Creating Searches in Morningstar Direct

Onboarding Guide
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Creating Searches in Morningstar Direct℠

How can Morningstar Direct℠ help users when they need to find a set of securities with certain characteristics, such as funds belonging to a specific Morningstar category, or those with an expense ratio below a particular threshold, or stocks in an industry that also have a P/E ratio below a certain number?

The Search function in Morningstar Direct is the solution to this problem. The Search by Criteria window returns a set of investments currently matching whatever criteria the user defines.

Note: Prior to using this training guide, be sure to read the Quick Start Guide for Morningstar Direct. Also, this guide builds on the exercises offered in Working with Investment Lists in Morningstar Direct.
Creating Searches in Morningstar Direct

What is the difference between a search and a list?

If a search returns a set of investments, and a list is also a set of investments in Morningstar Direct, then what is the difference between the two approaches?

A search offers dynamic results each time it is run. For example, a search for five-star, open-end funds in the Large Value category, would find dozens of funds today, but the specific funds seen could (and likely will) change from month to month (because the Morningstar Rating is updated monthly).

An investment list, however, is static and the items on a list do not change unless items are manually added to or removed from the list. In other words, the dozens of five-star Large Value funds from the search results could be saved to a list, and that list will not change unless items are added to it, or removed from it. To learn more about creating lists, see Working with Investment Lists in Morningstar Direct.

Searches can be created (or retrieved) from the following modules:

- Local Databases
- Global Databases
- Performance Reporting
- Portfolio Management
- Portfolio Analysis, and
- Workspace.

In which module should a search be created? This depends, in part, on what is being searched for. For example, if only one type of investment available for sale in your country needs to be found, then create that search from the Local Databases module.
However, if a search needs to consider both open-end funds and exchange-traded funds, use either the Workspace or Performance Reporting module to complete that search.

Finally, if the ultimate goal is not simply to generate a set of results from a search, but to analyze the results by grouping investments, comparing them to benchmarks, and applying conditional formatting, the search should be created from the Performance Reporting module.

The following exercises offer practice in leveraging the advantages and possible limitations of a search created in various areas of Morningstar Direct.
Working with Simple Searches

In a sense, all searches are created equal. No matter how many criteria are selected or how they are ordered in the Search by Criteria window, each search requires the following actions:

- Select a field name (i.e., a data point) to evaluate
- Choose an operator (=, <, >, etc.) for the field's value, and
- Assign a value to the field; this could be a number or a text label.

For example, a very basic search to find funds in the Large Value category would use the following criteria:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Operator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morningstar Category</td>
<td>=</td>
<td>Large Value</td>
</tr>
</tbody>
</table>

A search to find funds whose annual net expense ratio is less than or equal to 1.25% would look use the following criteria:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Operator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Net Expense Ratio</td>
<td>&lt;=</td>
<td>1.25</td>
</tr>
</tbody>
</table>

This section offers practice with creating some relatively simple searches, as well as learning how to save and retrieve searches for later use.

In a word, no. While the Search by Criteria window can be used to look for items by name or ticker symbol when those values are known, this action takes an extraordinarily long time to complete. The number of clicks involved is not worth the effort.

Instead, create a list of known investments from the Workspace module. For details on how to create lists, please see Working with Investment Lists in Morningstar Direct.
Exercise 1: Create a search from the Local Databases module

A search created from the Local Databases module is effectively building on a search that already exists. For example, for users in the United States, when the Open End Funds page is selected in the Local Databases module and the United States Mutual Funds link is selected (see screen shot after step 2 below), this is a search result screening for open-end funds for sale in the U.S.

In this first exercise, U.S. Large Value funds will be found. Do the following:

1. From the left-hand navigation pane, select the Local Databases module.
2. Click the Open End Funds page.
3. Click the link for United States Mutual Funds. The database opens.
4. From the toolbar above the spreadsheet view, click the Search icon. The Search by Criteria window opens.
5. Click in the **Field Name** cell for the row 1, and select **Morningstar Category**. The Operator cell in the first row defaults to `=`.

6. Click the **Value** cell in the first row. Note that the categories are listed alphabetically.

7. **Scroll** down and click **Large Value**.

