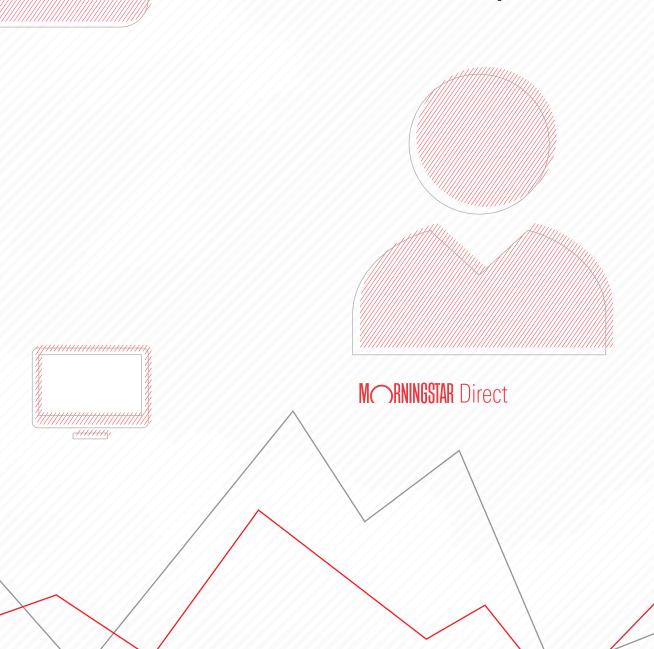
Working with Custom Column Sets

Morningstar DirectSM Cloud Editions



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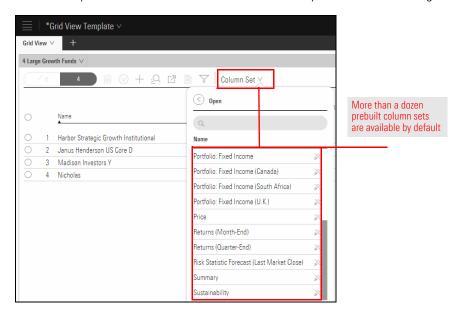


Working with Custom Column Sets

By now, you should have completed the Creating Lists and Workbooks and Creating Screens manuals. The products of the exercises you completed are referenced in this manual.

Overview

The Grid View worksheet in Morningstar DirectSM for Wealth Management offers several prebuilt column sets with data points grouped logically together. For example, you can find a data set for Performance & Risk, Equity Summary, Returns, Sustainability, and more. These column sets are read-only, and cannot be changed.



Not all data points are available via these prebuilt column sets, and you might prefer to build your own column sets, containing data point(s) you want to display. This guide helps you do the following:

- ► Create, Save, and Share a Custom Column Set (page 5)
- ► Customize Data Points in a Custom Column Set (page 19)
- ► Nest Data Points Together (page 40)

In the exercises, you will work with lists and screens; however, the same workflows can be performed with model portfolios.

Create, Save, and Share a Custom Column Set

When you create a custom column set, you have two options:

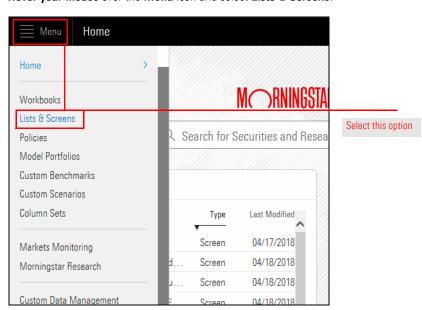
- ► Start from scratch and add columns one at a time in exactly the order you want, or
- ▶ Open an existing column set and add or remove the columns as needed.

This section contains exercises covering both approaches. You will also learn how to share a custom column set.

When you created your first screen (for 5-star stocks), you changed the default Summary column set in the Grid View worksheet to the Equities Summary column set. The Equities Summary column set contains the Morningstar Rating column, but none of the other Morningstar proprietary data points for equities are included. This exercise teaches you how to do the following:

remove the columns you do not want to see in a column set, find a data point you want to add to a column set, and rearrange the data points in a column set. Do the following:

1. Hover your mouse over the Menu icon and select Lists & Screens.



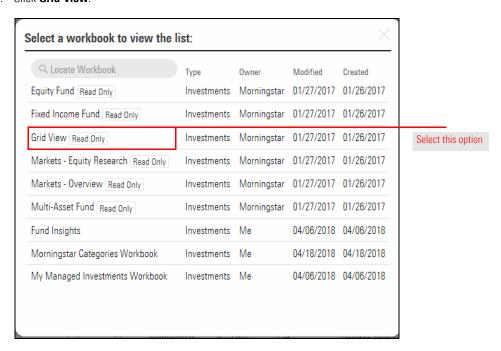
- 2. Click the **5-Star Stocks** screen. The Select a workbook to view the list: window opens.
 - Note: If you do not have this screen saved, select another equity-based screen you have.

Overview

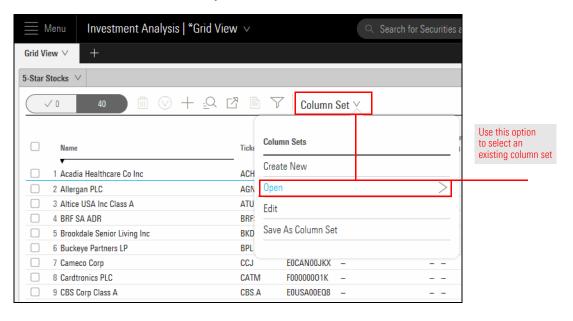
Exercise 1: Create a custom column set for stocks



3. Click Grid View.

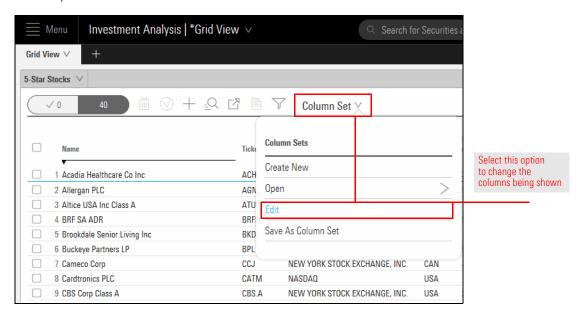


4. Click the Column Set menu, then select Open.

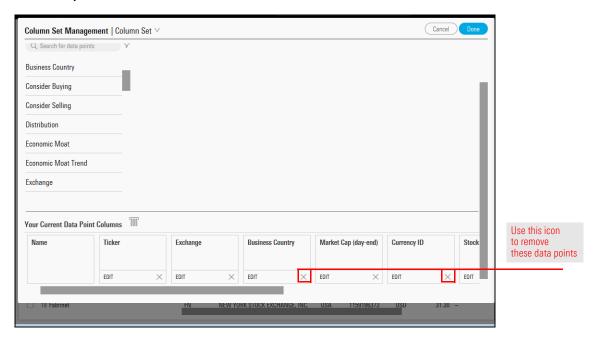


5. Select the **Equities Summary** column set.

6. Click the **Column Set** menu again, then select **Edit**. The Column Set Management window opens.

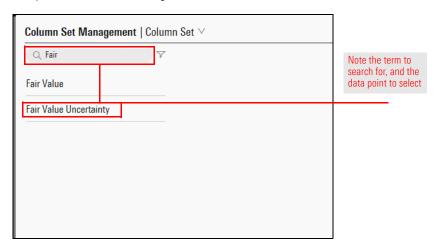


- 7. At the bottom of the window, click the **X** icons to remove the following data points:
 - Business Country, and
 - ► Currency ID.

