrow), and a 'move to bottom' button (two down arrows). The 'move to top' button is highlighted with a red box.

5. Click **OK**. In the next exercise, you will learn to leverage this setting.

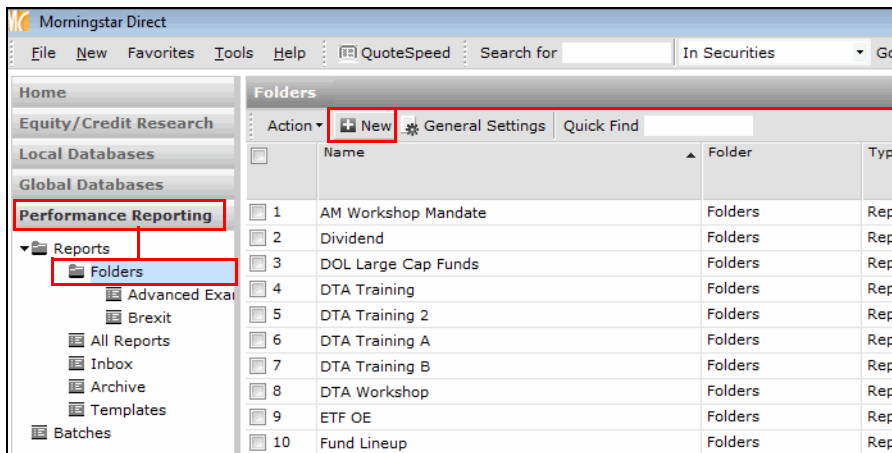
The first step in identifying consistently top performing large cap funds is to search for those open-end funds that meet the following criteria:

- ▶ an expense ratio below the category average
- ▶ still open to new investors
- ▶ an above-average Sharpe Ratio for the trailing five-year period, when compared to their category peers, and
- ▶ a Downside Capture Ratio below 100 for the five-year period.

Exercise 14: Create a search by criteria in Performance Reporting

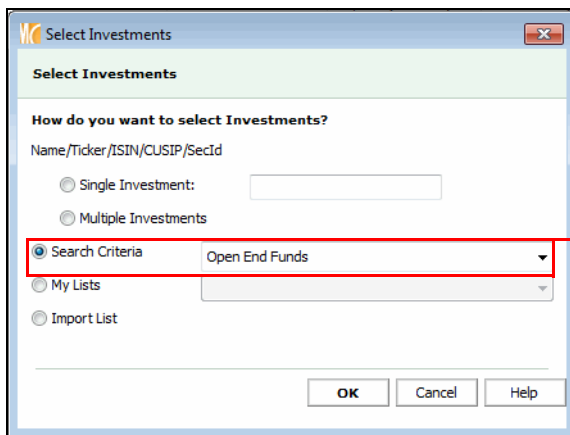
To create a search by criteria in the Performance Reporting module, do the following:

1. In Morningstar Direct, select the **Performance Reporting** tab. The Folders page should be selected by default.
2. From the toolbar above the grid view, click **New**. The Select Investments dialog box opens.



Click this icon to create a new performance report

3. Select the option for **Search Criteria**. Be sure the **Open End Funds** option is selected from the drop-down field.



Be sure this option is selected to find investments based on the parameters you choose

4. Click **OK**. The Search Criteria dialog box opens.

5. Set your criteria as shown in the following table:

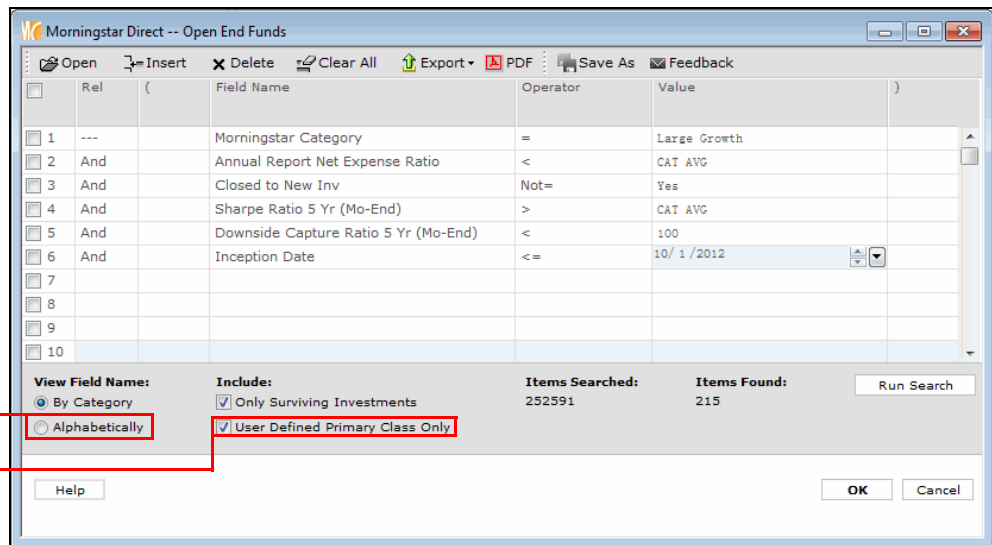
Note: At the bottom of the Search Criteria dialog box, be sure to check the checkbox for **User Defined Primary Class Only**.

Rel	(Field Name	Operator	Value)
--		Morningstar Category	=	US Large Growth	
And		Annual Report Net Expense Ratio	<	CAT AVG	
And		Closed to New Inv	Not=	Yes	
And		Sharpe Ratio 5 Yr (Mo-End)	>	CAT AVG	
And		Downside Capture Ratio 5 Yr (Mo-End)	<	100	
And		Inception Date	<=	10/1/2012	

Be sure your search reflects the inputs shown here

When looking for criteria in the Field Name column, it helps to have the Alphabetically option selected, so you can see all criteria at once

Be sure to check this box as well



6. Click **OK**. The Group Settings window opens.

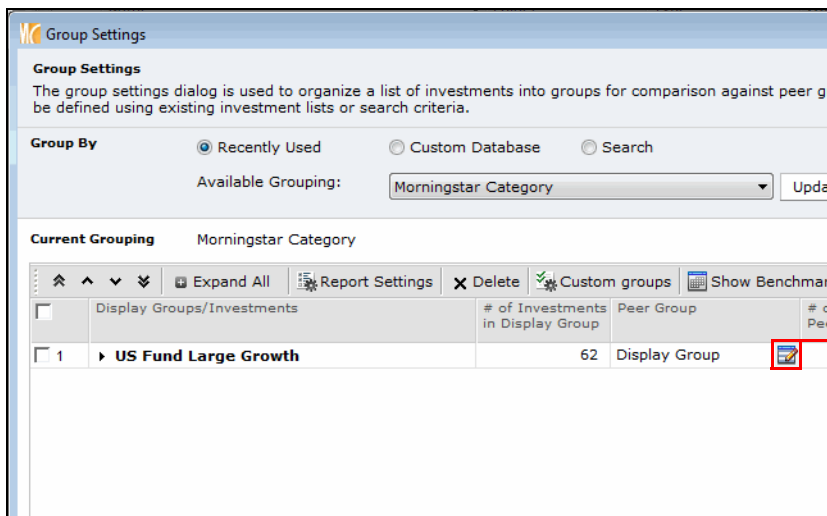
By default, when examining the performance of selected funds in a performance report, Morningstar Direct compares the funds to each other, rather than all of the funds in the appropriate Morningstar Category. In this section, you will learn how to change the peer group for a set of funds.

Exercise 15: Change the settings for the group

In a performance report, it is also important to use a relevant benchmark for both the performance comparison and performance calculations. You can also decide whether to display only one comparison benchmark (rather than the default two benchmarks).

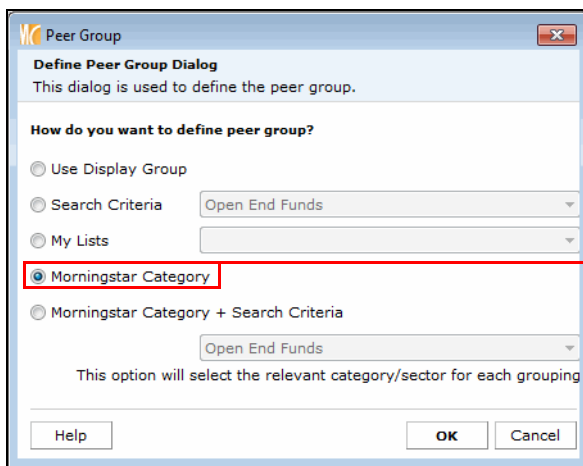
To change these settings for a performance report, do the following:

1. In the Peer Group column for row 1, click the **Peer Group** icon. The Peer Group dialog box opens.



Click this icon to change the peer group for the report

2. Select the **Morningstar Category** option.

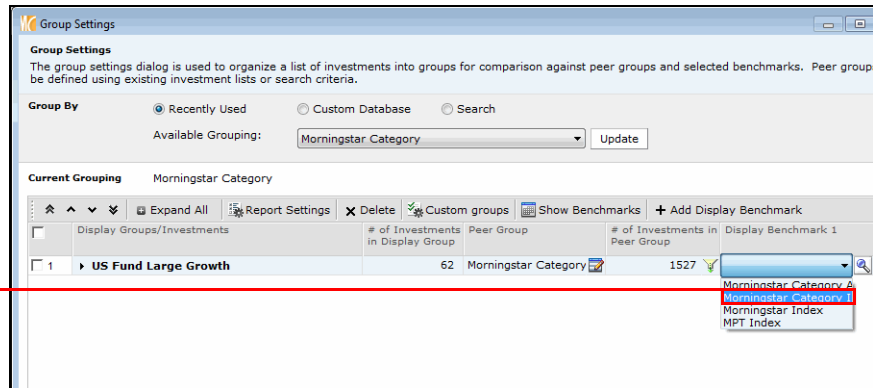


This option allows you to compare the funds from your search to all other funds in their category

3. Click **OK** to close the dialog box.

- In row 1, from the **Display Benchmark 1** drop-down field, select **Morningstar Category Index**.

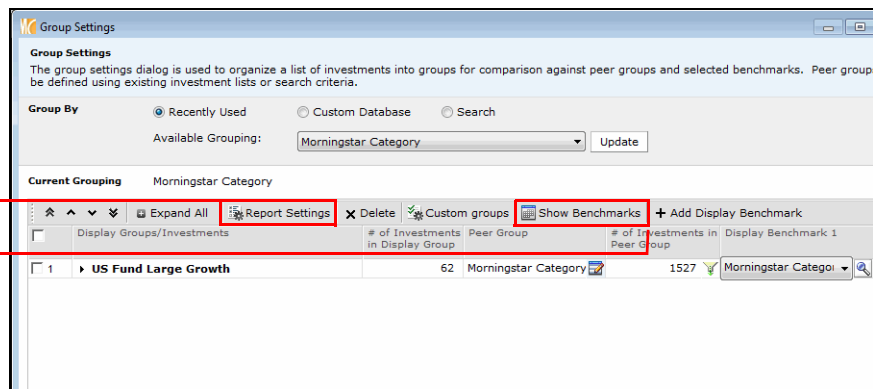
Select this option to assign an index to the category in the performance report



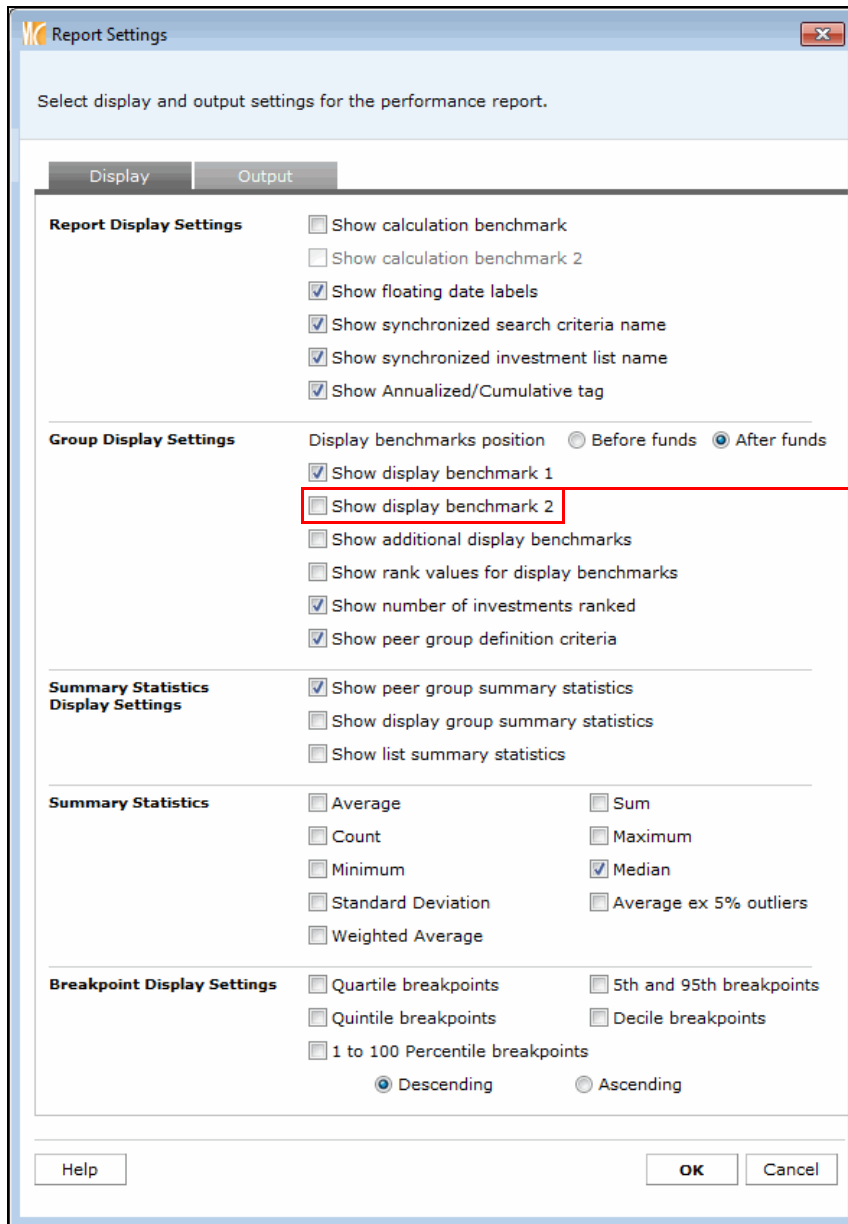
- To see what the benchmarks are for each category, from the toolbar, click **Show Benchmarks**.
- From the toolbar, click **Report Settings**. The Report Settings dialog box opens. From here, the second display benchmark can be hidden.

Use this icon to display just one comparison benchmark on the performance report

This icon allows you to see the name of each index that will appear on the report



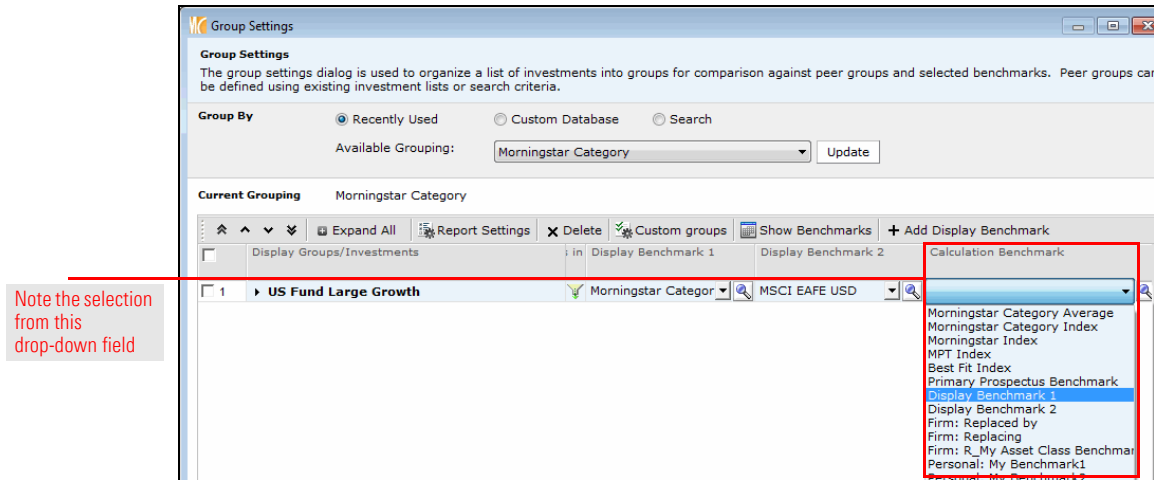
- Uncheck the **Show display benchmark 2** checkbox.



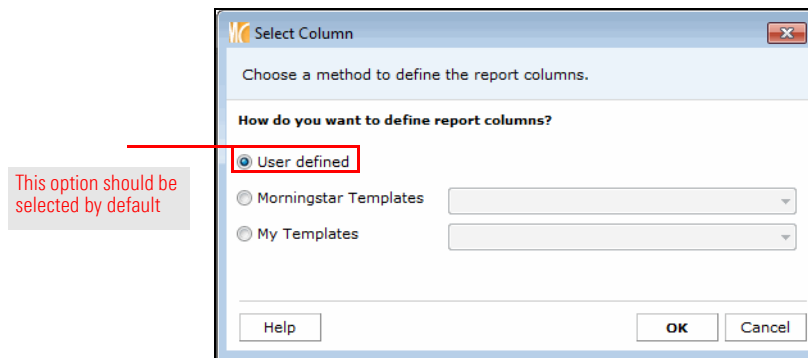
Uncheck this box to ensure only one benchmark appears on the performance report

- Click **OK** to close the Report Settings dialog box.

- Next, you need to ensure the proper benchmark is used for calculating the data on the performance report. From the **Calculation Benchmark** drop-down field, select **Display Benchmark 1**. This allows you to use the same benchmark for both display and calculation. It also ensures a peer-appropriate index is being used for calculation purposes.



- Click **OK**. The Select Column dialog box opens.
- Make sure the option for **User Defined** is selected, then click **OK**. The Performance Column Setup window opens.



To see if this set of funds has had consistent performance over a set of rolling three-year periods starting from five years ago, do the following:

1. In the Performance Column Setup, select the **Rolling window** option.
2. From the Start Date field, select **Enter Date**, and select the first day of the current month from five years ago.
3. From the End Date field, select **Last Month End**.
4. From the **Window size** drop-down field, select **3 years**.
5. From the **Moving step** drop-down field, select **1 month**. The Number of columns field should read **25**.
6. Click **Add Columns**. The time periods for the report are added to the Selected Time Periods area.

Note: Do not click OK yet; the Data Points and Ranks tabs still need to be addressed.

Exercise 16: Set the values for the Time Periods tab

The screenshot shows the 'Performance Column Setup' dialog box with the 'Time Periods' tab selected. The 'Time Period Setup' section includes fields for 'Start Date' (12/01/2012) and 'End Date' (11/30/2017). Under 'Time Periods', the 'Rolling window' radio button is selected. The 'Window size' is set to '3 years' and the 'Moving step' is set to '1 month'. The 'Number of columns' is set to '25'. Below these settings is a list of 'Selected Time Periods' with various date ranges and window/step specifications. At the bottom are buttons for 'Manage Columns', 'Settings', 'Remove', 'Remove All', 'Help', 'OK', and 'Cancel'.

Note the values for the Start Date and End Date fields

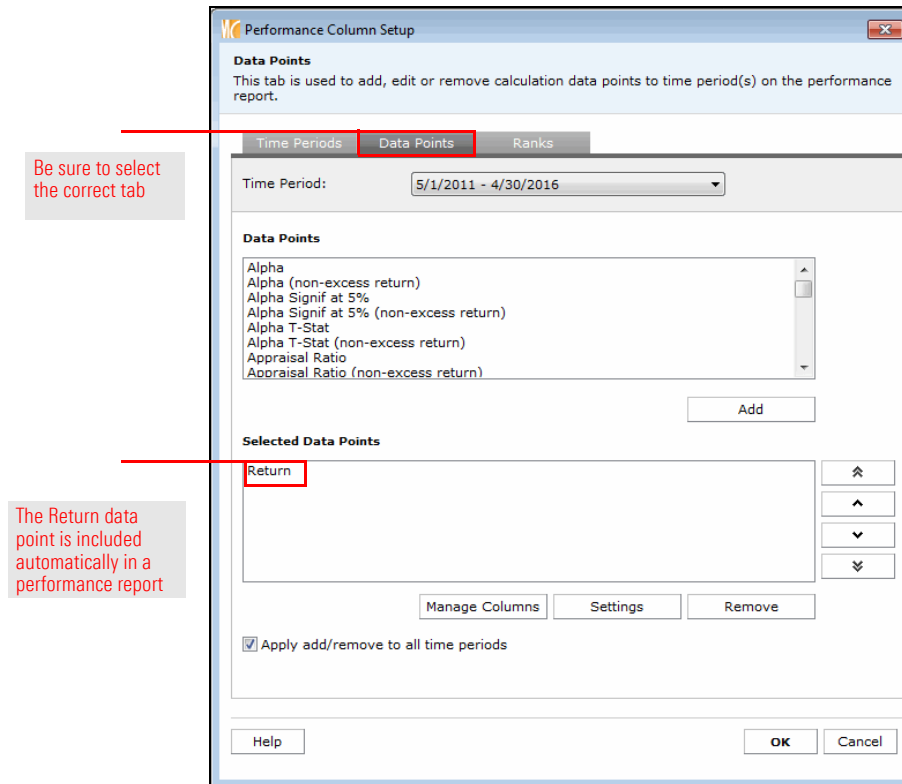
Be sure to select this option for Time Periods

Be sure to select the correct values for Window size and Moving step

Exercise 17: Set the values for the Data Points and Ranks

Remember that your manager requested to see not only the return for each time period, but also the Sharpe Ratio for only the most recent time period. To set the values for the two remaining tabs in the Performance Column Setup window, do the following:

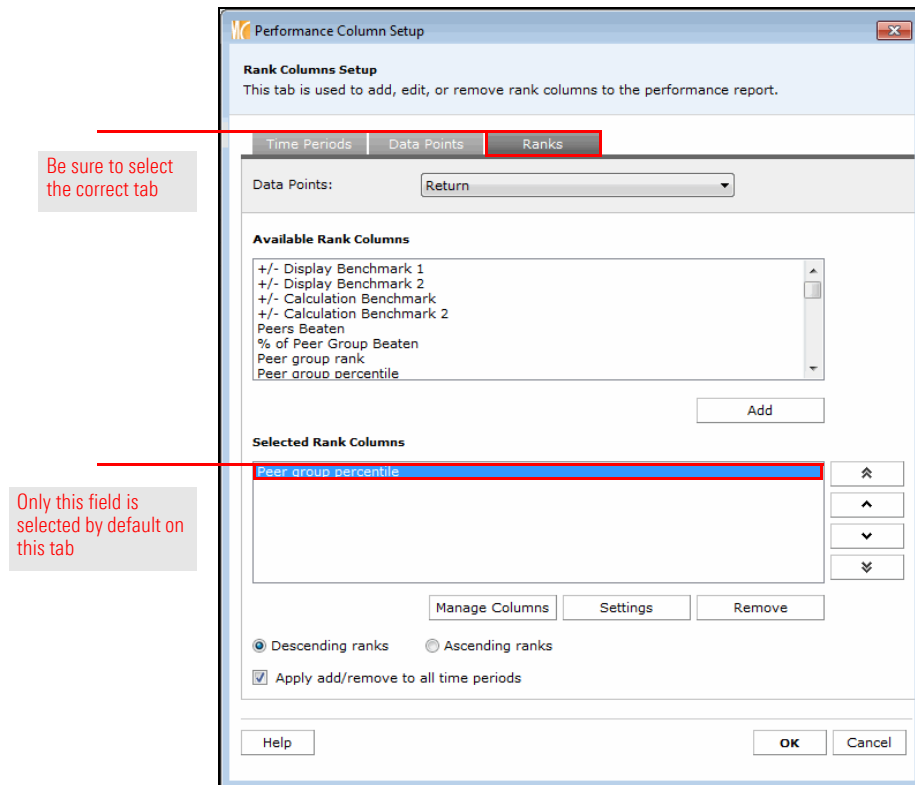
1. Select the **Data Points** tab, and ensure **Return** is displayed in the Selected Data Points list.



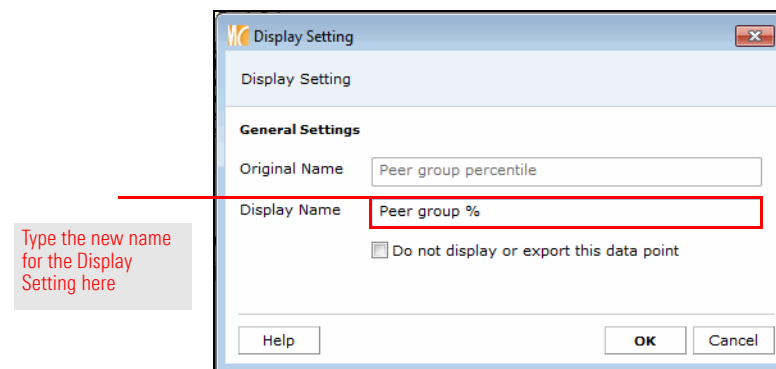
2. To see the Sharpe Ratio value for the funds, but only for the most recent time period, at the bottom of the window, uncheck the **Apply add/remove to all time periods** checkbox.
3. From the **Time Period** drop-down field at the top of the window, **scroll** down to select **the most recent time period**.
4. In the Data Points list, **scroll** down until you see the Sharpe Ratio data point, then **double-click Sharpe Ratio** to add it to the Selected Data Points area.

The screenshot shows the 'Performance Column Setup' dialog box with the 'Data Points' tab selected. The 'Time Period' dropdown is set to '11/1/2014 - 10/31/2017'. The 'Data Points' list includes 'Sharpe Ratio (arith)', which is highlighted in blue. The 'Selected Data Points' list contains 'Return' and 'Sharpe Ratio'. The 'Apply add/remove to all time periods' checkbox is checked. Red lines and callout boxes provide instructions: 'Be sure to select the latest time period' points to the dropdown; 'Double-click this data point' points to the highlighted 'Sharpe Ratio (arith)'; 'This box must be unchecked to ensure the data point is added only to the time period you select at the top' points to the 'Apply add/remove to all time periods' checkbox.

5. Select the **Ranks** tab, and ensure only **Peer group percentile** is selected in the Selected Rank Columns list.
6. In the Selected Rank Columns list, **double-click Peer group percentile**. The Display Setting dialog box opens.



7. In the Display Name field, type **Peer group %**.

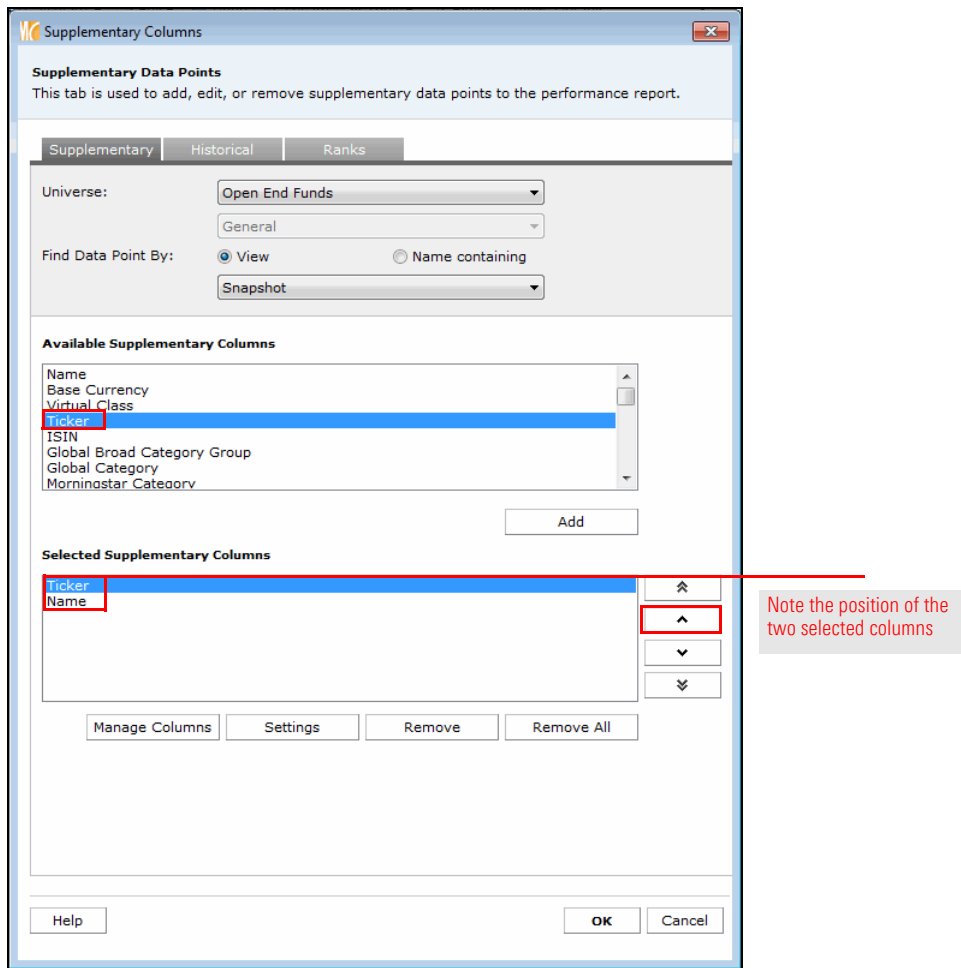


8. Click **OK** to close the Display Setting dialog box.
9. Click **OK** to close the Performance Column Setup window. The Supplementary Columns window opens.

In addition to seeing the name of a fund on the performance report, it will also be useful to include the fund’s ticker symbol. Also, your manager asked to see a Morningstar Analyst Rating if one is assigned to the fund. To include a fund’s ticker symbol and Analyst Rating on the performance report, do the following:

Exercise 18: Select options from the Supplementary Columns window

1. On the Supplementary tab, in the Available Supplementary Columns list, **double-click Ticker** to move it to the Selected Supplementary Columns list.
2. In the Selected Supplementary Columns list, select **Ticker** and click the **up arrow** to move it above Name.



3. Scroll down in the Available Supplementary Columns list, and **double-click Morningstar Analyst Rating**.

Be sure to double-click the Morningstar Analyst Rating, and not the Morningstar Rating

Supplementary Columns

Supplementary Data Points
This tab is used to add, edit, or remove supplementary data points to the performance report.

Supplementary | Historical | Ranks

Universe: Open End Funds
General

Find Data Point By: View Name containing
Snapshot

Available Supplementary Columns

- Fixed Inc Style Box (Long)
- Morningstar Analyst Rating**
- Morningstar Analyst Rating - Process Pillar
- Morningstar Analyst Rating - Performance Pillar
- Morningstar Analyst Rating - People Pillar
- Morningstar Analyst Rating - Parent Pillar
- Morningstar Analyst Rating - Price Pillar
- Analyst Name

Add

Selected Supplementary Columns

- Ticker
- Name
- Morningstar Analyst Rating**

Manage Columns Settings Remove Remove All

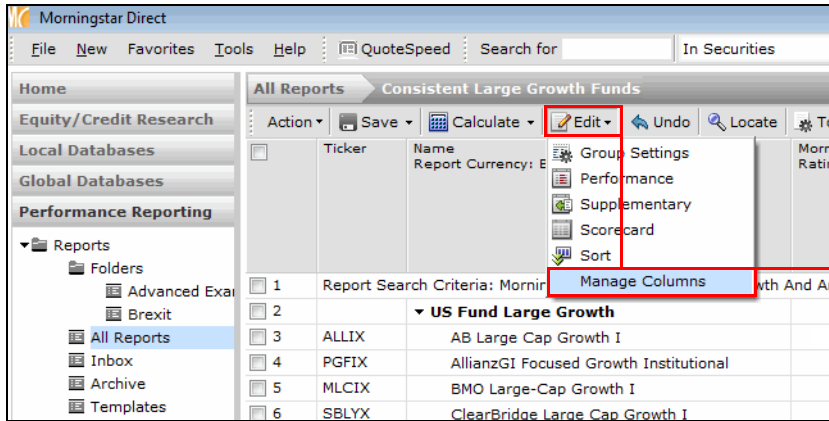
Help OK Cancel

4. Click **OK** to close the Supplementary Columns window. The performance report is now ready to be saved and calculated.

Only the most recent time period has the correct label for the Peer group percentile column; the others were not renamed to Peer group %. To correct this for all other time periods at once, do the following:

Exercise 19: Rename a data column

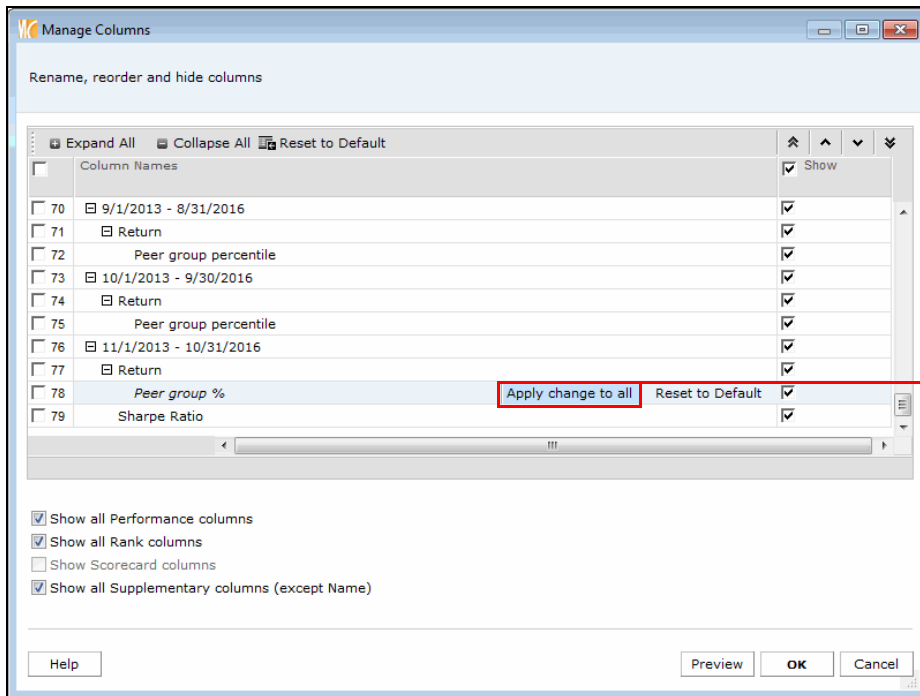
1. From the toolbar above the grid, from the **Edit** drop-down field, select **Manage Columns**. The Manage Columns dialog box opens.



Select this option from the Edit drop-down field

2. **Scroll down** to the row where Peer group % is shown.
3. **Hover** your mouse over the Peer group % cell.
4. Click **Apply change to all**.

Note: You could also click in a row to manually rename "Peer group percentile" to "Peer group %," but this would take much more effort.



When you hover your mouse over this area, you will be able to click this option

5. Click **OK** to close the Manage Columns dialog box.

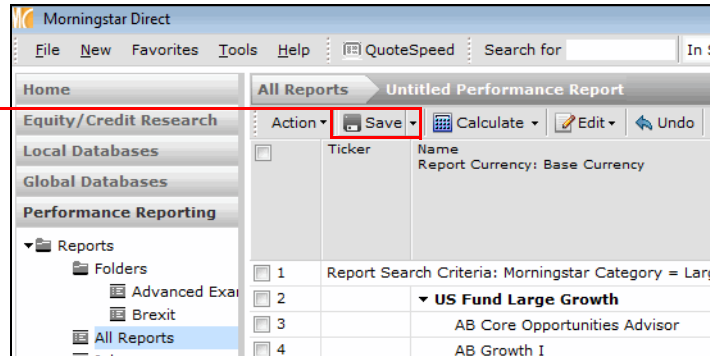
Exercise 20: Save the performance report

Now that the parameters for the report are set, the last step before calculating it is to save it.

To save the performance report, do the following:

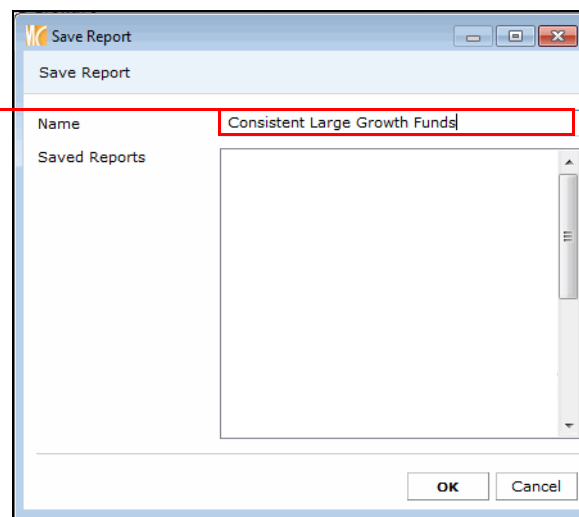
1. From the toolbar above the spreadsheet grid, click **Save**. The Save Report dialog box opens.

This icon allows you to save your work when creating a performance report



2. In the Name field, type **Consistent Large Growth Funds**.

Note the name you should enter for this report

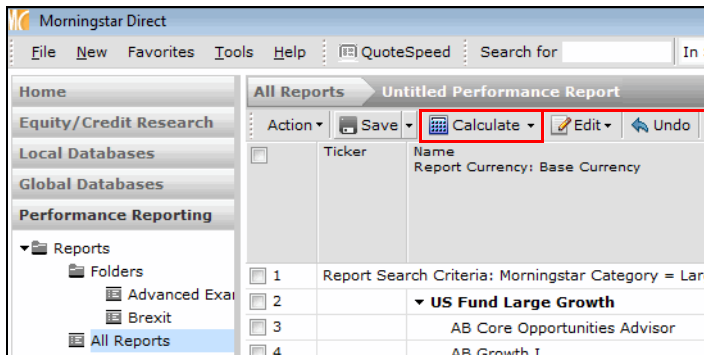


3. Click **OK**. The Save Report dialog box closes.

To calculate the report, do the following:

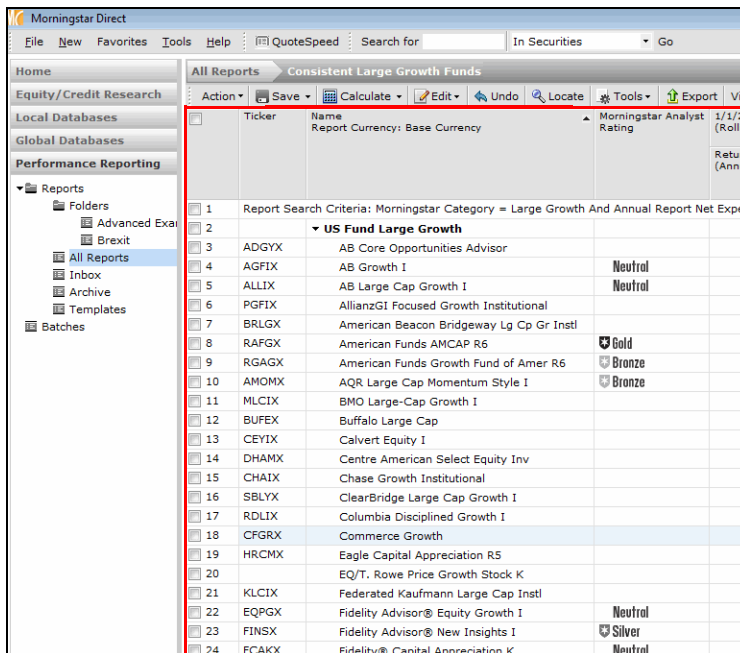
Exercise 21: Calculate the performance report

1. From the toolbar above the grid view, click **Calculate**. During the calculation, the Folders page is displayed.



This icon allows you to generate a performance report

2. When the Report Calculation Complete message opens, click **Yes** to view the report. The spreadsheet grid is now filled with data.



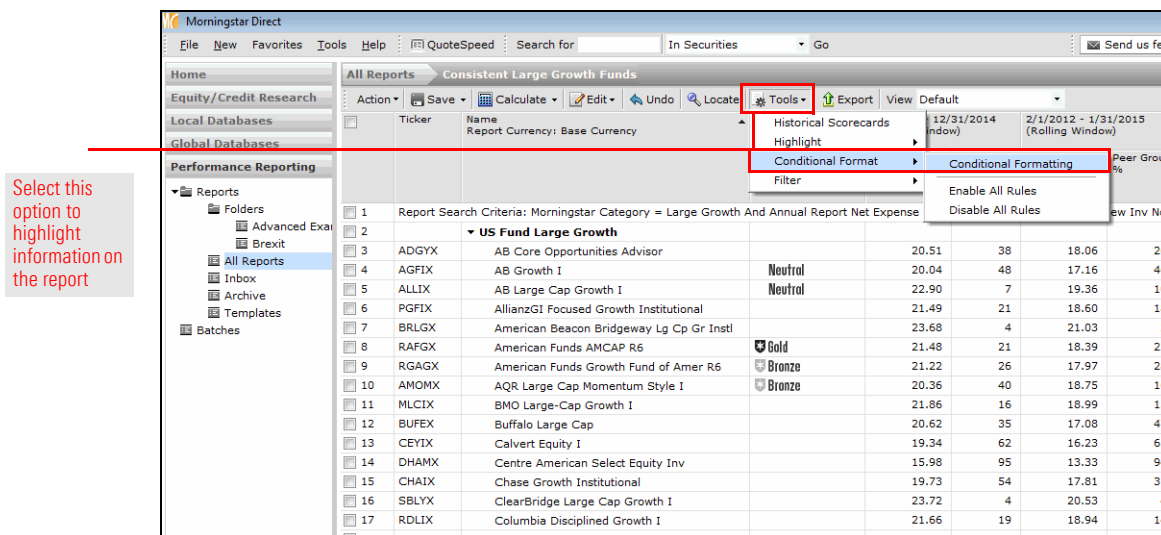
Note the data now available in the report

Exercise 22: Apply conditional formatting to a performance report

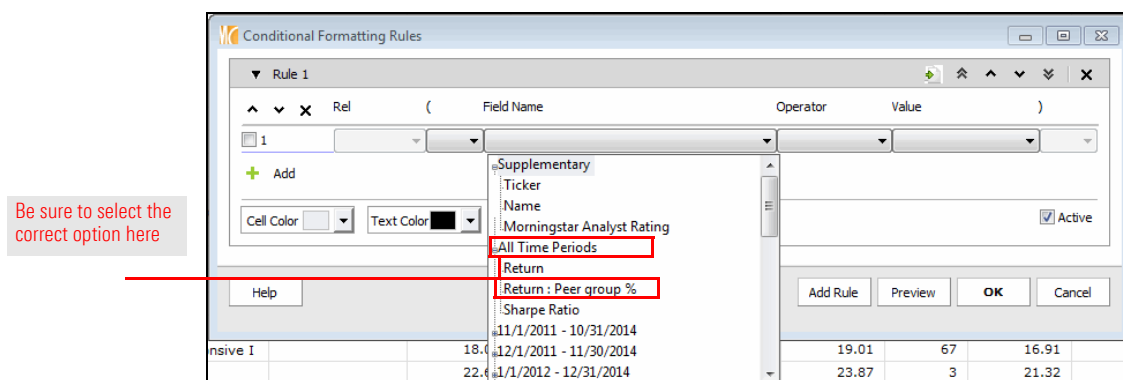
The information in the performance report is great, but it is also a bit difficult to read without some additional formatting. The conditional formatting feature in the Performance Reporting module allows you to color each row, cell, or column to aid the interpretation of the data.

In this exercise, you will apply a color to the Peer group % column to call out the times when each fund was in the top quartile of its category. To apply conditional formatting to a performance report, do the following:

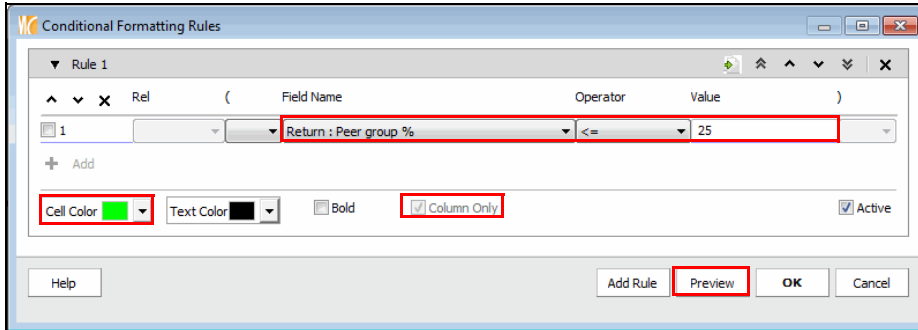
1. From the toolbar above the grid view, from the **Tools** drop-down field, select **Conditional Format . . . Conditional Formatting**. The Conditional Formatting Rules dialog box opens.



2. From the **Field Name** drop-down field, expand the **All Time Periods** option and select **Return : Peer group %**.



3. From the **Operator** drop-down field, select **<=**.
4. In the **Value** field, type **25**.
5. From the **Cell Color** drop-down field, select **green** in the upper-right corner.
6. Be sure the box for **Column Only** is checked.
7. Click **Preview** to ensure the rule is working as expected.



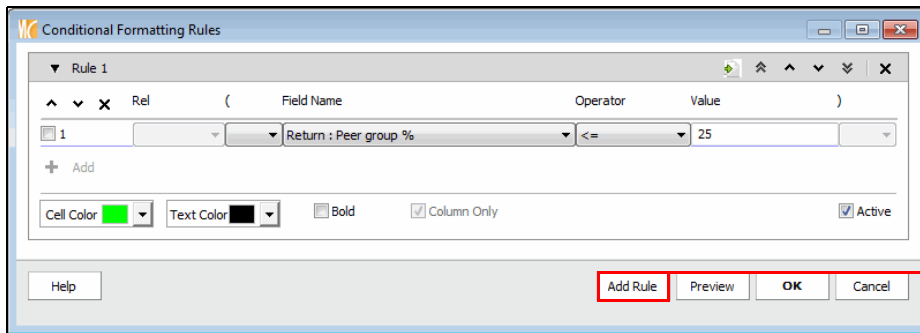
Note all of the highlighted values for this first rule

8. Click **OK**. The Conditional Formatting Rules dialog box closes.

In addition to highlighting funds when they appeared in the top quartile, you can also apply conditional formatting to the Morningstar Analyst Rating column, to help these values stand out. Do the following:

Exercise 23: Apply conditional formatting to the Morningstar Analyst Rating

1. From the toolbar above the grid view, from the **Tools** drop-down field, select **Conditional Format... Conditional Formatting**. The Conditional Formatting Rules dialog box opens.
2. Click **Add Rule**. Rule 2 now appears.



Click this button to add another formatting rule

3. From the **Field Name** drop-down field, select **Morningstar Analyst Rating**.
4. The Operator field should show **=**.
5. From the **Value** field, select **Gold**.
6. From the **Cell Color** drop-down field, click **Custom**. The Custom Color dialog box opens.

Note the values for this rule

Use this button to customize the color for these cells

HRCMX	No Fill	Capital Appreciation R5	21.69	19	1.00	18.5
		T. Rowe Price Growth Stock K	21.55	20	1.00	18.8
KLCIX	Custom	erated Kaufmann Large Cap Instl	24.75	2	1.00	21.2

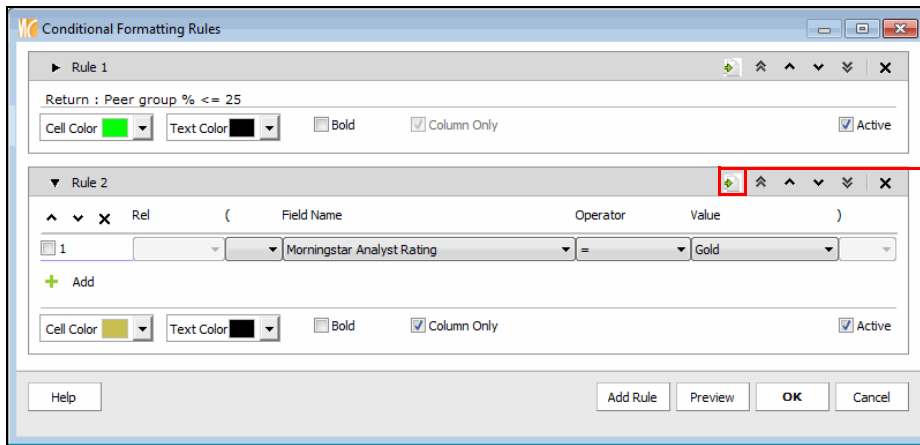
7. Set the following values:

- ▶ Red = **250**
- ▶ Green = **164**
- ▶ Blue = **29**

Be sure your values match those shown here

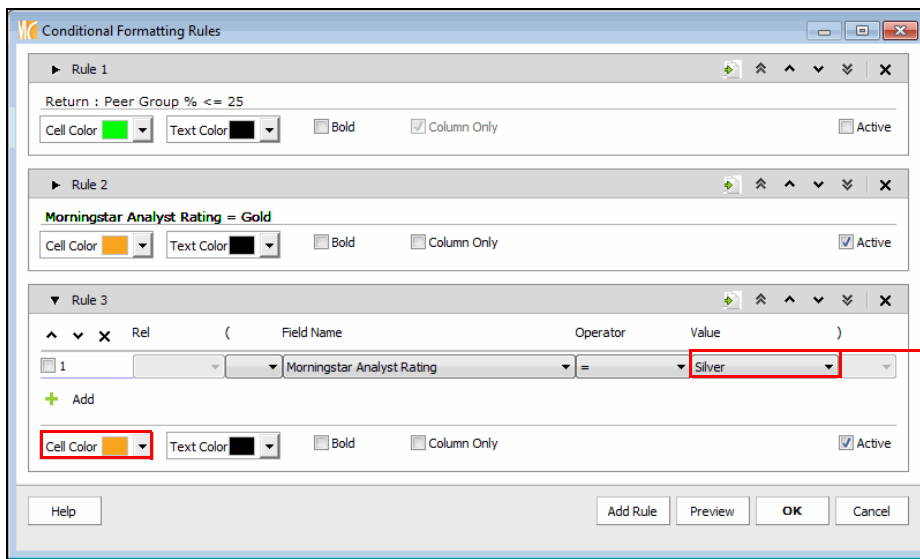
8. Click **OK**.
9. Be sure the **Column Only** box is checked.

