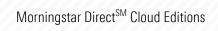
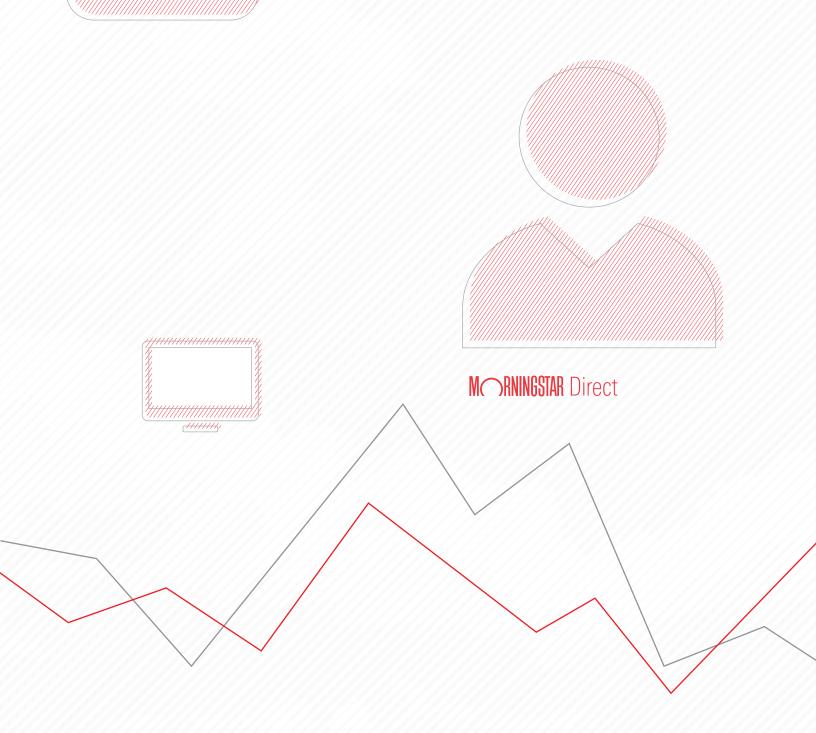
Working with Client Accounts





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Working with Client Accounts

How do I create client accounts and household them together? Once available, how can I analyze them for performance, ESG statistics, exposure to various stock sectors or regions, and more? How do I create a custom benchmark in order to compare it to a client account? How can I compare my manager selections to an investment policy for a client account? How can I propose changes to a client account?

This manual answers these questions by guiding you through a series of exercises covering the following topics:

- Working with Client Accounts (page 5)
- Householding Clients (page 24)
- Creating an Investment Policy (page 32)
- Using Portfolio Analysis Tools (page 33)
- Proposing Changes to a Client Account (page 38)
- Working with Custom Benchmarks (page 53)



Overview

Working with Client Accounts

With a client account, you can easily track and analyze a client's investments, as well **Over** as compare the account to a custom benchmark, investment policy, or proposal.

In this section, you will learn how to do the following:

- ► Meet the prerequisites for working with client accounts (page 6)
- Create a client account from scratch (page 7)
- Create a client account by importing (page 12)
- Add holdings from a different portfolio object to an account (page 17)
 - Note: The phrase "portfolio object" is used throughout this guide to refer to a model portfolio, client account, custom benchmark, or investment policy.
- Change an account's performance calculation start date (page 18)
- ► Understand how fees are calculated (page 18)
- ► Add a platform fee to a client account (page 19)
- ► Display portfolio fees in the Holdings Analysis component (page 20)
- ► Display portfolio fees in the Portfolio Editor (page 21), and
- Evaluate an existing account's company-level ESG data (page 23)

Before engaging with the client account exercises in this guide, you will want to ensure you have already created the related custom benchmarks, investment policy, and model portfolios in a related manual. This guide also shows you how to create a report template in the standalone Presentation Studio tool, and how to access that template in Morningstar Direct Cloud for Wealth Management. Therefore, you will want to be sure that application is available to you.

To have the proper files and application available for the exercises in this manual, do the following:

- Complete the exercises in Creating Model Portfolios, Custom Benchmarks, and Investment Polices, and
 - Note: If you have created model portfolios, custom benchmarks, and investment policies on your own, then you may be able to use those in conjunction with the client accounts you create here, in lieu of the content you would create in the manual linked to above.
- ► Download and install the standalone version of Presentation Studio.

What are the prerequisites to working with client accounts?

Usually, a firm's existing client accounts are automatically recreated in Morningstar Direct Cloud for Wealth Management. However, you might need to manually create an account in the following circumstances:

- you want to mock up an account based on a model portfolio (perhaps for held-away assets)
- ▶ you want to create an account for a prospect who is not yet a client, or
- you are a potential user on a trial license and your client holdings are not being brought in to Morningstar Direct Cloud.

In this exercise, you will create a client account to represent the holdings of a prospect who needs assistance in diversifying and improving performance. You will input the investments, set weights for them, select a start date for the account, and so on.

You will be offered the option to view the company-level ESG data for the client account. You can also view this data when editing holdings, which is covered in Exercise 7 on page 23.

To learn more about ESG data and how a Morningstar ESG Score is computed, please read Leveraging Morningstar Sustainability Data.

To create a client account, do the following:

1. In the header, click the **Create** icon and select **Client Account**. The Creating Accounts window opens.

≣ Menu	Home			Û	E ? &	
				Create	^	
			R Direct 🗢	List		
			II DIIGUL	Screen		
	(Q Search for Securities and Rese	arch	Client Account		NL 1 II
	· · · · · · · · · · · · · · · · · · ·			Custom Benchmark		Note the highlighted selections.
				Custom Scenario		mynnymeu selections.
	Lists & Screens		Client Accounts	Policy		
		The lot of the state of the		Model Portfolio		
	Name	Type Last Modified	Name	Workbook		
	Blockchain	List 08/23/2018	401K	Note		
	Stocks to Watch	List 08/23/2018	Scott Tucker	Grid Batch		

Exercise 1: Create a client account from scratch

2. (Optional) In the upper-right corner of the Untitled area, click the **Expand** icon. The Untitled area expands to the full size of the window, making it easier to read.

In the upper-left corner of the Untitled area, note that the account date defaults to yesterday's date.

CREATING ACCOUNTS				Save As	Rename	Close	
Untitle 11/26/2018		\bigcirc	Allocation: Asset	Allocation 10/31/	2018	\$ \$	Click here to expand
+ Name	Weight >	Recalculate Market Value(USI	100.00		E E	itock (Net) Jond (Net) Cash (Net)	this component and make it easier to read.
Edited	100.00	10,000.01	50.00		■ F ■ C	Pref (Net) Convert (Net	
Morningstar Mod Tgt Risk TR USD Unallocated Cash	100.00	 10,000.01)ther (Net)	
Current default portfolio date is yest	erday. Please use "Edit Cu	rrent	0.00 Existin	-		/()	Note the default value (yesterday's date).
Date" option to change the date if y portfolio date.			- Benchmark	A		\ <i>A</i> \	

3. To enter the account's origination date, click the **Component Settings** icon and from the menu, select **Portfolio Date** > **Edit Current Date**.

Note the sample entries in the Edit Current Date menu.

CREATING ACCOUNTS	Save As Rename	Close
Untitled 11/13/2018		0
+	Component Settings	ate
Name Wei Edited 100. Morningstar Mod Tgt Risk TR USD Unallocated Cash 100.	Benchmark Morningstar Mod Tgt Risk TR USD Column Set Appendix Algorithm	> F
O Portfolio Holdings Dates	🕙 Edit Current Date	Done
Edit Current Date	> Portfolio Holdings Date	
Create New Date Create From Existing Date Delete Existing Date Open Date		

4. Click the blank field and enter **-y3**. The words "3 Years From Last Month End" are displayed.

Done	-y3 is the abbreviation for 3 Years From Last Month End.
	Done

- 5. Click **3 Years From Last Month End**, then click **Done**.
- 6. Now, you will select the investments for the account. In the upper-left corner of the Creating Accounts window, click the **Add** icon. The Add menu opens.

CREATING ACCOUNTS					Sa	/e As	Rename	Close	
Untitled 10/10/2018								17 L	
+							Rec	calculate)	Click
Name	Weight >	Market Value(USD)	> Shares	>	Price	Ticker		Alloc (Net)	
Edited	100.00	10,000.00	-		_	-		-	
Morningstar Mod Tgt Risk TR USD	-	_	-		-	-		59.72	
Unallocated Cash	100.00	10,000.00	10,000.00		1.00			0.00	

7. In the Search field, enter Real Estate Select. From the results list, select Real Estate Select Sector SPDR[®].

CR	EATING ACCOUNTS				
Un	titled 10/10/2018				
+	÷				
N	Add				
E	Q Real Estate Select			×	Type here.
N	Frequently Accessed	Identifier	Туре	Exchange	.,,,
U	Real Estate Select Sector SPDR®	XLRE	Exchange-Traded Fund	NYSE ARCA	Select this
	S&P Real Estate Select Sector NR USD		Index		
	S&P Real Estate Select Sector PR USD		Index		
	S&P Real Estate Select Sector TR USD		Index		

Real Estate Select Sector SPDR[®] is displayed in the Creating Account window, under Unallocated Cash.