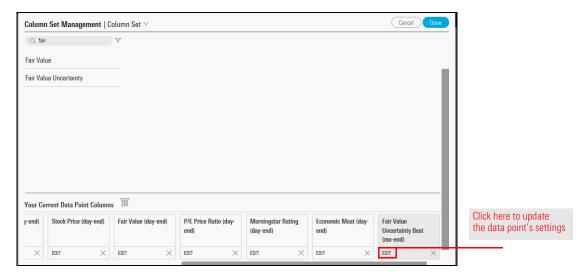




8. In the **Search for data points** field, type **Fair**, then click **Fair Value Uncertainty**. The data point is added to the far right side of the column set.

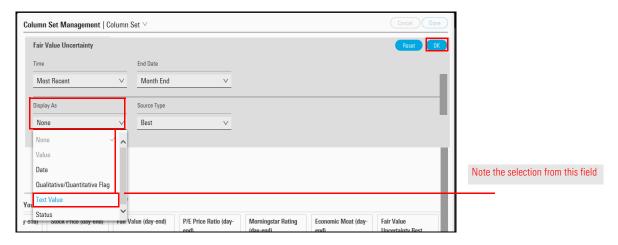


9. The word "Best" appears in the name of the Fair Value Uncertainty data point, indicating that the column will reflect either the qualitative or quantitative value for this data point, depending on which is available for each stock. One change that needs to be made, though, is to ensure the correct setting is in place to display the text of the value. In the Fair Value Uncertainty Best data point box, click **Edit**. A dialog box opens.

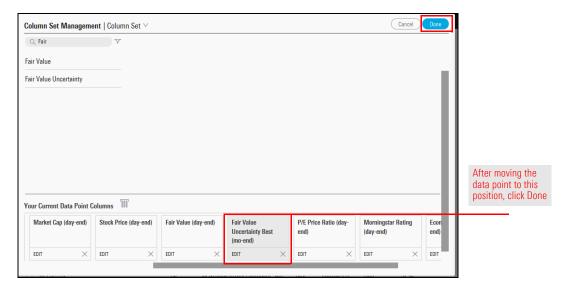




- 10. From the **Display As** drop-down field, select **Text Value**.
- 11. Click **OK** to close the dialog box.



- 12. **Drag-and-drop** the **Fair Value Uncertainty** data point until it is to the right of the Fair Value data point.
- 13. Click Done.



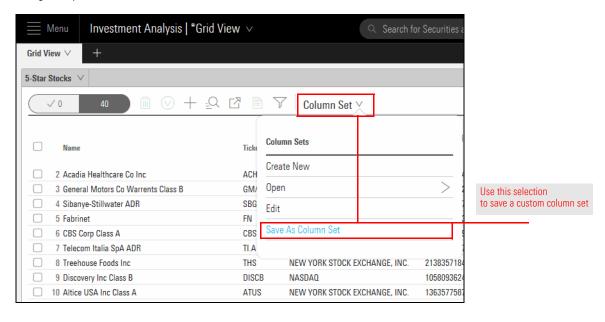


Like a list or a screen, a custom column set is not automatically saved when it is created. A custom column set can be saved from the Column Set Management window, but this exercise shows you how to do this from the Grid View worksheet.

Saving a custom column set from the Grid View worksheet (rather than the Column Set Management window) allows you to see what a column set looks like in the worksheet before you commit to saving it. If you do not like something about the way it looks—perhaps you need to add one more column, remove a column, or rearrange the columns—you can always use the Column Set menu to edit the column set, and then save it. Do the following:

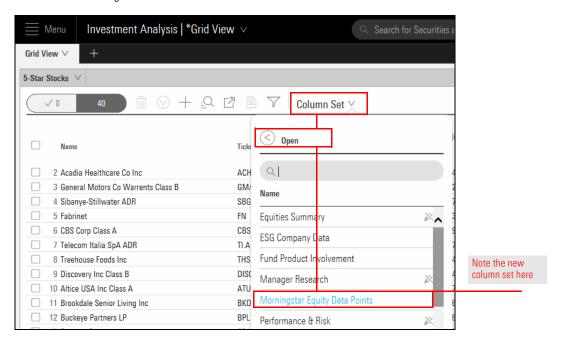
1. Click the **Column Set** menu, then select **Save As Column Set**. The Save Column Set As dialog box opens.

Exercise 2: Save a custom column set





 In the name field, type Morningstar Equity Data Points, then click Save. From the Column Sets page (found via the Menu icon), this column set can be deleted, renamed, or shared with colleagues.



Now that you have created a saved custom column set, you can share it with other users in your group or firm.

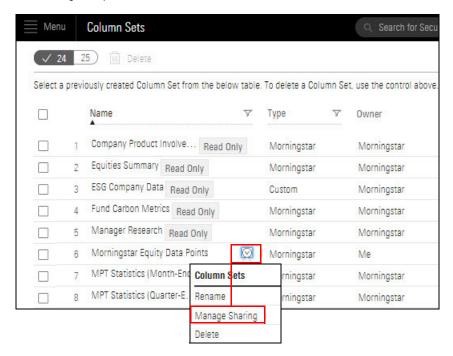
Exercise 3: Share a custom column set

Note: You can share only custom column sets that you create.

Do the following:

- 1. In the upper-left corner of your edition of Morningstar Direct Cloud, **hover the cursor** over **Menu**, then select **Column Sets**. The Column Sets page opens.
- 2. **Hover the cursor** over the **empty area** to the right of a custom column set name (in this case, Morningstar Equity Data Points). The Actions icon appears.

Click the Actions icon and from the Column Sets menu, select Manage Sharing. The Share dialog box opens.



Note the highlighted selections.

- 4. At the top of the Share dialog box, in the **Search** field, type one of the following:
 - ► colleague name
 - ► colleague email, or
 - group name.
- 5. Click **Share**. Screenshot when live

When someone has shared a custom column set with you, you can access the column set as described in the following table:

Note: You cannot modify a column set you did not create.

Location	Description
Column Sets page	The "Shared" tag is displayed to the right of the column set name.
Workbook: Column Sets menu	The "read-only" icon is displayed to the right of the column set name.

How can I access a column set someone has shared with me?



In this exercise, you will open a saved list, but start from a blank column set to create a custom column set comprised of the following data points:

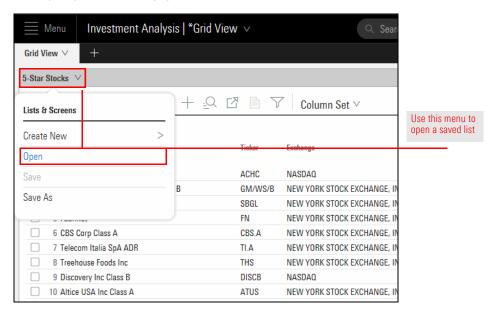
Exercise 4: Create a custom column set for funds

- ► Morningstar Rating
- ► Total Return (1Y mo-end)
- ► Total Return (3Y mo-end)
- ► Total Return (5Y mo-end)
- ► Alpha (1Y mo-end)
- ► Alpha (3Y mo-end)
- ► Alpha (5Y mo-end)
- ► Beta (1Y mo-end)
- ► Beta (3Y mo-end)
- ► Beta (5Y mo-end)
- ► Morningstar Risk
- ► Prospectus Net Expense Ratio, and
- ► Annual Net Expense Ratio.

