

**SAN MATEO COUNTY  
DEFERRED COMPENSATION COMMITTEE  
AGENDA – NOVEMBER 19, 2015 (9:00 AM– 12:00 PM)  
455 COUNTY CENTER, 4<sup>th</sup> Floor- Room 402)**

<p><b>DEFERRED COMPENSATION COMMITTEE</b> Donna Vaillancourt, Chair Lillibeth Dames Joe Demee John Kovach Glenn Kulm Bridget Love Steve Perry Michael Wentworth David Whisman</p>	<p><b>SUPPORT</b> Bill Tugaw Paul Hackleman Bob Gleason Lauren Penko Lisa Okada Marife Ramirez Jay Castellano</p> <p>SST Benefits SST Benefits MassMutual MassMutual County Staff County Staff County Staff</p>
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CALL TO ORDER

1. Accessing SST Portal / Downloading Agenda Items - Marife

ACTION/DECISION ITEMS

2. Review / Approve Minutes of August 13, 2015 Regular Meeting / October 8, 2015 Special Meeting
3. Status Update – RFP Results (SST)
  - Board Action
  - Transition Process
4. Quarterly Investment Review (MassMutual)
5. Lauren’s Departure / Replacement & Process
6. Quarterly Plan Summary Review (MassMutual)
7. Education Policy Review (County / MassMutual / SST)
8. Payment of Excess Revenues (County)
9. Annual Consultant Review (County)



10. NAGDCA Report (SST / MassMutual / County)

### INFORMATIONAL ITEMS

11. Legislative Update (SST / MassMutual)
12. 2016 Dates – February 18, May 19, August 18, November 3
13. Other Issues

#### **February 18, 2016**

- Investment Policy Review
- General Fund and Fee Review
- Education Policy / Education for Committee and Participants

#### **May 19, 2016**

- Q1 investment review
- Review Q1 plan summary information
- Finalize NAGDCA conference attendees
- Mass Mutual Annual Plan Review
- 3121 Plan 401(a) / 457(b)

#### **August 18, 2016**

- Q2 investment review
- Review Q2 plan summary information
- Discussion of Survey Results

#### **November 3, 2016**

- Q3 investment review
- Education Policy
- Annual consultant performance review
- Fee Disclosure Responsibilities / Fee Equalization





455 County Center, 5<sup>th</sup> Floor  
 Redwood City, CA 94063-1663  
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 www.smcgov.org/hr

**Director**  
 Donna Vaillancourt  
**Board of Supervisors**  
 Dave Pine  
 Carole Groom  
 Don Horsley  
 Warren Slocum  
 Adrienne Tissier

**SAN MATEO COUNTY  
 SPECIAL DEFERRED COMPENSATION COMMITTEE MEETING MINUTES  
 AUGUST 13, 2015 MINUTES**

Committee Attendees: Donna Vaillancourt, Lillibeth Dames, Joe Demea,, John Kovach, Steve Perry, David Whisman, Bridget Love, Glenn Kulm

Other attendees: Jay Castellano, Lisa Okada, Marife Ramirez, Bill Tugaw and Paul Hackleman (SST Benefits), Bob Gleason, Ed Riley, Lauren Penko (MassMutual)..

Absent: Michael Wentworth

The meeting was convened at 9:05.

Description of Item for Discussion	Action Taken by Committee
Approval of May 24, and June 25 Minutes	Both the regular meeting and the special meeting minutes were approved unanimously.
Educational Session on Understanding Fixed, General Stable Value Accounts and Retiree Health Savings Account Options	Bill Tugaw provided a training session on various Fixed and Stable Value options the Committee is likely to see in RFP responses. Paul Hackleman provided an overview of the history of the County's Retiree Health Savings Account (RHSA), the various models which employers can choose and the advantages of using the DC provider to also manage the RHSA. The County's Benefits Committee also attended this educational session. The Committee discussed receiving training on the SST portal and obtaining documents without printing. That training will occur in November.
Status / Update of RFP	Bill Tugaw briefly discussed the RFD results. Paul Hackleman discussed the addition of Reporting to Primary Criteria and the significant changes that were made to the RFP both for educational services and reporting as well as Performance Standards. Paul also identify the four Committee members who will serve on the RFP sub-committee, the timeframe for the RFP events, the initial communication that is being sent to participants and the overall budget for the process.
Quarterly Investment Review	Ed Riley reviewed the Macro and County-specific fund status as addressed each of the watch-list funds. Although there was no formal recommendation, MassMutual and SST both agreed that all the current watch-list funds should remain on the watch list although there are not specific issues with the funds.
Quarterly Plan Summary Review	Bob Gleason reviewed the key plan summaries. Total plan value has increased \$20m since the second quarter of 2014 (a 6% increase). Total participants was up 386 (8.2%) since last year and total contributing employees went from 2,845 to 3,108 since last year. Both pre-tax and Roth contributions were up. Total outstanding loans rose by 43 (5.5%) and the value of those loans also increased by 10.5%
Options for Excess Reserves	Jay indicated that total money from funds not used for Financial

	<p>Soundings would equal roughly \$300,000 which should be returned to participants. Since that money has not all been received the Committee unanimously agreed to use reserves to help total \$300,000 which will be returned to participants within the next couple of months. The \$70,000 annually reimbursement should be a little less than expenses which will help reduce the remaining reserves.</p>
Legislative Update	<p>Paul reviewed the <i>News and Views</i> focusing on the Tibble vs. Edison International ruling requiring ERISA employers to continually monitor funds on an ongoing basis. Even though not directly applicable to the public sector it would be considered best practice to follow the key takeaways from the ruling. Paul also discussed recent legislative proposals, working group reports and GAO report on household savings. Paul also distributed and discussed the Defending Safety Employees Retirement Act signed into law and effective January 1, 2015. After discussion, it is unlikely that anyone will be benefited by this law in delaying retirement in 2015. Bob Gleason also discussed the MassMutual White Paper on the same subject.</p>
Other Issues	<p>No new issues were discussed.</p>
Closed Session	<p>The Committee discussed briefly the six respondents to the County's RFP and the likely improvement both in fee reductions as well as enhanced services especially in the behavior finance and reporting areas.</p>

The Committee adjourned at 11:30.



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**SAN MATEO COUNTY  
 SPECIAL DEFERRED COMPENSATION COMMITTEE MEETING MINUTES  
 OCTOBER 8, 2015 MINUTES**

Committee Attendees: Donna Vaillancourt, Lillibeth Dames, Joe Demea,, John Kovach, Steve Perry, David Whisman, Bridget Love, Glenn Kulm

Other attendees: Jay Castellano, Lisa Okada, Marife Ramirez, Bill Tugaw and Paul Hackleman (SST Benefits).

By Phone: Michael Wentworth

Description of Item for Discussion	Action Taken by Committee
Committee Report on RFP Process	Paul Hackleman began by summarizing the process the sub-Committee had followed in distributing the Request for Proposal and the receipt of six proposals from Empower, Lincoln, MassMutual, Nationwide Retirement Solutions VALIC and Voya.
Primary / Secondary Criteria Meetings	Bill Tugaw discussed the Primary Criteria Meeting that was held on August 24, 2015 and reviewed a Comparison Chart detailing the financial proposals of each of the respondents. Voya was eliminated because its cost was both higher than the current amount and nearly twice as much as each of the other respondents. Lincoln was eliminated because their education and reporting capabilities were uncompetitive with the other respondents. While VALIC was more competitive their total asset charge was higher and their general account was less than the finalists. Paul reviewed the educational and reporting capability of each of the finalists discussing the strength of their on-site, and web-based services as well as their reporting and communication capability. Based on the August 24, meeting Paul indicated that the sub-Committee unanimously selected Empower, MassMutual and Nationwide Retirement Solutions. Paul briefly mentioned that the Secondary Criteria meeting generated mostly questions but few issues for the finalists.
Finalist Meeting	Bill Tugaw then discussed the results of the finalist meeting held on October 7, 2015. He reviewed the key changes that each of the finalists made, especially the significant, additional fee reduction MassMutual offered and the various alternative general and pooled accounts they submitted. Based on the comparison, MassMutual had the lowest asset charge and overall the strongest financial proposal. Paul discussed the improvements that MassMutual and others made for the finalist meeting but concluded that MassMutual's proposal was superior to the other finalists. Based on the results, the sub-Committee unanimously recommended that MassMutual be retained as the County's Deferred Compensation Provider.
Full Committee Discussion of Recommendations	The full Committee discussed the comparison of the proposals and asked the sub-Committee questions about various

components of the finalists' proposals. After discussion, the Committee unanimously agreed to recommend MassMutual to the Board of Supervisors.

**San Mateo County**  
**Deferred Compensation Plan**  
**3<sup>rd</sup> Quarter Highlights**  
As of September 30, 2015

**Overview**

- Q3 2015: Total plan Value: \$340,274,383.05
- Q2 2015: Total plan Value: \$352,857,047.08
- Q1 2015: Total plan Value: \$349,307,652.85
- Q4 2014: Total plan Value: \$341,783,806.24
- Q3 2014: Total plan Value: \$332,765,248.95
  
- Q3 2015: Total participants who have an account balance: 5,202
- Q2 2015: Total participants who have an account balance: 5,099
- Q1 2015: Total participants who have an account balance: 5,008
- Q4 2014: Total participants who have an account balance: 4,843
- Q3 2014: Total participants who have an account balance: 4,784
  
- Q3 2015: Total employees who are eligible to participate: 5,443
- Q2 2015: Total employees who are eligible to participate: 5,331
- Q1 2015: Total employees who are eligible to participate: 5,415
- Q4 2014: Total employees who are eligible to participate: 5,407
- Q3 2014: Total employees who are eligible to participate: 5,200
  
- Q3 2015: Total participants who are actively contributing: 3,176 (58%)
- Q2 2015: Total participants who are actively contributing: 3,108 (58%)
- Q1 2015: Total participants who are actively contributing: 3,112 (57%)
- Q4 2014: Total participants who are actively contributing: 2,881 (53%)
- Q3 2014: Total participants who are actively contributing: 2,901 (56%)

**Pre-Tax Contributions**

- Q3 2015 Total participants who contribute to Pre-Tax only: 2,385
- Q2 2015 Total participants who contribute to Pre-Tax only: 2,338
- Q1 2015 Total participants who contribute to Pre-Tax only: 2,376
- Q4 2014 Total participants who contribute to Pre-Tax only: 2,285
- Q3 2014 Total participants who contribute to Pre-Tax only: 2,325
  
- Q3 2015 Total bi-weekly Pre-Tax contribution: \$636,613.24 (September 18, 2015)
- Q2 2015 Total bi-weekly Pre-Tax contribution: \$630,240.10 (June 26, 2015)
- Q1 2015 Total bi-weekly Pre-Tax contribution: \$698,728.22 (March 20, 2015)
- Q4 2014 Total bi-weekly Pre-Tax contribution: \$556,246.62 (December 26, 2014)
- Q3 2014 Total bi-weekly Pre-Tax contribution: \$614,073.91 (September 19, 2014)
  
- Q3 2015 Average bi-weekly Pre-Tax contribution amount: \$266.92 (max is \$692.30)
- Q2 2015 Average bi-weekly Pre-Tax contribution amount: \$269.56 (max is \$692.30)
- Q1 2015 Average bi-weekly Pre-Tax contribution amount: \$294.08 (max is \$692.30)
- Q4 2014 Average bi-weekly Pre-Tax contribution amount: \$243.43 (max is \$673.07)
- Q3 2014 Average bi-weekly Pre-Tax contribution amount: \$264.12 (max is \$673.07)

**Deferred Compensation Plan**  
**3<sup>rd</sup> Quarter Highlights**  
**Page 2**

**Roth Contributions**

- Q3 2015 Total participants who contribute to Roth only: 283
- Q2 2015 Total participants who contribute to Roth only: 257
- Q1 2015 Total participants who contribute to Roth only: 241
- Q4 2014 Total participants who contribute to Roth only: 200
- Q3 2014 Total participants who contribute to Roth only: 183
  
- Q3 2015 Total bi-weekly Roth contribution amount: \$45,202.40 (September 18, 2015)
- Q2 2015 Total bi-weekly Roth contribution amount: \$43,757.76 (June 26, 2015)
- Q1 2015 Total bi-weekly Roth contribution amount: \$44,395.82 (March 20, 2015)
- Q4 2014 Total bi-weekly Roth contribution amount: \$32,200.34 (December 26, 2014)
- Q3 2014 Total bi-weekly Roth contribution amount: \$23,637.79 (September 19, 2014)
  
- Q3 2015 Average bi-weekly Roth contribution amount: \$159.73
- Q2 2015 Average bi-weekly Roth contribution amount: \$170.26
- Q1 2015 Average bi-weekly Roth contribution amount: \$184.22
- Q4 2014 Average bi-weekly Roth contribution amount: \$161.00
- Q3 2014 Average bi-weekly Roth contribution amount: \$129.17

**Participants who contribute to both Pre-Tax and Roth**

- Q3 2015 Total participants who contribute to both Pre-Tax and Roth: 508
- Q2 2015 Total participants who contribute to both Pre-Tax and Roth: 513
- Q1 2015 Total participants who contribute to both Pre-Tax and Roth: 495
- Q4 2014 Total participants who contribute to both Pre-Tax and Roth: 396
- Q3 2014 Total participants who contribute to both Pre-Tax and Roth: 393
  