CREATING ACCOUNTS				
Untitled 10/10/2018				
Name	Weight >	Market Value(USD) >	Shares >	Each instrument will initially be
Edited	100.00	10,000.00	-	categorized as Unallocated Cash, with no weight, market
Morningstar Mod Tgt Risk TR U	- 1	-	-	value, or number of shares.
Unallocated Cash	100.00	10,000.00	10,000.00	
1 Real Estate Select Sector SPDR®			-	

 Click the Add icon, and in the Search field, enter VFIXX (the ticker symbol for JPMorgan Federal Money Market Agency). From the results list, select JPMorgan Federal Money Market Agency. JPMorgan Federal Money Market Agency is displayed under Unallocated Cash.

CR	REATING ACCOUNTS					Sa	ve As	Rename	Close	
Un	titled 10/10/2018								$\bigcirc ~ ^{A_{\mathcal{P}}}$	
+					~			Rec	calculate	Click here
N	Add				Shares >	Price	Ticker		Alloc (Net)	
	Q VFIXX			×	_	-	-		-	Type here.
	Frequently Accessed	Identifier	Туре	Exchange	-	-	_		59.72 0.00	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1	JPMorgan Federal Money Market Agency	VFIXX	Money Market Fund	NASDAQ	-	31.76	XLRE		99.95	Select this.

- 9. Add Diamond Hill Large Cap A (DHLAX).
- 10. Change the **Weight** of each fund according to this table:
 - ${\ensuremath{\,^{\ensuremath{\mathcal{P}}}}}$ Note: Press ${\ensuremath{\textbf{Enter}}}$ after each entry to move to the next one.

Fund	Weight
Real Estate Select Sector SPDR	40
JPMorgan Federal Money Market Agency	35
Diamond Hill Large Cap A	25

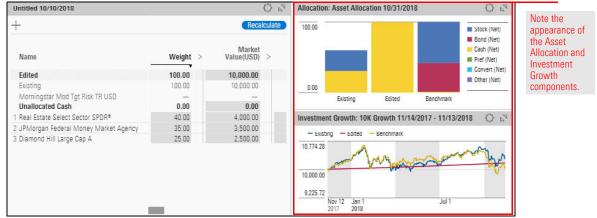
11. In the Market Value field at the top, enter 1,000,000.

12. Click Recalculate.

CREATING ACCOUNTS				Save As	Rename	Close	
Untitled 10/31/2015						0 4 ⁴	
+						Recalculate	After entering the account's
Name	Weight >	Market Value(USD) >	Shares 🗦	> Price	Ticker	Asset	value and weights for each holding, click this button.
Edited	100.00	1,000,000.00	-		-		
Morningstar Mod Tgt Risk TR USD	_		<u></u>		-		
Unallocated Cash	0.00	0.00	0.00	1.00			Enter the account's value here.
1 Real Estate Select Sector SPDR®	40.00	400,000.00	12,924.07	30.95	XLRE		
2 JPMorgan Federal Money Market Agency	35.00	350,000.00	350,000.00	1.00	VFIXX		
3 Diamond Hill Large Cap A	25.00	250,000.00	10.822.51	23.10	DHLAX		
							Enter the weights for each holding here.

13. If you expanded the component in step 2 on page 8, click the **Collapse** icon so you can see how the other components are affected when you recalculate.





14. In the upper-right corner of the Creating Accounts window, click Save As.

CREATING ACCOUNTS				Save As	Rename	Close	Click here to s
Untitled 10/31/2015	Allocation: Asset A	llocation 10/31	/2018	\bigcirc ∇	the client acco		
+		Recalculate	100.00		S S	tock (Net)	
Name	Weight >	Market Value(USD)			<mark>=</mark> C	ond (Net) ash (Net) ref (Net)	
Edited	100.00	1,000,000.00	50.00		and the second se	onvert (Net)	
Morningstar Mod Tgt Risk TR USD		_			0	ther (Net)	
Unallocated Cash	0.00	0.00					
1 Real Estate Select Sector SPDR®	40.00	400,000.00	0.00				
2 JPMorgan Federal Money Market Agency	35.00	350,000.00		ing Edited Ben	chmark		
3 Diamond Hill Large Cap A	25.00	250,000.00	EXIST	ing culled ben	CIIIIark		
			Investment Growth	1: 10K Growth 1	1/27/2017 - 11/	~() N	
			- Edited -	Benchmark			
			11,040.27				
			10.520.14	٨		10	

15. In the "Save portfolio as" dialog box, enter **Karen Franklin**, then click **Save**. In the upper-left corner of the Creating Accounts window, "Untitled" is replaced with "Karen Franklin."

Save portfolio as	
Karen Franklin	Enter a name.
Cancel Save	

16. In the upper-right corner of the Creating Accounts window, click **Close**. The window closes.

A potential client might send you a list of his or her current investments as a Microsoft[®] Excel spreadsheet. Instead of manually entering those investments (as you did in Exercise 1 on page 7), you can import the spreadsheet directly into a client account.

Exercise 2: Create a client account by importing

In this exercise, you will download an Excel file to use.

Note: When using an Excel file of your own, be sure to first check the requirements for importing an Excel file, found in Data Import Specifications.

To import an Excel file, do the following:

- 1. Download the Excel file for this exercise.
- 2. In the upper-right corner of the Morningstar Direct Cloud for Wealth Management window, **hover the cursor** over **Menu** and select **Import**. The Import page opens.

Note: At the left side of the page, the Upload File option is selected.

Menu Home			Ç [€ (?) &	
Home	>		i	
Workbooks	MMRNINGST	🖁 Direct 🖴		
Lists & Screens Client Accounts	Irch for Securities and Rese	arch		
Policies				
Model Portfolios Custom Benchmarks		Client Accounts		
Custom Scenarios	Type Last Modified 🛓	Name	Last Modified	
Column Sets Grid Batch Reports	List 08/23/2018			
Grid Batch Schedules	List 08/23/2018			
	List 08/16/2018			
Markets Monitoring	List 07/12/2018			
Morningstar Research	List 07/09/2018			Note the highlighted selections.
Custom Data Management	List 06/06/2018			
Import	List 05/23/2018		· · · · · · · · · · ///	
Notes	List 05/23/2018			
Alerts	List 05/02/2018 🗸			
Excel Add-In				
Presentation Studio Asset Allocation				

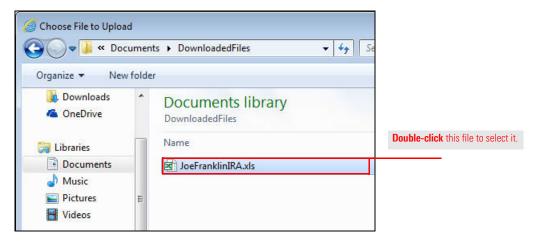
3. From the **Select File Type** menu, select **Account Holdings**. To the right of the Select File Type menu, the Upload File icon appears.

E Import		
Import		
Upload File Preview Data	Select File Type	
	Investment List Investment List with Custom Data	Note the highlighted selections.
	Account Holdings Model Portfolios	
	Custom Benchmark	

4. Click the Upload File icon. A navigation window opens.

	Import					
Impor	t					
Upload	l File	>	Account Holdings	V)	↓ Upload File ⑦	Click her
Previev	w Data					

5. Locate and **double-click JoeFranklinIRA.xls**. On the Import page, the import options are displayed.



- In the Column Mapping area, make a selection from each Unmapped menu. Each unmapped menu corresponds to a column in the Excel spreadsheet. A selection for each column is required.
- 7. In the Exclude Header Row field, make sure **First 1 row** is selected.
 - ☞ Note: Not all options are shown in the illustration.

Menu Impo Import	t		Q Search for Sec	curities and Research	
Upload File > Preview Data	Account Holdings V	JoeFranklinIRA.xls	× Ø		Map each column to the appropriate heading.
	Unmapped ✓ ▲ Date Account Number	Account Name Account Name IRA IRA	SecID SecID FOUSA00G4M FOUSA00G46	Holding Name Security Name Nuveen Large-Cap V Oppenheimer Equity	
	Account Name Holding Name Identifier				Scroll right, if needed, to see more Unmapped columns.
	Security Mapping Option Exclude Inactive Inves Auto Select Oldest Sh Auto Select Virtual Cla	tments are	Exclude Header Row First 1 row	Date Format YYYY-MM-DD	Note the selection here.

- 8. When you have finished selecting options, in the upper-right corner of the window, click **Preview Data**.
- 9. In the Import Status list, under Account Holdings, click **Preview Data Section.**

	Import	Q Search - Q 🖉 🖓 🖉	
Import		Import Status	
Upload Preview	80.8	Account Holdiv	
		Import Status	Click here.
		Account Holdings 🗸 🗸	
		Data is ready for preview. View your results in Preview Data Section.	

10. **Review** the displayed data and make any necessary corrections. Then in the upper-right corner of the window, click **Next**. Another preview page of data is displayed.

Menu Impo	rt				a Sea	arch for Securiti	es and Rese	earch.		Ľ () 2	<u></u>
Import									Imp	oort Status	
Upload File Preview Data >	Acco	ount Holdingsv								Next	
		Securities (5)	>	Prices (5)	>	Holding	s (5)	>	Accoun	nts (1)	14
	0	Status •		Security Name		Identifier	Security	Туре	Imported Security Type Code	Currency	Here you se that no erro were found
	0	Existing Sec	curities (No Err	or)							-
	0	1		1290 SmartBet	a		Uniden	tifi			
	0	2		1290 GAMCO (S		Uniden	tifi			
	0	3		1290 Convertit	le		Uniden	tifi	MF		
	0	4		1290 Convertit	le		Uniden	tifi			
	0	5		1290 GAMCO (S		Uniden	tifi	MF		

- 11. Continue reviewing and correcting, and click Next as you finish each page.
- 12. On the final Preview page, select the **account** and click **Import**. When the data has been imported, an alert opens.