You will also learn how to filter for data points specific to a particular data universe.

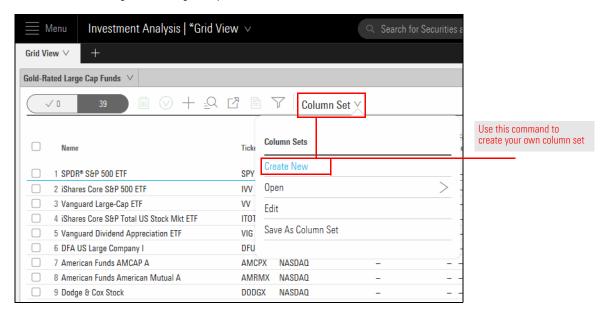
Do the following:

 The Grid View workbook should still be open. From the List Selector menu, open the Gold-Rated Large Cap Funds list. Note that most of the columns are blank, because the Morningstar Equity Data Points column you edited and saved is intended for stocks, but the list you opened has mostly open-end funds.

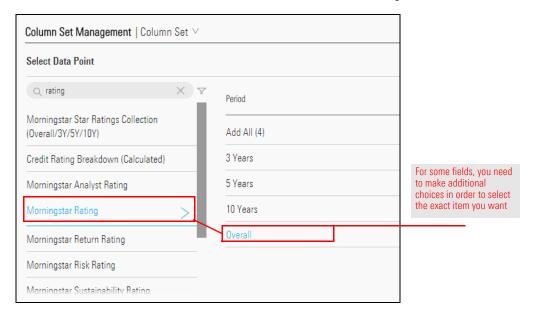




From the toolbar above the grid, click the Column Set menu, then select Create New. The Column Set Management dialog box opens.



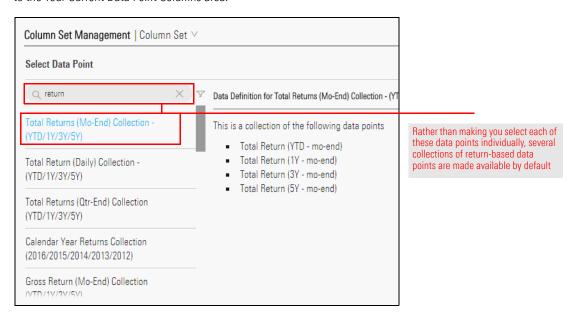
3. Click **Morningstar Rating**, then click **Overall**. The Morningstar Rating Overall data point is added to the Your Current Data Point Columns area at the bottom of the dialog box.



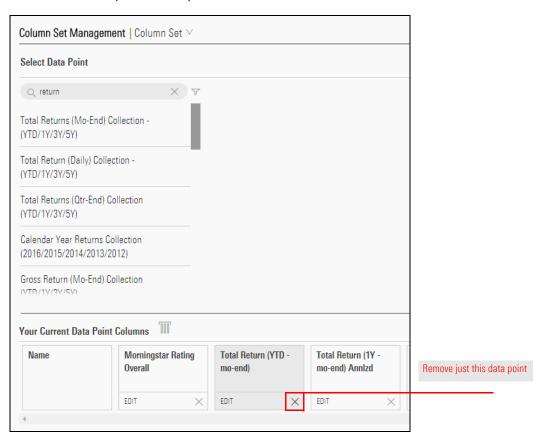
4. In the **Search for data points** field, remove "rating," and type **return**.



5. Click **Total Returns (Mo-End) Collection - (YTD/1Y/3Y/5Y)**. Four data points are added to the Your Current Data Point Columns area.

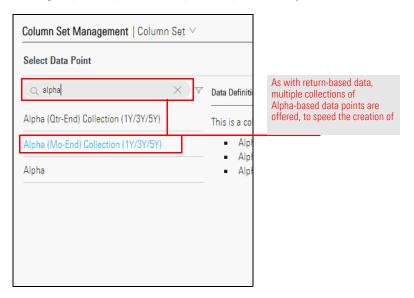


6. Remove Total Return (YTD - mo-end).

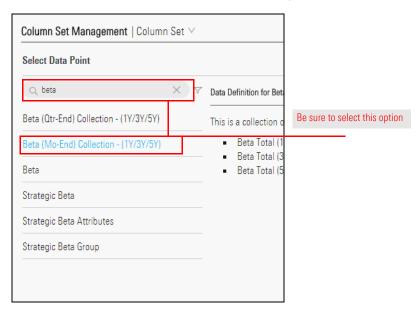


7. In the **Search** field, remove "return" and type **alpha**.

8. Click Alpha (Mo-End) Collection - (1Y/3Y/5Y). Three data points are added.

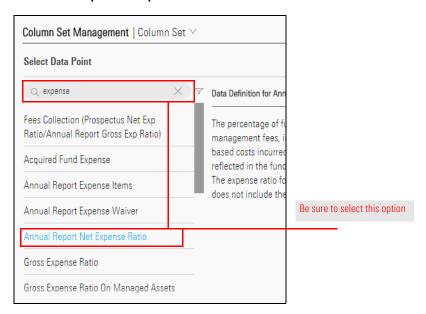


- 9. In the **Search** field, remove "alpha" and type **beta**.
- 10. Click Beta (Mo-End) Collection (1Y/3Y/5Y). Three data points are added.

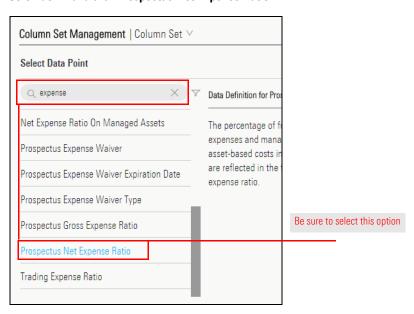


11. In the **Search** field, remove "beta" and type **expense**.

12. Click Annual Report Net Expense Ratio.



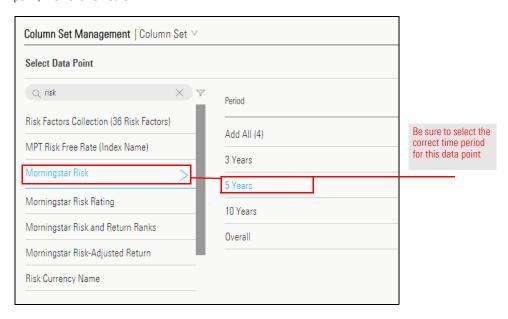
13. Scroll down and click Prospectus Net Expense Ratio.



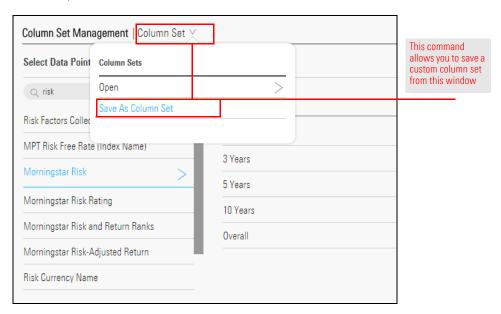
14. In the **Search** field, remove "expense" and type **risk**.



15. From the list of options that appears, click once to select the **Morningstar Risk** data point, then click **5 Years**.



16. To save a custom column set from this window, click the Column Set menu at the top of the window, and select Save As Column Set.



