# Peer Analytics: Conducting Advanced Investment Analysis and Comparisons

Morningstar Direct Cloud Editions





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# **Peer Analytics: Conducting Advanced Investment Analysis and Comparisons**

This document provides a series of exercises to help familiarize you with the Peer Analytics capabilities in the Grid View component of the Morningstar Direct<sup>SM</sup> Cloud editions. The Peer Analytics tools allow you to conduct advanced investment analysis and comparison.

**Overview** 

Note: In the desktop version of Morningstar Direct, these capabilities were found in the Performance Reporting module.

Note the following steps for leveraging the Peer Analytics tools:

- 1. Select investments to analyze (via a list or screen).
- 2. Choose the data columns to appear in the Grid View component.
- 3. Use the Peer Analytics tools to do the following:
  - group investments together (for example, by Morningstar Category)
  - ► display group-specific benchmarks, dynamic rank values, and summary statistics
  - apply conditional formatting to numeric data columns, and
  - create a scorecard to evaluate the data points you have displayed.

Once the presentation of the Grid View component meets your satisfaction, you can save the workbook and create a grid batch report to automatically generate the report as a Microsoft<sup>®</sup> Excel<sup>®</sup> file, saving you the trouble in the future of having to open the workbook and export it yourself.

The following scenarios are covered in this guide:

- Using Dynamic Ranking (page 6)
- Assessing the Performance of Small Cap Value Funds (page 17)
- Identifying Top Actively Managed Funds (page 28)
- Creating a Custom Scorecard (page 44)
- Setting Up a Grid Batch Report (page 57)

Before using the Peer Analytics capabilities in a Grid View component, note the following important points:

- The list or screen you are viewing must have no more than 2,000 items, as this is the limit when using the Peer Analytics capabilities.
- The Peer Analytics panel is available on the Grid View component in any worksheet, but the component must be expanded in order for the Show Peer Analytics button to be seen.

What do I need to know before using the Peer Analytics tools?

**Exercise 1: Screen** 

for funds in emerging markets

## **Using Dynamic Ranking**

In this section, you will use dynamic ranking for selected data points to rank funds **Overview** against their peer group by doing the following:

- 1. Screen for emerging markets funds
- 2. Select columns to display
- 3. Rank selected columns within their peer group, and
- 4. Apply conditional formatting to the dynamically ranked values.

In this exercise, you will screen for exchange-traded and open-end funds in the Diversified Emerging Markets Morningstar Category.

Do the following:

1. On the header, click **Create** > **Screen**. The Screener window opens.

Menu	Home				Ú	P 🛛 🖓 🕰	
					Create	-	
			MORNINGST	B Direct 🗢	List		
					Screen		
	(Q.	Search for S	Securities and Rese	arch	Custom Benchmark		Select this option
					Custom Scenario		to create a screen.
					Policy		
I	Lists & Screens			Model Portfolios	Model Portfolio		
		τ	Last Mad Erad		Workbook		
	vame	Type		(i) There are no model portfo	Note		
	5-Star Stocks	Screen	04/30/2018	account.	Grid Batch		
1	Moderate Aggressive	List	04/24/2018	To create a new model portfol	.,		
1	arge Value Funds	List	04/24/2018	in the upper right-hand corner.			
	Annala antes Data d Oraclia	1 tax	04/22/2010	777			

2. Create a **screen** to include the following criteria:

Field	Value
Universe	<ul> <li>Exchange-Traded Fund</li> <li>Open End Fund</li> </ul>
Domicile	United States
Morningstar Category	Diversified Emerging Markets
Oldest Share Class	Yes
Prospectus Net Expense Ratio	<=1
Inception Date	Before the first day of the current month from five years ago. (For example, 10/01/2013)

		Cancel Done	
<ul> <li>Create your Universe</li> </ul>		🔍 Logic Mode 📋	
Investment Type: Exchange-Traded Fund, Open-End Fund			
I Domicile: United States	()×	The final screen	
# Morningstar Category: Diversified Emerging Mkts		()×	SHOULD LOOK LIKE UIIS.
I Oldest Share Class	Value: Yes	()×	
I Prospectus Net Expense Ratio: Less than or Equal to	( ×		
Inception Date: Before		×	

3. Click Done.

4. Save the screen as Diversified Emerging Markets.

To properly rank the funds, you need to ensure the appropriate data columns are displayed. You could open an existing column set, but in this exercise you will create a new column set to simplify the data display. Do the following:

## Exercise 2: Select data columns to display

1. From the **Column Set** menu, select **Create New**. The Column Set Management window opens.



- 2. Search for and select Ticker.
- Search for and select Total Return (Mo-End) Collection (YTD/1Y/3Y/5Y). Four data points are added to Your Current Data Point Columns.
- 4. Click the X to remove Total Ret (YTD mo-end).

Column Set Man	<b>agement</b>   Column Set ∨				C	Cancel Done	
Select Data Point							
$\mathbf{Q}$ total return	Y						
Total Returns (Mo - (YTD/1Y/3Y/5Y)	-End) Collection						Search for and select this option.
Total Return (Daily (YTD/1Y/3Y/5Y)	y) Collection -						
Total Returns (Otro (YTD/1Y/3Y/5Y)	-End) Collection						
Calendar Year Ret (2016/2015/2014/	turns Collection (2013/2012)						
Gross Return (Mo	-End) Collection						
Your Current Data	a Point Columns 🔟						
Name	Ticker	Total Return (YTD - mo-end)	Total Return (1Y - mo-end) Annizd	Total Return (3Y - mo-end) Annizd	Total Return (5Y - mo-end) Annizd		Click here to remove this item.
	EDIT ×	edit ×	edit ×	edit ×	edit ×		

- Search for and select Morningstar Standard Rank Collection (YTD/1Y/3Y/5Y). Four data points are created.
- 6. Click the X to remove Total Ret % Rank Cat YTD mo-end (mo-end).

Column Set Management   Co	lumn Set ∨			Cancel Done	
Select Data Point					
Q Morningstar 🛛 🗸					
Morningstar Star Ratings Collection (Overall/3Y/5Y/10Y)					Search for and select this option.
Morningstar Standard Rank Collection (YTD/1Y/3Y/5Y)					
Operations Collection (Ticker/Category/Inc Date/ISIN/Base Currency/Secid)					
Your Current Data Point Colum	ns 🎹				
Total Return (5Y - mo-end) Annizd Rai mo	tal Ret % nk Cat YTD I-end (mo-	Total Ret % Rank Cat 1Y mo-end (mo-	Total Ret % Rank Cat 3Y mo-end (mo-	Total Ret % Rank Cat 5Y mo-end (mo-	Click here to remove this item.
K EDIT X EDI	it X	EDIT ×	EDIT ×	EDIT ×	

- 7. Search for and select the following data points:
  - ► Standard Deviation (Mo-End) Collection (1/3/5 Years)
  - Prospectus Net Expense Ratio, and
  - ► Morningstar Analyst Rating.
- 8. To create a data point to display the Analyst Date, you will add a second instance of Morningstar Analyst Rating and modify its display setting. Do the following:
  - A. Search for and select **Morningstar Analyst Rating**. Now you have two Morningstar Analyst Rating data points.
  - B. In the second Morningstar Analyst Rating data point, click **Edit**. A window opens, where you can edit the data point's settings.

Colun	nn Set Management	Column Set 🗸					Cancel Done	
Selec	t Data Point							
QN	Morningstar Analys	Y						
Morn	ingstar Analyst Rating							
Your	Current Data Point Col	umns III						
	Standard Deviation Total (1Y - qtr-end)	Standard Deviation Total (3Y - qtr-end)		Standard Deviation Total (5Y - qtr-end)	Prospectus Net Expense Ratio	Morningstar Analyst Rating (day-end)	Morningstar Analyst Rating (day-end)	Click here to change the data point's settings.
×	EDIT ×	EDIT	$\times$	EDIT ×	EDIT ×	EDIT ×	EDIT ×	

C. From the Display As menu, select Analyst Date.

Column Set Management   Co	lumn Set ∨		(Gancel (Done)	
Morningstar Analyst Rating			Reset	
Time	End Date			
Most Recent	∨ Day End	~		
Analyst Rating Type	Display As		25	
Overall	V Value	v		
	None			
	Value	V.,		Note the highlighted selections
	Effective Date			Noto the fightighted belocitiens.
	Analyst Date			
	Code			

- D. Click **OK**.
- 9. Search for and add two instances of the Morningstar Quantitative Rating data point.
  - A. In the second Morningstar Quantitative Rating data point, click Edit.

Column S	Set Management   Col	umn Set 🗸				Cancel Done	
Select Da	ita Point						
Q ingst	ar Quantitative	7					
Mornings	tar Quantitative Rating						
Your Curr	ent Data Point Column	is III					
otal d)	Standard Deviation Total (5Y - qtr-end)	Prospectus Net Expense Ratio	Morningstar Analyst Rating (day-end)	Morningstar Analyst Rating (day-end)	Morningstar Quantitative Rating (mo-end)	Morningstar Quantitative Rating (mo-end)	Click here to change this data point.
×	EDIT ×	EDIT ×	EDIT ×	EDIT ×	EDIT ×	EDIT ×	

### B. From the Display As menu, select As of Date.

Column Set Managem	ent   Colum	in Set ∨		(Cancel)(Done)	
Morningstar Quanti	tative Ratin	g		Reset OK	
Time		End Date			
Most Recent	V	Month End	<u> </u>		
Analyst Rating Type		Display As			
Overall	$\sim$	Value	V		
		Value	~		Note the highlighted selections
		Text Value			Note the highlighted selections
		As of Date			

C. Click **OK**.

- 10. Search for and select **Manager Tenure**.
- 11. From the Actions menu, select Nest by Data Point.

	3				Connicer	Dune	
Select Data Poir	nt						
Q Search for d	data poin 🛛 🗸						
nvestment Obje	ectives						
ŧ of Holdings							
% Assets in Top	Holdings						
12b-1 Fee							
ABI Primary Seri	ies						
AIF(AIFMD)							
40P							
'our Current Da	ita Point Columns 🔟						Salact this
Name	Actions	eturn (1Y - 1) Annizd	Total Return (3Y - mo-end) Annizd	Total Return (5Y - mo-end) Annlzd	Total Ret % Rank Cat 1Y	Total Rank	option from the Nested icor
	Nest by Time Period	-			mo-end (mo-	mo-e	

### 12. Click Done.

Diver	versified Emerging M V											
	VU 89 E U		Total	Return (n	no-end) Annizd	Total (	Ret % Cat (mo	Rank -end)	Standar (mo-end	d Deviatio ) AnnIzd (	on Total Cat Curr	Note the new column layout with posted boadors
	Name	Ticker	1Y	3Y	5Y	1Y	3Y	5Y	1Y	3Y	5Y	with hested headers.
	1 AB Emerging Markets M	ABIEX	-3.27	7.73	3.72	48	79	25	12.02	11.09	10.97	
	2 AllianzGI Emerging Mark	AOTIX	-0.48	10.56	3.92	19	49	20	13.20	12.89	13.02	
$\Box$	3 AllianzGI NFJ Emerging	AZMIX	-4.12	12.35	5.06	58	22	7	11.85	13.46	13.74	

13. From the Column Set menu, select Save As Column Set.

Diver	sified Emerging M 🗡					
	≠ <u>2</u> 2	1	Y	Column Set 🗡		
			Column	Sets		
	Name	Tic	Create I	lew		
	1 AB Emerging Markets Multi-Asset I	ABI	Open		>	the Column Set menu
	2 AllianzGI Emerging Markets Opps Instl	AO'	Edit			to save the changes.
	3 AllianzGI NFJ Emerging Markets Value Ins	AZ!				
	4 American Century NT Emerging Markets G	ACI	Save As	Column Set		

14. Name the column set Volatility and Expense.

Initially, dynamic ranking selects the first rankable data point in the column set. You can select more than one data point to rank on; however, not all data points are rankable, as you will see.

Exercise 3: Rank the funds within their peer group

Do the following:

1. At the top-right corner of the Grid View component, click **Show Peer Analytics**. The Peer Analytics panel opens.

Dive	rsified Emerging M $$											4	
$\square$	vi 89 🗎 🛇	+ <u>-</u> Q	C C	Y	Column	Set ∨					Show Pe	eer Analytics 🔇	Click horo
			Total	Return (m	io-end) Annizd	Total (	Ret % Cat (mo	Rank -end)	Standar (mo-end	rd Deviati ) Annlzd	on Total Cat Curr		UNCK HEIE
	Name	Ticker	1Y	3Y	5Y	1Y	3Y	5Y	1Y	3Y	5Y	Prospectus Net Expense Ratio	
	AB Emerging Markets M	ABIEX	-3.27	7.73	3.72	48	79	25	12.02	11.09	10.97	1.00	
	2 AllianzGl Emerging Mark	AOTIX	-0.48	10.56	3.92	19	49	20	13.20	12.89	13.02	0.91	
D	3 AllianzGI NFJ Emerging	AZMIX	-4.12	12.35	5.06	58	22	7	11.85	13.46	13.74	0.90	

- 2. Click the Dynamic Ranking toggle to enable it.
- Click the Select Data Points to Rank field. In the menu, the first rankable data point (1Y in Total Returns Mo-End)) is selected. Note that only rankable data points from the column set are listed.
- 4. At the top of the menu, uncheck the box for Total Return (1Y mo-end) AnnIzd.
- 5. **Scroll down** and near the bottom of the menu, check the box for the following data points:
  - ► Standard Deviation Total (1Y mo-end) AnnIzd Cat Curr
  - ► Standard Deviation Total (3Y mo-end) AnnIzd Cat Curr
  - Standard Deviation Total (5Y mo-end) Annlzd Cat Curr, and
  - ► Prospectus Net Expense Ratio.



6. Click away from the menu to close it.

7. In the Rank Within area, select Peer Group.



### 8. Click Apply.

9. Click Hide Peer Analytics.

New columns for percentile data have been created under Standard Deviation Total (mo-end) AnnIzd Cat Corr and to the right of Prospectus Net Expense Ratio.

· · · · · ·			Standar	rd Deviat	ion Total (mo-	end) Ann	lzd Cat Curr			
	Name	1Y	Percentile Standard	3Y	Percentile Standard	5Y	Percentile Standard	Prospectus Net Expense Ratio	Percentile Standard	Note the
	14 Columbia Emerging Mark	11.39	87	15.48	95	14.96	94	0.59	20	selections.
	15 Consulting Group Emergi	13.61	94	13.80	91	14.28	92	0.86	42	
	16 DFA Emerging Markets C	13.07	93	14.09	92	14.22	92	0.53	16	
	17 DFA Emerging Markets I	13.12	93	14.00	92	14.30	92	0.48	14	
	18 DFA Emerging Markets II	13.16	93	14.00	92	14.29	92	0.34	7	

In this exercise, you will apply conditional formatting to the dynamically ranked columns, so values less than or equal to 25 will have a green background, making them easier to focus on.