- To help you create multiple conditional formatting rules for the same column, you can use the Clone Rule icon. From the Rule 2 heading bar, click the **Clone Rule** icon. Rule 3 now appears. The Field Name, Operator, and Value fields are populated automatically based on the rule you cloned.



Be sure to click the Clone Rule icon for the correct rule

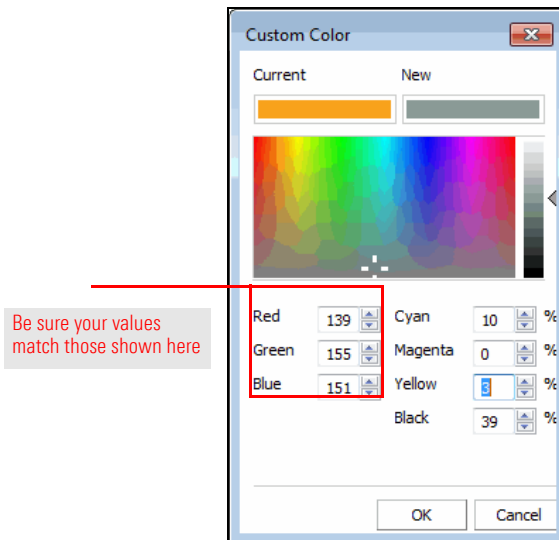
- In the Rule 3 section, from the **Value** drop-down field, select **Silver**.
- From the **Cell Color** drop-down field, click **Custom**. The Custom Color dialog box opens.



Be sure to change the value for this field

13. Set the following values:

- ▶ Red = **139**
- ▶ Green = **155**
- ▶ Blue = **151**



14. Click **OK** to close the Custom Color dialog box.

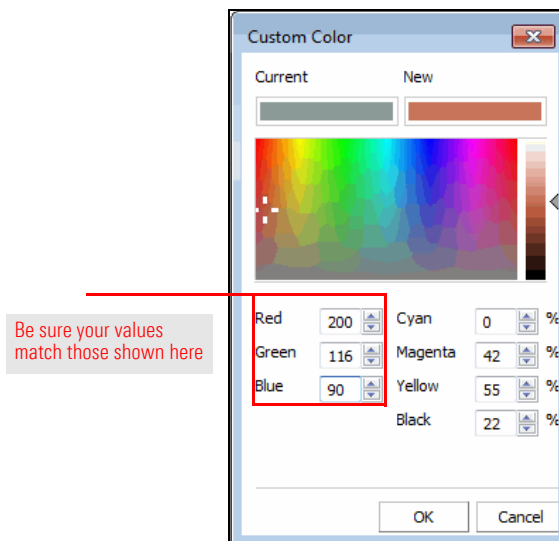
15. In the Conditional Formatting Rules dialog box, on the Rule 3 heading bar, click the **Clone Rule** icon. Rule 4 now appears.

16. In the for Rule 4 section, from the **Value** drop-down field, select **Bronze**.

17. From the **Cell Color** drop-down field, select **Custom**. The Custom Color dialog box opens.

18. Set the following values:

- ▶ Red = **200**
- ▶ Green = **116**
- ▶ Blue = **90**



19. Click **OK** to close the Custom Color dialog box.

20. Click **OK** to close the Conditional Formatting Rules dialog box.

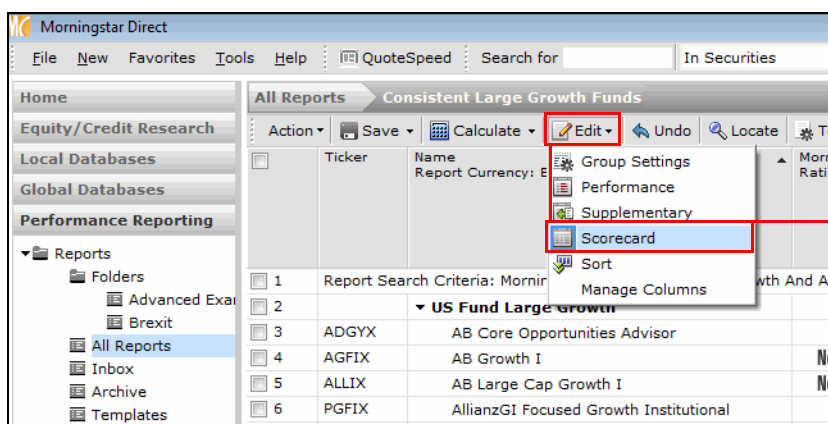
Conditional formatting is helpful, but it still is not clear which funds have actually performed consistently well. Remember, your manager stated that to be considered a top performer, a fund had to be in the top quartile at least 75% of the time over these time periods. This calculation can be done with the Scorecard feature. A new column will be added to each time period, as well as to the right side of the report for the Total Score of each fund across these time periods.

Exercise 24: Generate a Scorecard for a set of investments

In this instance, each time a fund appears in the top quartile of its category for a time period, it will be given a score of one point. If it is not in the top quartile, it will not receive any points. Once you add a scorecard to a performance report, you will need to recalculate the report.

To create a Scorecard for this set of investments, do the following:

1. From the toolbar above the grid view, from the **Edit** drop-down field, select **Scorecard**. The Investment Scorecard dialog box opens.

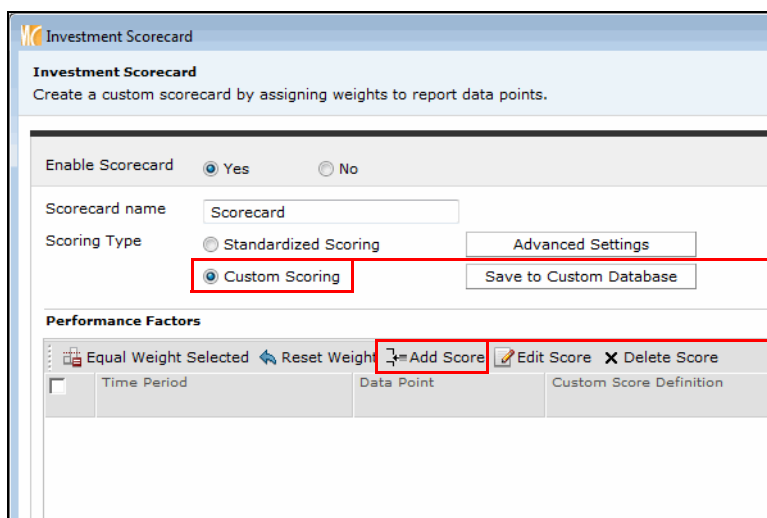


Select this option from the Edit icon's drop-down field

2. In the Scoring Type area, select the **Custom Scoring** option.

Note: When the Performance Reporting warning message opens related to all formatting being lost, click **Yes**.

3. In the Performance Factors area, click **Add Score**. The Custom Score Setting dialog box opens.



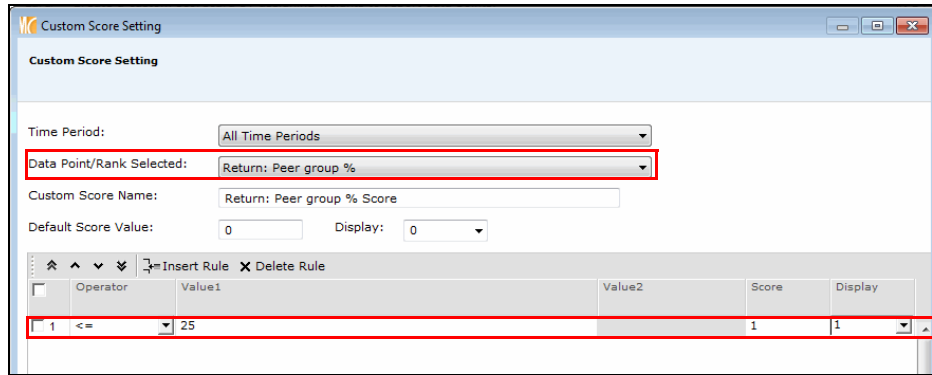
Be sure to select this option to create your own scoring rules

Use this icon to create your custom scorecard

4. The Time Period field should read All Time Periods. From the **Data Point/Rank Selected** drop-down field, select **Return: Peer group %**.
5. In row 1, enter the following values:

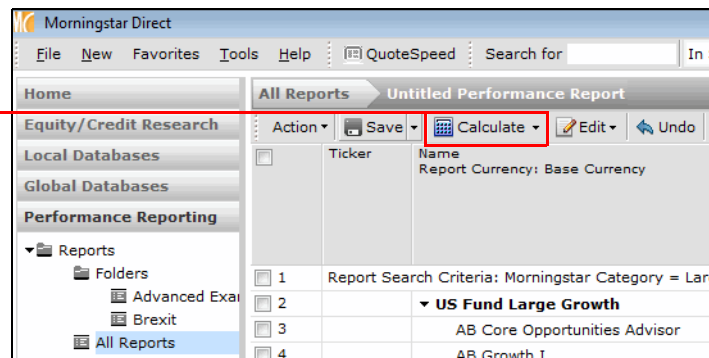
Operator	Value1	Score	Display
<=	25	1	1

Note the highlighted values for this rule



6. Click **OK** to close the Custom Score Setting dialog box.
7. Click **OK** to close the Investment Scorecard dialog box.
8. From the toolbar above the spreadsheet grid, click **Calculate**.

Because the parameters of the report have changed, you need to recalculate it



9. When the confirmation message opens, click **Yes** to view the report.
10. To see only the scores, from the toolbar above the grid view, from the **View** drop-down field, select **Score Columns**. Note the new Total Score column on the far right side.

The screenshot shows the Morningstar Direct interface with a report titled "Consistent Large Growth Funds". The "View Score Columns" dropdown menu is open, showing options for different time periods and a "Total Score" column. The table below displays the scores for various funds, with the "Total Score" column highlighted in red. Two callout boxes provide instructions: "Select this option to see only the score columns for the report" and "The Total Score column has been added to the report".

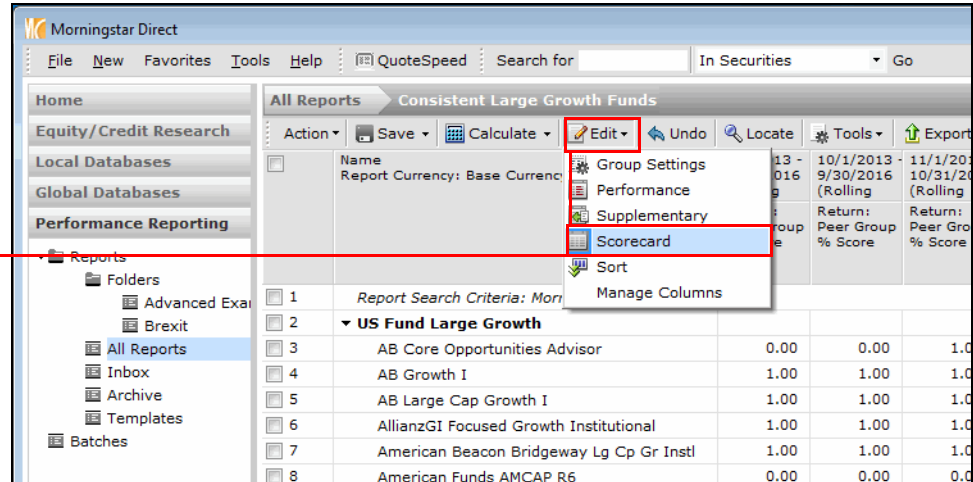
Name	9/1/2013 - 8/31/2016 (Rolling)	10/1/2013 - 9/30/2016 (Rolling)	11/1/2013 - 10/31/2016 (Rolling)	12/1/2013 - 11/30/2016 (Rolling)	1/1/2014 - 12/31/2016 (Rolling)	Total Score
Report Search Criteria: Morningstar Category = L						
US Fund Large Growth						
AB Core Opportunities Advisor	0.00	0.00	1.00	1.00	1.00	7.00
AB Growth I	1.00	1.00	1.00	1.00	1.00	19.00
AB Large Cap Growth I	1.00	1.00	1.00	1.00	1.00	25.00
AllianzGI Focused Growth Institutional	1.00	1.00	1.00	1.00	1.00	25.00
American Beacon Bridgeway Lg Cp Gr Instl	1.00	1.00	1.00	1.00	1.00	24.00
American Funds AMCAP R6	0.00	0.00	0.00	1.00	1.00	11.00
American Funds Growth Fund of Amer R6	0.00	0.00	1.00	1.00	1.00	8.00
AQR Large Cap Momentum Style I	0.00	0.00	0.00	0.00	0.00	3.00
BMO Large-Cap Growth I	1.00	1.00	1.00	1.00	1.00	25.00
Buffalo Large Cap	1.00	1.00	1.00	1.00	1.00	22.00
Calvert Equity I	0.00	0.00	0.00	0.00	0.00	0.00
Centre American Select Equity Inv	0.00	0.00	0.00	0.00	0.00	0.00
Chase Growth Institutional	1.00	1.00	0.00	0.00	0.00	9.00
ClearBridge Large Cap Growth I	1.00	1.00	1.00	1.00	1.00	25.00
Columbia Disciplined Growth I	1.00	1.00	1.00	1.00	1.00	23.00
Commerce Growth	1.00	1.00	1.00	1.00	1.00	12.00
Eagle Capital Appreciation R5	1.00	1.00	1.00	1.00	1.00	22.00

Exercise 25: Add a summary column for various scores

The information in the score columns is useful, but it would be nice to summarize the scores, and then analyze the funds. How many have been truly consistent over all 25 time periods? Do the following:

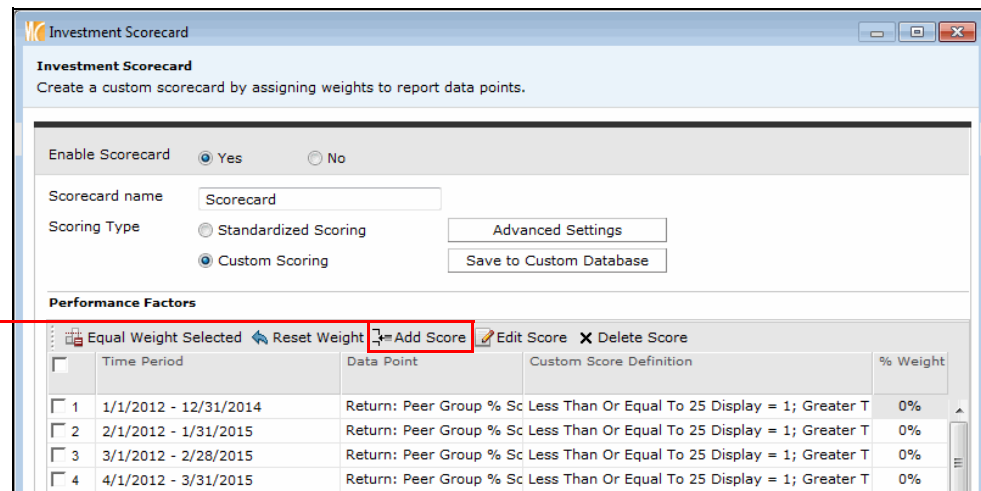
1. From the toolbar above the spreadsheet grid, from the **Edit** drop-down field, select **Scorecard**. The Investment Scorecard window opens.

As before, use this option to create a scorecard column

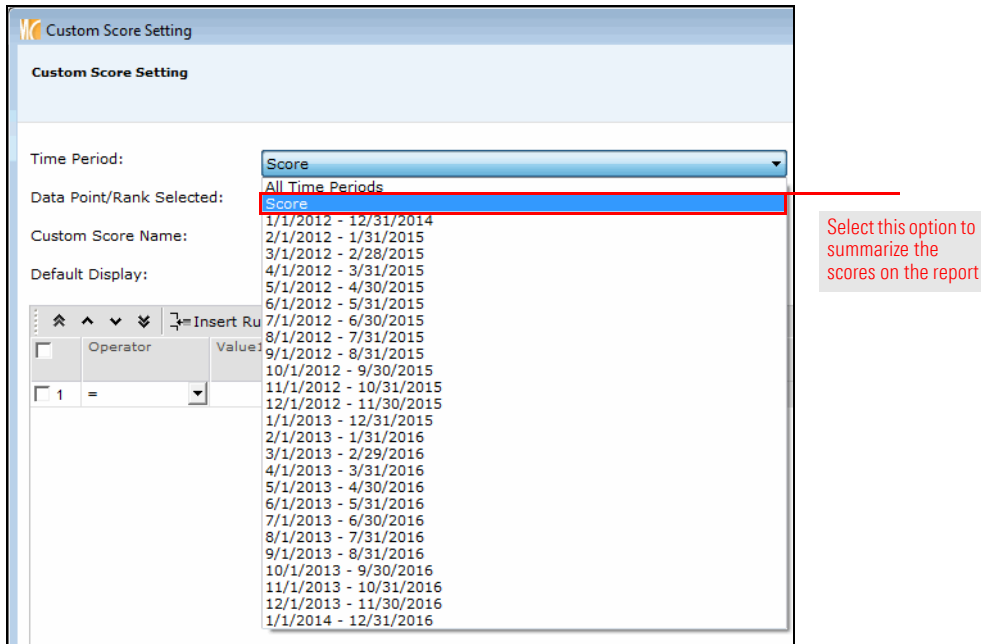


2. From the toolbar in the Performance Factors section, click **Add Score**. The Custom Score Setting dialog box opens.

Click this button to create an additional score column



- From the **Time Period** drop-down field, select **Score**. The Data Point/Rank Selected drop-down field should show Total Score.



- In row 1 under Default Display, enter the following values:

Operator	Value1	Display
=	25	Consistent Performer

- Click **Insert Rule** to create the following rule:

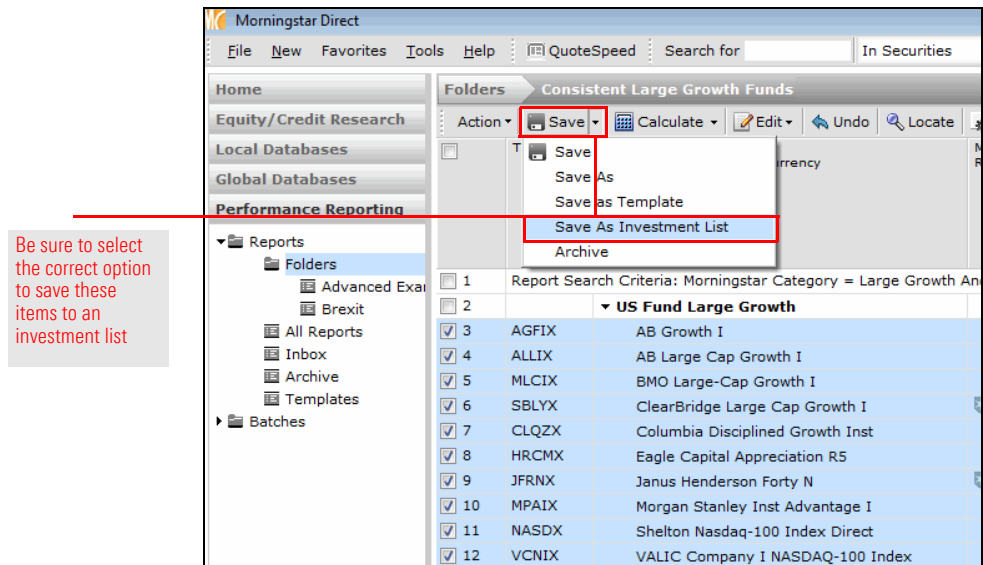
Operator	Value1	Display
<	25	Do Not Consider

- Click **OK** to close the Custom Score Setting dialog box.
- Click **OK** to close the Investment Scorecard window.
- From the toolbar above the grid view, click **Calculate**.
- When the confirmation message opens, click **Yes** to view the report.
- Scroll** to the right and **double-click** the **Total Score** column header to sort the content of this column.

Exercise 26: Save investments to a list

Now that you know which funds should be considered consistent top performers, you can do further analysis on the portfolio of each one. The first step is to save these items to a list. Do the following:

1. For each fund in the Large Growth category marked as a Consistent Top Performer in the Total Score column, click the **checkbox** to the left of its row number
2. From the toolbar, from the **Save** drop-down field, select **Save as Investment List**. The Save As dialog box opens.



3. In the **Name** field, type **Large Growth Consistent Performers**.
4. Click **OK**.

You have now successfully generated a Performance Report, and saved the securities to a list for further analysis. To conduct that analysis, you will use the Portfolio Analysis module, which is covered in the next section.

Using Portfolio Attribution to Understand Performance

Now that you have a list of funds to examine, you can begin to explore how they have achieved their success, particularly in the past year. Can the funds' success be credited to an overexposure to Financial Services and Technology, or being underexposed to Energy and Real Estate? Maybe both? The Portfolio Analysis module in Morningstar Direct allows you to conduct this type of attribution exploration.

Overview

Your manager has asked you to investigate the Large Growth Consistent Performers list you saved from the performance report you created. Which fund has the highest active return? What investment decisions can account for this? Did the manager make any missteps in selecting different stocks or sector investments?

Scenario

The steps to accomplish your assignment are as follows:

Solution

1. Use the Portfolio Analysis tool in Morningstar Direct Cloud to analyze the funds on the list you saved in Performance Reporting.
2. Display the Attribution worksheet on the dashboard view, then drill down on a specific fund to conduct further attribution analysis.
3. Select, configure, and navigate through the Attribution workspace to investigate the fund and provide insightful analysis to your manager on the fund's return over the past year.

Name	Ticker	Portfolio	Weights %	Return %	Attribution Effect
Total					
			100.02	2.86	-0.34 3.70 3.36

Name	Benchmark	Report	Portfolio Date	# of Holdings	Allocation %	Selection %	Active Ret%
US Fund Large Growth							
1	AB Large Cap Growth I	Morningstar US Large Grow	11/30/2016	56	-0.30	4.03	3.74
2	AllianzGI Focused Growth Inst	Morningstar US Large Grow	11/30/2016	41	-1.12	3.64	2.52
3	BMO Large-Cap Growth I	Morningstar US Large Grow	11/30/2016	72	0.49	8.87	9.36
4	ClearBridge Large Cap Growth	Morningstar US Large Grow	9/30/2016	47	0.96	6.15	7.11
5	Glenmede Large Cap Growth	Morningstar US Large Grow	10/31/2016	82	1.25	7.95	9.19
6	Hartford Core Equity Y	Morningstar US Large Grow	11/30/2016	73	3.17	1.99	5.15
7	Hartford Disciplined Equity HL	Morningstar US Large Grow	11/30/2016	72	3.23	2.22	5.45

	Allocation %	Selection %	Active Ret%
Consumer Defensive	6.72	-4.13	0.02
Attribution Total	99.91	2.86	-0.34
Other	0.11		

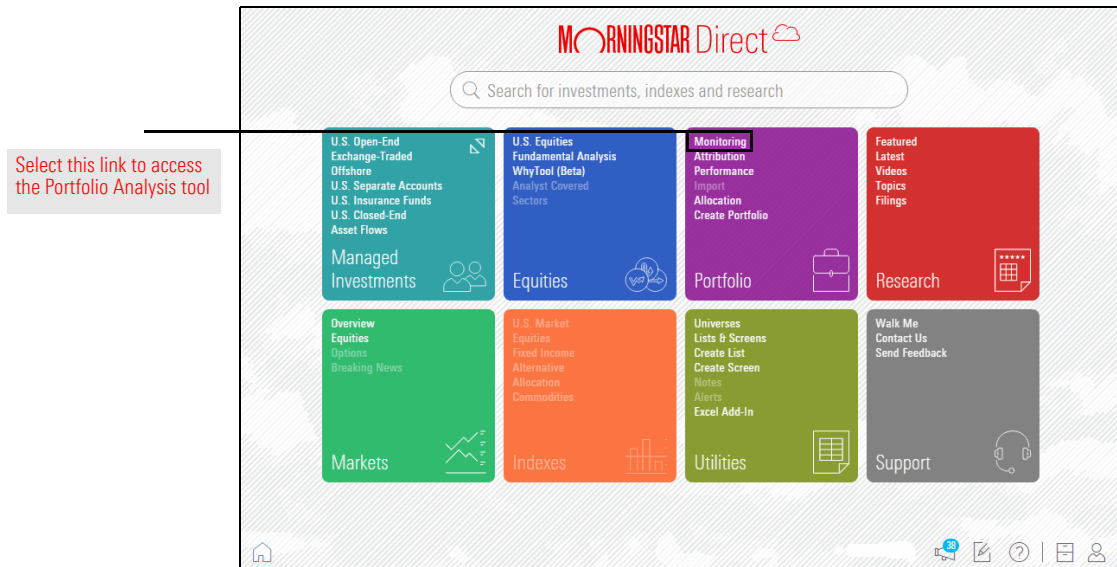
A report created in Performance Reporting can be analyzed in Portfolio Analysis

Exercise 27: Opening a list in Portfolio Analysis

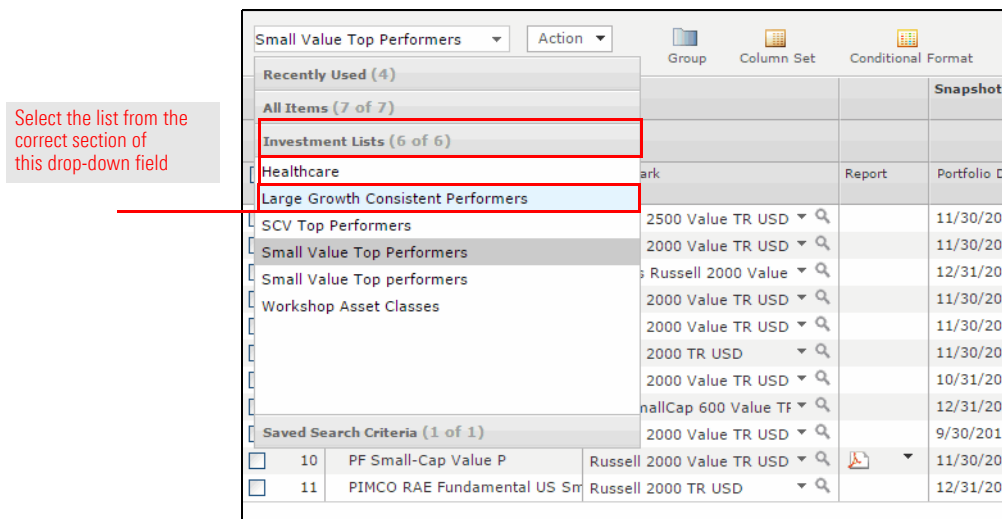
Rather than manually re-creating the list of funds in Portfolio Analysis, you can simply recall the list you saved.

Do the following:

1. **Log in** to Morningstar Direct Cloud at <http://direct.morningstar.com>, using the same credentials you use to log in to the desktop version of Morningstar Direct.
2. On the Portfolio tile, click **Monitoring**. The dashboard mode of the Portfolio Analysis tool opens.
 - ☞ Note: You may be asked to log in again. If necessary, close the Release Notes window once the Portfolio Analysis tool opens



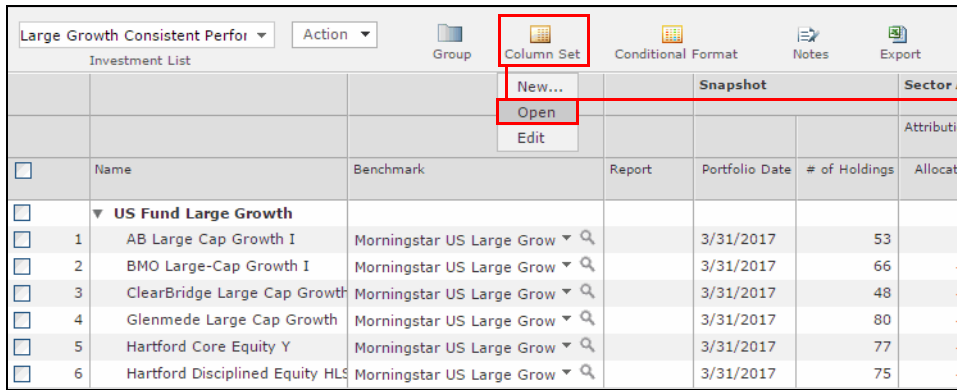
3. From the **Investment List** drop-down field in the upper-left corner of the screen, select **Investment Lists... Large Growth Consistent Performers**. The funds from the list automatically show in the dashboard.



Now you need to ensure the Attribution workspace is displaying these funds. To see the attribution analysis for this list of funds, do the following:

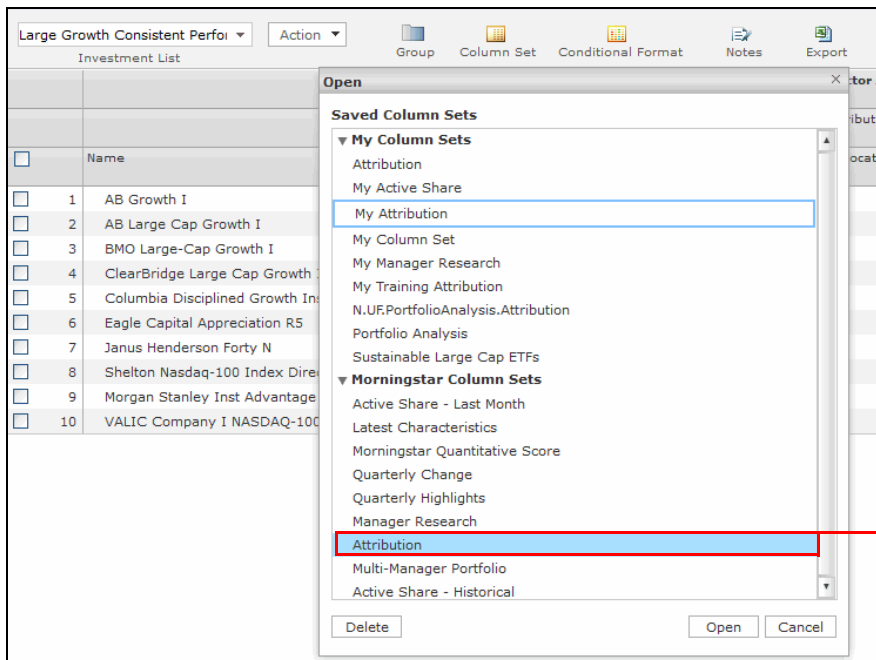
Exercise 28: Viewing attribution data in Portfolio Analysis

1. From the toolbar at the top of the window, from the **Column Set** drop-down field, select **Open**. The Open dialog box opens.



This option allows you to open an existing set of columns

2. In the Morningstar Column Sets list, select **Attribution**.



Be sure to select the correct option under Morningstar Column Sets

3. Click **Open**. The attribution data points now show in the dashboard.

Exercise 29: Adjusting the benchmark for attribution analysis

One of the keys to conducting Attribution Analysis is to ensure you are using a comparison benchmark for which you have constituent rights to see the holdings for the index. If you do not have the rights to see constituent data for an index, the Attribution data points cannot be calculated for the funds you are reviewing. You can address this issue the following ways:

- ▶ Work with your Morningstar Client Service Consultant to enable those indexes for which you do have constituent rights in Morningstar Direct so you can see this data in the Portfolio Analysis module (and elsewhere, such as Presentation Studio).
- ▶ Use an ETF proxy instead of an index for attribution analysis, or
- ▶ Use a Morningstar Index as the comparison benchmark when conducting attribution analysis. Because you are a Morningstar Direct subscriber, you automatically have constituent rights to all Morningstar Indexes.

To use the Morningstar index for each fund, do the following:

1. In the header row at the top of the grid view, check the **checkbox** at the far left. This selects all rows in the list.
2. From the **Benchmark** drop-down field for row 1, select **Morningstar Index**. The workspace recalculates all rows.

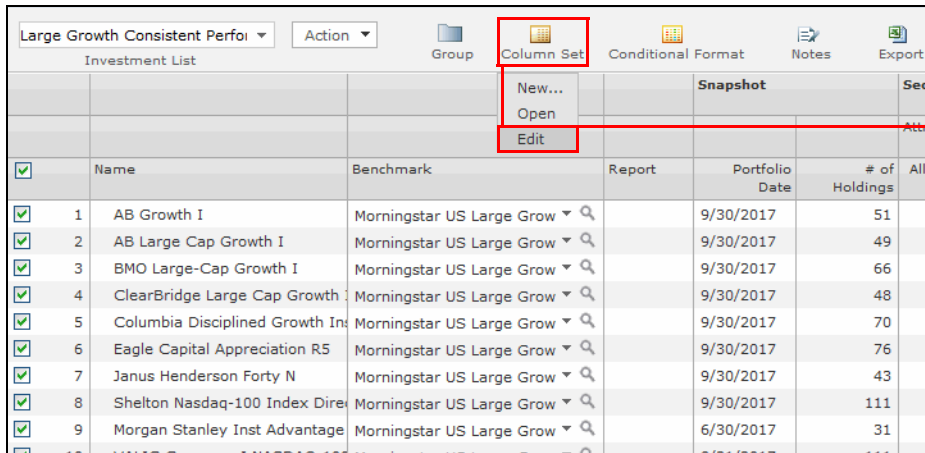
The screenshot shows the 'Investment List' grid in Morningstar Direct. The grid has columns for Name, Benchmark, Report, and Portfolio Date. The first row is highlighted in blue. A red box highlights the checkbox in the first column of the first row. A red line points from a callout box 'Click this checkbox to select all rows' to this checkbox. Another red box highlights the 'Morningstar US Large Grow' dropdown menu in the Benchmark column of the first row. A red line points from a callout box 'Select this option from the drop-down field' to this dropdown menu. The dropdown menu is open, showing a list of benchmark options, with 'Morningstar Index' highlighted in a red box.

	Name	Benchmark	Report	Portfolio Date
<input checked="" type="checkbox"/>				
<input checked="" type="checkbox"/>	1 AB Growth I	Morningstar US Large Grow		9/30/2017
<input checked="" type="checkbox"/>	2 AB Large Cap Growth I	Morningstar Category Index		9/30/2017
<input checked="" type="checkbox"/>	3 BMO Large-Cap Growth I	Best Fit Index		9/30/2017
<input checked="" type="checkbox"/>	4 ClearBridge Large Cap Growth I	ETF Index Proxy		9/30/2017
<input checked="" type="checkbox"/>	5 Columbia Disciplined Growth Inc	Manager Preferred Benchmark		9/30/2017
<input checked="" type="checkbox"/>	6 Eagle Capital Appreciation R5	Morningstar Category Average		9/30/2017
<input checked="" type="checkbox"/>	7 Janus Henderson Forty N	Morningstar Index		9/30/2017
<input checked="" type="checkbox"/>	8 Shelton Nasdaq-100 Index Dire	MPT Index		9/30/2017
<input checked="" type="checkbox"/>	9 Morgan Stanley Inst Advantage	Primary Prospectus Benchmark		6/30/2017
<input checked="" type="checkbox"/>	10 VALIC Company I NASDAQ-100	Personal: My Benchmark1		8/31/2017

By default, the Attribution workspace shows information from the past quarter. To adjust the time period being considered, do the following:

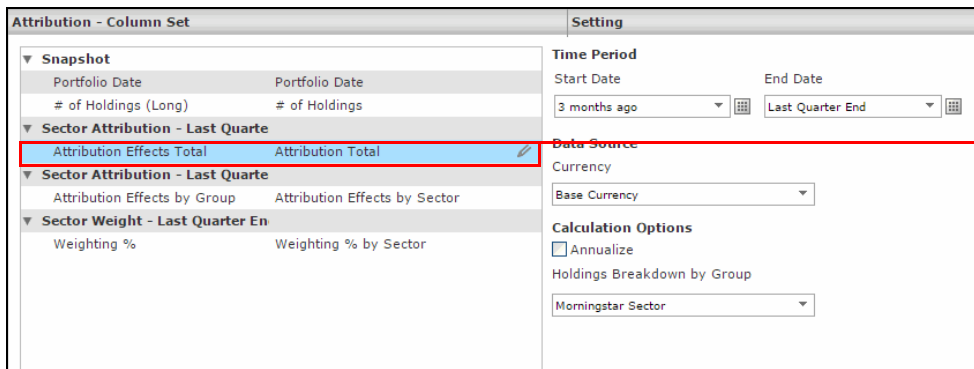
Exercise 30: Adjusting the time period reflected in a workspace

1. From the toolbar at the top of the window, from the **Column Set** drop-down field, select **Edit**. The Attribution - Column Set dialog box opens.



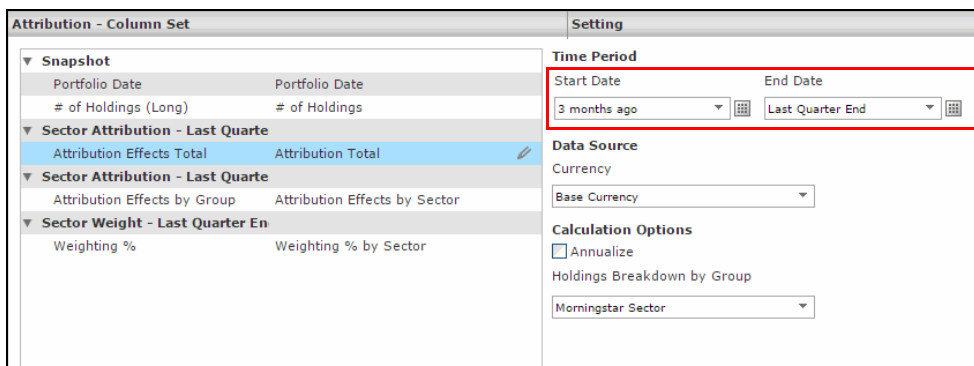
Use the Column Set icon to select this option

2. Click the row for **Attribution Effects Total**. Additional fields appear to the right.



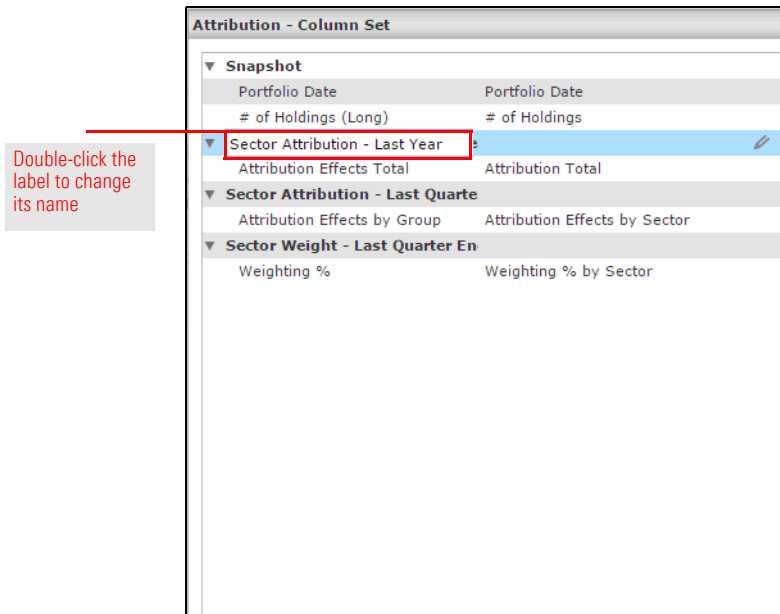
Click this option to see the additional fields on the right

3. From the **Start Date** drop-down field, select **1 year ago**.
4. From the **End Date** drop-down field, select **Last Month End**.

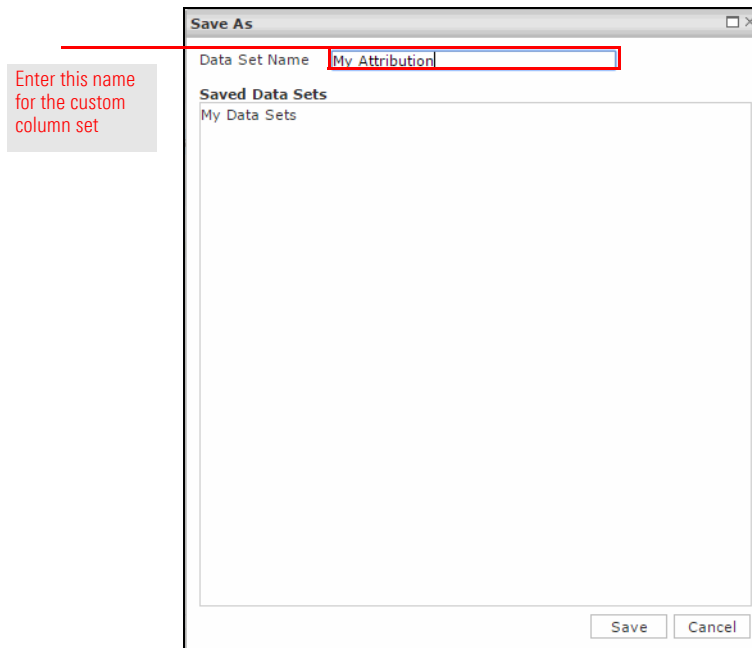


Note the values of the date fields

5. **Double-click** the label for **Sector Attribution - Last Quarter**, and change this text to **Sector Attribution - Last Year**.



6. Click **Save**. The Save As dialog box opens.
7. In the Data Set Name field, type **My Attribution**.



8. Click **Save**.

In reviewing the Active Return column, which fund has the highest Selection Effect value over the past year? Click the **name** of that fund in the list. The Detail view opens.

Exercise 31: Moving to Analysis mode

		Snapshot			Sector Attribution - Last Year				
					Attribution Total				
<input checked="" type="checkbox"/>	Name	Benchmark	Report	Portfolio Date	# of Holdings	Allocation %	Selection %	Active Ret%	Active R
<input checked="" type="checkbox"/>	1 AB Growth I	Morningstar US Large Grow		9/30/2017	51	-2.12	3.76	1.64	
<input checked="" type="checkbox"/>	2 AB Large Cap Growth I	Morningstar US Large Grow		9/30/2017	49	-1.95	2.04	0.10	
<input checked="" type="checkbox"/>	3 BMO Large-Cap Growth I	Morningstar US Large Grow		9/30/2017	66	-1.37	4.29	2.92	
<input checked="" type="checkbox"/>	4 ClearBridge Large Cap Growth	Morningstar US Large Grow		9/30/2017	48	-1.40	-3.80	-5.20	
<input checked="" type="checkbox"/>	5 Columbia Disciplined Growth Int	Morningstar US Large Grow		9/30/2017	70	-0.83	0.06	-0.77	
<input checked="" type="checkbox"/>	6 Eagle Capital Appreciation R5	Morningstar US Large Grow		9/30/2017	76	0.17	3.55	3.72	
<input checked="" type="checkbox"/>	7 Janus Henderson Forty N	Morningstar US Large Grow		9/30/2017	43	2.12	-1.76	0.35	
<input checked="" type="checkbox"/>	8 Shelton Nasdaq-100 Index Dire	Morningstar US Large Grow		9/30/2017	111	1.75	-1.60	0.15	
<input checked="" type="checkbox"/>	9 Morgan Stanley Inst Advantage	Morningstar US Large Grow		6/30/2017	31	2.56	-2.19	0.36	
<input checked="" type="checkbox"/>	10 VALIC Company I NASDAQ-100	Morningstar US Large Grow		8/31/2017	111	1.82	-0.82	1.00	

You need to click only once on a fund's name to go to Analysis mode

Exercise 32: Displaying the Attribution workspace template

As in the Dashboard view, you need to ensure the Attribution workspace is being displayed in the Detail view. To display the Attribution workspace template from Morningstar, do the following:

1. In the bottom-right corner of the screen, click the **Content Management** icon. The Content Management dialog box opens.

Click this icon to change the content you see in the workspace

The screenshot shows the Morningstar Attribution workspace for 'BMO Large-Cap Growth I'. The main area is divided into two sections: 'Attribution Detail' and 'Current Exposure'. The 'Attribution Detail' section shows a table of weights for various sectors across three time periods: 10/1/2016 - 10/31/2016, 11/1/2016 - 11/30/2016, and 12/1/2016. The 'Current Exposure' section shows a bar chart of the portfolio's exposure to various Morningstar sectors, with Technology being the largest at 28.76%.

Name	10/1/2016 - 10/31/2016			11/1/2016 - 11/30/2016			12/1/2016
	Weights %	Benchmark	+/-	Weights %	Benchmark	+/-	Weights %
Total	100.05	100.00	0.05	100.00	100.00	0.00	100.0
Basic Materials	1.11	2.18	-1.07	1.26	2.02	-0.76	1.0
Cash	1.67	0.00	1.67	1.81	0.00	1.81	1.6
Communication Services	6.68	4.83	1.85	6.40	4.80	1.60	6.2

2. In the left pane, click **Morningstar Templates**.
3. In the list, click **Attribution Highlights**. The workspace loads automatically.

Select this template to see Attribution data

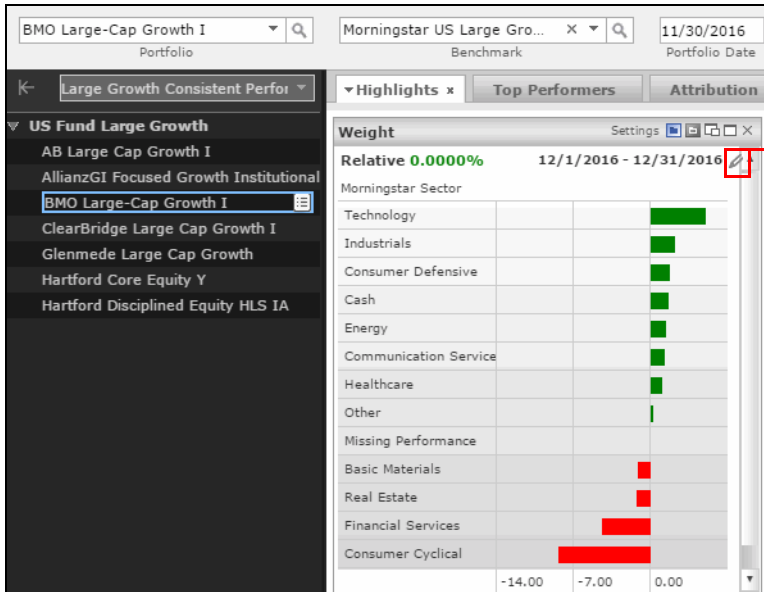
The screenshot shows the 'Content Management' dialog box with a list of templates. The 'Morningstar Templates' folder is selected in the left pane. In the main list, the 'Attribution Highlights' template is highlighted in blue. Other templates include Market Highlights, Multi-Asset Portfolio, Manager Research, Fundamental Analysis, Single Tool View, Equity Highlights, Real-Time Portfolio Monitor, Exposures, and Contribution.

Name	Date Modified	Owner	Permission
Market Highlights	3/20/2015	Morningstar	Read Only
Multi-Asset Portfolio	3/20/2015	Morningstar	Read Only
Attribution Highlights	3/20/2015	Morningstar	Read Only
Manager Research	3/20/2015	Morningstar	Read Only
Fundamental Analysis	1/25/2015	Morningstar	Read Only
Single Tool View	7/2/2014	Morningstar	Read Only
Equity Highlights	7/2/2014	Morningstar	Read Only
Real-Time Portfolio Monitor	5/14/2014	Morningstar	Read Only
Exposures	5/14/2014	Morningstar	Read Only
Contribution	5/14/2014	Morningstar	Read Only

By default, components on the Highlights page (and on the other pages in the Attribution workspace) reflect information for the prior one-month period. You can change this to the trailing one-year period by doing the following:

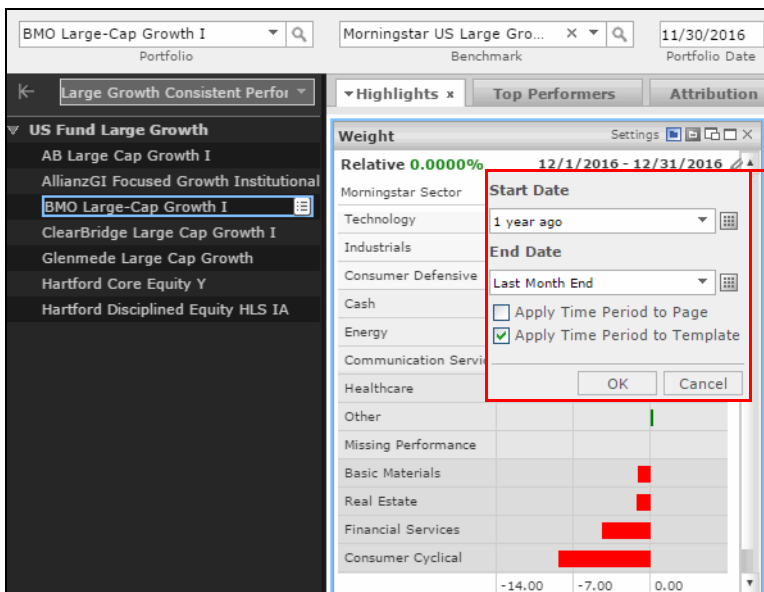
Exercise 33: Changing the time period for a template

1. In the Weight component, click the **pen** icon to the right of the displayed date. A flyover panel opens.



Note the location of the pen icon

2. From the **Start Date** drop-down field, select **1 year ago**. (Leave the End Date field set to Last Month End).
3. Click the **checkbox** for **Apply Time Period to Template**. All the components recalculate.



