Creating Searches in Morningstar Direct

Onboarding Guide



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Creating Searches in Morningstar DirectSM

How can Morningstar DirectSM 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.

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		Private Fund		□ 17	Essex Property Trust Inc		ESS	0.9	9 ***		1.81	9.00	11.29
	▼≣ St		_	□ 18	Extra Space Storage Inc		EXR	0.8	7 ***		3.48	39.23	23.96
	l ⊫ Bo	E Stocks		☐ 19	General Electric Co		GE	0.9	9 ***		5.54	8.80	11.18
		vnos vnership Analvsis		20	General Mills Inc		GIS	1.0	2 ***		5.42	9.71	11.20

Overview

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.

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What is the difference between a search and a list?

How do searches differ in various parts of Morningstar Direct?

The highlighted modules indicate modules in Morningstar Direct where a search can be created or retrieved.

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:

- JIIS.
- 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:

Field Name	Operator	Value
Morningstar Category	=	Large Value

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

Field Name	Operator	Value
Annual Net Expense Ratio	<=	1.25

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.

Should I create a search to look for investments by name or ticker symbol? 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.

Exercise 1: Create a search from the Local Databases module

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.

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4. From the toolbar above the spreadsheet view, click the **Search** icon. The Search by Criteria window opens.

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Closed End Funds	□ 3	13	290 Con	vertible Sec	urities I		TNFIX	Con	vertibles	Convertibl	es	US OE Convert	ibles	
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5. Click in the **Field Name** cell for the row 1, and select **Morningstar Category**. The Operator cell in the first row defaults to =.

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View Field Name:	Include:	Items Searched:	Items Found:	Run Search	
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Help			[OK Cancel	

- 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.

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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.

Home	Open E	nd Funds United States Mutual Funds					
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Local Databases	_	Name	Ticker	Global Broad	Global	Morningstar Category	
▼ ■ Funds/Managed Products				Category Group	Category		
Fund Analysis/News		AB Equity Income A	AUIAX	Equity	US Equity Large Cap Value	US Fund Large Value	
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Exchange-Traded Fi	□ 6	AB Equity Income K	AUIKX	Equity	US Equity Large Cap Value	US Fund Large Value	uns column.
Hedge Funds		AB Equity Income R	AUIRX	Equity	US Equity Large Cap Value	US Fund Large Value	
Money Market Fund Open End Funds		AB Equity Income Z	AUIZX	Equity	US Equity Large Cap Value	US Fund Large Value	
European Pension/L		AB Relative Value A	CABDX	Equity	US Equity Large Cap Value	US Fund Large Value	
Insurance and Pens		AB Relative Value Advisor	CBBYX	Equity	US Equity Large Cap Value	US Fund Large Value	-
UK Life and Pension		AB Relative Value B	CBBDX	Equity	US Equity Large Cap Value	US Fund Large Value	
Variable Annuities	□ 11 □ 12	AB Relative Value D	CBBCX	Equity	US Equity Large Cap Value	US Fund Large Value	
Variable Annuity Su	T 13	AB Relative Value C	CBBIX	Equity	US Equity Large Cap Value	US Fund Large Value	
🗉 Variable Life	T 14	AB Relative Value I AB Relative Value K	CBBIX	Equity	US Equity Large Cap Value	US Fund Large Value	
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Separate Accounts/	□ 15 □ 16	AB Relative Value R AB Relative Value Z	CBBZX	Equity	US Equity Large Cap Value		
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Private Fund	□ 17 □ 17	AB Value A AB Value Advisor		Equity	US Equity Large Cap Value		
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 Bonds Ownership Analysis 	19	AB Value B	ABVBX	Equity	US Equity Large Cap Value	US Fund Large Value	
Economics	20	AB Value C	ABVCX	Equity	US Equity Large Cap Value	US Fund Large Value	
Market Indexes	21	AB Value I	ABVIX	Equity	US Equity Large Cap Value	US Fund Large Value	
	22	AB Value K	ABVKX	Equity	US Equity Large Cap Value	US Fund Large Value	
	23	AB Value R	ABVRX	Equity	US Equity Large Cap Value	US Fund Large Value	
	24	AIG ESG Dividend A	EDFAX	Equity	US Equity Large Cap Value	US Fund Large Value	
	25	AIG ESG Dividend C	EDFCX	Equity	US Equity Large Cap Value	US Fund Large Value	
	26	AIG ESG Dividend W	EDFWX	Equity	US Equity Large Cap Value	US Fund Large Value	
	27	AIG Focused Dividend Strategy A	FDSAX	Equity	US Equity Large Cap Value	US Fund Large Value	
	28	AIG Focused Dividend Strategy B	FDSBX	Equity	US Equity Large Cap Value	US Fund Large Value	
< >	29	AIG Focused Dividend Strategy C	FDSTX	Equity	US Equity Large Cap Value	US Fund Large Value	
Global Databases	□ 30	AIG Focused Dividend Strategy W	FDSWX	Equity	US Equity Large Cap Value	US Fund Large Value	
Performance Reporting	∏ 31	AIG Select Dividend Growth A	SDVAX	Equity	US Equity Large Cap Value	US Fund Large Value	
	32	AIG Select Dividend Growth C	SDVCX	Equity	US Equity Large Cap Value	US Fund Large Value	The number of
Asset Allocation	33	AIG Select Dividend Growth W	SDVWX	Equity	US Equity Large Cap Value	US Fund Large Value	
Portfolio Management	34	AIG Strategic Value A	SFVAX	Equity	US Equity Large Cap Value	US Fund Large Value	funds matchi
Portfolio Analysis	35	AIG Strategic Value C	SFVTX	Equity	US Equity Large Cap Value	US Fund Large Value	the search
Markets	36	Al Frank Adv	VALAX	Equity	US Equity Large Cap Value	US Fund Large Value	parameters is
	37	Al Frank Dividend Value Adv	VALEX	Equity	US Equity Large Cap Value	US Fund Large Value	shown here.
Asset Flows	-	· · · · · ·	<		· · ·		511011111010.
Presentation Studio							

Exercise 2: Save a search

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:

 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.