Exercise 4: Apply conditional formatting

Do the following:

- 1. Click Show Peer Analytics.
- 2. Click the toggle to enable **Conditional Formatting**.

Menu	Investment A	nalysis   *Equity	y Fund 🗸		Q Search fo	or Securities	and Research		<b>(19</b>	6	) &
Grid View $\vee$	Performance	Analyst Research	Eq. Attribution	Active Share	Characteristics	Holdings	Allocation	Style		+	Edit
Diversified Emerg	ging Markets \vee										
√ 0	90	⊘ + ⊴Q	c e v	Column Set	~				Hide Pe	er Analyti	cs 📎
			Peer Analyt	ics							0
			Grouping	0						C	
□ ▼ Name				gstar Category		v (	) Separate OE a	nd ETF Fu	unds		
VUS Fu	und Diversified Emer nerging Markets Mult	<b>ging Mkts</b> ii-Asset I	Add Groupin	ng Level							
2 Allian     3 Allian	zGI Emerging Markets zGI NFJ Emerging Ma	s Opps Instl arkets Value Ins	Condition	al Formatting @	)					C	
4 Ameri     5 AQR E	ican Century NT Emer Emerging Defensive S	ging Markets G tyle I	≣All Nun	neric Data 🗸	Between	V	Min - Ma	x	Aa 🕑		
6 Baillie	e Gifford Emerging Ma	arkets 3									

- 3. Do the following:
  - A. In the **All Numeric Data** drop-down field, **scroll down** and select the first **Percentile Standard**.
  - B. From the next drop-down field, select Less/Equal To.
  - C. In the text field, type **25**.
  - D. From the Formatting Style drop-down field, select Green.
- 4. To the right of Formatting Style, click the **Rule Options** icon, then select **Duplicate**. A duplicate of the first row is created.

Peer Analytics	0	
<ul> <li>Grouping ⑦</li> <li>Conditional Formatting ⑦</li> </ul>		Note the selections and values for these fields
■ Percentile Stan      Less/Equal To      ✓ 25	Aa	
Add Formatting Rule	Rule Options	
Dynamic Ranking ②	Delete	Note the highlighted selections
Select Data Points To Rank *	Duplicate	

- 5. In the new row, from the **All Numeric Data** drop-down field, select the second **Percentile Standard**.
- 6. From the Rule Options menu, select Duplicate. A third row is created.
- 7. In the new row, from the **All Numeric Data** drop-down field, select the third **Percentile Standard**.
- 8. From the Rule Options menu, select Duplicate. A fourth row is created.
- 9. In the fourth row, from the **All Numeric Data** drop-down field, select the fourth **Percentile Standard**.

Peer Analytics				0	
▼ Grouping ②					
Conditional Formatting	0				The Conditional Formatting area
∎Percentile Stan… ∨	Less/Equal To 🗸 🗸	25	Аа	$\odot$	should look like this.
∎Percentile Stan… ∨	Less/Equal To 🗸 🗸	25	Aa	$\odot$	
∎Percentile Stan…∨	Less/Equal To 🗸 🗸	25	Аа	$\odot$	
∎ Percentile Stan…∨	Less/Equal To 🔍 🗸	25	Aa	$\odot$	
Add Formatting Rule					

- 10. Click **Apply**.
- 11. Click Hide Peer Analytics.

12. Scroll right to see the columns with conditional formatting applied.

	×0 89 🗎 (	0+	_Q [	7	Y	1	olur	nn Set	V						Show Pee	r Analytics 🤇
			Total	Return end) A	(mo- nnizd	Tot I	al Re Rank mo-i	et % Cat end)		Standard	l Deviatio	on Total (mo-	end) Ann	lzd Cat Curr		
	▼ Name	Ticker	1Y	ЗY	5Y	1Y	3Ү	5Y	1¥	Percentile Standard	3Y	Percentile Standard	5Y	Percentile Standard	Prospectus Net Expense Ratio	Percentile Standard
	▼ US Fund Diversified															1
	1 AB Emerging Markets	ABIEX	-3.27	7.73	3.72	48	79	25	12.02	32	11.09	10	10.97	10	1.00	26 -
7	2 AllianzGI Emerging M	AOTIX	-0.48	1	3.92	19	49	20	13.20	61	12.89	34	13.02	29	0.91	20
7	3 AllianzGI NFJ Emergi	AZMIX	-4.12	1	5.06	58	22	7	11.85	28	13.46	47	13.74	47	0.90	19 -
)	4 American Century NT	ACLKX	-5.75	1	6.00	72	20	3	11.66	24	13.62	51	14.11	58	0.01	1 -
3	5 AQR Emerging Defen	AZEIX	3.77	7.85	0.60	5	77	85	11.37	17	12.51	25	12.88	26	0.71	13 -
D	6 Baillie Gifford Emergi	BGELX	-0.17	1	7.40	17	5	1	15.45	95	16.26	96	15.74	91	0.78	15
כ	7 BlackRock Advantage	BLSIX	-0.68	1.35	-0	21	98	94	13.86	76	9.10	2	7.66	1	0.94	21 -
3	8 BlackRock Emerging	MA	-0.37	1	3.75	19	12	25	14.06	83	14.36	72	14.69	81	0.99	25
0	9 BlackRock Total Emer	BEEIX	-7.20	6.91	2.79	81	87	51	9.44	5	11.14	11	10.89	7	0.91	20
0	10 Calvert Emerging Mar	CVMIX	-4.30	1	5.68	59	11	4	12.49	39	12.58	27	13.22	33	0.92	21
0	11 Capital Emerging Mar	EM	-3.51	1	2.09	51	37	67	13.59	71	14.59	82	14.59	74	0.89	19 -
	12 Columbia Beyond BRI	BBRC	2.21	7.34	0.17	8	83	89	13.72	73	12.80	32	12.75	24	0.60	10 -
D	13 Columbia EM Quality	HILO	0.38	1	-0	14	55	95	12.30	36	13.22	41	14.20	59	0.60	10
	14 Columbia Emerging	ECON	-1	1.73	-2	100	98	99	11.39	18	15.48	91	14.96	85	0.59	9 -
	15 Consulting Group Em	TEMUX	-6.60	1	2.88	77	34	49	13.61	72	13.80	54	14.28	61	0.86	17 -
	16 DFA Emerging Marke	DFCEX	-2.48	1	3.57	41	36	31	13.07	53	14.09	63	14.22	59	0.53	8
	17 DFA Emerging Markets I	DFEMX	-0.88	1	3.59	23	25	28	13.12	56	14.00	60	14.30	61	0.48	7
	18 DFA Emerging Marke	DFETX	-0.76	1	3.80	22	23	23	13.16	58	14.00	60	14.29	61	0.34	5 -
	19 DFA Emerging Marke	DE	-5.08	1	4.60	66	51	10	13.15	58	14.09	63	13,79	49	0.73	14 -
	20 DFA Emerging Marke	DFESX	-2.34	1	3.69	39	23	26	12.88	47	14.11	64	14.29	61	0.55	9 -
0	21 DFA Emerging Marke	DFEVX	2.37	1	3.58	7	7	29	14.85	92	15.62	92	16.20	94	0.57	9
	22 DWS Emerging Mark	SEMGX	1.37	1	4.42	9	24	12	13.80	74	14.20	66	14.60	75	1.00	26 -
2	23 Fidelity® Emerging M	FEMIKX	-2.28	1	5.44	38	20	5	11.93	29	13.20	40	13.19	32	0.97	24 1
7	24 Fidelity® Emerging M	FPADX	-1.04	1	2.02	26	27	20	13 35	65	14.03	61	14.66	79	0.08	1 -

Now you can easily identify the funds with data in the  $0\!-\!25$  quartile.

## 13. Save the workbook as Emerging Markets Volatility and Expense.

≣ Menu	Investment Analysis   *Grid V	iew ∨			
Grid View $\vee$	Workbook		_		
Diversified Em	ergii Create New 8: Open	- 7 B	∀   c	olumn Set 🗸	Use the workbook menu to select this option
	Save			1Y (mo-er	
	Save As			Standard	
□ ▼ Name	Manage Sharing	Ticker	Total Re	Total Cat Curr	
▼ US Fu	nd Diversified Emerging Mkts erging Markets Multi-Asset I	ABIEX	-3.27	12.02	
🗆 2 Allianz	GI Emerging Markets Opps Instl	AOTIX	-0.48	13.20	
🗆 3 Allianz	GI NFJ Emerging Markets Value	Ins AZMIX	-4.12	11.85	
🗆 4 Ameri	can Century NT Emerging Marke	ts G ACLKX	-5.75	11.66	
□ 5 AQR E	merging Defensive Style I	AZEIX	3.77	11.37	
🗆 6 Baillie	Gifford Emerging Markets 3	BGELX	-0.17	15.45	

Your manager has asked you to evaluate the performance of funds in the Small Cap Value category over the past one-, three-, and five-year time periods, provided the funds are at least five years, and are still open to new investors. Your manager needs to see only certain share classes of these funds.

You will create a screen to find these funds, then use the Scorecard capability to evaluate their performance. In addition to seeing the overall score for the funds, you will also display the absolute rank and the percentile rank for each fund.

	Menu Investment Analysis   *Grid View	$\sim$					Q Sea	irch fo
Grid Vi	iew +							
* Open	Small Value Funds 🗸							
	✓ 0		Column Set 🗸					
							Scorecard	
	Name	Total Return (1Y - mo-end) Annlzd [20%]	Total Return (3Y - mo-end) Annizd [30%]	Total Return (5Y - mo-end) Annlzd [50%]	Weighted Score	Weighted Score List Rank	Weighted Score List Quartile	
	1 Goldman Sachs Small Co Val Insohts Inv	20.66	12.60	12.30	6.20	1	1	
	2 JNL/PPM America Small Cap Value A	17.15	11.26	13.29	7.50	2	1	
	3 Goldman Sachs Small Cp Val Insghts A	20.37	12.32	12.02	7.70	3	1	
	4 Columbia Small Cap Value I A	18.91	12.53	11.69	9.50	4	1	
	5 Royce Opportunity Invmt	20.81	12.16	11.33	10.70	5	1	
	6 VALIC Company I Small Cap Special Val	15.39	11.28	12.96	12.20	6	1	
	7 Wells Fargo Special Small Cap Value A	15.03	11.13	12.78	15.50	7	1	
	8 CornerCap Small-Cap Value Investor	14.82	11.04	13.08	16.10	8	1	
	9 Nuveen Small Cap Value A	12.65	11.18	12.50	20.20	9	1	
	10 MFS® New Discovery Value A	15.07	10.96	11.65	20.80	10	1	
	11 ProFunds Small Cap Value Inv	18.71	10.82	11.02	21.20	11	1	
	12 Wells Fargo Small Company Value A	19.48	10.31	10.94	22.30	12	1	
	13 Vanguard Small Cap Value Index Inv	14.71	9.54	11.92	25.10	13	1	
	14 AB Discovery Value A	16.33	9.35	11.11	25.90	14	1	
	15 Delaware Small Cap Value A	12.52	11.04	11.23	27.30	15	1	
	16 RBC Microcap Value A	16.21	8.87	11.28	27.70	16	1	
	17 Dunham Small Cap Value A	16.47	10.18	10.23	31.30	17	1	
	18 Bridgeway Small-Cap Value	22.42	10.36	9.43	31.60	18	2	
	19 Northern Small Cap Value	12.60	9.68	11.05	33.90	19	2	
	20 American Beacon Small Cp Val Inv	15.13	9.41	10.74	34.10	20	2	
	21 Janus Henderson Small Cap Value A	11.38	10.10	11.07	34.20	21	2	
	22 Sterling Capital Behav Sm Cp Val Eq A	15.60	9.46	10.33	34.40	22	2	
	23 Guggenheim Mid Cap Value A	15.76	11.13	9.39	36.00	23	2	
	24 Victory Integrity Small-Cap Value A	16.14	8.52	10.78	36.00	23	2	
	25 American Beacon Small Cp Val A	15.03	9.33	10.64	36.20	25	2	
	26 VALIC Company II Small Cap Value	15.44	9.42	10.27	36.20	25	2	

## **Overview**

Various options exist for reporting scores.

To find small-cap value funds still open to new investors (and that have been open for at least five years), do the following:

1. On the header, click **Create** > **Screen**. The Screener window opens.

Exercise 5: Screen for funds in the Small Cap Value Morningstar Category

<u></u> Menu	Home					Û	E 7 2	
						Create	1	
			MORNINGST			List	-	
				DIGGU		Screen		
	Q	Search for S	Securities and Rese	arch		Custom Benchmark		Use this icon to
						Custom Scenario		create a new screen
						Policy		
	Lists & Screens			Model Portfol	ios	Model Portfolio		
	News	T	1			Workbook		
	Name	туре		(i) There are no i	model portf(	Note		
	5-Star Stocks	Screen	04/30/2018	account.		Grid Batch		
	Moderate Aggressive	List	04/24/2018	To create a new m	nodel portfoli	.,		
	Large Value Funds	List	04/24/2018	in the upper right-	hand corner.			
	Manaja antas Data d Stanla	1.544	04/22/2010					

2. Create a screen to include the following criteria:

Field	Value
Investment Type	<ul> <li>Exchange-Traded Fund</li> <li>Open-End Fund</li> </ul>
Domicile	United States
Morningstar Category	Small Value
Closed to New Investors	No
Inception Date	Before [Choose the first date of the current month from five years ago]
Share Class Type	<ul> <li>A</li> <li>► Inv</li> <li>► No Load</li> </ul>

Screener			Cancel Done	
0/64   十 茴 心	▼ Create your Universe		C Logic Mode	
Adirondack Small Cap	Investment Type: Open-End Fund, Exchange-Traded	l Fund		Note the criteria
Aegis Value	Domicile: United States		X	for this screen
AllianzGI NFJ Small-Cap Value A	I Morningstar Category: Small Value		()×	
American Beacon Small Cp Val A				
American Beacon Small Cp Val Inv	Closed to New Investors	Value: No	()×	
Ariel Discovery Investor	Inception Date: Before		•×	
Boston Partners Small Cap Value II Inv	# Share Class Type: A. Inv. No Load		()×	
Bridgeway Small-Cap Value				
ClearBridge Small Cap Value A				
Columbia Small Cap Value I A				
Columbia Small/Mid Cap Value A				

- 3. Click Done.
- 4. Save the search as Open Small Value Funds.