- Q3 2015 Total bi-weekly contribution amount: \$120,832.04 (September 18, 2015)
- Q2 2015 Total bi-weekly contribution amount: \$120,030.17 (June 26, 2015)
- Q1 2015 Total bi-weekly contribution amount: \$113,263.25 (March 20, 2015)
- Q4 2014 Total bi-weekly contribution amount: \$78,011.67 (December 26, 2014)
- Q3 2014 Total bi-weekly contribution amount: \$88,138.14 (September 19, 2014)
  
- Q3 2015 Average bi-weekly contribution amount by participant: \$237.86
- Q2 2015 Average bi-weekly contribution amount by participant: \$233.98
- Q1 2015 Average bi-weekly contribution amount by participant: \$228.81
- Q4 2014 Average bi-weekly contribution amount by participant: \$197.00
- Q3 2014 Average bi-weekly contribution amount by participant: \$224.27

**Total Contributions**

- Q3 2015 Total participants who contribute: 3,176
- Q2 2015 Total participants who contribute: 3,108
- Q1 2015 Total participants who contribute: 3,112
- Q4 2014 Total participants who contribute: 2,881
- Q3 2014 Total participants who contribute: 2,901



**Deferred Compensation Plan**  
**3<sup>rd</sup> Quarter Highlights**  
**Page 3**

- Q3 2014 Total bi-weekly contribution amount: \$802,647.68 (September 18, 2015)
- Q2 2014 Total bi-weekly contribution amount: \$794,028.03 (June 26, 2015)
- Q1 2015 Total bi-weekly contribution amount: \$856,387.29 (March 20, 2015)
- Q4 2014 Total bi-weekly contribution amount: \$666,458.63 (December 26, 2014)
- Q3 2014 Total bi-weekly contribution amount: \$725,849.84 (September 19, 2014)
  
- Q3 2015 Average bi-weekly contribution amount: \$252.72 (max is \$692.30)
- Q2 2015 Average bi-weekly contribution amount: \$255.48 (max is \$692.30)
- Q1 2015 Average bi-weekly contribution amount: \$275.19 (max is \$692.30)
- Q4 2014 Average bi-weekly contribution amount: \$231.33 (max is \$673.07)
- Q3 2014 Average bi-weekly contribution amount: \$250.21 (max is \$673.07)

- Q3 2015 Bi-weekly contribution by age (see below)

Age	less than \$10	\$10-\$24	\$25-\$49	\$50-\$74	\$75-\$99	\$100-\$200	More than \$200.00	TOTALS
<26	3	9	6	3	7	12	10	50
26-35	25	96	126	63	77	110	150	647
36-45	14	70	141	114	83	207	315	944
46-55	10	35	101	101	67	202	407	923
56-66	1	20	53	32	41	107	322	576
Over 66	0	0	1	3	1	7	24	36
	53	230	428	316	276	645	1,228	3,176

- Q2 2015 Bi-weekly contribution by age (see below)

Age	less than \$10	\$10-\$24	\$25-\$49	\$50-\$74	\$75-\$99	\$100-\$200	More than \$200.00	TOTALS
<26	4	12	7	3	8	13	7	54
26-35	22	83	127	59	69	104	140	604
36-45	10	64	134	114	81	206	315	924
46-55	8	37	96	104	69	207	401	922
56-66	1	18	51	35	38	102	323	568
Over 66	0	0	0	3	1	7	25	36
	45	214	415	318	266	639	1,211	3,108

- Q1 2015 Bi-weekly contribution by age (see below)

Age	less than \$10	\$10-\$24	\$25-\$49	\$50-\$74	\$75-\$99	\$100-\$200	More than \$200.00	TOTALS
<26	3	5	7	5	7	10	7	44
26-35	18	80	135	55	65	113	147	613
36-45	9	67	135	115	71	201	310	908
46-55	7	33	95	105	68	213	403	924
56-66	2	16	53	37	37	102	335	582
Over 66	0	1	0	4	2	8	26	41
	39	202	425	321	250	647	1,228	3,112

**Deferred Compensation Plan  
3<sup>rd</sup> Quarter Highlights  
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➤ Q4 2014 Bi-weekly contribution by age (see below)

Age	less than \$10	\$10-\$24	\$25-\$49	\$50-\$74	\$75-\$99	\$100-\$200	More than \$200.00	TOTALS
<26	4	7	7	4	6	10	8	46
26-35	21	83	103	57	48	118	125	555
36-45	13	68	132	109	63	193	265	843
46-55	7	30	95	112	55	195	370	864
56-66	5	15	48	38	35	111	287	539
Over 66	0	1	0	4	3	7	19	34
	50	204	385	324	210	634	1,074	2,881

➤ Q3 2014 Bi-weekly contribution by age (see below)

Age	less than \$10	\$10-\$24	\$25-\$49	\$50-\$74	\$75-\$99	\$100-\$200	More than \$200.00	TOTALS
<26	3	4	6	2	4	10	8	37
26-35	20	78	110	57	45	112	132	554
36-45	13	66	125	107	64	194	281	850
46-55	7	33	98	112	60	191	389	890
56-66	5	15	46	30	27	98	311	532
Over 66	0	0	0	5	2	7	24	38
	48	196	385	313	202	612	1,145	2,901

**Number of participants and percentage of all participants actively deferring who are deferring at or above \$692.30 (biweekly rate to max out in 2015)**

- Q3 2015 – 352 out of 3,470 or 10.14% are on track to reach the maximum by year-end (based on employees with contributions in 2015)
- Q2 2015 – 359 out of 3,329 or 10.78% are on track to reach the maximum by year-end (based on employees with contributions in 2015)
- Q1 2015 – 352 out of 3,195 or 11%
- Q4 2014 - 337 out of 3,224 or 10.45% deferred the maximum (\$17,500 and over, including those on 50+ and pre-retirement catch)
- Q3 2014 - 330 out of 2,999 or 11% are on track to reach the maximum by year-end (as of the 9/19/14 payroll total contributions are at least \$12,788.33)

**\*Loan Program**

- Q3 2015 Number of outstanding loans: 820
- Q2 2015 Number of outstanding loans: 813
- Q1 2015 Number of outstanding loans: 801
- Q4 2014 Number of outstanding loans: 805
- Q3 2014 Number of outstanding loans: 784
  
- Q3 2015 Amount of outstanding loans: \$7,124,744.95
- Q2 2015 Amount of outstanding loans: \$7,049,924.09
- Q1 2015 Amount of outstanding loans: \$6,894,996.79
- Q4 2014 Amount of outstanding loans: \$6,703,273.84
- Q3 2014 Amount of outstanding loans: \$6,574,811.30

**Deferred Compensation Plan**  
**3<sup>rd</sup> Quarter Highlights**  
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- Q3 2015 Average loan amount: \$8,688.71
- Q2 2015 Average loan amount: \$8,671.49
- Q1 2015 Average loan amount: \$8,607.99
- Q4 2014 Average loan amount: \$8,327.05
- Q3 2014 Average loan amount: \$8,386.24

\* Loan Program statistics reported above no longer includes deemed distribution. Loan balance on Quarterly Plan Summary does include deemed distribution.

**QDRO Reviewed and Processed**

- YTD 2015: 1 QDRO processed in 2Q 2015 for \$137,479.39

**Hardship Withdrawals**

- Q3 2015: 8 requests (5 approved; 3 denied) 1 participant was denied twice but subsequently approved when resubmitted during the same quarter, no carryover from previous quarter.
- Q2 2015: 3 requests (3 approved; 0 denied) no carryover from previous quarter.
- Q1 2015: 4 requests (2 approved; 2 denied) 1 participant was denied and subsequently granted approval when resubmitted during the same quarter, no carryover from previous quarter.
- Q4 2014: 8 requests (7 approved; 1 denied) 1 carryover from previous quarter and 1 denied and subsequently granted approval when resubmitted during the same quarter.
- Q3 2014: 5 requests (2 approved; 3 denied) no carryover from previous quarter.

**Employee Meetings**

- Q3 2015: 54 individual in person participant meetings; 12 educational seminars with approx. 107 total participants, approx. 72 participant service calls
- Q2 2015: 121 individual in person participant meetings; 19 educational seminars with approx. 143 total participants, approx. 95 participant service calls
- Q1 2015: 112 individual in person participant meetings; 10 educational seminars with approx. 84 total participants, approx. 105 participant service calls
- Q4 2014: 79 individual in person participant meetings; 13 educational seminars with approx. 79 total participants, approx. 185 participant service calls
- Q3 2014: 54 individual in person participant meetings; 7 educational seminars with approx. 72 total participants, approx. 122 participant service calls

**Morningstar**


- Q3 2015: 81 unique users
- Q2 2015: 71 unique users
- Q1 2015: 57 unique users
- Q4 2014: 54 unique users
- Q3 2014: 49 unique users

**Financial Planning Services**

- Q3 2015: 2 inquiry; 1 meeting; 0 client
- Q2 2015: 7 inquiry; 5 meeting; 2 client
- Q1 2015: 3 inquiry; 3 meeting; 1 client
- Q4 2014: 3 inquiry; 2 meeting; 1 client
- Q3 2014: 2 inquiry; 3 meeting (1 meeting from previous quarter inquiry); 0 client

San Mateo County  
3rd Quarter 2015 Hardship Report

Date Into PI	IGO Date	Group Number	Participant Name	Hardship Reason	Amount Requested	Account Balance	Committee Recommend	Amount Approved	Plan Manager	Decision Date	Notes
8/20	8/20	150018	Participant A	Imminent Eviction	\$4,300.00	\$6,956.51	Approved	\$4,300.00	Silvio DiGrande	8/20	
7/6	7/6	150018	Participant B	Imminent Foreclosure	\$736.00	\$915.17	Approved	\$736.00	Silvio DiGrande	7/6	
8/21	8/21	150018	Participant C	Sudden and Unexpected	\$460.65	\$460.65	Approved	\$460.65	Silvio DiGrande	8/21	
9/22	9/22	150018	Participant D	Imminent Eviction	\$13,000.00	\$37,405.52	Approved	\$13,000.00	Silvio DiGrande	9/22	
7/22	7/22	150018	Participant E	Imminent Foreclosure	\$7,736.83	\$9,346.65	Approved	\$5,369.69	Silvio DiGrande	7/22	
7/8	7/13	150018	Participant F	Imminent Foreclosure	\$0.00	\$4,250.55	Denied	\$0.00	Silvio DiGrande	7/14	Requested supporting documentation was not provided.
7/22	7/27	150018	Participant A	Imminent Eviction	\$8,000.00	\$6,870.05	Denied	\$0.00	Silvio DiGrande	7/27	Requested supporting documentation was not provided.
7/2	7/6	150018	Participant A	Imminent Eviction	\$8,000.00	\$6,904.80	Denied	\$0.00	Silvio DiGrande	7/6	Requested supporting documentation was not provided.



Investment Performance Review  
prepared for:

County of San Mateo  
as of September 30, 2015

For Use with Plan Sponsors and Financial Intermediaries.  
Not for Use with Plan Participants.



MassMutual Funds



## Table of Contents

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# Quarterly Market Indicators as of September 30, 2015

# Market Indicators



## Global Economic Snapshot

Percent (%)	US	EU	Japan	China
GDP Growth	2.7*	1.5*	0.8*	7.0*
CPI	0.2**	-0.1	-0.1	2.0**
Unemployment	5.1	11.0**	3.4**	4.0*
Central Bank Rate	0.25	0.05	0.08	4.6
10 Year Treasury	2.04	0.59	0.36	3.27

Source: Bloomberg

\* As of 6/30/15

\*\* As of 8/31/15

## Q3 2015 – Major Indices Performance

	Q3 2015	YTD	1-Year	3-Year
S&P 500	-6.44%	-5.29%	-0.61%	12.40%
NASDAQ	-7.35%	-2.45%	2.82%	14.03%
Dow Jones	-6.98%	-6.95%	-2.11%	9.26%
Barclays Aggregate	1.23%	1.13%	2.94%	1.71%
MSCI EAFE	-10.23%	-5.28%	-8.66%	5.63%

The **S&P 500 Index** is a capitalization-weighted index of 500 widely traded stocks. Created by Standard & Poor's, it is considered to represent the performance of the stock market in general. It is not an investment product available for purchase.

The **NASDAQ Composite** is a market-capitalization price only index that reflects the aggregate performance of domestic common stocks traded on the regular NASDAQ market, as well as national market system traded foreign common stocks and ADRs. It is not an investment product available for purchase.

The **Dow Jones Industrial Average (DJIA)** is a price-weighted average of 30 actively traded Blue Chip stocks, primarily industrials but including service oriented firms. Prepared and published by Dow Jones & Co., it is the oldest and most widely quoted of all the market indicators. The components, which change from time to time, represent between 15% and 20% of the market value of NYSE stock. It is not an investment product available for purchase. Past performance is no guarantee of future results. Dividends are reinvested.

The **Barclays Aggregate Bond Index** (formerly Lehman Brothers) is a measure of the U.S. bond market. It is not possible to invest directly in an index.