<u>F</u> ile <u>N</u> ew Favorites <u>T</u> oo	ls <u>H</u> elp	📺 Price Monitor 🛛 Search fo	or II	n This View	1	
Home	Open B	ind Funds United States I	1utual Funds			
Equity/Credit Research	Action	• View Snapshot	🔹 🔚 Save 🍾	Search	F Edit Da	
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Closed End Funds	□ 3	AB Equity Income B		AUIBX	Equity	
College Saving Plar	4	AB Equity Income C		AUICX	Equity	
College Saving Port	5	AB Equity Income I		AUIIX	Equity	
Exchange-Traded F		AB Equity Income K		AUIKX	Equity	
Hedge Funds	□ 7	AB Equity Income R		AUIRX	Equity	
Money Market Fund Open End Funds	8	AB Equity Income Z		AUIZX	Equity	
European Pension/L		AB Relative Value A		CABDX	Equity	
European Pension/L Insurance and Pension		AB Relative Value Advisor		CBBYX	Equity	
UK Life and Pension		AB Relative Value B		CBBDX	Equity	
Variable Annuities	□ 11 □ 12	AB Relative Value B				
Variable Annuity Su	<u> </u>	AB Relative Value C		CBBCX	Equity	

2. From the top of the Search by Criteria window, click the **Save As** icon. The Save As dialog box opens.

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Rel	(Field Name		Operator	Value)	Click thi to save
1		Morningstar Category		=	Large Value	<u> </u>	
2							
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View Field N	lame:	Include:		Items Searched:	Items Found:	Run Search	
By Categ	ory	Only Surviving Invest	ments	0	-		
	ically	User Defined Primary	Class Only				

3. In the Name field, type Large Value.

Via Save As		
Save As		
Name Existing Searches	Large Value	Enter a name for
Existing Searches		the search here.
	OK Cancel Help	

- 4. Click **OK** to close the dialog box.
- 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:

Exercise 3: Reset a universe after conducting a search

From the toolbar above the spreadsheet view, click the name of the universe, in this case: **United States Mutual Funds**.

🥻 Morningstar Direct						
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Home	Open E	nd Funds United States Mu	tual Funds			
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Local Databases		Name		▲ Ticker	Global Broad Category Group	all investments again in a univer
▼ 🚞 Funds/Managed Products					category croop	uguin in a annoi
Fund Analysis/News	1 1	AB Equity Income A		AUIAX	Equity	
Category/Sector Av Closed End Funds	2	AB Equity Income A Load Waived		AUIAX.lw	Equity	
Closed End Funds College Saving Plan	□ 3	AB Equity Income Advisor		AUIYX	Equity	
College Saving Port	— •	AB Equity Income B		AUIBX	Equity	
Exchange-Traded Fi	5	AB Equity Income C		AUICX	Equity	
🗉 Hedge Funds	□ 6	AB Equity Income I		AUIIX	Equity	
🔟 Money Market Fund	7	AB Equity Income K		AUIKX	Equity	
🗉 Open End Funds	8	AB Equity Income R		AUIRX	Equity	
European Pension/L	2	AB Equity Income Z		AUIZX	Equity	
Insurance and Pens	1 10	AB Growth and Income A		CABDX	Equity	
UK Life and Pension	—	AD Count and to see A Lood M	a hand	CARDY I.	man de la	

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.

Exercise 4: Open a saved search

🚺 Morningstar Direct U	nited States Mutual Funds			- • •	
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Open (Field Name	Operator	Value)	Use this icor to recall a
1	Click here to start a new search			^	saved search
2					
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10					
View Field Name:	Include:	Items Searched:	Items Found:	Run Search	
By Category	Only Surviving Investments	0	-		
O Alphabetically	User Defined Primary Class Only				
Help				OK Cancel	
neip					

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 Exercise1 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.

Field Name Click here to start a new s	earch	Value)	Use this i to recall a
Click here to start a new s	earch			
				saved sea
			Ψ.	
Include:	Items Searched	l: Items Found:	Run Search	
Only Surviving Investme	ents 0	-		
User Defined Primary Cl	ass Only			
	Only Surviving Investme		☑ Only Surviving Investments 0 -	Include: Items Searched: Items Found: Run Search ⑦ Only Surviving Investments 0 - -

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

Exercise 5: Create a simple search with multiple criteria

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

C≇Open ⊒=Inse	t 🗙 Delete 😭 Clear All 🟦 Export 🗸	🕨 PDF 🛛 🖏 Save As	🖾 Feedback		
Rel (Field Name	Operator	Value)	
1	Morningstar Category	=	Large Value	A	
2 And	Oldest Share Class	=	Yes		
3					Note the valu
4					in these fields
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10				-	
View Field Name:	Include:	Items Searched:	Items Found:	Run Search	
By Category	Only Surviving Investments	31154	355	Kun Search	
Alphabetically	User Defined Primary Class Only				
<u> </u>					
Help				OK Cancel	

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	— ×	
Name	Large Value	
Existing Searches	Large Value	Double-click the name of an existing search to override that item with the current content in the Search by Criteria window.
	OK Cancel Help	

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.

Exercise 6: Expand a search to another category



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.

Mor	rningsta	ar Direct Un	ited States M	utual Funds		
i c∌ o)pen]+= Insert	🗙 Delete	🚅 Clear All	î Expo	
	Rel	(Field Name	2		
1			Morningsta	ar Category		
2	And		Oldest Sha	are Class		
3	And		Closed to	All Inv		
4			_₽ Snapshot	:		
5			Name			Click the icon to the
6			Base Cu Virtual C			left of Snapshot to collapse the category.
7			Ticker	JIdSS		
8			ISIN			
9			Global B	road Category	Group	
10			Global C			
			Morning	star Category		

4. Click the icon to the left of the Operations category to expand it.

Mo	rningst	ar Direct Un	ited States Mu	tual Funds		
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	Rel	(Field Name			
1			Morningsta	r Category		
2	And		Oldest Sha	re Class		
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4			Snapshot			
5			Sustainab			
6			Operation	s		Click the icon to th
7			Name Firm Pho	ne		left of Operations t
8 📃			Firm Web	Address		expand the catego
9			Firm Stre	et Address		
10			Firm City	,		
			Eirm Stat	e or Province		

5. Scroll down in the Operations category and click Closed to New Inv.

Morningstar Direct Uni	ited States Mutual Funds				
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Rel (Field Name	Operator	Value)	
1	Morningstar Category	=	Large Value	A	
2 And	Oldest Share Class	=	Yes		
🗐 3 And	Oldest Share Class				
4	Minimum Initial Unit	*			
5 6 7 8 9 10 View Field Name: • By Category • Alphabetically Help	Closed to All Inv Closed to New Inv Minimum Initial Purchase Minimum Initial AIP Minimum Additional Purchase Enhanced Index Fund of Funds Colly Surviving Investments User Defined Primary Class Only	Ttems Searched: 27380	Items Found: 351	Run Search	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.