8. To preview how many investments meet the criterion, click the **Run Search** button.
9. To view the results of the search in the grid view, click **OK**. In each row, take note of what is shown under the Morningstar Category column, and note the Total: number of investments showing in the bottom-left corner of the grid view.
Saving a search precludes a user from having to re-enter the criteria again and again for those searches used frequently. Once saved, a search is found under the Search Criteria folder from the Workspace tab, or it can be opened from the Search window itself in other modules. To save a search, do the following:

1. The Open End Funds universe should still be selected within the Local Databases module, with United States Mutual Funds showing. From the toolbar above the grid view, click the Search icon. The Search by Criteria window opens, and the criterion entered earlier should still be showing.

2. From the top of the Search by Criteria window, click the Save As icon. The Save As dialog box opens.
3. In the Name field, type Large Value.

4. Click OK to close the dialog box.

5. Click OK to close the Search by Criteria window. The saved search can be opened from the Search by Criteria window, or by going to the Workspace module and selecting the My Searches page.

Creating the search in Exercise 1 changed the data universe (Open End Funds) selected when the exercise began. Now, instead of seeing all open end funds, only open end funds in the Large Value category are seen. To reset the universe and return to seeing all open end funds with one click, do the following:

From the toolbar above the spreadsheet view, click the name of the universe, in this case: United States Mutual Funds.
Once saved, a search is found under the Search Criteria folder in the Workspace module. Alternatively, a saved search can be opened from the Search by Criteria window itself anywhere it is accessed in another module, such as the Workspace or Performance Reporting modules.

To open a saved search from the Local Databases module, do the following:

1. The Open End Funds universe should still be selected within the Local Databases module, with United States Mutual Funds showing. From the toolbar above the spreadsheet area, click the Search icon. The Search by Criteria window opens.

2. Click the Open icon. The Open From dialog box opens.

3. Click Large Value, then click OK to close the Open From dialog box.

4. Click OK on the Search by Criteria window to execute the search.
To open a saved search from the Workspace module, do the following:

1. From the left-hand navigation pane, select the **Workspace** module.

2. Under the **Search Criteria** folder, select **My Search Criteria**. If the exercises in the *Working with Investment Lists in Morningstar Direct* guide were completed, the Small Value Funds search created and saved as part of that work is seen here. The Small Value Funds search did not appear in the previous set of steps (where a saved search was opened from the Local Databases module) because the Small Value Funds search considered both Open End Mutual Funds and Exchange-Traded Funds, and the search in the Local Databases module looks only for Open End Mutual Funds.

Therefore, when opening a search from the Search by Criteria window in the Local Databases (or Global Databases) module searches including other investment types cannot be seen.

3. **Double-click** the **Large Value** item to open it. Note that the spreadsheet view opens with the results, without first showing the Search window.
So far, the exercises in this guide have dealt with a search looking for one criterion only: Large Value funds. In practice, searches will almost always contain multiple criteria, so this exercise explores adding criteria to a search.

When the Large Value funds search from Exercise 1 was run, multiple instances of the same funds appeared in the results, rather than just a single instance of each fund. To see only one instance of a fund, a few options exist. For instance, a search could look for only a certain share class of a fund, such as the A share.

However, because not all funds have an A share class, using this as an additional criterion would eliminate any funds from a search without this feature. Instead, a criterion called Oldest Share Class can be used. Oldest Share Class finds only the original share class for each fund included in a search.

Start by opening the search saved in Exercise 2, then build on it. Do the following:

1. Select the Local Databases module, and open the United States Mutual Funds universe. From the toolbar above the spreadsheet area, click the Search icon. The Search window opens.
2. Click the Open icon. The Open From dialog box opens.

Use this icon to recall a saved search.
3. Click **Large Value**, then click **OK** to close the Open From dialog box.

![Open From dialog box](image)

Be sure to select the correct search from this dialog box.

4. In the Search by Criteria window, click **Run Search**, and take note of the number of items found.

5. Click in the **Field Name** cell for the second row, and scroll down until **Oldest Share Class** can be selected. The Operator cell in the second row defaults to =.

   Note: As soon as the Field Name cell for row 2 was clicked, the word “And” appeared in the Rel(ationship) column. This means both of these criteria (in rows 1 and 2) must be true in order for a fund to be returned by the search. Also, rather than scrolling down to find a criterion, another option is to type the word **Old**, and the cursor would jump to find Oldest Share Class.

6. Click in the **Value** cell for row 2 and select **Yes**.

![Search by Criteria window](image)

Note the values in these fields.