To properly calculate the scores for the funds' performance, you need to ensure the correct data columns are being shown. You could open an existing column set to do this, but in this exercise, you will create one from scratch to simplify the data being shown and see how it ties to the scorecard. Do the following:

Exercise 6: Select data columns to display

1. From the **Column Set** menu, select **Create New**. The Column Set Management window opens.

	In	westment Analysis   *Grid View ${\scriptstyle\lor}$		Q Search for	Reports and Researc	
Grid Vi	ew 🗸	+				
Open Si	mall V	∕alue ∨				
	0	63 ₪ ⊘ + ⊴ C	Column Sets	et V	B	Use this command to make a new set of columns.
0	1	Adirondack Small Cap	Open		>	
0	2	Aegis Value	Edit			
0	3	AllianzGI NFJ Small-Cap Value A	Save As Column Set			
0	4	American Beacon Small Cp Val A				
0	5	American Beacon Small Cp Val Inv	AVPAX	FOUSA02SYW Si	mall Value	
0	6	Ariel Discovery Investor	ARDFX	F00000LJAD Si	mall Value	

- 2. Search for Return, then select Total Returns (Mo-End) Collection (YTD/1Y/3Y/5Y).
- 3. Remove the Total Return (YTD mo-end) data point.

Column Set Managem	ent   Column Set $^{\vee}$				
Select Data Point					
Q Return	X				
Total Returns (Mo-End) C - (YTD/1Y/3Y/5Y)	ollection				Search for and select this option.
Total Return (Daily) Collec (YTD/1Y/3Y/5Y)	ction -				
Total Returns (Qtr-End) Co (YTD/1Y/3Y/5Y)	ollection				
Calendar Year Returns Co (2016/2015/2014/2013/20	ollection 012)				
Gross Return (Mo-End) Co (VTD/1V/3V/5V)	ollection				
Your Current Data Point	Columns 🔟				
Name	Total Return (YTD - mo-end)	Total Return (1Y - mo-end) Annizd	Total Return (3Y - mo-end) Annizd	Total Return (5Y - mo-end) AnnIzd	Click here to remove this data point from the column set
	EDIT	EDIT ×	EDIT ×	EDIT ×	

- 4. To close the Column Set Management window, click Done.
- 5. From the Column Set menu, choose Save As Column Set and name it Basic Returns.

A scorecard allows you to evaluate the numeric values in the Grid View component, to determine which investments meet a rule or series of rules you define. Scorecards are of two varieties:

- The Standard Scoring method converts raw data points to percentile ranks, and applies user-selected weights to those percentile ranks. These weighted percentile ranks are then aggregated to create the score for an investment.
- The Custom Scoring method applies user-defined rules for data points and assigns numeric grades based on those rules.

In this example, a standard scorecard will be applied. Do the following:

1. Click **Show Peer Analytics**. The Peer Analytics panel opens.

#### Investment Analysis | \*Grid View $\, imes \,$ <u>(</u> Grid View $\vee$ Edit Open Small Value $~\vee~$ 🛅 🕥 🕂 🔍 🖸 🖻 🍸 🛛 Column Set 🗸 Show Peer Analytics Click here to expand this panel Total Return (5Y Total Return (1Y - Total Return (3Y mo-end) mo-end) Annizd mo-end) Annizd Annizd Name 1 Adirondack Small Can 12.85 8.70 13.28 2 Aegis Value 17.10 9.80 8.49 13.94 AllianzGI NFJ Small-Cap Value A 7.58 11.08 3 12.59 10.06 14.46 American Beacon Small Cp Val A 5 American Beacon Small Cp Val Inv 12.70 10.15 14.58 4 70 6 Ariel Discovery Investor 15.72 0.58

2. Click the **Scorecard** toggle to turn it on, then click **Create Scorecard**. The Scorecard window opens.

	lr	nvestment Analysis   *Grid View ${\scriptstyle\lor}$	Q Search for Reports and Research	💭 🤔 🖉 🧷 🖉	
Grid Vie	ew 🗸	+		Edit	
Open Sr	nall \	/alue V		4 <sub>17</sub>	
~	0	63	🖄 🗎 🏹 Column Set 🗸	Hide Peer Analytics 📎	
			Peer Analytics	0	
0		Name	► Grouping ②	0	
0	1	Adirondack Small Cap	► Conditional Formatting ②	0	
0	2	Aegis Value	► Dynamic Ranking ⑦	0	
$\left  \frac{0}{0} \right $	3	AllianzGI NFJ Small-Cap Value A American Beacon Small Cp Val A	► Summary Statistics ⑦	$\odot$	
0	5	American Beacon Small Cp Val Inv	► Benchmarks ⑦	0	Click here to enable this feature
0	6	Ariel Discovery Investor	▼ Scorecard ②		
0	7	Boston Partners Small Cap Value II Inv	No Scorecard is setup. To begin, please click 'Create Scorecard'.		
<u> </u>	8	Bridgeway Small-Cap Value	Create Scorecard		
	9	ClearBridge Small Cap Value A			Click here to create a scorecard

## Exercise 7: Score funds on their performance

3. The option for Standard Scoring should be selected. Click the **select all** button next to Data Point, then click **Equal Weight**. The values in the % Weight column update.

Scorecard				Cancel	Done	
Scoring Type		Scoring Settings				This option should be selected
Standard Scoring	Custom Scoring	Handle Missing Values By Reweighting	V	Standardize Based On Percentile rank (Peer group)	V	
Performance Factors		Torrograng				
Equal Weight Rese	et Weight			Total Weight	0%	
🥑 Data Point		Scoring		% Weight		To select all click here
Total Return (1Y - r	no-end) Annizd	Higher is Better	V		0%	then click the
Total Return (3Y - r	no-end) AnnIzd	Higher is Better	V		0%	
Total Return (5Y - r	no-end) AnnIzd	Higher is Better	V		0%	

- 4. Click **Done**. The Scorecard window closes.
- 5. Click **Hide Peer Analytics**. Note the two new scorecard columns added to the Grid View component.
- 6. Click the **Weighted Score List Rank** column to sort by that value. The best-performing funds appear at the top.

	Ir	westment Analysis   *Grid View $\vee$		Q Search for F	Reports and Researc	:h	) 遵 🛛	j (?) &	
Grid V	ew 🗸	+						Edit	
Open S	mall \	/alue ∨						4	
	0	83 1 N + 2 C 1 N 1	Column Set	V			Show Peer A	Analytics 🚫	Click this column header to sort by this data point
0		Name	Total Return (1Y - mo-end) Annlzd [33.34%]	Total Return (3Y - mo-end) Annizd [33.33%]	Total Return (5Y - mo-end) Annizd [33.33%]	Weighted Score	Weighted Score List Rank		
0	1	JNL/PPM America Small Cap Value A	21.21	13.94	17.48	1.67	1		
0	2	MFS® New Discovery Value A	17.84	12.64	15.62	6.33	2		
0	3	Columbia Small Cap Value Fund I A	19.63	13.33	15.17	7.33	3		
0	4	Royce Opportunity Invmt	23.80	11.83	15.24	9.00	4		
	5	VALIC Company I Small Can Special Val	14.52	12.28	16 20	14.67	5		

After seeing the results, you realize the return values should be weighted so that the longer time periods are weighted more heavily than the earlier ones. Do the following:

Exercise 8: Adjust the weightings for the scorecard

1. Click Show Peer Analytics. The Peer Analytics panel opens.

	Ir	westment Analysis   *Grid View ${\scriptstyle\lor}$		Q Search for F	leports and Research	L () L	
Grid V	iew 🗸	+				Edit	
Open S	mall \	/alue V					
	/ <sub>0</sub>	63 III () + <u>1</u> 2 [] F	Click here to open the panel				
0		Name	Total Return (1Y - mo-end) Annizd	Total Return (3Y - mo-end) Annizd	Total Return (5Y - mo-end) Annizd		
0	1	Adirondack Small Cap	12.85	8.70	13.28		
0	2	Aegis Value	17.10	9.80	8.49		
0	3	AllianzGI NFJ Small-Cap Value A	13.94	7.58	11.08		
0	4	American Beacon Small Cp Val A	12.59	10.06	14.46		
0	5	American Beacon Small Cp Val Inv	12.70	10.15	14.58		
0	6	Ariel Discovery Investor	15.72	0.58	4.70		

2. Click Edit Scorecard. The Scorecard window opens.

	Ir	nvestment Analysis   *Grid View ${\scriptstyle\lor}$	○ Search for Reports and Research	L () L	
Grid V	iew \	/ +		Edit	
Open S	mall \	Value $\vee$	7 <sup>4</sup>		
C		63 🗎 💟 🕂 🔄			
			Peer Analytics	0	
			► Grouping ②	Õ	
0		Name	► Conditional Formatting ⑦	0	
0	1	JNL/PPM America Small Cap Value A	► Dynamic Ranking ⑦	Õ	
0	2	MFS® New Discovery Value A	► Summary Statistics ⑦	Õ	
0	3	Columbia Small Cap Value Fund I A	▶ Benchmarks ⑦	0	Use this button to change
0	4	Royce Opportunity Invmt		0	the Scorecard settings
0	5	VALIC Company I Small Cap Special Val	▼ Scorecard ②		
0	6	Delaware Small Cap Value A	Edit Scorecard Delete Scorecard		
0	7	Janus Henderson Small Cap Value A			
0	8	Wells Fargo Special Small Cap Value A			

- 3. Uncheck the **select all** button.
- 4. Under the % Weight column, enter the following values:
  - ► 1Y = **20**
  - ► 3Y = **30**
  - ► 5Y = **50**

Scorecard				Cancel Done	
Scoring Type		Scoring Settings			
C Standard Sepring	Custom Searing	Handle Missing Values By		Standardize Based On	
Standard Scoring		Reweighting	$\sim$	Percentile rank (Peer group) $\qquad \lor$	
Performance Factors					
Equal Weight Reset Wei				Total Weight 100%	Be sure to deselect this option
🔿 Data Point		Scoring		% Weight	
O Total Return (1Y - mo-er	nd) Annlzd	Higher is Better	$\sim$	20%	Be sure the values you input
O Total Return (3Y - mo-er	nd) AnnIzd	Higher is Better	V	30%	here always total to exactly 100
Total Return (5Y - mo-er	nd) Annlzd	Higher is Better	V	50 ×	

- 5. Click Done. The Scorecard window closes.
- 6. Click Hide Peer Analytics. Note the updated values in the two Scorecard columns.

	/lenu In	vestment Analysis   *Grid View	$\vee$		्र Search for Sec	curities and	Research	(? A	
Grid Vi	iew ∨ +	•						Edit	
Open S	mall Value Fun	ds ∨						$\mathbb{Z}_{\overline{P}}$	
	/ 0	◎ 〕 ◎ + ≥		Column Set 🗸		_		Show Peer Analytics 🔇	
						Scorecard			
	Name		Total Return (1Y - mo-end) Annizd [20%]	Total Return (3Y - mo-end) Annizd [30%]	Total Return (5Y - mo-end) Annizd [50%]	Weighted Score	Weighted Score List Rank		Note that with a standard score, the lower the score, the better the ranking.
	1 Goldman Sa	achs Small Cp Val Insghts Inv	2.33	11.26	8.62	2.50	1		
	2 Goldman Sa	achs Small Cp Val Insghts A	2.08	10.99	8.35	6.10	2		
	3 MFS® New	Discovery Value A	0.97	11.08	8.13	6.70	3		
	4 VALIC Com	pany I Small Cap Special Val	-0.86	10.19	8.61	8.40	4		
	5 Vanguard S	imall Cap Value Index Inv	0.22	9.06	8.39	10.60	5		
	6 Wells Fargo	Special Small Cap Value A	-0.98	9.94	8.37	11.40	6		
	7 ProFunds S	mall Cap Value Inv	0.77	10.18	6.81	15.30	7		
	8 Dunham Sn	nall Cap Value A	0.08	9.36	7.15	17.30	8		

Seeing both the weighted score and the weighted score list rank for the funds is useful, but remember that the set of funds you're seeing is based on a screen and the results of a screen are dynamic. Therefore, the number of items returned each time you open the screen could change, and this in turn would change the meaning of the score rank.

Exercise 9: Show the percentile rank for the funds' scores

In addition to the score columns already showing, you can also choose to display the weighted score list quartile. Seeing the quartile ranking for a fund's score provides a relative value for its absolute rank value. For example, a fund whose rank is 10 out of 18 funds would be in just the third quartile, but a fund whose rank is 10 out of 48 funds would be in the top quartile. Do the following:

- 1. Click Show Peer Analytics. The Peer Analytics panel opens.
- 2. Click Edit Scorecard. The Scorecard window opens.
- 3. Under the Weighted Score Ranks area, select the option for List Quartile.

Scorecard				(	ancel Done	
Scoring Type		Scoring Settings				
Standard Scoring	Custom Scoring	Handle Missing Values By	Handle Missing Values By			
		Reweighting	~	Percentile rank (Peer group)	$\vee$	
Performance Factors						
				Total Weight	100%	
O Data Point		Scoring		% Weight		
O Total Return (1Y - mo-end) Annizd		Higher is Better	V		20%	
O Total Return (3Y - mo-end) Annizd		Higher is Better	V		30%	
O Total Return (5Y - mo-end) Annizd		Higher is Better	v		50%	
						Ulick this button to see
						annears in based on its sco
Score Settings	Weighted Score Ranks (Weight total must e	equal 100% to use these options)				
Weighted Score	ODisplay Group Bank	ODisplay Group Quintile		SList Quartile		
	ODisplay Group Percentile	🕑 List Rank		List Quintile		
	Olisplay Group Quartile	OList Percentile				
L						

- 4. Click Done. The Scorecard window closes.
- 5. Click Hide Peer Analytics. Note the new Weighted Score List Quartile column.