Mo	rningstar	Direct Un	ited States Mutual Funds				
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	Rel	(Field Name	Operator	Value)	
1			Morningstar Category	=	Large Value	· · · · · · · · · · · · · · · · · · ·	
1 2	And		Oldest Share Class	=	Yes		
3 4 5 6 7 8 9	And		Closed to New Inv	Not=	Yes		Note the values for this row.
6 7							
9							
View By	Field Na Categor phabetica	У	Include:	Items Searched: 31145	Items Found: 351	Run Search	
н	elp					OK Cancel	

- 8. Click **Run Search**. The number of items found now reflects the inclusion of this additional criterion. Because the Rel(ationship) 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.

Exercise 7: Look for a field by name

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**.

(2) Оре	en 📑	+= Insert	🗙 Delete 🛛 🖆 Clear All	🖞 Export 🕶 🔼 P	DF Save As	🖾 Feedback		
]	Rel	(Field Name		Operator	Value)	
1 .			Morningstar Category		=	Large Value		
2	And		Oldest Share Class		=	Yes		
3/	And		Closed to New Inv		Not=	Yes		
4								
5								
6								
7								
8								
9								
10							-	
View Fi			Include: Only Surviving Investment	nents	Items Searched: 27380	Items Found: 336	Run Search	
Alpha	abetical	lly	User Defined Primary (Class Only				
Help	,						OK Cancel	

- 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.

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R.	2	(Field Name				Operator	Valu	
1	-		Morningstar	Category			=	Larg	
2 Ar	nd		Oldest Shar	e Class			=	Yes	
3 Ar	nd		Closed to N	ew Inv			Not=	Yes	
4 Ar	nd		# Buyers (I	nstitutions)					
5 6 7 8 9 10 View Fiel © By Cat @ Alphat	egory		# Buyer # Buyer # Comp # Comp # Comp # Invest # Invest • Invest	ments in Cate	is) Istitutions) Istitutions) P Accts) P Accts) P Accts) P Accts P Acc	•	Items Searched: 0		The fields all appear in alphabetical order; thos with symbols and numbers at the start of their names appear firs

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)**.

Morningstar Direct Ui					
©⊖Open _=Insert	🗙 Delete 🛛 🖆 Clear All 🛛 🟦 Export 🗸 🖪 F	PDF 🛛 🐂 Save As	🖾 Feedback		
Rel (Field Name	Operator	Value)	
1	Morningstar Category	=	Large Value	·	
2 And	Oldest Share Class	=	Yes		
3 And	Closed to New Inv	Not=	Yes		
🕅 4 And	# Buyers (Mutual Funds)	=			
5 6 7 8 9 10 View Field Name: By Category Ø Alphabetically	US Treasury % (Short) US Treasury TIPS % (Long) US Treasury TIPS % (Long) US Treasury TIPS % (Net) US Treasury TIPS % (Short) Umbrella Upside Capture Ratio 1 Yr (Mo-End) Upside Capture Ratio 1 Yr (Qtr-End) User Defined Primary Class Only	Items Searched: 27380	Items Found: 336	Run Search	As a data poin name is typed the list moves
Help	Oser Denned Frinkry Class Only			OK Cancel	to that locatio

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.

Mor	ningstar D)irect Un	ited States Mutual Funds				
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	Rel	(Field Name	Operator	Value)	
1			Morningstar Category	=	Large Value	^	
2	And		Oldest Share Class	=	Yes		
3	And		Closed to New Inv	Not=	Yes		
E 4	And		Upside Capture Ratio 1 Yr (Mo-End)	>=	100		Note the values
5							for this row.
6							
2 7							
8 🔄							
9							
10						.	
View	Field Nam	ie:	Include:	Items Searched:	Items Found:	Run Search	
💿 Ву	Category		Only Surviving Investments	27380	336		
Alp Alp	habetical	ly	User Defined Primary Class Only				
He	łp					OK Cancel	

- 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 $\boldsymbol{\mathsf{OK}}$ 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.



Exercise 8: Update the system user preferences to find the cheapest share class of a fund

- 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.

Set Us	er Preferences		×							
Set Use	er Preferences									
General Portfolio Management Import Export Return Settings User Defined Primary User Defined Primary Criteria Marce the rules set in the search dialog have been applied, the criteria below will be implemented, in the order chosen, to select only one share class per fund provided the 'User Defined Primary' option is checked. If more than one share class shares the selected preference for the criteria (e.g., more than one share classes the highest management free and/or the oldest inception date) them all those share classes which match the selected preference will be judged using the next criterion (with any share classes that do not match the first preference being discarded). If, for the Currency, Distribution or Institutions criteria, no share classes for the fund match the preference dosen, then none of the share classes should be discarded and so the next criterion is considered. Click this button to move the selected										
Order	r Criteria in order of preference	Choose		item to the top of the list.						
10.001										
1	Annual Report Net Expense Ratio	Lowest	*							
1 2	Annual Report Net Expense Ratio Max Management Fee	Lowest Lowest	×							
1										
1 2	Max Management Fee	Lowest								
1 2 3	Max Management Fee Institutional	Lowest Retail Preferred	<u>^</u>							
1 2 3 4	Max Management Fee Institutional Minimum Investment	Lowest Retail Preferred Lowest	 ▲ ▲ 							
1 2 3 4 5	Max Management Fee Institutional Minimum Investment Performance Start Date	Lowest Retail Preferred Lowest Oldest	 ▲ ▲ 							
1 2 3 4 5 6	Max Management Fee Institutional Minimum Investment Performance Start Date Distribution Status	Lowest Retail Preferred Lowest Oldest Accumulation Preferred	 ▲ ▲ 							

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.



Exercise 9: Create a search by criteria in the Workspace module 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**.