7. Click **Run Search** again, and note the number of funds that are now found.
8. Two criteria should now appear in the search for Large Value funds. To re-save the search to reflect this change, click **Save As**. The Save As dialog box opens.

9. Under the Existing Searches area, **double-click Large Value**; this populates its value in the Name field.

![Save As dialog box]

Double-click the name of an existing search to override that item with the current content in the Search by Criteria window.

10. Click **OK**.

11. When the overwrite confirmation message opens, click **OK**. Keep the Search by Criteria window open for the next exercise.
By default, the Search by Criteria window shows the available search criteria by grouping data points into categories. These categories are identical to the pre-built views available in the Local Databases grid view. If the category (or view) a data point appears in is known, it’s easy to find that field for inclusion in a search. Note that some fields, such as Ticker or Morningstar Rating, appear in more than one search category (and pre-built view).

So far, the two criteria (Morningstar Category and Oldest Share Class) used in creating searches have appeared in the default Snapshot category, which is expanded by default when the Search by Criteria window is opened. Seeing fields grouped by category is the default setting when working with the Search by Criteria window.

While seeing the Snapshot category expanded by default is convenient for selecting the most popular fields being sought (which is the intent of the Snapshot view/category), this category does not allow users to access all of the criteria that may be needed for every search. For example, what if the need is to eliminate any fund from a search not open to new investors? No criterion exists for “Open to New Investors.” Instead, an alternative approach needs to be taken in order to see these funds. Specifically, the search needs to look for those instances where funds have not been closed to new investors.
To find funds still open to new investors, do the following:

1. The Search by Criteria window should still be open, with the criteria from the Large Value search still displayed. (If not, open the saved search now.)

2. In row 3, click in the Field Name cell.
   - Note: Again, the word “And” appears in the Rel column for row 3.

3. Scroll up to the top of the Field Name list, and collapse the Snapshot category by clicking once on the icon to the left of its name.

4. Click the icon to the left of the Operations category to expand it.
5. **Scroll down** in the Operations category and click **Closed to New Inv**.

![Screenshot showing the Operations category with the field Closed to New Inv highlighted.](image)

The field appears under the Operations category.

6. In the **Operator** cell for row 3, select **Not =**.

7. In the **Value** cell for row 3, select **Yes**.

![Screenshot showing the search criteria with Closed to New Inv in row 3 highlighted.](image)

Note the values for this row.

8. Click **Run Search**. The number of items found now reflects the inclusion of this additional criterion. Because the Relationship column for all three rows is "And," all three criteria must be true for a fund in order for it to be found by the search.

9. Re-save the search again to include this latest change. Click the **Save As** icon. The Save As dialog box opens.

10. Under the Existing Searches area, **double-click Large Value**; this populates its value in the Name field.

11. Click **OK** to close the Save As dialog box.

12. When the overwrite confirmation message opens, click **OK**. Keep the Search by Criteria window open for the next exercise.
By default, the Search by Criteria window allows users to select criteria based on the category each data point is assigned to. This makes finding a particular data point easy, as long as its known under which category each one is found. What happens, though, when this isn’t known? Rather than waste a lot of time expanding, scrolling, and collapsing categories to find a data point, it will be faster to see all fields listed alphabetically, regardless of the category in which it appears.

To find and select a data point by name, do the following:

1. The Search by Criteria window should still be open, with the criteria from the Large Value search still displayed. (If not, open the saved search now.)
2. In the bottom-left corner of the Search by Criteria window, select the option for **Alphabetically**.

![Select this option to see all criteria at once.](image.png)
3. In row 4, click in the **Field Name** cell. All criteria are now listed alphabetically.

   Note: Again, the word “And” appears in the Rel column for row 4.

   ![Image showing the Field Name cell with data points listed alphabetically]

4. Type **Up**. The list of data points automatically jumps to Upside Capture Ratio 1 Yr (Mo-End). Click **Upside Capture Ratio 1 Yr (Mo-End)**.

   ![Image showing the data points being sorted alphabetically]

5. In the **Operator** cell for row 4, select **>=**.
6. In the **Value** field for row 4, enter **100**. This line now looks for only those funds achieving at least 100% of the upside of the market over the past year.