After you change the Start Date and End Date fields, be sure to click the checkbox for Apply Time Period to Template

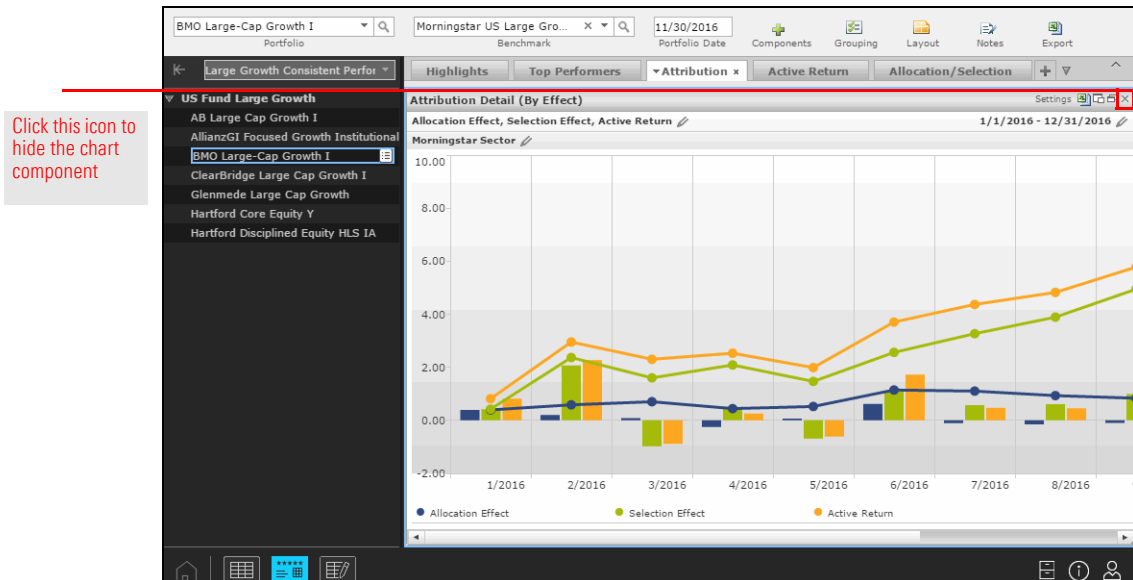
4. Click **OK**.
5. **Close** the Attribution Highlights save message in the upper-right part of the window.

Exercise 34: Displaying the Attribution Detail table

By default, the Attribution page shows a chart, rather than a table. To display the Attribution Detail table in place of the default chart, do the following:

1. Select the **Attribution** tab. The Attribution Detail (By Effect) chart component opens.
2. Click the **X** in the upper-right corner of the component to remove the chart.

Note: When the Confirmation message appears, click **OK**.



3. From the toolbar at the top of the window, click **Components**. The Select component(s) to add pane opens.
4. Under the Select component(s) to add pane on the left, select **Portfolio Analysis... Attribution**.
5. Click the **Attribution Detail** table component to add it to the workspace. The component appears automatically, but it is not sized correctly.

Click this icon to see the components you can add to a page

6. In the upper-right corner of the Select component(s) to add pane, click **[X]Close**.
7. In the upper-right corner of the Attribution Detail component, click **Maximize this component** to resize the table to take up the entire page.

Although you updated the time period for the entire template, components you add to a page will not reflect that change. To update the data being reflected in the Attribution Detail table, do the following:

Exercise 35: Changing the time period for the Attribution Detail table

1. In the upper-right corner of the component, click the **pen** icon to the right of the date. A dialog box opens.

The screenshot shows the Morningstar Attribution Detail table for BMO Large-Cap Growth I. The table is set to show data for the period 10/1/2016 - 12/31/2016. A red box highlights the date field, and a red arrow points to a pen icon next to it. A callout box on the right says "Use the pen icon to change the date in the table".

		10/1/2016 - 12/31/2016					10/1/2016 -
		Weights %	Return %	Attribution Effect		Weights %	
Name	Ticker	Portfolio	Portfolio	Allocation %	Selection %	Active Ret%	Portfolio
Total		100.02	2.86	-0.34	3.70	3.36	100.05
▶ Basic Materials		1.12	42.92	0.03	0.50	0.53	1.11
▶ Cash		1.71	0.11	0.01	0.00	0.01	1.67
▶ Communication Services		6.45	5.17	0.04	0.19	0.23	6.68
▶ Consumer Cyclical		17.45	2.68	-0.22	0.12	-0.10	15.89
▶ Consumer Defensive		6.72	-4.13	0.02	-0.22	-0.20	7.19
▶ Energy		1.88	2.98	-0.02	0.09	0.07	1.40
▶ Financial Services		4.49	9.77	-0.21	0.39	0.18	2.67
▶ Healthcare		19.77	-2.97	-0.07	-0.04	-0.11	20.90
▶ Industrials		6.90	17.11	0.14	0.62	0.76	6.67

2. From the **Start Date** drop-down field, select **1 year ago**. (Leave the End Date field set to Last Month End).
3. Click **OK**. The Save Template dialog box opens.
4. **Close** the Save Template dialog box.

Exercise 36: Exploring the worst stock selection for the fund

In examining the attribution data for this fund, you can see not only where management made good and bad choices on sectors for exposure, but also where they made good and poor choices on specific stocks. When a stock was doing poorly, did management maintain their position in the security? Did they decrease their position in it? Did they increase their position in the security? If the stock is covered by a Morningstar Analyst, what does that person think of the stock's value?

To learn more about the stock decisions for this fund, do the following:

1. In the Attribution Effect tab for the trailing one-year period, click the column header **Selection %** to sort by this column.
2. In the section where the management team did the worst job selecting stocks, click the **triangle** to the left of the sector's name to expand this section. Note the stock that has had the worst performance relative to the index for this fund.

Click once on a column header to sort in ascending order

Click once on the sector's triangle to expand it and see the stocks the fund owns in the sector

Attribution Detail		8/1/2017 - 10/31/2017				
		Weights %	Return %	Attribution Effect	Selection %	Active Ret%
Total		100.00	6.35	-0.47	1.27	0.81
▼ Financial Services						
Alliance Data Systems Corp	ADS	1.63	-7.11	0.08	-0.47	-0.39
Allstate Corp	ALL	1.47	3.56	-0.12	-0.31	-0.31
US Bancorp	USB	1.44	3.61	-0.11	-0.11	-0.11
Citizens Financial Group Inc	CFG	0.15	-5.56	-0.04	-0.04	-0.04
MSCI Inc	MSCI	0.91	8.08	0.00	0.00	0.00
S&P Global Inc	SPGI	0.43	1.39	0.01	0.01	0.01
American Express Co	AXP	1.87	12.50	0.02	0.02	0.02
Visa Inc Class A	V	0.24	4.50	0.03	0.03	0.03
Mastercard Inc A	MA	2.95	16.59	0.04	0.04	0.04
► Communication Services		4.40	-8.44	0.22	-0.07	-0.15

3. To investigate the fund's history with this stock, select the **Holdings** tab.
4. In the Buy/Sell component at the bottom of the page, click the **pen** icon to the right of Data Column. A flyover panel opens.

Be sure to select the correct tab

Click this icon

Holdings		1/31/2015					
Name	Ticker	Weighting %	Shares	Position Market Value	Market Cap (mil) (Daily)	P/E Ratio Current	P/E Ratio Forward
Total		100.00	4,983,362.0	297,054.92	122,351.82	21.76	17.0
► Basic Materials		1.70	47,780.00	5,059,224.00	33,221.51	14.91	13.4
► Cash		2.66		7,903,714.00			
► Communication Services		6.10	309,142.00	18,128,268.0	143,259.10	17.18	15.0
► Consumer Cyclical		13.71	1,765,809.00	40,731,869.0	50,289.30	21.23	17.2
► Consumer Defensive		6.72	252,909.00	19,968,412.0	75,743.97	23.21	21.4

Buy/Sell		1/1/2016 - 12/31/2016			
Name	Ticker	Overall Buy/Sell %	Weights % 12/31/2015	Weights % 3/31/2016	Return % 6/30/2016
Acuty Brands Inc	AYI	SOLD	2.34	1.98	-6.64
Adobe Systems Inc	ADBE	BUY	0.00	0.00	0.00
Affiliated Managers Group Inc	AMG	SOLD	0.87	0.00	-16.01
Align Technology Inc	ALGN	INCREASE	525.07	0.25	10.39
Allison Transmission Holdings Inc	ALSN	BUY	0.00	0.51	1.1
Alphabet Inc A	GOOG	DECREASE	-17.14	1.08	1.04

5. Check the **Buy/Sell** checkbox, and uncheck the **Weights** checkbox.

The screenshot shows the Morningstar software interface. The 'Buy/Sell' window is open, displaying a list of holdings. The 'Buy/Sell' checkbox is checked, and the 'Weights' checkbox is unchecked. A red box highlights these two options, with a callout pointing to them.

Name	Ticker	Overall Buy/Sell %	Weights %	Weight
Acuity Brands Inc	AYI	SOLD	2.34	
Adobe Systems Inc	ADBE	BUY	0.00	
Affiliated Managers Group Inc	AMG	SOLD	0.87	
Align Technology Inc	ALGN	INCREASE	525.07	0.25
Allison Transmission Holdings Inc	ALSN	BUY	0.00	
Alphabet Inc A	GOOGL	DECREASE	-17.14	1.08

6. Click **OK**.
7. **Scroll** down until you see the stock that had the worst selection effect, then **scroll** right to see the buy/sell history for the stock in this fund's portfolio.
8. **Right-click** the **name** of the stock, then select **Security Profile... Research**. The Security Profile window opens.

The screenshot shows the Morningstar software interface. The 'Security Profile' window is open for a stock. The 'Research' option is selected from the right-click menu. A red box highlights the 'Research' option, with a callout pointing to it.

Name	Ticker	Overall Buy/Sell %	Weights %	Weight
Alexandria Real Estate Equities	ARE	BUY		
Align Technology Inc	ALGN	DECREASE		
Alliance Data Systems Corp				
Allison Transmission Holdings Inc				
Allstate Corp				

9. **Scroll** down to the Detailed Reports area to see the Morningstar Analyst's take on this stock, and whether it is fairly valued.
10. **Close** the Security Profile window.

Finding Sustainable Investments in Morningstar Direct Cloud

Overview

Morningstar Direct Cloud offers more than just access to the Portfolio Analysis module. You can also use this platform to read Morningstar Research (either on specific investments, methodology, or thematic topics), and conduct investment analysis similar to what you would do in the Workspace module of the desktop version of Morningstar Direct. Morningstar Direct Cloud, however, has several data points not found in the desktop version.

Scenario

Your manager is looking for information on Morningstar's Sustainability Rating, and for a list of managed investments not invested either directly or indirectly in companies extracting or using thermal coal. The funds should also have a Morningstar Sustainability Rating that is at least three globes, and a Morningstar Rating of at least three stars.

Solution

Use the Morningstar Research area in Morningstar Direct Cloud to find documentation related to sustainable investing, and use the Investment Analysis area to screen for funds that meet your manager's criteria.

Exercise 37: Accessing Morningstar research on sustainability

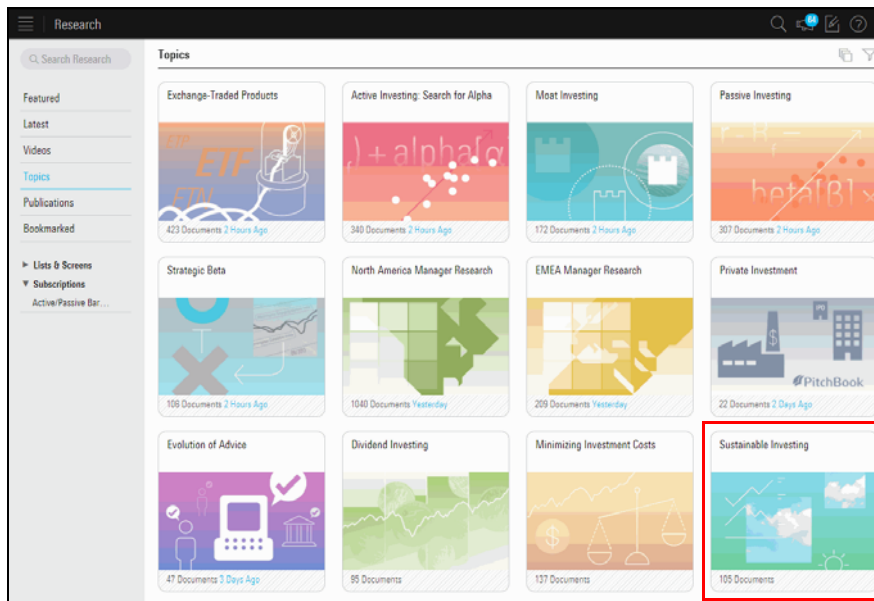
To see articles and videos from Morningstar's Research team related to sustainability, including the methodology papers related to proprietary statistics, do the following:

1. If you are not already logged in to Morningstar Direct Cloud, **log in** at <http://direct.morningstar.com>, using the same credentials you use to log in to the desktop version of Morningstar Direct. If you are logged into Morningstar Direct Cloud and still in the Portfolio Analysis module, click the **Home** icon in the bottom-left corner.
2. From the Home page, in the Morningstar Research tile, click **Topics**. The Topics page opens.

Click this link to see Morningstar Research content grouped by topic

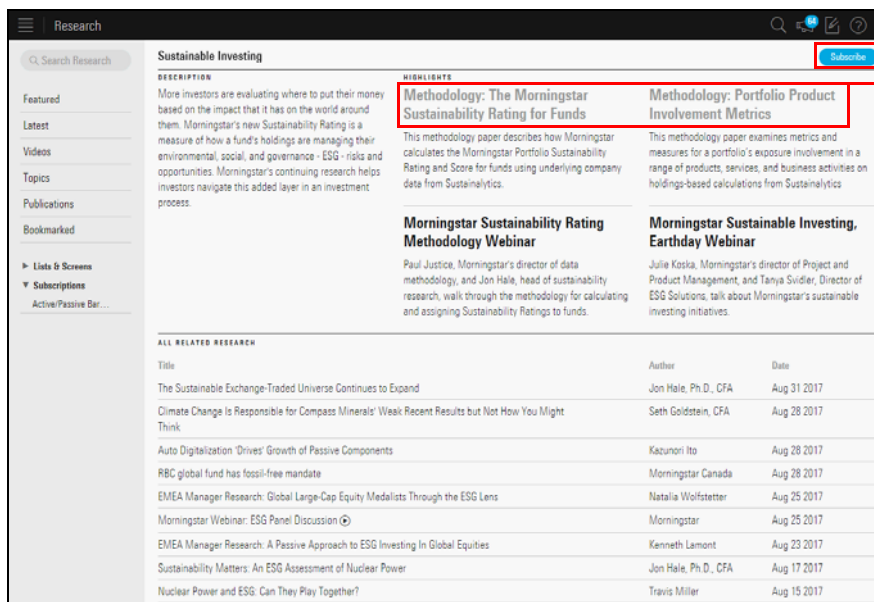


- On the Topics page, click the tile for **Sustainable Investing**. A list of articles and videos related to this topic are presented.



Click this tile to see content related to this topic

- At the top of the page, you can see links to methodology papers related to sustainable investing. The articles on the page are listed in reverse chronological order, with the most recent article available at the top. Click an **article's headline** to read it.
- To receive a notification each time a new article is added to the page, in the upper-right corner, click the **Subscribe** button.



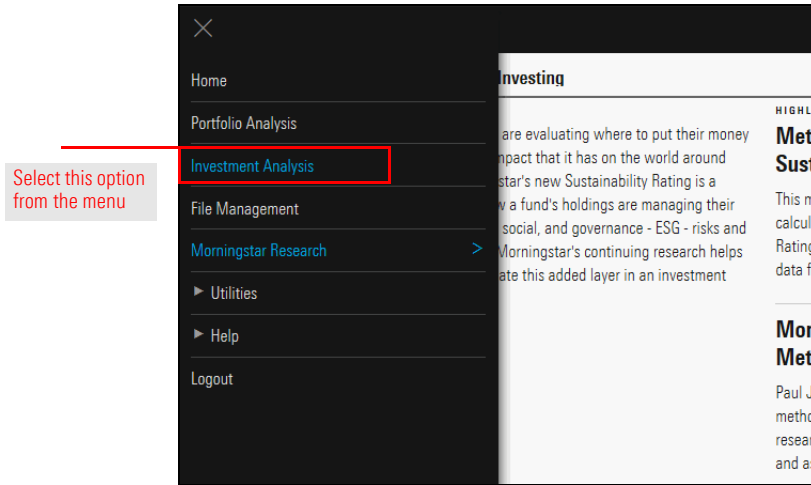
Use this button to subscribe to this topic

Click either of these headlines to read the methodology papers related to Morningstar's sustainability metrics

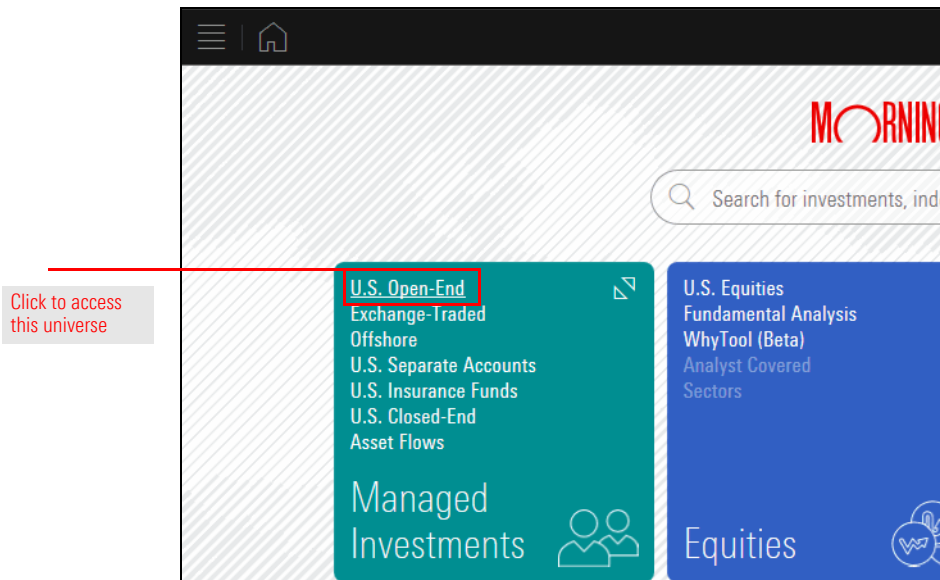
Exercise 38: Create a screen for sustainable investments

To find investments not owning companies involved with thermal coal, you can create a screen. The screen will look for both mutual funds and ETFs that are socially conscious, and will eliminate funds not meeting a certain threshold for both the Morningstar Sustainability Rating, and the Morningstar Rating. Do the following:

1. To go to the Investment Analysis area, click the **menu** icon in the upper-left corner of the screen, then select **Investment Analysis**. You are returned to the Home page.



2. From the Home page, on the Managed Investments tile, click **U.S. Open-End**. The Investment Analysis area opens.



- By default, all open-end US funds are shown in the grid view. To screen for the funds you want, click the **Open Screener** icon. The Screener window opens.

Analysis

U.S. Open-End Summary

27,306 Open Screener

	Name	Ticker	Morningstar Category
<input type="radio"/>	1 1290 Convertible Securities A	TNFAX	Convertibles
<input type="radio"/>	2 1290 Convertible Securities I	TNFIK	Convertibles
<input type="radio"/>	3 1290 Convertible Securities R	TNFRX	Convertibles
<input type="radio"/>	4 1290 DoubleLine Dynamic Allocation A	-	Allocation--30% to 50%
<input type="radio"/>	5 1290 DoubleLine Dynamic Allocation I	-	Allocation--30% to 50%
<input type="radio"/>	6 1290 DoubleLine Dynamic Allocation R	-	Allocation--30% to 50%
<input type="radio"/>	7 1290 GAMCO Small/Mid Cap Value A	TNVAX	Small Blend
<input type="radio"/>	8 1290 GAMCO Small/Mid Cap Value I	TNVIX	Small Blend

Use this icon to change the investments you see in the grid view

- At the top of the Screener window, note that the system is already filtering for Open-End Funds that are domiciled in the United States. To include ETFs as well, click the header for the **Investment Type**, then select the option for **Exchange-Traded Fund**.

Screener

0 / 27,306

Investment Type

Value

Category Average Equity Insurance Fund

Closed-End Fund Exchange-Traded Fund Money Market Fund

Collective Investment Trust Index Open-End Fund

Domicile: United States

Click here to expand this area...

... then be sure to select this option

- To close the Investment Type element, click **OK**.

6. In the Add Criteria search field, type **Social**, then select **Socially Conscious**.

Note the search term to enter, and the data point to select

Screener
0 / 29,740

1290 Convertible Securities A
1290 Convertible Securities I
1290 Convertible Securities R
1290 DoubleLine Dynamic Allocation A
1290 DoubleLine Dynamic Allocation I
1290 DoubleLine Dynamic Allocation R
1290 GAMCO Small/Mid Cap Value A
1290 GAMCO Small/Mid Cap Value I
1290 GAMCO Small/Mid Cap Value R
1290 GAMCO Small/Mid Cap Value T
1290 Global Talents A
1290 Global Talents I
1290 Global Talents R

Investment Type: Open-End Fund, Exchange-Traded Fund
Domicile: United States
Add Criteria

Q Social X
Socially Conscious

7. The option for Yes should be selected. Click **OK**.

8. In the Add Criteria search field, type **Ethic**, then select **Ethical Issue Strategy Focus**.

Note the search term to enter, and the data point to select

Screener
0 / 715

1290 VT Socially Responsible IA
1290 VT Socially Responsible IB
1919 Socially Responsive Balanced A
1919 Socially Responsive Balanced B
1919 Socially Responsive Balanced C
1919 Socially Responsive Balanced I
AB Impact Municipal Income
AB Sustainable Global Thematic A
AB Sustainable Global Thematic Advisor
AB Sustainable Global Thematic B
AB Sustainable Global Thematic C
AB Sustainable Global Thematic I
AB Sustainable Global Thematic K

Investment Type: Open-End Fund, Exchange-Traded Fund
Domicile: United States
Socially Conscious
Add Criteria

Q Ethic X Data Definition for Ethical
Ethical Issue Strategy Focus An indication that the fu
responsible strategy.

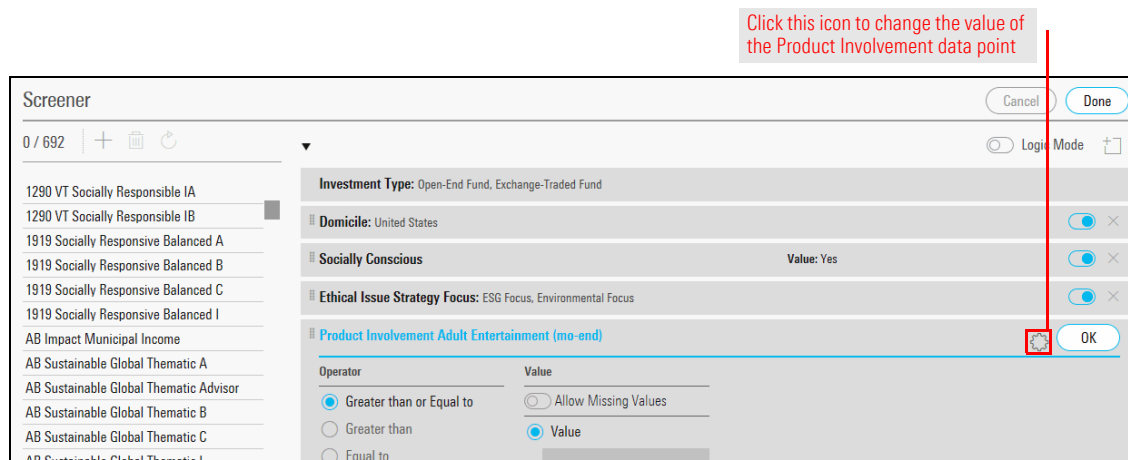
9. Select the options for **ESG Focus** and **Environmental Focus**, then click **OK**.

The screenshot shows the 'Screener' interface with 0 / 715 results. The 'Ethical Issue Strategy Focus' section is expanded, showing a table with columns for 'Operator' and 'Value'. Under 'Operator', 'Include' is selected. Under 'Value', 'ESG Focus' and 'Environmental Focus' are both checked with blue checkmarks and enclosed in a red rectangular box. A red callout box on the right contains the text 'Select both options' with a line pointing to the red box.

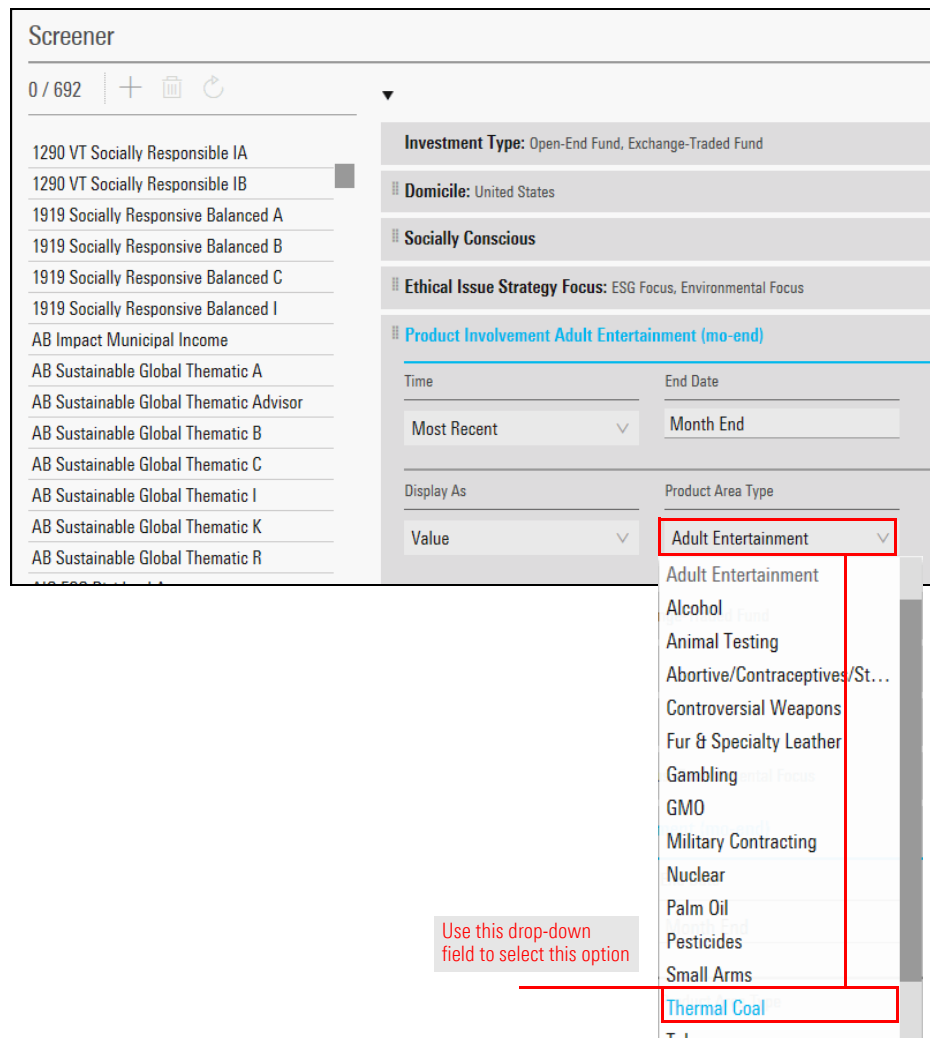
10. In the Add Criteria search field, type **Prod**, then select **Product Involvement**.

The screenshot shows the 'Screener' interface with 0 / 692 results. The 'Add Criteria' section is expanded, showing a search field containing 'Prod'. A dropdown menu is open, listing several criteria. 'Product Involvement' is highlighted with a red rectangular box. A red callout box on the right contains the text 'Note the search term to enter, and the data point to select' with a line pointing to the search field and the selected item.

- By default, the Product Involvement data point points to Adult Entertainment (because this alphabetically comes first in the options for this field). To change this, in the Product Involvement header, click the **Settings** icon.



- From the **Product Area Type** drop-down field, select **Thermal Coal**, then click **OK**.



13. From the Operator area, select **Equal to**.
14. In the Value field, type **0**, then click **OK**.

The screenshot shows the 'Screener' interface with 0 / 692 results. The 'Product Involvement Thermal Coal (mo-end)' criterion is selected. The configuration shows the following options:

- Investment Type:** Open-End Fund, Exchange-Traded Fund
- Domicile:** United States
- Socially Conscious**
- Ethical Issue Strategy Focus:** ESG Focus, Environmental Focus
- Product Involvement Thermal Coal (mo-end)**
 - Operator:**
 - Greater than or Equal to
 - Greater than
 - Equal to
 - Not Equal to
 - Less than or Equal to
 - Value:**
 - Allow Missing Values
 - Value
 - Not Available

A red box highlights the 'Equal to' operator and the '0' value. A callout box points to the 'Value' field with the text: "Note the option to select, and the value to enter".

15. In the Add Criteria search field, type **Old** then select **Oldest Share Class**.

The screenshot shows the 'Screener' interface with 0 / 199 results. The 'Add Criteria' search field contains the text 'Old'. The search results list the following criteria:

- # of Holdings** (An indi share c)
- HOLDR**
- Inception Date of Fund's Oldest Share Class**
- Oldest Share Class** (highlighted in blue)

A red box highlights the search term 'Old' and the selected data point 'Oldest Share Class'. A callout box points to the search field with the text: "Note the search term to enter, and the data point to select".

16. The option for Yes should be selected. Click **OK**.

17. In the Add Criteria search field, type **Rating** then select **Morningstar Sustainability Rating**.

The screenshot shows the 'Screener' interface with a list of investment funds on the left and filter criteria on the right. A search box labeled 'Rating' is open, and 'Morningstar Sustainability Rating' is highlighted in blue. A red box highlights the search box and the selected option. A red line points from a text box to the search box.

Note the search term to enter, and the data point to select

18. Select the options for the **3-**, **4-**, and **5-globe** ratings, then click **OK**.

The screenshot shows the 'Screener' interface with the 'Morningstar Sustainability Rating' filter expanded. The 'Operator' is set to 'Include'. Under the 'Value' column, the 3-globe, 4-globe, and 5-globe options are selected with blue checkmarks. A red box highlights these three options. A red line points from a text box to the selected options.

Select these options

19. In the Add Criteria search field, type **Rating** then select **Morningstar Rating > Overall**.

The screenshot shows the 'Screener' window with a list of investment funds on the left and a criteria configuration panel on the right. In the 'Add Criteria' section, a search box contains the text 'Rating'. Below the search box, a dropdown menu is open, showing 'Credit Rating Breakdown (Calculated)', 'Morningstar Analyst Rating', 'Morningstar Rating', and 'Morningstar Return Rating'. The 'Morningstar Rating' option is selected, and its sub-menu is visible, showing 'Overall' as the chosen option. A red box highlights the search box and the 'Overall' option, with a callout note: 'Note the search term to enter, and the data point to select'.

20. Select the options for the **3-**, **4-**, and **5-star** ratings, then click **OK**.

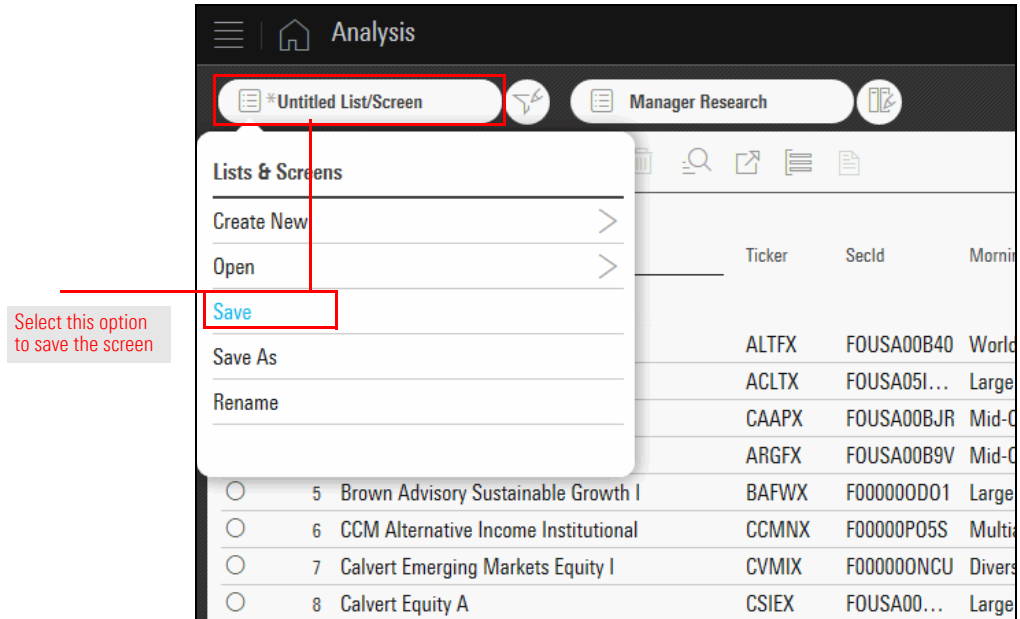
The screenshot shows the 'Screener' window with the 'Morningstar Rating Overall' configuration panel. The 'Operator' is set to 'Include' (radio button selected) and the 'Value' is set to 'Allow Missing Values' (radio button selected). Under the 'Value' section, there are five star options: '5-star', '4-star', '3-star', '2-star', and '1-star'. The '3-star', '4-star', and '5-star' options are selected with blue checkmarks. A red box highlights these three options, with a callout note: 'Select these options'.

21. In the upper-right corner of the Screener window, click **Done**. You are returned to the grid view.

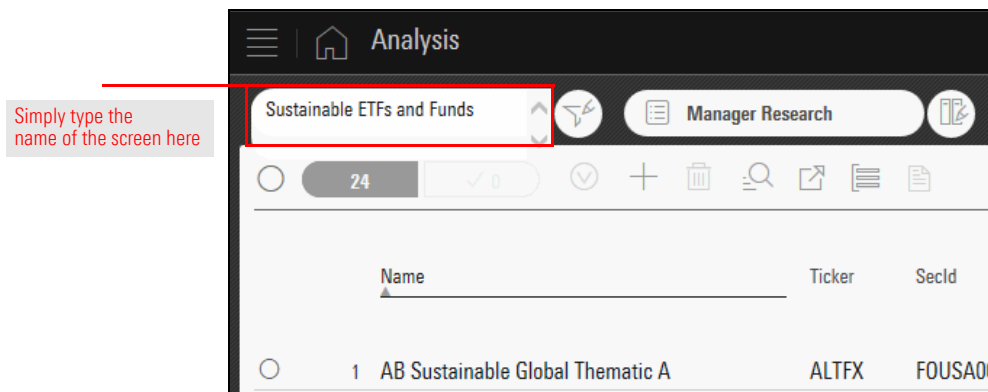
Exercise 39: Save the screen and its investments to a list

Just as with searches and lists in the desktop version of Morningstar Direct, in Morningstar Direct Cloud, you can save both a screen and a list. To separately save both this screen, and the results of the screen as a list, do the following:

1. Click the **List/Screen menu** in the upper-left corner and select **Save**. The name field is highlighted, awaiting for you to enter a name.



2. In the name field, type **Sustainable ETFs and Funds**, then press <ENTER>. The screen is now saved.



- To save the investments from the screen to a list, start by clicking the **Select All** option in the upper-left corner of the grid view.

Analysis

Sustainable ETFs and Funds | Manager Research

24 | ✓ 24

	Name	Ticker	SecId	Mornin
✓	1 AB Sustainable Global Thematic A	ALTFX	FOUSA00B40	World
✓	2 American Century NT Growth G	ACLTX	FOUSA05I...	Large
✓	3 Ariel Appreciation Investor	CAAPX	FOUSA00BJR	Mid-C
✓	4 Ariel Fund Investor	ARGFX	FOUSA00B9V	Mid-C
✓	5 Brown Advisory Sustainable Growth I	BAFWX	F00000OD01	Large
✓	6 CCM Alternative Income Institutional	CCMNX	F00000PO5S	Multia
✓	7 Calvert Emerging Markets Equity I	CVMIX	F00000ONCU	Divers
✓	8 Calvert Equity A	CSIEX	FOUSA00...	Large

Use this option to select all rows

- Click the **Actions** icon above the grid view and select **Save As**.

Analysis

Sustainable ETFs and Funds | Manager Research

24 | ✓ 24

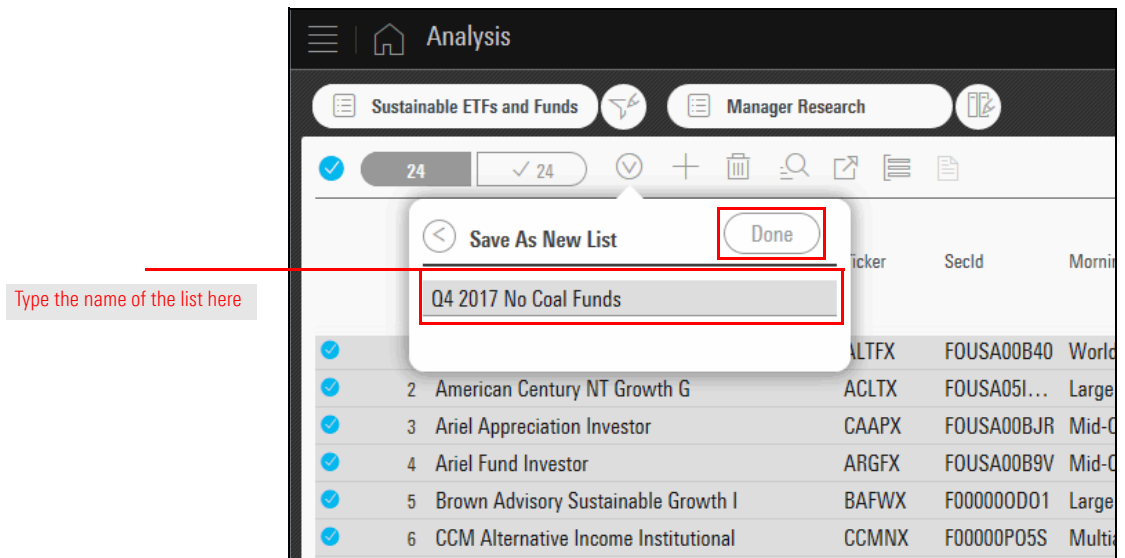
Actions (24)

- Add to List
- Remove from List
- Save As New List
- Generate Factsheet

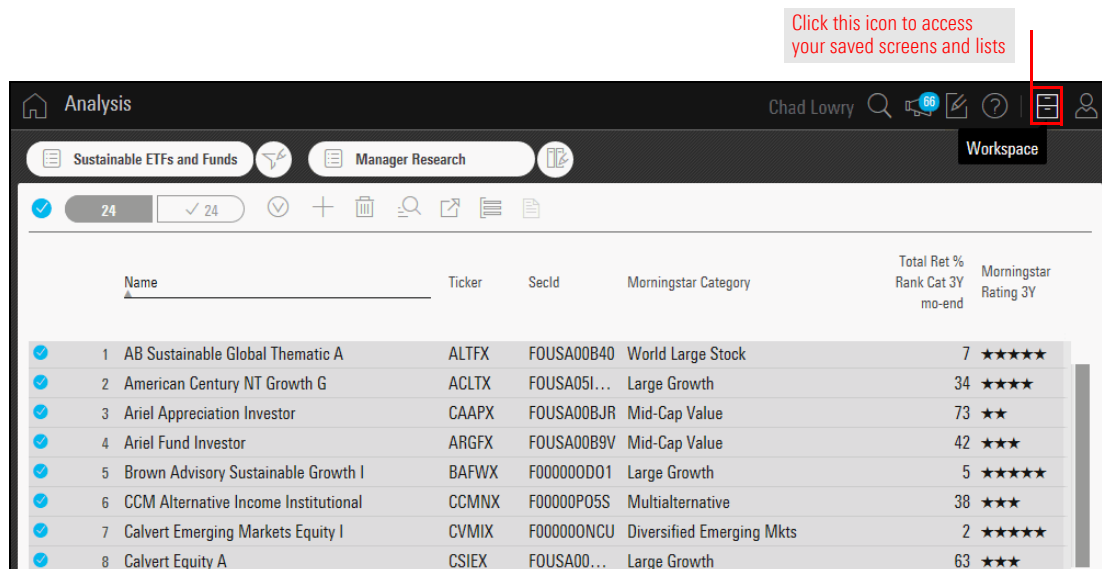
	Name	Ticker	SecId	Mornin
✓	1 AB Sustainable Global Thematic A	ALTFX	FOUSA00B40	World
✓	2 American Century NT Growth G	ACLTX	FOUSA05I...	Large
✓	3 Ariel Appreciation Investor	CAAPX	FOUSA00BJR	Mid-C
✓	4 Ariel Fund Investor	ARGFX	FOUSA00B9V	Mid-C
✓	5 Brown Advisory Sustainable Growth I	BAFWX	F00000OD01	Large
✓	6 CCM Alternative Income Institutional	CCMNX	F00000PO5S	Multia
✓	7 Calvert Emerging Markets Equity I	CVMIX	F00000ONCU	Divers
✓	8 Calvert Equity A	CSIEX	FOUSA00...	Large

Use this icon to save the selected items to a list

- In the list name field, type **Q4 2017 No Coal Funds**, then click **Done**.



- In the future, you can retrieve the saved screen and list by using the **Workspace** icon on the header.



Managing a Portfolio in Morningstar Direct

The Portfolio Management module in Morningstar Direct allows you to enter either accounts or model portfolios of holdings. You can manually enter holdings or import them from Microsoft® Excel®. When you import a portfolio, you need to evaluate the portfolio settings (such as the Portfolio Start Date) that could impact the data for the portfolio elsewhere in Morningstar Direct. Finally, the Portfolio Management module also allows you to create and assign custom benchmarks to model portfolios and accounts.

Overview

You have been asked to determine whether one Large Growth fund should be replaced with another in a model portfolio. You need to first create the model portfolio, then assign a custom benchmark to determine how the portfolio's comparison to the benchmark will change if the fund is replaced.

Scenario

You will import the portfolio that has been provided in an Excel file, then configure a setting for the portfolio. Next, you will create a custom benchmark and assign it to the portfolio. Finally, you will add a holding to the portfolio so you can compare two large-cap funds to one another.

Solution

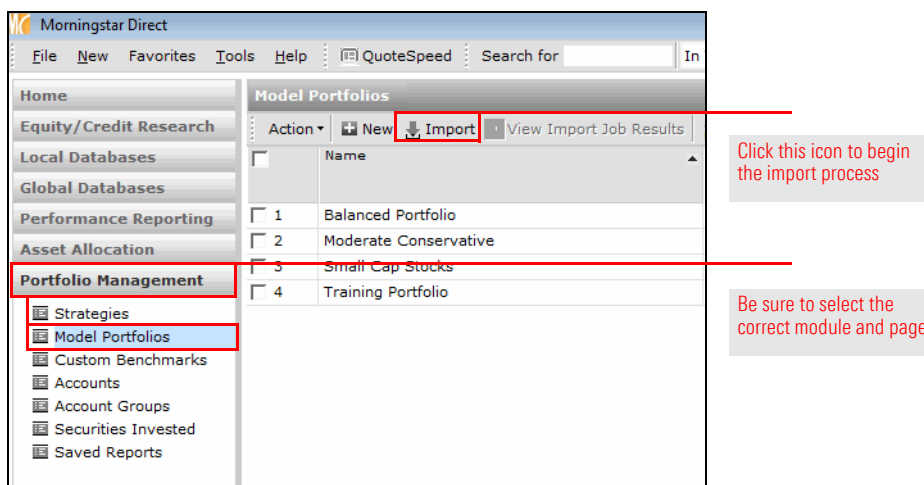
An Excel file (FundPortfolio.xlsx) has been saved to your desktop. Importing a portfolio into Morningstar Direct uses the following three-step process:

Exercise 40: Importing a model portfolio from Microsoft Excel

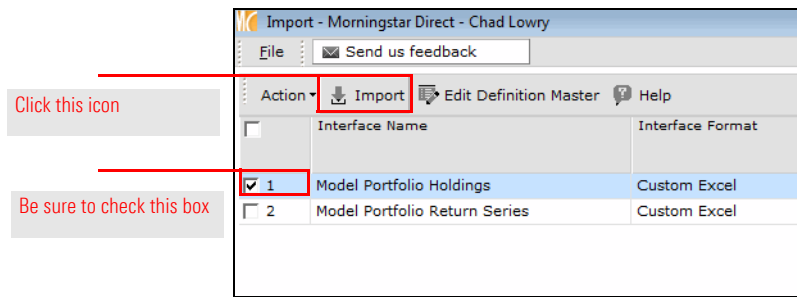
1. Save the portfolio holdings in a properly formatted Excel file.
2. Import the file and review the portfolio's information in the import blotter.
3. Post the portfolio to Morningstar Direct.

To import and post the Excel file as a model portfolio in Morningstar Direct, do the following:

1. From the left navigation pane, select the **Portfolio Management** module.
2. Select the **Model Portfolios** page.
3. From the toolbar, click **Import**. A new dialog box opens.



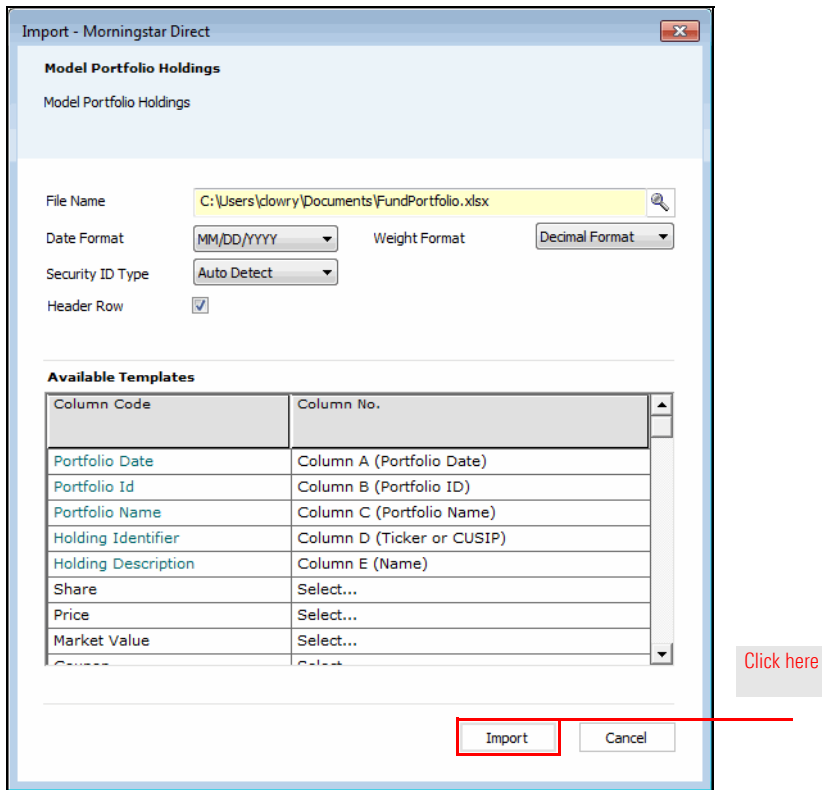
4. Check the **row 1** checkbox (Model Portfolio Holdings).
5. From the toolbar, click **Import**. The Import - Morningstar Direct dialog box opens.