<u></u> ■ Menu	Import	10.2				Q Search	for Securities and Res	earch	↓ £ ⑦	3	1
Import									Import Status		l
Upload File Preview Data	>	Acc	ount Holdingsv)	Ē					Back Imp	ort	l
			Securities (5)	>	Prices (5	>	Holdings (5)	>	Accounts (1)		l
		0	Status T			Account Number	Account Name	ļ	mport Date/Time		Click here to select the account, then click Import .
		۲	 Existing Acc 	counts (No	Error)						
		0	1			401K	401K		2018-11-15 11:		1

13. In the alert, click Portfolios Workbook.

Good news, your account has (have) imported successfully. To see	×	
your account in action go to the Portfolio Workbook. To import another account, select your File Type and click Upload.		Click here.
another account, select your the type and click opload.		

14. In the Select a portfolio list to view in this workbook dialog box, click All Client Accounts. In the workbook, the imported account is displayed in the top row of the Grid component. After you imported the Joe Franklin IRA file, the prospect notified you that one of the holdings is no longer owned. In this exercise, you will remove a holding from an account. The Client Accounts workbook should be open, with the Client Accounts worksheet selected.

Do the following:

- 1. In the Grid component, **hover the cursor** over **IRA** (the account you imported in Exercise 2 on page 12). The Actions icon appears to the right of the account name.
- 2. Click the **Actions** icon and from the menu, select **Edit Holdings**. The Editing Holdings window opens.

Menu Portfolio Analysis Client Accoun	ts ∨ Q Search for Secu	rities a
Client Accounts V Holdings Allocation Perform	Account	Scer
Grid	Edit Holdings	Note the
	Settings	highlighted selections.
	Delete	tandard ital (3Y
Name	Actions	
□ 1 IRA 🔘	Generate Portfolio Proposal Report	
2 Karen Franklin	Generate Portfolios Comparison Report	
3 Maeve Doonan		
4 Sample	Proposals	
5 Smith Family Trust	No Saved Proposals	
	Create Proposal	

- 3. Hover the cursor over MainStay MacKay International Opports I. The Actions icon appears to the right of the name.
- 4. Click the **Actions** icon and select **Remove from portfolio**. The holding is removed from the account.
 - Pote: You can also add holdings and change market values in the Edit Holdings window.

RA 12/08/2015			
+		Recalculate	
Name	Weight >	Market Value(USI	
Edited	100.00	205,000.00	
Existing	100.00	205,000.01	
Morningstar Mod Tgt Risk TR USD	_		
Unallocated Cash	0.00	0.0	
1 Oppenheimer Rochester® LtdTerm NY MunisA	36.59	75,000.0	
2 Nuveen Large-Cap Value I	24.39	50,000.0	
3 Oppenheimer Equity Income A	21.95	45,000.0	
4 Pioneer Equity Income A	12.20	25,000.0	
5 MainStay MacKay International Opports I 💮	4.88	10,000.0	
Actions			Click here to remove this holdi
Remove from portfo	olio		

5. In the upper-right corner of the window, click **Save**, then click **Close**.

In Exercise 1 on page 7, you created a client account with funds as its holdings. You can also add the following portfolio objects:

- ► model portfolios
- custom benchmarks, and
- ► proposals.

The client account containing other portfolio objects is called a nested account. The account calculations support up to five levels of nesting.

To learn how to add portfolio objects as holdings to a client account, please refer to Exercise 3 in Creating Model Portfolios, Custom Benchmarks, and Investment Policies.

How can I add a portfolio object as holdings to a client account? When you first create a client account, its default performance calculation start date is the first portfolio date, but you can change it to one of the following:

- ► earliest common, or
- ► earliest available.

Components using historical performance data are affected by the performance calculation start date. The components are as follows:

- ► Investment Growth
- ► Historical Return
- ► Scatter Plot, and
- ► Rolling Line.

Changing a client account's performance calculation start date is the same as changing it in a model portfolio. To learn how to change a performance calculation start date, please refer to Exercise 4 in Creating Model Portfolios, Custom Benchmarks, and Investment Policies.

The Portfolio Fee is a forward-looking fee analysis tool. It projects the fees occurring in your portfolio for the next year. It also decomposes the total portfolio fee to the portfolio level and holding level.

The Portfolio Fee is calculated with annual platform fee % and most recent portfolio holdings' annual fee %, assuming a 5% return for the next year. You can customize the platform fee %, holdings' fee %, and expected return, and then calculate the one-year expected Portfolio Fee.

The Total Portfolio Fee % is a sum of the Platform Fee % and the Holdings Fee %.

☞ Note: The the default value for the Holdings Fee % is Prospectus Net Expense Ratio.

How can I change the performance calculation start date? You can add a platform fee to a client account or proposal. The fee (along with the holding fee) is then included in the total portfolio fee calculation.

A platform fee is an annual ongoing charge at the portfolio level.

To add a platform fee, do the following:

- 1. In a Client Accounts workbook, select the **Client Accounts** worksheet.
- 2. Hover the cursor over a client account, then select Action > Settings. The Account Settings window opens.

Exercise 4: Add a platform fee to a client account or portfolio

Menu Portf	olio Analysis C	lient Account	ts v		
Client Accounts \lor	Holdings	Allocation	Performance	Return/Risk	
Grid		+ 9 2	Account Edit Holdings		
Name	P		Settings Delete		Note the highlighted
2 Emma Rosevi 3 Moderate Cor 4 Paul Donahue	lle nservative		Generate Portfolio Pro Generate Portfolios C	A CONTRACTOR OF	
 5 Robert Rosevi 6 Tamara Targe 			Proposals		
			No Saved Proposals		
			Create Proposal		

3. In the Account Settings window, in the **Platform Fee %** field, enter a value between **0 and 100**.

Account Setti	ngs		Cancel	Save	
General	>	Identifier	Model Portfolio		
Calculation			None	V	
		Separately Managed Account	Platform Fee % ①		The value in this field is interpreted as a percentage.
		O No	0.00000		

4. Click Save.

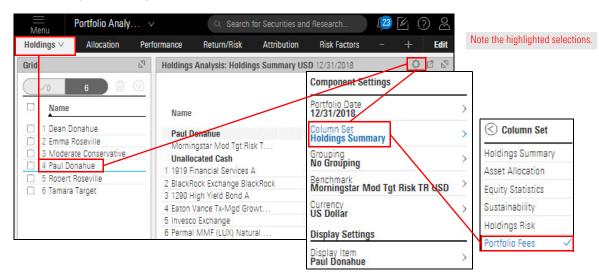
In a Client Accounts workbook, the Holdings Analysis component has a column set (Portfolio Fees) to display fees for a client account or proposal. The fees are as follows:

- ► Total Portfolio Fee % (the sum of the Platform Fee % and the Holdings Fee %)
- ► Platform Fee %, and
- ► Holdings Fee %.

☞ Note: The the default value for the Holdings Fee % is Prospectus Net Expense Ratio.

Do the following:

- 1. In a Client Accounts workbook, select the Holdings worksheet.
- 2. In the **Grid**, select a **client account or proposal**.
- 3. In the Holdings Analysis component, click the **Component Settings** icon.
- 4. From the Component Settings menu, select Column Set > Portfolio Fees.



5. Click away from the menu to close it.

Menu Portfolio Analysi	s *Client Accounts \lor	Q	Search for	Securities and	Research) [23 [402	
Holdings V Allocation	Performance Return/Risk	Attribution	Risk Fact	ors Scena	nio Analysis	* *	+ Edit	
Grid 🛛	Holdings Analysis: Portfolio Fees	USD 12/31/2018					002	
<u>√0</u> 6 🖻 0	- Name	Ticker	Weight	Market Value(USD)	Fotal Portfolio Fee %	Platform Fee %	Holdings Fee %	The column set
Name Name	- Paul Donahue	_	100.00	11,272.56	1.34	0.76	_	displays Total Por
1 Dean Donahue	Morningstar Mod Tgt Risk T	MSAA	_	-	_	_	_	Fee %, Platform F
2 Emma Roseville	Unallocated Cash	MSBI	36.56	4,121.39	-	_	_	and Holdings Fee
3 Moderate Conservative	1 Permal MMF (LUX) Natural	10-10	3.83	432.25		_	0.00	
4 Paul Donahue	2 Invesco Exchange	ACEHX	5.39	607.37	_		0.03	
5 Robert Roseville	3 Eaton Vance Tx-Mgd Growt	CAPEX	5.58	628.93	_		0.00	
🗇 6 Tamara Target	4 BlackRock Exchange BlackR	STSEX	16.57	1,868.42	<u></u>	<u></u> \$	0.13	
tes and a second state of the second state of the SEC SECOND	5 1919 Financial Services A	SBFAX	21.96	2,475.99	<u>199</u>	2018	0.30	
	6 1290 High Yield Bond A	TNHAX	10.10	1,138.21	_	-	0.11	

Exercise 5: Display portfolio fees in the Holdings Analysis component The Portfolio Fees column set (used in Exercise 5 on page 20) is also available in the Portfolio Editor window.

Do the following:

1. In a Client Accounts workbook, in the **Grid**, **hover the cursor** over a client account, then select **Action** > **Edit Holdings**. The Portfolio Editor window opens.