7. Click **Run Search**.

8. Click the **Save As** icon. The Save As dialog box opens.

9. Under the Existing Searches area, double-click **Large Value**; this populates its value in the Name field.

10. Click **OK** to close the Save As dialog box.

11. When the overwrite confirmation message opens, click **OK**. Keep the Search by Criteria window open for the next exercise.
When searching for only one instance of a fund, look for one of the following options:

- 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.

The first example has already been explored. The second example is achieved simply by selecting the Share Class Type data point, then choosing the appropriate value. When searching for only the cheapest share class for a fund, however, the first step is to set the proper user preference from the File menu because no field exists to search on called “Cheapest Share Class.” Once the correct user preference is set, a check box on the Search by Criteria window can be used to activate it and make it part of a search.

To create a user preference prioritizing the cheapest share class of a fund (over other share classes), do the following:

1. On the menu bar at the top of the Morningstar Direct window, from the File menu, select 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 element takes precedence when conducting a search.

4. Be sure the word **Lowest** appears in the Choose column.

5. Click **OK**. In the next exercise, this setting will be applied to a search.
In this exercise, large growth funds (both open-end funds and ETFs) meeting the following criteria will be found:

- 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
- a Downside Capture Ratio below 100 for the five-year period, and
- have been around for at least five years.

Because both open end funds and exchange-traded funds are being sought at once, this search should be created from the Workspace module, where a search can look across multiple universes simultaneously. Additionally, the following exercise uses a check box on the Search by Criteria window that heretofore has not been used.

To create this search in the Workspace module, do the following:

1. In Morningstar Direct, select the **Workspace** tab.
2. Under the **Search Criteria** folder, select **My Search Criteria**.
3. From the toolbar above the grid view, select **New > Advanced Search > Funds (Open End and Exchange-Traded Funds)**. The Search by Criteria window opens.
4. Set the criteria as shown in the following table. At the bottom of the Search by Criteria window, be sure to check the checkbox for **User Defined Primary Class Only**.

<table>
<thead>
<tr>
<th>Rel</th>
<th>Field Name</th>
<th>Operator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Morningstar Category</td>
<td>=</td>
<td>US Large Growth</td>
</tr>
<tr>
<td>And</td>
<td>Annual Report Net Expense Ratio</td>
<td>&lt;</td>
<td>CAT AVG</td>
</tr>
<tr>
<td>And</td>
<td>Closed to New Inv</td>
<td>Not=</td>
<td>Yes</td>
</tr>
<tr>
<td>And</td>
<td>Sharpe Ratio 5 Yr (Mo-End)</td>
<td>&gt;</td>
<td>CAT AVG</td>
</tr>
<tr>
<td>And</td>
<td>Downside Capture Ratio 5 Yr (Mo-End)</td>
<td>&lt;</td>
<td>100</td>
</tr>
<tr>
<td>And</td>
<td>Inception Date</td>
<td>&lt;=</td>
<td>1/1/2014*</td>
</tr>
</tbody>
</table>

*Note: Change this date value to the previous month-end period from five years ago. When using date fields, note that < means “before,” while > means “after.”

5. Click **Save As**.

6. Name the search **Large Growth Watch List**.

7. Click **Run Search**.

   *Note: The number shown here does not reflect those funds to be eliminated when the User Defined Primary Class rule is applied. This reduction is seen only after the Search by Criteria window is closed.*

8. Click **OK** to close the Search by Criteria window.

9. Take note of the number of funds shown in the grid view. How does this compare to the number seen after clicking Run Search in step 7? Note, too, that only one share class of a fund is showing, although different share class types are represented.
A simple search uses the same relationship (namely, “And”) between all rows, no matter how many criteria are included in the search. The following are some additional notes to reflect on when creating simple searches:

- Searches can be created in Morningstar Direct from the Local Databases, Global Databases, Workspace, Performance Reporting, and other modules, depending on the need.

- Users can select search criteria fields within a pre-built category, or by seeing them listed alphabetically.

- When looking for data points alphabetically, type the beginning of a data point’s name to jump to that spot in the list.

- Fields taking a numeric value, such as Annual Report Net Expense Ratio, can often be entered either as a number or as a comparison to the category average.

- Each time a criterion is added to a search, click the Run Search button to ensure it does not turn out that 0 results are found. If this happens, it indicates a parameter of the search needs to be changed.

- Searches can be saved, to keep users from having to re-enter the same criteria over and over, but remember that the results seen each time a saved search is opened could change.