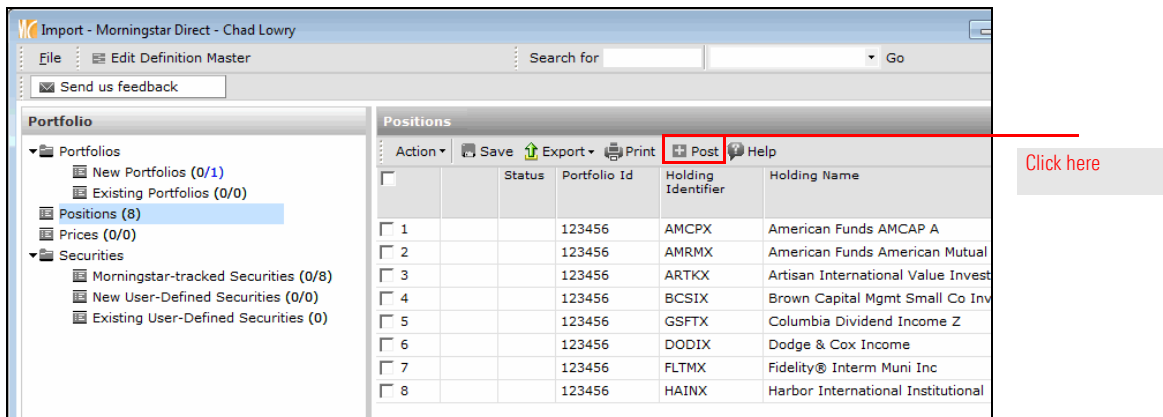
6. In the File Name field, click the **magnifying glass** icon. The Open dialog box opens.
7. Select the **Desktop**, then select the **FundPortfolio.xlsx** file.
8. Click **Open**.
9. Ensure the Column Code and Column No. fields match each other as shown in the following table:

This Column Code field...	Should be mapped to this Column No....
Portfolio Date	Column A (Portfolio Date)
Portfolio Id	Column B (Portfolio ID)
Portfolio Name	Column C (Portfolio Name)
Holding Identifier	Column D (Ticker or CUSIP)
Holding Description	Column E (Name)
Weight	Column H (Weight)

10. Click **Import**. The import blotter opens.

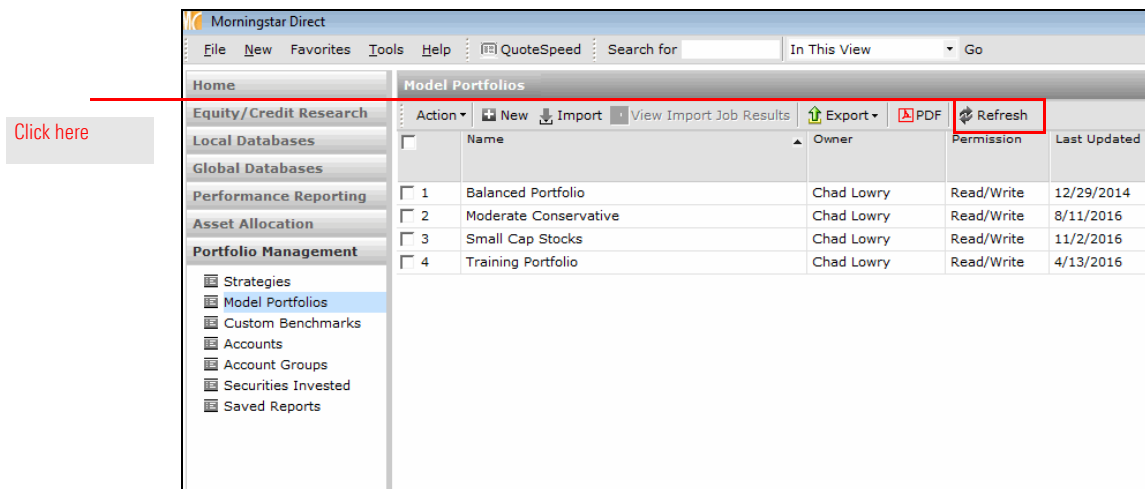


11. Ensure no errors exist with the funds you are importing. From the toolbar above the grid view, click **Post**.



12. When the confirmation message appears, click **OK**.
 13. **Close** the import window. The grid view is displayed.

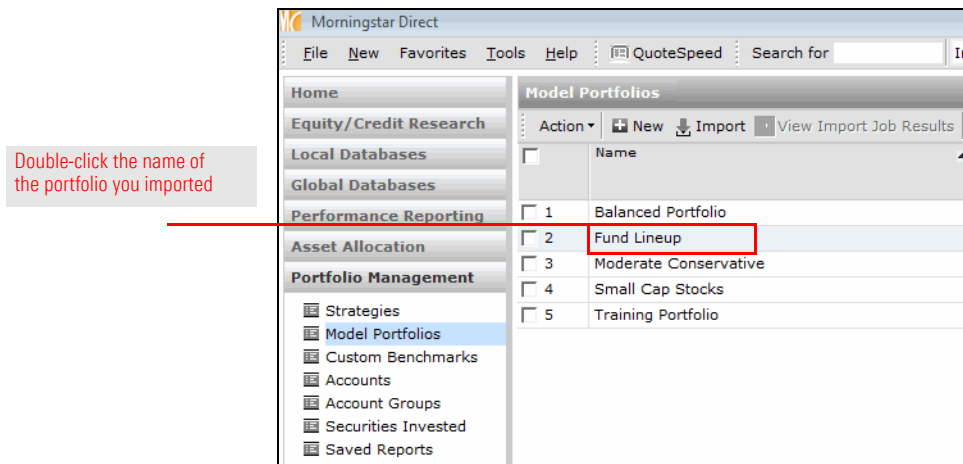
14. From the toolbar above the grid view, click **Refresh**. Your portfolio should now be displayed.



Exercise 41: Adjusting a portfolio's settings for Performance Reporting

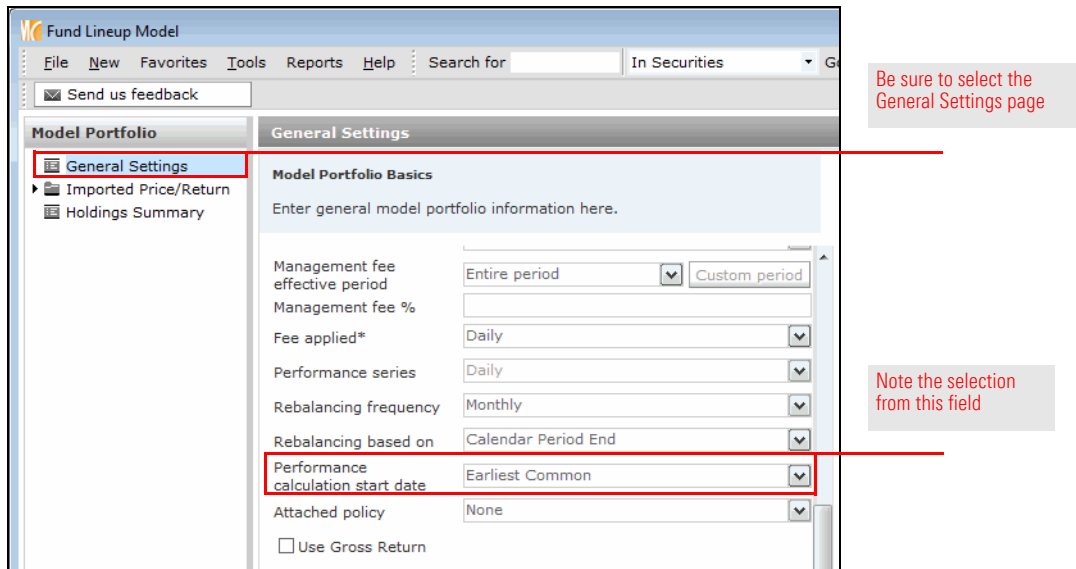
The portfolio you imported had a date of 10/31/2013. You need to manually set this as the performance start date for the portfolio. Do the following:

1. In the grid view, **double-click** the **Fund Lineup** portfolio. A new window opens, showing the holdings for the portfolio.



2. In the left navigation pane of the new window, select the **General Settings** page.
3. **Scroll down** until you see the Performance calculation start date.

- From the **Performance calculation start date** drop-down field, select **Earliest Common**.



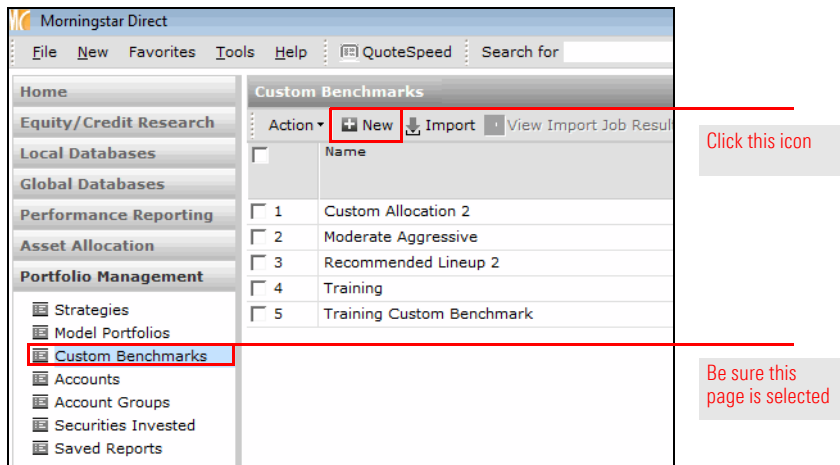
- Click **Save**.
- Close** the portfolio window.

The process for creating a custom benchmark is parallel to that of creating a model portfolio: you select the items for the benchmark (in this case, indexes, but you can use Morningstar Categories or securities if you prefer), then assign an allocation to them.

Exercise 42: Creating a custom benchmark

To create a custom benchmark, do the following:

- With the **Portfolio Management** module still selected, select the **Custom Benchmarks** page.
- From the toolbar, click **New**. The Benchmark Basics dialog box opens.



3. In the **Name** field, type **Moderate Aggressive**.
4. From the **Currency** drop-down field, select **US Dollar**.

Note the name for the custom benchmark, and the Currency setting

Morningstar Direct

Benchmark Basics
Enter general benchmark information here.

Name Moderate Aggressive

Combined series Yes No

Combined series:Yes

Base series

Operator Arithmetic Addition

Second series

Combined series:No

Currency US Dollar

Benchmark 1 S&P 500 TR

Benchmark 2

Risk free proxy USTREAS T-Bill Auction Ave 3 Mon

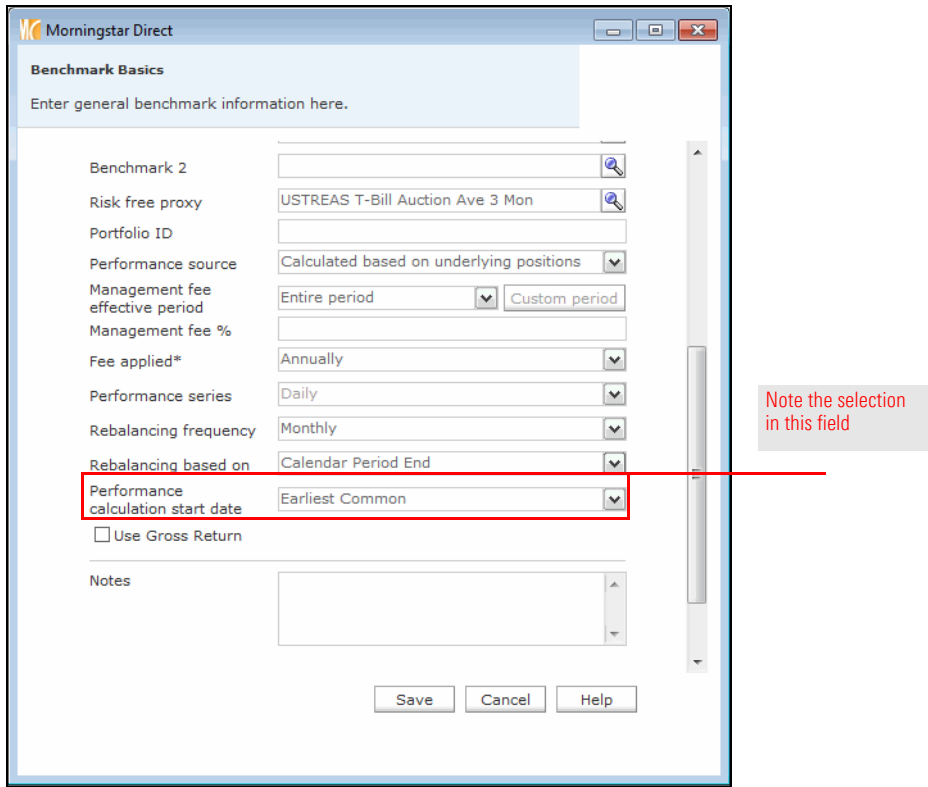
Portfolio ID

Performance source Calculated based on underlying positions

Management fee Entire period Custom period

Save Cancel Help

5. **Scroll** down to the **Performance calculation start date** drop-down field, and select **Earliest Common**.



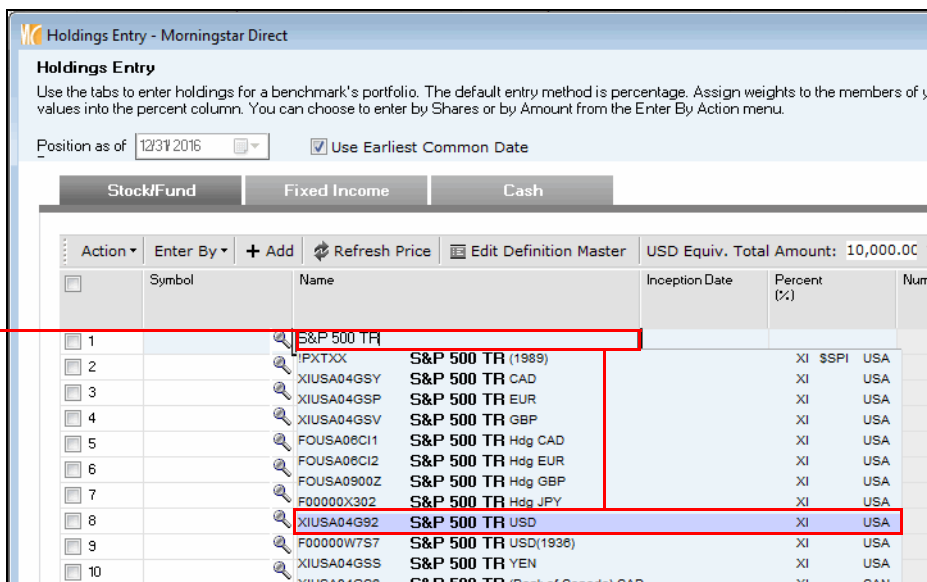
6. Click **Save**. The Holdings Entry window opens.

Exercise 43: Selecting and allocating the weightings for a custom benchmark

To select and allocate weightings to the custom benchmark, do the following:

1. In the Holdings Entry window, click the **Name** field for the first row.
2. Type **S&P 500 TR**, then from the list that opens, select **S&P 500 TR USD**.

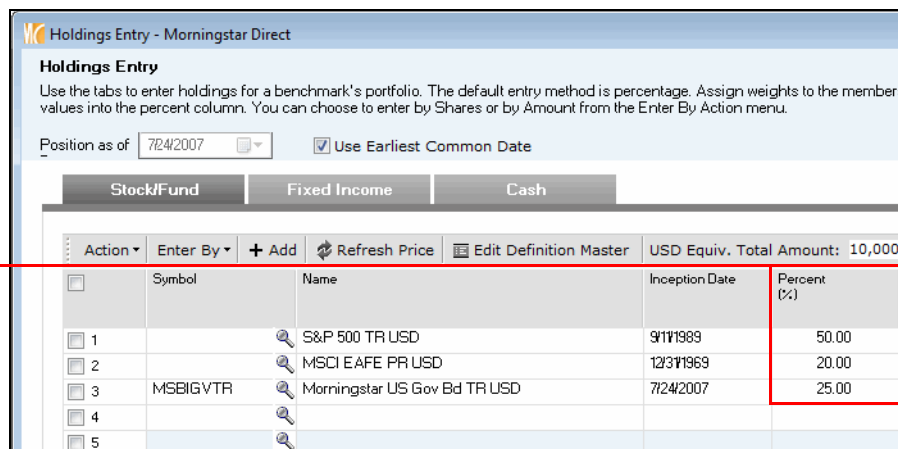
As you type in this field, matching selections appear automatically



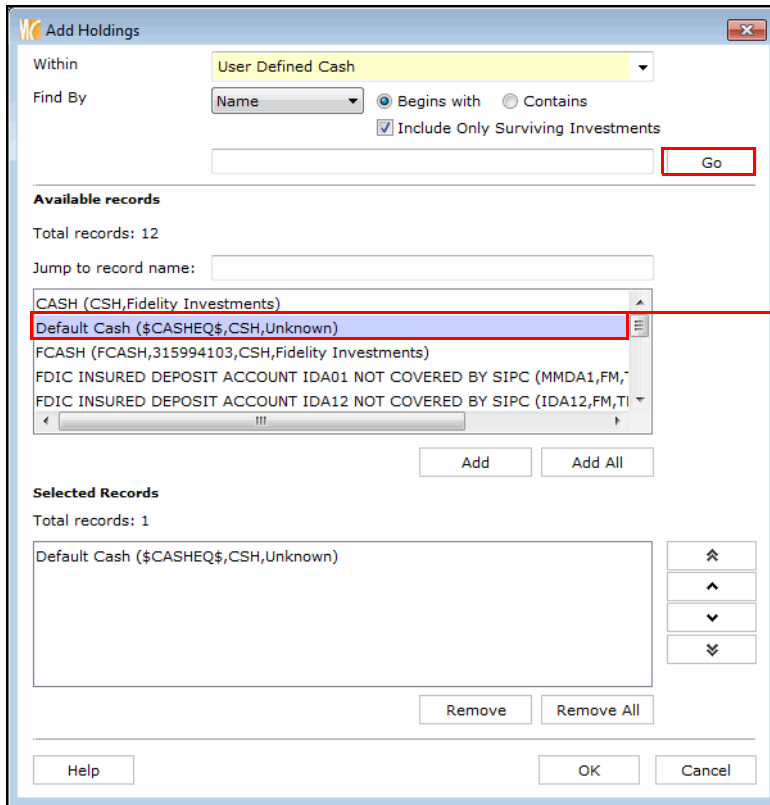
3. Repeat steps 1-2 for the following indexes:
 - ▶ **MSCI EAFE PR USD**, and
 - ▶ **Morningstar US Gov Bd TR USD**.
4. In the Percent (%) column, assign the following percentages to each index:

Index	Percent (%)
S&P 500 TR USD	50
MSCI EAFE PR USD	20
Morningstar US Gov Bd TR USD	25

Note the values entered for each index here

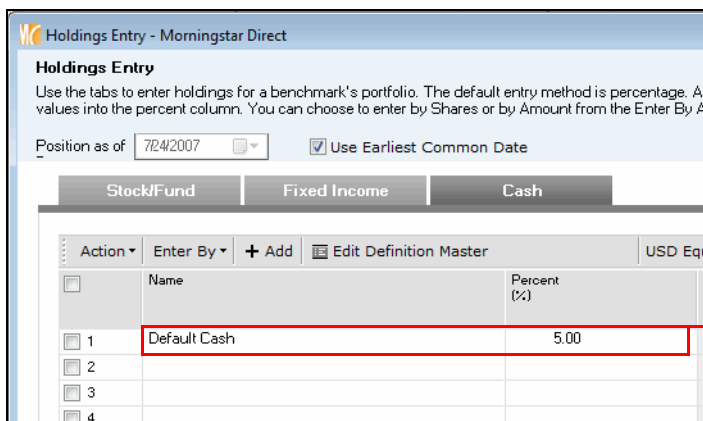


5. Select the **Cash** tab.
6. Click the **magnifying glass** icon in the first row. The Add Holdings dialog box opens.
7. Click **Go**.
8. In the Available Records list, **double-click Default Cash** to move it to the Selected Records list.



Double-click this option

9. Click **OK** to close the Add Holdings dialog box. The Holdings Entry window is displayed.
10. In the **Percent (%)** column for Default Cash, type **5**.



Be sure to enter the correct percentage here

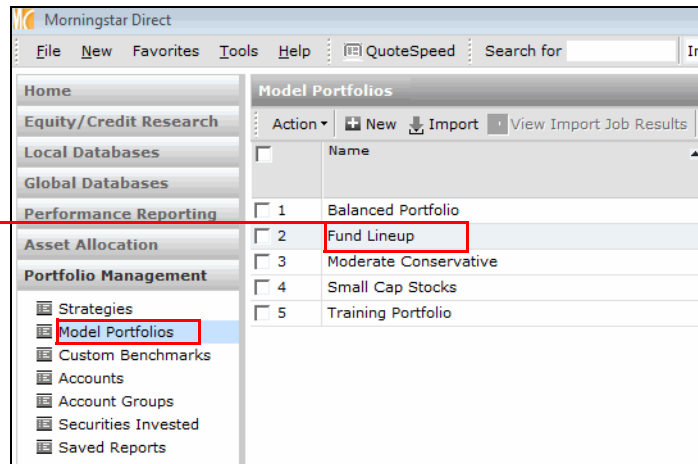
11. Click the **Finish>>** button. The Training Benchmark window opens. You can now **close** this window.

Exercise 44: Assigning a custom benchmark to a model portfolio

To assign a custom benchmark to the model portfolio you created, do the following on the Model Portfolios page:

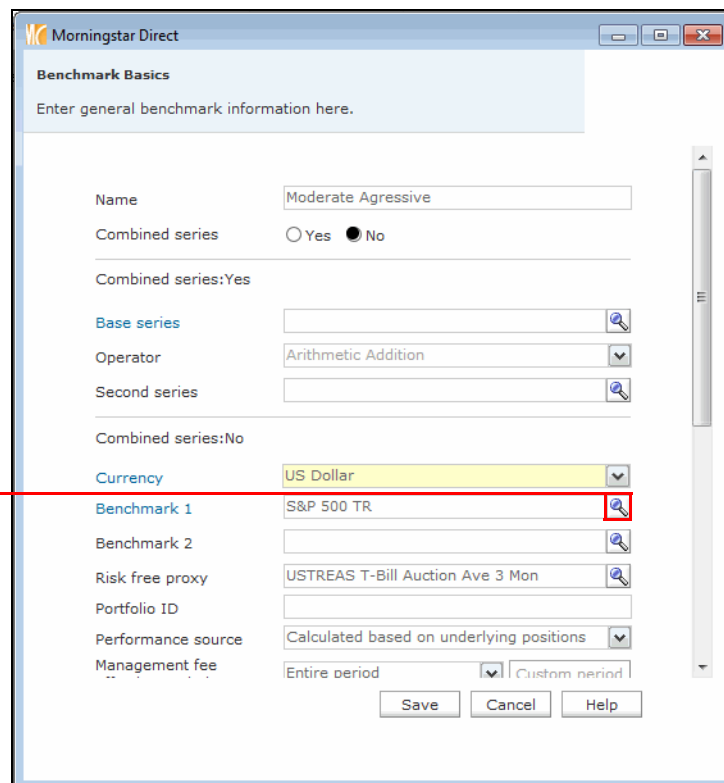
1. The Portfolio Management module should still be selected. From the left navigation pane, select the **Model Portfolios** page.
2. **Double-click** the **Fund Lineup** model portfolio to open it. The Fund Lineup window opens.

Double-click the name of the portfolio you imported

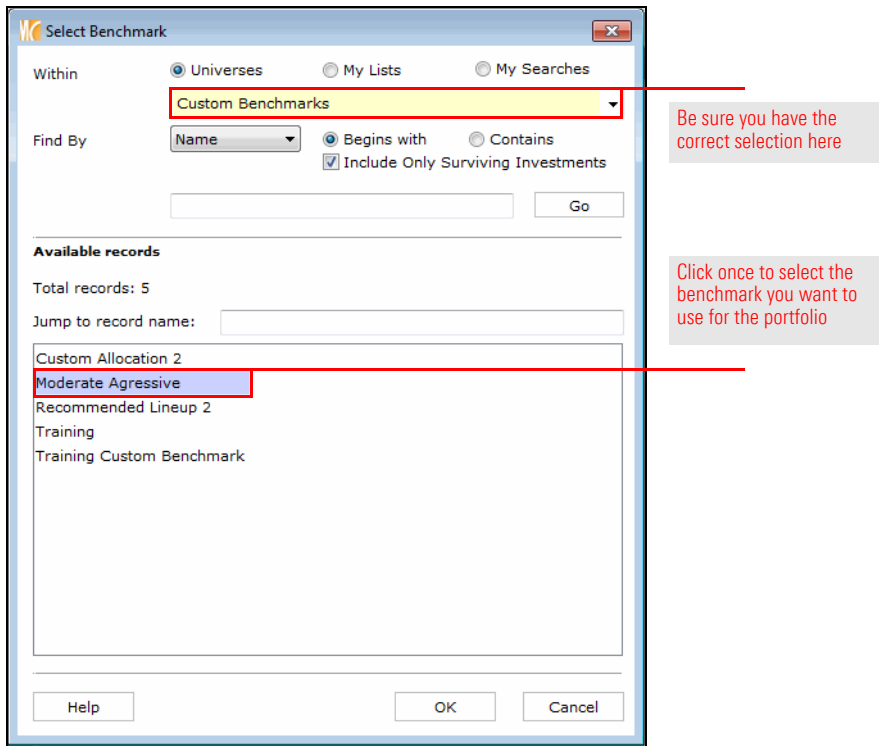


3. On the navigation pane, select the **General Settings** page.
4. To the right of the **Benchmark 1** field, click the **magnifying glass** icon. The Select Benchmark dialog box opens.

Click this icon to change the benchmark assigned to the portfolio



5. At the top of the dialog box, Universes should be selected. From the drop-down field at the top, select **Custom Benchmarks**.
6. Click **Go**.
7. In the Available records list, click **Moderate Aggressive**.

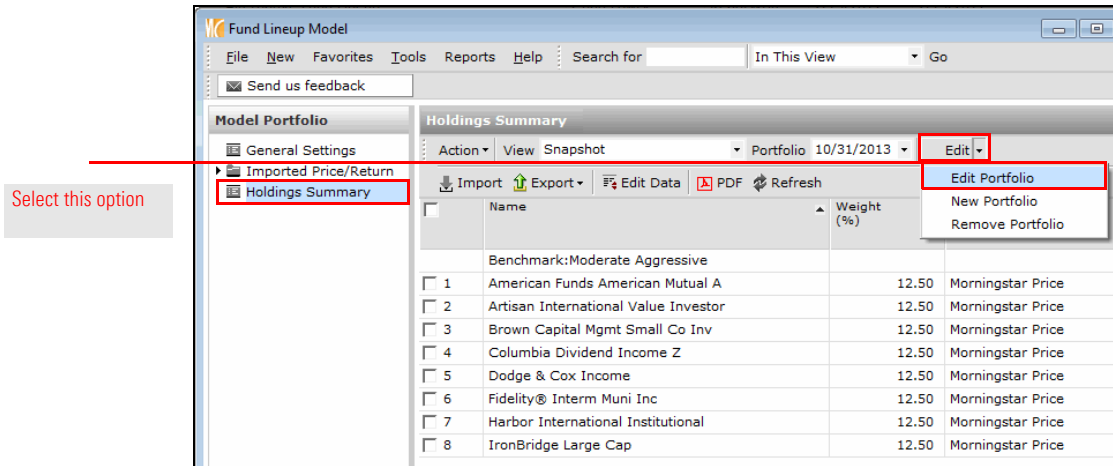


8. Click **OK** to close the Select Benchmark dialog box.
9. In the Moderate Aggressive Model window, click **Save**.

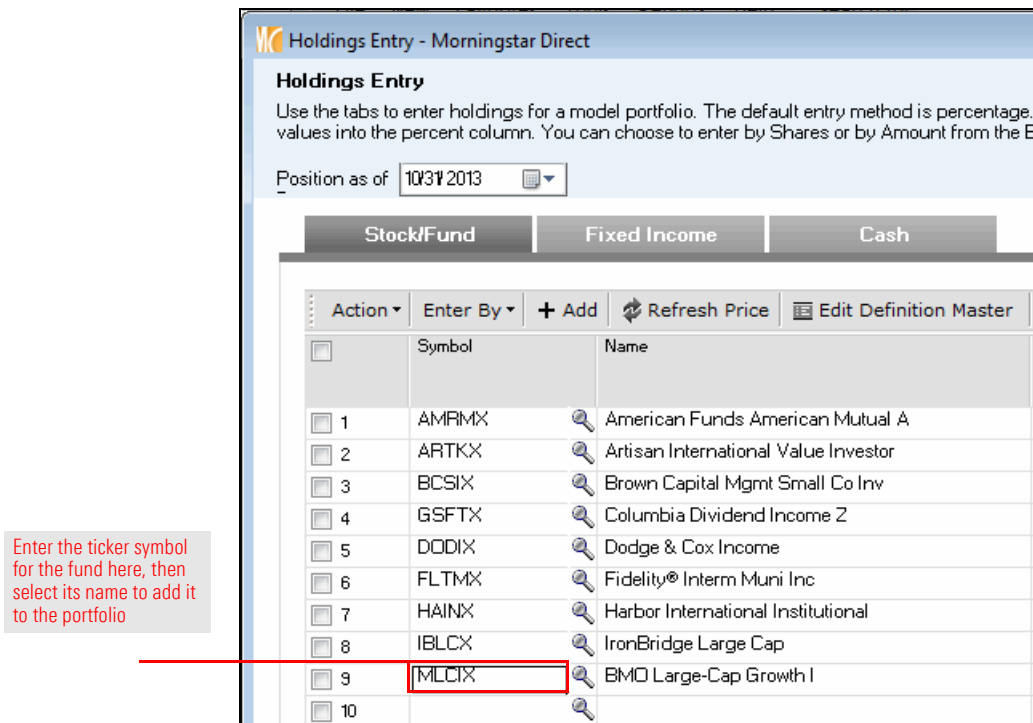
Exercise 45: Adding a holding to a portfolio for comparison

As stated in the introduction for this section, you have been asked to evaluate whether IronBridge Large Cap (the Large Growth fund in the portfolio) should be replaced by another Large Growth fund. To add the new fund and generate a report comparing the two funds, do the following:

1. The portfolio window should still be open. In the left navigation pane, select the **Holdings Summary** page.
2. From the toolbar above the grid view, from the **Edit** drop-down field, select **Edit Portfolio**. The Portfolio Date Selection dialog box opens.

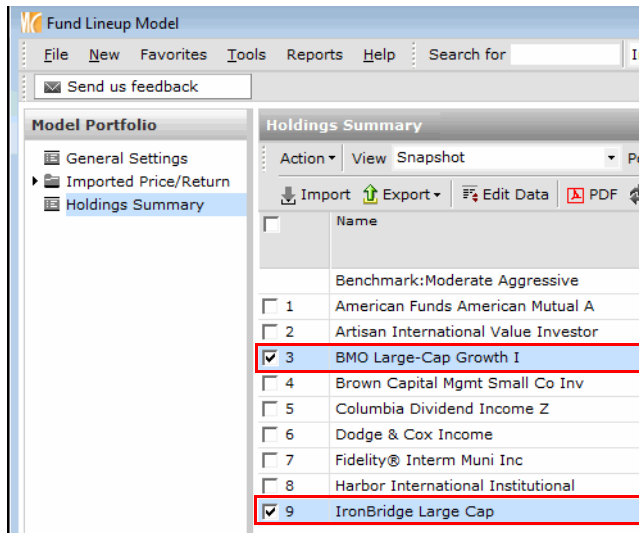


3. Click **OK**. The Holdings Entry window opens.
4. In row 9, type the **ticker symbol** for the fund you want to consider, and click its **name** when it appears. The fund is added to the portfolio.



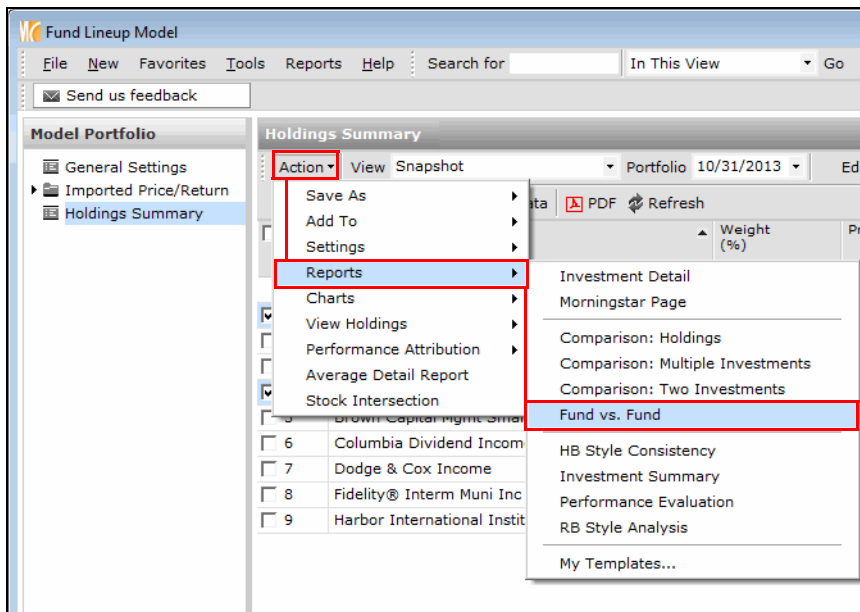
5. Click **Finish>>**. (You do not need to assign a value to the fund to be able to compare it to the other Large Growth fund.)

6. In the grid view, select the following by checking the checkboxes at the beginning of their rows:
 - ▶ **IronBridge Large Cap** and
 - ▶ the **fund** you added.



Select the two funds you want to compare

7. From the toolbar above the grid view, from the **Action** drop-down field, select **Reports... Fund vs. Fund**. The Fund vs. Fund report opens in a new window.



Use the Action drop-down field to generate this report

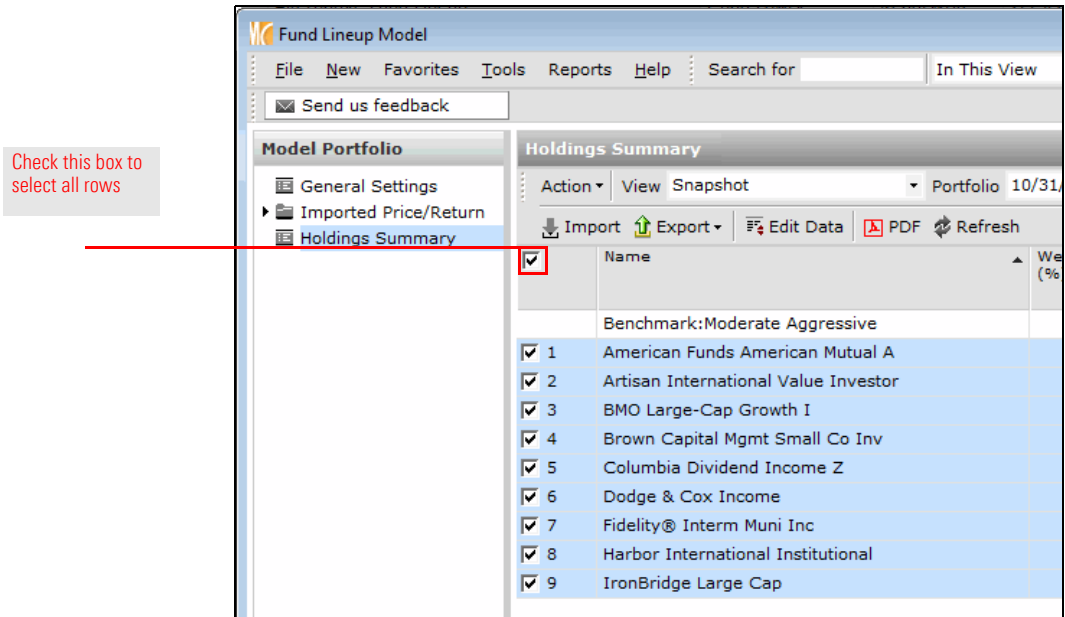
8. From the toolbar, click the **PDF Report** icon. The PDF report opens in a new window.

Exercise 46: Creating a new model portfolio from an existing model portfolio

After comparing the two Large Growth funds, you are not sure whether the model would be better off with the Parnassus Endeavor fund or the American Funds AMCAP fund, but you want to compare the model portfolio with the original fund to a model portfolio with the new fund. You can easily copy an existing model portfolio and make a change to the lineup. (You will compare the two models in the next section on Presentation Studio.)

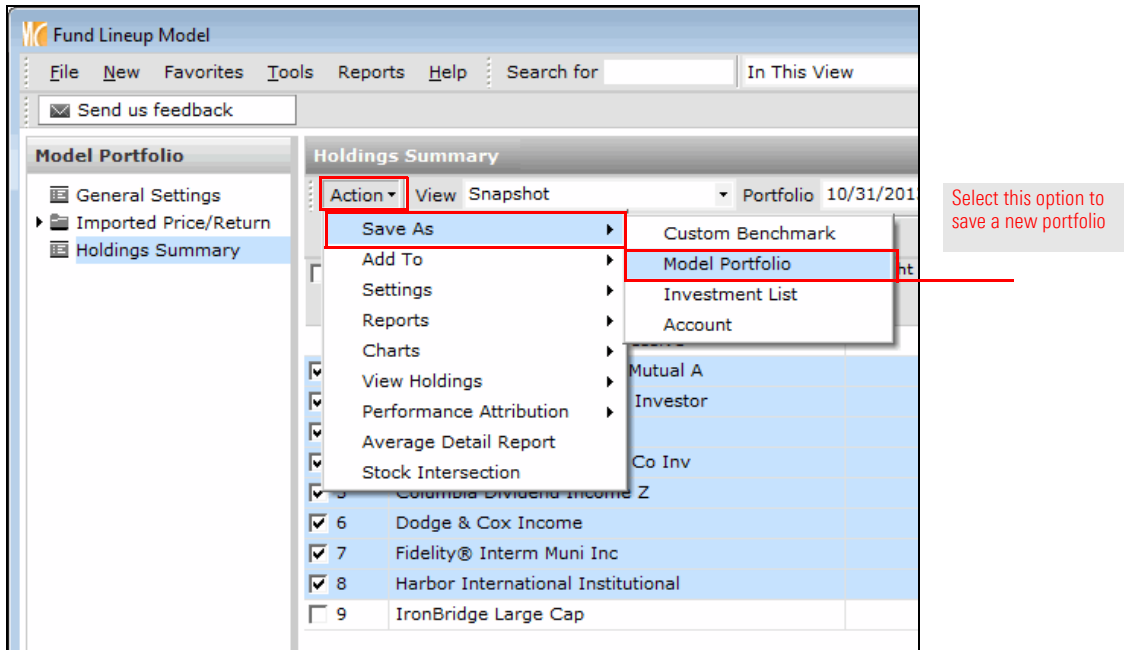
To copy and edit an existing model portfolio, do the following:

1. With the Fund Lineup portfolio still open, in the header row, check the **checkbox** above the grid view; this selects all rows.

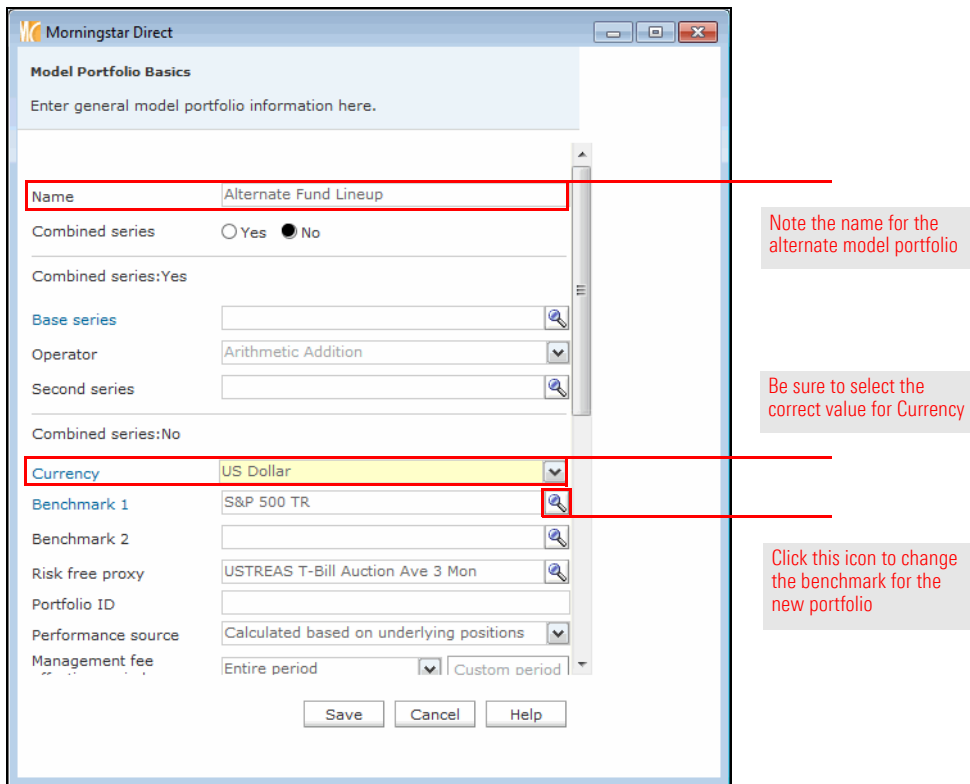


2. Uncheck the **IronBridge Large Cap** checkbox.

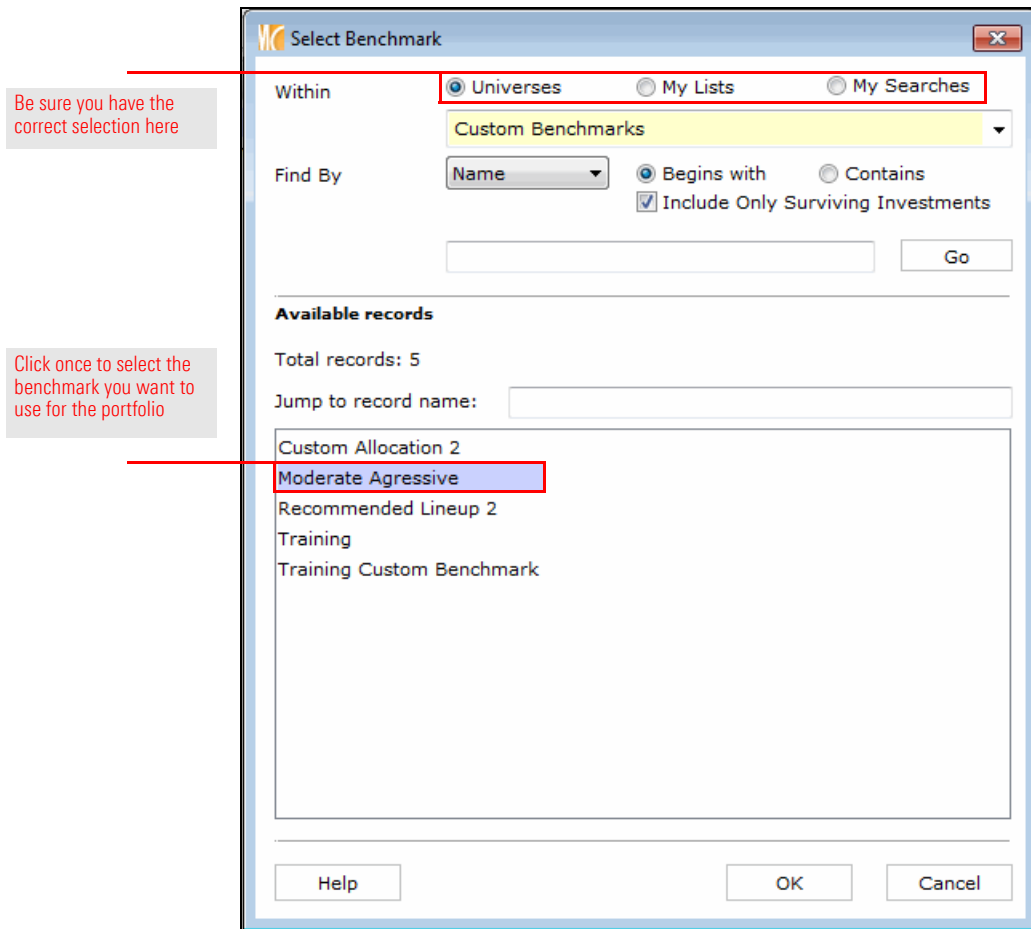
- From the **Action** drop-down field, select **Save As...Model Portfolio**. The Model Portfolio Basics dialog box opens.



- In the **Name** field, type **Alternate Fund Lineup**.
- From the **Currency** drop-down field, select **US Dollar**.
- In the **Benchmark 1** field, click the **magnifying glass** icon. The Select Benchmark dialog box opens.



7. The option button for **Universes** should be selected. From the drop-down field at the top, select **Custom Benchmarks**.
8. Click **Go**.
9. Click **Moderate Aggressive**.



10. Click **OK** to close the Select Benchmark dialog box.

- From the **Performance calculation start date** drop-down field, select **Earliest Common**.

Benchmark Basics
Enter general benchmark information here.

Benchmark 2	<input type="text"/>
Risk free proxy	USTREAS T-Bill Auction Ave 3 Mon
Portfolio ID	<input type="text"/>
Performance source	Calculated based on underlying positions
Management fee effective period	Entire period <input type="button" value="Custom period"/>
Management fee %	<input type="text"/>
Fee applied*	Annually
Performance series	Daily
Rebalancing frequency	Monthly
Rebalancing based on	Calendar Period End
Performance calculation start date	Earliest Common
<input type="checkbox"/> Use Gross Return	
Notes	<input type="text"/>

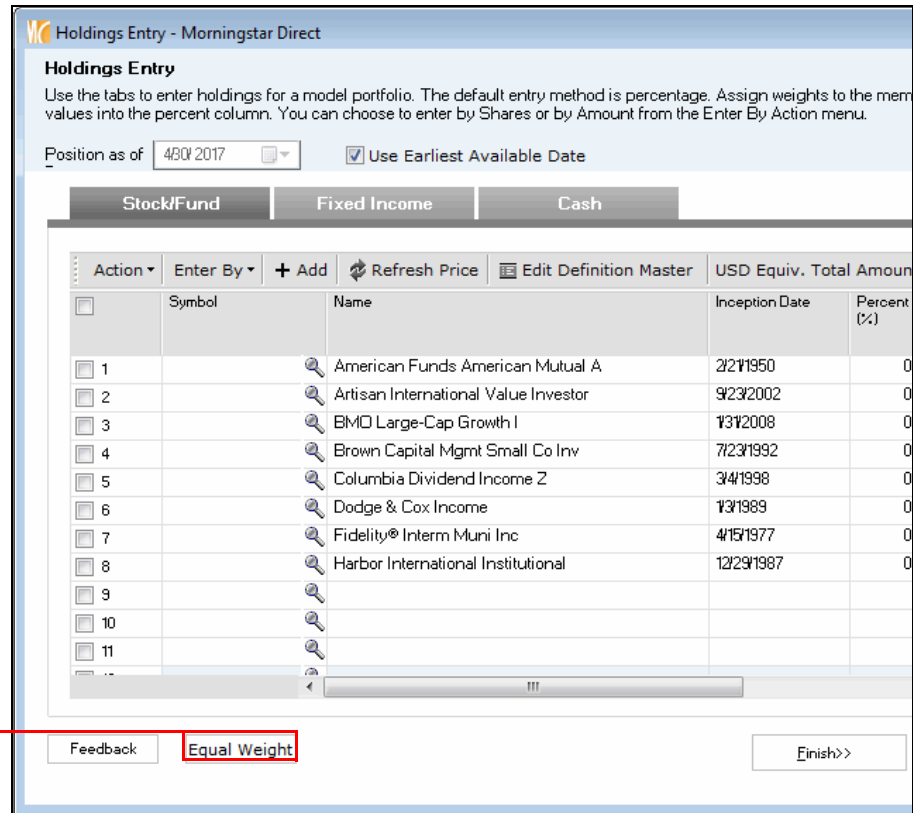
Save Cancel Help

Note the selection for this field

- Click **Save**. The Holdings Entry window opens.

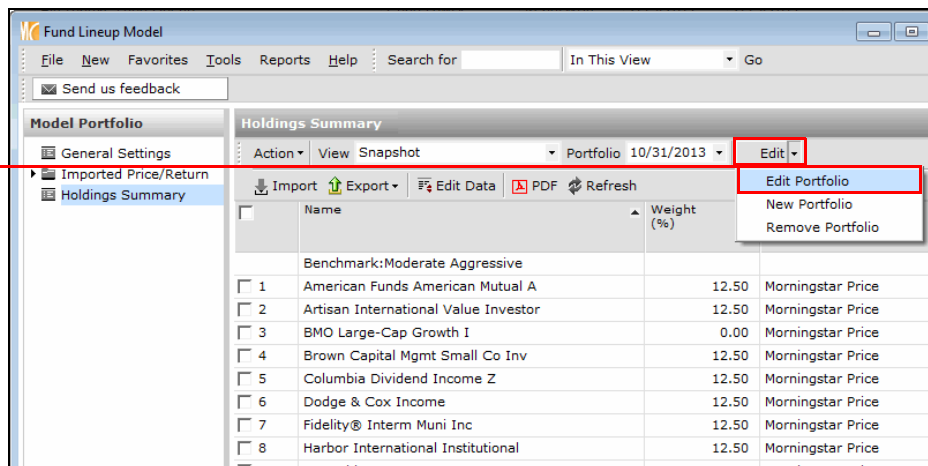
13. At the bottom-left corner of the window, click **Equal Weight**.
14. Click **Finish>>**. The Holdings Entry window closes.