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	<=	1/1/2014*	

*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."

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	Rel	(Field Name	Operator	Value)		inputs shown here
1			Morningstar Category	=	Large Growth			^	
2	And		Annual Report Net Expense Ratio	<	CAT AVG				
3	And		Closed to New Inv	Not=	Yes				
4	And		Sharpe Ratio 5 Yr (Mo-End)	>	CAT AVG				
5	And		Downside Capture Ratio 5 Yr (Mo-End)	<	100				
6	And		Inception Date	<=	1 / 1 /2014	+ -			
7									
8									
9									
10								~	
View	Field Na	me:	Include:	Items Searched:	Items Found:	Run Search			
OB	y Categor	y	Only Surviving Investments	0	-				
	phabetica	ally	User Defined Primary Class Only						Remember to che
									this box as well.
									this box as wen.

- 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.

Final lessons on creating simple searches

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.

Morningstar Direct		
<u>File New Favorites Tools Help</u> III QuoteSpeed Search for	In Securities • Go	
Home Open End Funds		
Equity/Credit Research Welcome, Chad Lowry		
Local Databases Morningstar-defined Universes		
Funds/Managed Products Name	Size	
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Category/Sector Av United States Mutual Funds	31,180	
Closed End Funds		Be sure
College Saving Plar		select th
College Saving Port		correct p and link
Exchange-Traded Fi		und mit
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🔟 Money Market Fund		
🔟 Open End Funds		
European Pension/L		
Insurance and Pens		

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.

10 Morningstar Direct															
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Local Databases	Г	Name					 Ticker 		bal Broad egory Group	Global Categor		Morning	star Catego	Click this icon to ope	en the
▼ ■ Funds/Managed Products								Cau	egory croup	Categor	,			Search by Criteria w	indow
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UK Life and Pension															
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E Separate Accounts/		5													
Unit Investment Tru		6													
Private Fund	1	7													
Stocks	1 1	8													
🕨 🚞 Bonds		9													
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			_												
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5. Click the **Open** icon. The Open From dialog box opens.

Morningstar Direct Un	ited States Mutual Funds				
C∰ Open	🗙 Delete 🛛 🖆 Clear All 🛛 🟦 Export 🕶 🖪	PDF 🔤 Save As	🖾 Feedback		
Open (Field Name	Operator	Value)	Use this icon to recall a
1	Click here to start a new search			<u>^</u>	saved search.
2					
3					
E 4					
5					
6					
7					
8					
9					
10				-	
View Field Name:	Include:	Items Searched:	Items Found:	Run Search	
By Category	Only Surviving Investments	0	-		
Alphabetically	User Defined Primary Class Only				
Help				OK Cancel	

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.

Mo 🚺	rningstar	Direct Un	ited States Mutual Funds				
6	Open]+= Insert	🗙 Delete 🛛 🚽 Clear All 🛛 🟦 Export 🕶 🖪	PDF 🛛 🐂 Save As	🖾 Feedback		
	Rel	(Field Name	Operator	Value)	
1			Morningstar Category	=	Large Value		
V 2	And		Oldest Share Class	=	Yes		
3	And		Closed to New Inv	Not=	Yes		Check the box
4	And		Upside Capture Ratio 1 Yr (Mo-End)	>=	100		below the row
 4 5 6 7 							where a new row should
6							be inserted.
7							De maerteu.
8							
10							
View	Field Na	me:	Include:	Items Searched:	Items Found:	Run Search	
💿 Ву	Catego	ry	Only Surviving Investments	0	-		
© Alı	phabetica	ally	User Defined Primary Class Only				
	elp						
H	зıр					OK Cancel	

8. From the toolbar, click the **Insert** icon. A blank row is inserted between rows 1 and 2.

M	Morningst	ar Direct U	nited States Mutual Funds				
i a	⊖ Open	- Insert	🗙 Delete 🛛 🖆 Clear All 🛛 🟦 Export	🔹 📐 PDF 🛛 🐂 Save As	🖾 Feedback		
	Rel	(Field Name	Operator	Value)	Click this icon to insert a new row
	1		Morningstar Category	=	Large Value	A	above the
V	2 And		Oldest Share Class	=	Yes		highlighted row.
	3 And		Closed to New Inv	Not=	Yes		
	4 And		Upside Capture Ratio 1 Yr (Mo-End)	>=	100		
	5						
	6						
	7						
	8						
	9						
	10						
V	ew Field N	lame:	Include:	Items Searched:	Items Found:	Run Search	
0	By Categ	jory	Only Surviving Investments	0	-		
C	Alphabet	ically	User Defined Primary Class Only				
	Help					OK Cancel	
	neip					Cancer	

9. In new row (2), click the **Rel** column, then select **Repeat**. The data from the row above is copied into row 2.

			ited States Mutual Funds ★ Delete 🔮 Clear All 🟦 Export		W Faadhaal		
¢ €°		insen:					
	Rel	(Field Name	Operator	Value)	
1			Morningstar Category	=	Large Value	<u>^</u>	
2	And						
V 3	And		Oldest Share Class	=	Yes		
4	Or		Cloced to New Inv	Not-	Yee		
5	Repeat		Upside Capture Ratio 1 Yr (Mo-End)	>=	100		Choosing
6 🔄							Repeat copies
7							the content from
8 🔄							the row above.
9							
10							
View	Field Name		Include:	Items Searched:	Items Found:	Run Search	
🔘 Ву	Category		📝 Only Surviving Investments	0	-		
🔘 Alp	habetically		📃 User Defined Primary Class Only				
					r		
He	alp					OK Cancel	
							1

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**.