Men	Investment Analysis   *Grid View $\vee$			2. Search for Sec	curities and	l Research	Ļ.	K (? &	
Grid View								Edit	
* Open Sma	all Value Funds $leftarrow$							$\mathbb{A}_{\overline{V}}$	
✓ 0         68         III         ✓          ✓									
							Scorecard		
	Name	Total Return (1Y - mo-end) Annlzd [20%]	Total Return (3Y - mo-end) Annizd [30%]	Total Return (5Y - mo-end) Annlzd [50%]	Weighted Score	Weighted Score List Rank	Weighted Score List Quartile		This column ha
	Goldman Sachs Small Cp Val Insghts Inv	20.66	12.60	12.30	6.20	1	1		the componen
2	JNL/PPM America Small Cap Value A	17.15	11.26	13.29	7.50	2	1		
3	Goldman Sachs Small Cp Val Insghts A	20.37	12.32	12.02	7.70	3	1		
4	Columbia Small Cap Value I A	18.91	12.53	11.69	9.50	4	1		
5	Royce Opportunity Invmt	20.81	12.16	11.33	10.70	5	1		
6	VALIC Company I Small Cap Special Val	15.39	11.28	12.96	12.20	6	1		
□ 7	Wells Fargo Special Small Cap Value A	15.03	11.13	12.78	15.50	7	1		
0									

To illustrate where the list quartile breakpoints occur, you can use the Conditional Formatting tool to add color to the Weighted Score List Quartile column. Using the Conditional Formatting tool requires you to create a series of rules to define how to apply color to cells. Once you create the first rule, it's easy to duplicate it and change just a couple of values, rather than creating an entirely new rule from scratch.

Exercise 10: Use conditional formatting to highlight the results

Do the following:

- 1. Click Show Peer Analytics. The Peer Analytics panel opens.
- 2. Click the **Conditional Formatting** switch to enable it.
- 3. Click the **first drop-down field**, then scroll down to select **Weighted Score** List Quartile.



- 4. From the next drop-down field, leave **Between** selected. The next two fields to the right should read Min and Max, respectively.
- 5. Click the **Color** icon, and be sure the **multi-color** option is selected.

Menu Investment Analysis   *Standa	rd Score ∨ Search for Securities and	Research 길 🖌	0 2	
Grid View ∨ +			Edit	
Open Small Value Funds $ee$			$\mathbb{A}_{\overline{\mathbb{P}}}$	
<b>√</b> 0 70 🛍 🛇 + 🔄	🖸 🖹 🍸 🛛 Column Set 🗸	Hide Peer Ar	alytics 📎	
	Peer Analytics		$\bigcirc$	
Name	► Grouping ⑦		0	
1 MFS New Discovery Value A	<ul> <li>Conditional Formatting <sup>(2)</sup></li> </ul>			Note the values for these fiel
2 Goldman Sachs Small Cp Val Insghts Inv     3 Goldman Sachs Small Cp Val Insghts A	⊯ Weighted Sco… ∨ Between ∨ Min	- Max 🔎 🛛 🛇		
4 Dunham Small Cap Value A 5 VALIC Company I Small Cap Special Val	Add Formattino Rule	Formatting Style		
6 Wells Fargo Special Small Cap Value A     7 CornerCap Small-Cap Value Investor	<ul> <li>Dynamic Ranking <sup>(2)</sup></li> </ul>	Aa Aa Aa	D	
8 Janus Henderson Small Cap Value A 9 Quaker Small/Mid-Cap Impact Val Advisor	► Summary Statistics ⑦	Aa Aa Aa	D	Select this color
<ul> <li>10 Columbia Small Cap Value I A</li> </ul>	Developeda (2)			

6. Click Apply.

7. Click Hide Peer Analytics. Note the conditional formatting applied to the last column.

Grid	Meni View	u Investment Analysis   *Grid Viev	/ ~					Q Searc	h fo
* 0.00		all Value Funda							
- Ope	n Sina	an value runds V							
	√0	68 🔟 🛇 🕂 🕰 🖸	1 🗋 🝸 (	Column Set 🗸					
								Scorecard	
	,	Name	Total Return (1Y - mo-end) Annlzd [20%]	Total Return (3Y - mo-end) Annlzd [30%]	Total Return (5Y - mo-end) Annlzd [50%]	Weighted Score	Weighted Score List Rank	Weighted Score List Quartile	
			00.00	10.00	10.00	6.00			
	10	Goldman Sachs Small Cp Val Insgnts Inv	20.66	12.60	12.30	6.20	1	1	
	2 0	Coldman Soche Small Ca Value A	17.10	11.20	13.29	7.50	2		
	10	Columbia Small Can Value I A	18 91	12.52	11.02	9.50	3	1	Conditional formatting can be
	5.6	Rovce Onnortunity Invest	20.81	12.35	11.03	10.70	4	1	applied to any numerical field
	6 \	VALIC Company   Small Cap Special Val	15.39	11.28	12.96	12.20	6	1	applied to any hanoloar loid
	7 \	Wells Fargo Special Small Cap Value A	15.03	11.13	12.78	15.50	7	1	
	8 (	CornerCap Small-Cap Value Investor	14.82	11.04	13.08	16.10	8	1	
	9 1	Nuveen Small Cap Value A	12.65	11.18	12.50	20.20	9	1	
	10 1	MFS® New Discovery Value A	15.07	10.96	11.65	20.80	10	1	
	11 F	ProFunds Small Cap Value Inv	18.71	10.82	11.02	21.20	11	1	
	12 \	Wells Fargo Small Company Value A	19.48	10.31	10.94	22.30	12	1	
	13 \	Vanguard Small Cap Value Index Inv	14.71	9.54	11.92	25.10	13	1	
	14 /	AB Discovery Value A	16.33	9.35	11.11	25.90	14	1	
	15 [	Delaware Small Cap Value A	12.52	11.04	11.23	27.30	15	1	
	16 F	RBC Microcap Value A	16.21	8.87	11.28	27.70	16	1	
	17 [	Dunham Small Cap Value A	16.47	10.18	10.23	31.30	17	1	
	18 E	Bridgeway Small-Cap Value	22.42	10.36	9.43	31.60	18	2	
	19 I	Northern Small Cap Value	12.60	9.68	11.05	33.90	19	2	
	20 /	American Beacon Small Cp Val Inv	15.13	9.41	10.74	34.10	20	2	
	21 、	Janus Henderson Small Cap Value A	11.38	10.10	11.07	34.20	21	2	
	22 \$	Sterling Capital Behav Sm Cp Val Eq A	15.60	9.46	10.33	34.40	22	2	
	23 (	Guggenheim Mid Cap Value A	15.76	11.13	9.39	36.00	23	2	
	24 \	Victory Integrity Small-Cap Value A	16.14	8.52	10.78	36.00	23	2	
	25 /	American Beacon Small Cp Val A	15.03	9.33	10.64	36.20	25	2	
	26 \	VALIC Company II Small Cap Value	15.44	9.42	10.27	36.20	25	2	

In addition to wanting to see the latest results of the screen each time you open it, you also want to ensure the custom column set, scorecard columns, and conditional formatting elements are seen along with it. To do this, you need to save the workbook.

Exercise 11: Save the changes to the workbook

To save the workbook, do the following:

1. At the top of the window, click the Workbook menu, then select Save As.

Menu Inves	stment Analysis   *Grid	View $\vee$	Q.	Sear	
Grid View +	Workbook				
* Open Small Value Fund	Create New				
✓ 0 68	Open	🖞 🖹 🍸 🛛 Colu	🖹 📄 🏹 🛛 Column Set 🗸		
	Save				
	Save As				
Name	Manage Sharing	Total Return (1Y - Tot mo-end) Annizd n [20%]	tal Return (3Y - T no-end) Annlzd [30%]	Total R mo-ei	
1 Goldman Sach	s Small Cp Val Insghts Inv	20.66	12.60		
2 JNL/PPM Ame	erica Small Cap Value A	17.15	11.26		
3 Goldman Sachs Small Cp Val Insghts A		20.37	12.32		
4 Columbia Small Cap Value I A		18.91	12.53		
5 Royce Opportu	nity Invmt	20.81	12.16		

2. Name the workbook Standard Scorecard, then click Save.

To practice opening this workbook, do the following:

 From the Menu icon, select Home. The name of the screen you saved in Screen for funds in the Small Cap Value Morningstar Category on page 18 appears at the top of the Lists & Screens tile.



- 2. Click **Open Small Value Funds**. The Select a workbook to view the screen: dialog box opens.
- 3. Click **Standard Scorecard**. The workbook opens. Note that the custom column set loads automatically, and the Peer Analytics settings are applied as well.

Q Locate Workbook	Туре	Owner	Modified	Created	
Equity Fund Read Only	Investments	Morningstar	01/27/2017	01/26/2017	
Fixed Income Fund Read Only	Investments	Morningstar	01/27/2017	01/26/2017	
Grid View Read Only	Investments	Morningstar	01/27/2017	01/26/2017	
Markets - Equity Research Read Only	Investments	Morningstar	01/27/2017	01/26/2017	Selecting a workbook when
Markets - Overview Read Only	Investments	Morningstar	01/27/2017	01/26/2017	automatically associates it wit
Multi-Asset Fund Read Only	Investments	Morningstar	01/27/2017	01/26/2017	
Standard Scorecard	Investments	Me	06/22/2018	06/22/2018	

## **Identifying Top Actively Managed Funds**

The first set of exercises you completed allowed you to practice using the Scorecard and Conditional Formatting capabilities in the Peer Analytics panel. This section introduces even more features of the Peer Analytics panel by showing you how to do the following:

- group funds by Morningstar Category
- ► apply conditional formatting with multiple rules (for different columns)
- ► view summary statistics for each group, and
- ► apply a scorecard to a list using only some of the data points in the column set.

You can use almost any list or screen of funds (or other investments) for the exercises that follow, but this exercise allows you to create a screen to find funds you can re-use for the subsequent exercises in this book.

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

Do the following:

 1. From the header, select Create > Screen. The Screener window opens.

 ■ Menu
 Home

			Diract 🕰	Create List	-	
			<b>III</b> DIIECI	Screen		
(a	Search for S	Securities and Resea	arch	Custom Benchmark		Use this icon to
				Custom Scenario		create a new screen
				Policy		
Lists & Screens			Model Portfolios	Model Portfolio		
Namo	Tuno	Last Modified		Workbook		
Ivallie	Type		(i) There are no model portfo	Note		
5-Star Stocks	Screen	04/30/2018	account.	Grid Batch		
Moderate Aggressive	List	04/24/2018	To create a new model portfol.	с,		
Large Value Funds	List	04/24/2018	in the upper right-hand corner.			
					01.11.11.11.11.11.11.1	

Overview

Exercise 12: Create a screen to find actively managed funds

- 2. For Investment Type, select the option for **Open-End Fund**.
- 3. Click **OK**.
- 4. In the Add Criteria area, click Active Share.



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

Screener			Cancel Done	
0/27,387 🕂 🟛 🖒	<ul> <li>Create your Universe</li> </ul>		C Logic Mode	
1290 Convertible Securities A	Investment Type: Open-	End Fund		
1290 Convertible Securities I	Domicile: United States		()×	
1290 Convertible Securities R				
1290 DoubleLine Dynamic Allocation A	# Active Share Score		يري وير	
1290 DoubleLine Dynamic Allocation I	0	M.L.		These settings ensure
1290 DoubleLine Dynamic Allocation R	Uperator	Value		Active Share Secretic
1290 GAMCO Small/Mid Cap Value A	Greater than or	Allow Missing		excluded from the screen
1290 GAMCO Small/Mid Cap Value I	Equal to	Values		
1290 GAMCO Small/Mid Cap Value R	O Grantar than	(a) Malua		
1290 GAMCO Small/Mid Cap Value T		Value		
1290 Global Talents A	O Equal to	U		
1290 Global Talents I	🔿 Not Equal to	O Not Available		
1290 Global Talents B				

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

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

Screener			Cancel Done
0/2,754 + 🖻 🖒	▼ Create your Universe		🔘 Logic Mode 📋
Alger International Growth B Inc	Investment Type: Open-End Fund		
Alger Mid Cap Growth B Inc	Domicile: United States		
Goldman Sachs Mid Cap Value Instl			
Transamerica Multi-Cap Growth A	# Active Share: Greater than or Equal to	Value: 0	
Timothy Plan Large/Mid Cap Value A	" Oldest Share Class	Melver Ver	
Northern Large Cap Value	· Oldest Share Glass	value: Yes	
Salient Real Estate Inv	# Add Criteria		×
ClearBridge Small Cap Value A			
Russell Inv US Defensive Equity E	Q sharp V		
Manning & Napier International S			_
DFA Emerging Markets Small Cap I	Sharpe Ratio Sime Periods	End Date Start Date	
Ivy Large Cap Growth A			-
DFA Tax-Managed US Marketwide Value II	Most C >	Month End > 1 Year Ago	
Great-West MFS International Value Inv			-
Invesco Small Cap Equity A		Quarter End 3 Years Ago	

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

Screener				Cancel Done	
0 / 2,754   + 💼 🖒	<ul> <li>Create your Universe</li> </ul>			C Logic Mode	
Alger International Growth B Inc	Investment Type: 0	pen-End Fund			
Alger Mid Cap Growth B Inc	Domicile: United Sta	tes			
Goldman Sachs Mid Cap Value Instl					
Transamerica Multi-Cap Growth A	# Active Share: Greate	er than or Equal to	Value: 0		
Timothy Plan Large/Mid Cap Value A	# Oldest Share Class		Value: Voo		
Northern Large Cap Value	" Uluest olidre Glass		value. res		
Salient Real Estate Inv	II Sharpe Ratio Total	Morningstar (3Y - mo-end)	Annizd	έζε OK	
ClearBridge Small Cap Value A					These settings ensure
Russell Inv US Defensive Equity E	Operator	Value			the screen returns
Manning & Napier International S		Allow Missing			only funds with a
DFA Emerging Markets Small Cap I	<ul> <li>Greater than or</li> </ul>	Values			nositive Sharne Ratio
Ivy Large Cap Growth A	Equal to	values			positive sharpe hatto.
DFA Tax-Managed US Marketwide Value II	Greater than	Value			
Great-West MFS International Value Inv			~		
Invesco Small Cap Equity A	Equal to	Ju	_		
Monteagle Value I	O Not Equal to	O Not Available			

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

Screener					Cancel Done
0/2,460 + 🖻 🖒	 # Active Share: Greater than	n or Equal to		Value: O	X
Alger International Growth B Inc	II Oldest Share Class			Value: Yes	
Alger Mid Cap Growth B Inc	I Sharpe Ratio Total Morr	ningstar (3Y - m	o-end) Anniz	Value: 0	OX -
Goldman Sachs Mid Cap Value Instl					
Timothy Plan Large/Mid Cap Value A	# Add Criteria				×
Northern Large Cap Value					
ClearBridge Small Cap Value A	Q info				
Russell Inv US Defensive Equity E					
Manning & Napier International S	Information Ratio >	Time Periods	End Date	Start Date	
DFA Emerging Markets Small Cap I					
Ivy Large Cap Growth A		Most C >	Month End $>$	1 Year Ago	
DFA Tax-Managed US Marketwide Value II				- 2 Vooro Ago	
Great-West MFS International Value Inv			Quarter End	5 Tears Ago	
Invesco Small Cap Equity A				5 Years Ago	
Monteagle Value I					•