- 17. Name the column set My Custom Fund Data Points.
- 18. Click Save.
- 19. In the upper-right corner of the Column Set Management dialog box, click **Done**. The dialog box closes and the Grid View worksheet is displayed.



Customize Data Points in a Custom Column Set

One hurdle you might need to clear when building a custom column set is tuning each data point to show you exactly the information you want to see. This section's exercises teach you how to customize data points in a custom column set.

Overview

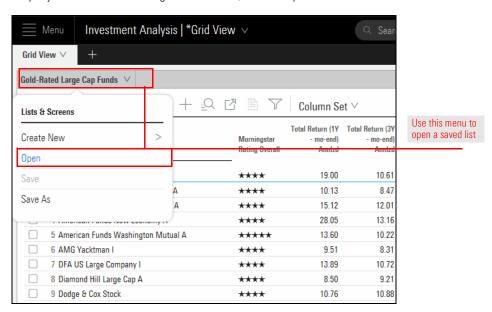
In this exercise, you will learn how to add the Price-to-Book and Price-To-Sales ratios to a custom column set for stocks. (The Price-to-Earnings ratio already exists as part of the column set.) This task requires you to do the following work:

Exercise 5: Customize data points for stocks

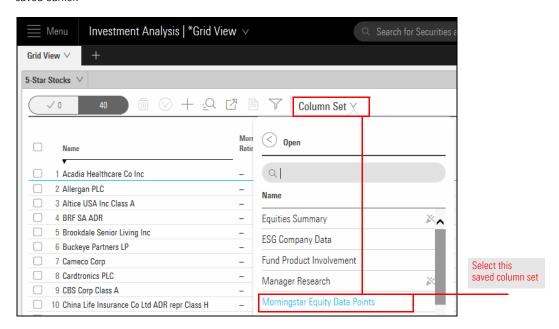
- ► Open and edit a saved custom column set
- ► Filter for data points from a particular universe when building a custom column set, and
- ► Change the settings for a data point.

Do the following:

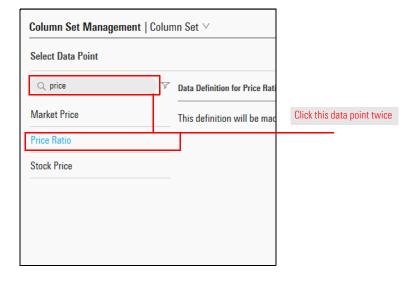
The Grid View workbook with the Gold-Rated Large Cap Funds list should still be open.
Use the List Selector menu to open the 5-Star Stocks screen. Note that the columns for
these investments display dashes; this is because the data points in the custom column
set you just saved are for managed investments, and not equities.



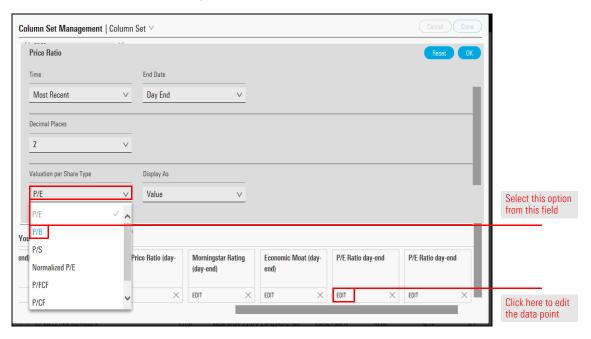
From the Column Set menu, open the Morningstar Equity Data Points column set you saved earlier.



- 3. From the Column Set menu, click Edit. The Column Set Management window opens.
- 4. In the **Search for data points** field, type **price**.
- 5. Click **Price Ratio** twice. Two instances of the P/E Price Ratio (day-end) data point are added to the Your Current Data Point Columns area at the bottom of the window.



- 6. In the first instance of the P/E Price Ratio (day-end) data point, click Edit. A dialog box opens.
- 7. From the Valuation per Share Type drop-down field, select P/B.

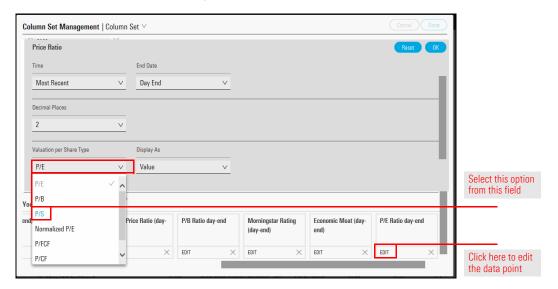


- 8. In the upper-right corner of the window, click **OK**.
- 9. Drag-and-drop the P/B Price Ratio (day-end) data point so it is just to the left of the P/E Price Ratio data point.





- 10. In the remaining instance of the P/E Price Ratio (day-end) data point, click **Edit**. A dialog box opens.
- 11. From the Valuation per Share Type drop-down field, select P/S.



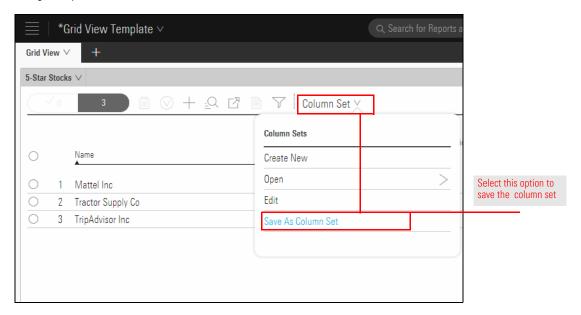
- 12. In the upper-right corner of the window, click **OK**.
- 13. **Drag-and-drop** the **P/S Price Ratio (day-end)** data point so it is just to the left of the P/B Price Ratio data point.



14. In the upper-right corner of the Column Set Management window, click **Done**.



15. Click the **Column Set** menu, then select **Save As Column Set**. The Save Column Set As dialog box opens.



16. In the name field, type Morningstar Data Plus Price Ratios, then click Save.

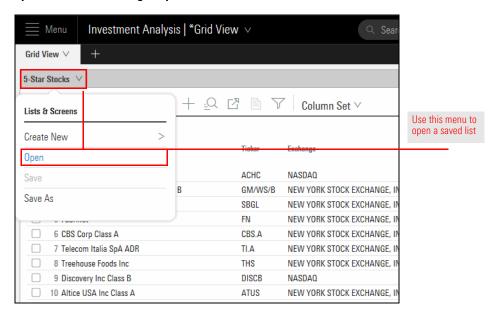


You can modify data points for funds in the same way you do for equities. This exercise teaches you how to display the Morningstar Analyst Rating pillars. These data points do not appear in any pre-built column set, so you must create a custom column set in order to see them. The five pillars (People, Parent, Process, Price, and Performance) are used by Morningstar's analysts to help determine the Morningstar Analyst Rating for a fund. Seeing the pillar values, then, can help you understand where a fund is particularly strong or weak.