Mor	ningstar [Direct Un	ited States Mutual Fund	ds						×	
i ⊯o	pen 🔤	+= Insert	X Delete	ar All 🛛 🟦 E	xport 👻 🕨 Pl	OF 🛛 🖏 Save As	🖾 Feedback				
	Rel	(Field Name			Operator	Value)		
1			Morningstar Catego	ory		=	Large Value			•	
2	Or		Morningstar Catego	ory		=	Large Value				
V 3	And		Oldest Share Class			=	Intermediate-Term Bond]		
E 4	And		Closed to New Inv			Not=	Japan Stock	_			
5	And		Upside Capture Ra	tio 1 Yr (Mo-I	End)	>=	Large Blend Large Growth				When a row
6							Large Value	1			is repeated,
7							Latin America Stock				only the Value
8 🔄							Leveraged Net Long				cell needs
9							Long Government				to change.
10							Long-Short Credit	- F		-	to change.
View I	ield Nan	ne:	Include:			Items Searched:	Items Found:	R	un Search		
By	Category	,	🔽 Only Surviving Ir	vestments		0	-		an ocarch		
◎ Alp	habetical	lly	User Defined Pri	mary Class O	nly						
· · ·											
He	Ip							ок	Cancel		
1											

- 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 Blend fund, or the oldest share class of Large Growth funds still open to new investors with an upside capture ratio of at least 100%.

K	Morn	ingstar	Direct Ur	ited States Mutual Funds				
	29 Op	en]+= Insert	🗙 Delete 🛛 🚽 Clear All 🛛 🟦 Export 🕶 🖪	PDF Save As	🖾 Feedback		
		Rel	(Field Name	Operator	Value)	
	1			Morningstar Category	=	Large Value	×	
	2	Or		Morningstar Category	=	Large Blend		
	3	Or		Morningstar Category	=	Large Growth		
V	4	And		Oldest Share Class	=	Yes		This number
		And		Closed to New Inv	Not=	Yes		is far higher
	6	And		Upside Capture Ratio 1 Yr (Mo-End)	>=	100		than expected
	7							based on
	8							the criteria
	9							being used.
	10							
v	iew Fi	eld Na	me:	Include:	Items Searched:	Items Found:	Run Search	
) Ву С	atego	гу	Only Surviving Investments	27353	2818		
0	Alph	abetic	ally	User Defined Primary Class Only				
١.	Help						OK Cancel	
	Help	,					Cancel	

- 13. In the (cell of row 1, type (.
- 14. In the) cell of row 3, type).

M	Morningst	ar Direct Ur	nited States Mutual Funds				
1	9 Open]+= Insert	🗙 Delete 🛛 🖆 Clear All 🛛 🟦 Export 🕶 🔼	PDF 🛛 🐂 Save As	🖾 Feedback		
	Rel	(Field Name	Operator	Value)	
	1	(Morningstar Category	=	Large Value	▲	NL C II
	2 Or		Morningstar Category	=	Large Growth		Note the
	3 Or		Morningstar Category	=	Large Blend)	placement of parentheses.
	4 And		Oldest Share Class	=	Yes		parentneses.
1	5 And		Closed to New Inv	Not=	Yes		
1	6 And		Upside Capture Ratio 1 Yr (Mo-End)	> =	100		
1	7						
1	В						
	9						
	10					.	
	ew Field N		Include: Only Surviving Investments	Items Searched: 27379	Items Found: 2891	Run Search	
	By Categ		User Defined Primary Class Only	2/3/3	2001		
	Alphabet	ically	User Defined Primary Class Only				
	Help					OK Cancel	
							l

- 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.

V Save As		
Save As		
Name Existing Searches	Open Large Cap Funds Large Value	Note the name for the new search.
	OK Cancel Help	

- 18. Click **OK** to close the Save As dialog box.
- 19. Click **OK** to close the Search by Criteria window.

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.

Exercise 11: Create two searches at once

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.
- 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.

Rel	(Field Name	Operator	Value)
	(Morningstar Category	=	U.S. > Large Value	
Or		Morningstar Category	=	U.S. > Mid-Cap Value	
Or		Morningstar Category	=	U.S. > Small Value)
And		P/E Ratio TTM (Long)	<=	17	
Or	(Morningstar Category	=	U.S. > Large Growth	
Or		Morningstar Category	=	U.S. > Mid-Cap Growth	
Or		Morningstar Category	=	U.S. > Small Growth)
And		P/E Ratio (TTM) (Long)	>	17	
And		Oldest Share Class	=	Yes	

r≊o	pen 🗄	+= Insert	🗙 Delete 🛛 🖆 Clear All 🖄 Export 🗸 🚺	PDF 🔤 Save As	🖾 Feedback		
	Rel	(Field Name	Operator	Value)	
1		(Morningstar Category	=	Large Value	A	Your S
2	Or		Morningstar Category	=	Mid-Cap Value		by Crit
3	Or		Morningstar Category	=	Small Value)	window
4	And		P/E Ratio (TTM) (Long)	<=	17		should this im
5	Or	(Morningstar Category	=	Large Growth		1115 1111
6	Or		Morningstar Category	=	Mid-Cap Growth		
7	Or		Morningstar Category	=	Small Growth)	
8	And		P/E Ratio (TTM) (Long)	>	17		
9	And		Oldest Share Class	=	Yes		
10						· ·	
View I	Field Nan	ne:	Include:	Items Searched:	Items Found:	Run Search	
🔘 Ву	Category	1	Only Surviving Investments	256815	1346		
Alp	habetical	lly	User Defined Primary Class Only				
	lo				_	OK Cancel	

- 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.
 - Place 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.

Final lessons on creating advanced searches

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.

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.

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.

Overview

Exercise 12: Find passively managed funds in a Morningstar Category

Exercise 13: Find the annual return values for Morningstar Stock Sector indexes 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 Rel(ationship) 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.

Exercise 14: Find socially responsible separate accounts and CITs

For Exercise 12, the Search by Criteria window should look like the following:

Solution to Exercise 12

1 м	orningsta	r Direct Fu	nds (Open End and Exchange Traded Funds)				De sure te
6	Open]+= Insert	🗙 Delete 🛛 🖆 Clear All 🛛 🟦 Export 🗸	🕨 PDF 🛛 🐂 Save As	🖾 Feedback		Be sure to search within
	Rel	(Field Name	Operator	Value)	this universe from the
1			Morningstar Category	=	Mid-Cap Value	<u> </u>	Workspace
2	And		Index Fund	=	Yes		module.
2 3	And		Oldest Share Class	=	Yes		
2 4 2 5 2 6							
5							
6							
7							
8 🗐							
9							
1	D					T	
	w Field Na		Include:	Items Searched:	Items Found:	Run Search	
() E	By Catego	bry	Only Surviving Investments	256682	25		
A (0)	Iphabeti	cally	User Defined Primary Class Only				
	Help					OK Cancel	