The **Morgan Stanley Capital International (MSCI) EAFE (Europe, Australasia, Far East) Index** is a commonly used measure of the international stock market. It is not possible to invest directly in an index.

Source: Morningstar Direct

## \*U.S Morningstar Category Average

### Q3 2015

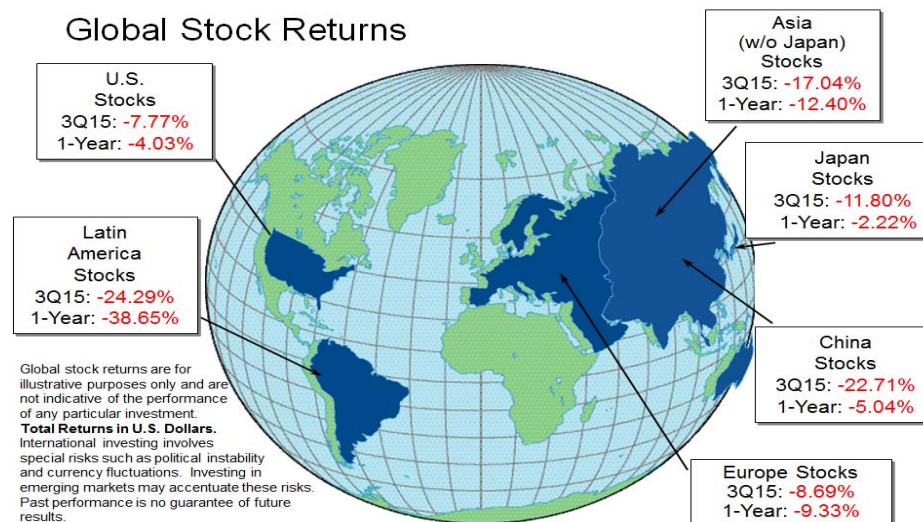
Large Cap		Mid Cap		Small Cap	
Value	-8.42%	Value	-9.19%	Value	-10.32%
Growth	-6.69%	Growth	-9.49%	Growth	-11.98%

### 1-Year

Large Cap		Mid Cap		Small Cap	
Value	-4.97%	Value	-3.16%	Value	-2.99%
Growth	1.36%	Growth	0.83%	Growth	2.39%

Source: Morningstar Direct

## Global Stock Returns





# Market Indicators



## Market Indicators - as of 9/30/2015

### Equity Market Returns

#### Q3 2015 Returns

	Value	Blend	Growth
Large Cap	-8.39	-6.83	-5.29
Mid Cap	-8.04	-8.01	-7.99
Small Cap	-10.73	-11.92	-13.06

#### 1 Year Returns

	Value	Blend	Growth
Large Cap	-4.42	-0.61	3.17
Mid Cap	-2.07	-0.25	1.45
Small Cap	-1.60	1.25	4.04

#### Foreign Stock - 3 Year

	Value	Blend	Growth
Large Cap	4.26	4.62	5.40
Small/Mid	7.36	7.91	8.27

#### 3 Year Annualized Returns

	Value	Blend	Growth
Large Cap	11.59	12.66	13.61
Mid Cap	13.69	13.91	13.98
Small Cap	9.18	11.02	12.85

#### 5 Year Annualized Returns

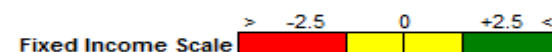
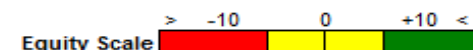
	Value	Blend	Growth
Large Cap	12.29	13.42	14.47
Mid Cap	13.15	13.40	13.58
Small Cap	10.17	11.73	13.26

#### Foreign Stock - 5 Year

	Value	Blend	Growth
Large Cap	2.88	3.30	4.39
Small/Mid	4.82	6.71	7.27

### Fixed Income Returns

	Total Return Q3 2015	Total Return 1 Year	Total Return 3 Year	Total Return 5 Year
US OE Ultrashort Bond	-0.13	0.07	0.40	0.75
US OE Short-Term Bond	-0.14	0.53	0.76	1.49
US OE Short Government	0.26	1.03	0.25	0.74
US OE Intermediate Government	0.94	2.41	0.90	2.24
US OE Long Government	4.27	7.02	1.67	5.17
US OE Intermediate-Term Bond	0.32	1.46	1.58	3.15
US OE High Yield Bond	-4.46	-3.61	2.89	5.21
US OE World Bond	-1.25	-4.50	-0.93	1.22



Source: Morningstar Direct

As of September 30, 2015. Past performance is no guarantee of future results. Mutual fund returns are for illustrative purposes only and are not indicative of any particular investment. Category Average Total Returns assume reinvestment of all dividends and capital gains. Historically, small cap stocks have been more volatile than the stocks of larger, more established companies.

It's not possible to invest directly in an index.

# Market Indicators



## Market Indicators - as of 9/30/2015

Indices Used		Total Return Q3 2015	Total Return 1 Year	Total Return 3 Year	Total Return 5 Year	Total Return 10 Year	Total Return 15 Year
Russell 1000 Value TR USD	Large Value	-8.39	-4.42	11.59	12.29	5.71	5.73
Russell Mid Cap Value TR USD	Mid Value	-8.04	-2.07	13.69	13.15	7.42	9.55
Russell 2000 Value TR USD	Small Value	-10.73	-1.60	9.18	10.17	5.35	8.53
Russell 1000 TR USD	Large Blend	-6.83	-0.61	12.66	13.42	6.95	4.14
Russell Mid Cap TR USD	Mid Blend	-8.01	-0.25	13.91	13.40	7.87	7.63
Russell 2000 TR USD	Small Blend	-11.92	1.25	11.02	11.73	6.55	6.51
Russell 1000 Growth TR USD	Large Growth	-5.29	3.17	13.61	14.47	8.09	2.20
Russell Mid Cap Growth TR USD	Mid Growth	-7.99	1.45	13.98	13.58	8.09	3.72
Russell 2000 Growth TR USD	Small Growth	-13.06	4.04	12.85	13.26	7.67	4.15
MSCI EAFE NR USD	Foreign Stock	-10.23	-8.66	5.63	3.98	2.97	3.03
Barclay's Cap US Agg Bond TR USD	US Bonds	1.23	2.94	1.71	3.10	4.64	5.29
DJ Industrial Average TR USD	US Stocks	-6.98	-2.11	9.26	11.38	7.17	5.39
NASDAQ Composite PR USD	US Stocks	-7.35	2.82	14.03	14.30	7.94	1.54
S&P 500 TR	US Stocks	-6.44	-0.61	12.40	13.34	6.80	3.96
<b>Morningstar Foreign Stock Category Averages</b>							
US OE Foreign Large Value		-10.68	-10.40	4.26	2.88	1.96	3.48
US OE Foreign Large Blend		-10.34	-8.06	4.62	3.30	2.91	3.04
US OE Foreign Large Growth		-9.36	-4.95	5.40	4.39	3.90	3.22
US OE Foreign Small/Mid Value		-8.97	-5.60	7.36	4.82	3.92	4.63
US OE Foreign Small/Mid Blend		-8.42	-3.71	7.91	6.71	4.89	5.25
US OE Foreign Small/Mid Growth		-7.14	-1.20	8.27	7.27	5.98	5.38
<b>Morningstar Fixed Income Category Averages</b>							
US OE Ultrashort Bond		-0.13	0.07	0.40	0.75	1.79	2.29
US OE Short-Term Bond		-0.14	0.53	0.76	1.49	2.92	3.49
US OE Short Government		0.26	1.03	0.25	0.74	2.53	3.08
US OE Intermediate Government		0.94	2.41	0.90	2.24	3.91	4.37
US OE Long Government		4.27	7.02	1.67	5.17	5.56	7.41
US OE Intermediate-Term Bond		0.32	1.46	1.58	3.15	4.29	4.96
US OE High Yield Bond		-4.46	-3.61	2.89	5.21	5.87	6.03
US OE World Bond		-1.25	-4.50	-0.93	1.22	3.83	5.37

Source: Morningstar Direct

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# Morningstar Category Analysis

**Morningstar Style Box requested by County of San Mateo**

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**Current Investments**

Domestic Equity	Value	Blend	Growth
Large	Hartford Dividend and Growth HLS IA American Funds American Mutual R4	SSgA S&P 500 Index Sec Lend Inv Opt Parnassus Core Equity Investor Vanguard Total Stock Mkt Idx Inv Hartford Capital Appreciation HLS IA American Funds Fundamental Invs R5	Franklin Growth A American Funds Growth Fund of Amer R5
Medium	Artisan Mid Cap Value Investor	SSgA S&P MidCap Index Non-Lend Series Inv Opt	Prudential Jennison Mid Cap Growth A
Small		SSgA Russell Small Cap Index Sec Lend Inv Opt Columbia Small Cap Core A	Baron Small Cap Retail Royce Pennsylvania Mutual Svc Invesco Small Cap Discovery Y
	Global / International	Target Risk	Target Date
	American Funds Europacific Growth R5 American Funds Capital World Gr&Inc R5 Oppenheimer Developing Markets Y	American Century Strat Allc: Cnsrv Inv Oakmark Equity & Income I American Century Strat Allc: Mod Inv American Century Strat Allc: Agrsv Inv	Vanguard Target Retirement Income Inv Vanguard Target Retirement 2015 Inv Vanguard Target Retirement 2025 Inv Vanguard Target Retirement 2035 Inv Vanguard Target Retirement 2045 Inv
	Specialty	Fixed Income	Stable Value/Money Market
	MFS® Utilities A Hartford Healthcare HLS IA Invesco Real Estate R5	PIMCO Real Return A PIMCO Total Return Admin Loomis Sayles Bond Instl Oppenheimer International Bond Y	General Account Bank of the West Insured Deposit Option

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Source: Morningstar

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# Investment Performance

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# Investment Return and Risk Report