Exercise 6: Display portfolio fees in the Portfolio Editor window

≡M	Menu Portfol	io Analysis C	lient Account	ts v	
Client	nt Accounts 🗸	Holdings	Allocation	Performance	Return/Risk
	Vo 6 Name 1 Dean Donahue 2 Emma Roseville 3 Moderate Conse 4 Paul Donahue 5 Robert Roseville 6 Tamara Target	ervative		Account Edit Holdings Settigs Devete Actions Generate Portfolio Pr Generate Portfolios C Proposals No Saved Proposals Create Proposal	

2. In the Editing Holdings window, you might want to **expand** the Grid.

EDITING HOLDINGS FOR "ROBER	T ROSEVILLE"	- B	Save	Save A	ls Rena	me	Close		
Robert Roseville 10/31/2015	5	Allocati	on: Asset	Allocati	ion 12/31/2	2018	\$ 2	Click here to ex	- vpand the
+	Recalculate	100.00					ock (Net) nd (Net)	CIICK HEIE LU E	
Name	Weig					Car Pre	sh (Net) ef (Net)		
Edited	100.0						nvert (Net)		
Existing	100.0	50.00				Utr	her (Net)		
Morningstar Mod Tgt Risk TR USD	-								
ABC Policy Unallocated Cash	0.0								
1 BlackRock Exchange BlackRock	20.0	0.00							
2 ETFMG Prime Cyber Security ETF	20.0		Existing	Edited	Benchmark	-			
3 Invesco Exchange	20.0			12.240.000					
4 PNC Government Money Market A	20.0	Investm	ent Grow	th: 10K	Growth 01	/25/	40.		
5 Vanguard PRIMECAP Adm	20.0				1999 - 1999 -	1000	and the second		

3. Click the **Component Settings** icon, then select **Column Set** > **Portfolio Fees**.

							[1] San Jan Dan Jan Jan Jan Jan Jan Jan Jan Jan Jan J
					1	3 4	highlighted selections.
		Compone	ent Settings			ate	
Veight >	Market Value(USD) >	10/31/20)15		>	Allor (Net	Column Set
00.00	10,000.00	Benchma Morning	star Mod T	gt Risk TR US	D>	82.24	Equity Style
100.00	10,000.00				>	82.21	Equity Sectors
-	-	Asset All	location			-	Sustainability
_		-	-	-		-	oustannaonney
0.00	0.00	0.00	1.00	- \		0.0(Product Involvemen
20.00	2,000.00	2.32	861.09	STSEX	\mathbf{i}	99.6!	Detune Marsth Feed
20.00	2,000.00	74.63	26.80	HACK		99.21	Return Month End
20.00	2,000.00	4.13	483.77	ACEHX		99.4	Return Quarter End
20.00	2,000.00	2,000.00	1.00	PGAXX		0.84	
20.00	2,000.00	18.28	109.41	VPMAX		97.0(Risk Month End
1	20.00 20.00 20.00 20.00 20.00	Weight > Value(USD) > 100.00 10,000.00 10,000.00 10,000.00 100.00 10,000.00 - - 0.00 0.00 20,000 20,000 20,000 20.00 2,000.00 2,000.00 20,000 20,000 20,000	Weight Value(USD) Portfolio 100.00 10,000.00 10/071/20 100.00 10,000.00 Column S 0.00 0.00 0.00 20.00 2,000.00 74.63 20.00 2,000.00 74.63 20.00 2,000.00 4.13 20.00 2,000.00 2,000.00	Neight Value(USD) Portfolio Date 100.00 10,000.00 10,000.00 10,000.00 100.00 10,000.00 Column Set 0.00 0.00 0.00 1.000 0.00 20,000 2.32 861.09 20.00 2.000.00 74.63 26.80 20.00 2.000.00 4.13 483.77 20.00 2.000.00 2.000.00 1.00	Weight Value(USD) 10/31/2015 100.00 10,000.00 Benchmark Morningstar Mod Tgt Risk TR US 0.00 10,000.00 Column Set Asset Allocation 0.00 0.00 0.00 0.00 20.00 2.000.00 2.32 861.09 20.00 2.000.00 74.63 26.80 HACK 20.00 2.000.00 4.13 483.77 ACEHX 20.00 2.000.00 1.00 PGAXX	Weight > Market Value(USD) > 100.00 10,000.00 10,000.00 10,000.00 10,000.00 Senchmark Morningstar wood Tgt Risk TR USD > 0.00 10,000.00 0.00 1.00 - > > 0.00 0.00 0.00 1.00 - > > 20.00 2,000.00 2.32 861.09 STSEX > 20.00 2,000.00 74.63 26.60 HACK > 20.00 2,000.00 4.13 483.77 ACEHX > 20.00 2,000.00 2,000.00 1.00 PGAXX >	Meight Market Value(USD) Portfolio Date 10/31/2015 Allor (Net Benchmark Benchmark 82.21 Column Set Allocation Column Set Allocation 82.21 0.00 0.00 0.00 0.00 20.00 2.000.00 2.32 861.09 STSEX 99.61 20.00 2.000.00 4.13 483.77 ACEHX 99.41 20.00 2.000.00 2.000.00 1.00 PGAXX 0.81

EDITING HOLDINGS FOR "ROBE	RT ROSEV	ILLE"		Save	Save A	s Rename	Close	
Robert Roseville 10/31/2015							() 4 ^r	
+						B	ecalculate	
Name	Weight	>	Market Value(USD)	Total Portfolio Fee %	Platform Fee %	Holdings Fee %		The column set
Edited	100.00		10,000.00	0.55	0.00	<u>-</u> 2		displays Total Portfolio Fee %, Platform Fee %
Existing	100.00		10,000.00	0.55	0.00	-		and Holdings Fee %.
Morningstar Mod Tgt Risk TR USD	—		_		-	-		and hordings rec 70.
ABC Policy	-		—	-	-	—		
Unallocated Cash	0.00		0.00			—		
1 BlackRock Exchange BlackRock	20.00		2,000.00	<u> </u>		0.16		
2 ETFMG Prime Cyber Security ETF	20.00		2,000.00	<u>22</u> 1	14 <u>8</u> 8	0.13		
3 Invesco Exchange	20.00		2,000.00	_	_	0.11		
4 PNC Government Money Mark	20.00		2,000.00	_	_	0.09		
5 Vanguard PRIMECAP Adm	20.00		2,000.00	_	-	0.07		

Many clients are concerned about the impact of their investment on the world around them and want to know more about environmental, social, and governance (ESG) factors. If you are licensed to access Systainalytic's company-level ESG data, the data points Company Normalized ESG Score and Company Highest Controversy Level are available as follows:

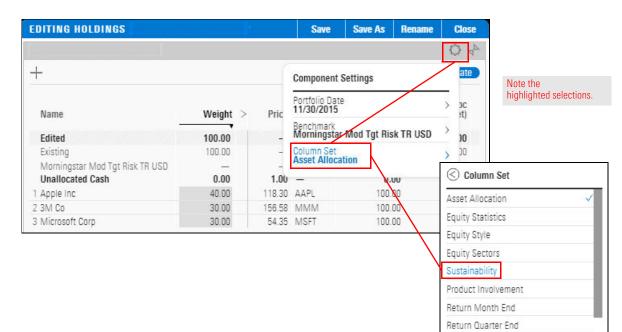
▶ when creating a new client account (optional in Exercise 1 on page 7)

- ▶ when editing holdings for an existing client account, and
- ► In the Holdings Analysis component.

To learn more about ESG data and how a Morningstar ESG Score is computed, please read Leveraging Morningstar Sustainability Data.

To display the company-level ESG data points editing holdings for an existing client account, do the following:

- 1. Open the Client Accounts workbook.
- 2. Hover the cursor over the empty area to the right of a portfolio's name.
- 3. Click the Actions icon and select Settings. The Model Portfolio Settings window opens.
- 4. In the Editing Holdings window, click the **Component Settings** icon, then select **Column Set** < **Sustainability**.
 - Note: For display clarity, the main component of the Editing Holdings window has been expanded.



Exercise 7: Evaluate company-level ESG data in an existing client account's holdings 5. **Scroll right** to see the Company Normalized ESG Score and Company Highest Controversy Level columns.

EDITING HOLDINGS		Save	Save As	Rename	Close	
					04	
+				Re	calculate	
Name	Percent of AUM ith Below Average ESG Scores	AUM with Lov	v Normal	ized Co	Company Highest ntroversy Level	The company-level ESG data is located at the far-right in the Sustainability column set.
Edited	0.00	0.0	0	_	-	Sustainability column set.
Existing	0.00	0.0	0	-	-	
Morningstar Mod Tgt Risk TR USD	_	-	÷	-	-	
Unallocated Cash	-	-	-	-	-	
1 Apple Inc	_	-	- 5	8.92	3.00	
2 3M Co	-	-	- 6	5.22	3.00	
3 Microsoft Corp		-	- 7	1.06	3.00	
					1	

6. Click Save and Close.

Householding Clients

You might have several clients from a single family or household. By creating a custom data point with which you can classify the client accounts, you gain access to data for the household as a whole.

In this section, you will learn how to do the following:

- Create a Household data point (page 25)
- ► Assign values to the Household data point (page 27), and
- ► Display the Household data in the Client Accounts workbook (page 29), and
- ► Group your client accounts by household (page 31).

In this exercise, you will create a custom data point named Household. You can use it to classify your client accounts.

Exercise 8: Create a Household data point

Do the following:

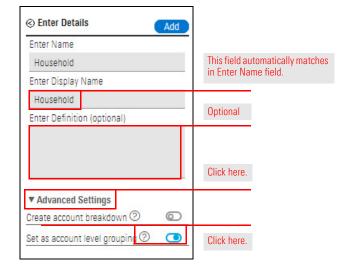
1. On the Home page, from the upper-left **Menu**, select **Custom Data Management**. The Custom Data Management page opens.