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.
- 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: 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
	Morningstar Category	=	U.S. > Mid-Cap Value
And	Index Fund	=	Yes
And	Oldest Share Class	=	Yes

5. Click **OK**.

For Exercise 13, the Search by Criteria window should look like the following:

Solution to Exercise 13

Mor	ningstar D	irect - Ma	arket Indexes			- • •	De sure te secure
i 🍙 o	pen 3	-Insert	🗙 Delete 🛛 🖆 Clear All 🛛 🟦 Export 🗸 📐	PDF 🛛 🐂 Save As	🖾 Feedback		Be sure to search within this universe
	Rel	(Field Name	Operator	Value)	from the Local Databases module.
1			Series Name	=	Morningstar US Sector	<u> </u>	
2	And		Return Type	=	Total Return		1
3	And		Base Currency	=	US Dollar		1
4							1
5							1
6							1
7							
8							1
9							1
10						.	
	Field Nam		Include:	Items Searched:	Items Found:	Run Search	
-	Category		Only Surviving Investments	76704	19		1
© Alp	habetical	ly	User Defined Primary Class Only				
He	elp				Γ	OK Cancel	
1							

The following results should be seen:

Pote: The exact market return values you see will differ from those shown here.

Home	Market	Indexes Global Indexes in USD				
Equity/Credit Research	Action	View Returns (Month-End) - Save	🎸 Search 📑 Eo	dit Data 🖉 Se	ort 🔍 Locate	
Local Databases		Name	Return Date	Total Ret	Total Ret	Note the view
Funds/Managed Products			(Mo-End)	1 Yr (Mo-End) USD	Annizd 2 Yr (Mo-End) USD	to select to see the return value
Fund Analysis/News Category/Sector Av	1	Morningstar US Bas Mat & Energy TR USD	12/31/2019	16.12	(2.98)	
Closed End Funds	2	Morningstar US Basic Materials TR USD	12/31/2019	26.44	1.68	
College Saving Plan	□ 3	Morningstar US Commun Svc Capped TR USD	12/31/2019	31.70	10.85	
College Saving Port	4	Morningstar US Commun Svc TR USD	12/31/2019	33.56	11.24	
Exchange-Traded FL	5	Morningstar US Consumr Cyclcl TR USD	12/31/2019	27.25	12.85	
🗉 Hedge Funds	6	Morningstar US Consumr Dfnsve TR USD	12/31/2019	27.51	8.07	
🗉 Money Market Fund	7	Morningstar US Cyclcl Sup Sec TR USD	12/31/2019	29.88	10.04	
🗉 Open End Funds	8	Morningstar US Dfnsve Sup Sec TR USD	12/31/2019	23.97	12.06	
European Pension/L	9	Morningstar US Energy Capped TR USD	12/31/2019	10.22	(5.75)	
Insurance and Pens	10	Morningstar US Energy TR USD	12/31/2019	10.03	(5.86)	
UK Life and Pension Variable Annuities	11	Morningstar US Fin Svc & RE TR USD	12/31/2019	32.12	9.74	
Variable Annuities	12	Morningstar US Financial Services TR USD	12/31/2019	33.37	9.62	
Variable Life	13	Morningstar US Healthcare TR USD	12/31/2019	21.77	13.56	
Variable Life Subacc	14	Morningstar US Industrials TR USD	12/31/2019	31.40	7.59	
E Separate Accounts	15	Morningstar US Real Estate TR USD	12/31/2019	27.10	10.37	
E Collective Investme	□ 16	Morningstar US Snstve Sup Sec TR USD	12/31/2019	36.94	12.69	Scroll right to
Models	17	Morningstar US Tech & Commun Svc TR USD	12/31/2019	44.49	18.90	see this column
🗉 Unit Investment Tru	18	Morningstar US Technology TR USD	12/31/2019	46.66	20.32	
Private Fund	∏ 19	Morningstar US Utilities TR USD	12/31/2019	25.12	14.43	
Restricted Investors Stocks						

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.

<u>File N</u> ew Favorites <u>T</u> ool	s <u>H</u> elp 🔟 Price Monitor Search fo		
lome	Market Indexes		
quity/Credit Research	Welcome, Training Morningstar		
ocal Databases	Morningstar-defined University	ses 🔍	
Funds/Managed Products	Name		
Fund Analysis/News	Global Indexes	Size 73,543	
Category/Sector Av	Global Indexes in USD	38,750	
Closed End Funds	Global Indexes in GOD	30,730	Click to ope
College Saving Plan			this univers
College Saving Plan College Saving Port			this univers
Exchange-Traded Fi			
Hedge Funds			
Money Market Fund			
Open End Funds			
European Pension/L			
Insurance and Pens			
UK Life and Pension			
Variable Annuities			
Variable Annuity Su			
🔟 Variable Life			
🔲 Variable Life Subaci			
Separate Accounts/			
🗉 Unit Investment Tru			
Private Fund			
Stocks			
Bonds			
Ownership Analysis			
Economics			1