As of 9/30/2015

Fund Name	Inception Date	Short Term Performance				Long-Term Performance						5 Yr Risk/Return Data					Prospectus		
		Qtr	%Rank	1 Yr	%Rank	3 Yr	%Rank	5 Yr	%Rank	10 Yr	%Rank	Beta	Alpha	R-Sq	St Dev	Sharpe Ratio	Gross Expense Ratio	Net Expense Ratio	Mstar Rating
<b>US OE Large Value</b>																			
American Funds American Mutual R4	6/27/2002	-6.90	22	-2.71	21	10.11	58	10.90	49	6.46	19	0.75	1.52	92.75	9.47	1.14	0.66	0.66	4
Hartford Dividend and Growth HLS IA	3/9/1994	-7.06	24	-3.04	25	11.63	25	11.84	27	7.20	6	0.94	0.27	97.91	11.52	1.03	0.67	0.67	5
Benchmark 1: Russell 1000 Value TR USD	12/29/1978	-8.39		-4.42		11.59		12.29		5.71				12.13	1.01				
Benchmark 2: US OE Large Value	5/1/1931	-8.42		-4.97		10.27		10.79		5.26		0.98	-1.26	99.12	11.92	0.90	1.49	1.13	3
<b>US OE Large Blend</b>																			
SSgA S&P 500 Index Sec Lend Inv OptA		-6.45		-0.66		12.38		13.32		6.83									
American Funds Fundamental Invs R5	5/15/2002	-7.03	43	-1.30	40	12.21	32	11.95	50	7.49	8	1.02	-1.59	97.22	12.18	0.99	0.35	0.35	4
Hartford Capital Appreciation HLS IA	4/2/1984	-9.15	83	-2.92	64	13.79	10	10.83	70	7.02	15	1.19	-4.48	94.01	14.35	0.79	0.66	0.66	3
Parnassus Core Equity Investor	8/31/1992	-3.96	5	0.88	9	13.79	10	13.36	14	9.55	1	0.83	2.03	89.84	10.28	1.27	0.87	0.87	5
Vanguard Total Stock Mkt Idx Inv	4/27/1992	-7.29	50	-0.67	24	12.34	28	13.15	21	6.97	17	1.02	-0.45	99.79	11.95	1.09	0.17	0.17	4
Benchmark 1: Russell 1000 TR USD	12/29/1978	-6.83		-0.61		12.66		13.42		6.95				11.72	1.13				
Benchmark 2: US OE Large Blend	7/1/1924	-7.53		-2.48		11.28		11.68		5.97		1.02	-2.18	99.75	11.93	0.95	1.49	1.09	3
<b>US OE Large Growth</b>																			
American Funds Growth Fund of Amer R5	5/15/2002	-6.62	51	0.73	60	13.84	25	12.90	45	7.22	42	1.01	-1.50	95.15	12.18	1.06	0.38	0.38	4
Franklin Growth A	4/1/1948	-6.01	37	2.94	36	13.41	33	12.44	57	8.09	21	0.93	-0.86	96.21	11.12	1.11	0.90	0.90	3
Benchmark 1: Russell 1000 Growth TR USD	12/29/1978	-5.29		3.17		13.61		14.47		8.09				11.76	1.21				
Benchmark 2: US OE Large Growth	12/1/1925	-6.69		1.36		12.52		12.64		6.96		1.07	-2.71	98.14	12.66	0.98	1.39	1.20	3
<b>US OE Mid-Cap Value</b>																			
Artisan Mid Cap Value Investor	3/28/2001	-10.04	65	-8.45	89	8.91	88	9.95	79	7.02	33	0.93	-1.98	90.77	12.36	0.83	1.19	1.19	3
Benchmark 1: Russell Mid Cap Value TR USD	12/31/1985	-8.04		-2.07		13.69		13.15		7.42				12.70	1.04				
Benchmark 2: US OE Mid-Cap Value	7/1/1949	-9.19		-3.16		12.04		11.31		6.47		1.02	-1.79	97.89	13.10	0.89	1.73	1.24	3
<b>US OE Mid-Cap Blend</b>																			
SSgA S&P MidCap Index Non-Lend Series Inv OptA		-8.51		1.32		13.05		12.85		8.02									
Benchmark 1: Russell Mid Cap TR USD	12/29/1978	-8.01		-0.25		13.91		13.40		7.87				13.06	1.03				
Benchmark 2: US OE Mid-Cap Blend	7/1/1938	-9.14		-2.41		11.74		11.19		6.39		1.04	-2.43	98.78	13.65	0.84	1.47	1.20	3
<b>US OE Mid-Cap Growth</b>																			
Prudential Jennison Mid Cap Growth A	12/31/1996	-9.63	52	0.91	50	9.74	83	11.62	53	8.47	23	0.90	-0.55	96.87	12.56	0.94	1.05	1.05	3
Benchmark 1: Russell Mid Cap Growth TR USD	12/31/1985	-7.99		1.45		13.98		13.58		8.09				13.73	1.00				
Benchmark 2: US OE Mid-Cap Growth	9/1/1935	-9.49		0.83		12.02		11.71		7.15		1.00	-2.00	98.44	13.89	0.84	1.90	1.30	3
<b>US OE Small Blend</b>																			
SSgA Russell Small Cap Index Sec Lend Inv OptA		-11.85		1.45		11.19		11.91		6.49									
Columbia Small Cap Core A	11/2/1998	-11.82	68	-4.92	82	8.18	83	8.91	85	5.91	58	0.95	-2.04	95.14	15.59	0.62	1.38	1.38	2
Benchmark 1: Russell 2000 TR USD	12/29/1978	-11.92		1.25		11.02		11.73		6.55				15.96	0.77				
Benchmark 2: US OE Small Blend	6/1/1956	-10.90		-1.11		10.38		10.94		6.11		0.95	-0.21	98.69	15.32	0.75	1.82	1.25	3
<b>US OE Small Growth</b>																			
Baron Small Cap Retail	9/30/1997	-12.56	61	-4.32	93	9.71	75	11.01	75	6.71	62	0.85	-0.20	91.88	14.94	0.77	1.30	1.30	3
Invesco Small Cap Discovery Y	2/2/2006	-14.31	81	3.01	46	11.16	50	11.77	58	7.32	46	0.91	-0.29	95.25	15.81	0.78	1.07	1.07	3
Royce Pennsylvania Mutual Svc	11/8/2005	-12.98	69	-8.61	97	6.60	95	7.77	95	5.37	88	0.88	-3.52	91.52	15.49	0.56	1.24	1.24	2
Benchmark 1: Russell 2000 Growth TR USD	12/29/1978	-13.06		4.04		12.85		13.26		7.67				16.92	0.82				
Benchmark 2: US OE Small Growth	6/1/1946	-11.98		2.39		11.17		12.11		7.02		0.94	-0.66	98.81	15.94	0.77	1.87	1.37	3
<b>US OE Real Estate</b>																			
Invesco Real Estate R5	4/30/2004	2.14	51	8.44	65	8.85	50	11.08	58	7.17	24	0.93	-0.10	99.23	14.87	0.78	0.87	0.87	4
Benchmark 1: S&P United States REIT TR USD	6/30/1989	2.08		9.61		9.46		11.94		6.75				15.86	0.79				
Benchmark 2: US OE Real Estate	3/1/1985	1.37		8.58		8.60		11.19		6.18		0.93	-0.14	99.58	14.75	0.78	1.59	1.30	3
<b>US OE Health</b>																			
Hartford Healthcare HLS IA	5/1/2000	-11.92	30	13.55	20	24.66	29	21.98	31	11.86	37	1.13	0.09	90.45	13.53	1.54	0.88	0.88	4
Benchmark 1: S&P 1500 Health Care TR	12/30/1994	-10.61		6.22		20.40		19.32		10.15				11.37	1.62				
Benchmark 2: US OE Health	7/1/1981	-13.65		9.00		22.65		20.66		11.37		1.15	-0.85	87.94	13.97	1.45	1.42	1.39	3
<b>US OE Utilities</b>																			
MFS Utilities A	2/14/1992	-11.83	89	-12.23	86	6.24	71	9.03	67	8.24	6	0.55	2.97	32.41	11.59	0.80	0.97	0.97	3
Benchmark 1: S&P 1500 Utilities TR	12/30/1994	5.20		6.47		10.30		11.31		7.04				11.91	0.96				
Benchmark 2: US OE Utilities	10/1/1948	-3.58		-4.73		7.35		8.91		6.05		0.74	0.75	76.06	10.08	0.91	1.27	1.25	3

Performance data shown represents past performance and is no guarantee of future results. Investment return and principal values fluctuate, and shares when redeemed may be more or less than their original cost. Current performance may be higher or lower than quoted. For most recent month - end performance, visit [www.massmutual.com/serve](http://www.massmutual.com/serve)

# Investment Return and Risk Report

As of 9/30/2015

Fund Name	Inception Date	Short Term Performance				Long-Term Performance						5 Yr Risk/Return Data					Prospectus		
		Qtr	%Rank	1 Yr	%Rank	3 Yr	%Rank	5 Yr	%Rank	10 Yr	%Rank	Beta	Alpha	R-Sq	St Dev	Sharpe Ratio	Gross Expense Ratio	Net Expense Ratio	Mstar Rating
<b>US OE Foreign Large Growth</b>																			
American Funds Europacific Growth R5	5/15/2002	-9.82	58	-4.97	47	6.30	33	4.50	45	5.32	14	0.93	1.84	96.45	14.03	0.38	0.53	0.53	4
Benchmark 1: MSCI ACWI Ex USA Growth NR USD	12/29/2000	-10.77		-8.12		3.63		2.74		3.64				14.76	0.25				
Benchmark 2: US OE Foreign Large Growth	5/1/1981	-9.36		-4.95		5.40		4.39		3.90		0.97	1.35	97.72	14.43	0.34	1.68	1.35	3
<b>US OE Diversified Emerging Mkts</b>																			
Oppenheimer Developing Markets Y	9/7/2005	-17.28	74	-23.19	81	-3.69	41	-1.47	21	6.74	3	0.90	1.77	90.82	16.78	-0.01	1.06	1.05	4
Benchmark 1: MSCI EM NR USD	12/31/1998	-17.90		-19.28		-5.27		-3.58		4.27				17.78	-0.12				
Benchmark 2: US OE Diversified Emerging Mkts	9/1/1989	-15.87		-18.77		-4.12		-3.43		3.75		0.92	-0.25	97.16	16.51	-0.13	2.68	1.55	3
<b>US OE World Stock</b>																			
American Funds Capital World Gr&Inc R5	5/15/2002	-8.55	41	-5.74	62	8.63	38	7.49	53	6.21	21	0.94	1.01	96.19	12.52	0.64	0.49	0.49	4
Benchmark 1: MSCI ACWI NR USD	12/31/1998	-9.45		-6.66		6.95		6.82		4.58				13.08	0.57				
Benchmark 2: US OE World Stock	11/1/1954	-8.66		-5.02		7.95		7.37		4.85		0.96	0.31	98.51	12.64	0.59	2.46	1.36	3
<b>US OE Retirement Income</b>																			
Vanguard Target Retirement Income Inv	10/27/2003	-2.11	11	0.18	5	3.56	22	5.17	10	4.96	11	0.80	1.07	93.51	4.08	1.24	0.16	0.16	4
Benchmark 1: Morningstar Lifetime Mod Incm TR USD	12/31/1998	-3.02		-1.41		2.87		5.04		5.02				4.91	1.02				
Benchmark 2: US OE Retirement Income	3/1/1994	-3.00		-1.35		2.44		3.88		3.71		0.98	-0.66	96.03	4.90	0.86	2.01	0.89	3
<b>US OE Target Date 2011-2015</b>																			
Vanguard Target Retirement 2015 Inv	10/27/2003	-3.87	38	-0.66	22	5.88	10	7.04	7	5.30	4	1.01	0.41	97.55	6.83	1.02	0.16	0.16	4
Benchmark 1: Morningstar Lifetime Mod 2015 TR USD	12/31/1998	-3.86		-1.85		4.45		6.53		5.74				6.66	0.98				
Benchmark 2: US OE Target Date 2011-2015	9/1/1990	-4.11		-1.84		4.27		5.52		3.51		0.99	-1.10	97.84	6.67	0.80	3.36	0.89	3
<b>US OE Target Date 2021-2025</b>																			
Vanguard Target Retirement 2025 Inv	10/27/2003	-5.53	41	-1.60	29	7.31	13	8.16	12	5.41	9	0.98	0.47	98.55	8.85	0.93	0.17	0.17	4
Benchmark 1: Morningstar Lifetime Mod 2025 TR USD	12/31/1998	-5.41		-2.75		6.17		7.80		5.97				8.96	0.88				
Benchmark 2: US OE Target Date 2021-2025	10/1/2003	-5.73		-2.55		5.70		7.01		4.23		0.98	-0.85	98.83	8.84	0.78	2.18	0.91	3
<b>US OE Target Date 2031-2035</b>																			
Vanguard Target Retirement 2035 Inv	10/27/2003	-7.12	44	-2.75	40	8.41	17	9.06	13	5.56	15	0.97	0.73	99.20	10.77	0.86	0.18	0.18	4
Benchmark 1: Morningstar Lifetime Mod 2035 TR USD	12/31/1998	-7.62		-4.26		7.44		8.54		6.07				11.09	0.79				
Benchmark 2: US OE Target Date 2031-2035	10/1/2003	-7.34		-3.39		6.84		7.87		4.40		0.95	-0.46	99.17	10.60	0.74	2.39	0.94	3
<b>US OE Target Date 2041-2045</b>																			
Vanguard Target Retirement 2045 Inv	10/27/2003	-7.95	48	-3.49	48	8.59	20	9.19	15	5.73	20	0.95	1.12	99.11	11.22	0.84	0.18	0.18	4
Benchmark 1: Morningstar Lifetime Mod 2045 TR USD	12/31/1998	-8.65		-5.22		7.38		8.35		6.04				11.71	0.74				
Benchmark 2: US OE Target Date 2041-2045	10/1/2003	-8.05		-3.75		7.32		8.23		4.59		0.97	-0.10	99.09	11.43	0.73	2.91	0.96	3
<b>US OE Conservative Allocation</b>																			
American Century Strat Allc: Cnsvr Inv	2/15/1996	-3.41	42	-0.60	26	4.44	28	5.94	23	4.90	22	1.09	0.21	95.72	5.81	1.01	1.00	1.00	4
Benchmark 1: Morningstar Mod Con Tgt Risk TR USD	12/31/1998	-3.00		-1.43		3.76		5.27		5.09				5.24	1.00				
Benchmark 2: US OE Conservative Allocation	9/1/1948	-3.83		-2.55		3.25		4.85		4.14		0.99	-0.84	97.64	5.26	0.83	1.61	1.21	3
<b>US OE Moderate Allocation</b>																			
American Century Strat Allc: Mod Inv	2/15/1996	-5.85	64	-1.62	43	6.12	58	7.37	50	5.60	29	0.81	0.95	97.74	8.33	0.89	1.06	1.06	4
Oakmark Equity & Income I	11/1/1995	-6.95	88	-2.53	60	8.17	18	8.04	33	6.50	8	0.85	1.32	90.71	9.08	0.89	0.74	0.74	4
Benchmark 1: Morningstar Mod Agg Tgt Risk TR USD	12/31/1998	-7.29		-4.27		6.72		7.77		5.79				10.14	0.78				
Benchmark 2: US OE Moderate Allocation	7/1/1929	-5.60		-2.51		6.41		7.33		5.08		0.77	0.73	98.51	7.88	0.87	1.61	1.24	3
<b>US OE Aggressive Allocation</b>																			
American Century Strat Allc: Agrsv Inv	2/15/1996	-7.39	44	-1.64	14	7.47	48	8.38	32	5.97	11	0.85	0.93	97.37	10.37	0.82	1.14	1.09	4
Benchmark 1: Morningstar Agg Tgt Risk TR USD	12/31/1998	-8.85		-5.28		7.81		8.66		5.82				12.09	0.74				
Benchmark 2: US OE Aggressive Allocation	9/11/1935	-7.63		-4.10		7.19		7.79		4.73		0.84	-0.06	99.14	10.22	0.74	2.13	1.38	3
<b>US OE Intermediate-Term Bond</b>																			
PIMCO Total Return Admin	9/8/1994	-0.15	78	1.32	65	1.11	72	2.98	60	5.50	9	1.04	-0.21	60.69	3.71	0.79	0.71	0.71	4
Benchmark 1: Barclays US Agg Bond TR USD	12/31/1975	1.23		2.94		1.71		3.10		4.64				2.77	1.09				
Benchmark 2: US OE Intermediate-Term Bond	11/1/1954	0.32		1.46		1.58		3.15		4.29		0.89	0.36	83.96	2.68	1.13	1.06	0.86	3
<b>US OE Inflation-Protected Bond</b>																			
PIMCO Real Return A	1/29/1997	-1.90	73	-3.04	79	-2.73	69	1.76	39	3.75	18	1.09	-0.98	96.36	5.79	0.32	0.90	0.85	2
Benchmark 1: Barclays US Treasury US TIPS TR USD	2/28/1997	-1.15		-0.83		-1.83		2.55		4.01				5.20	0.50				
Benchmark 2: US OE Inflation-Protected Bond	4/1/1988	-1.84		-2.51		-2.46		1.53		3.05		0.88	-0.79	98.56	4.60	0.32	0.96	0.79	3