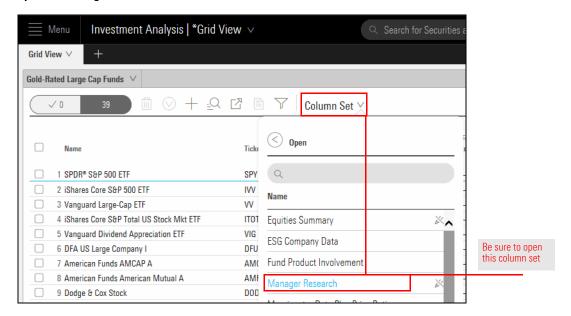
Exercise 6: Customize data points for funds

Do the following:

1. Open the Gold-Rated Large Cap Funds list.

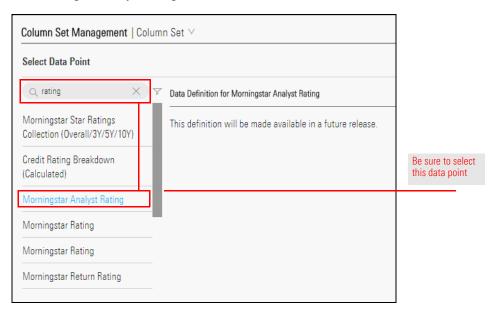


2. Open the Manager Research column set.

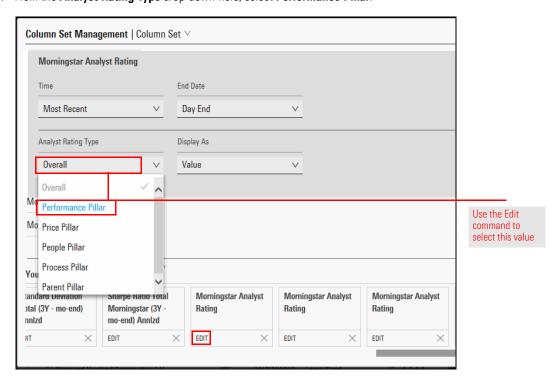




- 3. Use the Column Set menu to Edit the column set.
- In the **Search for data points** field, type rating.
- 5. Click Morningstar Analyst Rating.

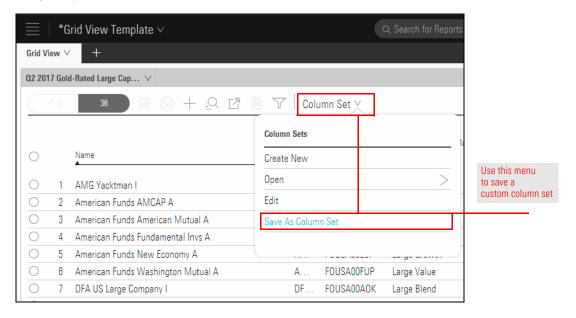


- 6. Click Morningstar Analyst Rating four more times, so it appears a total of five times in the Your Current Data Point Columns area.
- 7. In the first instance of Morningstar Analyst Rating, click **Edit**. The Morningstar Analyst Rating window opens.
- 8. From the **Analyst Rating Type** drop-down field, select **Performance Pillar**.

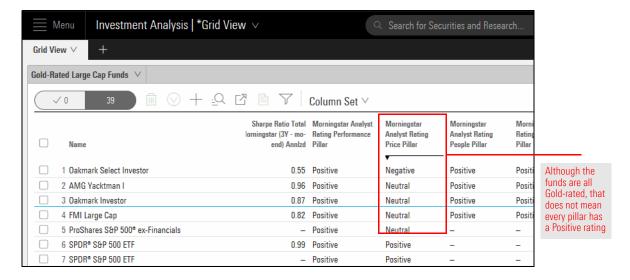




- 9. Click **OK**.
- 10. Repeat steps 7-9 for the other four instances of Morningstar Analyst Rating to select the other pillars that compose the Morningstar Analyst Rating:
 - ► Price Pillar
 - ► People Pillar
 - Process Pillar, and
 - ► Parent Pillar.
- 11. Click Done.
- 12. Click the **Column Set** menu, then select **Save As Column Set**. The Save Column Set As dialog box opens.



- 13. In the name field, type Morningstar Analyst Rating Data Points, then click Save.
- 14. **Scroll right** and click the **Morningstar Analyst Rating Price Pillar** column header to sort by that data point.





In the Grid View, the primary prospectus benchmark can be used for the Active Share calculation.

The Active Share data point is a comparison between the equity holdings of a fund and a selected benchmark. Typically, an index is used as the benchmark. To calculate Active Share with an index benchmark, index holding data is required. Therefore, you need access to the index holdings in order to view the calculated Active Share result.

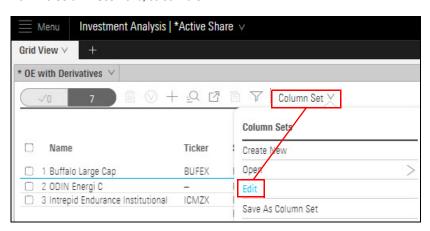
Active Share calculation can be used for open-end funds and separately managed accounts meeting the following criteria:

- ► The Global Broad Category is Equity, and
- ► At least 85% of the portfolio must be Morningstar Direct Cloud equity holdings.

Most Fund-of-Funds and multi-asset portfolios do not meet the above criteria. Also, index funds do not have this capability.

Do the following:

- 1. **Create** or **open** a **list of funds** meeting the criteria for the Active Share calculation.
- 2. Open the list in an Investment Analysis workbook,
- 3. From the Column Set menu, select Edit.

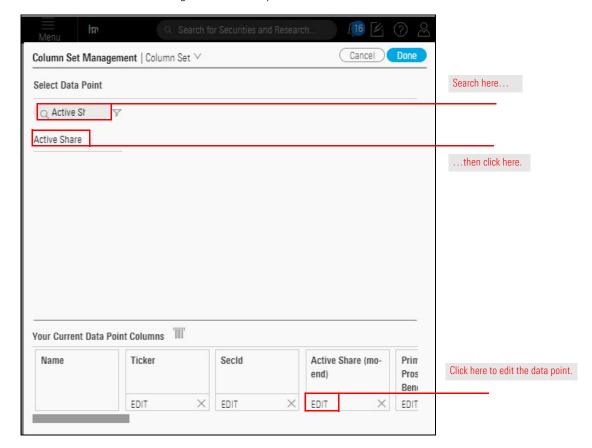


How can I use a Primary Prospectus of a fund's equity holdings for the Active Share calculation in the Grid View?

Note the highlighted selections.

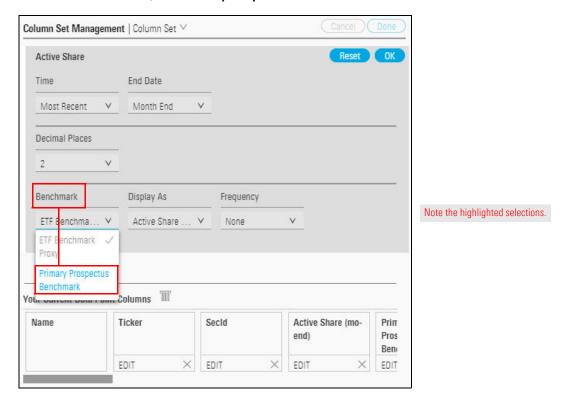


- In the Column Set Management window, search for Active Share. Click it to add it to the column set.
 - In the Your Current Data Point Columns area, the new data point appears at the far right. You might want to drag it to the left so it will be displayed as one of the first columns.
- 5. In the **Your Current Data Point Columns** area, in the **Active Share (mo-end)** tile, click **EDIT**. The Column Set Management window opens.