Be sure to click this button



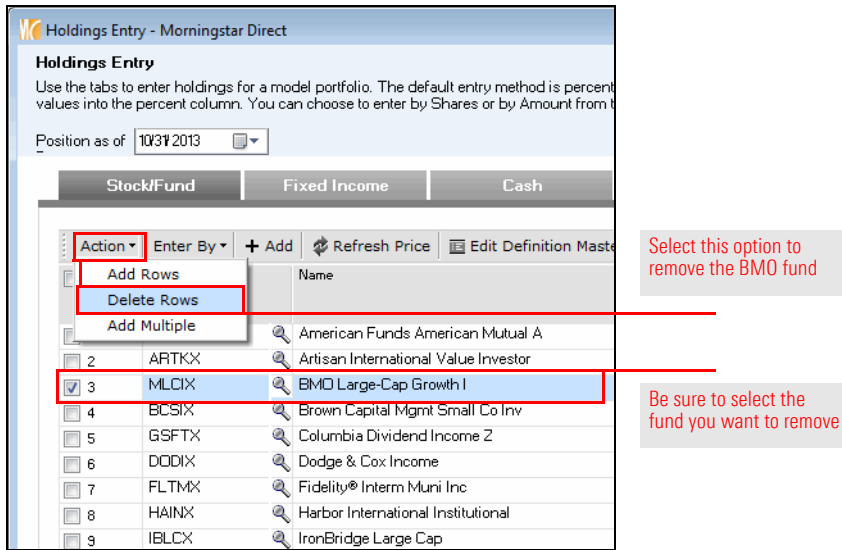
15. The Fund Lineup Model portfolio window should still be open. The fund you added can now be removed from this model portfolio. From the toolbar, from the **Edit** drop-down field, select **Edit Portfolio**. The Portfolio Date Selection dialog box opens.

Select these options



16. Click **OK**.

17. Select the fund you added by clicking the **checkbox** at the beginning of its row.
18. From the **Action** drop-down field, select **Delete Rows**.



19. Click **Finish>>**.
20. **Close** the Fund Lineup Model portfolio window.
21. From the toolbar, click **Refresh** to see the new model you created.

Using Presentation Studio to Compare Model Portfolios

Overview

The Presentation Studio module has a number of templates you can take advantage of to display the power and diversity of a portfolio of holdings. For example, the Portfolio Aggregation Factsheet template is the basis for a compact, powerful report containing almost two dozen components covering asset allocation, geographic distribution, performance data, holdings intersections, and much more. However, because this is a Factsheet template, it is designed to reflect information for only one holding at a time.

If you need to compare two model portfolios, rather than simply analyze a single portfolio of holdings, you can use the Current versus Proposal Portfolio Comparison workbook template.

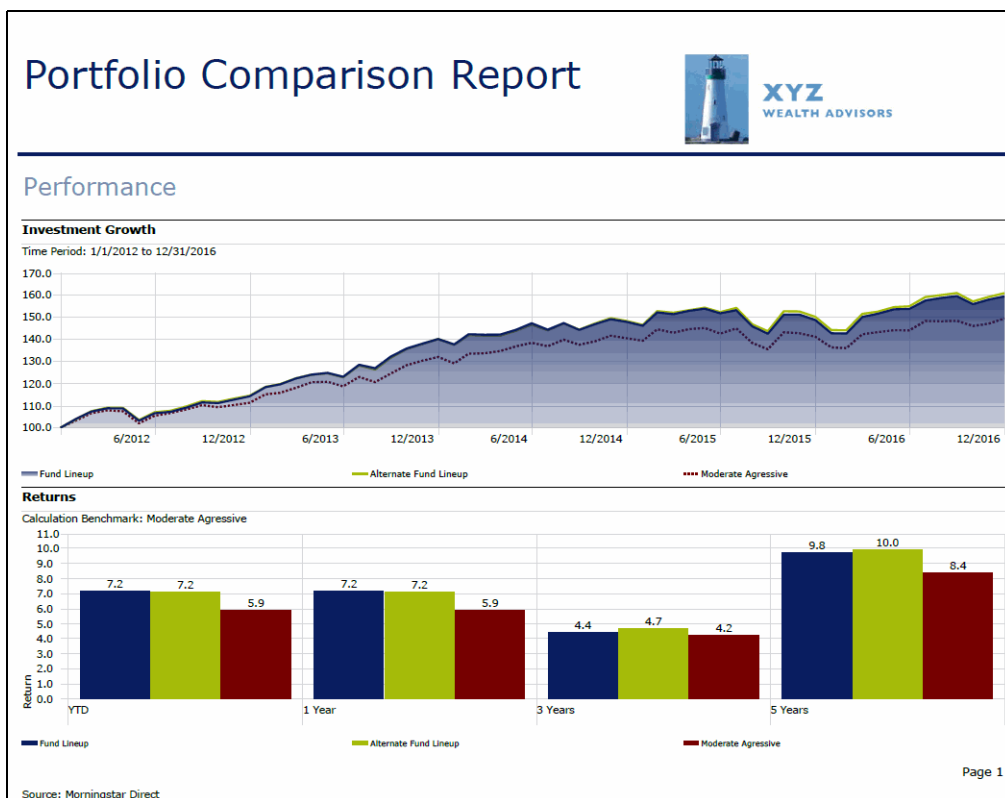
Scenario

You've decided to create a report comparing the two model portfolios, to illustrate the similarities and differences between them.

Solution

You will use Presentation Studio to create a workbook template from scratch, and include the two model portfolios as part of the template. The multi-page report you produce will compare the portfolios in terms of asset allocation, holdings, performance, and more.

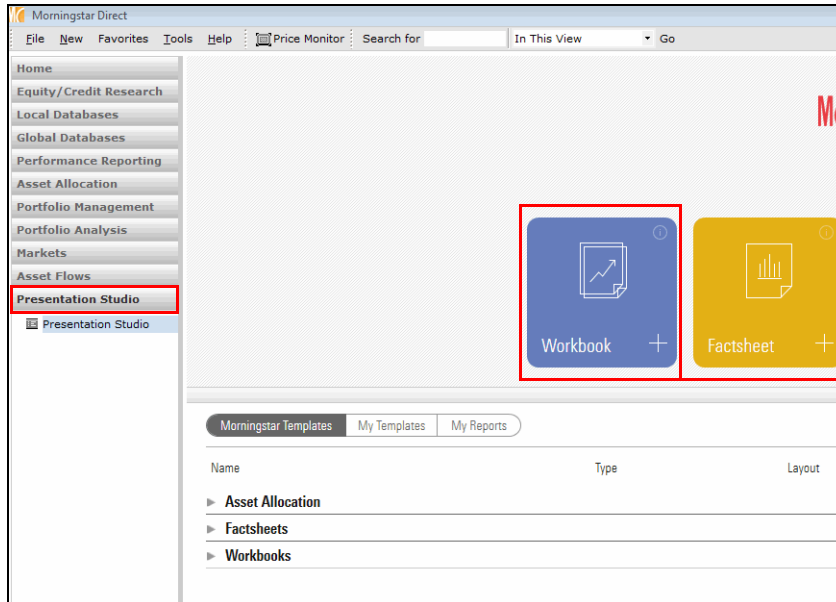
Presentation Studio includes many templates developed by Morningstar experts, or you can build your own



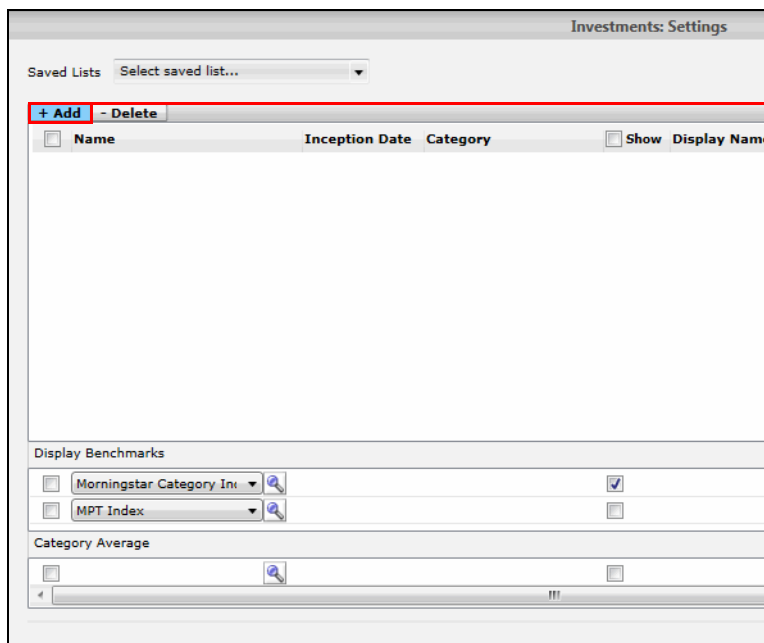
To create a Presentation Studio workbook template from scratch, do the following:

1. If a Presentation Studio template window is open, **close** it.
2. In Morningstar Direct, select the **Presentation Studio** module.
3. At the top of the page, click the **Workbook** tile. The Create New Workbook dialog box opens.

Exercise 47: Create a template from scratch



4. The option for **New Workbook** should be selected. Click **OK**. The Investments: Settings dialog box opens.
5. Click **+Add**. The Find Investments dialog box opens.



6. From the **Within** drop-down field, select **Model Portfolios**.
7. Click **Go**.
8. To select both model portfolios at once, click **Add All**.

Model Portfolios is at the top of the drop-down field

Use the Go button to find all model portfolios at once

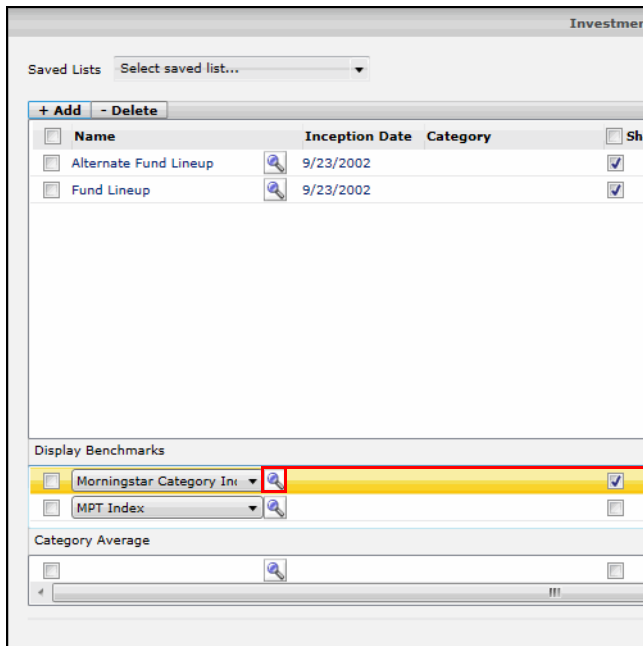
Click this button to include both model portfolios at once

The screenshot shows the 'Find Investments' dialog box with the following elements:

- Within:** A dropdown menu set to 'Model Portfolios'.
- Find By:** A dropdown menu set to 'Name'.
- Search Options:** Radio buttons for 'Begins with' and 'Contains', and a checked checkbox for 'Include Only Surviving Investments'.
- Go:** A button to execute the search.
- Available records:** A list showing 'Total records: 2' and two records: 'Alternate Fund Lineup' and 'Fund Lineup'.
- Buttons:** 'Add' and 'Add All' buttons.
- Selected Records:** A list showing 'Total records: 2' and the same two records: 'Alternate Fund Lineup' and 'Fund Lineup'.
- Navigation:** Up and down arrow buttons next to the selected records.
- Bottom Buttons:** 'Remove', 'Remove All', 'Help', 'OK', and 'Cancel' buttons.

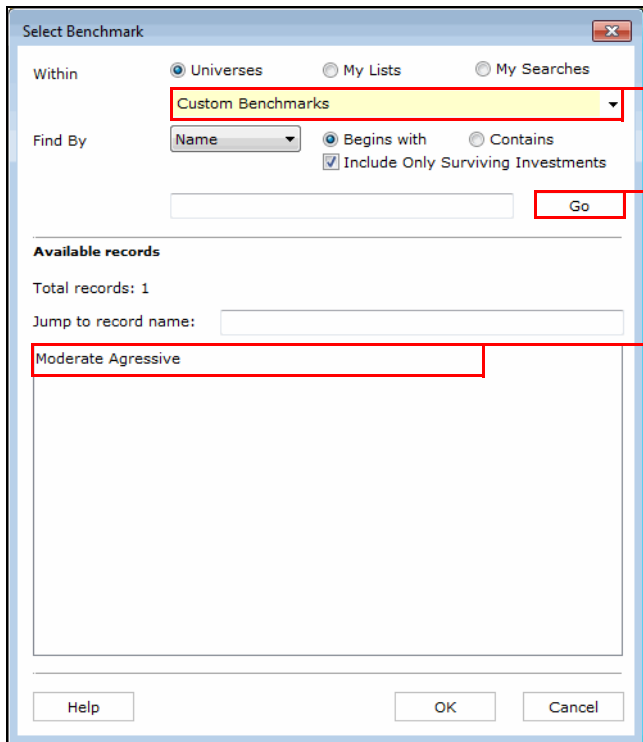
9. Click **OK** to close the Find Investments dialog box.

10. In the Alternate Fund Lineup row, from the **Calculation Benchmark** drop-down field, be sure **Display Benchmark 1** is displayed for both model portfolios.
11. In the Display Benchmarks area, click the **magnifying glass** icon in the top row. The Select Benchmark dialog box opens.



Click this icon to use the custom benchmark you created earlier

12. From the **Within** drop-down field, select **Custom Benchmarks**.
13. Click **Go**. The Moderate Aggressive benchmark you created should now be displayed in the Available records list.
14. In the Available records list, click the **name** of the custom benchmark to select it.



Be sure this option is selected from this field

Click the Go button to display the custom benchmark you created

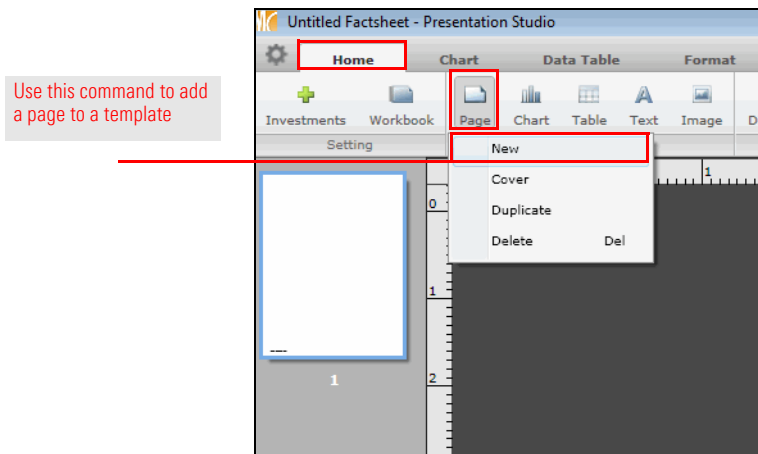
Click once on the name of the custom benchmark

15. Click **OK** to close the Select Benchmark dialog box.
16. Click **OK** to close the Investments: Settings window. The workbook template opens in a new window.

Exercise 48: Add the pages for the report template

Your custom report template will be comprised of six pages. To create additional pages you need, do the following:

1. In the Presentation Studio window, the **Home** tab should be selected. From the toolbar, from the **Page** drop-down field, select **New**.



2. **Repeat step 1** four more times. The left pane should display a total of six blank pages.

Exercise 49: Save the Presentation Studio template and report

When you save a file in Presentation Studio, you have two options:

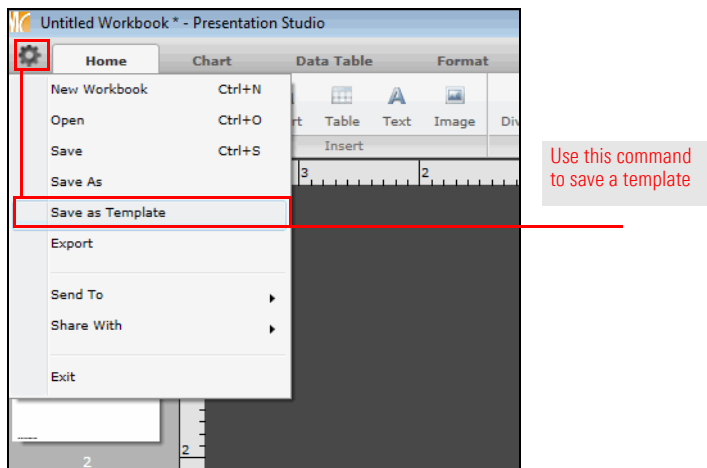
- ▶ Save the file as a template, or
- ▶ Save the file as a report.

Saving the workbook as a template allows you to use it with any two portfolios in the future, not just the two portfolios you selected to help build out the template. However, when you open the template, you will always need to select the portfolios to associate with it; the system will not remember portfolios you previously selected.

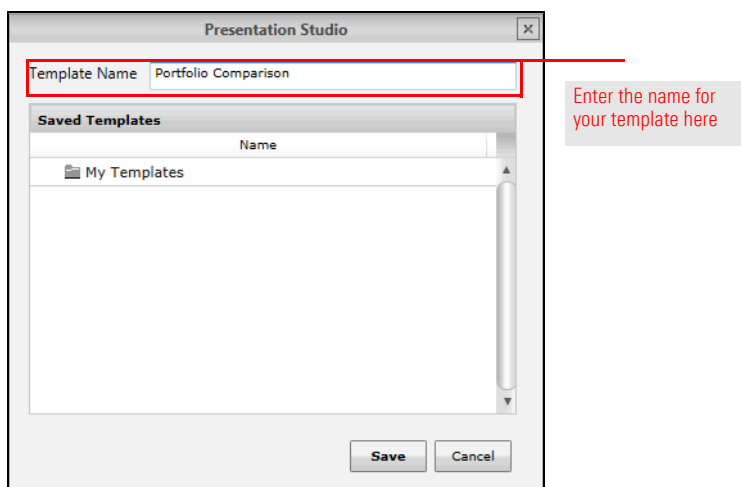
If you save the report with the two model portfolios you chose in Exercise 47, you will not have to make that selection again, but if you make changes to that report file, they will not be saved to a template as well; you will need to save both the report and the report template if you wish to save your changes in both places.

To save your Presentation Studio template, do the following:

1. In the upper-left corner of the Presentation Studio window, click the **gear** icon, then select **Save As Template**. The Presentation Studio dialog box opens.



2. In the **Template Name** field, type **Portfolio Comparison**.



3. Click **Save**.
4. When the confirmation message opens, click **OK**.

To save the report with the portfolios you have selected, do the following:

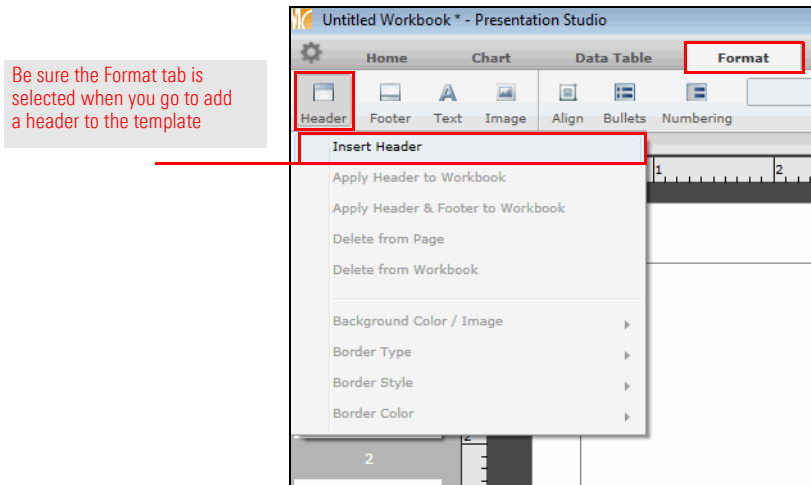
1. In the upper-left corner of the Presentation Studio window, click the **gear** icon, then select **Save**. The Presentation Studio dialog box opens.
2. In the **Workbook Name** field, type **Model Portfolio Comparison Report**.
3. Click **Save**.

Exercise 50: Insert and design the report header and footer

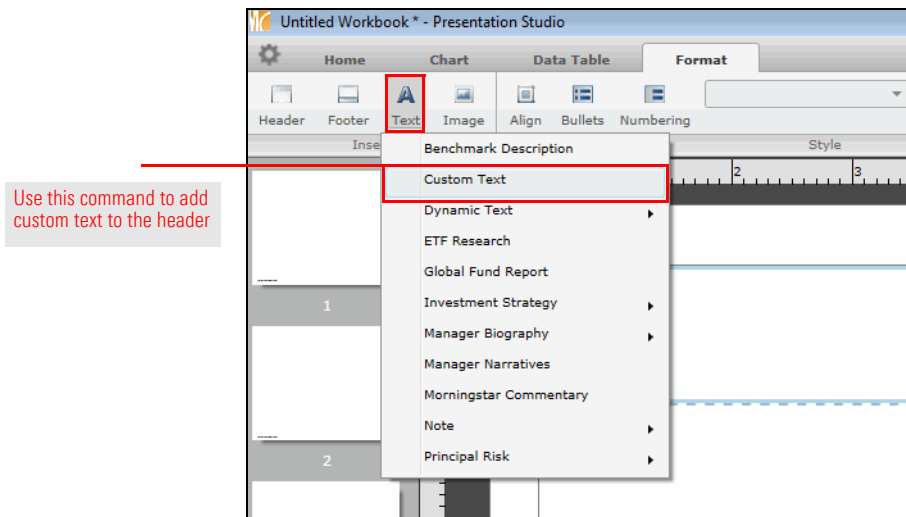
After saving the workbook, you are ready to insert a header and footer on the first page. This provides a title for the factsheet and also allows you to include a logo. The footer will display the page number for the report. Once built, the header and footer will be copied to all other pages.

To insert and style the header and footer on the first page, do the following:

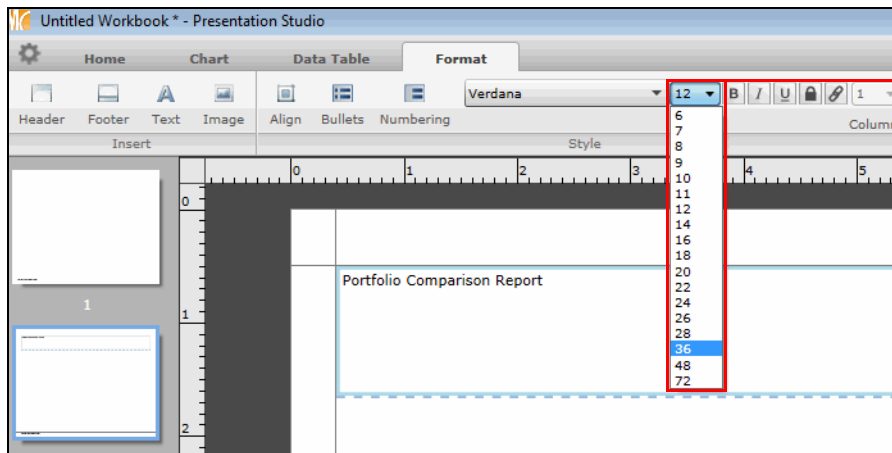
1. In the left pane, be sure the **first page** is selected.
2. From the toolbar at the top of the window, select the **Format** tab.
3. From the toolbar above the ruler, click the **Header** icon and select **Insert Header**.



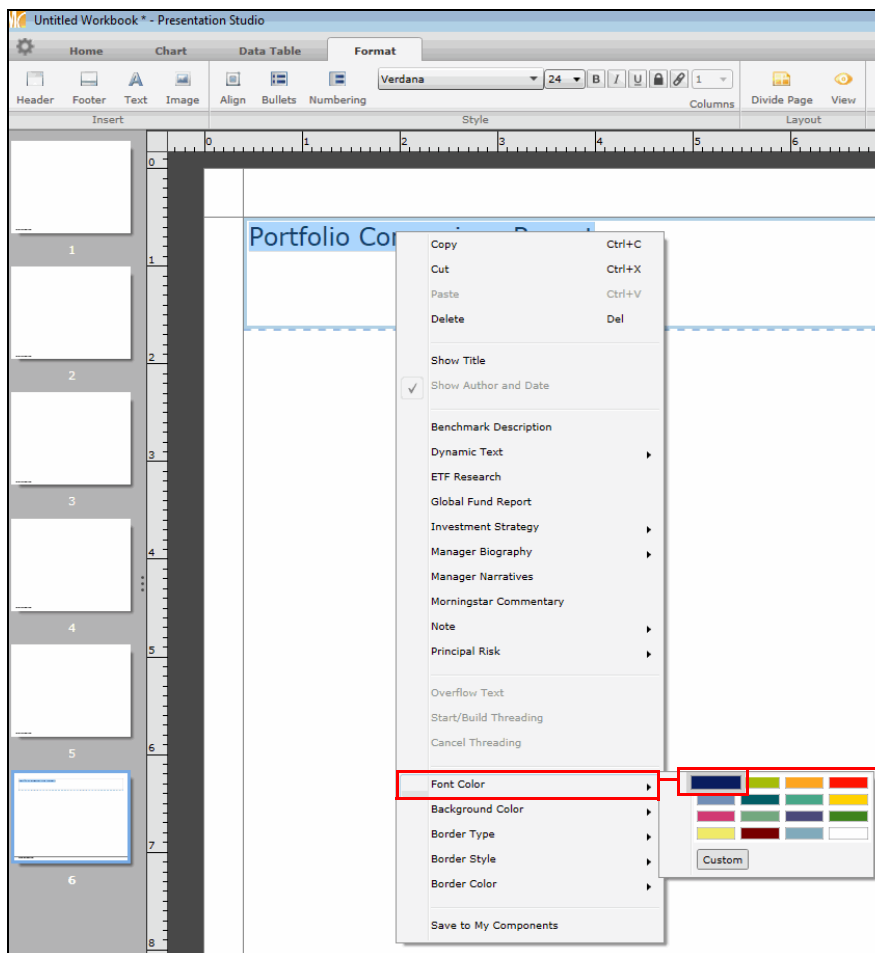
4. From the toolbar above the ruler, click the **Text** icon and select **Custom Text**.



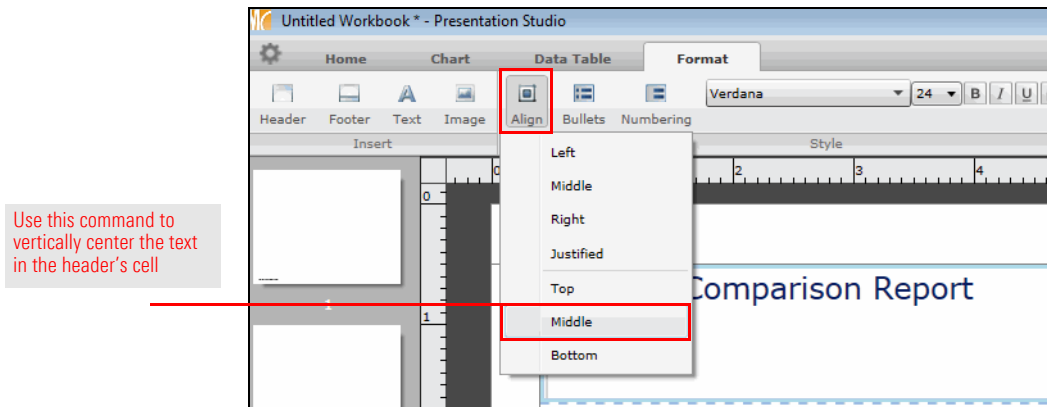
5. Click the **header** area, then type **Portfolio Comparison Report**.
6. To select the text you just typed, press <CTRL>+<A>, then use the **font size** drop-down field from the toolbar to select **36**.



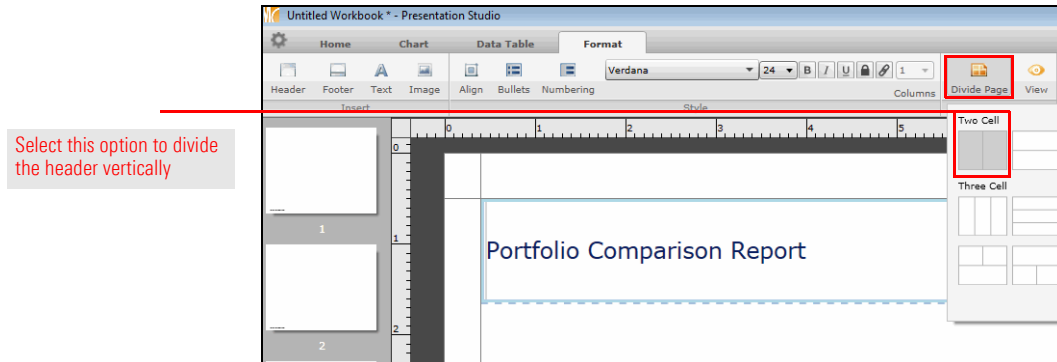
7. To change the color of the text, with the text still selected, **right-click** on the text and select **Font Color**.
8. Select the **dark blue** color in the upper-left corner of the color palette.



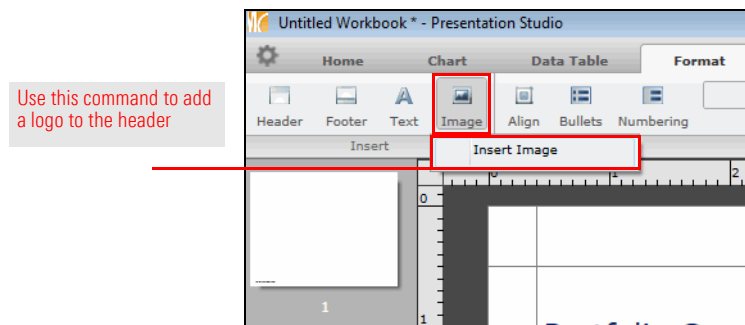
9. From the toolbar, use the **Align** icon to select the second instance of **Middle**. Note the new position of the header's text.



10. To place an image in the header, click the **Divide Page** icon, then select the option displaying **two side-by-side cells**.

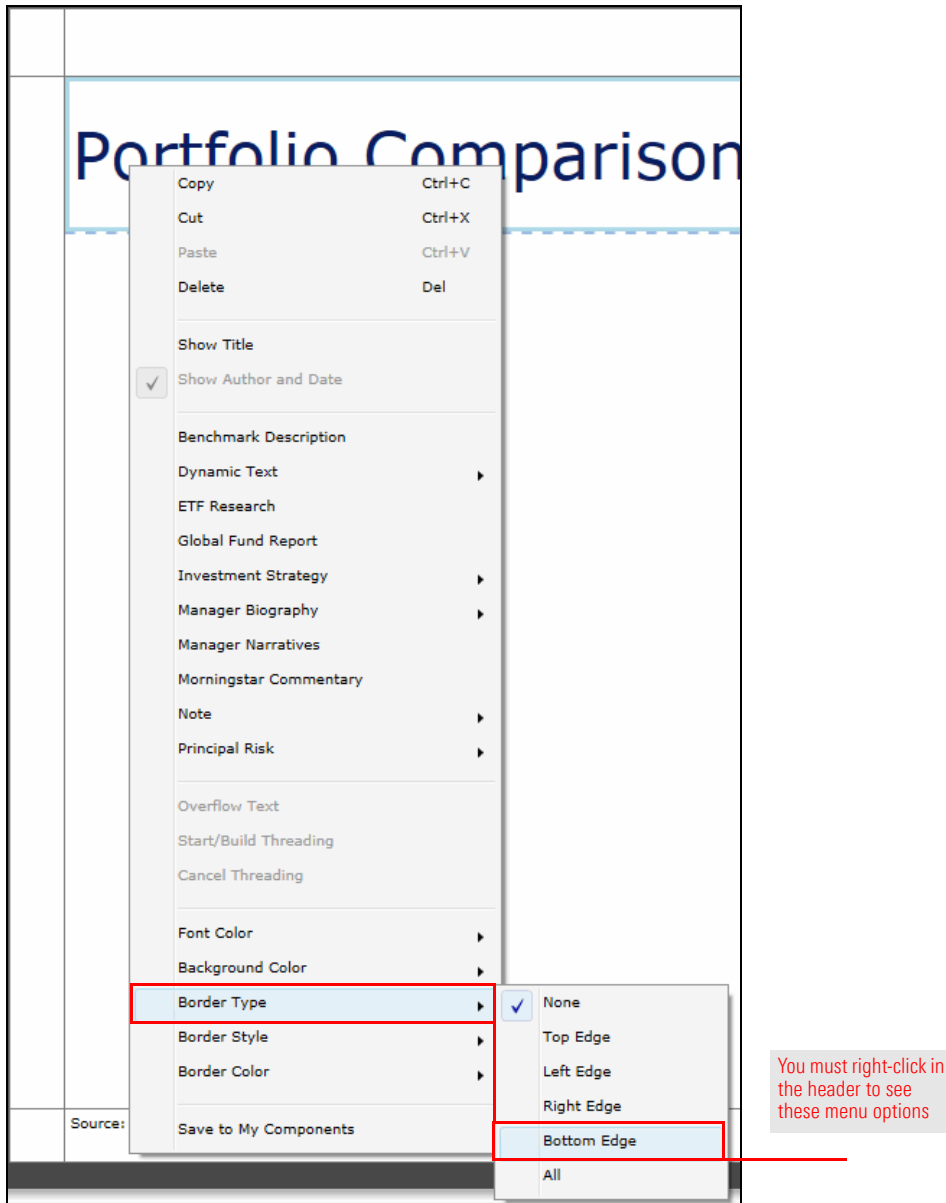


11. In the header, select the **cell** on the left.
12. From the toolbar, from the **Image** drop-down field, select **Insert Image**.

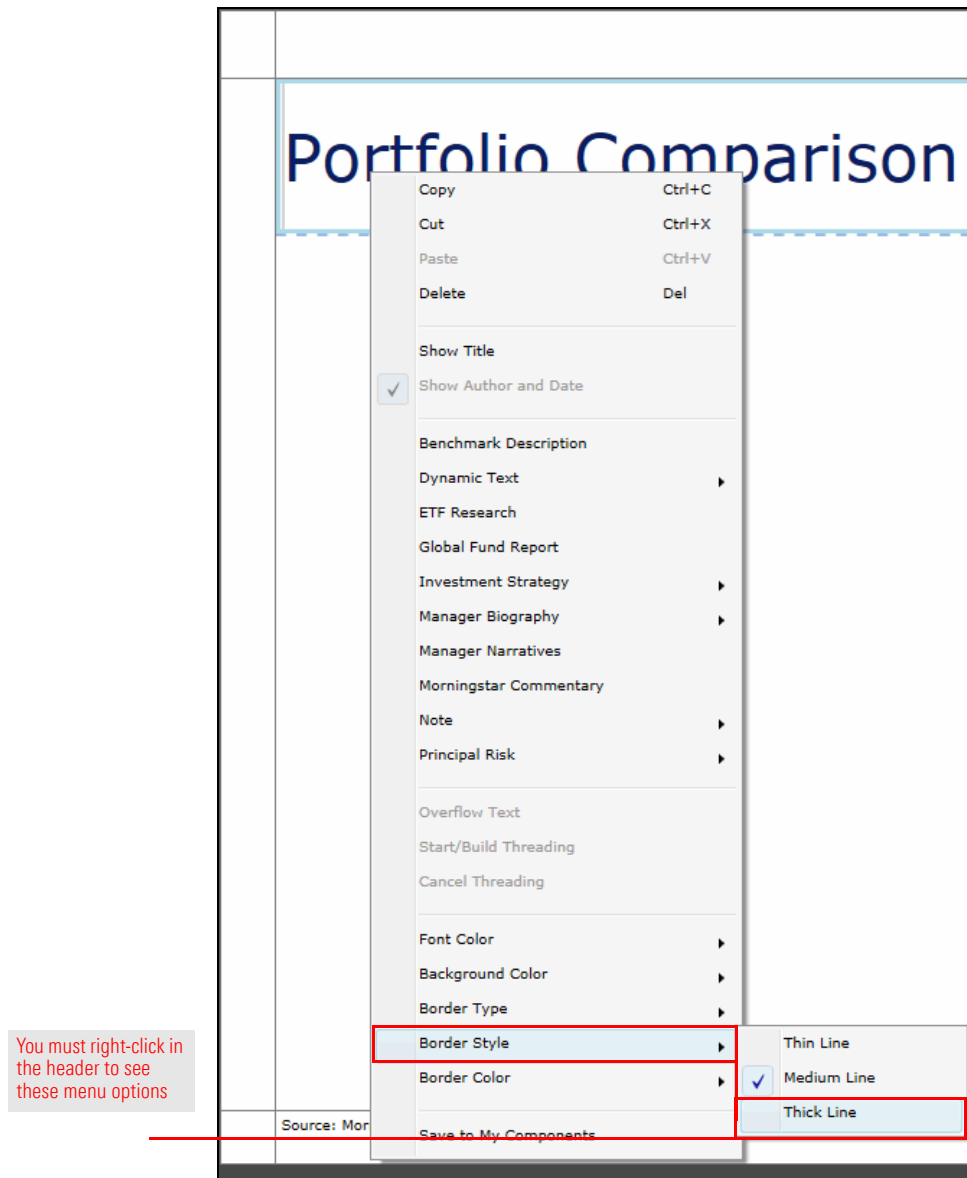


13. Navigate to your **desktop**, select the **XYZ Advisor** logo and **open** it. The image now appears in the right cell of the header.
14. From the toolbar, from the **Align** drop-down field, select **Right**.

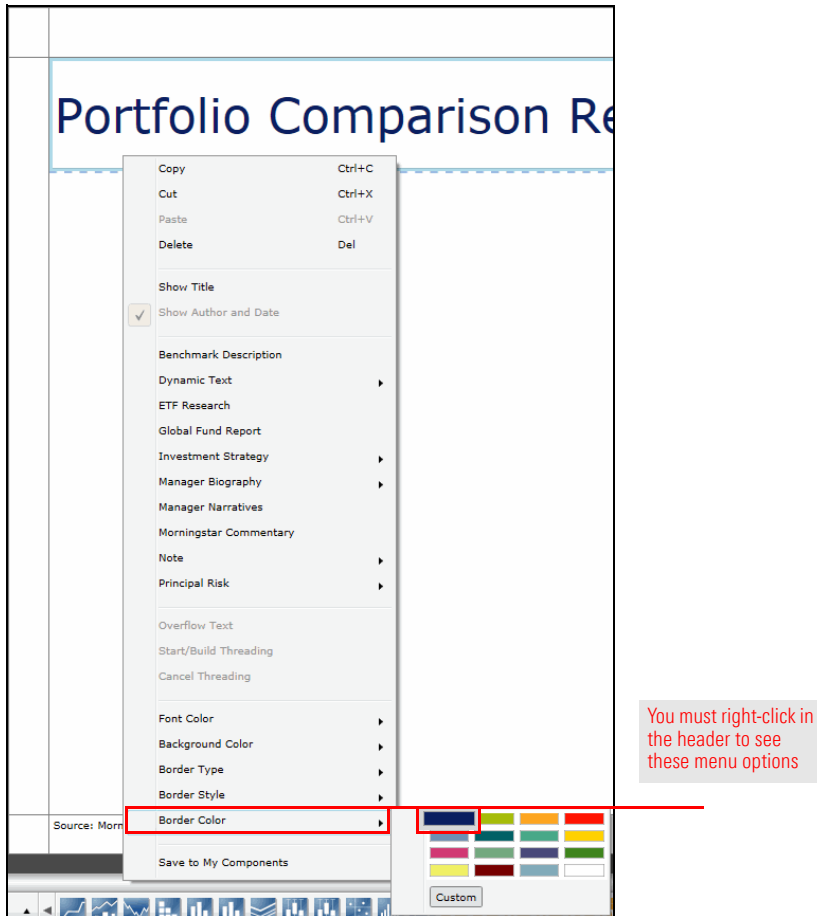
15. To create the border on the left header cell, **right-click** in the cell, then select **Border Type... Bottom Edge**.



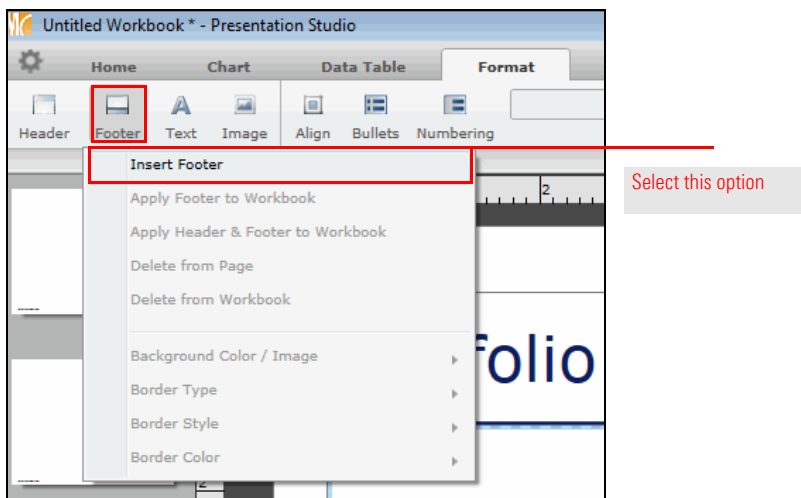
- To change the thickness of the border, **right-click** in the left cell, then select **Border Style... Thick Line**.



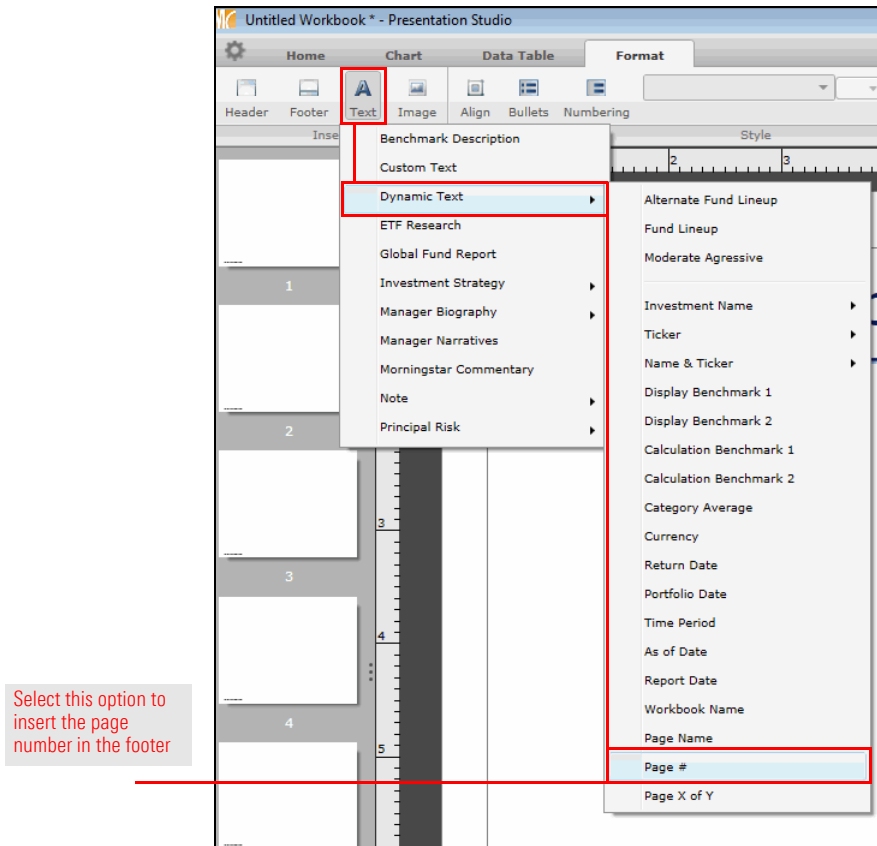
17. To change the color of the border, **right-click** in the left cell, then select **Border Color** and select the **dark blue color** in the upper-left corner of the color palette.



18. Repeat steps 14-16 for the cell with the logo image.
 19. To insert a page number in the footer, be sure the **Format** tab is selected.
 20. From the toolbar, click the **Footer** icon and select **Insert Footer**.

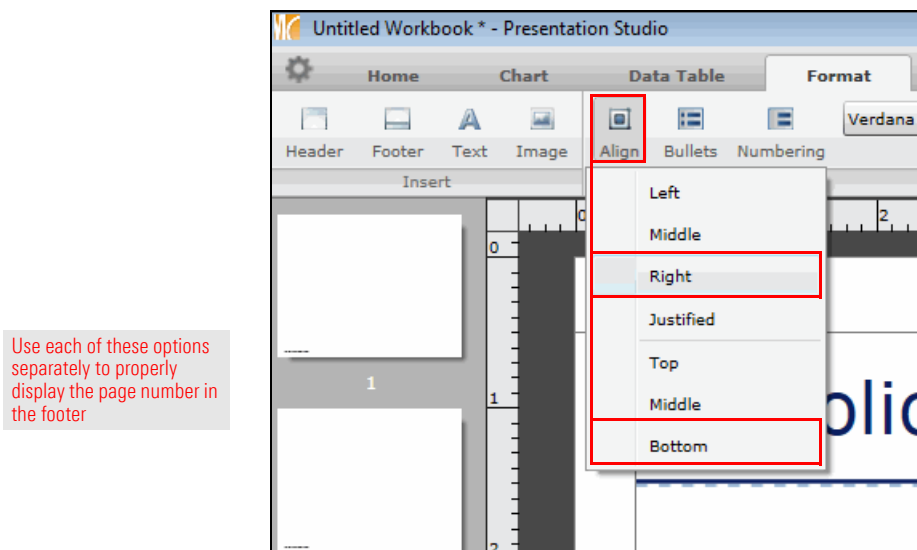


21. From the toolbar, click the **Text** icon and select **Dynamic Text...Page #**.

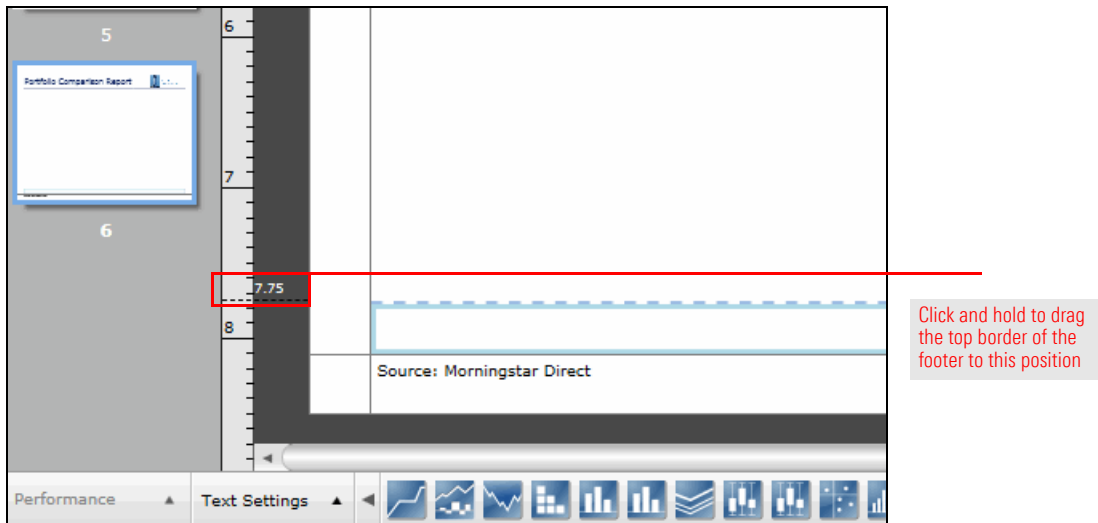


22. From the toolbar, click the **Align** icon and select **Right**.

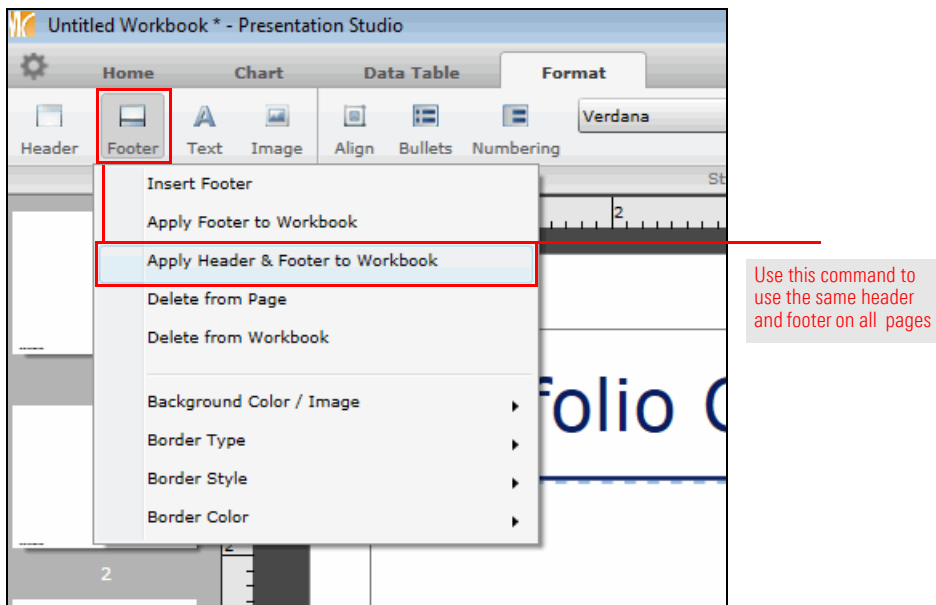
23. From the toolbar, from the **Align** icon and select **Bottom**.