- Saved searches are found under the Workspace module (on the My Searches page), and these saved search files can be shared with or sent to other Morningstar Direct users, just as with lists.

- Use the User Defined Primary preference (available from the File menu) to include in a search an additional layer to eliminate all but one type of share class.
Creating Complex Searches

Thus far, the searches created have been fairly simple. Although multiple criteria have been used, all of the rows in the Search by Criteria window are linked by the “And” relationship. At times, a more sophisticated search may be needed where the relationship between rows is more complicated and additional capabilities of the Search by Criteria window are needed. This section covers the following topics:

- using parentheses within the Search by Criteria window to create complex searches
- inserting additional rows into an existing search, and
- monitoring the relationship between rows as a complex search is built.

The search so far looks at the Large Value category for the oldest share class of open-end funds, still open to new investors, with a 1-year upside capture ratio of at least 100%. What if the goal is to see funds matching these criteria not just in the Large Value category, but also in the Large Blend and Large Growth categories? This can be done by building on the saved search, rather than creating three separate searches. Do the following:

1. From the left-hand navigation pane, select the Local Databases module.
2. If needed, select the Open End Funds page.
3. Click the link for United States Mutual Funds. The database opens.

Exercise 10: Create a search across multiple Morningstar categories
4. From the toolbar above the spreadsheet view, click the **Search** icon. The Search by Criteria window opens.

5. Click the **Open** icon. The Open From dialog box opens.
6. Click **Large Value**, then click **OK** to close the Open From dialog box.

7. The next step is to insert a new row. An insertion always goes above the selected row. To insert a row between rows 1 and 2, select the **checkbox** to the left of row 2.
8. From the toolbar, click the Insert icon. A blank row is inserted between rows 1 and 2.

9. In new row (2), click the Rel column, then select Repeat. The data from the row above is copied into row 2.
10. The Field Name and Operator cells for row 2 should stay the same. Click the Value cell for row 2, and select Large Blend.

11. Repeat steps 6–10 to insert another new row for Large Growth funds.

12. Click Run Search. The number of funds returned seems unexpectedly high. This indicates the search needs modification. Specifically, the first three lines of the search need to be encapsulated in parentheses, to tell the system to consider them as one object. Otherwise, the system searches for any Large Value fund, or any Large Growth fund, or the oldest share class of Large Blend funds still open to new investors with an upside capture ratio of at least 100%.
13. In the ( cell of row 1, type (.

15. Click Run Search. Note the much lower number of funds returned.
16. Save this search as a new item. Click the Save As icon.
17. In the Name field, type Open Large Cap Funds.

18. Click OK to close the Save As dialog box.
19. Click OK to close the Search by Criteria window.
Creating Complex Searches

Exercise 11: Create two searches at once

The last exercise showed how to use a set of parentheses to encapsulate a single set of criteria. What if the goal is to look for two separate sets of data at once? For example, imagine the need is to find value-oriented funds with a P/E ratio of no more than 17, and growth-oriented funds that have a P/E ratio of at least 17? This type of search requires multiple instances of parentheses.

To create two searches at once, do the following:

1. From the left-hand navigation pane, click the Workspace module.
2. Under the Search Criteria folder, select My Search Criteria.
3. From the toolbar above the grid view, select New > Advanced Search > Funds (Open End and Exchange Traded Funds). The Search by Criteria window opens.
4. **Create** a search with the following criteria:

Note: Remember to use the Repeat option from the Rel column to avoid having to select the same field name multiple times. Selecting the Alphabetically button in the lower-left corner of the dialog box can help find the criteria more quickly.

<table>
<thead>
<tr>
<th>Rel</th>
<th>Field Name</th>
<th>Operator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>Morningstar Category</td>
<td>=</td>
<td>U.S. &gt; Large Value</td>
</tr>
<tr>
<td>Or</td>
<td>Morningstar Category</td>
<td>=</td>
<td>U.S. &gt; Mid-Cap Value</td>
</tr>
<tr>
<td>Or</td>
<td>Morningstar Category</td>
<td>=</td>
<td>U.S. &gt; Small Value</td>
</tr>
<tr>
<td>And</td>
<td>P/E Ratio TTM (Long)</td>
<td>&lt;=</td>
<td>17</td>
</tr>
<tr>
<td>Or</td>
<td>Morningstar Category</td>
<td>=</td>
<td>U.S. &gt; Large Growth</td>
</tr>
<tr>
<td>Or</td>
<td>Morningstar Category</td>
<td>=</td>
<td>U.S. &gt; Mid-Cap Growth</td>
</tr>
<tr>
<td>Or</td>
<td>Morningstar Category</td>
<td>=</td>
<td>U.S. &gt; Small Growth</td>
</tr>
<tr>
<td>And</td>
<td>P/E Ratio (TTM) (Long)</td>
<td>&gt;</td>
<td>17</td>
</tr>
<tr>
<td>And</td>
<td>Oldest Share Class</td>
<td>=</td>
<td>Yes</td>
</tr>
</tbody>
</table>