Performance data shown represents past performance and is no guarantee of future results. Investment return and principal values fluctuate, and shares when redeemed may be more or less than their original cost. Current performance may be higher or lower than quoted. For most recent month - end performance, visit [www.massmutual.com/serve](http://www.massmutual.com/serve)

## Investment Return and Risk Report

As of 9/30/2015

Fund Name	Inception Date	Short Term Performance				Long-Term Performance						5 Yr Risk/Return Data					Prospectus		
		Qtr	%Rank	1 Yr	%Rank	3 Yr	%Rank	5 Yr	%Rank	10 Yr	%Rank	Beta	Alpha	R-Sq	St Dev	Sharpe Ratio	Gross Expense Ratio	Net Expense Ratio	Mstar Rating
<b>US OE World Bond</b>																			
Oppenheimer International Bond Y	9/27/2004	-1.53	64	-3.50	34	-1.27	48	0.55	57	4.72	23	0.78	1.64	54.19	6.90	0.11	0.85	0.84	3
Benchmark 1: Citi WGBI NonUSD USD	12/31/1984	1.71		-7.01		-4.59		-1.32		2.92				6.55	-0.18				
Benchmark 2: US OE World Bond	2/1/1981	-1.25		-4.50		-0.93		1.22		3.83		0.59	1.62	71.95	4.58	0.20	1.35	1.07	3
<b>US OE Multisector Bond</b>																			
Loomis Sayles Bond Instl	5/16/1991	-4.11	93	-6.37	92	2.40	34	4.90	22	6.32	7	0.90	1.97	15.26	6.17	0.80	0.63	0.63	4
Benchmark 1: Barclays US Universal TR USD	1/31/1990	0.68		2.33		1.89		3.36		4.80				2.68	1.23				
Benchmark 2: US OE Multisector Bond	4/1/1977	-2.22		-1.68		2.01		4.09		5.19		0.80	1.17	30.45	3.90	0.98	1.48	1.12	3

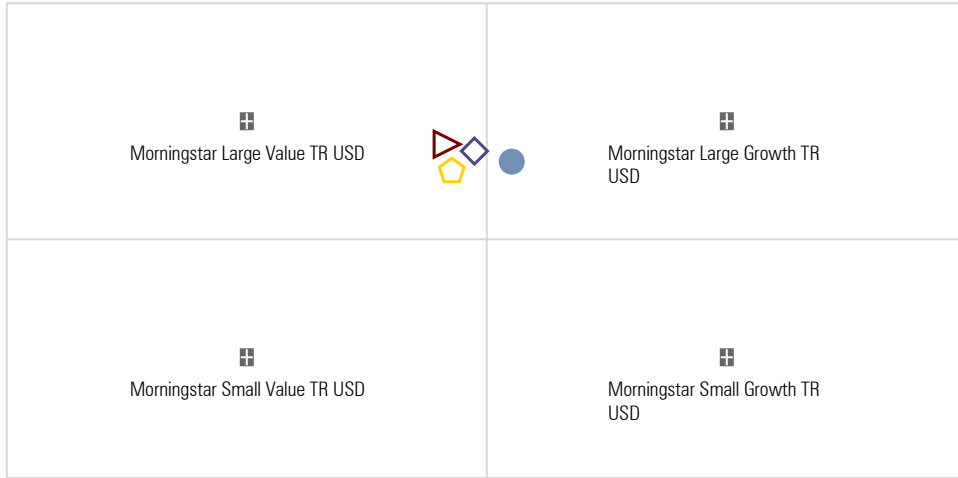




# Enhanced Analytics

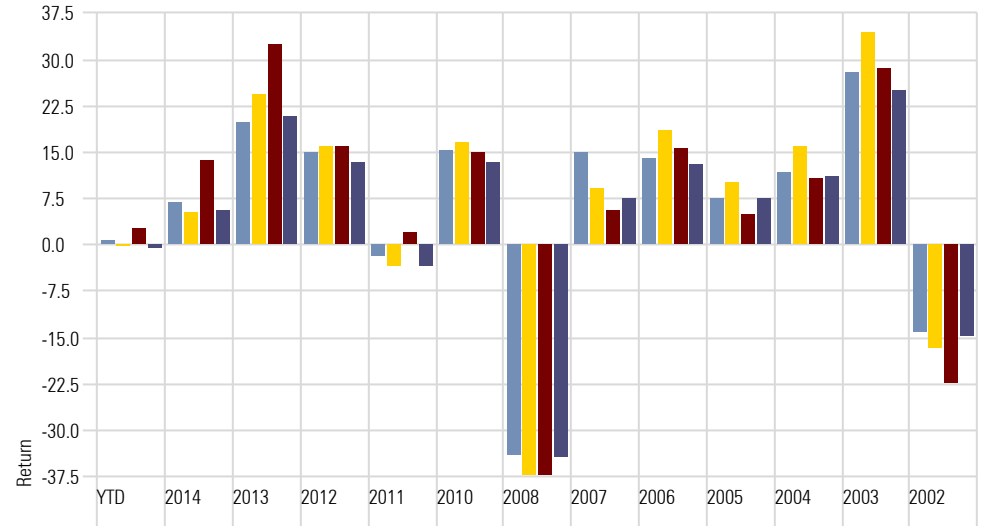
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● American Century Strat Alloc: Agrsv Inv    ◊ Morningstar Agg Tgt Risk TR USD    ▶ S&P 500 TR USD  
◆ US OE Aggressive Allocation

### Returns

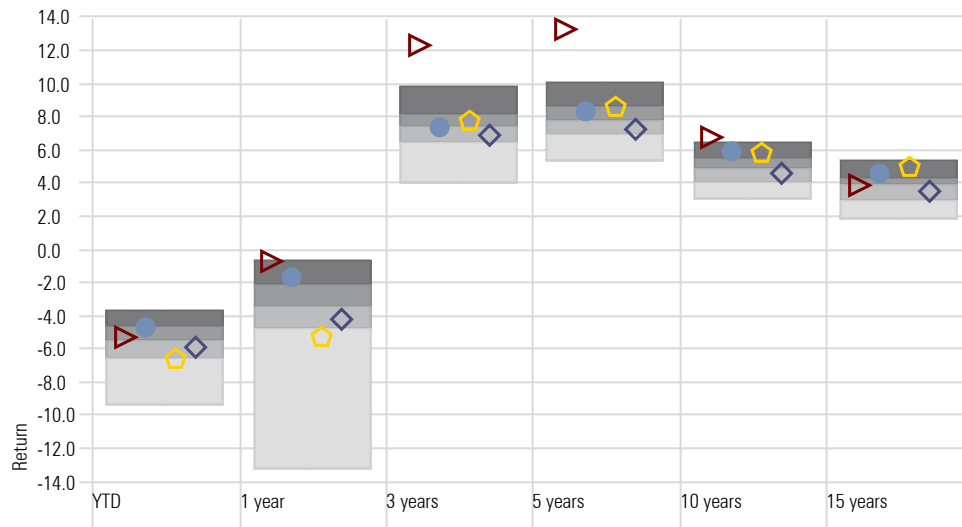


■ American Century Strat Alloc: Agrsv Inv    ■ Morningstar Agg Tgt Risk TR USD    ■ S&P 500 TR USD  
■ US OE Aggressive Allocation

### Performance Relative to Peer Group

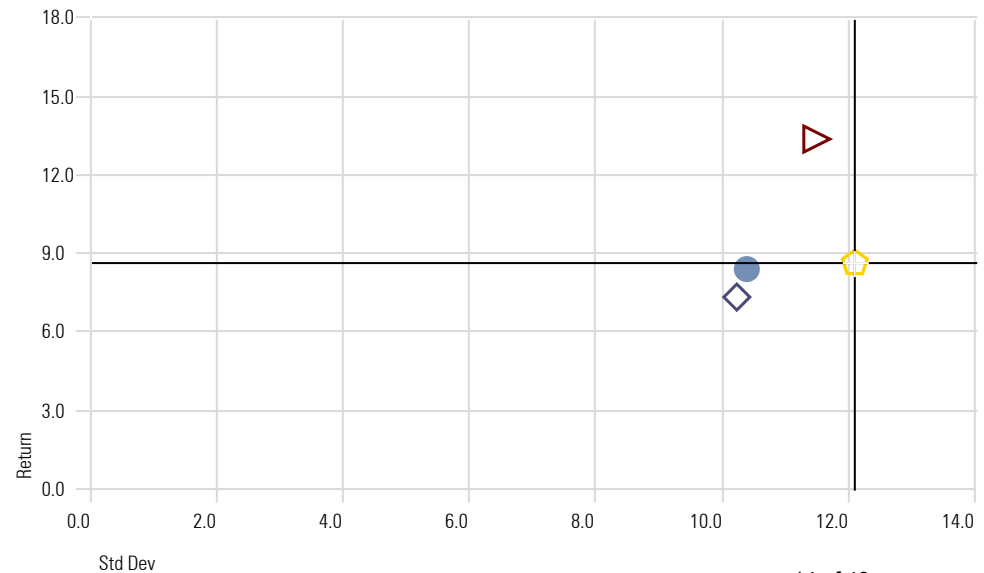
Peer Group (5-95%): Open End Funds - U.S. - Aggressive Allocation

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



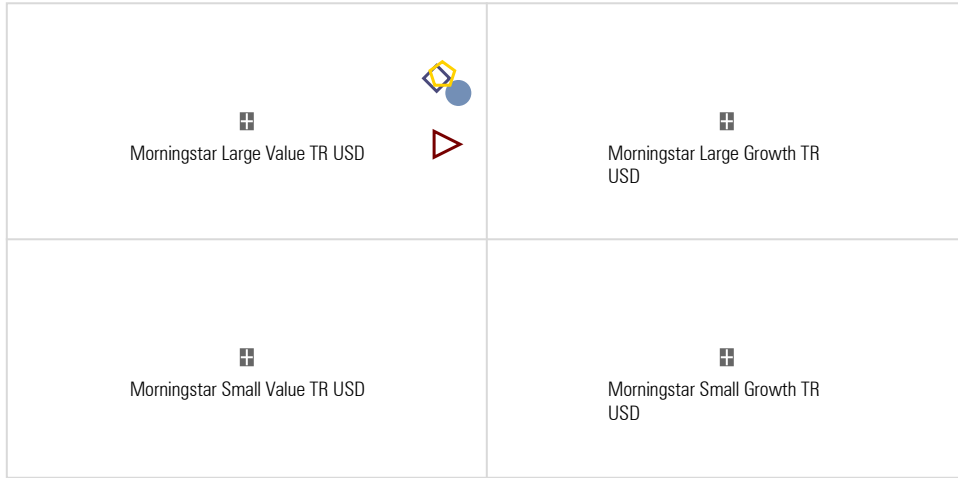
### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



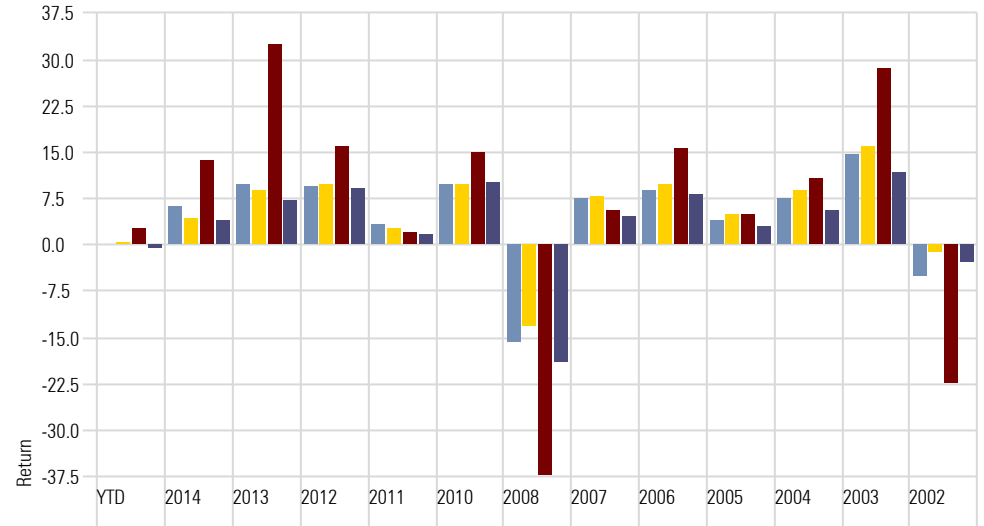
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● American Century Strat Alloc: Cnsv Inv    ● Morningstar Mod Con Tgt Risk TR USD    ▲ S&P 500 TR USD  
◆ US OE Conservative Allocation