### 12. Set the Operator to **Greater than**.

13. In the **Value** field, type **0**, then click **OK**.

Screener				Cancel Done	
0 / 2,460   + 💼 🖒	# Active Share: Greater that	an or Equal to	Value: 0	۰×	
Alger International Growth B Inc	I Oldest Share Class		Value: Yes	۰×	
Alger Mid Cap Growth B Inc	I Sharpe Ratio Total Mor	rningstar (3Y - mo-end) Annlz	Value: 0	<b>●</b> ×	
Goldman Sachs Mid Cap Value Instl					These settings
Timothy Plan Large/Mid Cap Value A	Information Ratio Total	Arith (3Y - mo-end) Annlzd Cat		ĘЗ <mark>ОК</mark>	ensure the screen
Northern Large Cap Value	Operator	Value			returns only funds
ClearBridge Small Cap Value A					with a positive
Russell Inv US Defensive Equity E	Greater than or	Allow Missing			Information Ratio
Manning & Napier International S	Equal to	Values			
DFA Emerging Markets Small Cap I	C				
Ivy Large Cap Growth A	Greater than	Value			
DFA Tax-Managed US Marketwide Value II	Equal to	0			
Great-West MFS International Value Inv	Not Found to				
Invesco Small Cap Equity A					
Monteagle Value I	C Less than or Equal				

## 14. Click **Done**.

15. Save the screen as **Active Share Funds**.

Menu	Investment Analy	sis   Grid Viev	N V		Q Sear	
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Lists & Screens		+ <u>⊧</u> Q	28	Column S	Set 🗸	
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C 4		isitions IB	-	FVUSA04ACX	Market Neutral	
Save As			-	F00000Q6TY	World Large Sto	
			CHCLX	FOUSA00BNM	Mid-Cap Growth	
5 AB	Emerging Markets		SNEMX	FOUSA00KC8	Diversified Emer	
6 AB	FlexFee Emerging Markets	FFEYX	F00000SKJY	Diversified Emer		
2 7 AB	7 AB Global Core Equity C			F00000U3B6	World Large Sto	
🗆 8 AB	Growth B		AGBBX	FOUSA00CAR	Large Growth	
9 AB	International		SIMTX	FOUSA00IJE	Foreign Large Bl	

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

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

Column Set Management		
Select Data Point		
Q Search for data points	♥ Data Definition for Active Share	Scroll down a little to see this data point, or search for it by name
Active Share	The amount that the fund spen	
Actual Administration Fee	during the last fiscal year, as r annual report. This includes or	
Actual Deferred Load	equipment, and fees for the ac multiple share classes, the am	
Actual Front Load	share class.	
Actual Net Flow		
Admin Fee Schedule		

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

Column Set Management   C	olumn Set 🗸			-
Select Data Point				
Q Search for data points	Y			
Active Share				
Actual Administration Fee				
Actual Deferred Load				
Actual Front Load				
Actual Net Flow				
Admin Fee Schedule				
Administrator				
Your Current Data Point Columns	; 111			Drag-and-drop the data point from the right side of the window to this position
Name Ticker		Active Share (mo- end)	SecId	

Exercise 13: Add the Active Share Score data point and benchmark

- 4. In the Search for data points field, type bench, then click Benchmarks.
- 5. Under the Benchmark Type heading, select **Category Index ETF Proxy**.

Column Set Management   Colu		
Select Data Point		
Q bench	F Benchmark Type	l
Benchmark Carbon Risk Score	Morningstar Index	Note the search term, and the data point to select
Benchmarks >	Best Fit Index	
Morningstar Category Primary Benchmark	Manager Designated Index Broad Asset Class Index	
Morningstar Category Primary	Primary Prospectus Benchmark	
	Morningstar Category Index	Select this option
	Category Index ETF Proxy	

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

Column Set Management   Colum		
Select Data Point		
Q bench	Benchmark Type	
Benchmark Carbon Risk Score	Morningstar Index	
Benchmarks >	Best Fit Index	
Morningstar Category Primary	Manager Designated Index	
Benchmark	Broad Asset Class Index	
Morningstar Category Primary	Primary Prospectus Benchmark	
Benchmark Id	Morningstar Category Index	
	Category Index ETF Proxy	
	nn <sup>1</sup>	Drag-and-drop the data point from the right side of the window to this position
Your Current Data Point Columns		<b>3</b>
Name Ticker	Active Share (mo- end) Proxy	dex ETF

7. Click **Done**.

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

	Aenu Investment Analysis   *Grid Vie	w v		Q Search for Sec	curities a	
Grid Vi	ew V +					
Active S	Share Funds $\vee$					
	∕0 719 🕅 💛 + 🕰 [	7 🛾 S	Column Set	×		
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	3 1290 VT SmartBeta Equity K	- Edit			0	save the column set
	4 AB Discovery Growth A	СНС			3	
	5 AB Emerging Markets	SNE Save A	is Column Set		3	
	6 AB FlexFee Emerging Markets Growth Adv	FFE)			C	
	7 AB Global Core Equity C	GCECX	92.19 -		F0000	
	8 AB Growth B	AGBBX	75.47 iShares Rus	sell 1000 Growth ETF	FOUS	
	9 AB International	SIMTX	87.31 iShares MS	CI ACWI ETF	FOUS	
	10 AB Large Cap Growth A	APGAX	70.84 iShares Rus	sell 1000 Growth ETF	FOUS	
	11 AB Small Cap Growth A	QUASX	84.51 iShares Rus	sell 2000 Growth ETF	FOUS	

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

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Grid Viev	$w \lor +$				
Active Sh	hare Funds $\vee$				
$\checkmark$	0 719 m ⊙ + <u>-</u> Q		Colur	nn Set 🗸	
	Name	Ticker	Active Share Ca	tegory Index ETF Proxy	Note the sort order for this column
	1 Gotham Enhanced 500 Institutional	GENFX	152.71 iS	hares Russell 1000 ETF	
	2 Gotham Index Plus Institutional	GINDX	136.48 iS	hares Russell 1000 ETF	
	3 Fidelity® Select Chemicals	FSCHX	100.00 iS	hares North American I	
	4 Oberweis Emerging Growth	OBEGX	99.99 -		
	5 AMG Yacktman Special Opportunities Z	YASLX	99.99 -		
	6 DFA Japanese Small Company I	DFJSX	99.99 iS	hares MSCI Japan ETF	
	7 Wasatch Global Opportunities Investor	WAGOX	99.98 -		
	8 Wells Fargo Global Small Cap A	EKGAX	99.98 -		
	9 Delaware International Small Cap Instl	DGGIX	99.97 -		

Exercise 14: Group funds by Morningstar Category

To group funds by Morningstar Category, do the following:

- 1. On the right side of the grid header, click **Show Peer Analytics**. The Peer Analytics panel opens.
- 2. Click the **Grouping** switch to activate it. In the drop-down field, Morningstar Category should already be selected.
- 3. Click **Apply**.



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

$\equiv$	*0	Grid View Template $\vee$			्, Search for Reports and Research	Û	
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		785 🗴 ◯ + 🖓 🖄 🦷	7 Colu	mn Set ∨		Show Pee	
0		Name	Ticker	Active Share Score	Category Index ETF Proxy	<⇔ Secld	You may need to widen this column to make it easier to read the full name
		EAA Fund US Large-Cap Growth Equity					of the ETF proxy.
0	1	Franklin DynaTech Fund A	-	70.70	iShares Russell 1000 Growth ETF	F00000M810	
-		▼ EAA Fund US Small-Cap Equity					
0	2	Vanguard Small Cap Index	-	55.12	iShares Russell 2000 ETF	F00000MHD0	
-		▼ US Fund Diversified Emerging Mkts					
0	3	Virtus KAR Emerging Markets Small-Cap I	VI	99.96	iShares MSCI Emerging Markets ET	F F00000QEKK	
0	4	Ashmore Emerging Markets Sm Cp Eq Instl	ES	99.76	iShares MSCI Emerging Markets ET	F F00000MN0Y	
0	5	RBC Emerging Markets Small Cap Eq I	RE	99.73	iShares MSCI Emerging Markets ET	F F00000QIJC	
0	6	Templeton Emerging Markets Small Cap Adv	ΤΕ	99.72	iShares MSCI Emerging Markets ET	F FOUSA05KQF	
0	7	Victory Trivalent Emerging Mkts Sm-Cp Y	M	99.44	iShares MSCI Emerging Markets ET	F FOOOOOPTUU	
0	8	Ashmore Emerging Mkts Frontier Eq Instl	EFEIX	99.37	iShares MSCI Emerging Markets ET	F F0000002MZ	
0	9	HSBC Frontier Markets I	HS	99.27	iShares MSCI Emerging Markets ET	F F00000MEKK	

One way to clarify information in the Grid View component is to apply conditional formatting to numerical values. In this exercise, you will add color to the funds appearing in the top quartile of their category for the trailing 3-year period.

Exercise 15: Apply conditional formatting to a column

Do the following:

- 1. Click Show Peer Analytics.
- 2. Click the switch for **Conditional Formatting**.
- 3. From the first drop-down field, select Total Ret % Rank Cat 3Y mo-end.
- 4. Change the next drop-down field to Less/Equal To.
- 5. In the Numeric Value field, type 25
- 6. Click the Formatting Style icon, and select green.

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		Peer Analytics	0	
	Name     EAA Fund US Large-Cap Growth Equity     Franklin DynaTech Fund A	▼ Grouping ②	•	
	<ul> <li>▼ US Fund Allocation85%+ Equity</li> <li>2 Morgan Stanley Inst Insight I</li> </ul>	I Morningstar Category ✓ Separate OE an	d ETF Funds	
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	10 UFA Emerging Warkets Small Cap I		Арріу	

- 7. Click **Apply**.
- 8. Click Hide Peer Analytics.

Looking at the category performance for the funds is helpful, but it's also useful to see values for each category itself. To see summary statistics for each category, do the following:

Exercise 16: View the average and count values for each category group

- 1. Click Show Peer Analytics.
- 2. Click the switch for Summary Statistics. The Average option is selected by default.
- 3. Select the option for Count. (The Average option should remain selected.)
- 4. Under the Display For section, the option for Peer Group is selected by default. Select the option for **Your Group**. (The Peer Group option should remain selected)

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ctive S	Share Funds V			
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U	5 Meeder Dynamic Allocation Retail	O Minimum	<ul> <li>Standard Deviation</li> </ul>	
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	13 Templeton Emerging Markets Small Cap Adv	▶ Benchmarks ⑦		0
	14 AllianzGI Emerging Markets Sm-Cp Instl			
	15 JOHCM Emerging Mkts Sm Mid Cp Eq Instl	► Scorecard ②		© ¥
	16 DFA Emerging Markets Small Cap I			-
	17 Oppenheimer Emerging Markets Innvtrs I			Apply

Be sure to select only the highlighted items in this area

- 5. Click **Apply**.
- 6. Click **Hide Peer Analytics**. Note the rows added at the bottom of each group, and the values calculated (where possible).

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	▼ US Fund Diversified Emerging Mkts	ΔΙΔΙΧ	99.24	Shares MSCI Emerning Markets FTF	81	+++	<b>AA</b>	
	2 Amanzar Emerging Warkets Shirep Inst	MIEMY	05.45	iShares MSCI Emerging Markets ETF	10			
	4 DEA Emerging Markets Small Cap I	DEMCY	05.00	iShares MSCI Emerging Markets ETF	40		() () () () () () () () () () () () () (	
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	Average (Your Group)	-	97.06	-	35	-	-	
	Count (Your Group)	-	11.00	_	11	-	-	
	Average (Peer Group)	-	76.13	-	50	-	-	
	Count (Peer Group)	_	599.00	-	788	-	-	

To create a scorecard using the data columns being shown, do the following:

- 1. Click Show Peer Analytics.
- 2. Click the switch for **Scorecard**.
- 3. Click Create Scorecard. The Scorecard window opens.

Exercise 17: Apply a standard scorecard to the list

Menu	Investment Analysis   *Grid Vie	w v	$\mathbb{Q}_{\mathbb{Q}}$ . Search for Securities and Research	📄 🥼 🖉 🏖	
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49 Cath	nolic Investor International Eq I	O Maximum	🥝 Count		
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52 Ame	erican Funds New World A	▼ Scorecard ②			create a scorecard
53 BNY	Mellon Emerging Markets M				
54 Acad	dian Emerging Markets Investor	No Scorecard is setup.	To begin, please click 'Create Scorecard'.		
55 Well	Is Fargo Emerging Markets Equity Adm	Create Scorecard		~	
56 T. R	owe Price Emerging Markets Stock				
57 Fide	lity* Emerging Markets			Apply	
				, Abbah	

4. Enter the following values in the **Total Weight** column:

Data Point	% Weight
Total Return (3Y - mo-end) Annlzd	25
Alpha Total (non-excess return) (3Y - mo-end) AnnIzd	25
Standard Deviation Total (3Y - mo-end) Annlzd	25
Sharpe Ratio Total Morningstar (3Y - mo-end) AnnIzd	25

Note: The Scoring value for Standard Deviation is automatically set to Lower is Better. No weight should be entered for the Active Share or Beta Total rows.

Scorecard				(4	ancel Do
Scoring Type		Scoring Settings			
Standard Scoring	Custom Scoring	Handle Missing Values By		Standardize Based On	
Considere seeming	<u> </u>	Reweighting	V	Percentile rank (Peer group)	V
Performance Factors					
				Total Weight	100%
O Data Point		Scoring		% Weight	
Active Share (mo-end)		Higher is Better	V		0%
Total Return (3Y - mo-end) Ar	inlzd	Higher is Better	~		25%
Alpha Total (non-excess retur	n) (3Y - mo-end) Annizd	Higher is Better	V		25%
Beta Total (non-excess return	) (3Y - mo-end)	Higher is Better	×		0%
Standard Deviation Total (3Y	mo-end) Annizd	Lower is Better	×		25%
Sharpe Ratio Total Morningst	ar (3Y - mo-end) Annizd	Higher is Better	×		25%
Score Settings	Weighted Score Ranks (Weight total m	ust equal 100% to use these options)			
Weighted Score	ODisplay Group Rank	ODisplay Group Quintile		OList Quartile	
	Olisplay Group Percentile	🕑 List Rank		OList Quintile	
	Display Group Quartile	OList Percentile			

Note that only certain columns are being used in the scorecard

- 5. Click Done.
- 6. Click Hide Peer Analytics.
- 7. **Scroll right** to see the Scorecard columns. Note that because standard scoring is being used, a lower score is better than a high score.