Menu Home			Ĵ 🕅 Ĵ 🖉	
Home 	→ M∽BNINGST/	AR Direct 🖴		A
Lists & Screens				
Client Accounts	urch for Securities and Rese	arch)//////////////////////////////////////	
Policies				
Model Portfolios Custom Benchmarks		Client Accounts		
Custom Scenarios	Type Last Modified 🔺	Name	Last Modified	
Column Sets Grid Batch Reports	List 08/23/2018			
Grid Batch Schedules	List 08/23/2018			
	List 08/16/2018			
Markets Monitoring	List 07/12/2018			
Morningstar Research	List 07/09/2018			
Custom Data Management	List 06/06/2018			
Import	List 05/23/2018		· · · · · · · //	Note the highlighted selections.
Notes	List 05/23/2018			
Alerts	List 05/02/2018 🗸			
Excel Add-In				
Presentation Studio				
Asset Allocation				

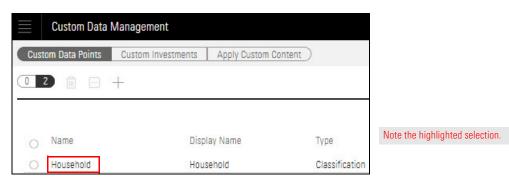
- 2. At the top of the page, select **Custom Data Points**.
- Click the Add icon. From the Select Data Type menu, select Classification. The Enter Details dialog box opens.

Custom Data I	Vanagement		
Custom Data Points	Custom Investments	Apply Custom Content	
_	+		
Select Data Type	>		The data point you create will be
Free Text	>		used to classify client accounts.
Classification	>		
Benchmark	>		
Performance	>		

- 4. In the Enter Name field, type Household.
- 5. Press **Tab** to move the cursor to the next field. The Enter Display Name field is automatically filled in, but you can change it if you want.
 - Note: The Enter Definition field is optional. If you are creating a more complex data point, you should consider writing a brief definition.
- 6. Click Advanced Settings to expand the options.
- 7. Click the slider next to Set as account level grouping to move it to the on position.



8. Click Add. Household is displayed at the top of the Custom Data Points List.



Now you can add a value to the Household data point for each client account. These values will become menu selections in Exercise 11 on page 31.

Prote: The Custom Data Management window should still be open.

Exercise 9: Assign values to the custom data point

- Do the following:
 - 1. At the top of the Custom Data Management window, select **Apply Custom Content**.
 - 2. Optional: If your client accounts are not displayed, click the **down arrow** and from the menu, select **All Client Accounts**.

Custom Data Management		
Custom Data Points Custom Investmen	te Apply Custor	m Content
2 2017 Gold-Rated Large Cap Funds $leftarrow$		Colu
List & Screens		
Open > Portfolios		Cus
All Client Accounts	lutual A	-
All Model Portfolios	al Invs A	_
All Custom Benchmarks	ny A	
	Mutual A	12-13

3. In the client account's row for Karen Franklin, in the Household column, **double-click** the **dash** character. The dash character is removed.

Custom Data Points Custom Investments A	pply Custom Content		
Client Accounts ∨	Column Set 🗸		
0 7			
Namo	Custom Bonchmark	Household	
Name	Custom Benchmark	Household	
1 Christine Hall	Custom Benchmark	Household	
	Custom Benchmark — —	Household	Double-click here
1 Christine Hall	Custom Benchmark — — —	- v	Double-click here
Christine Hall Scott Tucker	Custom Benchmark — — — — —	- v - v	Double-click here.
Christine Hall Scott Tucker Richard Hall	Custom Benchmark	- v - v - v	Double-click here.

4. In the blank space, type **Franklin Household**; then press **Enter**.

Client Accou	ints V	Column Set 🗸			
	Name	Custom Benchmark	Househ	old	
1	Christine Hall		Franklin	\vee	Type here.
2	Scott Tucker	1070 B	-	V	Type fiele.
3	Richard Hall		1 <u>777</u> 3	\vee	
4	Karen Franklin		: :	V	
5	Franklin Children	19275	<u></u> -	\sim	
6	David Franklin			V	

5. In client account row for IRA, in the Household column, **double-click** the **drop-down arrow** and select **Franklin Household**.

Client Accounts ∨	Column Set 🗸								
0 5 Name	Custom Classifica	ition	Economic Moat		Fund Ty	/pe	Househ	old	
1 Smith Family Trust		V	-	V	-	V	—	\vee	
2 Sample	·	V	-	V		v	—	V	
3 Maeve Doonan		~		V	-	V	-	V	Select this option
4 Karen Franklin	-	\mathbf{v}	-	V	—	v	Franklin	v	from the menu.
5 IRA		×	-	V	_	V			
							Frankli	n	

6. Continue **assigning** and/or **creating values** until you have classified all your client accounts by household.

Client Accou	ints ∨	Column Set ∨	
	Name	Custom Benchmark	Household
1	Christine Hall		Franklin 🗸
2	Scott Tucker		Tucker 🗸
3	Richard Hall		Tucker 🗸
4	Karen Franklin		Franklin 🗸
5	Franklin Children		Franklin 🗸
6	David Franklin	1.202	Franklin V

SKIP THIS? In this exercise, you will display the Household data point in the Grid by adding it to the default column set (Account Summary) and saving that as a new column set. Do the following:

- 1. Hover the cursor over the Menu in the upper-left corner of the window and select Workbooks.
- 2. Select the **Model Portfolios** workbook. The Select a portfolio list dialog box opens.
- 3. Select All Client Accounts. Your client accounts are displayed in the workbook.

Select a portfolio list to view in this workbook
All Client Accounts
All Custom Benchmarks
All Model Portfolios

- 1. From the Column Set menu, select Edit. The Column Set Management window opens.
- 2. In the **Select Data Point** search field, type **household**. The Household data point appears below the search field.
 - Note. Custom data points are displayed in italics.

Exercise 10: Display the custom data point in the Model Portfolios workbook 3. Click **Household**. The Household data point appears at the far right of the bottom of the window.

Colu	nn Set Management	: Column Set ∨			(Cancel) Done
Sele	t Data Point				
Q	household				
Hous	ehold				
Your	Current Data Point C	olumns 🔟			
•	Alpha Total (non-excess return) (3Y -	Sharpe Ratio Total Morningstar	Sortino Ratio Total Arith (3Y - mo-end) Annlzd	Upside Market Capture Ratio Total (3Y - mo-	Household

4. Drag Household to the left and drop it at the right of Name.

Column Set i	Managem	ient Column S	Get ∨		
Select Data F	Point				
Q househo	ld				
Household					
Your Current	Data Poir	nt Columns 🗍]'		
Your Current Name	Data Poir	nt Columns 🗍 Household]	Total Return (YT - mo-end)	D

- 5. In the upper-right corner of the window, click **Done**. In the Grid, Household is the column to the right of Name and the values are displayed.
- 6. From the Column Set menu, select Save Column Set As.
- 7. In the Save Column Set As dialog box, type Account Summary with Household.

Save Column Set As	
Account Summary with Household	
Cancel	

8. Click Save.

Now that you have assigned a Household value to each client account, you can group them by household in the Grid component of the Client Accounts workbook.

Exercise 11: Group client accounts by household

Do the following:

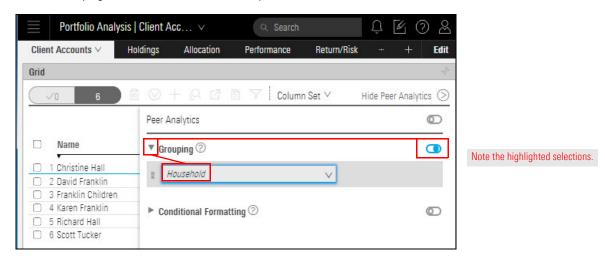
- 1. From the Menu, open the Client Accounts workbook and display All Client Accounts.
- 2. In the upper-right corner of the Grid, click **Show Peer Analytics**. The Peer Analytics panel opens

Portfolio Anal	ysis *Client A	IC V	Q Search			Û	C ? &	
Client Accounts \lor	Holdings	Allocation P	erformance	Return/F	Risk A	ttribution	+ Edit	
Grid							4	
✓0 6			Colum	n Set ∨		Show Pee	er Analytics 🔇	Click he
🗆 Name		To Retu (YTI mo-en	rn Return) - (6M -	Total Return (1Y - mo-end)	Total Return (3Y - mo-end)	Standard Deviation Total (3Y - mo-end) AnnIzd	Beta Total (non-excess return) (3Y - mo-end)	
D 1 Christine Hall		7.	41 8.12	13.13	50.04	8.43	1.47	
2 David Franklin		4.	75 5.62	-	-			
🗍 3 Franklin Children	12	0.	28 0.68	0.77	4.51	1.42	0.02	
4 Karen Franklin		2.	83 4.69	5.82	22.87	4.69	0.74	
5 Richard Hall		11.	73 12.29	19.05	2	023	_	
6 Scott Tucker		11.	62 12.23	18.95			-	

3. To the left of **Grouping**, click the **down arrow** to expand the Grouping menu, displaying all your custom data points.

☞ Note: When you display the Grouping menu, the slider at the right moves into the on position.