### Returns

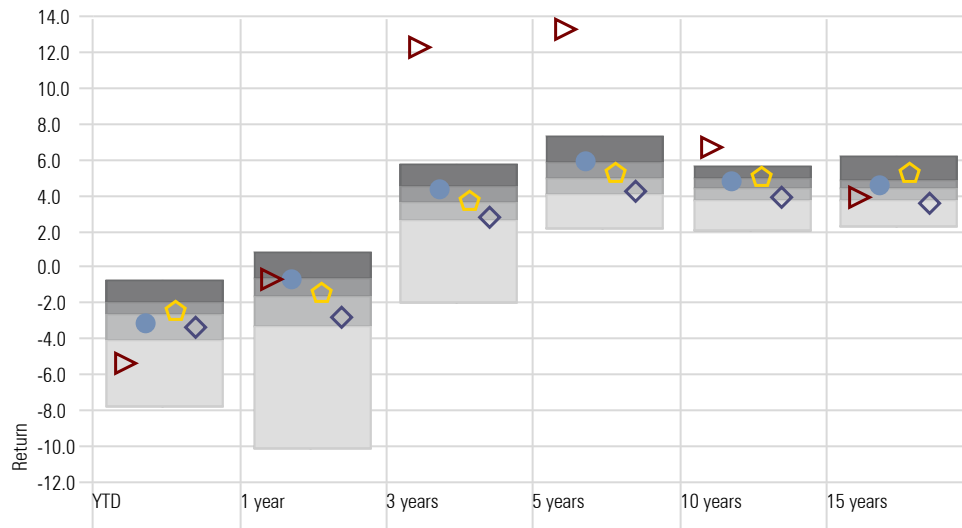


■ American Century Strat Alloc: Cnsv Inv    ■ Morningstar Mod Con Tgt Risk TR USD    ■ S&P 500 TR USD  
■ US OE Conservative Allocation

### Performance Relative to Peer Group

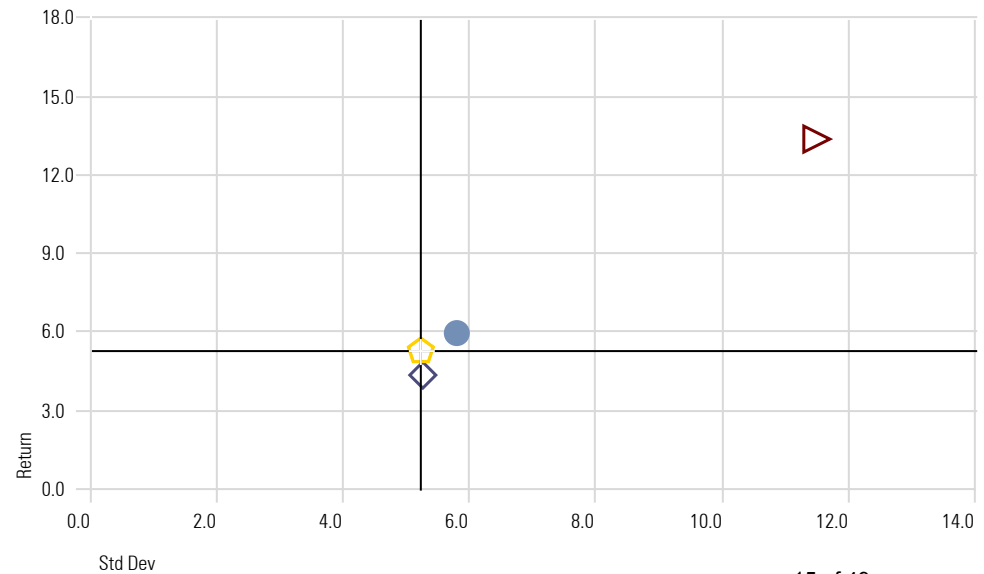
Peer Group (5-95%): Open End Funds - U.S. - Conservative Allocation

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



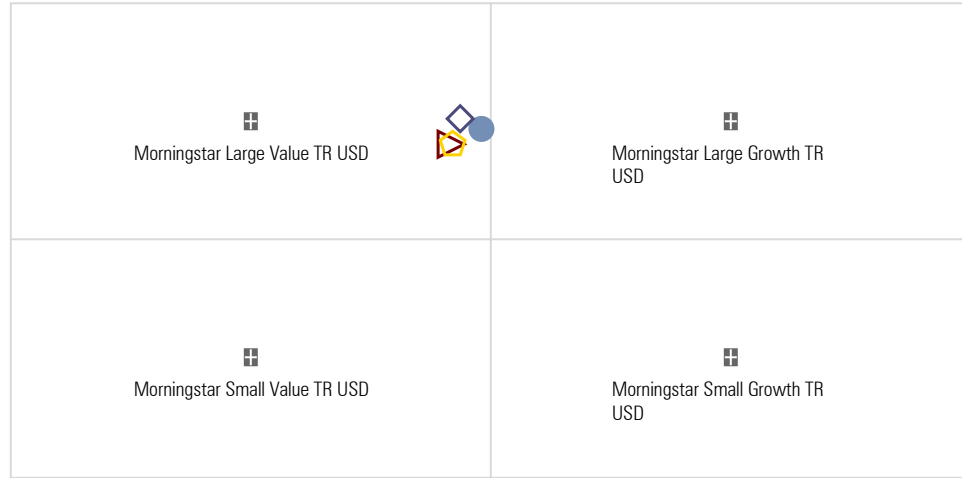
### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



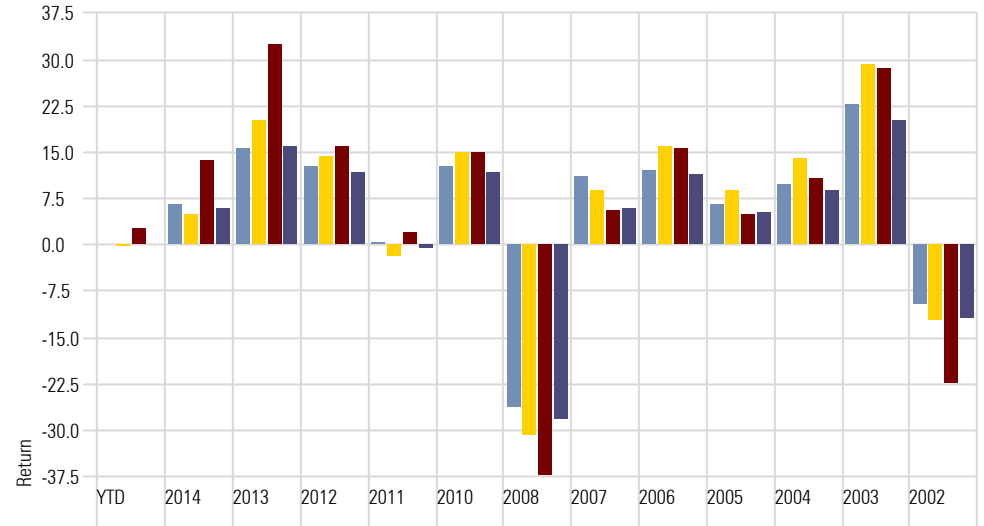
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● American Century Strat Alloc: Mod Inv    ◊ Morningstar Mod Agg Tgt Risk TR USD    ▶ S&P 500 TR USD  
 ◆ US OE Moderate Allocation

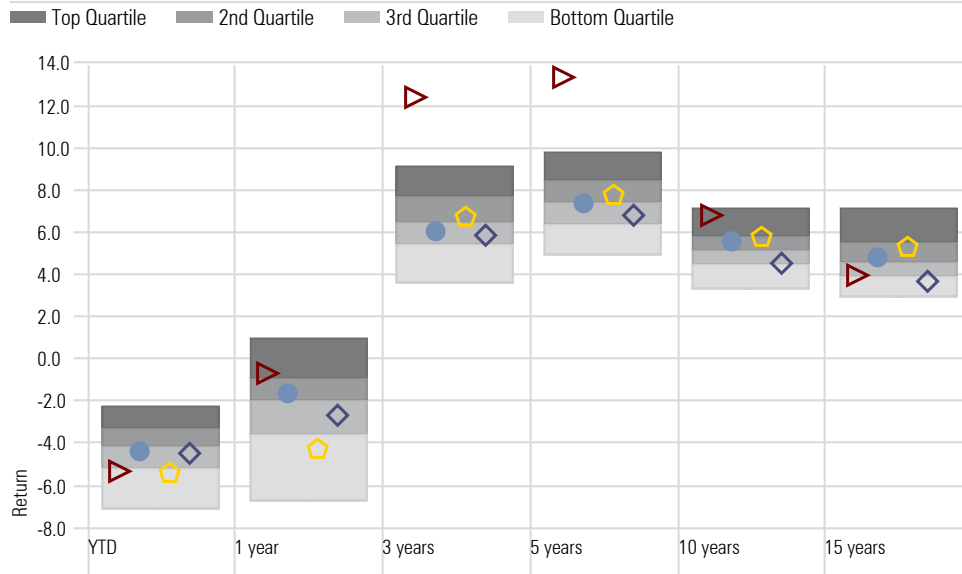
### Returns



■ American Century Strat Alloc: Mod Inv    ■ Morningstar Mod Agg Tgt Risk TR USD    ■ S&P 500 TR USD  
 ■ US OE Moderate Allocation

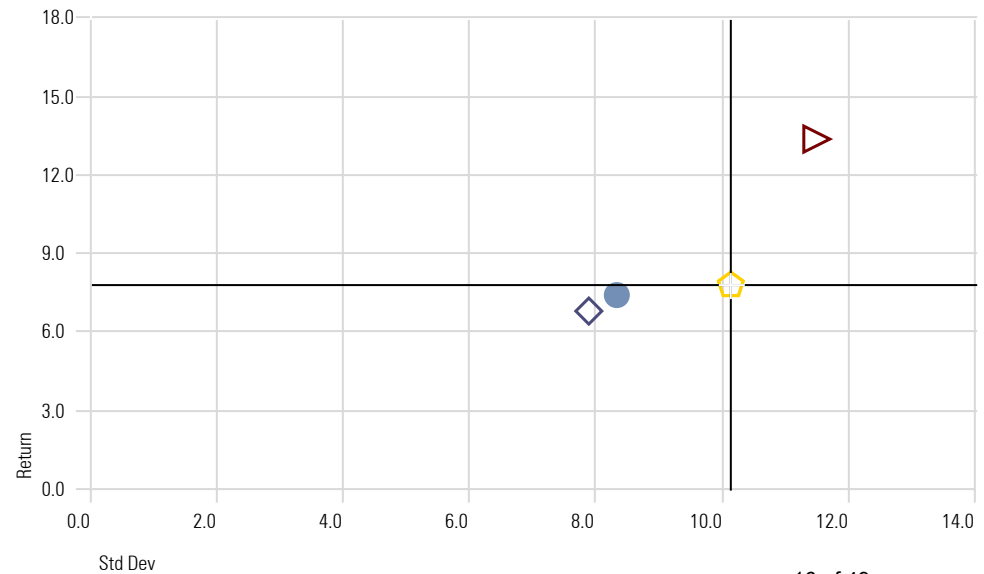
### Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Moderate Allocation



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



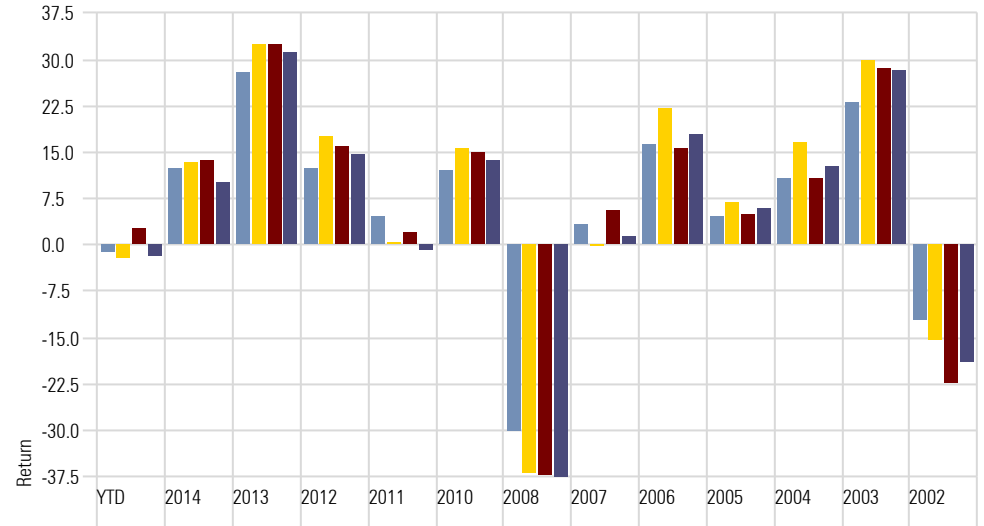
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● American Funds American Mutual R4    ◊ Russell 1000 Value TR USD    ▶ S&P 500 TR USD  
◆ US OE Large Value