4. From the toolbar above the grid view, click the **Search** icon. The search by criteria window opens.

<u>F</u> ile <u>N</u> ew Favorites <u>T</u> oo	ls <u>H</u> elp	🔟 Price Monitor Search for	In This View	
ome	Market	Indexes Global Indexes in USD		
quity/Credit Research	Action	🔹 View Returns (Month-End) 🔹 🔚 Save	🎸 Search F Edit Da	Nista tha Isaatian
ocal Databases	Γ	Name	Return Date Base	Note the location where you should b
Funds/Managed Products				before clicking this
E Fund Analysis/News	Γ1	3-Month LIBOR		J
E Category/Sector Av			2/28/2017	
Closed End Funds	2	50%JPM GBI-EM GD and 50%JPM EMBI GD	2/28/2017	
🗉 College Saving Plar	3	ABR Crisis Alpha PR USD	2/28/2017	
College Saving Port		ABR Dynamic Blend Eqt&Volatility PR USD	2/28/2017	
Exchange-Traded Fi	5	Aggressive Non Tax w/ AI	2/28/2017	
🗉 Hedge Funds	□ 6	Aggressive Non Tax w/o AI	2/28/2017	
🗉 Money Market Fund	7	Aggressive NonTax w/ AI	2/28/2017	
Open End Funds	□ 8	Aggressive NonTax w/o AI	2/28/2017	
European Pension/L	□ 9	Aggressive Tax w/ AI	2/28/2017	
Insurance and Pens	□ 10	Aggressive Tax w/ AI RCNT	2/28/2017	
UK Life and Pension	□ 11	Aggressive Tax w/o AI	2/28/2017	
Variable Annuities Variable Annuity Su	□ 12	Aggressive Tax w/o AI RCNT	2/28/2017	
Variable Life	□ 13	Agile Alpha PR USD	2/28/2017	
Variable Life Subace	□ 14	Agile Broad Commodity PR USD	2/28/2017	
Separate Accounts/		Agile Currency PR USD	2/28/2017	
Unit Investment Tru		Agile Emerging Market Equity PR USD	2/28/2017	
Private Fund	□ 17	Agile Global Bond PR USD	2/28/2017	
Stocks	□ ±/ □ 18	Agile Global Dividend & Income PR USD	2/28/2017	
Bonds	□ 10 □ 19	Agile Global Equity PR USD	2/28/2017	
🖿 Ownership Analysis	□ 19 □ 20	Agile Global Equity PR USD	2/28/2017	
Economics	•	-		
🗉 Market Indexes	□ 21 □ 22	Agile Global Tactical PR USD Agile Global TIPs PR USD	2/28/2017 2/28/2017	

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

Rel	Field Name	Operator	Value
	Series Name	=	Morningstar US Sector
And	Return Type	=	Total Return

°€⊘	pen	+= Insert	🗙 Delete 🛛 🖆 Clear All 🛛 🟦 Expo	rt 🔹 📐 PDF 🛛 🖏 Save As	🖾 Feedback		
]	Rel	(Field Name	Operator	Value)	
] 1			Series Name	=	Morningstar US Sector		
2	And		Return Type	=	Total Return		Caroll
3	And		Base Currency	=	US Dollar		Scroll t the top
4							the
5							drop-d
6							list in
] 7							field to
8							make t
9							selecti
10						-	
/iew l	Field Na	me:	Include:	Items Searched:	Items Found:	Run Search	
By Category		ry	Only Surviving Investments	76704	19		
) Alp	habetic	ally	User Defined Primary Class Only				
					_		

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.

-	View Returns (Month-En Name Morningstar US Bas Mat & Morningstar US Basic Mate Morningstar US Commun 1	Energy TR USD erials TR USD	¥ Search Return Date (Mo-End) 12/31/2019	dit Data J S Total Ret 1 Yr (Mo-End) USD 16.12	Total Ret Annlzd 2 Yr (Mo-End) USD	
2	Morningstar US Bas Mat & Morningstar US Basic Mate	erials TR USD	(Mo-End) 12/31/2019	1 Yr (Mo-End) USD	Annizd 2 Yr (Mo-End) USD	Note the view to select to s
2	Morningstar US Basic Mate	erials TR USD	12/31/2019	(Mo-End) USD	(Mo-End) USD	to select to s
2	Morningstar US Basic Mate	erials TR USD		16.12	()	to select to se the return val
3					(2.98)	
	Morningstar US Commun		12/31/2019	26.44	1.68	
4		Svc Capped TR USD	12/31/2019	31.70	10.85	
	Morningstar US Commun	Svc TR USD 12/31/2019 33.56		11.24	-	
5	Morningstar US Consumr	Cyclcl TR USD	12/31/2019	27.25	12.85	
6	Morningstar US Consumr Dfnsve TR USD 12/31/2019		27.51	8.07		
7	Morningstar US Cyclcl Sup	Sec TR USD	12/31/2019	29.88	10.04	
8	Morningstar US Dfnsve Sup Sec TR USD 12/31/2019 23.97 12.0		12.06			
9	Morningstar US Energy Ca	apped TR USD	12/31/2019	10.22	(5.75)	
10	Morningstar US Energy TR	USD	12/31/2019	10.03	(5.86)	
11	Morningstar US Fin Svc &	RE TR USD	12/31/2019	32.12	9.74	
12	Morningstar US Financial S	Services TR USD	12/31/2019	33.37	9.62	
13	Morningstar US Healthcare	TR USD	12/31/2019	21.77	13.56	
14	Morningstar US Industrials	TR USD	12/31/2019	31.40	7.59	
15	Morningstar US Real Estat	e TR USD	12/31/2019	27.10	10.37	
16	Morningstar US Snstve Su	p Sec TR USD	12/31/2019	36.94	12.69	Note the value
17	Morningstar US Tech & Co	mmun Svc TR USD	12/31/2019	44.49	18.90	in this colum
18	Morningstar US Technolog	y TR USD	12/31/2019	46.66	20.32	
19	Morningstar US Utilities TR	USD	12/31/2019	25.12	14.43	
	7 8 9 10 11 12 13 14 15 16 17 18	7 Morningstar US Cycld Sup 8 Morningstar US Dfnsve Su 9 Morningstar US Energy Ca 10 Morningstar US Energy TR 11 Morningstar US Fin Svc & 12 Morningstar US Fin Svc & 13 Morningstar US Fin Svc & 14 Morningstar US Healthcard 15 Morningstar US Real Estat 16 Morningstar US Snstve Su 17 Morningstar US Tech & Cc 18 Morningstar US Technolog	7 Morningstar US Cyclcl Sup Sec TR USD 8 Morningstar US Dfnsve Sup Sec TR USD 9 Morningstar US Energy Capped TR USD 10 Morningstar US Energy TR USD 11 Morningstar US Fin Svc & RE TR USD 12 Morningstar US Fin Svc & RE TR USD 13 Morningstar US Healthcare TR USD 14 Morningstar US Industrials TR USD 15 Morningstar US Snstve Sup Sec TR USD 16 Morningstar US Snstve Sup Sec TR USD 17 Morningstar US Tech & Commun Svc TR USD 18 Morningstar US Technology TR USD	7 Morningstar US Cyclcl Sup Sec TR USD 12/31/2019 8 Morningstar US Dfnsve Sup Sec TR USD 12/31/2019 9 Morningstar US Energy Capped TR USD 12/31/2019 10 Morningstar US Energy TR USD 12/31/2019 11 Morningstar US Fin Svc & RE TR USD 12/31/2019 12 Morningstar US Fin Svc & RE TR USD 12/31/2019 13 Morningstar US Financial Services TR USD 12/31/2019 14 Morningstar US Healthcare TR USD 12/31/2019 15 Morningstar US Snstve Sup Sec TR USD 12/31/2019 16 Morningstar US Tech & Commun Svc TR USD 12/31/2019 17 Morningstar US Tech & Commun Svc TR USD 12/31/2019 18 Morningstar US Technology TR USD 12/31/2019	7 Morningstar US Cycld Sup Sec TR USD 12/31/2019 29.88 8 Morningstar US Dfnsve Sup Sec TR USD 12/31/2019 23.97 9 Morningstar US Energy Capped TR USD 12/31/2019 10.22 10 Morningstar US Energy TR USD 12/31/2019 10.22 10 Morningstar US Energy TR USD 12/31/2019 10.33 11 Morningstar US Fin Svc & RE TR USD 12/31/2019 32.12 12 Morningstar US Fin Svc & RE TR USD 12/31/2019 33.37 13 Morningstar US Healthcare TR USD 12/31/2019 21.77 14 Morningstar US Real Estate TR USD 12/31/2019 27.10 15 Morningstar US Snstve Sup Sec TR USD 12/31/2019 27.10 16 Morningstar US Tech & Commun Svc TR USD 12/31/2019 36.94 17 Morningstar US Tech & Commun Svc TR USD 12/31/2019 44.49 18 Morningstar US Technology TR USD 12/31/2019 46.66	7 Morningstar US Cyclcl Sup Sec TR USD 12/31/2019 29.88 10.04 8 Morningstar US Dfnsve Sup Sec TR USD 12/31/2019 23.97 12.06 9 Morningstar US Energy Capped TR USD 12/31/2019 10.22 (5.75) 10 Morningstar US Energy TR USD 12/31/2019 10.03 (5.86) 11 Morningstar US Fin Svc & RE TR USD 12/31/2019 32.12 9.74 12 Morningstar US Fin Svc & RE TR USD 12/31/2019 33.37 9.62 13 Morningstar US Healthcare TR USD 12/31/2019 21.77 13.56 14 Morningstar US Healthcare TR USD 12/31/2019 21.70 10.37 15 Morningstar US Real Estate TR USD 12/31/2019 27.10 10.37 16 Morningstar US Snstve Sup Sec TR USD 12/31/2019 36.94 12.69 17 Morningstar US Tech & Commun Svc TR USD 12/31/2019 44.49 18.90 18 Morningstar US Technology TR USD 12/31/2019 46.66 20.32