	Menu	Investment Analysis   *Grid V	′iew ∨	Q 5	earch for Securities an	d Research	Ţ) 🕅	i (?) &				
Grid V	iew $\vee$	+						Edit				
Active	Active Share Funds V											
$\begin{tabular}{ c c c c c } \hline $ & $ & $ & $ & $ & $ & $ & $ & $ & $$												
								Scorecard				
	▼ Nar	me	Alpha Total (non-excess rn) (3Y - mo-end) Annizd [25%]	Beta Total (non- excess return) (3Y - mo-end)	Standard Deviation Total (3Y - mo-end) AnnIzd [25%]	Sharpe Ratio Total Morningstar (3Y - mo-end) AnnIzd [25%]	Weighted Score	Weighted Score List Rank				
	18 AB	International	0.97	0.83	10.67	0.45	22.00	205				
	19 Ha	rtford International Opportunities Y	0.90	0.88	11.22	0.44	26.75	326				
	20 Lor	ngleaf Partners International	2.64	1.20	16.20	0.52	30.75	406				
	21 Pri	ncipal Diversified Intl R5	1.23	0.85	10.87	0.47	19.50	162				
	22 Ha	rtford International Opp HLS IA	1.00	0.89	11.41	0.45	26.25	310				
	23 Art	isan International Value Investor	0.96	0.82	10.70	0.43	23.25	232				
	24 Dre	eyfus International Equity I	0.52	0.94	12.31	0.40	45.25	654				
	25 Op	timum International Instl	3.46	0.86	10.88	0.68	8.25	28				
	26 Gui	ideStone Funds International Fa Instl	1 70	0.94	11.79	0.51	26.25	310				

This column can be removed from the component.

### 8. Click Show Peer Analytics.

9. Click Edit Scorecard. The Scorecard window opens.



10. Deselect the option for List Rank.

Scorecard			Cancel	Don	e
Scoring Type	Scoring Settings				
Standard Scoring	Handle Missing Values By		Standardize Based On		
	Reweighting	$\vee$	Percentile rank (Peer group)	V	
Performance Factors					
			Total Weight 100%		
🔿 Data Point	Scoring		% Weight		
O Active Share (mo-end)	Higher is Better	V		0%	^
O Total Return (3Y - mo-end) Annlzd	Higher is Better	V		25%	~
Score Settings Weighted Score Ranks (W	eight total must equal 100% to use these	options)			
Weighted Score     Obisplay Group Rank	ODisplay Group Quintile		⊖List Quartile		
ODisplay Group Percenti	le OList Rank		⊖List Quintile		
ODisplay Group Quartile	CList Percentile				

- 11. Click Done.
- 12. Click Hide Peer Analytics.
- 13. Scroll right to see the Scorecard column. How do the range of values in the Weighted Score column compare to one another? It can be difficult to say just by scrolling up and down. It would be easier to distinguish them if they could be viewed as a heat map, where the values are automatically assigned a corresponding color.
- 14. Click Show Peer Analytics.

15. Under the Conditional Formatting area, click Add Formatting Rule.

Menu Investment A	nalysis   *Grid View $\vee$	Q Search for Securities and Research	L () L ()	
Grid View $\vee$ +			Edit	
Active Share Funds $\lor$			$^{A_{\overline{P}}}$	
✓ 0 883 III	⊘ + <u>-</u> ♀ ▷ ▮ ♡   Column Se	et 🗸	Hide Peer Analytics 📎	
	Peer Analytics		0	
□ ▼ Name	Convine (2)			
18 AB International	* Grouping 🗇			
19 Hartford International Op	portunities Y III Morningstar Category	✓ Separate 0E ar	nd FTF Funds	
20 Longleaf Partners Interna	tional		in cri i unus	
21 Principal Diversified Intl	15			
22 Hartford International Op	p HLS IA Add Grouping Level			
23 Artisan International Valu	e Investor	3		
24 Dreyfus International Equ	ity I	9		Click this button to create a new
25 Optimum International In	sti I Total Ret % Ran V	Less/Equal To V 25	Aa	rule for conditional formatting
26 GuideStone Funds Intern	ational Eq Instl			
27 DFA International Core E	juity I			
28 BlackRock Advantage Int	ernational Instl Add Formatting Rule			
20. SEI Morld Equity Ex US /	(0117)			

- 16. From the first drop-down field, select Weighted Score.
- 17. From the Choose Operator field, select Between.
- 18. The Value fields should read Min Max.
- 19. Be sure the Formatting Style icon reflects the multi-color option.

Menu Investment Ana	lysis   *Equity Fu	und $\vee$	Q Searc	ch for Securities ar	d Research	<u>(19</u>	E 0 2	
Grid View ∨ Performance A	nalyst Research E	Eq. Attribution Activ	ive Share Characterist	ics Holdings	Allocation	Style …	+ Edit	
Active Share Funds $\lor$								
✓ 0 221 III	⊘ + ≟Q હ	2 🖹 🍸 🖸 Co	olumn Set ∨			Hide Pe	er Analytics 📎	
	1	Peer Analytics					0	
Name		► Grouping ⑦					Õ	
1 1290 VT GAMCO Mergers & A	Acquisitions IB	Conditional Form	matting ②					Note the values for these fields
2 AB International Strategic Co     3 AB Sustainable Global Thema     4 Aberdeen Global Equity A	re Advisor atic A	II Weighted Sco	ore V Between	<b>∨</b> Mi	n • Max	Aa	l.	
5 Aegis Value		Add Formatting Rul	le					
6 Akre Focus Instl		Dynamic Bankir	 ng ②				0	
8 Alger Small Cap Focus I								

- 20. Click Apply.
- 21. Click Hide Peer Analytics.
- 22. Scroll right to see the Weighted Score column.

	Menu	Investment	Analysis   *Equity	Fund $\vee$	(	Q Search for Securities	s and Research	<u>(</u> 19]	502
Grid V	iew 🗸	Performance	Analyst Research	Eq. Attribution	Active Share	Characteristics Holding	s Allocation Style		+ Edit
Active	Share Fun	ids ∨							
	/ 0	221	i ⊗ + <u>-</u> Q		Column Set 🗸			Show Peer	Analytics 🔇
								Scorecard	
				ss return) (3Y inlzd Cat Curr	Beta Total (excess return) (3Y - mo-end)	Standard Deviation Total (3Y - mo-end) AnnIzd Cat Curr	Sharpe Ratio Total Morningsta (3Y - mo-end) AnnIzd Cat Cur	r Weighted	Weighted Score List
	▼ Name	e		[25%]	Cat Curr	[25%]	[25%	] Score	Rank
	▼ US F	und Allocation8	5%+ Equity						
	1 Morg	gan Stanley Inst Ins	ight l	5.04	1.49	10.82	1.15	5 22.50	74
	V US F	und Diversified En	nerging Mkts						
	2 Virtu	is KAR Emerging Ma	arkets Small-Cap I	6.62	0.87	12.08	0.83	4.25	4
	3 PIMC	CO RAE PLUS EMG I	nstl	6.66	1.40	19.40	0.63	26.50	96
	4 JOH	CM Emerging Mkts	Sm Mid Cp Eq Instl	2.28	1.01	13.91	0.45	28.50	106
	5 BMO	LGM Emerging Ma	irkets Equity I	1.77	0.84	12.91	0.39	34.25	131
	6 Timo	thy Plan Emerging I	Markets A	2.88	1.02	15.19	0.45	34.75	134



23. Save the workbook with the name Active Share Performance Report.

Menu Inv	vestment Analysis   *Gri	d View 🗸	
Grid View V +	Workbook		
	Create New		
s 0 √ 0	<sup>81</sup> Open	👌 📄 🏹 🛛 Column Set 🗸	Use the workbook menu
	Save	Active	
□ ▼ Name	Save As	Share Ticker (mo-end) Category Index FTE Proxy	
18 AB Interna	Manage Sharing	SIMTX 87.29 iShares MSCI ACWI EI	
19 Hartford Ir	nte.	HAOYX 90.47 iShares MSCI ACWI E	
20 Longleaf P	artners International	LLINX 99.46 iShares MSCI ACWI E	
21 Principal E	Diversified Intl R5	PINPX 88.72 iShares MSCI ACWI ET	
22 Hartford In	nternational Opp HLS IA	HIAOX 90.47 iShares MSCI ACWI ET	
23 Artisan Int	ernational Value Investor	ARTKX 96.30 iShares MSCI ACWI ET	
24 Dreyfus In	ternational Equity I	DIERX 93.72 iShares MSCI ACWI ET	

In this example, you will create a custom scorecard based on the category rank value for a series of periods. Specifically, the custom scorecard will evaluate how frequently a fund appeared in the top quartile of its category in each period.

When creating a screen, no option exists to see if a value such as Return or Expense Ratio is above or below the category average. Instead, you must first find the numeric value for the category average, then use that number when creating a screen. In this exercise, you will locate the category average for Prospectus Net Expense Ratio and the 5-year Sharpe Ratio in the Large Blend category. In the next exercise, you will use this value to create a screen for Large Blend funds.

One way to find the Large Blend category average for Prospectus Net Expense Ratio and 5-year Sharpe Ratio would be to create a new screen where you look in the Category universe to find the value for that data point. The Active Share Performance Report workbook you have open, however, probably contains that category, and the Peer Analytics panel allows you to display Summary Statistics for it, too. In fact, in Exercise 16 on page 38 you enabled the Average values in the Peer Analytics panel. Therefore, all you need to do is ensure the correct data points are showing in the column set, then find the correct category to locate the average value for the Prospectus Net Expense Ratio and 5-year Sharpe Ratio.

Do the following:

1. The Active Share Performance Report workbook should be open. From the **Column Set** menu, select **Edit**. The Column Set Management window opens.

■M	Investment Analysis   Active	Q Search for Securities a		
Grid Vie	ew V +			
Active S	Share Funds $ee$			
$\checkmark$	∕₀ 883 🖬 🛇 + 🕰	🖸 🗎 🍸 🛛 Column Set	×	
	<ul> <li>Nøme</li> <li>US Fund Foreign Large Blend</li> <li>Manning &amp; Napier International S</li> <li>Great-West International Value Inv</li> <li>MFS<sup>e</sup> International Value A</li> <li>AB Tax-Managed International</li> </ul>	Im (3) Column Sets [25] Create New 5. Open 7. Edit 4. Save As Column Set	> .	Use the Column Set menu to select this command in order to add the Prospectus Net Expense Ratio and 5-year Sharpe Ratio to the column set
	5 McKee International Equity Instl 6 Hartford Schroders International Stk I	4. 5.24 U.83	u.93	

## **Overview**

Exercise 18: Find the average value for a data point

- 2. Add the following data points to the column set:
  - Prospectus Net Expense Ratio, and
  - ► Sharpe Ratio 5Y (mo-end).

Column Set	Management   Colu	mn Set ∨				Cancel Done		
Net Assets - S	Share Class	Time Periods	End Date	Start Date				
Oldest Share	Class	Most Common >	Month End	> 6 Months Ago	_			
Primary Share	9	Custom Single	Quarter End	1 Year Ago				
Primary Share classification	e in GIFS	Calendar/Discrete	Year End	2 Years Ago				
Share Class T	уре	Rolling		3 Years Ago			L	
Sharia Compli	iant			4 Years Ago				
Sharpe Ratio	>	110 <sup>1</sup>		5 Years Ago				Be sure to add the correct two data points to the column set
Your Current	Data Point Columns						L	
'- Alpi exce mo-	ha Total (non-Br ess return) (3Y - ex end) AnnIzd m	eta Total (non-Star ccess return) (3Y - Tota o-end) Ann	ndard Deviation S al (3Y - mo-end) N Izd n	Sharpe Ratio Total Morningstar (3Y - no-end) AnnIzd	Prospectus Net Expense Ratio	Sharpe Ratio Total Morningstar (5Y - mo-end) AnnIzd USD		
× EDIT	× EC	DIT × EDIT	× E	$\times$ TIG	$_{\rm EDIT} \times$	EDIT $ imes$	1	

- 3. Click **Done**.
- 4. Locate the US Fund Large Blend category.

🗮 Menu	Investment Analysis   *Equit	y Fun	$nd$ $\lor$		Q Sean	
Grid View $\vee$	Performance Analyst Research	Eq.	Attribution	Active Share	Characterist	
Active Share Fu	nds $\vee$					
< √ 0	221 🗎 🖓 + ₌Q	ß		Column Set 🗸	/	
		s	s return) (3Y	Beta Total (excess	Standard D	
□ ▼ Nar	ne	1	nlzd Cat Curr [25%]	return) (3Y - mo-end) Cat Curr	- mo-eni	Be careful; note that the categories are not listed in alphabetical order
▼ US	Fund Large Blend					
🗌 35 Ma	tthew 25		-1.31	1.20		
36 Roc	k Oak Core Growth	$\odot$	-0.11	1.26		
37 Got	ham Enhanced 500 Institutional		1.31	1.09		
38 Got	ham Index Plus Institutional		2.54	1.08		
39 For	t Pitt Capital Total Return		0.75	0.95		

 Scroll down to the bottom of the category until you see the Summary Statistics area, then scroll right to see the values for the Prospectus Net Expense Ratio and 5-Year Sharpe Ratio columns you added.

Menu	Investment Analysis   *Active	Share Pe v	Q	Search for Securities a	nd Research	. 🥂 🖉	0 2
Grid View $\vee$	+						Edit
Active Share F	funds ∨						
< √ 0	883 ⋒ ⊘ + ⊴२	V S	Column Set $\vee$			Show Peer Ar	nalytics 🔇
		Pata Tatal (pap	Standard Deviation Total	Sharpa Patia Total	Prospecture	Sharpa Ratia Total	Scorecard
□ ► Na	ame	cess return) (3Y - mo-end)	(3Y - mo-end) AnnIzd [25%]	Morningstar (3Y - mo-end) AnnIzd [25%]	Net Expense Ratio	Morningstar (5Y - mo-end) Annlzd USD	Weighted Score
398 M	leritage Growth Equity Institutional	0.97	10.57	1.10	1.04	-	27.00
🗌 399 Fi	idelity Advisor® Series Equity Gr	1.01	11.91	1.19	0.00	-	20.50
□ 400 Er	ntrepreneur US Large Cap Institutional	0.93	10.39	1.32	0.75	-	8.25
🗌 401 Br	ridge Builder Large Cap Growth	1.02	11.08	0.97	0.29	-	47.00
2 402 A	merican Century NT Disciplined Gr Inv	1.03	11.16	0.94	1.02	-	51.75
Si	ummary Statistics						
A	verage (Your Group)	1.06	12.20	1.04	0.91	1.26	-
Co	ount (Your Group)	223.00	223.00	223.00	223.00	215.00	-
A	verage (Peer Group)	1.04	11.86	0.94	1.07	1.18	-

Be sure to take note of the Peer Group values, not the values for Your Group

6. In the following table, record the **Average (Peer Group)** value for the category and each data point:

Category	Prospectus Net Expense Ratio	5-Year Sharpe Ratio (mo-end)
Large Blend		

The screen for this example considers funds only in the US Fund Large Blend category. The funds must also meet the following criteria:

- ► at least five years old
- ► below-average expense ratio
- ► above-average 5-year Sharpe Ratio
- ► Downside Capture Ratio 5-year of less than 100, and
- ▶ open to new investors.