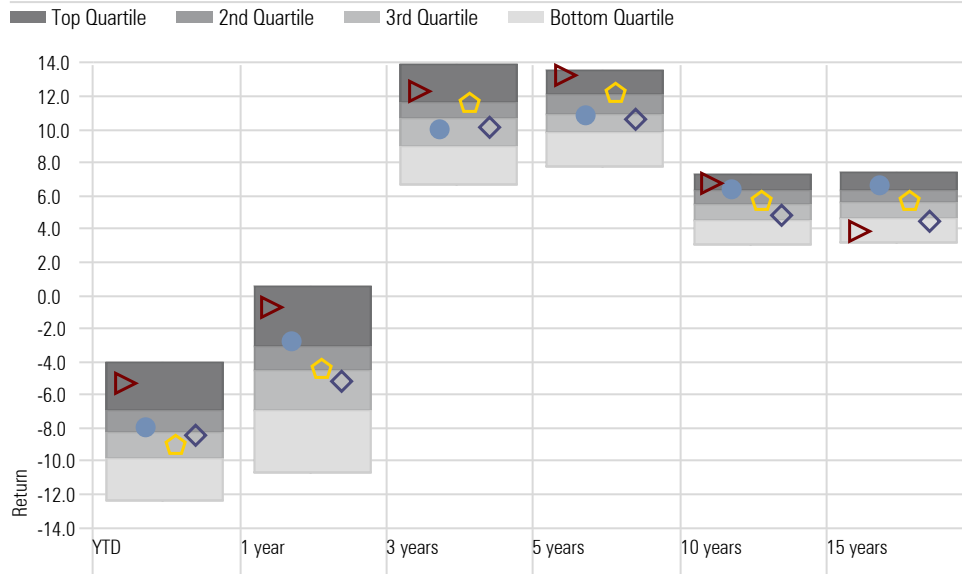
### Returns



■ American Funds American Mutual R4    ■ Russell 1000 Value TR USD    ■ S&P 500 TR USD  
■ US OE Large Value

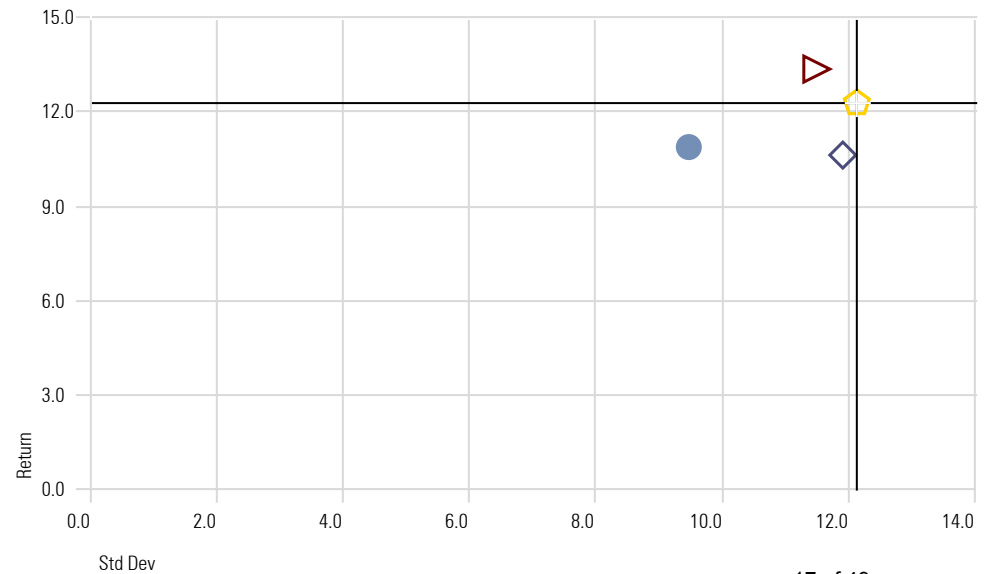
### Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Large Value



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



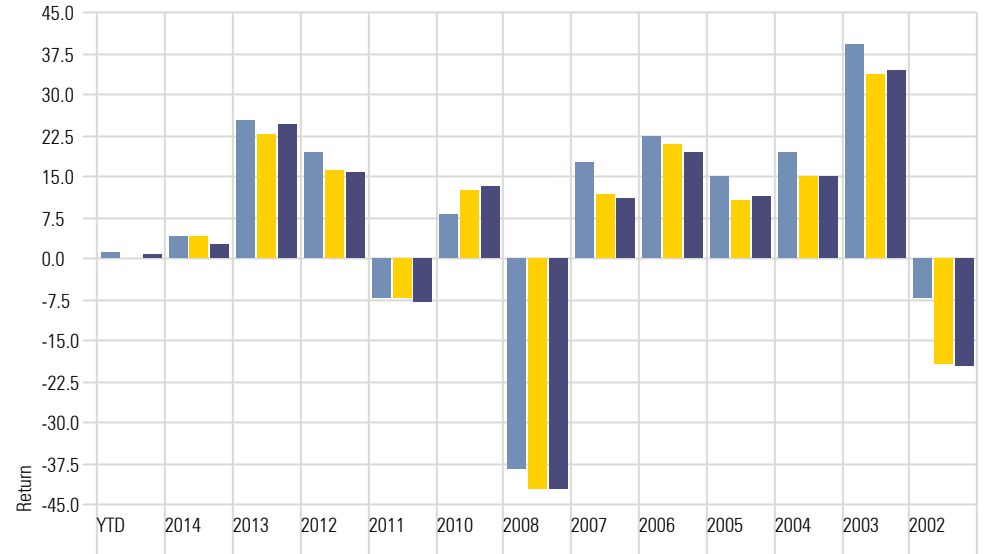
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● American Funds Capital World Gr&Inc R5    ● MSCI ACWI NR USD    ◆ US OE World Stock

### Returns

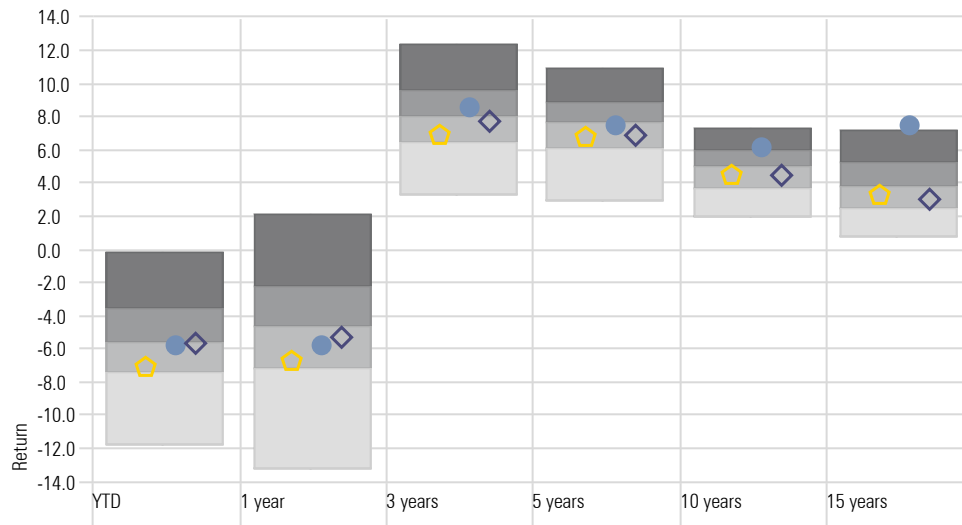


■ American Funds Capital World Gr&Inc R5    ■ MSCI ACWI NR USD    ■ US OE World Stock

### Performance Relative to Peer Group

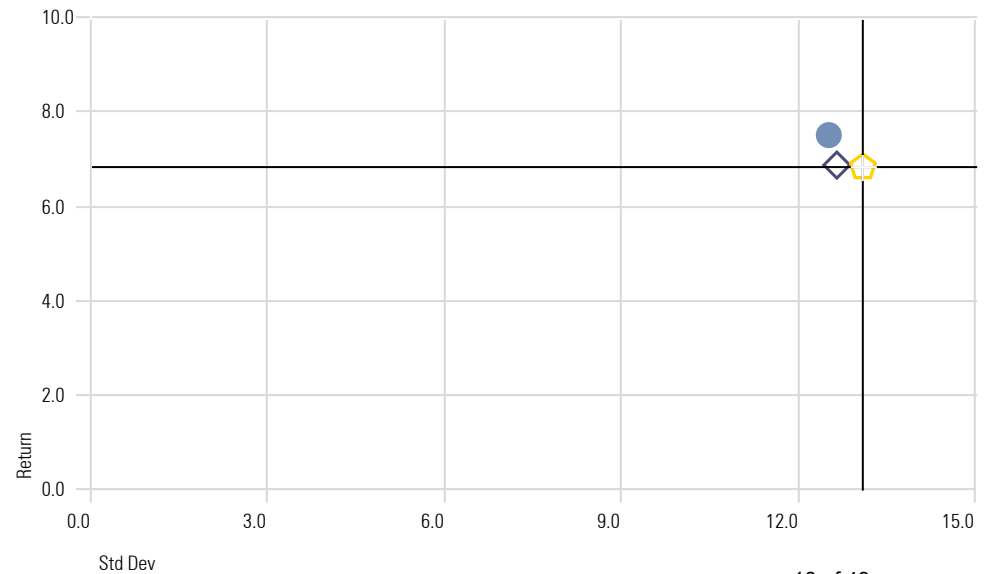
Peer Group (5-95%): Open End Funds - U.S. - World Stock

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# American Funds Europacific Growth R5

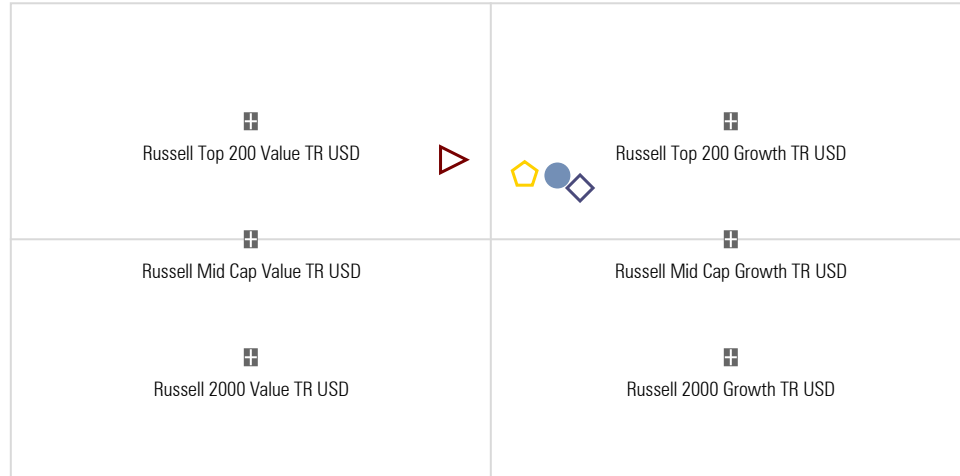
RERFX

**Benchmark 1:** MSCI ACWI Ex USA Growth NR USD  
**Benchmark 2:** MSCI ACWI Ex USA NR USD  
**Category:** US OE Foreign Large Growth

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

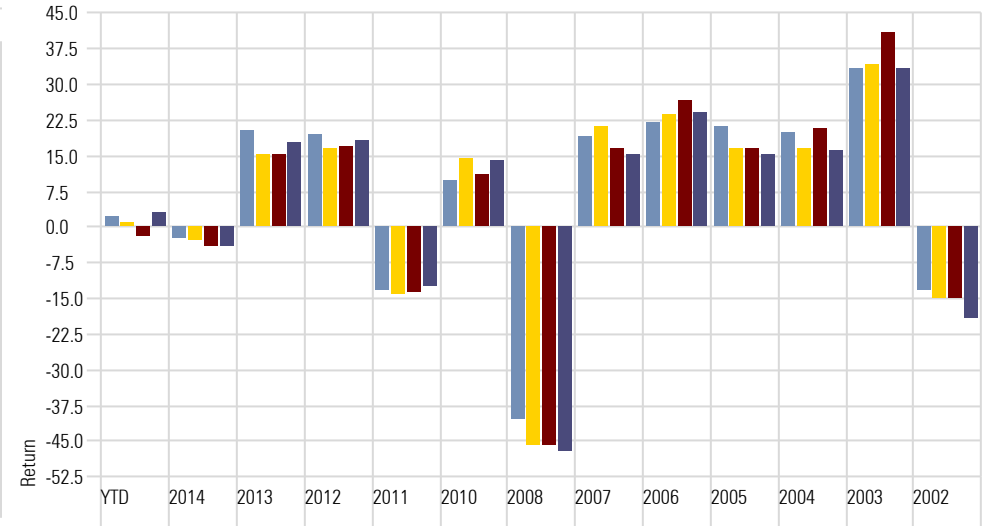
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● American Funds Europacific Growth R5   ● MSCI ACWI Ex USA Growth NR USD   ▲ MSCI ACWI Ex USA NR USD  
 ◆ US OE Foreign Large Growth