For Exercise 14, the Search by Criteria window should look like the following:

Solution to Exercise 14

Mo	rningstar D	irect Un	ited States Separate Accounts/CITs				
i 🖉 🛛	pen]	- Insert	🗙 Delete 🛛 🖆 Clear All 🛛 🟦 Export 🗸 🖪	PDF 🛛 🐂 Save As	🖾 Feedback		Be sure to search within this universe
	Rel	(Field Name	Operator	Value)	from the Local Databases module.
1		(Morningstar Institutional Category	=	All-Cap Core	•	
2	Or		Morningstar Institutional Category	=	Flexible Allocation)	
E 3	And		Socially Responsible	=	Yes		
4							
5							
<u>6</u>							
7							
8 🗐							
9							
10						-	
View	Field Nam	ie:	Include:	Items Searched:	Items Found:	Run Search	
🔘 Ву	Category		Only Surviving Investments	0	-		
🔘 Alp	habetical	ly	User Defined Primary Class Only				
							1
He	elp					OK Cancel	

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.

[Morningstar Direct					
<u>File N</u> ew Favorites <u>T</u> oo	ols <u>H</u> elp	Search for	In This View 🔻 Go		
lome	My Sea	rch Criteria			
Equity/Credit Research	Action	• New • 🕀 Export • 🔺 PDI	Refresh		
Local Databases		N Basic Search		wher	Permi
Global Databases	1 - I	Advanced Search	All Managed Investments		
	-		Analysis/News/Report		
Performance Reporting		5 Star Stocks			Read/ Read/
Asset Allocation		Active Small Cap Funds	Bonds		
Portfolio Management		Combined Large Blend	Category Average		Read/
-		Combined Large Value	Closed-End Fund		Read/
Portfolio Analysis	5 Consistent Large Cap Funds		College Savings Plans	Read/	
Markets		Consumer Defensive	Economic Series	Read/ Read/	
Asset Flows	7	DTA Large Value	Exchange Traded Fund		
Presentation Studio	□ 8	DUF 2017 v2	European Pension/Life Fund Wrappers	Read/	
Risk Model Analysis	□ 9	Energy	Funds (Open End and Exchange Trade	Read/ Read/	
	☐ 10	ESG Small Growth	Hedge Fund		
Workspace	11	ESGCustomView	HFR Hedge Funds		Read/
📲 Investment Lists	☐ 12	Example 1	eVestment Hedge Funds		Read/
🔟 My Lists	☐ 13	Example 2	Market Index		Read/
📲 Search Criteria	☐ 14	Exercise 1 (8-15-16) - Searche	Money Market Fund		Read
My Search Criteria	T 15	High Yield	Open-End Fund		Read/
Report Templates	☐ 16	International Small Cap Funds	Ownership-Portfolio		Read/
Chart Templates Data Sets	17	LG Funds	Ownership-Security		Read/
🖬 Data Sets	☐ 18	Manager Insight	Pension/Life/Insurance	•	Read/
Defined Contribution Play	□ 19	MidCap Value YTD	Private Funds		Read/
Saved Reports		MLP Funds	Global Restricted Funds		Read/
Note Manager	21	Morningstar Indexes	Separate Accounts		Read/
E Retirement Plans		My First Search	Collective Investment Trusts		Read/
Group Manager	- na	Band Entrate	Models		Deed

- 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.

Rel	(Field Name	Operator	Value)
	(Investment Type	=	Collective Investment Trusts	
Or		Investment Type	=	Separate Account)
And	(Morningstar Institutional Category	=	Diversified Emerging Markets	
Or		Morningstar Institutional Category	=	Emerging Markets Bond)
And		Sustainable Investment - Overall	=	Yes	



- 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.