5. Click the **Run Search** button, to see how many funds match the search.
6. Click the **Save As** icon. The Save As dialog box opens.
7. In the **Name** field, type **Multiple Searches**.
8. Click **OK** to close the Save As dialog box.
9. Click **OK** to close the Search by Criteria window.

Note: In the search results (seen in the grid view), check your work by sorting on the Morningstar Category column (click once on a column’s header to sort by that column), and also by examining the P/E Ratio (TTM) (Long) statistic, which is available from the Equity Port Stats (Long) view.
An advanced search uses relationships (And, Or) between rows, and can also include the use of parentheses. When creating advanced searches, keep in mind the following additional notes:

- When the same Field Name is used for multiple consecutive rows, but a different Value, encapsulate the rows with parentheses, and use “Or” as the Rel(ationship) among them. In the row for the next criterion, remember to change the Rel column to “And.”

- Selecting “Repeat” from the Rel column is an easy way to copy data from the row above, and saves a few clicks from making a selection for every cell in a row.

- Criteria can be nested in multiple levels through the proper use of both parentheses and the relationship between rows.

- Rows can be inserted between data points in the Search by Criteria window; remember that the inserted row appears above the selected row.
Additional Practice Exercises

The following exercises challenge you to build searches within Morningstar Direct on your own. Can you select the correct data points, relationships, operators, and values, and use parentheses correctly when needed? A link to the solution for each exercise is also provided.

Exercise 12: Find passively managed funds in a Morningstar Category

How many passively managed open-end funds and ETFs in the Mid-Cap Value category are for sale in the U.S.? Only one instance of each fund needs to be shown. What should the Search by Criteria window look like for this search? The following hints will help with this exercise:

1. Create the search from the Workspace module.
2. Search within the Funds (Open End and Exchange-Traded Funds) universe.
3. To find passive funds, opt to see the criteria listed alphabetically, and look for a field called “Index Fund.”

Now check your work: Solution to Exercise 12.

Exercise 13: Find the annual return values for Morningstar Stock Sector indexes

Morningstar divides stocks into 11 sectors and three Super Sectors. What are the Total Return 1-Yr (Mo-End) values for the Total Return series of Morningstar Indexes based on the Morningstar Stock Sectors? The following hints will help with this exercise:

1. The search can be created from the Market Indexes universe under the Local Databases module.
2. The Series Name for the indexes you are searching for is Morningstar US Sector.
3. Total Return indexes can be found by looking for Return Type = Total Return.
4. Note that the search results will encompass the indexes tied to both the Morningstar stock sectors, and the Super Sectors, as well as certain specialty sector indexes.
5. The one-year return values can be seen from the pre-built Returns (Month-End) view.

Now check your work: Solution to Exercise 13.
How many separate accounts or collective investment trusts (CITs) in the Diversified Emerging Markets or Emerging Markets Bond institutional categories self-identify as sustainable funds?

Note: The Morningstar Institutional Categories were launched in May 2009 in response to feedback from institutional clients of Morningstar. They felt the Morningstar Categories are typically too broad to support their business processes, such as manager compensation discussions and expense peer grouping. The Morningstar Institutional Categories were developed to address those needs by using more granular definitions to assign portfolios to peer groups. The result is a system with many more categories that more thoroughly identify distinct investment strategies.

The Morningstar Institutional Categories allocate portfolios into peer groups using the same holdings-based methodology already employed by the Morningstar Categories, which were introduced in 1996. The two structures are also parallel in that one category is assigned to each portfolio in the managed funds database at Morningstar. The key difference is that the Institutional Categories have narrower parameters, allowing for more sophisticated and detailed peer group comparisons. This new system is intended to help institutional investors identify true peers, build more thoroughly diversified portfolios, and gain more insight into an individual portfolio’s strategy.