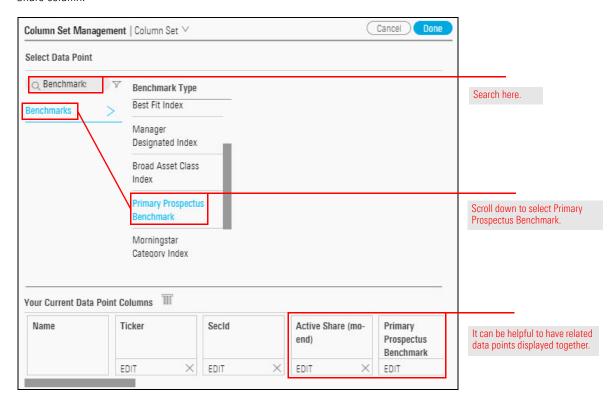
6. From the Benchmark menu, select Primary Prospectus Benchmark.



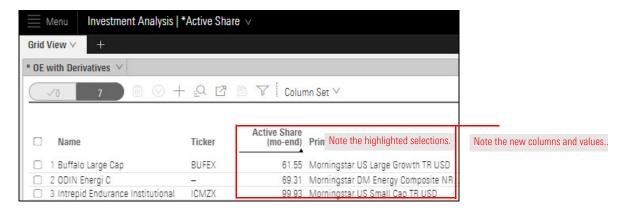
7. Click **OK**.

8. In the Column Set Management window, search for **Benchmarks**. Then, from the Benchmark Type menu, select **Benchmarks** > **Primary Prospectus Benchmark**.

In the Your Current Data Point Columns area, the new data point appears at the far right. You might want to drag it to the left so it will be displayed next to the Active Share column.



9. Click Done.

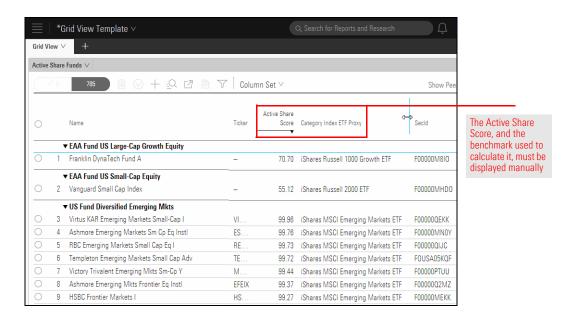


A fund's Active Share Score indicates the overlap between its holdings and that of a benchmark. The Active Share value ranges from 0 to 100, and the higher the score, the more divergent a manager is from the benchmark.

How can I see the Active Share Score for a fund?

A pre-calculated Active Share Score data point is available for funds in Morningstar Direct Cloud, but this data point is not part of any pre-built view; it must be manually displayed in the Grid View to be seen. In addition to the Active Share Score, you can also see the benchmark used for this calculation as a data point in the Grid View.

Pote: You cannot change which benchmark is used in the Active Share Score calculation.



The Active Share Score data point cannot be calculated for every fund. Note the following rules related to which funds will display this data point:

- ► It is available only for Open-End funds
- ► The funds must belong to the Equity Global Broad Category
- ► It cannot be an Index Fund, and
- ► At least 85% of the portfolio must be direct equity holdings.

Due to these criteria, most fund-of-funds and multi-asset portfolios will not show an Active Share Score.

Because not all Morningstar Direct Cloud subscribers are entitled to see index holdings, Morningstar's default Active Share calculation uses an ETF as the benchmark. Namely, the ETF is a Morningstar Analyst-assigned proxy for the category index. (Most Morningstar Categories have an analyst-assigned index. If one does not, then the Active Share Score cannot be calculated for the funds in that category.) An example of a category index mapped to an ETF proxy is the Russell 1000 Value TR USD mapped to iShares Russell 1000 Value.

The Active Share Score is calculated only on fund portfolio dates where the benchmark also has a portfolio date on the same day, or within 15 days prior. Further, the benchmark must not contain short positions of more than 1%.

Why don't all funds receive an Active Share Score?

What benchmark is used to calculate the Active Share Score?



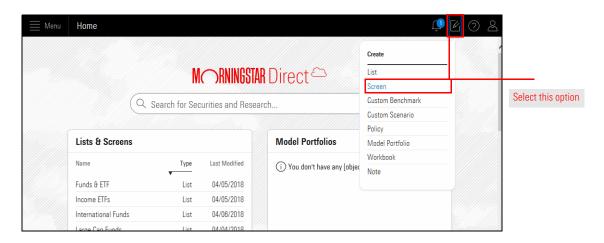
To see the Active Share Score for a fund and the benchmark being used for the calculation, first create a screen to ensure the funds you are viewing actually have an Active Share Score value. Additionally, while a high Active Share Score is admirable for actively managed funds, you will also look for funds that have a positive 3-year Sharpe Ratio (to demonstrate the risk-adjusted return value the manager is adding), and a positive 3-year Information Ratio (to see that the manager has also added excess return over the Morningstar Category Primary index).

Exercise 7: Viewing the Active Share Score for a fund

Do the following:

- 1. From the header, click **Create...Screen**. The Screener window opens.
 - Note: If you are beginning this exercise immediately after finishing Exercise 6 on page 24, you will be prompted to save the workbook. If you click Don't Save, the sort order you selected for the Price Pillar column in the previous exercise will not be preserved the next time you access the Morningstar Analyst Rating Data Points column set. If, however, you do elect to save the workbook, you must give it a name (because you cannot overwrite the Grid View workbook), and each time you open that workbook, three things will be true:
 - 1) The list you had displayed (Gold-Rated Large Cap Funds) will always appear by default in the workbook.
 - 2) The Morningstar Analyst Rating Data Points column set will show by default.
 - 3) The rows will be sorted by the Morningstar Analyst Rating Price Pillar column in the order you set.

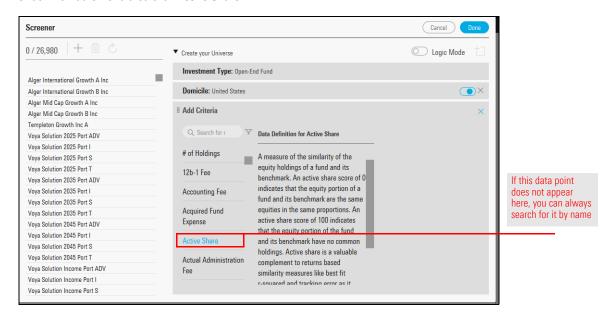
You can, of course, always choose to display a different list or screen in the workbook, as well as change the column set, or add worksheets.



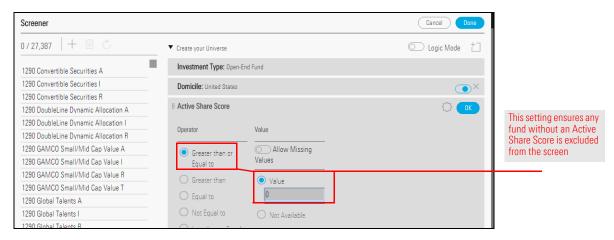
- 2. For Investment Type, select the option for **Open-End Fund**.
- 3. Click **OK**.