To find these funds, do the following:

- 1. From the Create icon, select Screen. The Screener window opens.
  - Provide the workbook, click Don't Save.

<u></u> ■ Menu	Home				Ć	P 🕑 🖉 🕰	
					Create		
			MORNINGST		List		
					Screen		
	a	Search for S	Securities and Bese	arch	Custom Benchmark		Use this icon to
					Custom Scenario		create a new screen
					Policy		
	Lists & Screens	Lists & Screens			Model Portfolio		
		-	1.11.15		Workbook		
	Name	Type	Last Modified	(i) There are no model portfo	Note		
	5-Star Stocks	Screen	04/30/2018	account.	Grid Batch		
	Moderate Aggressive	List	04/24/2018	To create a new model portfol.	·,		
	Large Value Funds	List	04/24/2018	in the upper right-hand corner.	. —		
	Margingster Pated Stocks	List	04/22/2010				

Exercise 19: Create a screen to find funds in the Large Blend Morningstar Category 2. Create a screen with the following criteria:

Field	Value(s)
Investment Type	Open-End Fund
Domicile	United States
Inception Date	Before [mm/dd/yyyy] (use the first day of the current month from five years ago)
Closed to New Investors	No
Morningstar Category	Large Blend
Prospectus Net Expense Ratio	Less than or equal to [enter value from step 6 on page 46]
Sharpe Ratio Total Morningstar (5Y - mo-end) Annlzd Cat Curr:	Greater than or equal to [enter value from step 6 on page 46]

Screener			Cancel Done
0/369   + 🖻 🖒	Create your Universe		O Logic Mode
Calvert US Large Cap Core Rspnb Idx A	Investment Type: Open-End Fund		
Russell Inv US Defensive Equity Y			
Calvert US Large Cap Core Rspnb Idx I	Domicile: United States		()×
Goldman Sachs US Tax-Managed Eq Insti	Incention Date: Potero		
Homestead Stock Index	" Inception Date. before		
Pioneer Core Equity A	Elosed to New Investors	Value: No	
DFA US Large Company I			
BNY Mellon Large Cap Stock M	# Morningstar Category: Large Blend		
Victory S&P 500 Index Y			
iShares S&P 500 Index K	Prospectus Net Expense Ratio: Less than or Equal to	Value: .89	×
DWS Equity 500 Index Inst	E Sharpa Patia Tatal Marningstar (EV, ma and) Applad C	Value: 1.07	
American Century Equity Growth Inv	- Sharpe hatio rotar Morningstar (51 - mo-end) Anniza C	value. 1.07	
Columbia Large Cap Index A			
Glenmede Strategic Equity			
MFS® Blended Research Core Equity I			
DWS Equity 500 Index S			
Clipper			
Columbia Large Cap Index Inst			
Principal Capital Appreciation A			
Wells Fargo Disciplined US Core A			
Goldman Sachs US Equity Insights Instl			
Federated Max-Cap Index Instl			
reaction processing a number			

Carefully note the construction of this screen

- 3. Click Done.
- 4. Save the screen with the name Large Blend Funds.

Before the scorecard can be created, the correct columns must be displayed in the Grid View component. In this exercise, you will create a custom column set to include the following data points:

Exercise 20: Create a custom column set

- ► Name
- ► Ticker
- Morningstar Analyst Rating
- Morningstar Quantitative Rating
- Prospectus Net Expense Ratio
- ► Sharpe Ratio 5Y mo-end
- ► 3Y Rolling Returns, and
- ▶ % Rank in Category for 1Y, 3Y, and 5Y periods.

Do the following:

1. From the **Column Set** menu, select **Create New**. The Column Set Management window opens.



- 2. Include the following data points:
  - ► Ticker
  - Morningstar Analyst Rating
  - ► Morningstar Quantitative Rating
  - Prospectus Net Expense Ratio
  - ► Sharpe Ratio 5Y mo-end

- 3. To create the rolling return (three-year windows over the past five years, moving forward one quarter at a time), do the following:
  - A. Search for Return
  - B. Under Time Periods, select Rolling
  - C. In the Start Date field, type -y5, then select 5 Years From Last Month End

Column Set Management   Colum	ın Set ∨					
Select Data Point						Note the term to search for
Q return					Add	
Morningstar Risk and Return	Time Periods	Start Date		End Date		
Hanks Morningstar Risk-Adjusted Return	Most Common	-у5	×	Enter Date		After entering the dash code, be sure to select 5 Years From Last Month End
	Custom Single	5 Years From Last		Window Sizo Gran	ularity	
Calendar Year Returns Collection	Calendar/Discrete	None	$\mathbf{v}$	None		
	Rolling >	Step Size		Step Size Granula	rity	
Return Ratio		None	$\mathbf{v}$	None	$\vee$	
Upside Capture Return						
Worst Return						

- D. In the End Date field, type -m0, then select Last Month End
- E. From the Window Size drop-down field, select 3
- F. From the Window Size Granularity drop-down field, select Years
- G. From the Step Size drop-down field, select 1
- H. From the Step Size Granularity drop-down field, select Quarters
- I. Click Add

Column Set Management   Colur	nn Set 🗸			
Select Data Point				
Q return			Add	
Morningstar Risk and Return Ranks	Time Periods	Start Date	End Date	
Morningstar Risk-Adjusted Return	Most Common	5 Years From Last Month	Last Month End	
Calendar Year Returns Collection	Custom Single	Window Size	Window Size Granularity	Note the values selected for these fields
Return >	Calendar/Discrete	3 ~	Years V	
Return Ratio	Rolling >	Step Size	Ouarters	
Upside Capture Return		1 ¥		
Worst Return				

- 4. Search for Rank, then select Morningstar Standard Rank Collection (YTD/1Y/3Y/5Y).
- 5. Click the X to remove Total Ret % Rank Cat YTD (mo-end).

Column Set Management   Co	olumn Set 🗸				Cancel Done		
Select Data Point						-	
Q rank	Ŷ						
Morningstar Standard Rank Collection (YTD/1Y/3Y/5Y)							
Carbon Risk Score All Funds Rank							
Carbon Risk Score Components Percent Rank in Category							
Carbon Risk Score Percent Rank in Category	-						
Controversy Category Rank							
ESG Category Rank							
Your Current Data Point Columns	<b>1000</b>						
t Sharpe Ratio Total Morningstar (5Y - mo-end) Annlzd USD	Total Return (5YLME - mo-end) 3 Year Rolling Annlzd USD	Total Ret % Rank Cat YTD mo-end (mo- end)	Total Ret % Rank Cat 1Y mo-end (mo-end)	Total Ret % Rank Cat 3Y mo-end (mo-end)	Total Ret % Rank Cat 5Y mo-end (mo-end)	Remove this data p	oint
imes edit $ imes$	EDIT $\times$	EDIT	EDIT $\times$	EDIT ×	EDIT ×		

- 6. Click Done.
- 7. From the **Column Set** menu, select **Save As Column Set**, and name the column set **Rolling Returns**. You now have the columns you need to create the scorecard.

🗮 Menu	Investment Analysis   *Grid V	iew 🗸	Q Searc	ch for Securities	
Grid View $\vee$	+				
Large Blend F	iunds V				
	369 💼 🛇 🕂 🚉 Q		ımn Set 🔨		
		Column Sets			
	lame	Ticke Create New			
□ 1 A	, AM/Bahl & Gaynor Income Growth I	AFN Open		>	Use this command
2 A	Alger Growth & Income I-2	AIG( Edit			to save the column set
🗌 3 A	Alger Growth & Income Z	AGIZ	0.1		
<b>4</b> A	American Century Equity Growth I	AME Save As Colum	in Set		
5 A	American Century Equity Growth Inv	BEQ			
6 A	American Century Sustainable Equity I	AFEIX Neutral	-	0.80	

Exercise 21: Create a

custom scorecard

A custom scorecard allows you to choose which data points (from the column set you have displayed in the Grid View component) will be used to calculate the score, and assign a weighting to them as well. This way, rather than simply stating that a higher or lower value for a data point should contribute to a better score (as is the case with standard scoring), you can target specific values for a data point.

In this example, you will target the Total Ret % Rank Cat columns in the Rolling Returns column set you created in Exercise 20 on page 48. Each time a fund appears in the top quartile (a value of 25 or less), it will be awarded one point. Further, the longer time period will be weighted more heavily than the shorter time periods.

To create a custom scorecard, do the following:

- 1. The Large Cap Funds screen should be open, with the Rolling Returns column set displayed. Click **Show Peer Analytics**.
- 2. Click the Scorecard switch, then click Create Scorecard.



- 3. Select the option for Custom Scoring.
- 4. From the Custom Data Point drop-down field, select Total Ret % Rank Cat 1Y mo-end (mo-end).

Scorecard		
Scoring Type	Scoring Settings	
OStandard Scoring	Handle Missing Values By Reweighting v	This option should be selected
Performance Factors		
C Equal Weight Reset Weight	Custom Score Definition	
Custom Data Point	✓ Add Score	
Sharpe Ratio Total Morningstar (5Y - mo-end) AnnIzd L	JSD	
( Total Return (06/01/2013 - 05/31/2016) 3 Year Rolling	Annizd USD	Select this data point
Total Ret % Rank Cat 1Y mo-end (mo-end)	iusi equai 100% to use these options)	
Total Ret % Rank Cat 3Y mo-end (mo-end)	Display Group Quintile	
I lotal Ket % Kank Cat 5Y mo-end (mo-end)	Vist Rank	

5. From the Custom Score Definition field to the right, click **Add Score**. The Score Settings pop-up window opens.

Scorecard					
Scoring Type			Scoring Settings		
Ostandard Scoring	Custom Scoring		Handle Missing Values By		
UStanuaru Sconny	Custom Scoring		Reweighting		
Performance Factors					
				1	This link allows you to set
🔿 Data Point			Custom Score Definition	ç	the parameters for your score
O Total Ret % Rank Cat 1Y	mo-end (mo-end)	V	Add Score		

- 6. From the Operator drop-down field, select Less/Equal To.
- 7. In the Value field, enter 25.
- 8. In the **Score** field, enter **1**. Leave the Display drop-down field as Use Score.
- 9. Click **Done**.

Scorecard					$\subset$	Cancel Done
Scoring Type			Scoring Settin	gs		
OStandard Scoring	Cust	om Scorina	Handle Missir	ng Values By		
	0		Reweighting	V		
Performance Factors						
					Total Weight	0%
🔿 Data Point			Custom Score	Definition	% Weight	
O Total Ret % Rank Cat 1Y mo-en	id (mo-end)		✓ Add Score			0% 🛇
		Total Ret % Rank Ca	1Y mo-end (mo-end) - Sco	re Settings	Cancel	one
		Operator	Value	Score	Display	
Add Data Point		Less/Equal To	∨ 25	1	Use Score 🗸 🗸	$\odot$
Score Settings	Weighte					-
Data Point Score	ODisj					
OTime Period Score	ODisj	Add Score				
✓Total Score	ODist	O Default Score is	applied if Custom Score (	Griteria is Default Sc	ore Default Display	
Weighted Score				0	Use Score 🗸	

10. Now that this rule is established, you can easily duplicate it for the other two % Rank in Cat data points. To the far right of the first rule you created, click the **Actions** icon, then select **Duplicate**.

Scorecard					(	Cancel Done	
Scoring Type			Scoring Settings				
Ostandard Scoring	Custom Scoring		Handle Missing Values By				
Ostandard Sconing	Oustoin Scoring		Reweighting	/			
Performance Factors							
				Tot	al Weight	0%	
🔿 Data Point			Custom Score Definition	%\	Veight		
O Total Ret % Rank Cat 1Y	mo-end (mo-end)	~	Edit Score			0% 🛇	
					Data Point	Score Options	Use the Action icon to
					Delete		
Add Data Point					Duplicate		
Score Settings	Weighted Score Ranks	(Weight total n	nust equal 100% to use these options)				

- 11. From the **Custom Data Point** drop-down field, select **Total Ret % Rank Cat 3Y mo-end** (mo-end).
- 12. The score settings from the first rule automatically apply to this row; funds in the top quartile of their category will be awarded one point. To the far right of the second rule, click the Actions icon, then select Duplicate.
- 13. From the Custom Data Point drop-down field, select Total Ret % Rank Cat 5Y mo-end (mo-end).

14. You can now enter the weightings for each performance factor. In the % Weight column, enter the values in the following table:

Data Point	% Weight
Total Ret % Rank Cat 1Y mo-end (mo-end)	20
Total Ret % Rank Cat 3Y mo-end (mo-end)	30
Total Ret % Rank Cat 5Y mo-end (mo-end)	50

Scorecard						Cancel	Don	e	
Scoring Type			Scoring Settings					_	
Ostandard Scoring	Custom Scoring		Handle Missing Values By						
O Standard Sconing	Constant Scaling		Reweighting	$\sim$					
Performance Factors									
					Total Weight		100%		De sure the weightings
🔿 Data Point			Custom Score Definition		% Weight				for your score always
O Total Ret % Rank Cat 1Y	mo-end (mo-end)	V	Edit Score			20%	$\odot$	~	equal exactly 100%
O Total Ret % Rank Cat 3Y	mo-end (mo-end)	V	Edit Score			30%	$\odot$		
O Total Ret % Rank Cat 5Y	mo-end (mo-end)	V	Edit Score			50%	$\odot$	~	
Add Data Point									

- 15. In the Score Settings section, uncheck the options for Total Score and List Rank.
- 16. Click **Done** to close the Scorecard window.