4. From the Grouping menu, Household should already be selected. If not, select it now.



5. At the bottom of the Peer Analytics panel, click **Apply**.

6. In the upper-right corner of the Grid, click Hide Peer Analytics.

Grid		4	
√ 0 6	🛅 🛇 🕂 🚨 🖻 🍸 🛛 Column Set 🗸	Hide Peer Analytics 📎	Click here.
	Peer Analytics	Ø	
□ ▼ Name	▼ Grouping ⑦		1
▼ Franklin □ 1 Christine Hall	E Household V		
 2 David Franklin 3 Franklin Children 	Conditional Formatting ②	0	
4 Karen Franklin	3)	

In the Grid, the client accounts are now grouped by Household. Note the following:

- At the top of each group, the group name is displayed.
- In the group name rows, the group-level data (such as Total Return) are displayed in bold-italic type, and
- The groups can be expanded or collapsed.
- Note: If you select a different worksheet in the Client Accounts workbook, you will need to expand the Grid component and re-enable the Peer Analytics settings on that worksheet to see client accounts as a household. You can also click the household row there to broadcast that information to the components on a worksheet.

	Portfolio Anal	ysis *Client	Ac ∨	6	२ Search			Û	602	
Clie	nt Accounts \vee	Holdings	Allocation	Perfo	rmance	Return/R	lisk A	ttribution	+ Edit	
Grid									4	
C	√0 6				Column	Set V		Show Pe	er Analytics 🔇	
	▼ Name			Total Return (YTD - mo-end)	Total Return (6M - mo-end)	Total Return (1Y - mo-end)	Total Return (3Y - mo-end)	Standard Deviation Total (3Y - mo-end) AnnIzd	Beta Total (non-excess return) (3Y - mo-end)	Group name and group-level data
	▼ Franklin			-		-	-	-	-	
	1 Christine Hall			7.41	8.12	13.13	50.04	8.43	1.47	
	2 David Franklin		10	4.75	5.62		_	-	_	
	3 Franklin Childre	n		0.28	0.68	0.77	4.51	1.42	0.02	
	4 Karen Franklin			2.83	4.69	5.82	22.87	4.69	0.74	
	▼ Tucker			11.68	12.26	19.00	-			
	5 Richard Hall			11.73	12.29	19.05	-	-	-	
	6 Scott Tucker			11.62	12.23	18.95	-	-	-	

Creating an Investment Policy

Investment policies serve as blueprints for investment plans. Morningstar Direct Cloud for Wealth Management allows you to create an investment policy as documentation of your investment strategy. You can then use it as a benchmark to see how well a client account conforms to the policy.

To learn how to create and use an investment policy, please refer to the following exercises in Creating Model Portfolios, Benchmarks, and Investment Policies:

- Exercise 14: Create an investment policy
- ► Exercise 15: Add another level
- Exercise 16: Add sub-asset classes and proxies
- Exercise 17: Assign weights to the sub-asset classes
- ► Exercise 18: Save an investment policy
- Exercise 19: Use an investment policy as a benchmark
- ► Exercise 20: Apply an investment policy to a portfolio object, and
- Exercise 21: Use groupings to replicate a policy's asset classes

Using Portfolio Analysis Tools

The Morningstar portfolio analysis tools reveal information about specific aspects of a client account, such as total portfolio attribution (TPA), sustainable investing, and risk exposure, and probable response to changing conditions.

The tools are as follows:

- ► the Attribution worksheet
- Morningstar Sustainability Rating
- Morningstar Global Risk Model, and
- ► the Scenario Analysis worksheet.

In this section, you will learn how to do the following:

- conduct total portfolio attribution (page 34)
- Create a total portfolio attribution report in Presentation Studio In Client Accts guide, get started, then link to PS Guide (Portfolio template, Attribution component category, (Total Portfolio Attribution needs full page), TPA Bar Chart, TPA Summary), then back to Client Accts
- calculate a Morningstar Sustainability Rating for a client account (page 35)
- use the Morningstar Global Risk Model to analyze a client's exposure to risk (page 35), and
- use the Scenario Worksheet to discover how an account, fund, or portfolio would perform if conditions from a past market event were to recur (page 38).

The Total Portfolio Attribution (TPA) capability allows you to measure the impact of asset allocation and manager selection on a client account.

To learn how to contact TPA attribution, please refer to the following topics and exercises in Creating Model Portfolios, Benchmarks, and Investment Policies:

- understand how TPA is calculated
- understand which asset classes are used for the investments in a model portfolio
- understand what policies are used in weighting assets
- Exercise 22: View a model portfolio's TPA
- ► Exercise 23: Include portfolio fees in the Total Portfolio Attribution component
- ► Exercise 24: Change TPA settings
- Exercise 25: Add a holding fee to TPA
- ► Exercise 26: Save TPA settings, and
- Exercise 27: Reuse saved TPA settings.

How can I conduct Total Portfolio Attribution? Your clients might express an interest in environmentally and/or socially responsible investing. By examining a client account in the Sustainability Ratings Analysis component, you can calculate the account's ESG statistics at both the account and the holding levels.

Calculating a client account's Morningstar Sustainability Rating is the same as calculating it for a model portfolio. To learn how to calculate the Morningstar Sustainability Rating, please refer to the following exercises in Leveraging Sustainability Data:

- ► Exercise 11: View ESG statistics for a client account and its holdings
- ► Exercise 12: View the Morningstar Sustainability Rating for a client account, and
- ► Exercise 13: View the holdings' exposures to product involvement areas.

A risk model is a forecast of the joint distribution of returns for a set of assets. Using the Morningstar Global Risk Model, you can do the following:

- Make more informed account construction decisions
- ► Understand future return behavior, and
- ► Understand the impact of adding or subtracting a particular security.

The Morningstar Global Risk Model provides information about an account's exposure to risk factors. The 36 risk factors are grouped as follows:

- ► Style
- ► Region
- ► Sector, and
- ► Currency.

How can I calculate a Morningstar Sustainability Rating for a client account?

How can I use the Morningstar Global Risk Model to analyze a client's exposure to risk? The risk factors are described in this table:

	Risk Factor	Description
Style	Valuation	The ratio of Morningstar's quantitative fair value estimate for a company to its current market price
	Economic Moat	A quantitative measure of the strength and sustainability of a firm's competitive advantages
	Valuation Uncertainty	The level of uncertainty embedded in the quantitative fair value estimate for a company
	Financial Health	A quantitative measure of the strength of a firm's financial position
	Ownership Risk	A measure of the risk exhibited by the fund managers who own a company
	Ownership Popularity	A measure of recent accumulation of shares by fund managers.
	Liquidity	Share turnover of a company.
	Size	Market capitalization of a company.
	Value-Growth	Value-Growth, where a value stock has a low price relative to its book value, earnings and yield
	Momentum	How much a stock has risen in price over the past year relative to other stocks.
	Volatility	Total return volatility as measured by largest minus smallest 1month returns in a trailing 12 month horizon

	Risk Factor	Description				
Sector	Basic Materials	Measure the economic exposure of a				
	Energy	company to the 11 Morningstar sectors. Must sum to 1 and must individually be between 0 and 1.				
	Financial Services					
	Consumer Defensive					
	Consumer Cyclical					
	Technology					
	Industrials					
	Healthcare					
	Communication Services	-				
	Real Estate					
	Utilities					
Region	Developed North America	Measure the partial economic exposure of a company or portfolio to seven geographic regions (Better approach than measuring				
	Developed Europe					
	Developed Asia Pacific	geographic measuring risk according to where the stock is listed, incorporated, or				
	Emerging Latin America	headquartered).				
	Emerging Europe					
	Emerging Asia Pacific					
	Emerging Middle East & Africa					
Currency	Euro	Measure the partial economic exposure of a				
	Japanese Yen	company or portfolio to seven exchange rates. we estimate partial economic exposure				
	British Pound	of each company to all 7 exchange rates. To capture these partial exposures, we perform				
	Swiss Franc	a time-series quantile regression over the				
	Canadian Dollar	past 5 years on a rolling, weekly frequency. These exposures generally fall between -1				
	Australian Dollar	and 1.				
	New Zealand Dollar	-				

To learn how to analyze risk exposure, please read Using the Morningstar Global Risk Model Components.

The Scenario Analysis worksheet shows how an account, fund, or portfolio would perform if conditions from a past market event were to recur. For example, in mid-2011, the U.S. Congress and the President faced off in a showdown over whether to increase the debt ceiling to continue borrowing to fund the government. The issue was resolved four months later, but the intervening dispute took a toll on equity and fixed income investments alike.

What can I discover using the Scenario Analysis Worksheet?

What would happen if the same risk premia were applied to a portfolio today, given its exposure to the 36 factors in Morningstar's Global Risk Model?

Please read Working with the Scenario Analysis Worksheet to learn how to do the following:

- ► Understand what scenarios are shown on the Scenario Analysis worksheet
- ► Understand how the scenario analysis values are calculated
- Display just one scenario at a time
- ► Apply a benchmark to the Scenario Trends component
- Add a fund for comparison
- Convert the chart to a table
- ► Find the draw-down for a fund during a scenario
- ► Find the day the maximum draw-down would be reached in a scenario
- ► Create a screen to find emerging markets funds, and
- ► Create a custom worksheet.

Overview

Proposing Changes to a Client Account

In analyzing a client account, you might discover that certain changes could strengthen the account's return, or lower the risk associated with it. In another case, the client might indicate an interest in rebalancing his or her portfolio, focusing on sustainable investing, or other such changes. All these situations can lead to creating a proposal for the client.

The overall steps to creating a proposal are as follows:

- 1. Generate a proposal from an existing client account.
- 2. Compare it to the current client account and/or benchmark.
 - Note: You can compare not only the account and proposal at a high level, but at the holdings level, too.
- 3. If necessary, in the proposal, continue changing investments and weights.
- 4. When you are satisfied the proposal meets the client's requirements, generate a proposal report or a proposal comparison report.
 - Note: To generate a report, you need a report template, created in Presentation Studio and published for your use.