4. Under the Add Criteria area click Active Share.

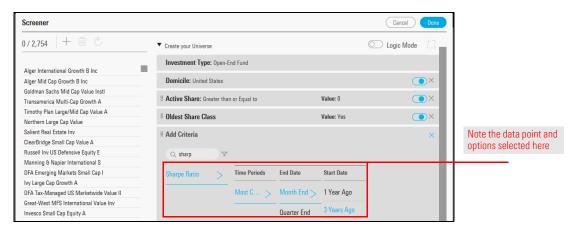


5. The Operator should be Greater than or Equal to. In the **Value** field, type **0**, then click **OK**.

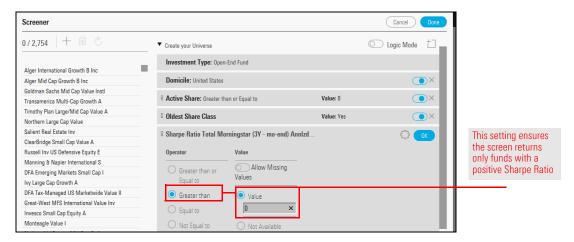


- 6. In the Add Criteria area, in the **Search for** field, type **old**, then select **Oldest Share Class**.
- 7. The option for Yes should be selected. Click **OK**.

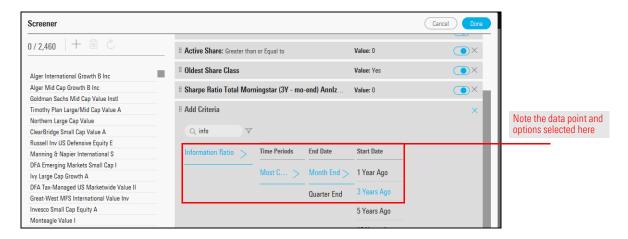
8. In the Add Criteria area, in the **Search for** field, type **sharp**, then select **Sharpe Ratio** > Most Common > 3 Years Ago.



- 9. Set the Operator to Greater than.
- 10. In the Value field, type 0, then click OK.

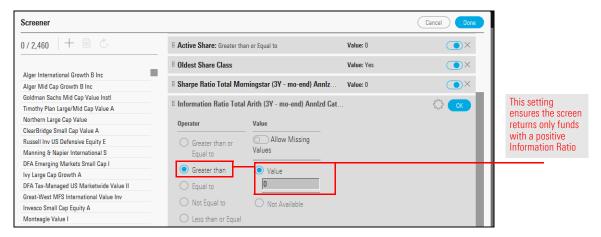


11. In the Add Criteria area, in the **Search for** field, type **info**, then select **Information Ratio** > Most Common > 3 Years Ago.

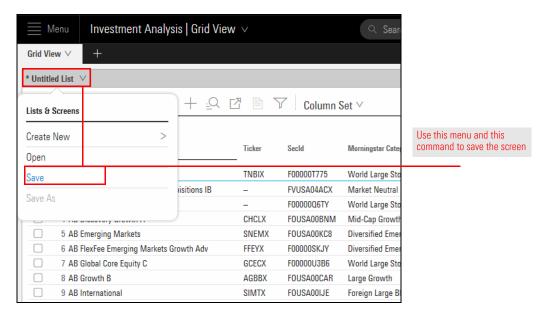




- 12. Set the Operator to **Greater than**.
- 13. In the **Value** field, type **0**, then click **OK**.



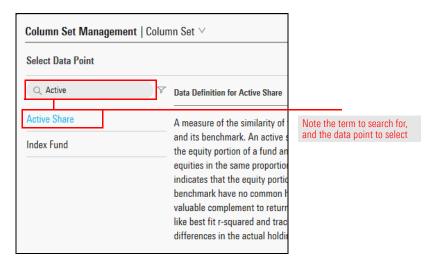
- 14. Click Done.
- 15. Save the screen as **Active Share Funds**.



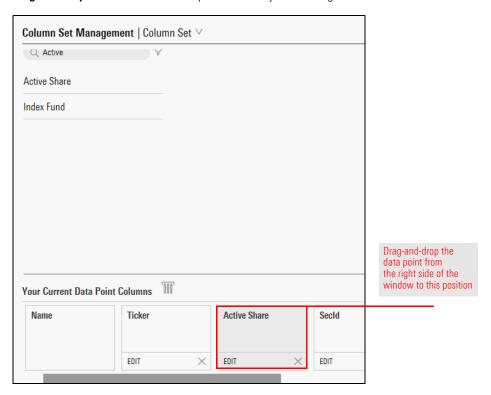


To add the Active Share Score data point and the benchmark being used for the active share calculation to the column set, do the following:

- The default Summary column set is showing. From the Column Set menu, select Edit.
 The Column Set Management window opens.
- 2. In the Column Set Management window, under the Search for data points field, type **active**, then click **Active Share Score**.



3. **Drag-and-drop** the **Active Share** data point until it is just to the right of Ticker.

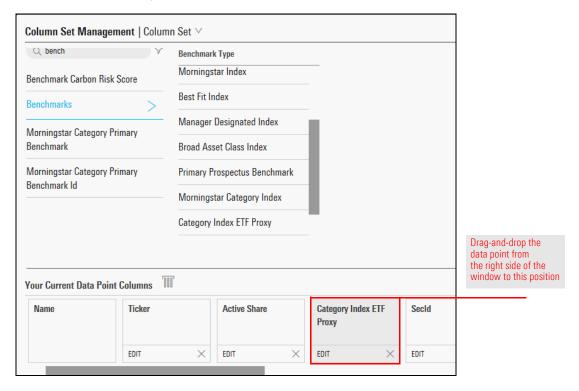




- 4. In the Search for data points field, type **bench**, then click **Benchmarks**. Several options appear under a Benchmark Type heading.
- 5. Scroll down (if needed) and select **Category Index ETF Proxy**. The Category Index ETF Proxy data point is added to the column set.

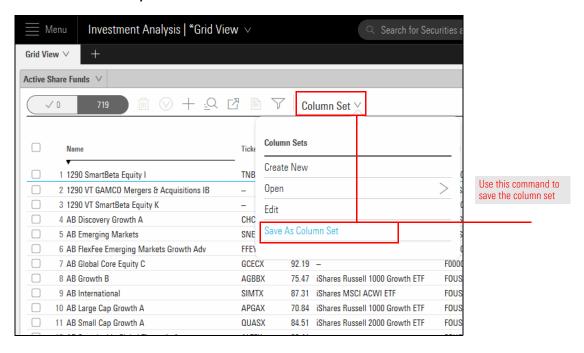


6. **Drag-and-drop** the **Category Index ETF Proxy** data point until it is just to the right of the Active Share Score data point.

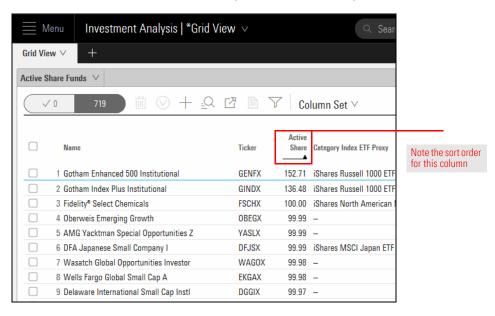


7. Click Done.

8. Save the column set as My Active Share Score.

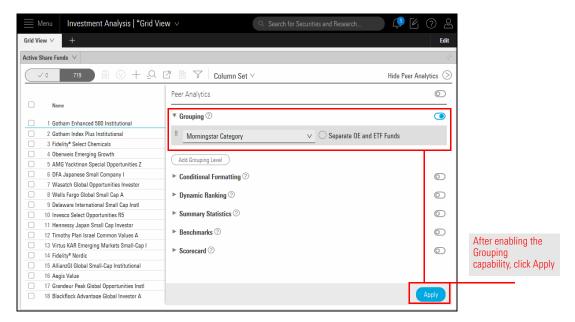


- 9. Click the Active Share Score column header to sort in ascending order.
- 10. Click the Active Share Score column header again to sort in descending order.