Scorecard			(	Cancel Done		
Scoring Type		Scoring Settings				
OStandard Scoring	Custom Scoring	Handle Missing Values By Reweighting	V			
Performance Factors						
			Total Weight	100%		
O Data Point		Custom Score Definition	% Weight			
O Total Ret % Rank Cat 1Y	mo-end (mo-end)	✓ Edit Score		20% 🛇	^	
O Total Ret % Rank Cat 3Y	mo-end (mo-end)	✓ Edit Score		30%		
O Total Ret % Rank Cat 5Y	mo-end (mo-end)	✓ Edit Score		50%	~	
Add Data Point						
Score Settings	Weighted Score Ranks (Weight to	tal must equal 100% to use these option	15)			
OData Point Score	ODisplay Group Rank	Olisplay Group Quintile	OList Quartile			Both of the highlighted
OTime Period Score	Oisplay Group Percentile	◯List Rank	◯List Quintile			options should be deselecte
OTotal Score	Oisplay Group Quartile	List Percentile				
Weighted Score						

- 17. Click Apply.
- 18. Click Hide Peer Analytics.
- 19. Scroll right to see the Scorecard column.

M	enu Investment Analysis   *Grid	view ∨			9	Search for Securities	s and Research	🗘 🖉	0 2	
Grid Vie	w ~ +								Edit	
Large Ca	ap Funds \vee									
$\checkmark$	′0 983 m ⊗ + ⊴Q	ß		Column S	iet 🗸			Show Peer A	nalytics 🔇	
		urn (	5YLME - mo-er	ıd) 3 Year Rollin	ıg Annlzd USD				Scorecard	
	Name	14 - 117	12/01/2014 - 11/30/2017	03/01/2015 - 02/28/2018	06/01/2015 - 05/31/2018	Total Ret % Rank Cat 1Y mo-end (mo-end) [20%]	Total Ret % Rank Cat 3Y mo-end (mo-end) [30%]	Total Ret % Rank Cat 5Y mo-end (mo-end) [50%]	Weighted Score	
	AB Core Opportunities Advisor	.51	11.80	10.99	11.20	81	57	60	0.00	The values in this column range
	2 AB Core Opportunities I	.53	11.81	11.01	11.21	81	57	59	0.00	nom 0.00 to 1.00, note the
	3 AB Growth Advisor	.89	14.00	14.02	15.02	27	10	9	0.80	possible values as you scroll down
	4 AB Growth I	.02	14.13	14.16	15.16	26	9	9	0.80	
	5 AB Large Cap Growth A	.21	14.34	13.74	14.12	57	21	9	0.80	
	6 AB Large Cap Growth Advisor	.50	14.64	14.02	14.39	53	18	7	0.80	
	7 AB Large Cap Growth I	.54	14.68	14.08	14.44	53	16	7	0.80	
	8 AB Large Cap Growth K	.14	14.27	13.66	14.04	57	22	9	0.80	

The final step is to apply conditional formatting to the Weighted Score column to make the scores easier to read. Once that is complete, you can save the workbook to preserve the changes and additions you have made. Do the following: Exercise 22: Apply conditional formatting to the report

- 1. Click Show Peer Analytics.
- 2. Click the switch to turn on **Conditional Formatting**.
- 3. From the All Numeric Data drop-down field, select Weighted Score.

≡ M	enu Investment Analysis   *Grid View	<i>w</i> ~	♀ Search for Securities and Research	) 🔱 🗹 🖓 🖉	
Grid Vie	v 🗸 🕂			Edit	
Large Ble	nd Funds $leftarrow$				
$\checkmark$	० 369 <b>वि</b> ⊗ + ₂२ वि	🕈 🗎 🍸 🛛 Column Set 🗸		Hide Peer Analytics 📀	
		Peer Analytics		0	
	Name	► Grouping ②		0	This is the only field you
	1 AAM/Bahl & Gaynor Income Growth I	Conditional Formatting ②			need to change for this option
	2 Alger Growth & Income I-2 3 Alger Growth & Income Z 4 American Contrary Equity Growth I	₩ Weighted Score ∨	Between V Min Max	Aa	
	5 American Century Equity Growth Inv	Add Formatting Rule			
	6 American Century Sustainable Equity I 7 American Funds Fundamental Invs 529A	Dynamic Ranking ②		0	
	8 American Funds Fundamental Invs 529F1				

- 4. Click **Apply**.
- 5. Click Hide Peer Analytics.

6. Scroll right to see the Weighted Score column with the conditional formatting applied.

	Investment Analysis   *Grid Vi	iew ∨			Q	Search for Securities	s and Research	🗘 🖉	02
Grid Vi	ew V +								Edit
Large C	ap Funds $leftarrow$								
	/0 983 <u> </u>	2		Column S	Set 🗸			Show Peer A	nalytics 🔇
		urn ( 14 -	5YLME - mo-en 12/01/2014 -	d) 3 Year Rollir 03/01/2015 -	ng Annlzd USD 06/01/2015 -	Total Ret % Rank Cat 1Y mo-end (mo-end)	Total Ret % Rank Cat 3Y mo-end (mo-end)	Total Ret % Rank Cat 5Y mo-end (mo-end)	Scorecard Weighted
	<ul> <li>Name</li> <li>US Fund Large Blend</li> </ul>	)17	11/30/2017	02/28/2018	05/31/2018	[20%]	[30%]	[50%]	Score
	1 Alger Growth & Income I-2	.68	9.87	9.85	8.97	82	61	62	0.00
	2 Alger Growth & Income Z	.91	10.03	10.04	9.20	81	56	61	0.00
	3 American Century Equity Growth I	.79	8.63	9.52	9.54	7	50	46	0.20
	4 American Century Equity Growth Inv	.57	8.41	9.30	9.32	8	54	53	0.20
	5 American Century Sustainable Equity I	.33	10.33	10.82	10.46	8	31	33	0.20
	6 American Funds Fundamental Invs 529A	.98	11.77	12.02	11.45	52	6	25	0.80
	7 American Funds Fundamental Invs 529F1	.21	12.02	12.26	11.70	50	5	13	0.80
	8 American Funds Fundamental Invs A	.07	11.87	12.11	11.54	52	6	21	0.80

A heat map effect has been applied to this column

7. Save the workbook as Large Cap Performance Report.

🗮 Menu	nvestment Analysis   *Gri	l View $\!$		Q 5	ea
Grid View ∨	+ Workbook				
	Create New 98: Open	7 6 7	Column S	Set 🗸	Use the workbook menu
	Save	urn (5YLME -	mo-end) 3 Year Rolli	ng Annizd USD	
□ ▼ Name	Save As Manage Sharing	14 - 12/01/2 017 11/30/	014 - 03/01/2015 - 2017 02/28/2018	06/01/2015 - 05/31/2018	1
1 Alger G	rowti.	.68	9.87 9.85	8.97	
2 Alger G	rowth & Income Z	.91 1	0.03 10.04	9.20	
3 Americ	an Century Equity Growth I	.79	8.63 9.52	9.54	
4 Americ	an Century Equity Growth Inv	.57	8.41 9.30	9.32	
5 Americ	an Century Sustainable Equity I	.33 1	0.33 10.82	10.46	
6 Americ	an Funds Fundamental Invs 529A	.98 1	1.77 12.02	11.45	

Now that the workbook is saved, you can create a grid batch report for it. Creating a grid batch report means that the values in the Grid View component will be calculated on a schedule and frequency you choose, and a Microsoft<sup>®</sup> Excel<sup>®</sup> file will be prepared, which you can easily share with others at your firm. This way, you do not have to remember to do this work manually. Each grid batch report supports only one workbook.

Taking advantage of grid batch reports involves the following basic steps:

- 1. Save a workbook with the list or screen to be calculated as part of the grid batch report.
- 2. Create a grid batch schedule (via the Create icon) to tell the system when the grid batch report should be created.
- 3. Visit the Grid Batch Reports page (via the Menu icon) to open or save a grid batch report.

When creating a grid batch, you set the time for the batch to run (such as 6:00). The batch will run when it's 6:00 a.m. in your time zone. The time zone setting is found in Global Settings. To set it, do the following:

Exercise 23: Set your time zone

**Overview** 

- 1. At the far right side of the header, click the **Account** icon.
- 2. From the Account menu, select **Global Settings**. The Global Settings window opens.

	I 🖉 🖉 🔔	
	Account	
	File Management	Note the highlighted selections.
MIC JANINGOLAN DIRECT	Global Settings	
Securities and Besearch	Content Catalog	
	Sign Out	

- 3. Select the Data Format tab.
- 4. From the **Timezone** menu, select a **time zone**.
  - Note: Scroll down to see more time zone selections, or type a keyword (such as London) in the Search field at the top of the Timezone menu.

General Data Format	Decimal Places	Decimal Separator  Period[.]  Comma[.]	Thousands Separator Period[.] Ocomma[.]	Negative Indicator • -1234.56 (1234.56)	
Calculation			Space None Quote[']		
	Date Format mm/dd/wyy	Timezone	Numb	nering System rabic dian	
	Show Calculated Dat	Europe/Kiro Europe/Lisb Europe/Ljub	v on Iljana		Select from this me
		Europe/Lon Europe/Luxe	don embourg 🗸		

5. Click Save.

To create a monthly grid batch report, do the following:

1. On the header, click **Create**, then select **Grid Batch**. The Grid Batch Setup window opens.

# Exercise 24: Creating a grid batch report

	Ienu Investment Analysis   Large Ca	p Perfor.	∨	Q Searc	ch for Securities an	nd Research	Û	E 7 2	
Grid Vi	ew ∨ +				í literatur (	-		Edit	
Large C	ap Funds $\vee$					Create		4 <sup>6</sup>	
		-11				List			
( v		4 E	V Column	i Set ∨		Screen		Analytics 🔇	
			Morningster	Morningstar	Proenecture	Custom Benchmark			
			Analyst Rating	Quantitative Rating	Net Expense Mo	Custom Scenario		01/2013 - 12/01/	
	Name     Algor Crowth & Income 1.2	LICKER	(day-end)	(mo-end)	hatio	Policy		5/31/2010 11/3	
	2 Alger Crowth & Income 7	ACIZY	-	Neutral	0.00	Model Portfolio		10.33	
	2 Argen drowth o mounte 2	AUIZA		Neutral	0.05			0.09	Select this command to
	American Century Equity Growth Inc.	AIVIEIA	Neutral	-	0.47	Workbook		9.90	begin making a grid batch report
	American Century Equity Growth Inv     American Century State inchile Equity I	ACCIV	Neutral	-	0.07	Note		9.70	begin making a gra baton report
	C. American Euroda Eurodamental Java 5200	OFNIAY	Celd	-	0.00	Grid Batch		11.62	
	American Funda Fundamental Invs 525A	CENEX	Calif	-	0.00			11.03	
	American Funds Fundamental Invs 529F1		Guid	-	0.40	1.00	10.00	11.00	
	o American Funda Fundamental Invs A	ANUEX	6010	-	0.60	1.20	10.20	11.74	
	9 American Funds Fundamental Invs F1	AFIFX	Gold	-	0.67	1.19	10.19	11.66	

- 2. In the Batch Name field, type Large Blend Performance.
  - ☞ Note: The name for a batch report is limited to 28 characters.
- 3. From the **Batch Workbook** drop-down field, select the **Large Blend Performance Report** workbook you saved in the previous exercise.

Grid Batch Setup		Cancel Next	
STEP 1 OF 3		*Required Fields	
Batch Name* Large Blend Performance Batch Report ① Only the Grid View worksheet from the selected Workbook will	Batch Workbook* ① Large Blend Performance Report	~	Note the values for these two fields

4. Click Next.

- 5. From the **Batch Start Date**, enter the date of the **third business day in the next month**. Leave the Batch End Date as MM/DD/YYYY. This way, the report will re-run each month with no end date.
- 6. From the Batch Run Time drop-down field, select 6:00. To the right of the Batch Run Time field, the Time Zone (from your Global Settings) is displayed. Together, these two fields indicate the report will run when it is 6 a.m. in the America/Chicago time zone.
- 7. In the Batch Frequency area, select the option for Monthly.

Grid Batch Setup Grid Batch setup allows yo	u to schedule the Grid View of yo	ur Workbook to calculate and expo	ort an E	Cancel Back Ne Cancel Back Ne	a	You can change your time
STEP 2 OF 3				*Required F	elds	zone in your diobal settings.
Batch Start Date* 10/03/2018	Batch End Date	Batch Run Time* () 6:00		Time Zone America/Chicago (Based on Global Settings)		
Batch Frequency*						Be sure to select the correct options for your batch report from each field on this step

## 8. Click Next.

- 9. Click **Save**. The first report will generate at the time you selected from the Batch Run Time field on the Batch Start Date you entered.
  - Note: If you ever need to edit or delete a grid batch schedule, you can do so by using the Menu to access the Grid Batch Schedules page. Hover the cursor over the schedule you need to edit or delete, then click the Actions icon to select the appropriate command.

When a batch report is available, you can open (or save) it from the Grid Batch Reports page. To open a grid batch report, do the following:

## Exercise 25: Opening a grid batch report

1. Hover the cursor over the Menu icon, then select Grid Batch Reports.

Menu Investment Ana	lysis   Large C	ap Perfor.	∨	Q Sea	
Home					
Workbooks	+ <u>-</u> Q	28	▽ Columr	n Set ∨	
Lists & Screens Policies			Morningstar	Morningstar	
Model Portfolios		Ticker	Analyst Rating (day-end)	Quantitative Rating (mo-end)	
Custom Benchmarks		AIGOX	-	Neutral	
Custom Scenarios		AGIZX	-	Neutral	Select this option to see the grid
Caluma San	1	AMEIX	Neutral	-	batch reports you have created
Column Sets	Inv	REOGX	Neutral	-	
Grid Batch Reports	juity I	AFEIX	Neutral	_	
Grid Batch Schedules	/s 529A	CFNAX	Gold	-	
	/s 529F1	CFNFX	Gold	_	

- 2. Check the Status column, to ensure the batch report completed successfully. If a report's Status is Failed, click the **Information** icon to find out what happened.
- 3. Click the **name** of a grid batch report to either open it in Microsoft<sup>®</sup> Excel<sup>®</sup> or save it.

Menu Grid Batch Report	rts		Q. Search for Sec	curities and Research
Custom Scenarios				
Workbooks	Name	Workbook	Created Date	Status
Lists & Screens		Large Blend	07/12/2019	Succeeded
Policies	Large biend Performance	Performance Report	0771272010	Succeeded
Model Portfolios				
Custom Benchmarks				
Column Sets				
Grid Batch Reports	>			
Grid Batch Schedules				