24. **Hover** your mouse over the bottom border of the header, then **click, hold, and drag up** until the bottom of the header is at the **1.50** mark on the vertical ruler.
25. **Hover** your mouse over the top border of the footer, then **click, hold, and drag down** until the top of the footer is at the **7.75** mark on the vertical ruler.



26. Make sure the footer cell is still selected, then click the **Footer** icon and select **Apply Header & Footer to Workbook**. A page number now appears in the footer of each page.

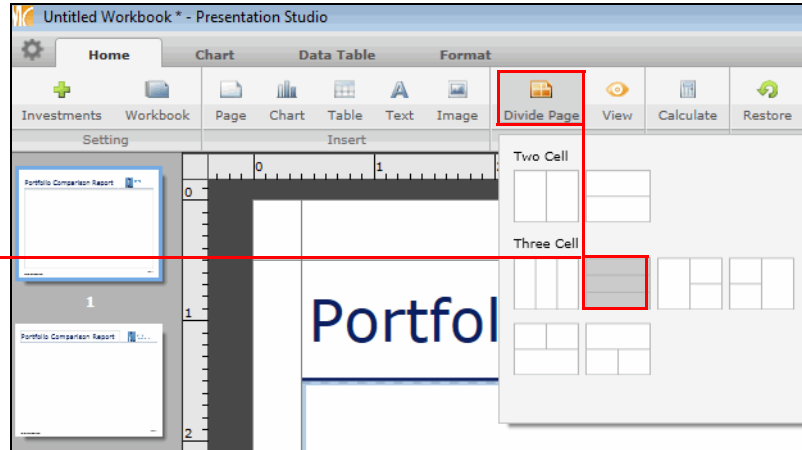


Exercise 51: Divide the first page to hold three components

The first page of the report has two charts and includes a label for the page, so that needs to be accounted for when designing the page's layout. To divide the page accordingly, do the following:

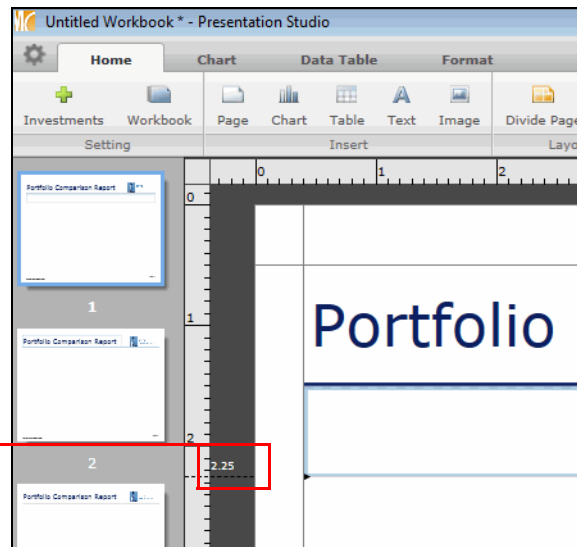
1. Select the **main part of page 1** (below the header), then use the **Divide Page** icon to select the second **Three-Cell** option (second from the left).

Select this option to divide the page into three sections

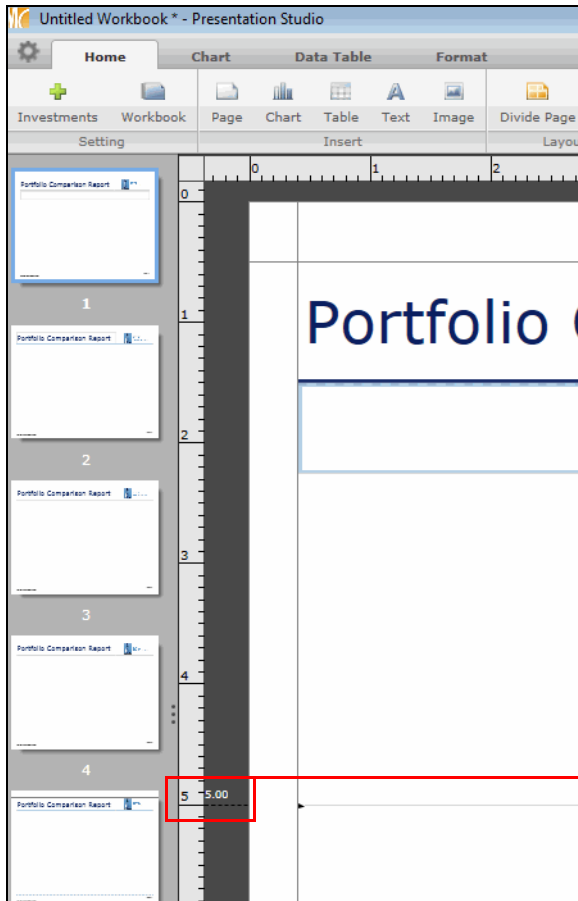


2. The label does not need to be as tall as the other cells. **Click, hold, and drag** the bottom of the top cell until your mouse is at the **2.25** mark on the vertical ruler.

Click and hold to drag the bottom border of the top section to this position



- To make the remaining two cells equal in width, **click, hold, and drag** the bottom border of the middle cell until your mouse is at the **5.00** mark on the vertical ruler.

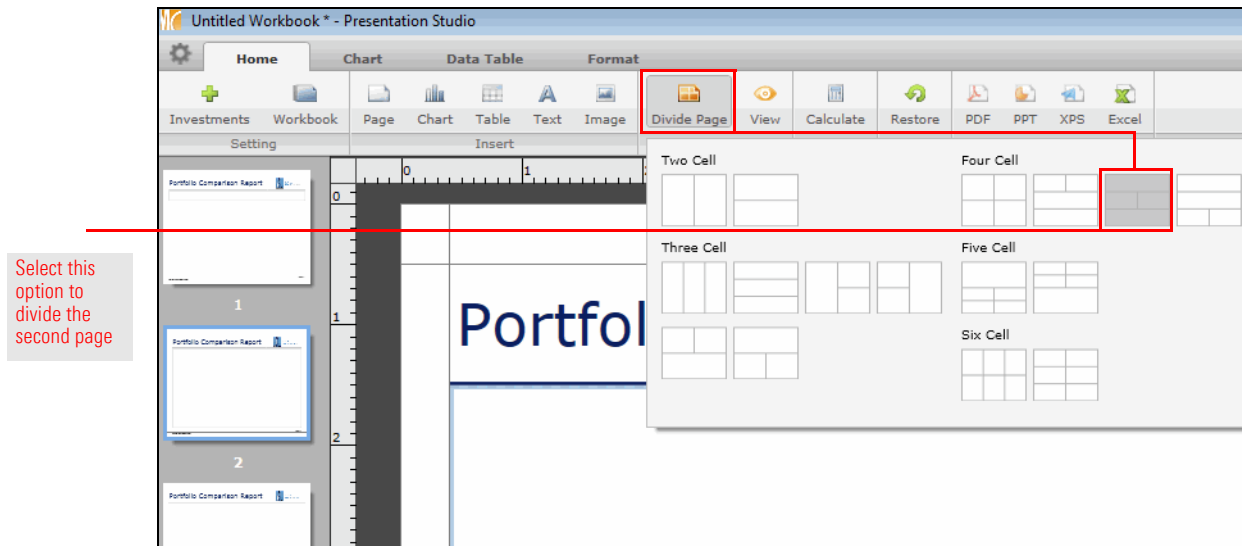


Click and hold to drag the bottom border of the top section to this position

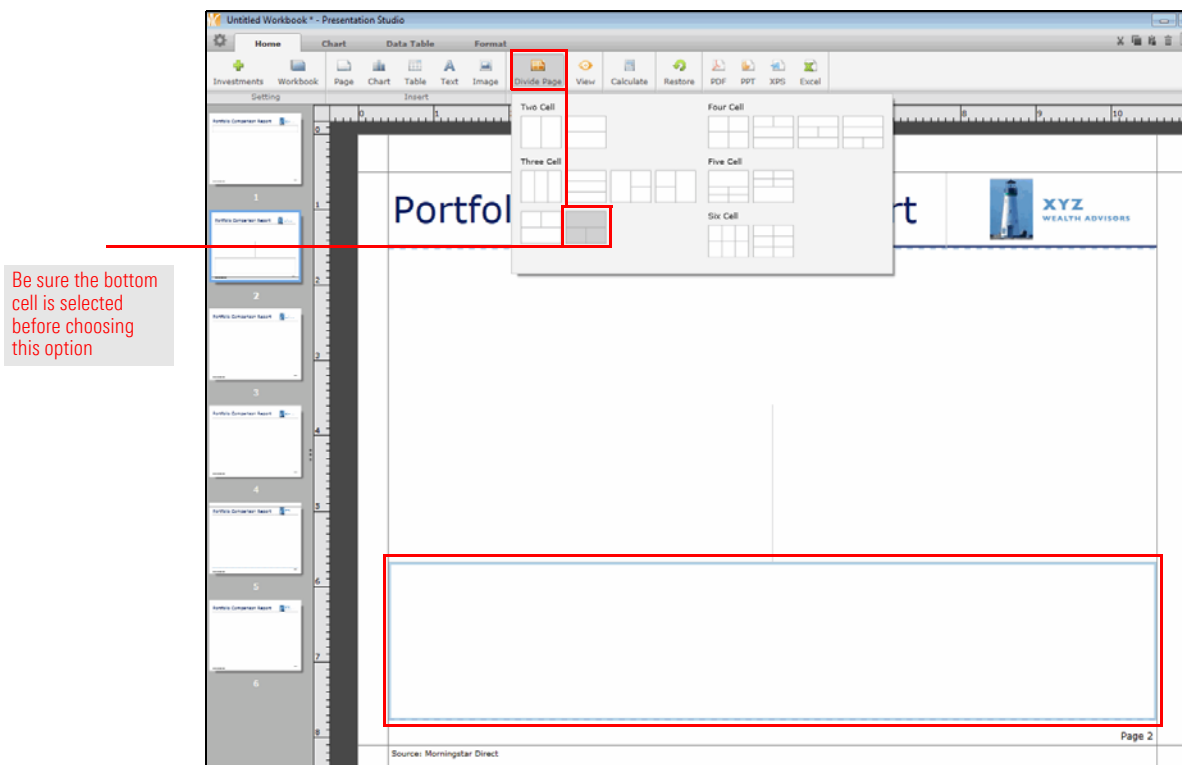
Exercise 52: Divide the second page to hold six components

The second page of the report has two charts that are repeated for each portfolio. Each chart section also needs a label, which means a total of six components. To divide the page for that content, do the following:

1. On page 2, select the **main part**.
2. On the **Home** tab, click the **Divide Page** icon and select the **Four-Cell** option that is third from the left.



3. Select the **bottom cell**.
4. On the **Home** tab, click the **Divide Page** icon and select the **Three-Cell** option in the bottom-right corner.



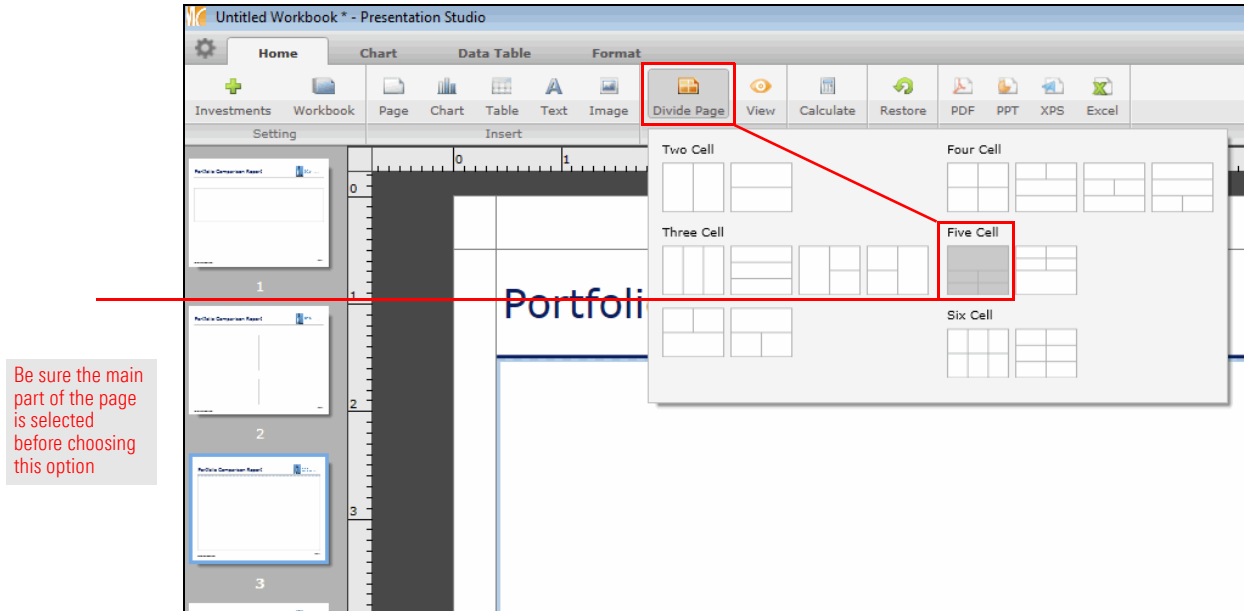
5. Resize the **top cell** so the bottom border is at the **2.25** mark on the vertical ruler.
6. Resize the **next two cells** so the bottom border is at the **5.00** mark on the vertical ruler.
7. Resize the **bottom cell** so the top border is at the **5.75** mark on the vertical ruler.

The screenshot shows the Presentation Studio interface for a slide titled "Model Portfolio Comparison Report * - Presentation Studio". The slide content includes a chart and the text "Portfolio Co". A vertical ruler on the left side of the slide is marked from 0 to 7. Red boxes highlight specific marks on the ruler: 2, 2.25, 5.00, and 5.75. Red lines connect these marks to the slide's borders. Two callout boxes provide instructions: "Click and hold the bottom border to drag the top section to this position" (pointing to the 2.25 mark) and "Click and hold each of these borders to drag them to the positions shown here" (pointing to the 5.00 and 5.75 marks).

Exercise 53: Divide the third page to hold five components

The third page of the report has a table and chart for each portfolio, as well as a label. To divide the page for that content, do the following:

1. On page 3, select the **main part**.
2. On the **Home** tab, click the **Divide Page** icon and select the **Five-Cell** option in the bottom-right corner.

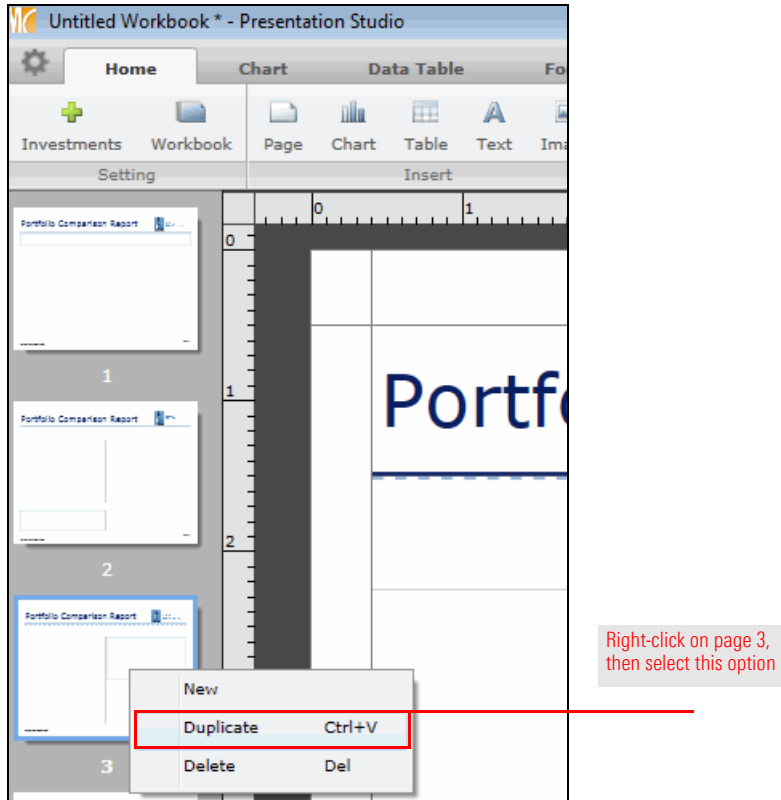


3. **Resize** the top cell so the bottom border is at the **2.25** mark on the vertical ruler.
4. Resize the **next two cells** so the bottom border is at the **5.00** mark on the vertical ruler.

The fourth page of the report uses the same layout as the third. Rather than manually recreate the layout, you can simply duplicate page three, and then delete what would have been page four. Do the following:

Exercise 54: Duplicate the layout of the third page for the fourth page

1. In the left pane, **right-click page 3**.
2. From the **right-click** drop-down field, select **Duplicate**. An identical page is inserted immediately after page 3.

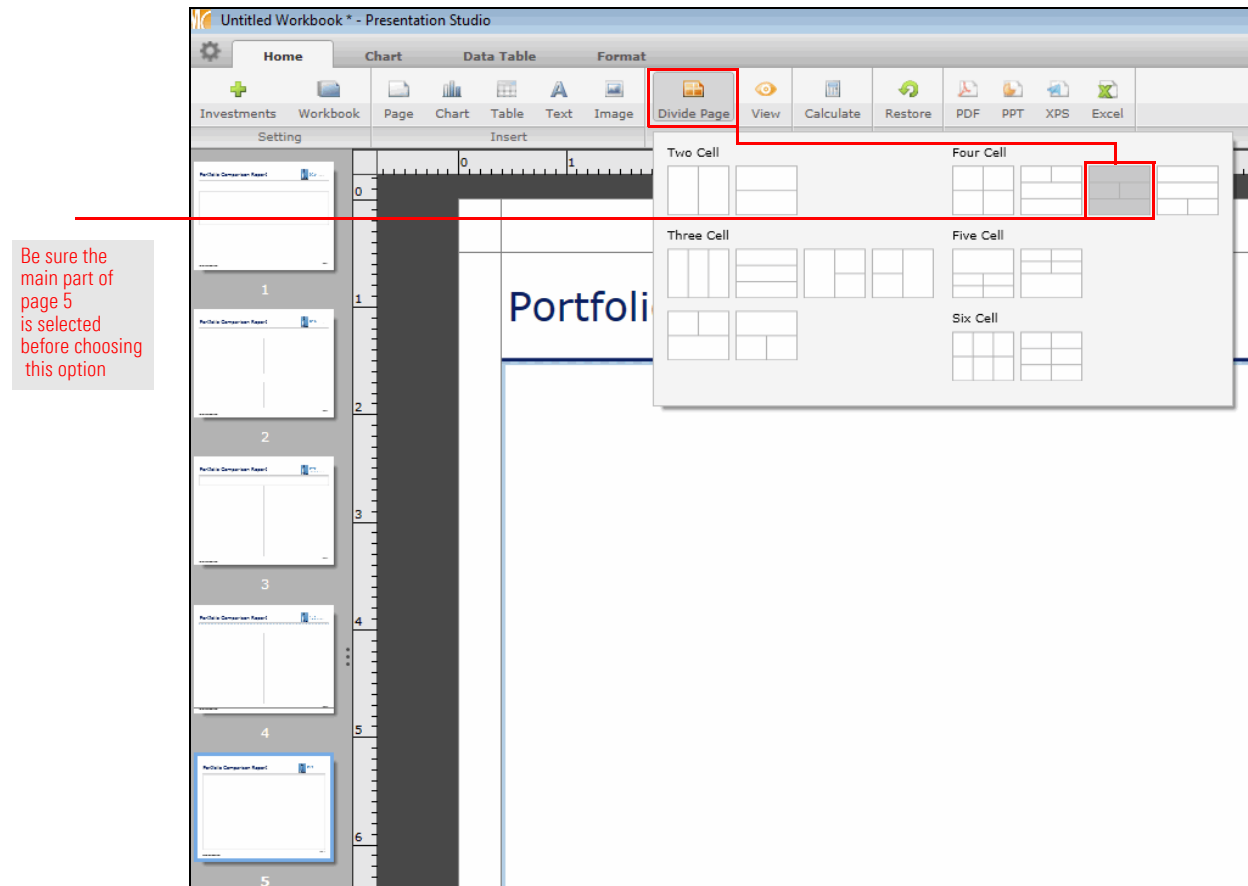


3. You now have an extra page in the report. In the left pane, **right-click page 5**.
4. From the right-click drop-down field, select **Delete**.
5. When the confirmation message opens, click **Yes**.

Exercise 55: Divide the fifth page to hold four components

The fifth page of the report has a label at the top, and three other components in a 2X1 layout. To divide the page for that content, do the following:

1. Select the **main part** of page 5.
2. On the **Home** tab, click the **Divide Page** icon and select the **Four-Cell** option that is third from the left.

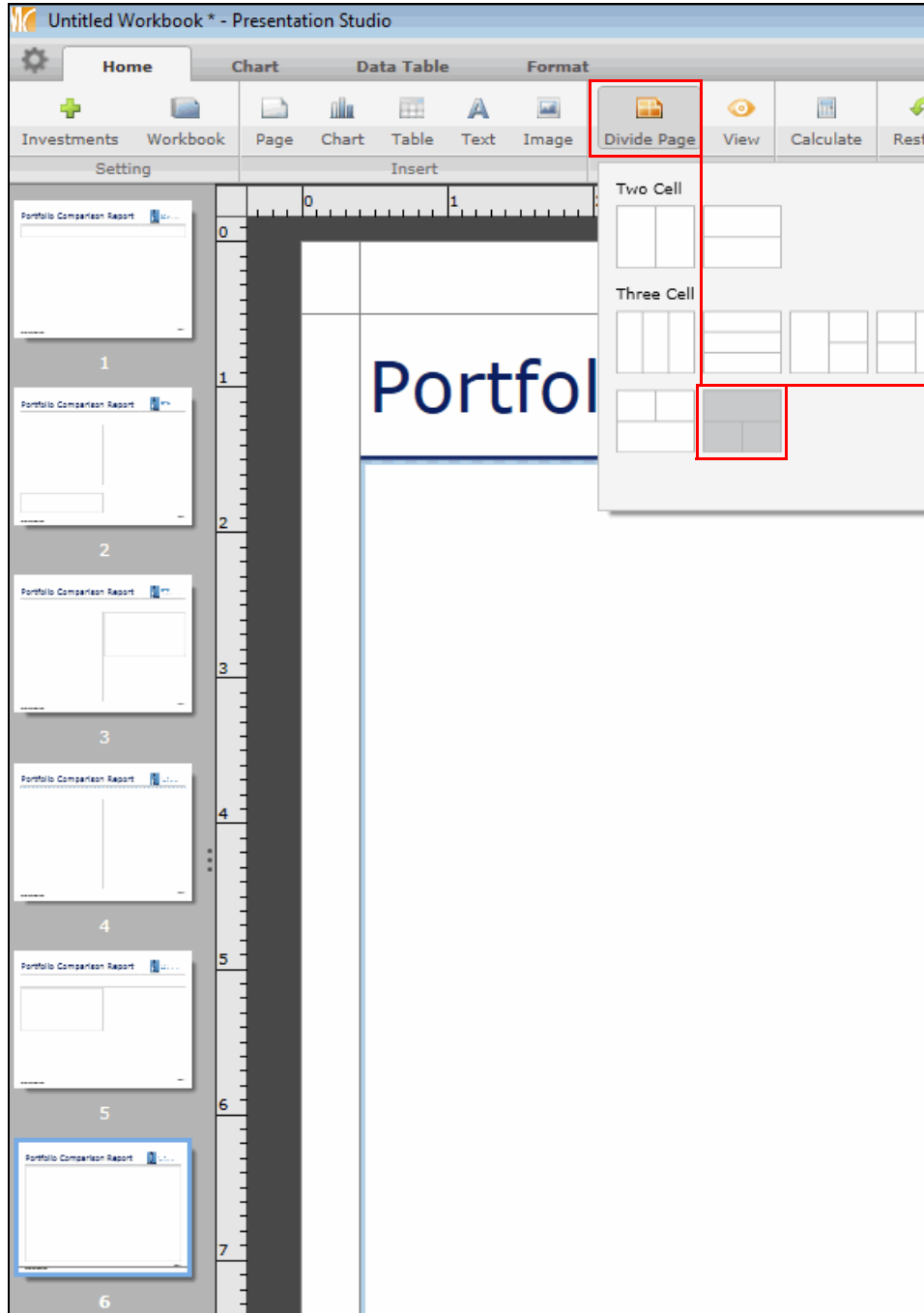


3. Resize the **top cell** so the bottom border is at the **2.25** mark on the vertical ruler.
4. Resize the **next two cells** so the bottom border is at the **5.00** mark on the vertical ruler.

The last page of the report will have a chart for each portfolio, as well as a label. To divide the page for that content, do the following:

1. On page 6, select the **main part**.
2. On the **Home** tab, click the **Divide Page** icon and select the **Three-Cell** option in the bottom-right corner.

Exercise 56: Divide the sixth page to hold three components



Be sure the main part of page 6 is selected before choosing this option

3. Resize the **top cell** so the bottom border is at the **2.25** mark on the vertical ruler.

You are now ready to add the components to each page.

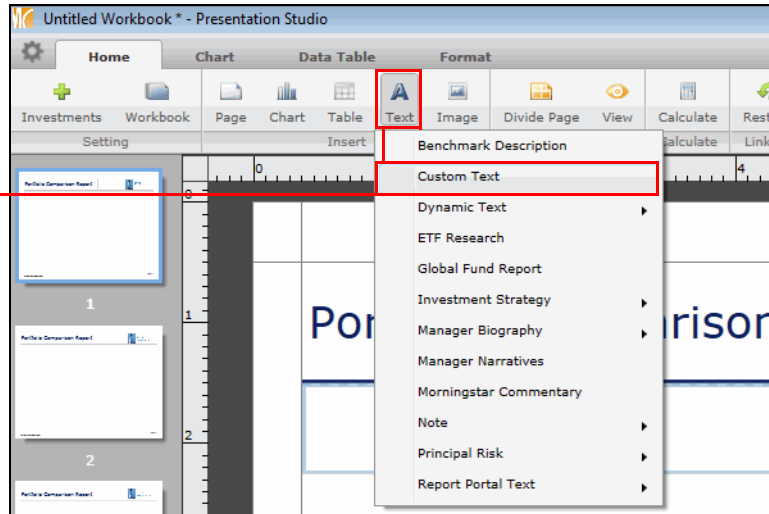
Exercise 57: Add the label to the first page

To add the component label to the first page of the report, do the following:

1. In the left pane, select **page 1**.
2. Select the **top cell** on the page; this is where the label for the page will go.
3. On the **Home** tab, click the **Text** icon and select **Custom Text**.

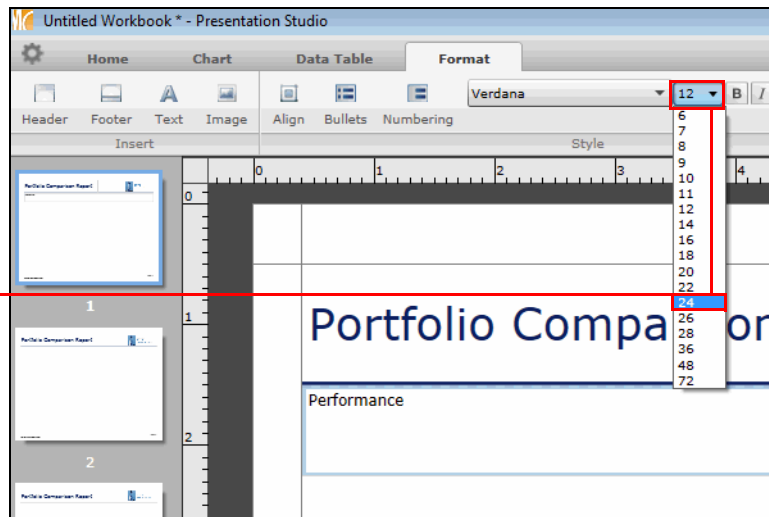
Select this option from the Text drop-down field

Be sure the correct page and component are selected before inserting the custom text

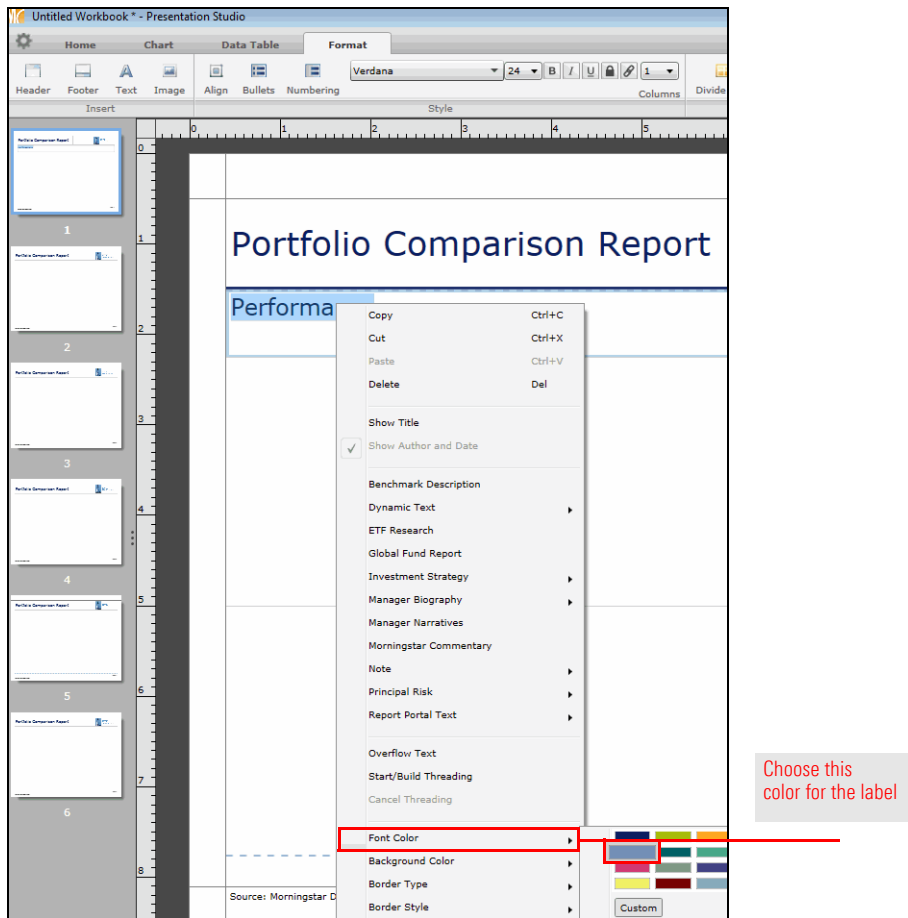


4. **Double-click** the **top cell**, then type **Performance**.
5. To select the text you just typed, press **<CTRL>+<A>**, then use the **font size** drop-down field to select **24**.

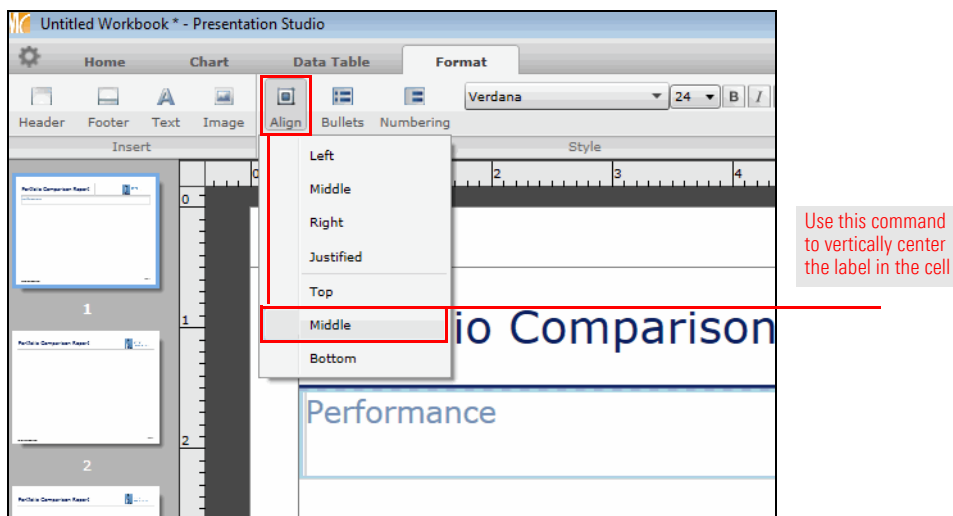
Use this command to change the font size of the label



6. **Right-click** the **text**, then select **Font Color...Light Blue** (the second option from the top on the left side of the color palette).



7. Be sure the **Format** tab is selected. From the toolbar, click the **Align** icon and select the second **Middle** option.



Exercise 58: Add the components to the first page

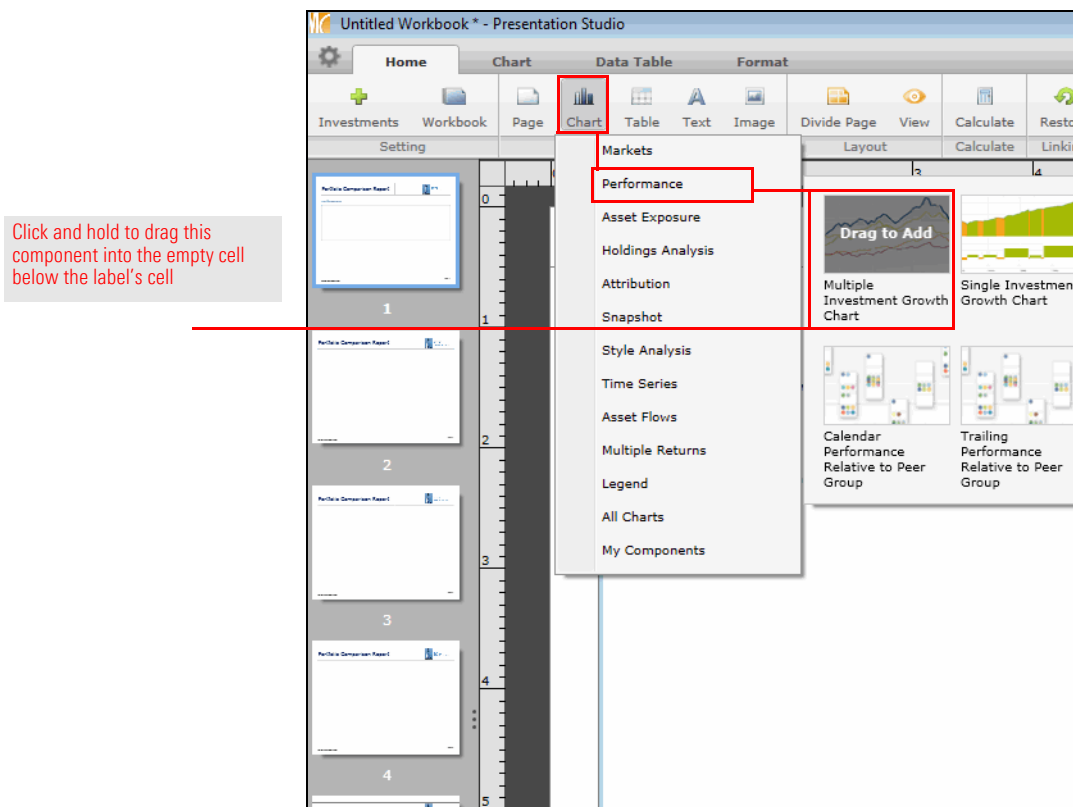
The first page of the report contains two graphical components:

- ▶ an Investment Growth chart depicts the performance of each portfolio as well as the custom benchmark, and
- ▶ a histogram shows return values for different time periods for both portfolios and the custom benchmark.

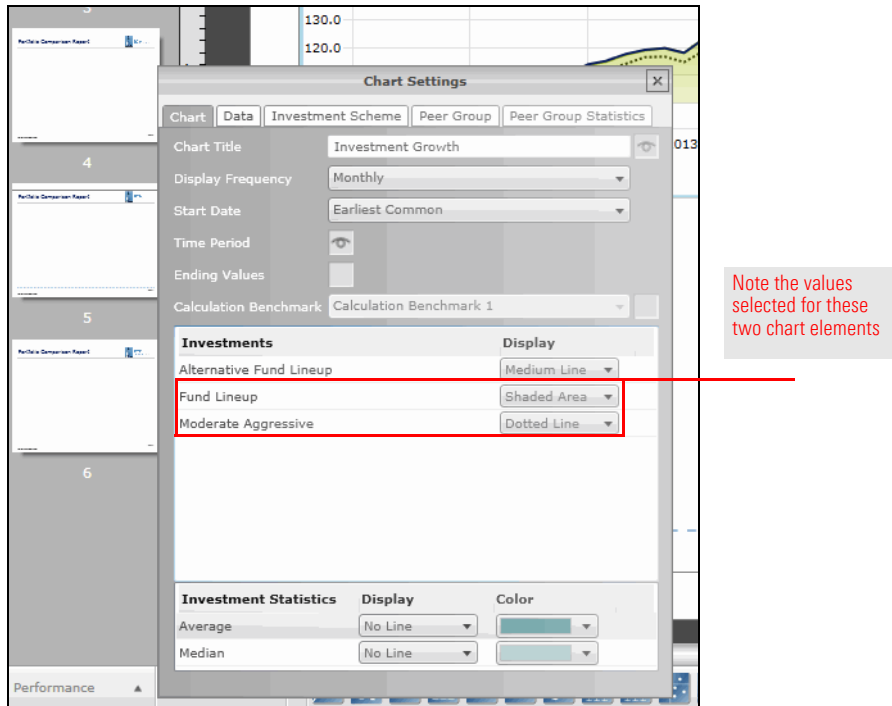
The Investment Growth chart will be modified to help the three elements visually stand out from one another. The histogram will be updated to both remove a couple of time periods shown by default, and to add the values for each bar shown.

To add and configure the components to the first page of the report, do the following:

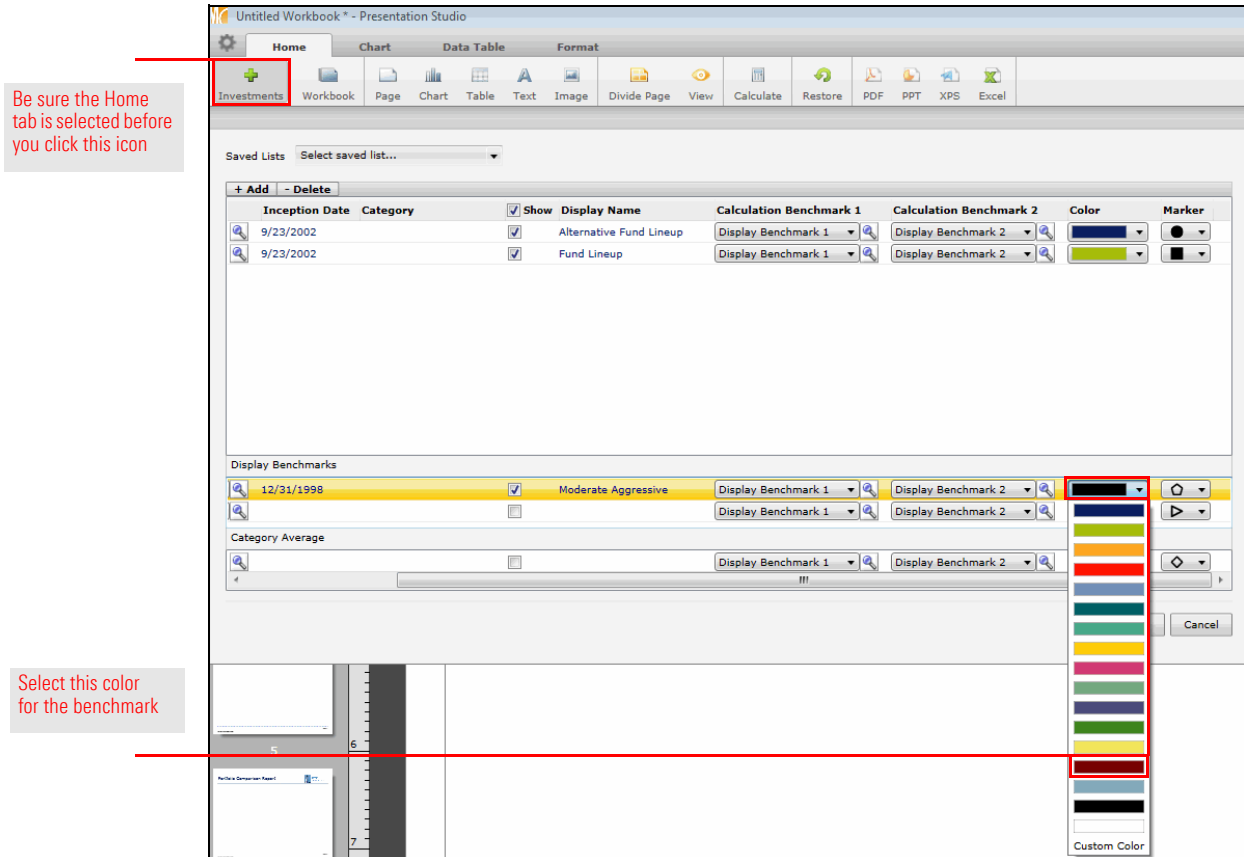
1. Select the **Home** tab.
2. From the toolbar, click the **Chart** icon and select **Performance**.
3. **Drag** the **Multiple Investment Growth Chart** into the cell below the Performance label.



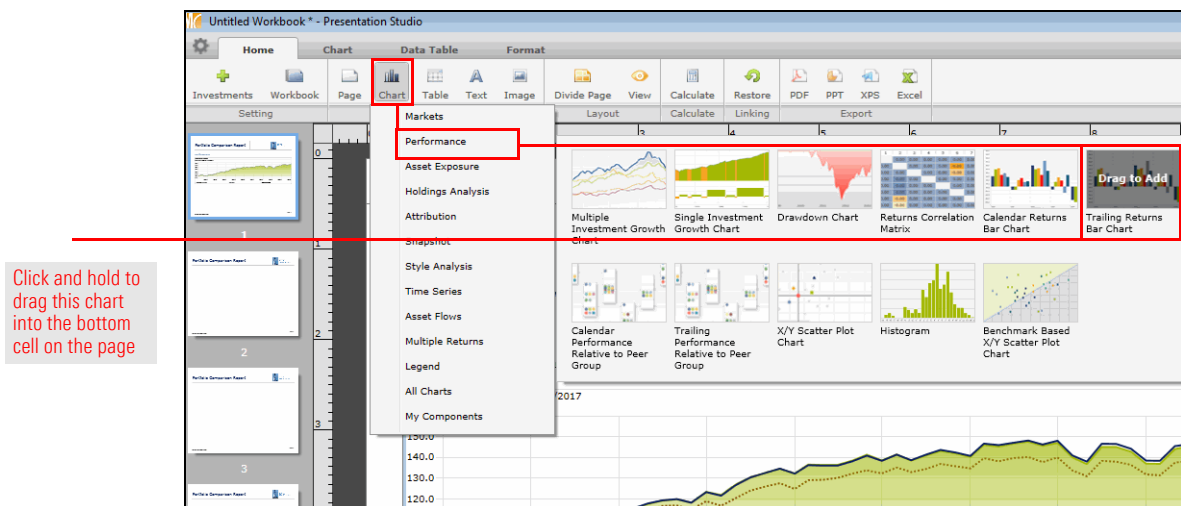
- To improve the readability and presentation of the chart, click **Chart Settings** in the bottom-left corner of the screen. The Chart Settings window opens.
- On the Chart tab of the menu, in the Investments list, from the Fund Lineup **Display** drop-down field, select **Shaded Area**
- From the Moderate Aggressive **Display** drop-down field, select **Dotted Line**.



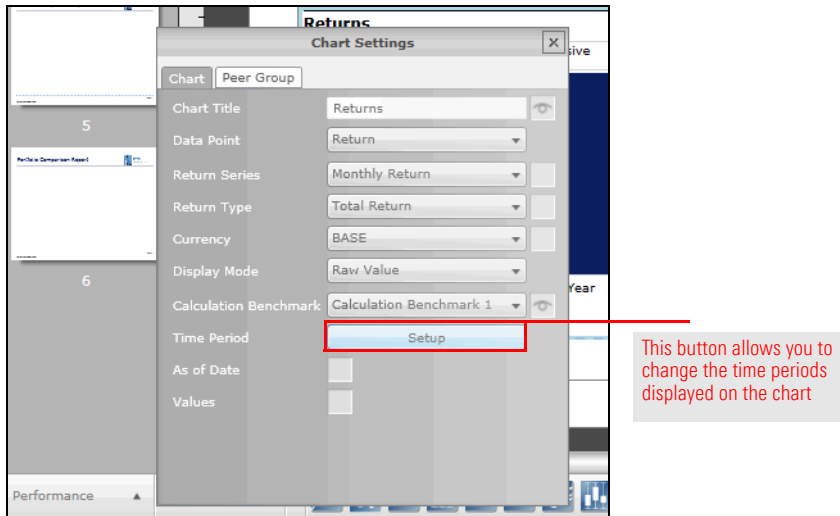
7. To change the color of the benchmark throughout the workbook, select the **Home** tab at the top of the window.
8. From the toolbar, click the **Investments** icon. A dialog box opens.
9. In the Display Benchmarks area, in the Moderate Aggressive row, from the **color** drop-down field, select the **dark red color** that is fourth from the bottom.



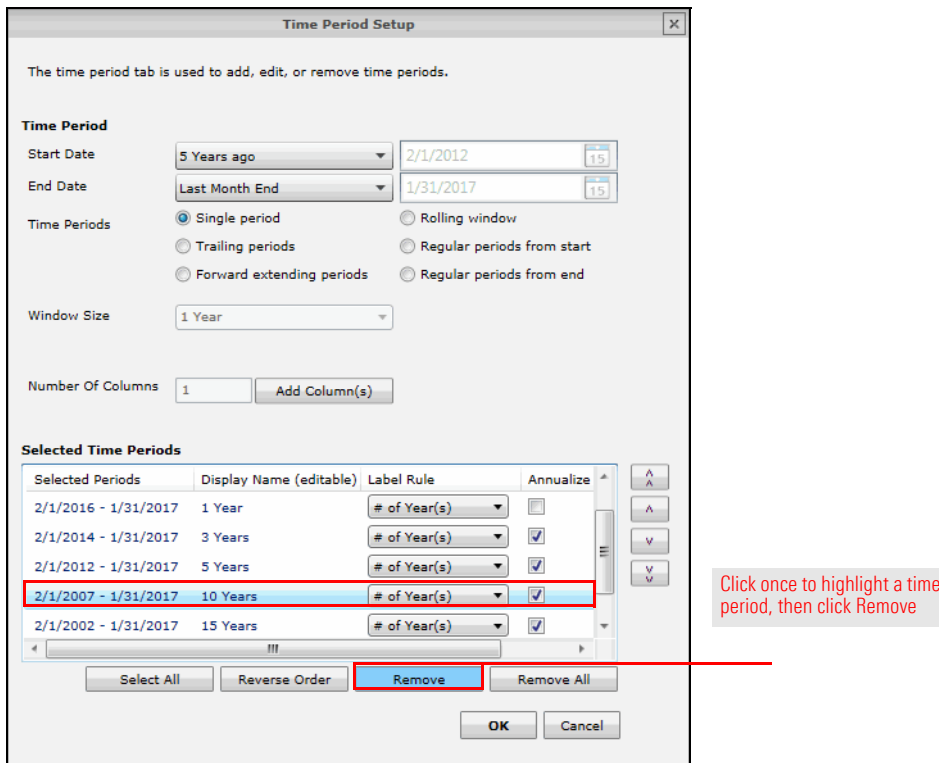
10. Click **OK** to close the dialog box.
11. From the toolbar, click the **Chart** icon and select **Performance**.
12. **Drag** the **Trailing Returns Bar Chart** into the bottom cell.



13. To ensure the time periods here match those in the rest of the report, in the bottom-left corner of the screen, click **Chart Settings**. The Chart Settings window opens.
14. In the Time Period field, click **Setup**. The Time Period Setup dialog box opens.

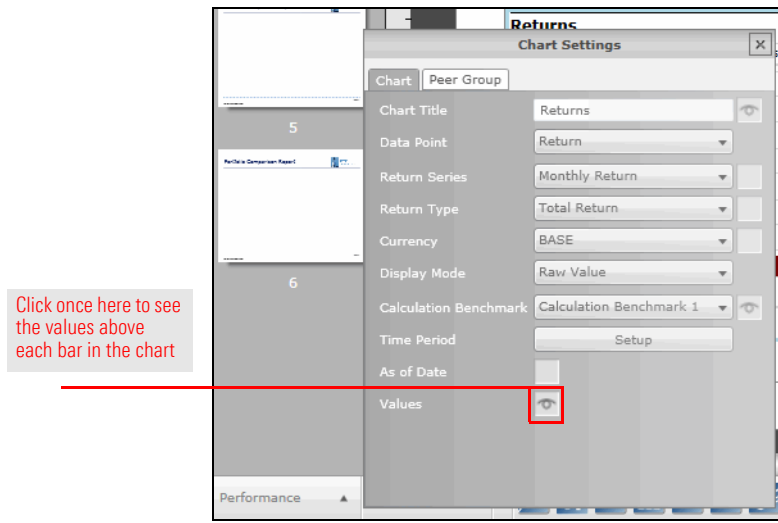


15. In the Selected Time Periods area, click the **10 Years** row, then click **Remove**.



16. Repeat step 14 for the **15 Years** row.
17. Click **OK** to close the Time Period Setup dialog box.

- In the Chart Settings window, click the **Values** box. The numeric value for the return in each time period is now shown.