In this section, you will learn how to do the following:

- Create a proposal (page 40)
- Learn which components can be used to compare a client account and a proposal (page 45)
- ► Compare the proposal to a client account in a single component (page 46)
- ► Compare the proposal to a client account in separate components (page 46), and
- ► Generate a proposal report (page 53).

A proposal allows you to present an alternative investment approach for a client's account, either by changing investments, allocations to existing investments, or both. A proposal is always created from a client account; therefore, be sure a client account exists before beginning this exercise.

Exercise 12: Create a proposal

Prote: A client account can have more than one associated proposal.

To create a proposal, do the following:

1. In the Client Accounts workbook, **hover the cursor** over **IRA**, then from the **Action** menu, select **Create Proposal**. The Creating Proposal window opens.

Menu Portfolio Analysis *Client Accourt	⊂ Search for	Securities a	
Client Accounts V Holdings Allocation Perform	Account	Scer	
Grid	Edit Holdings	_	
	Settings Delete	andard Ital (3Y	
□ Name ▲	Actions Generate Portfolio Proposal Report	_	
2 Karen Franklin 3 Maeve Doonan	Generate Portfolios Comparison Report		
4 Sample 5 Smith Family Trust	Proposals	-	
	No Saved Proposals Create Proposal	No ⁻	te the highlighted selections

2. Initially, the Creating Proposal window displays a copy of the account's holdings. Except for the header, this window is the same as the Edit Client Account window and offers the same options. **Remove** the existing holdings from the portfolio.

3. Add these investments and weightings for the client account proposal:

Investment Name	Ticker	Weighting %
iShares Core S&P 500 ETF	IVV	15
Vanguard Total Bond Market ETF	BND	12
Oakmark International Investor	OAKIX	12
Oppenheimer Developing Markets I	ODVIX	10
Wasatch Core Growth	WGROX	10
Columbia Disciplined Growth A	RDLAX	10
Metropolitan West Total Return Bd M	MWTRX	10
Oakmark Select Investor	OAKLX	8
Vanguard Mid-Cap ETF	VO	8
Vanguard FTSE Developed Markets ETF	VEA	5

RA 12/08/2015		\bigcirc 2	
+		Recalculate	Click here to add investmer
Name	Weight >	Market Value(USI	
Proposal	100.00	205,000.00	
Account	100.00	205,000.01	
Morningstar Mod Tgt Risk TR USD	<u></u>		Enter weights in each row.
Unallocated Cash	0.00	0.0	
1 iShares Core S&P 500 ETF	15.00	30,750.0	
2 Vanguard Total Bond Market ETF	12.00	24,600.0	
3 Oakmark International Investor	12.00	24,600.0	
4 Oppenheimer Developing Markets I	10.00	20,500.0	
5 Wasatch Core Growth	10.00	20,500.0	
6 Columbia Disciplined Growth A	10.00	20,500.0	
7 Metropolitan West Total Return Bd M	10.00	20,500.0	
8 Oakmark Select Investor	8.00	16,400.0	
9 Vanguard Mid-Cap ETF	8.00	16,400.0	
10 Vanguard FTSE Developed Markets ETF	5.00	10,250.0	

4. Click Recalculate.

CREATING PROPOSAL FOR "IRA"				Save As	Rename	Close	
IRA 12/08/2015		Q 2	Allocation: Asset A	llocation 10/31/	2018	√2 √2	
+		Recalculate	100.00			Stock (Net)	-
Name	Weight >	Market Value(USI				Bond (Net) Cash (Net) Pref (Net)	Two funds
Proposal	100.00	205,000.00	50.00		200	Convert (Net)	added and
Account	100.00	205,000.0	00.00		-	Other (Net)	funds wer
Morningstar Mod Tgt Risk TR USD	<u> </u>	_					reweighte
Unallocated Cash	0.00	0.0	0.00				
1 iShares Core S&P 500 ETF	15.00	30,750.0	0.00		-		
2 Vanguard Total Bond Market ETF	12.00	24,600.0	Accor	int ProposaBend	hmark		
3 Oakmark International Investor	12.00	24,600.0	Investment Growth	10K Growth 13	/01/2017 . 1	1/ 53 5	
4 Oppenheimer Developing Markets I	10.00	20,500.0					
5 Wasatch Core Growth	10.00	20,500.0	- Account -	Proposal -	Benchmark		
6 Columbia Disciplined Growth A	10.00	20,500.0	11,373.76				
7 Metropolitan West Total Return Bd M	10.00	20,500.0					
8 Oakmark Select Investor	8.00	16,400.0	10.686.88	4	A LAN	A AL .	
9 Vanguard Mid-Cap ETF	8.00	16,400.0	10,000.00	MA LA	A Pay	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
10 Vanguard FTSE Developed Markets ETF	5.00	10,250.0		ALL HOR	~ ~ · ·	A day	
	_		10,000.00 9,313.12 Nov 29 2017			Nov 28	

- 5. Click Save As.
- 6. Click Save As, name the proposal Joe Franklin IRA Proposal 11/2018, then click Save.
- 7. In the Creating Proposal window, click **Close**.

After creating a proposal for a client account, you can specify or update the calculation settings, just as you would for a client account itself.

1. Hover the cursor over IRA. The Actions icon appears to the right of the account name.

Do the following:

Exercise 13: Specify the calculation settings for a proposal

- Portfolio Analysis | Client Accounts v Return/Risk Client Accounts \vee Holdings Allocation Performance Grid N Column Total Return **Total Return** (YTD - mo-(6M - mo-Name end) end) \odot 1 Current IRA -1.16 -2.01 2 Existing IRA Account Edit Holdings Settings The Action icon for an account allows you update the settings for a proposal. Delete Actions Generate Portfolio Proposal Report Current IRA Proposal Generate Portfolios Comparison Report Edit Holdings Proposals ettings Current IRA Proposal Delete Create Proposal
- 2. From the Actions menu, select Joe Franklin IRA Proposal 11/2018 > Settings. The Settings window opens.

- 3. Select the **Calculation** tab.
- 4. Near the bottom of the window, in the Missing Performance Data area, select one of the following options:
 - ► Do Not Calculate Account Level Performance, or
 - Rescale Remaining Holdings (default).
- 5. At the bottom of the window, from the **Performance Calculation Start Date** menu, select one of these options:
 - ► First Portfolio Date (default)
 - ► Earliest Common, or
 - Earliest available.

General		Benchmark 1		Benchmark 2	P	olicy		
Calculation	>	Morningstar Mod Tgt Risk TR USD	Q	No Benchmark	2	None	V ⁻¹	
		Risk-Free Proxy		Cash Performance	C	turrency		
		Morningstar Cash TR USD	Q	Use Zero Return		US Dollar	V	
		-						Note the highlighter
		Performance Source						selections
		Imported Account Level Performance Calculate Based on Underlying Positi		Morningstar Data Imported Return Data				
				 Imported Return Data, Falling Back to Morningstar Data 				
	1	Missing Performance Data		Gaps In Available Performance	R	lebalancing Fi		
		O Do Not Calculate Account Level Performance		Do Not Calculate Account Level Performance		Buy And Hold	¥*	
		Rescale Remaining Holdings		O Rescale Remaining Holdings				
		Performance Calculation Start Date						
		First Portfolio Date	~					
		First Portfolio Date	~					
		Earliest Common						
		Earliest Available						

6. Click Save.

Once you have created a proposal, you can compare it to the associated client account and assess its relative strengths.

The following components can present a client account and a proposal in the same component:

- Allocation
- ► Equity Style Box
- Scatter Plot
 Scenario Metrics
- Historical Return
- Scenario Trend
- Historical Risk Exposure
- ► Investment Growth

Some components are limited to presenting information on only one portfolio object (in this case, the client account or the proposal). That doesn't mean you can't use them for comparison; simply create a second instance of the same component.

Sustainability Ratings Analysis

The following components can display information on only one portfolio object:

- Equity Attribution
- ► Equity Region Exposure
- ► Historical Allocation
- Holdings Analysis
- ► Holdings Correlation
- Holdings Plot

- Market Value
- Multiple Risk Exposures
- Risk Exposure Snapshot
- Risk Factor Attribution
- ► Rolling Time Series
- ► Total Portfolio Attribution

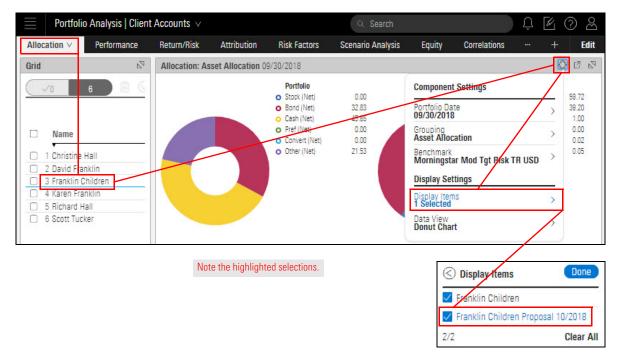
What components can I use to compare the client account and the proposal? In this exercise, you will compare allocations of the Franklin Children account and the Franklin Children Proposal 10/2018 proposal in the Allocation component.

The Client Account workbook should still be open with the Franklin Children account selected.

Pote: The selected client must have an associated proposal.