11. On the right side of the grid header, click **Show Peer Analytics**. The Peer Analytics panel opens.

- 12. Click the **Grouping** switch to activate it. In the drop-down field, Morningstar Category should already be selected.
- 13. Click Apply.



14. In the upper-right corner of the Peer Analytics panel, click **Hide Peer Analytics**. You can now see the funds with the highest Active Share Score at the top of each category.



Nest Data Points Together Overview

Nest Data Points Together

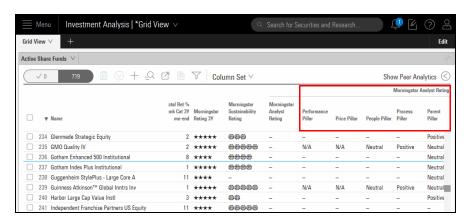
While building column sets in these exercises, you may have noticed that many common, related data points repeat the same information in their column header. This takes up unnecessary space on the screen. Fortunately, you can address this issue by using a feature called "nesting."

Nesting combines information from common data points under a single, shared header. This allows you to see more data points at once on the screen.

<u></u> <u>6</u> 3 2 Investment Analysis | *Grid View > Edit Grid View ∨ + - 2 2 Y Show Peer Analytics (Column Set > 234 Glenmede Strategic Equity Positive 1.08 235 GMO Quality IV Positive Neutral 236 Gotham Enhanced 500 Institutional Neutral 237 Gotham Index Plus Institutional 0.99 - 238 Guggenheim StylePlus - Large Core A 0.98 _ Neutral 239 Guinness Atkinson™ Global Inntrs Inv 0.97 N/A N/A Neutra Neutral 240 Harbor Large Cap Value Instl 1.09 -Positive 241 Independent Franchise Partners US Equity 0.98 -242 Janus Henderson Growth And Income D 1.05 Positive

Overview

Notice how much less space is taken up in the bottom image by the same data points when nesting is activated and a common header is applied



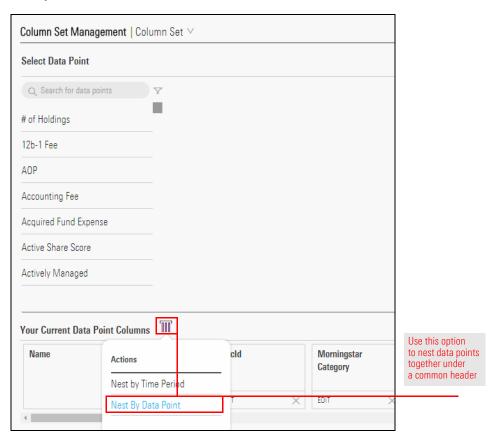


by data point

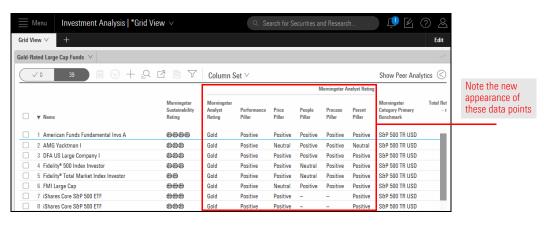
Exercise 8: Nest columns

To nest columns by data point, do the following:

- 1. Open the Gold-Rated Large Cap Funds list.
- 2. Open the Morningstar Analyst Rating Data Points column set.
- 3. **Edit** the column set.
- 4. At the bottom of the Column Set Management window, click the **Nest** icon, then select **Nest By Data Point**.

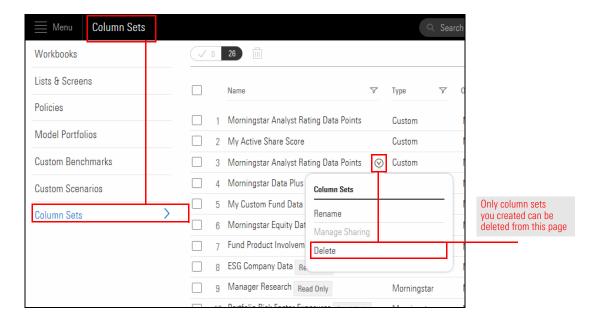


- 5. Click **Done** to close the Column Set Management window.
- 6. Scroll to the right (if needed) to see how the Morningstar Analyst Rating data points have been consolidated under a common header.





Note: To preserve the nesting modification, you need to resave the column set. When saving a custom column set after you make a change, you must give the column set a new name; you cannot simply overwrite the existing custom column set. You can give the updated column set the same name you assigned to the original custom column set, but now you will have two copies of that column set. In this case, consider using the Column Sets page to delete the earlier version you no longer need.

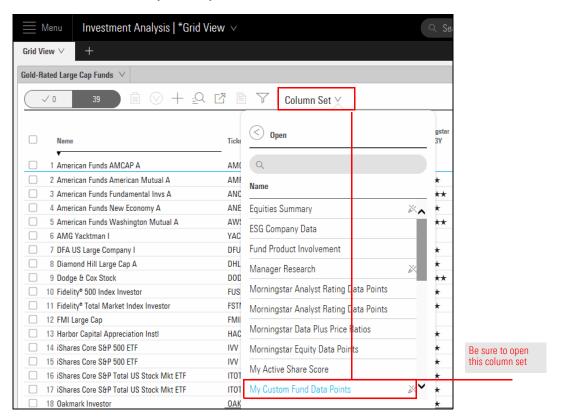




Another option for nesting data points is to group them under a common header for the time period they represent. To see this using the same list you have open, do the following:

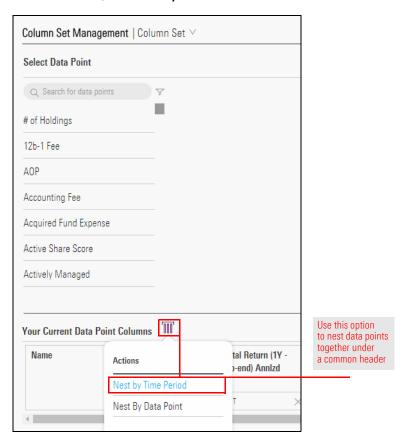
Exercise 9: Nest columns by time period

1. From the Column Set menu, open the My Custom Fund Data Points column set.

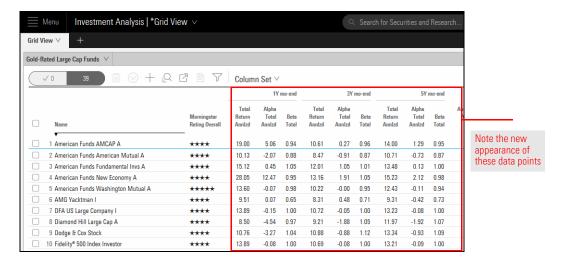


2. **Edit** the column set.

3. Click the Nest icon, then select By Time Period.



4. Click **Done**. Note the consolidated headers, and the various data points appearing under each one.



Note: To preserve the nesting modification, you need to re-save the column set. When saving a custom column set after you make a change, you must give the column set a name; you cannot simply overwrite the existing custom column set. You can give the updated column set the same name you assigned to the original custom column set, but now you will have two copies of that column set. In this case, consider using the File Management page to delete the earlier version you no longer need.