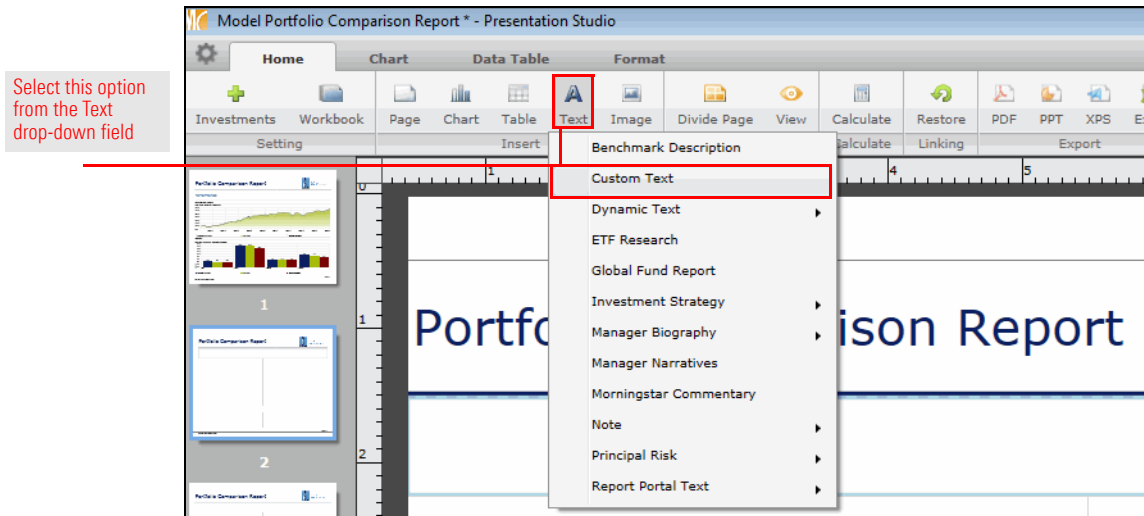


- Close** the Chart Settings window. The first page is now complete.

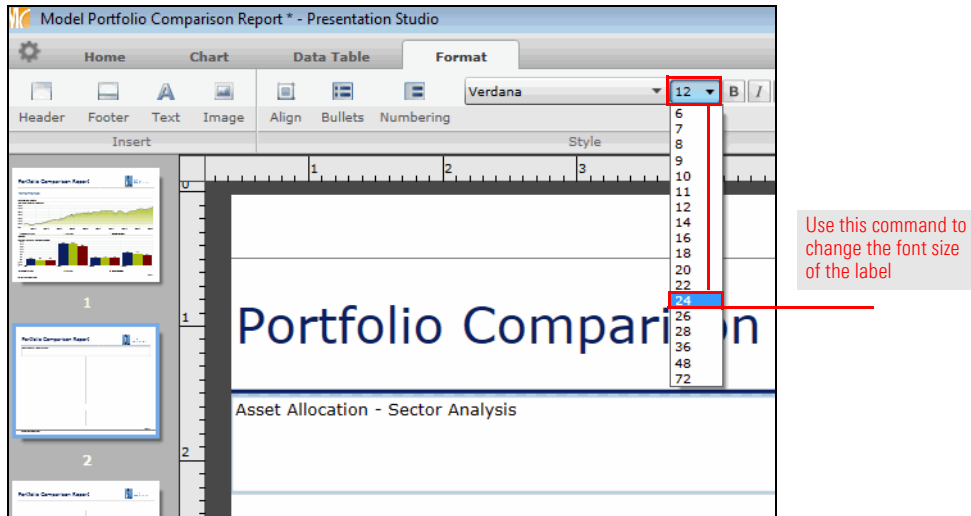
Exercise 59: Add the labels to the second page

To add the labels for the two sets of components on the second page of the report, do the following:

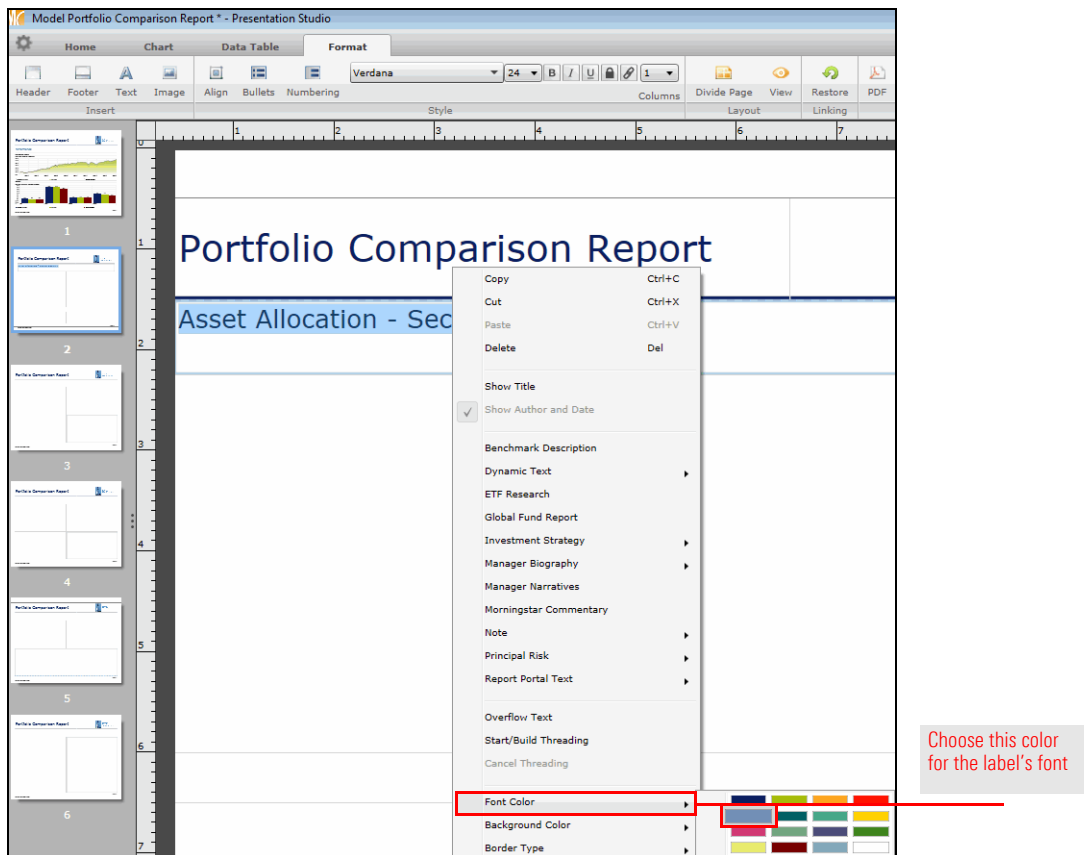
- In the left pane, select **page 2**.
- Select the **top cell** on the page; this is where the label for the page will go.
- On the **Home** tab, click the **Text** icon and select **Custom Text**.



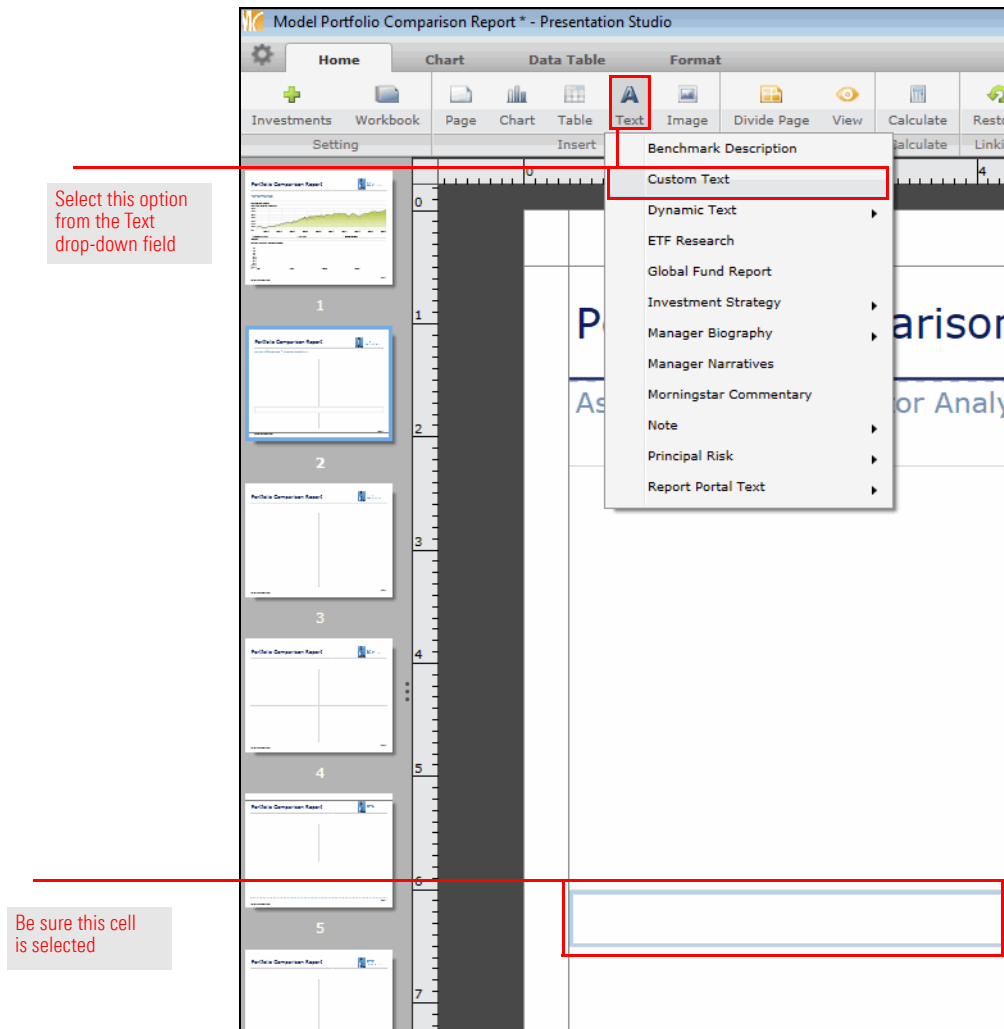
4. **Double-click** the **top cell**, then type **Asset Allocation - Sector Analysis**.
5. To select the text you just typed, press **<CTRL>+<A>**, then from the **font size** drop-down field, select **24**.



6. **Right-click** the **text**, then select **Font Color...Light Blue** (second option from the top on the left side).



7. Select the **third cell** from the top on the page; this is where the other label for the page will go.
8. On the **Home** tab, click the **Text** icon and select **Custom Text**.



9. **Double-click** in the **third cell** from the top on the page, then type **Broad Asset Class Lineup**.
10. Select the text, then from the **font size** drop-down field, select **24**.
11. **Right-click** the **text**, then select **Font Color... Light Blue** (second option from the top on the left side).
12. Select the **Format** tab.
13. From the toolbar, click the **Align** icon and select the second **Middle** option.

The screenshot shows the Presentation Studio interface with the 'Format' tab selected. The 'Align' menu is open, and the 'Middle' option is highlighted. A red box highlights the text 'Broad Asset Class Lineup' on the slide. A red box also highlights the 'Middle' option in the 'Align' menu. A red box highlights the text 'Broad Asset Class Lineup' on the slide.

Select this option to vertically center the text

Note that the text for this label matches the size and color of the label at the top of the page

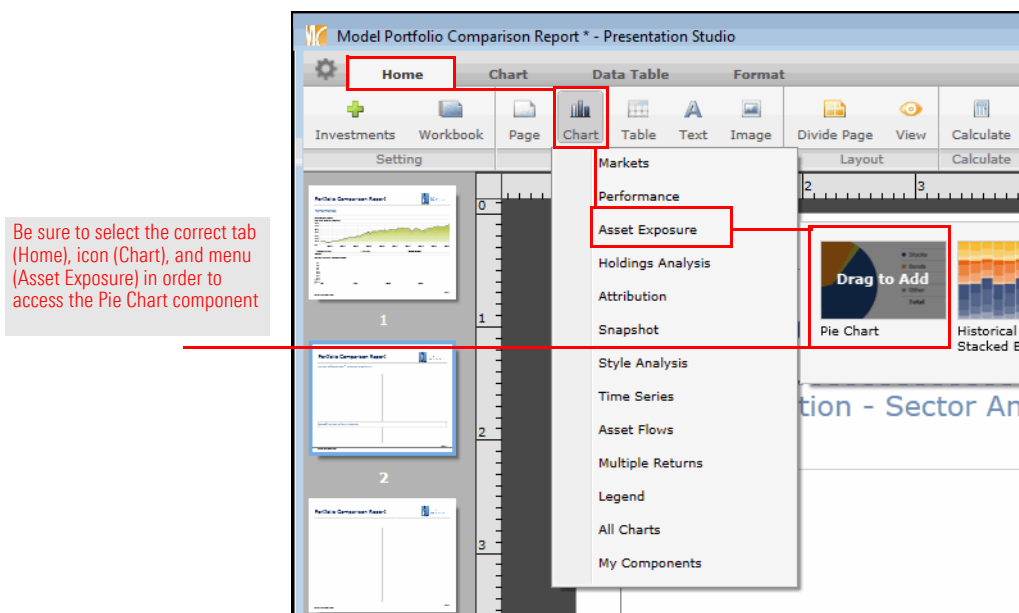
Exercise 60: Add the components to the second page

On the second page of the report, separate donut charts show the asset allocation for each portfolio, while the bottom of the page shows separate bar charts for the broad asset class allocation for each portfolio compared to the custom benchmark. For the elements on this page, note the following important points:

- ▶ The donut charts will start as a pie chart; you will change not only the appearance of the chart but also the information depicted on it.
- ▶ Although this page includes four graphical components, you actually need to create just one donut chart and one bar chart. You will then see how to copy, paste and update a component for a separate portfolio. This process will be repeated elsewhere throughout this report.

To add the components to the second page of the report, do the following:

1. Select the **Home** tab.
2. Click the **Chart** icon and select **Asset Exposure**.
3. **Drag** the **Pie Chart** component into the **upper-left cell** below the label.



4. At the bottom of the window, click **Chart Settings**. The Chart Settings window opens.

- From the **Data Set** drop-down field, select **Equity Sectors (Morningstar)**.

Chart Settings

Chart Title: Alternative Fund Lineup - Asset Allocation

Source Data: Portfolio Data

Data Set: Asset Allocation

Position Type: Standard

Data Point: Most

Asset Alloc Equity %

Asset Alloc Bond %

Asset Alloc Cash %

Asset Alloc Other %

Equity Sectors (Morningstar)

Equity Sectors (GICS)

Equity Super Regions

Equity Regional Exposure

Equity Country Exposure

Equity Country Exposure (MSCI)

Equity Style Capitalization

Equity Style Valuation

Equity Style

Fixed-Inc Super Sectors (Morningstar)

Fixed-Inc Sectors (Morningstar)

US Fixed-Inc Sectors (Morningstar)

Fixed-Inc Muni Super Sector

Fixed-Inc Country Exposure

Fixed-Inc Super Region

Fixed-Income Region Exposure

Fixed-Income Coupon

Fixed-Income Credit Quality

Fixed-Income Maturity

Surveyed Asset Class (NZ)

Surveyed Asset Class (AUS)

Portfolio Holdings

70.4

23.7

5.0

0.9

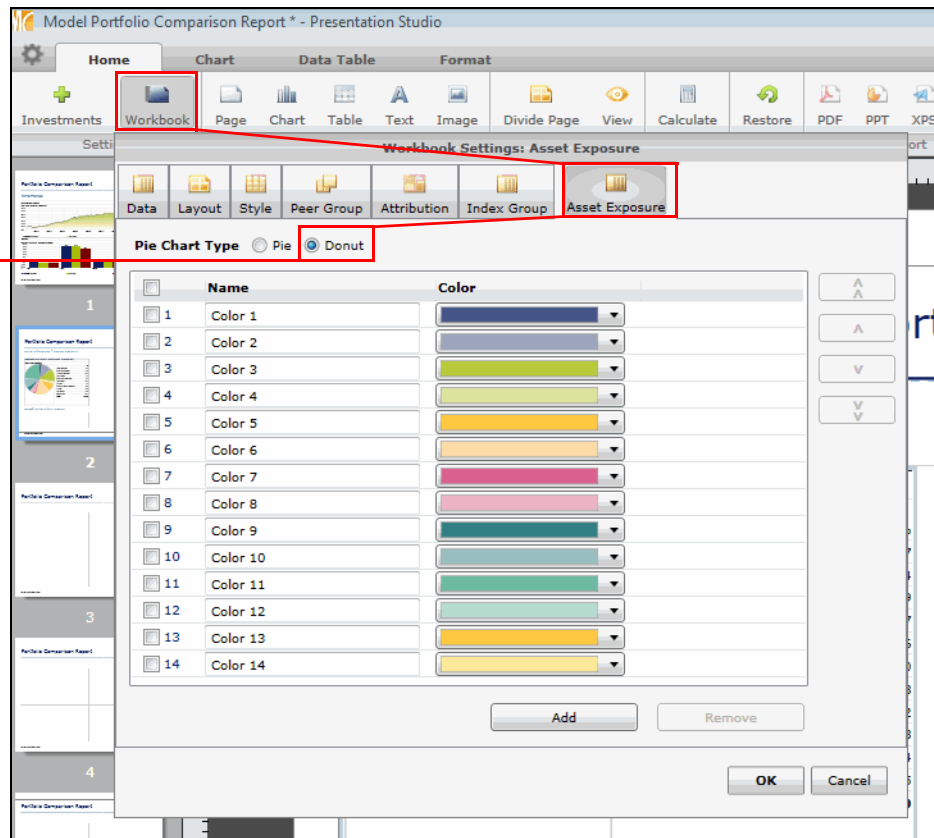
100.0

Select this option from the Data Set drop-down field

- Close** the Chart Settings window.

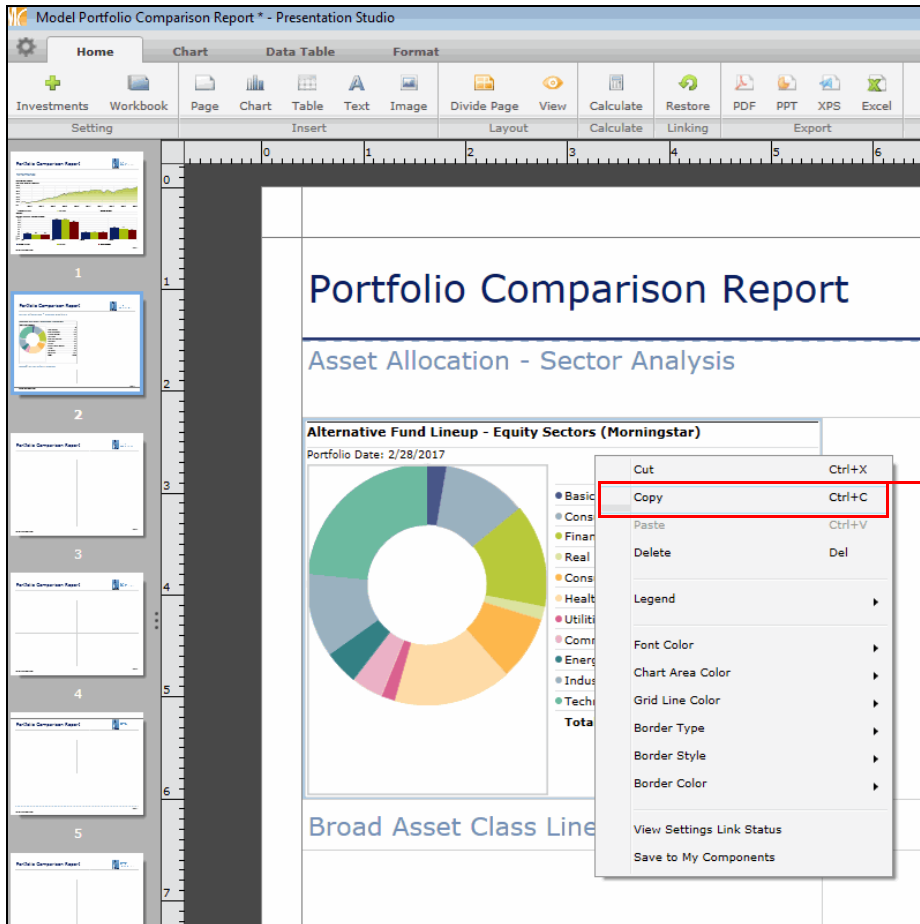
7. From the toolbar, click the **Workbook** icon. The Workbook Settings Data window opens.
8. Select the **Asset Exposure** tab.
9. In the Pie Chart Type area, Select the **Donut** option.

Be sure to select the correct tab (Home), icon (Workbook), and tab (Asset Exposure) in order to select the option for Donut



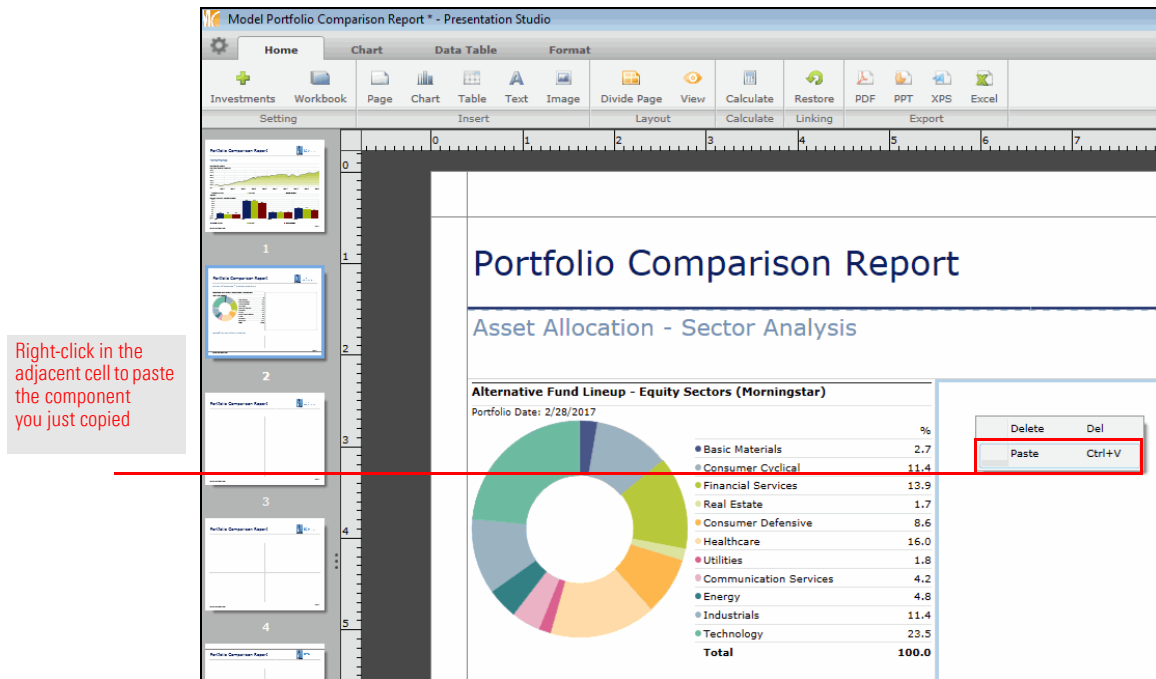
10. Click **OK** to close the Workbook Settings Data window.

11. Rather than recreate the same chart for the other portfolio, you can simple copy and paste the one you already have. **Right-click** the component you just configured in the upper-left cell and select **Copy**.

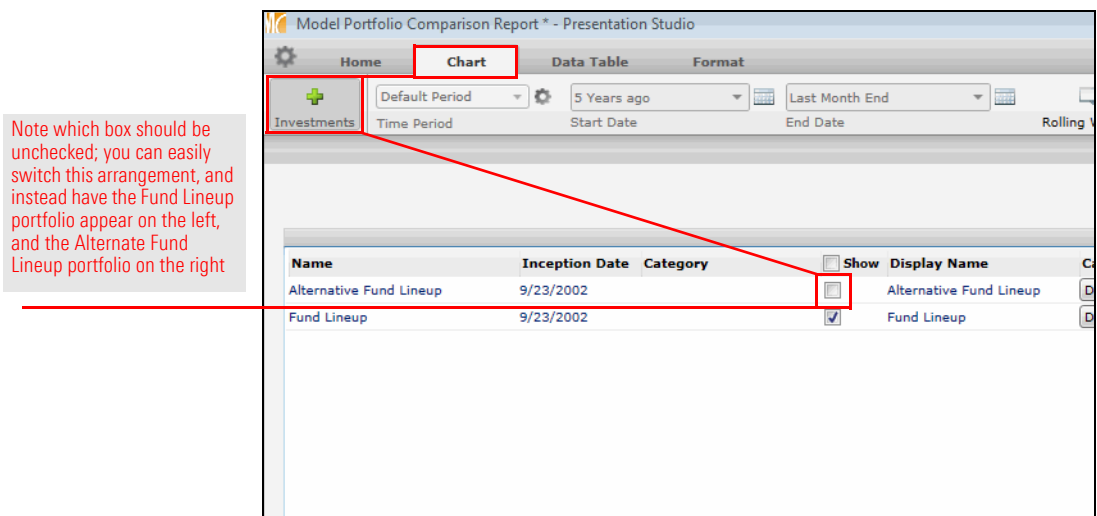


Right-click in the cell with the component you just configured to copy it

12. **Right-click** in the **upper-right cell** and select **Paste**.

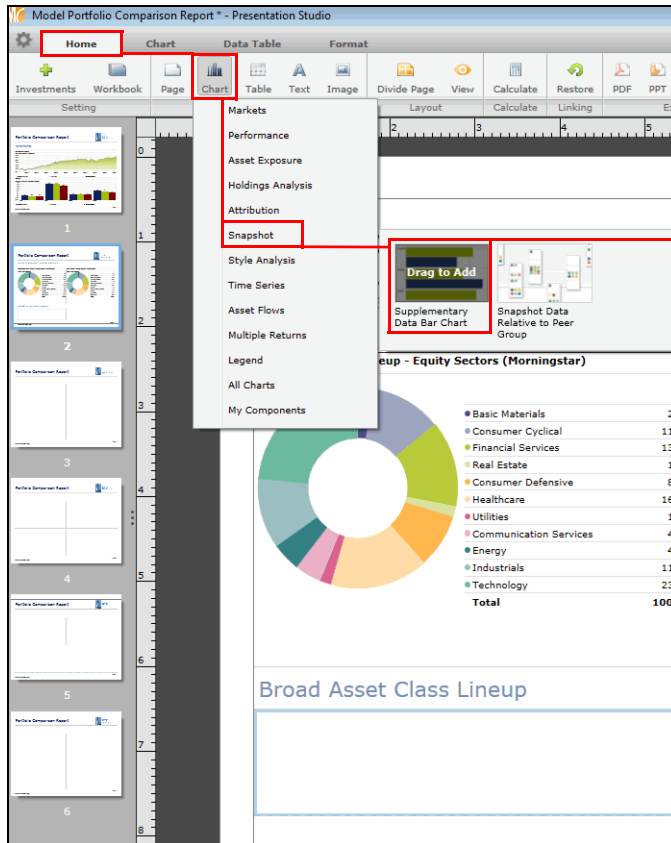


- Note that the component you pasted is still showing data from the Alternate Fund Lineup portfolio. You will change this to reflect the Fund Lineup portfolio. Be sure the **upper-left cell** where you just pasted the donut chart is still selected.
- At the top of the window, the Chart tab should be selected. From the toolbar, click **Investments**. A dialog box opens.
- In the Show column, **uncheck** the box for Alternate Fund Lineup.



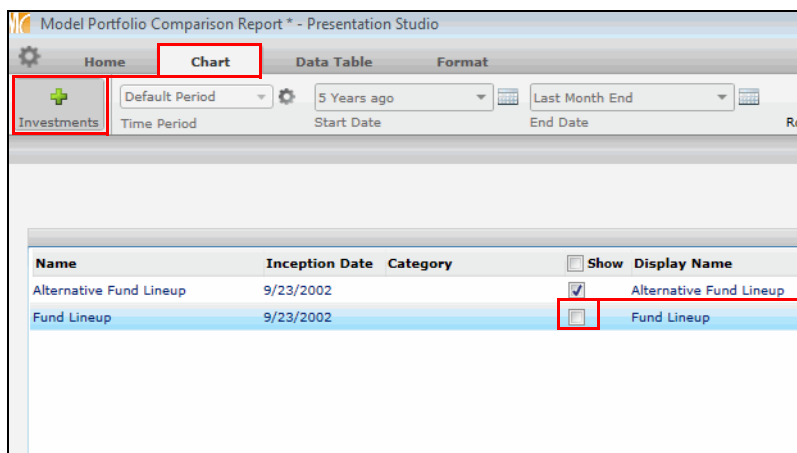
16. Click **OK** to close the dialog box.

17. The bar chart can now be added to the cell in the bottom-left corner of the page. At the top of the window, select the **Home** tab.
18. Click the **Chart** icon and select **Snapshot**.
19. **Drag** the **Supplementary Data Bar Chart** component into the **lower-left cell** on the page.



Be sure to select the correct tab (Home), icon (Chart), and menu (Snapshot) in order to select the Supplementary Data Bar Chart component

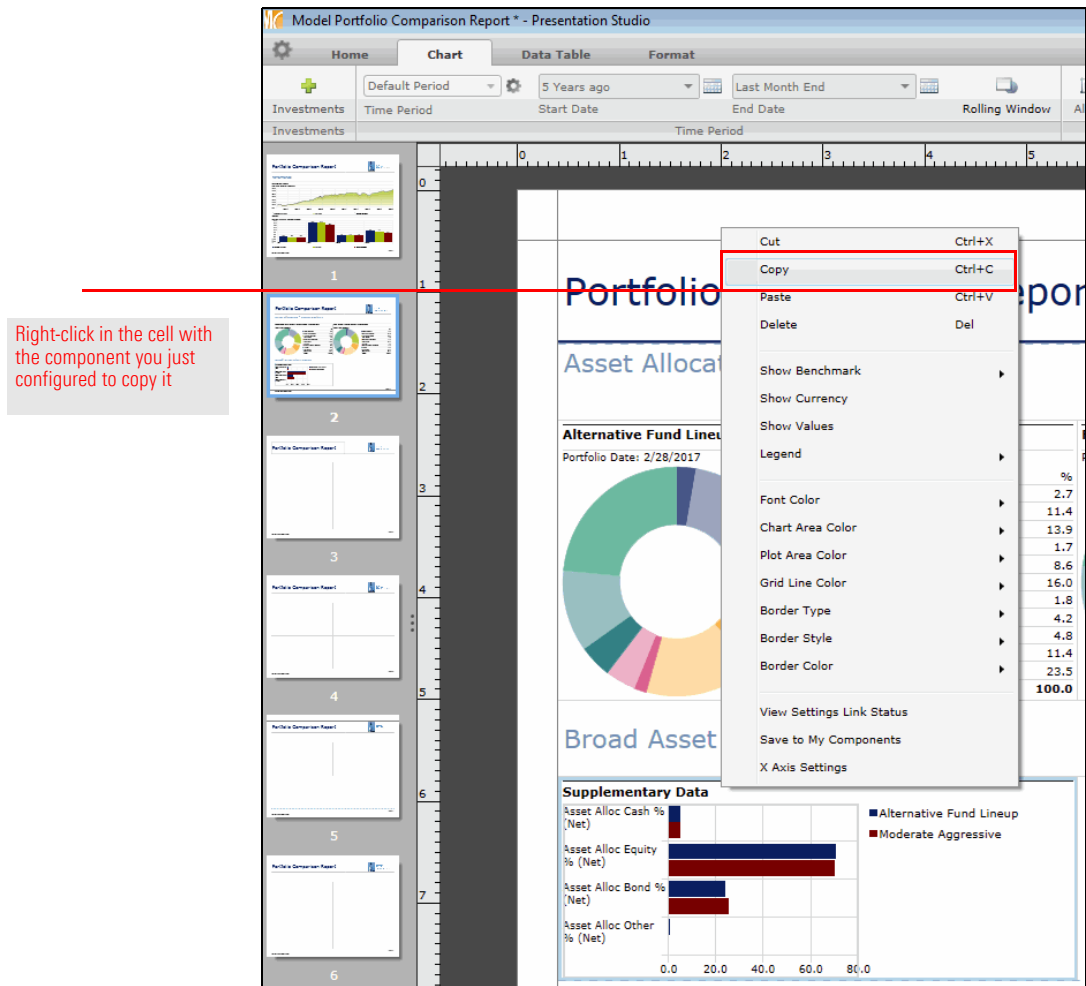
20. The Supplementary Data bar chart depicts both portfolios and the custom benchmark by default. Only one portfolio and the benchmark should show at once. The Chart tab should be selected. From the toolbar, click **Investments**. A dialog box opens.
21. In the Show column, **uncheck** the box for Fund Lineup.



Be sure to uncheck this box from the Investments dialog box on the Chart tab, and not the Home tab

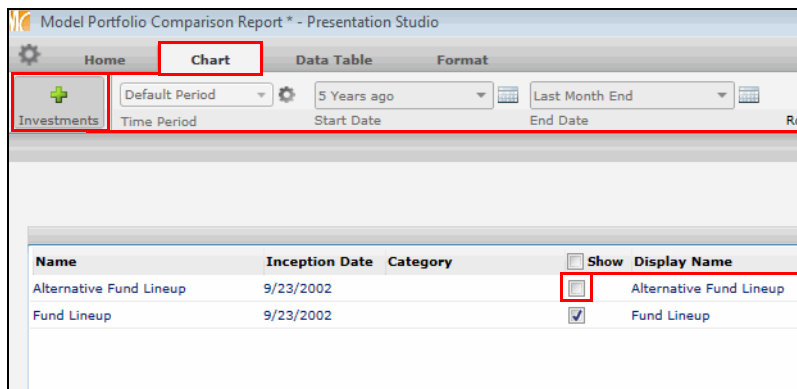
22. Click **OK** to close the dialog box.

- As before, you will copy the component you just created, and paste it into the adjacent cell. **Right-click** the Supplementary Data bar chart **component** you just configured in the lower-left cell and select **Copy**.



- In the **lower-right cell**, **right-click** and select **Paste**.

25. The last step is to change the portfolio being depicted in the lower-right cell. The Chart tab should be selected. From the toolbar, click **Investments**. A dialog box opens.
26. In the Show column, **uncheck** the box for Alternate Fund Lineup and **check** the box for Fund Lineup.



Be sure to click the Investments icon on the Chart tab, and not the Home tab

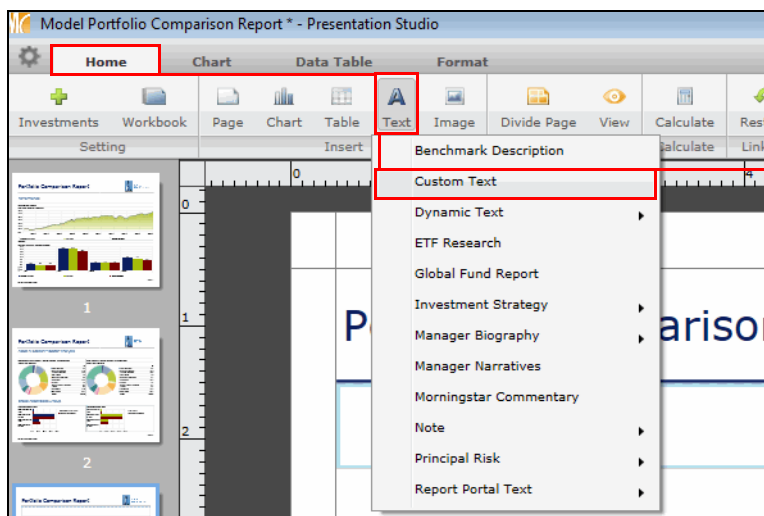
Be sure to clear the checkbox for the correct portfolio

27. Click **OK**. The second page is now complete.

To add the label for the components to the third page of the report, do the following:

Exercise 61: Add the label to the third page

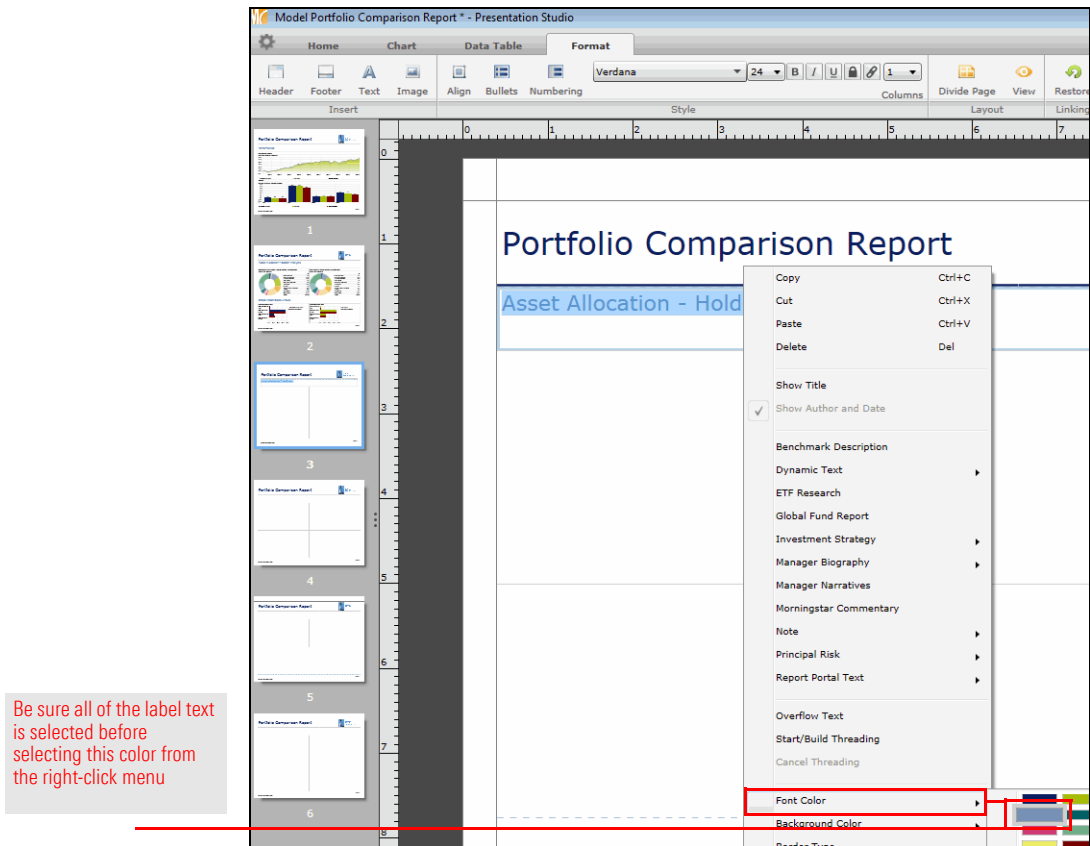
1. In the left pane, select **page 3**.
2. Select the **top cell** on the page; this is where the label for the page will go.
3. Select the **Home** tab.
4. Click the **Text** icon and select **Custom Text**.



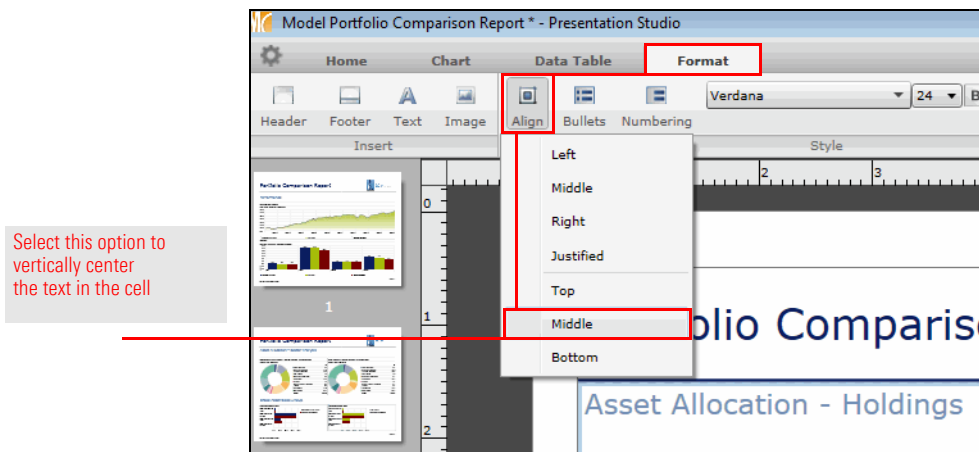
Select this option from the Text drop-down field

5. **Double-click** the **top cell**, then type **Asset Allocation - Holdings**.
6. Select the **text**, then use the **font size** drop-down field from the toolbar to select **24**.

7. **Right-click** the **text**, then select **Font Color...Light Blue** (the second option from the top on the left side).



8. Be sure the **Format** tab is selected.
9. From the toolbar, click the **Align** icon and select the second **Middle** option.

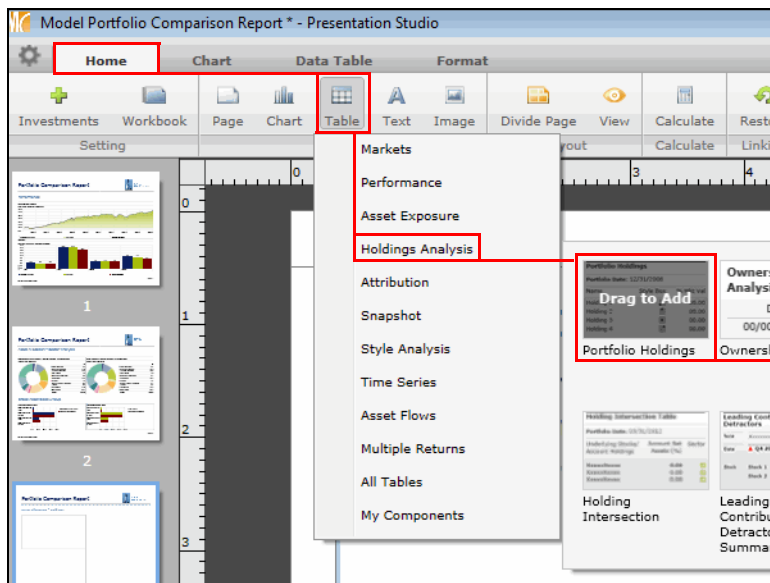


As on the previous page, on this page you will add a component (in this case, a table), manipulate it to show something other than the default data, then copy and paste it into an adjacent cell. You will then repeat this process for a chart component at the bottom of the page.

Exercise 62: Add the components to the third page

To add the components to the third page of the report, do the following:

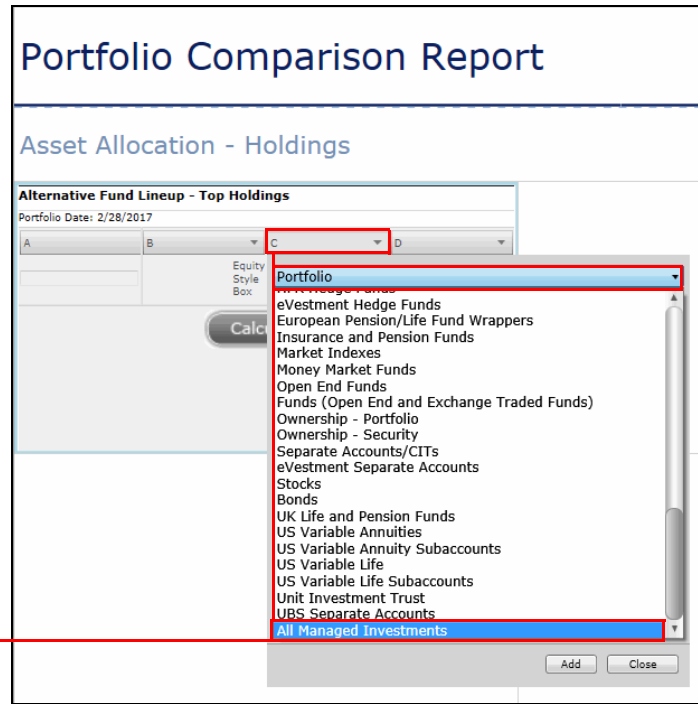
1. Select the **Home** tab.
2. Click the **Table** icon and select **Holdings Analysis**.
3. **Drag** the **Portfolio Holdings** component into the upper-left cell on the page.



Be sure to select the correct tab (Home), icon (Table), and option (Holdings Analysis) in order to select the Portfolio Holdings component

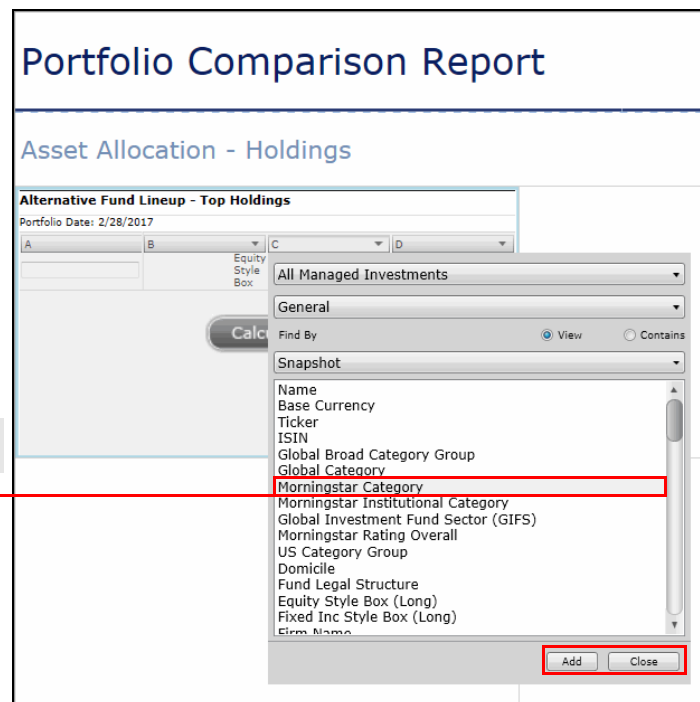
4. In the table, click the **drop-down header** for **column C** (Position Market Value (mil)). A dialog box opens.
5. From the **top drop-down field**, scroll all the way down and select **All Managed Investments**.

Note the selection from the top drop-down field for column C in the table



6. From the list of available fields, select **Morningstar Category**.
7. Click **Add**, then click **Close**.

Click once to select this option



- Now that the table is configured for one portfolio, you can copy and paste it into the adjacent cell for the other portfolio. **Right-click** the **upper-left cell** you just configured, then from the **right-click** drop-down field, select **Copy**.

Portfolio Comparison Report

Asset Allocation - Holdings

Alternative Fund Lineup - Top Holdings

Portfolio Date: 2/28/2017

A	B	C	D
	Equity Style Box	Morningstar Category	Portfolio Weight
American Funds American Mutual A		US Fund Large Value	
Artisan International Value Investor		US Fund Foreign Large Blend	
BMO Large-Cap Growth I		US Fund Large Growth	
Brown Capital Mgmt Small Co Inv		US Fund Small Growth	
Columbia Dividend Income Z		US Fund Large Value	
Dodge & Cox Income		US Fund Intermediate-Term Bond	
Fidelity® Interm Muni Inc		US Fund Muni National Interm	
Harbor International Institutional		US Fund Foreign Large Blend	

Right-click in the cell with the component you just configured to copy it

- Right-click** in the **upper-right cell**, then select **Paste**.