Do the following:

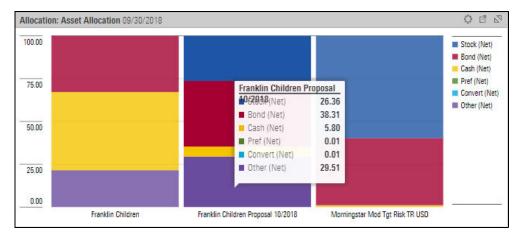
- 1. In the Client Accounts workbook, select the **Allocation** worksheet. Note that a Donut Chart is the default data view in the Allocation component.
- 2. In the Allocation component, click the **Component Settings** icon.
- 3. From the Component Settings menu, select **Display Items**, then click the **Franklin Children Proposal 10/2018 checkbox**.



4. Click Done, then click away from the Component Settings menu to close it.

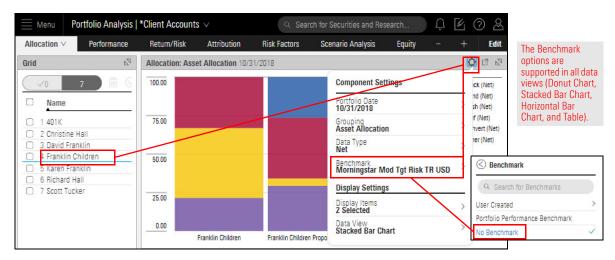
The Allocation component now displays a stacked bar chart, showing the account (Franklin Children), the proposal (Franklin Children Proposal 10/2018), and the benchmark (Morningstar Mod Tgt Risk TR USD).

Exercise 14: Compare a client account and its proposal in the same component 5. Hover the cursor over a bar and a popup displays the breakdown.



- The Allocation component can also display the data in a horizontal bar chart or a table. To change to a different display, from the **Component Settings** menu, select **Data View** > select a **display**.
 - Portfolio Analysis | *Client Accounts ∨ Menu Ü Allocation Performance Return/Risk Attribution **Risk Factors** Scenario Analysis Equity Edit 002 2 Allocation: Asset Allocation 10/31/2018 Grid 100.00 **Component Setting** ck (Net) nd (Net) Name 10/31/2018 sh (Net) f (Net) 1 401K 75.00 Grouping Asset Allocation nvert (Net) 2 Christine Hall ter (Net) Data Type Net 3 David Franklin 4 Franklin Childrei 50.00 Benchmark Morningstar Mod 1gt Risk TR USD 5 Karen Franklin 6 Richard Hall **Display Setting** 7 Scott Tucker 25.00 Display Iteris 2 Selected C Data View Data View Stacked Bar Chart 0.00 Franklin Children Franklin Children Propo onut Chart Stacked Bar Chart Horizontal Bar Chart Select from these options. Table
 - Pote: The Donut Chart cannot display proposal data.

 To focus on the client account and the proposal, without displaying the benchmark, turn off the benchmark display. From the Component Settings menu, select Benchmark > No Benchmark.



To compare the client account and the proposal in separate components, place two instances of the same component in the component area, then display the client account in one and the proposal in the other.

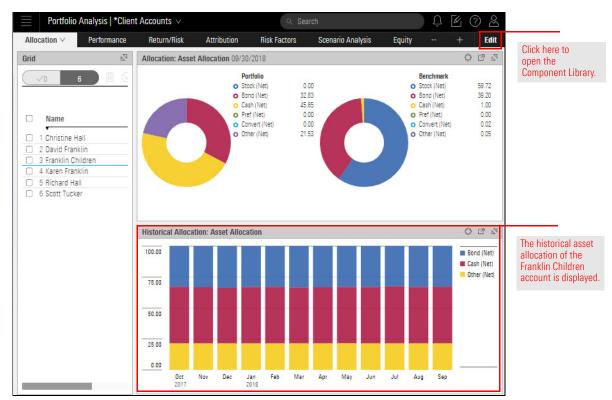
In this exercise, you will create two instances of the Historical Allocation component to compare the Franklin Children account and its proposal.

The Client Account workbook should still be open as follows:

- ► The Franklin Children account is selected in the Grid component, and
- ► The Allocation worksheet is selected.

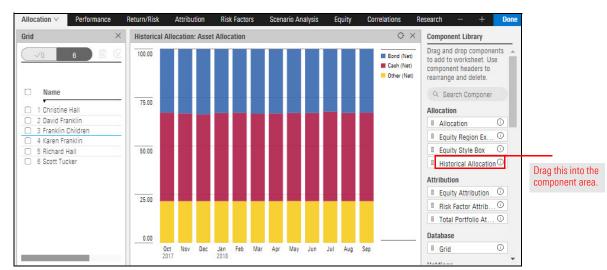
Do the following:

 At the bottom of the Allocation worksheet, the Historical Allocation component is displayed. At the far-right side of the Worksheet tabs, click Edit. The Component Library opens on the right.



Note: In subsequent screenshots in this exercise, the Allocation component (at the top of the component area) has been deleted so you can focus on the Historical Allocation component.

Exercise 15: Compare a client account and a proposal in separate components 2. In the Component Library, **drag-and-drop** the **Historical Allocation component** into the component area, placing it to the right of the existing Historical Allocation component.

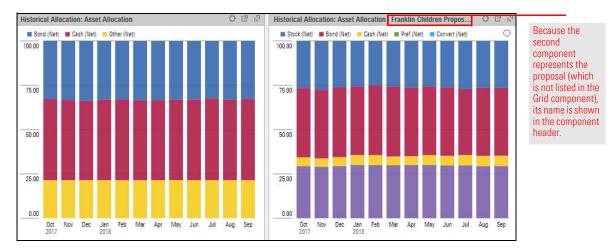


- 3. At the top of the Component Library, click **Done** to close the Component Library.
- Note that both components display the same data (the Franklin Children account). In the right-hand component, click the Component Settings icon and from the Component Settings menu, select Display Item > Franklin Children Proposal 10/2018.



5. Click Done, then click away from the Component Settings menu to close it.

You now have visual representations of the historical asset allocations of the Franklin Children account and the Franklin Children Proposal 10/2018.



- 6. (Optional) You might want to save your changes to re-use with other client accounts and proposals:
 - A. Rename the worksheet Allocation Comparison.

Portfol	io Analysis *Clie	Note the highlighted selections.
Allocation \vee	Performance	
Edit Worksheet		Please enter a name for the worksheet
Rename		Allocation Comparison
Delete		
		Cancel Save

B. Use **Save As** to save the workbook as a custom workbook, with the name **Client Accounts & Proposals**.



In a Client Accounts workbook, you can also compare a client account with any or all of the following:

- ► its proposal(s)
- ► other client accounts, and
- model portfolios used as benchmarks in the client account.

See What components can I use to compare the client account and the proposal? on page 45 for a list of components capable of using this feature.

In this example, you will compare a client account, its proposal, and benchmark in a Historical Return component.

Note: The client account does not have to have a proposal to compare it with other client accounts and model portfolios.

Do the following:

- 1. In a Client Accounts workbook, select a client account with a proposal.
- 2. Select the **Performance** worksheet.
- 3. In the **Historical Return** component, from the Component Settings menu, select **Display Settings** > **Display Items**.
- 4. Select the **items to display** (in this case, the client account, its proposal, and its benchmark).



Exercise 16: Compare a client account with its proposal and benchmark

5. Click **Done**, then click the **Component Settings** icon to close the Component Settings window.

Menu Port	folio Analysis *(Client Account	s v				Q	Search	n for Se	ecuritie	s and R	lesearc	h) (] [2	í (?) &
Performance \lor	Return/Risk	Attribution	Ris	k Factor	s	Scer	nario A	nalysis		Equity	3	Correla	tions	8 <u>88</u>	4 34	F	Edit
Grid		⊾ [¬] Histo	rical Ret	urn: Mo	onthly	12/01/	/2017 -	11/30	2018							Ø	0 2
✓1 8 ✓ Name ✓ 1 Judith Jame		6.00													I Ma	dith Jar oderate dith Jar oposal	Model
of Juditi Jame	3	3.00		l					_								
		-3.00															
													L				
		-6.00											4		-		
			Dec 2017	Jan 2018	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov			

Once you're satisfied with the proposal, you can share it with your client. Naturally, you want the proposal to look as polished and professional as possible. To do that, you need a template.

How can I generate a proposal report?

In Morningstar Presentation Studio, you can create the following proposal templates:

- ► Portfolio Proposal Report, and
- Portfolios Comparison Report.

To learn how create a proposal report, click the link in each of the following steps:

- 1. In Presentation Studio, create a proposal report template.
- 2. Publish the proposal report template from Presentation Studio.
- 3. In Morningstar Direct Cloud for Wealth Management, use the template to generate a proposal report.

Working with Custom Benchmarks

A benchmark index gives an investor a point of reference for evaluating a fund's performance. When such comparisons are made in Morningstar Direct Cloud for Wealth Management, the S&P 500 Index is the basic benchmark for stock-oriented funds, including domestic-hybrid, international-hybrid, and convertible-bond funds.

In Morningstar Direct Cloud for Wealth Management, you can create custom benchmarks for your client accounts.

Working with a custom benchmark in a client account is the same as working with it in a model portfolio. To learn how to create and manage custom benchmarks, please refer to the following exercises in Creating Model Portfolios, Custom Benchmarks, and Investment Policies:

- Exercise 10: Create a custom benchmark
- Exercise 11: Save a custom benchmark
- ► Exercise 12: Apply a custom benchmark to a client account
- ► Exercise 13: Create a second benchmark, and
- Exercise 14: Display and hide a benchmark.

Overview

Overview