The following hints will help with this exercise:

1. Because the search involves two distinct investment universes, it should not be created from the Local Databases module.

2. When looking for the Diversified Emerging Markets and Emerging Markets Bond institutional category values, be sure to select Morningstar Institutional Category as the Field Name.

3. Remember to use parentheses to enclose multiple criteria that have the same Field Name, but different Values, and use Or as the Relationship between those rows.

4. The Sustainable Investment - Overall criterion can be found under the Sustainability category grouping.

Now check your work: Solution to Exercise 14.
For Exercise 12, the Search by Criteria window should look like the following:

To reproduce this search, do the following:

1. From the left-hand navigation pane, click the **Workspace** module.
2. Under the **Search Criteria** folder, select **My Search Criteria**.
3. From the toolbar above the grid view, select **New > Advanced Search > Funds (Open End and Exchange-Traded Funds)**. The Search by Criteria window opens.

Be sure to search within this universe from the **Workspace** module.
4. **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.

<table>
<thead>
<tr>
<th>Rel</th>
<th>Field Name</th>
<th>Operator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>Morningstar Category</td>
<td>=</td>
<td>U.S. &gt; Mid-Cap Value</td>
</tr>
<tr>
<td>And</td>
<td>Index Fund</td>
<td>=</td>
<td>Yes</td>
</tr>
<tr>
<td>And</td>
<td>Oldest Share Class</td>
<td>=</td>
<td>Yes</td>
</tr>
</tbody>
</table>

5. Click **OK**.
For Exercise 13, the Search by Criteria window should look like the following:

The following results should be seen:

Note: The exact market return values you see will differ from those shown here.
To see these same results, do the following:

1. In the left-hand navigation pane, select the **Local Databases** module.
2. Click the **Market Indexes** page.
3. Under the Morningstar-defined Universes list, click the **Global Indexes in USD** universe.
4. From the toolbar above the grid view, click the **Search** icon. The search by criteria window opens.
5. **Create** a search with the following criteria:

<table>
<thead>
<tr>
<th>Rel</th>
<th>Field Name</th>
<th>Operator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Series Name</td>
<td>=</td>
<td>Morningstar US Sector</td>
</tr>
<tr>
<td>And</td>
<td>Return Type</td>
<td>=</td>
<td>Total Return</td>
</tr>
</tbody>
</table>

6. From the View drop-down field, select **Returns (Month End)**. Scroll right to see the values in the Total Return 1 Yr (Mo-End) column.
For Exercise 14, the Search by Criteria window should look like the following:

To see these same results, do the following:

1. From the left-hand navigation pane, click the **Workspace** module.
2. Under the **Search Criteria** folder, select **My Search Criteria**.
3. From the toolbar above the grid view, select **New > Advanced Search > All Managed Investments**. The Search by Criteria window opens.
4. **Create** a search with the following criteria:

   - **Note:** Remember to use the **Repeat** option from the **Rel** column to avoid having to select the same Field Name multiple times. Selecting the **Alphabetically** button in the lower-left corner of the dialog box can help find the criteria more quickly.

<table>
<thead>
<tr>
<th>Rel</th>
<th>Field Name</th>
<th>Operator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>Investment Type</td>
<td>=</td>
<td>Collective Investment Trusts</td>
</tr>
<tr>
<td>Or</td>
<td>Investment Type</td>
<td>=</td>
<td>Separate Account</td>
</tr>
<tr>
<td>And</td>
<td>Morningstar Institutional Category</td>
<td>=</td>
<td>Diversified Emerging Markets</td>
</tr>
<tr>
<td>Or</td>
<td>Morningstar Institutional Category</td>
<td>=</td>
<td>Emerging Markets Bond</td>
</tr>
<tr>
<td>And</td>
<td>Sustainable Investment - Overall</td>
<td>=</td>
<td>Yes</td>
</tr>
</tbody>
</table>

   Your Search by Criteria window should reflect this image.

5. Click the **Run Search** button, to see how many investments match the search.
6. Click the **Save As** icon. The Save As dialog box opens.
7. In the Name field, type **Sustainable Investment CITs/SAs**.
8. Click **OK** to close the Save As dialog box.
9. Click **OK** to close the Search by Criteria window.