Portfolio Comparison Report

Asset Allocation - Holdings

Alternative Fund Lineup - Top Holdings

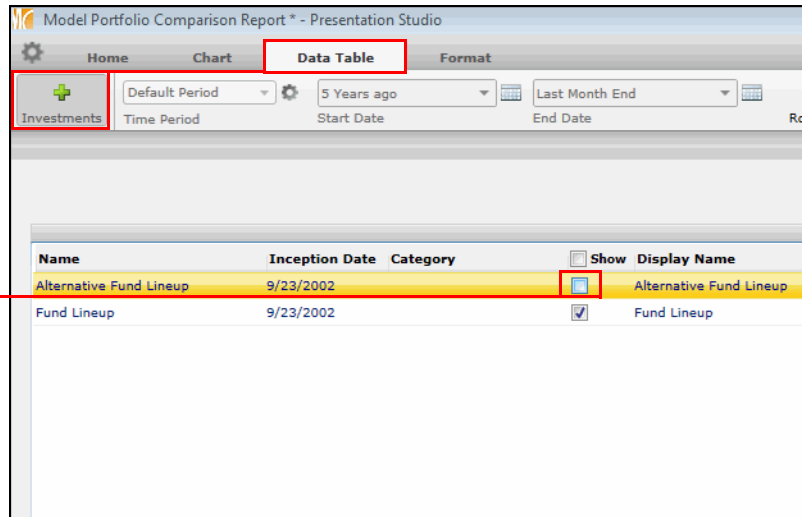
Portfolio Date: 2/28/2017

	Equity Style Box	Morningstar Category	Portfolio Weighting %
American Funds American Mutual A		US Fund Large Value	12.50
Artisan International Value Investor		US Fund Foreign Large Blend	12.50
BMO Large-Cap Growth I		US Fund Large Growth	12.50
Brown Capital Mgmt Small Co Inv		US Fund Small Growth	12.50
Columbia Dividend Income Z		US Fund Large Value	12.50
Dodge & Cox Income		US Fund Intermediate-Term Bond	12.50
Fidelity® Interm Muni Inc		US Fund Muni National Interm	12.50
Harbor International Institutional		US Fund Foreign Large Blend	12.50

Right-click in the adjacent cell to paste the component you just copied

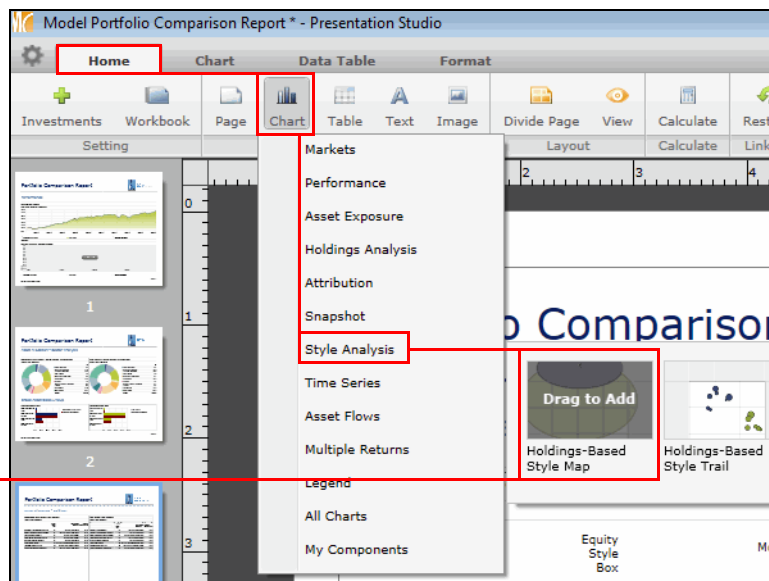
10. Now you need to change the portfolio being displayed in the table you pasted. Be sure the **upper-right cell** is selected.
11. At the top of the window, make sure the **Data Table** tab is selected.
12. From the toolbar, click the **Investments** icon. A dialog box opens.
13. In the Show column, **uncheck** the box for Alternate Fund Lineup.

Be sure to uncheck this box from the Investments dialog box on the Data Table tab, and not the Home tab



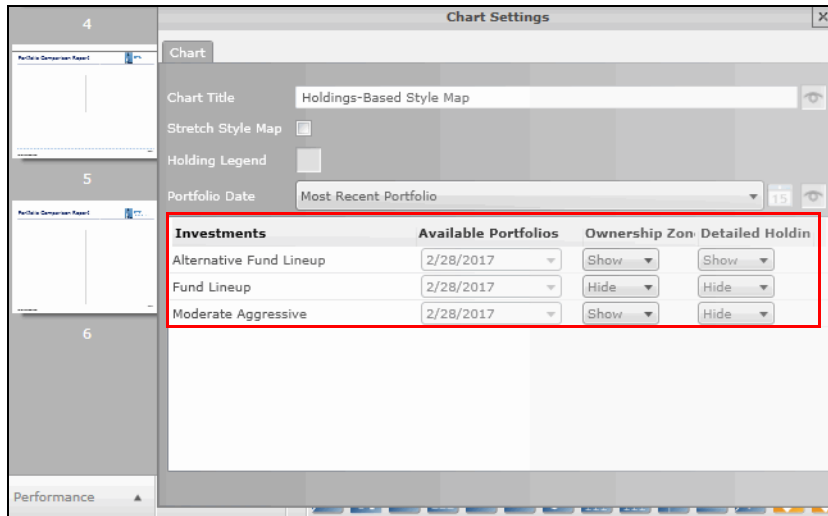
14. Click **OK**.
15. Select the **Home** tab.
16. Click the **Chart** icon select **Style Analysis**.
17. **Drag** the **Holdings-Based Style Map** component into the **bottom-left cell** on the page.

Be sure to select the correct tab (Home), icon (Chart), and menu (Style Analysis) in order to select the Holdings-Based Style Map component



18. In the bottom-left corner of the screen, click **Chart Settings**.
19. In the Chart Settings window, note the values in the following table for the area at the bottom:

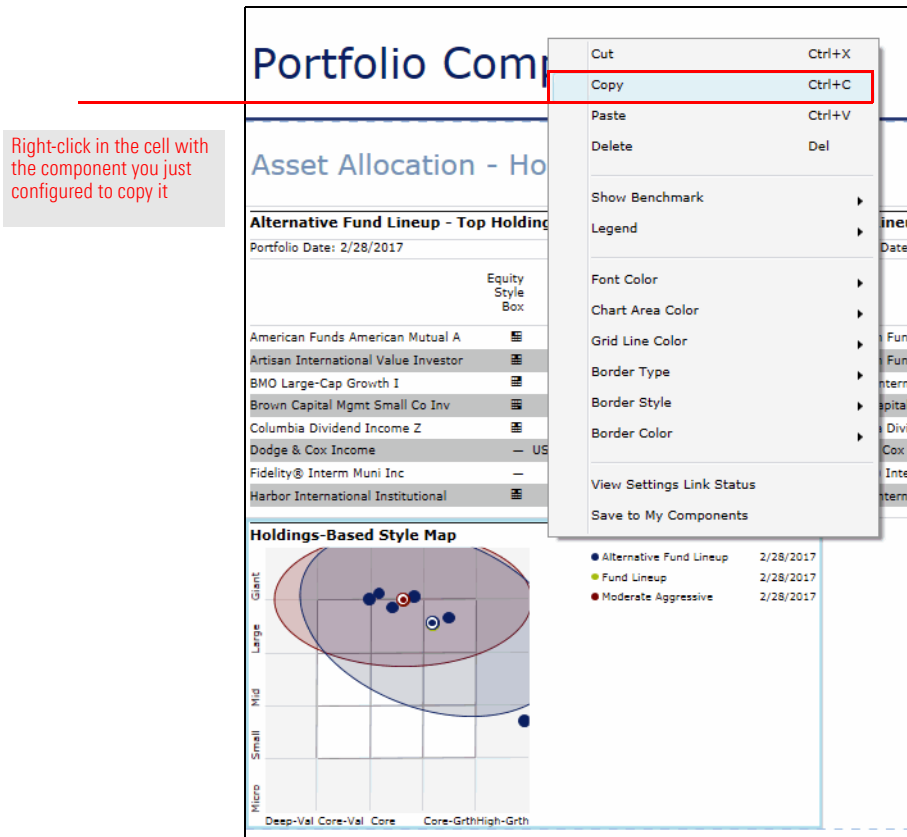
Investments	Ownership Zone	Detailed Holdings
Alternative Fund Lineup	Show	Show
Fund Lineup	Hide	Hide
Moderate Aggressive	Show	Hide



Note the values assigned to each item here

20. After making your selections, close the Chart Settings window.

21. **Right-click** the chart you just configured in the lower-left cell, then select **Copy**.

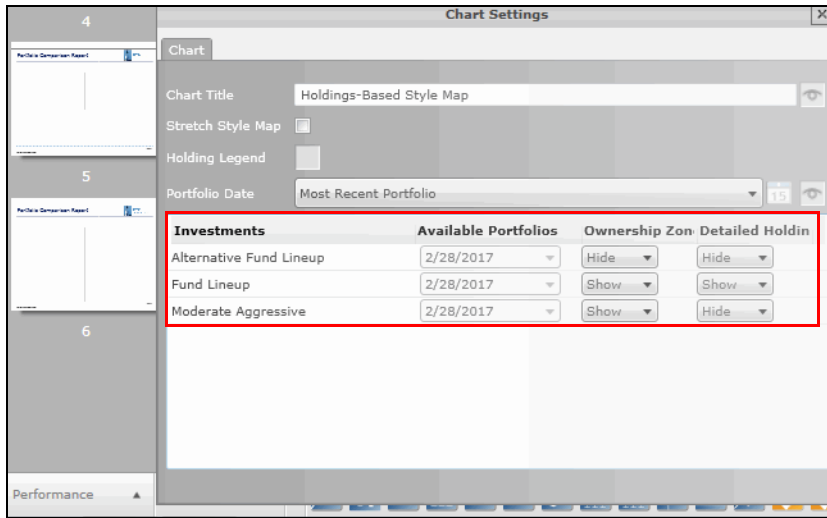


22. **Right-click** the **lower-right cell**, then from the **right-click** drop-down field, select **Paste**.

23. In the bottom-left corner of the screen, click **Chart Settings**.

24. In the Chart Settings window, note the values in the following table for the area at the bottom:

Investments	Ownership Zone	Detailed Holdings
Alternative Fund Lineup	Hide	Hide
Fund Lineup	Show	Show
Moderate Aggressive	Show	Hide



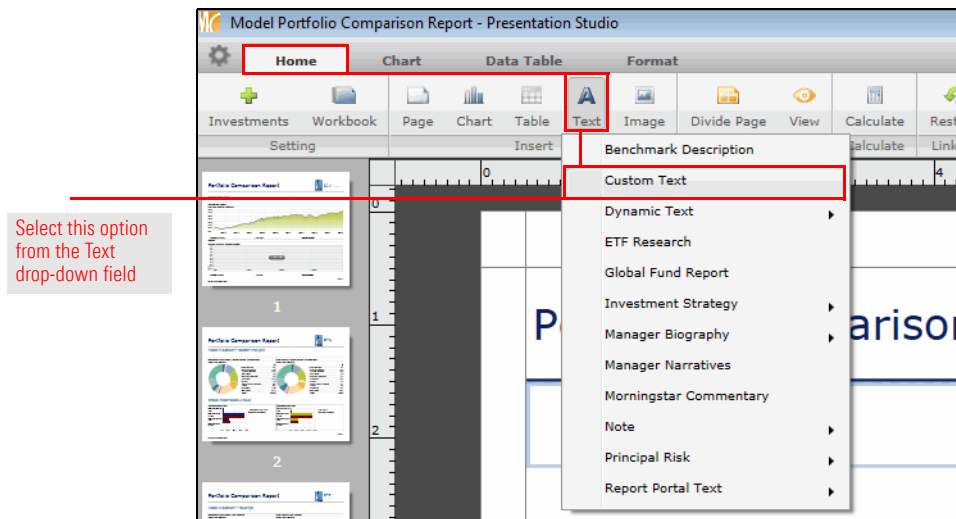
Note the new values assigned to each item here

25. After making your selections, close the Chart Settings window. The third page is now complete.

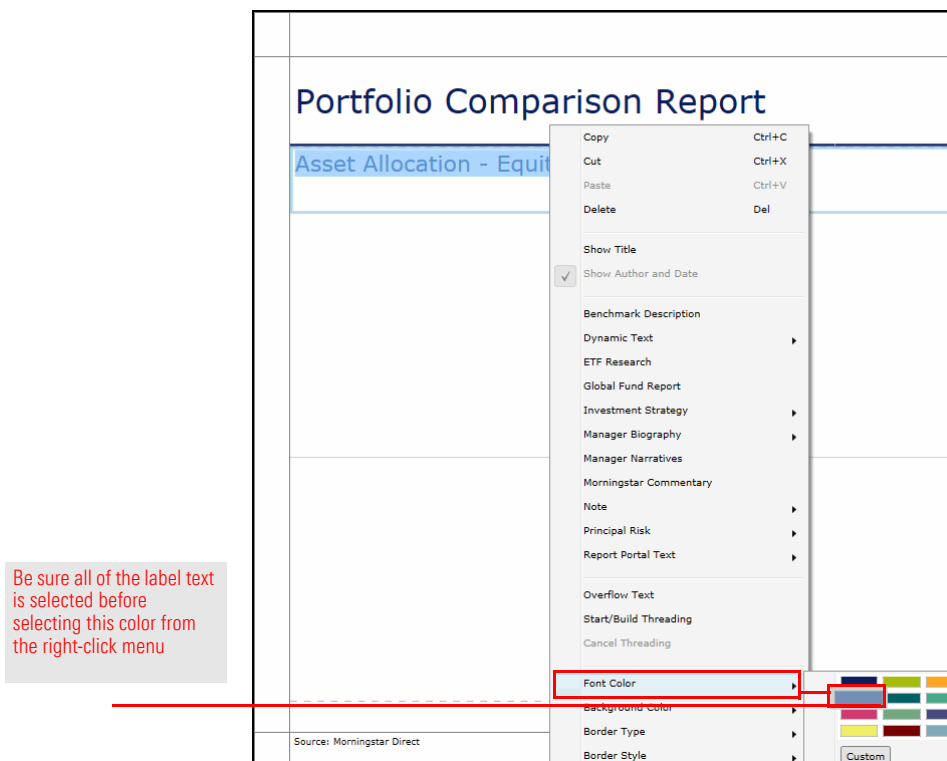
Exercise 63: Add the label to the fourth page

To add the label for the components on the fourth page of the report, do the following:

1. In the left pane, select **page 4**.
2. Select the **top cell** on the page; this is where the label for the page will go.
3. Select the **Home** tab.
4. Click the **Text** icon, then select **Custom Text**.

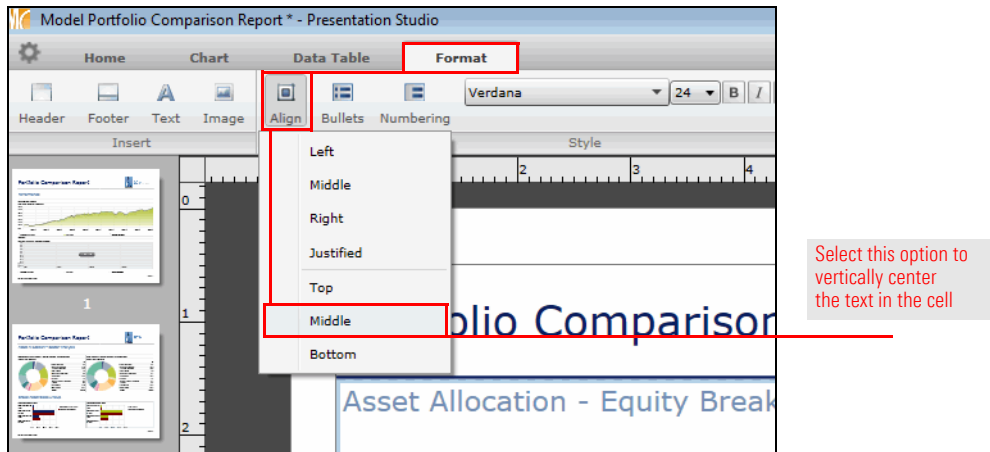


5. **Double-click** the **top cell**, then type **Asset Allocation - Equity Breakdown**.
6. Select the **text**, then use the **font size** drop-down field to select **24**.
7. **Right-click** the text, then select **Font Color... Light Blue** (the second option from the top on the left side).



8. Make sure the **Format** tab is selected.

- From the toolbar, click the **Align** icon and select the second **Middle** option.

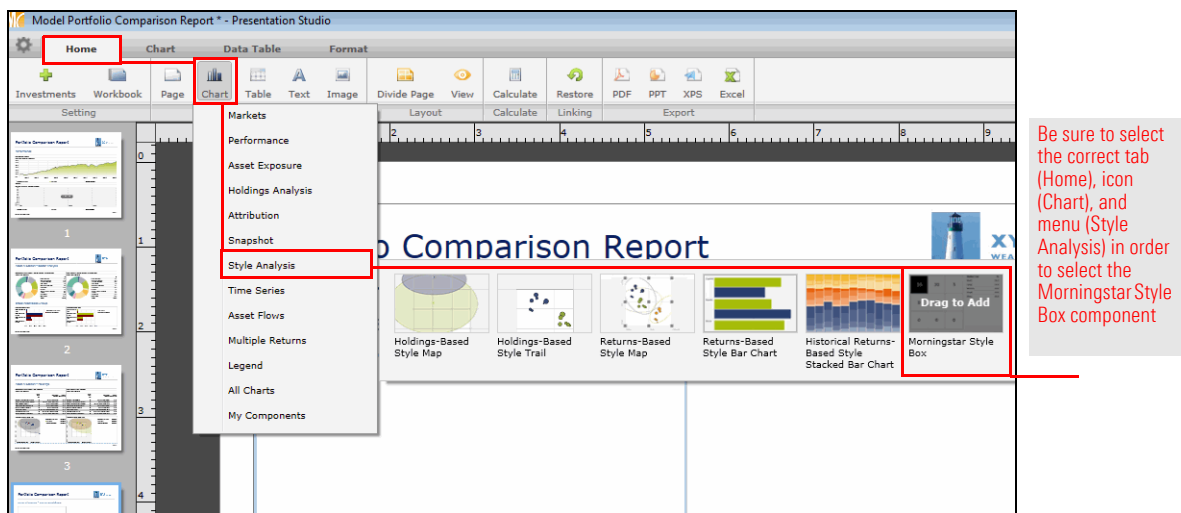


The fourth page is nearly the same as the third, in terms of adding a component, modifying it, copying it, then adding another component and copying it as well.

To add the components to the fourth page of the report, do the following:

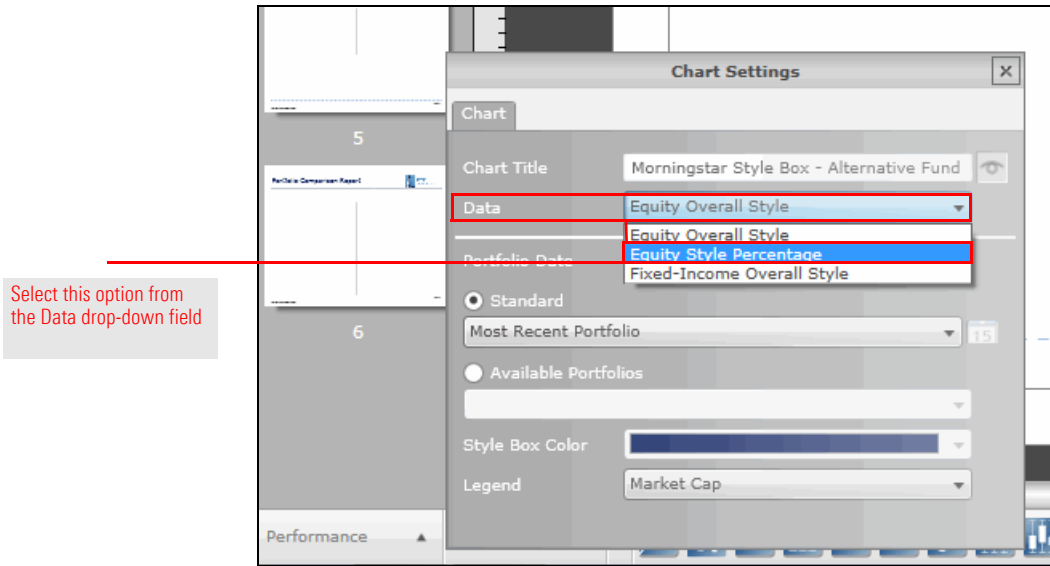
- Select the **Home** tab.
- Click the **Chart** icon and select **Style Analysis**.
- Drag** the **Morningstar Style Box** component into the top-left cell on the page.

Exercise 64: Add the components to the fourth page

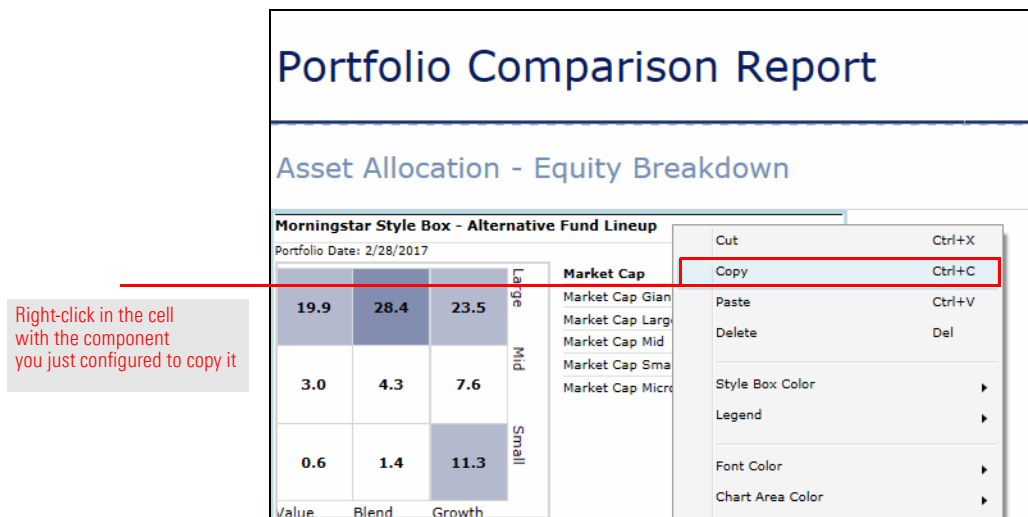


- In the bottom-left corner of the screen, click **Chart Settings**. The Chart Settings window opens.

- From the **Data** drop-down field, select **Equity Style Percentage**.

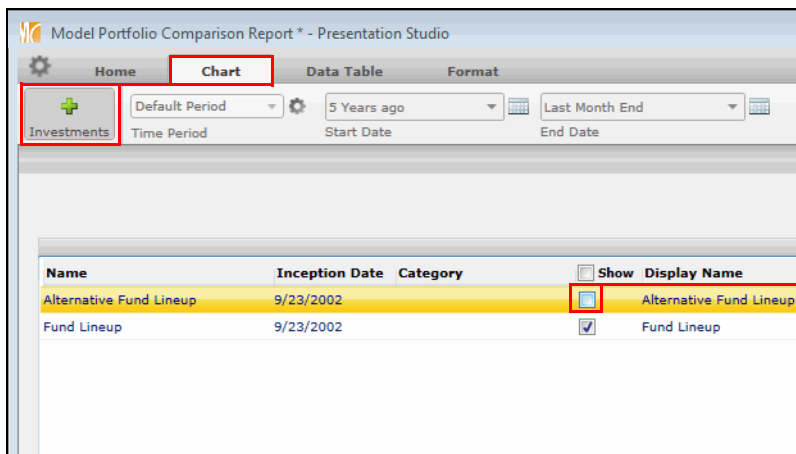


- Close the Chart Settings window. You can now copy the component and paste it into the cell on the right.
- Right-click** the **upper-left cell**, then select **Copy**.



- Right-click** the **upper-right cell**, then select **Paste**.

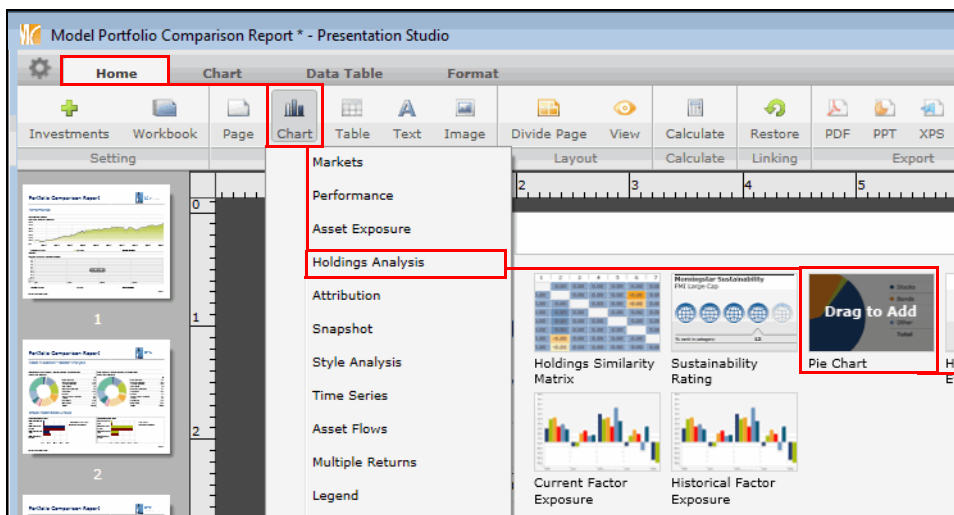
9. Make sure the **upper-right cell** is selected.
10. Be sure the **Chart** tab is selected.
11. From the toolbar, click the **Investments** icon. A dialog box opens.
12. In the Show column, **uncheck** the box for Alternate Fund Lineup.



Be sure to uncheck this box from the Investments dialog box on the Chart tab, and not the Home tab

13. Click **OK**. The next component can now be added to the bottom-left cell on the page.
14. Select the **Home** tab.
15. Click the **Chart** icon and select **Holdings Analysis**.
16. **Drag-and-drop** the **Pie Chart** component into the **bottom-left cell** on the page.

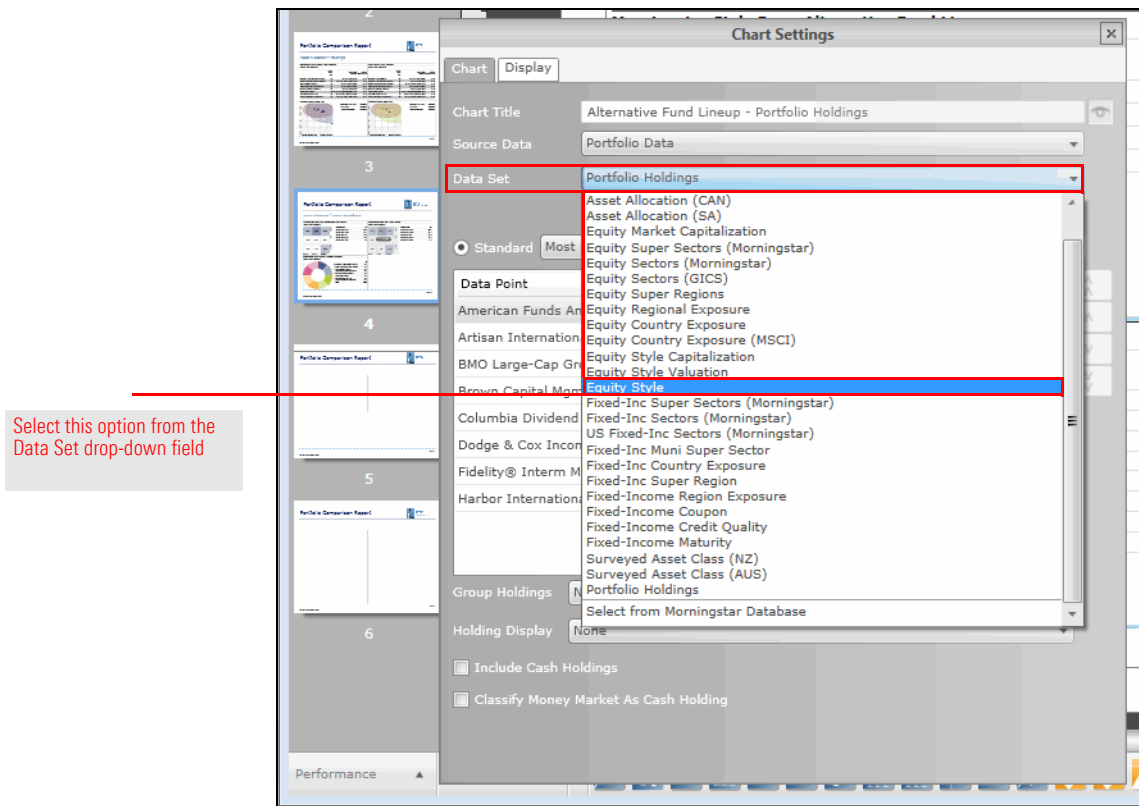
Note: The component appears as a donut chart because you made a change earlier from the Home tab to convert pie charts to donut charts.



Be sure to select the correct tab (Home), icon (Chart), and menu (Holdings Analysis) in order to select the Pie Chart component

17. In the bottom-left corner of the screen, click **Chart Settings**. The Chart Settings window opens.

18. From the **Data Set** drop-down field, select **Equity Style**.

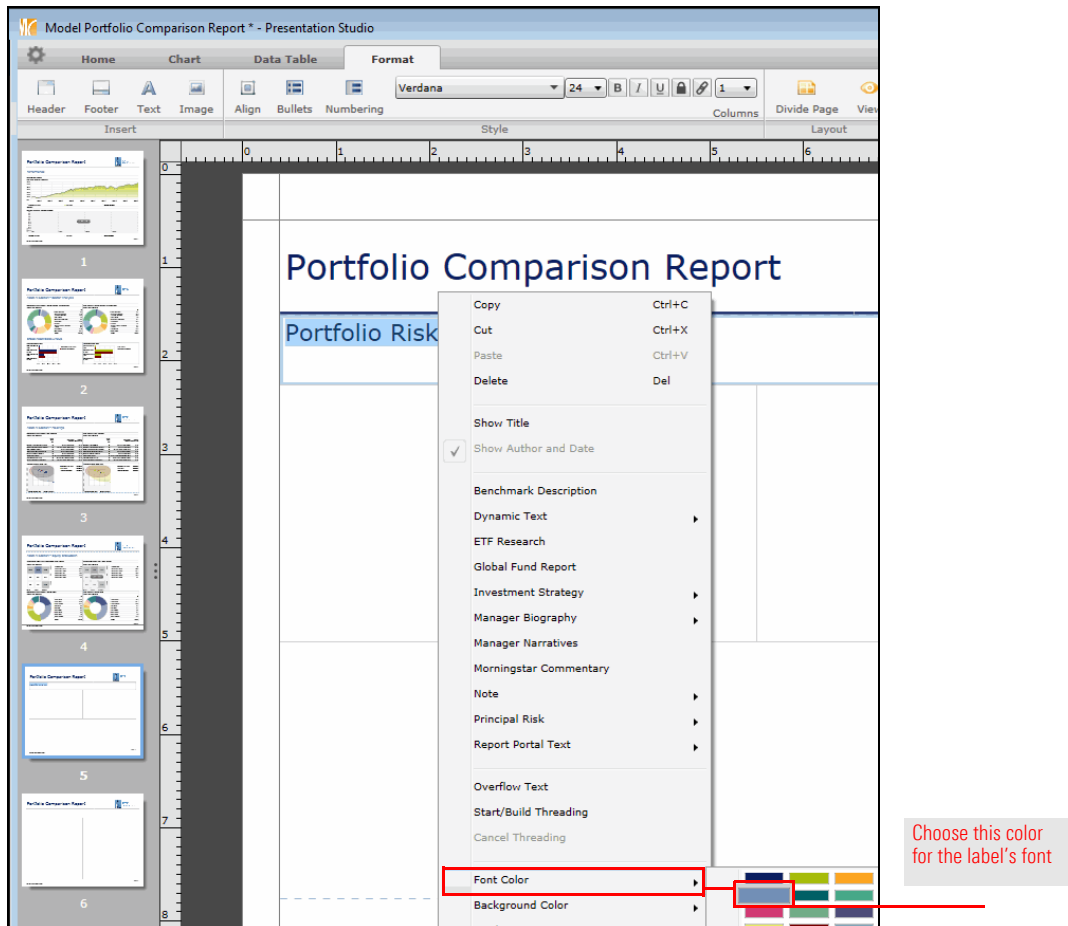


19. Close the Chart Settings window. You can now copy this component, and paste it into the cell on the right.
20. **Right-click** the **donut chart** you just configured in the bottom-left cell, then select **Copy**.
21. **Right-click** in the **bottom-right cell**, then select **Paste**.
22. Now it's time to switch the portfolio being reflected in the bottom-right cell. Make sure the **bottom-right cell** is selected.
23. Be sure the **Chart** tab is selected.
24. Click the **Investments** icon. A dialog box opens.
25. In the Show column, **uncheck** the box for Alternate Fund Lineup.
26. Click **OK**. The fourth page is now complete.

To add the label for the components on the fifth page of the report, do the following:

Exercise 65: Add the label to the fifth page

1. In the left pane, select **page 5**.
2. Select the **top cell** on the page; this is where the label for the page will go.
3. Select the **Home** tab.
4. Click the **Text** icon and select **Custom Text**.
5. **Double-click** the **top cell**, then type **Portfolio Risk**.
6. To select the text, press **<CTRL>+<A>**, then use the **font size** drop-down field from the toolbar to select **24**.
7. **Right-click** the text, then select **Font Color... Light Blue** (the second option from the top on the left side).



8. Select the **Format** tab.
9. From the toolbar, click the **Align** icon and select the second **Middle** option.

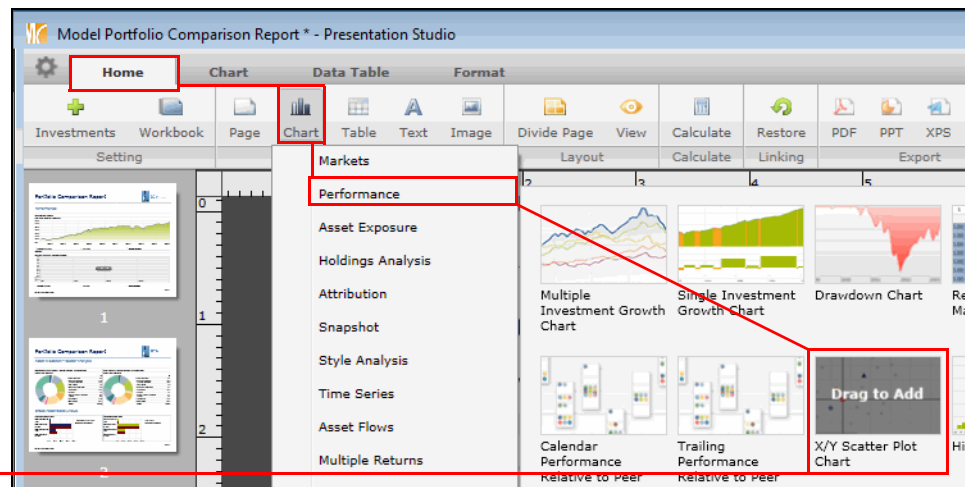
Exercise 66: Add the components to the fifth page

The fifth page has three components, all of which reflect both portfolios and the custom benchmark. Therefore, you do not need to copy and paste any components.

To add the components to the fifth page of the report, do the following:

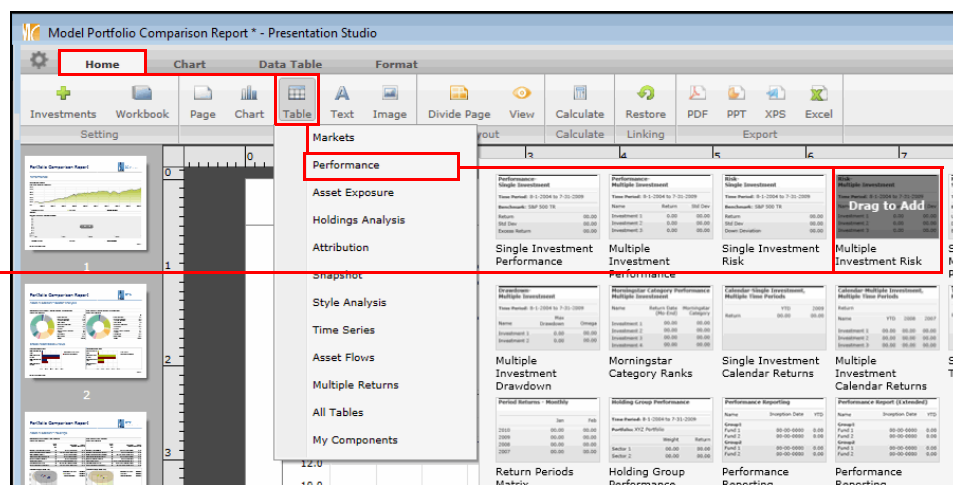
1. Select the **Home** tab.
2. Click the **Chart** icon and select **Performance**.
3. **Drag-and-drop** the **X/Y Scatter Plot Chart** component into the **top-left cell** on the page.

Be sure to select the correct tab (Home), icon (Chart), and menu (Performance) in order to select the X/Y Scatter Plot Chart component

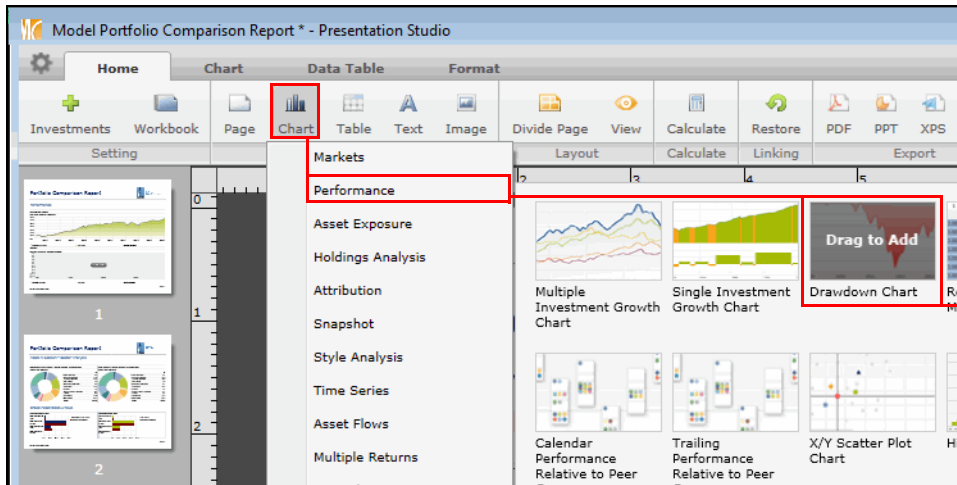


4. For the next component, click the **Table** icon and select **Performance**.
5. **Drag-and-drop** the **Multiple Investment Risk** component into the **top-right cell** on the page.

Be sure to select the correct tab (Home), icon (Table), and menu (Performance) in order to select the Multiple Investment Risk component

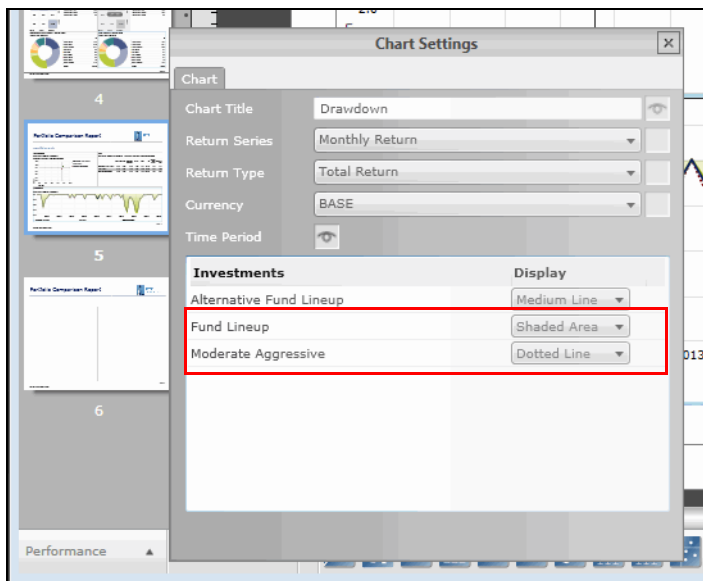


6. For the component at the bottom of the page, click the **Chart** icon and select **Performance**.
7. **Drag-and-drop** the **Drawdown Chart** component into the **bottom cell** on the page.



Be sure to select the correct tab (Home), icon (Chart), and menu (Performance) in order to select the Drawdown Chart component

8. In the bottom-left corner of the screen, click **Chart Settings**.
9. From the **Display** drop-down field for Fund Lineup, select **Shaded Area**.
10. From the **Display** drop-down field for Moderate Aggressive Benchmark, select **Dotted Line**.



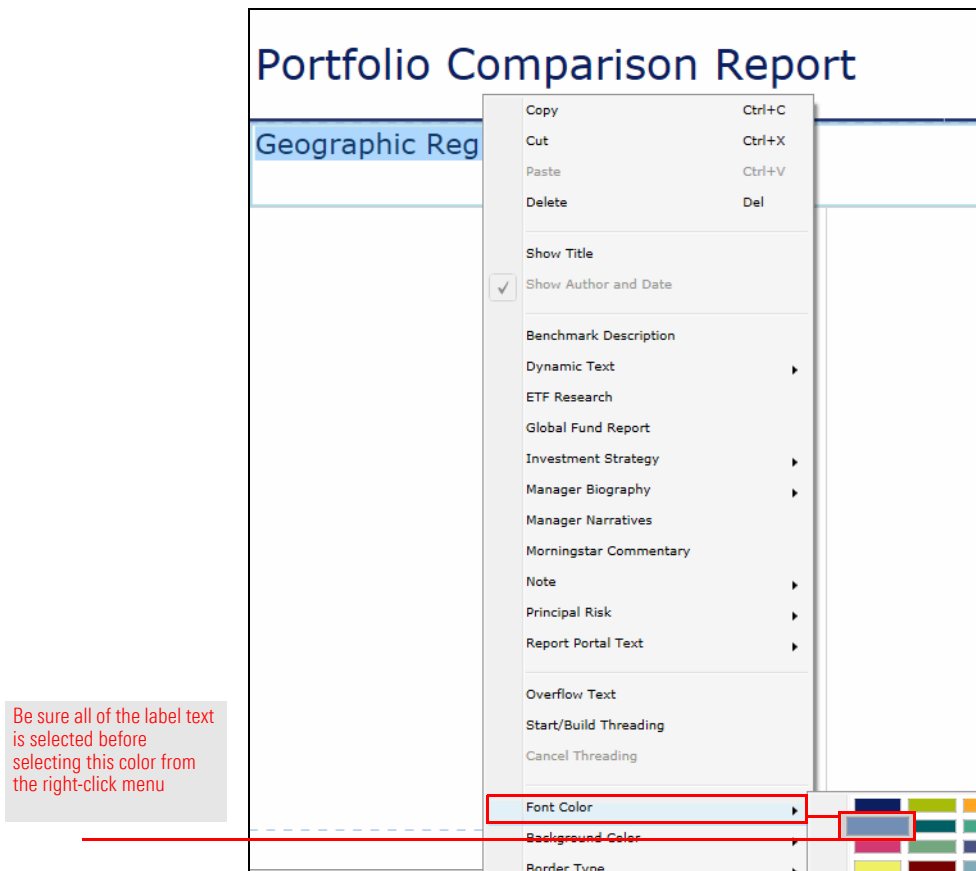
Note the values assigned to each item here

11. Close the Chart Settings window. The fifth page is now complete.

Exercise 67: Add the label to the last page

To add the label for the components to the sixth page of the report, do the following:

1. In the left pane, select **page 6**.
2. Select the **top cell** on the page; this is where the label for the page will go.
3. Select the **Home** tab.
4. Click the **Text** icon and select **Custom Text**.
5. **Double-click** the **top cell**, then type **Geographic Regions**.
6. To select the text, press <CTRL>+<A>, then from the **font size** drop-down field, select **24**.
7. **Right-click** the text, then select **Font Color...Light Blue** (the second option from the top on the left side).



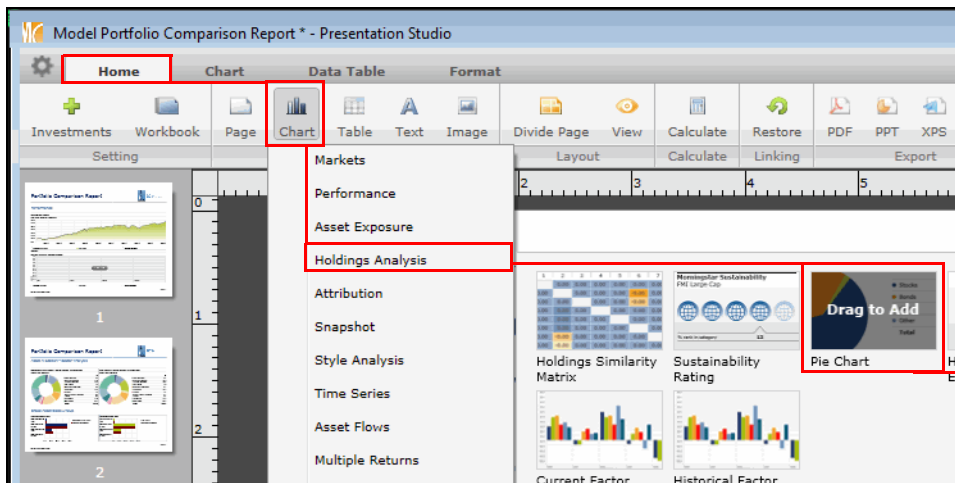
8. Select the **Format** tab.
9. From the toolbar, click the **Align** icon and select the second **Middle** option.

The last page has two components, but you only need to build one, then copy and paste it into the adjacent cell.

Exercise 68: Add the components to the last page

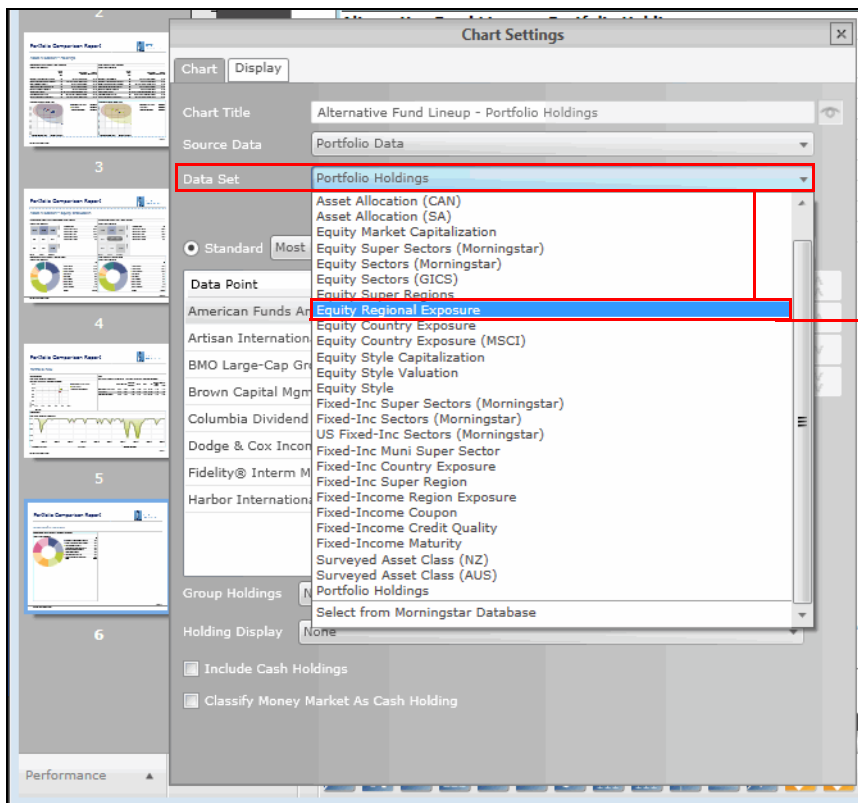
To add the components to the sixth page of the report, do the following:

1. Select the **Home** tab.
2. Click the **Chart** icon and select **Holdings Analysis**.
3. **Drag-and-drop** the **Pie Chart** component into the **left cell** on the page.



Be sure to select the correct tab (Home), icon (Chart), and menu (Holdings Analysis) in order to select the Pie Chart component

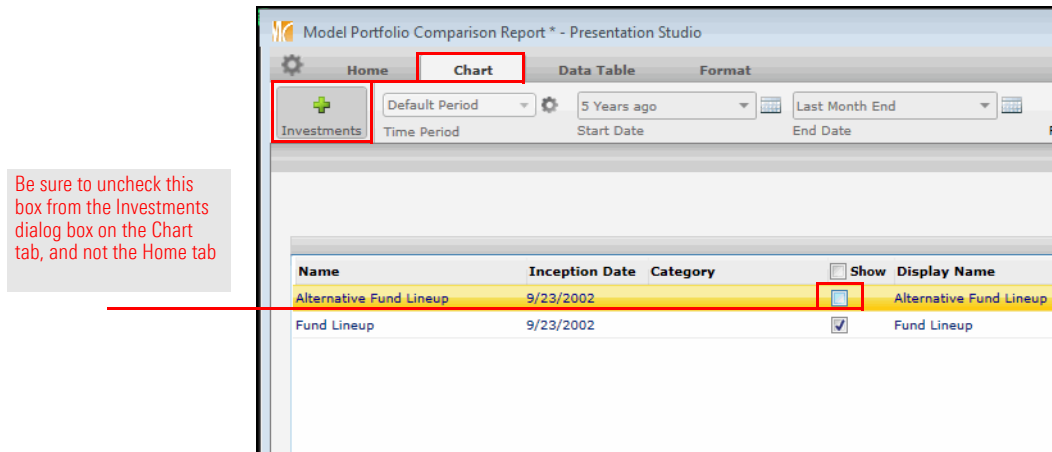
4. In the bottom-left corner of the screen, click **Chart Settings**.
5. From the **Data Set** drop-down field, select **Equity Regional Exposure**.



Select this option from the Data Set drop-down field

6. Close the Chart Settings window.

7. You can now copy and paste the pie chart into the cell on the right. **Right-click** in the **left cell**, then select **Copy**.
8. **Right-click** in the **right cell**, then select **Paste**.
9. Make sure the **right cell** is selected.
10. Be sure the **Chart** tab is selected.
11. From the toolbar, click the **Investments** icon. A dialog box opens.
12. In the Show column, **uncheck** the box for Alternate Fund Lineup.



13. Click **OK**. The sixth page is now complete. Be sure to save the report via the **gear icon** in the upper-left corner of the window.