## Returns

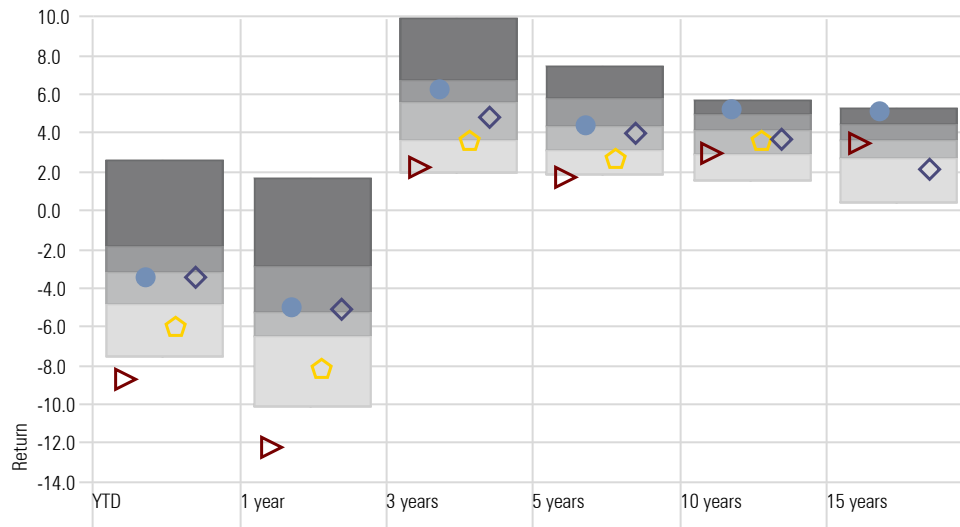


■ American Funds Europacific Growth R5   ■ MSCI ACWI Ex USA Growth NR USD   ■ MSCI ACWI Ex USA NR USD  
 ■ US OE Foreign Large Growth

## Performance Relative to Peer Group

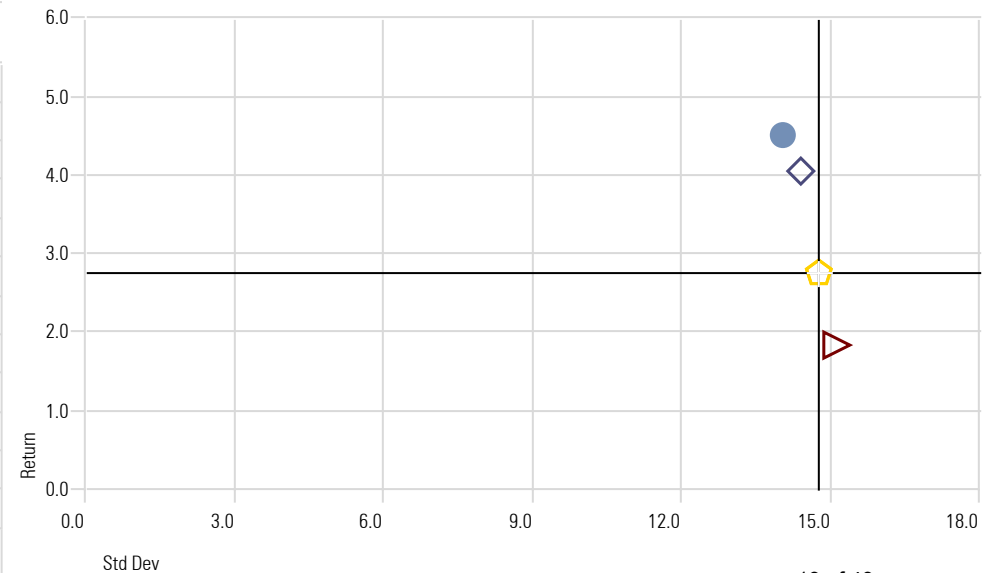
Peer Group (5-95%): Open End Funds - U.S. - Foreign Large Growth

■ Top Quartile   ■ 2nd Quartile   ■ 3rd Quartile   ■ Bottom Quartile



## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# American Funds Fundamental Invs R5

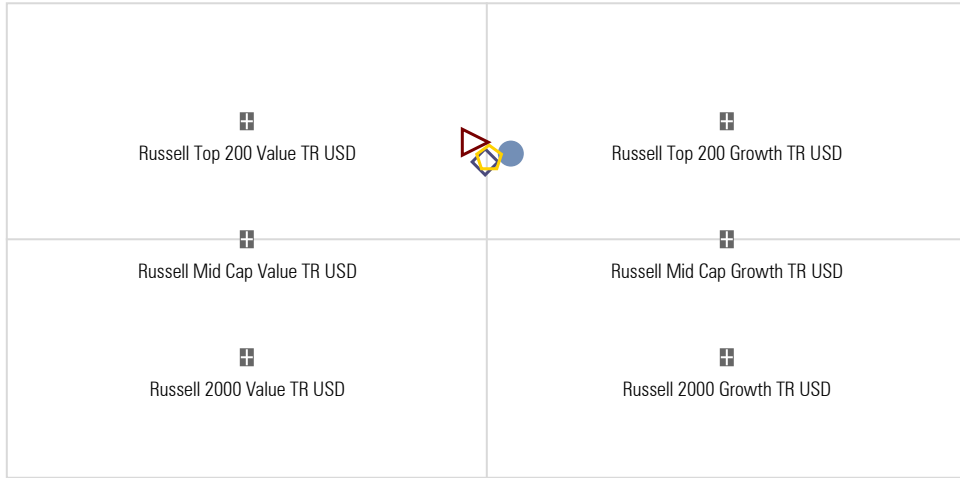
## RFNFX

**Benchmark 1:** Russell 1000 TR USD  
**Benchmark 2:** S&P 500 TR USD  
**Category:** US OE Large Blend

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

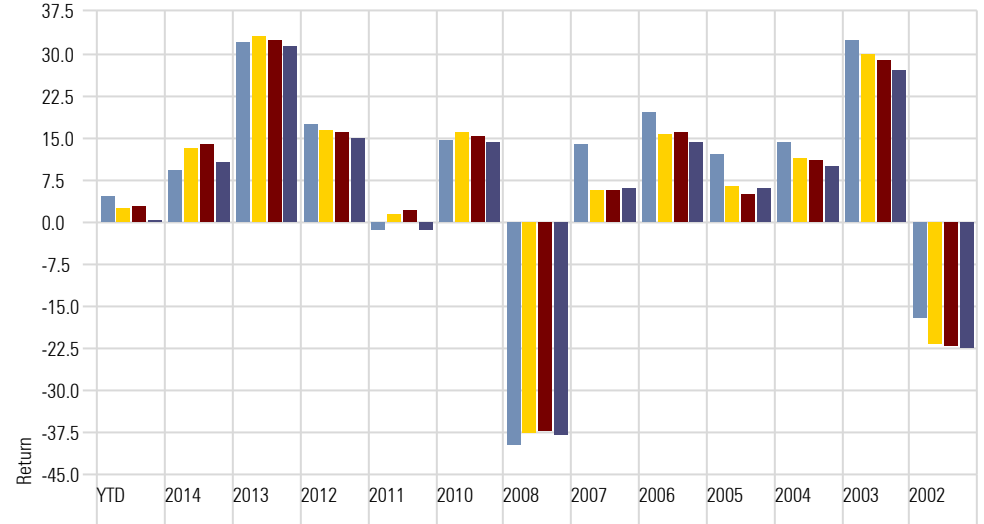
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● American Funds Fundamental Invs R5    ◊ Russell 1000 TR USD    ▶ S&P 500 TR USD  
 ◆ US OE Large Blend

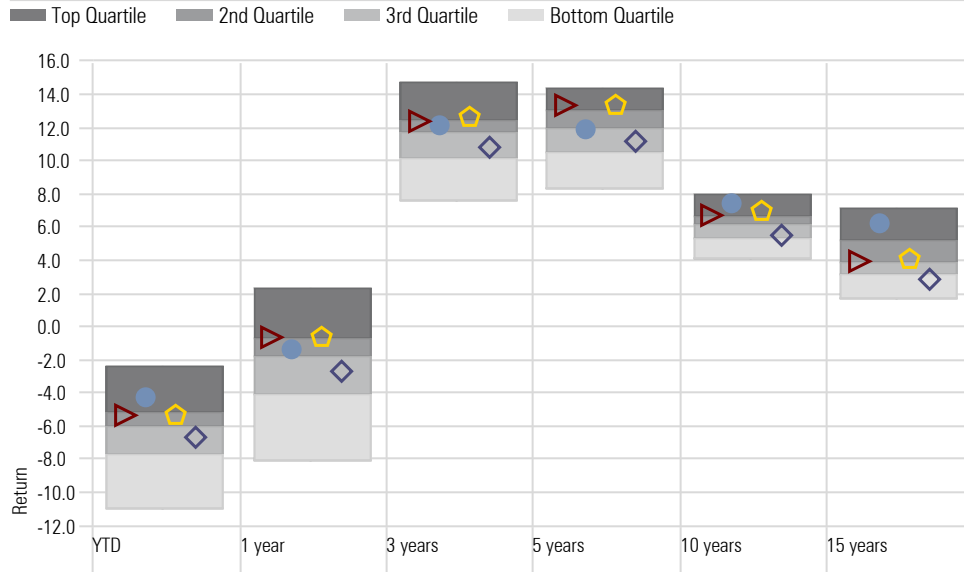
### Returns



■ American Funds Fundamental Invs R5    ■ Russell 1000 TR USD    ■ S&P 500 TR USD  
 ■ US OE Large Blend

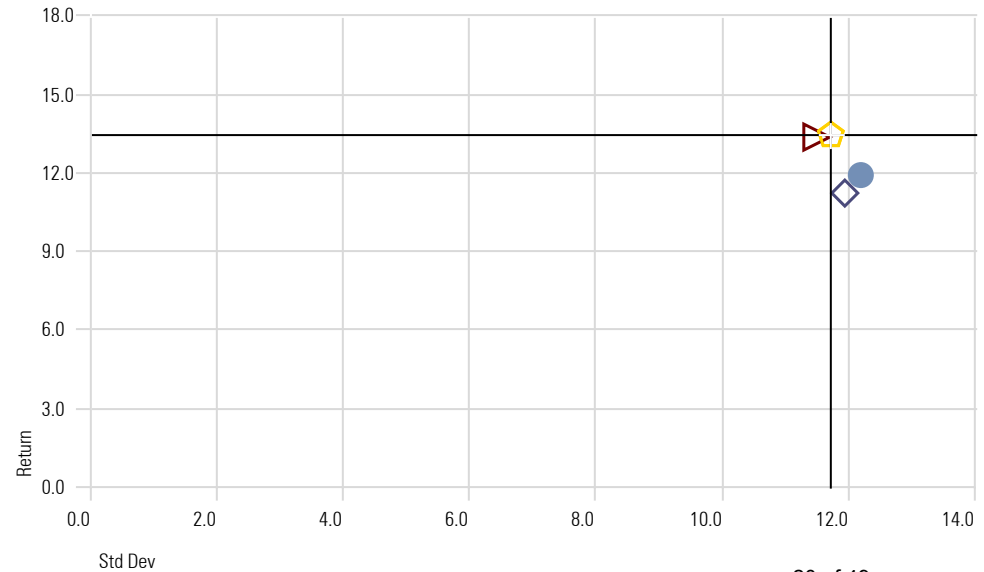
### Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Large Blend



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015





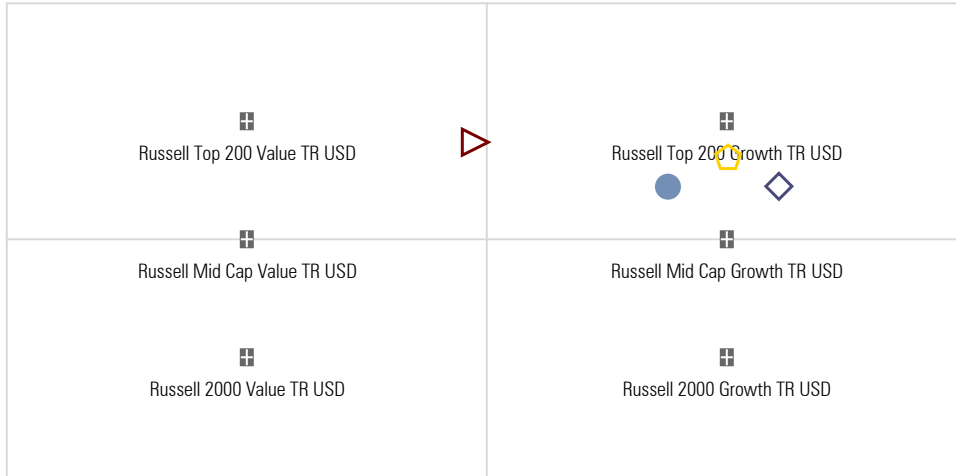
# American Funds Growth Fund of Amer R5 RGAFX

**Benchmark 1:** Russell 1000 Growth TR USD  
**Benchmark 2:** S&P 500 TR USD  
**Category:** US OE Large Growth

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

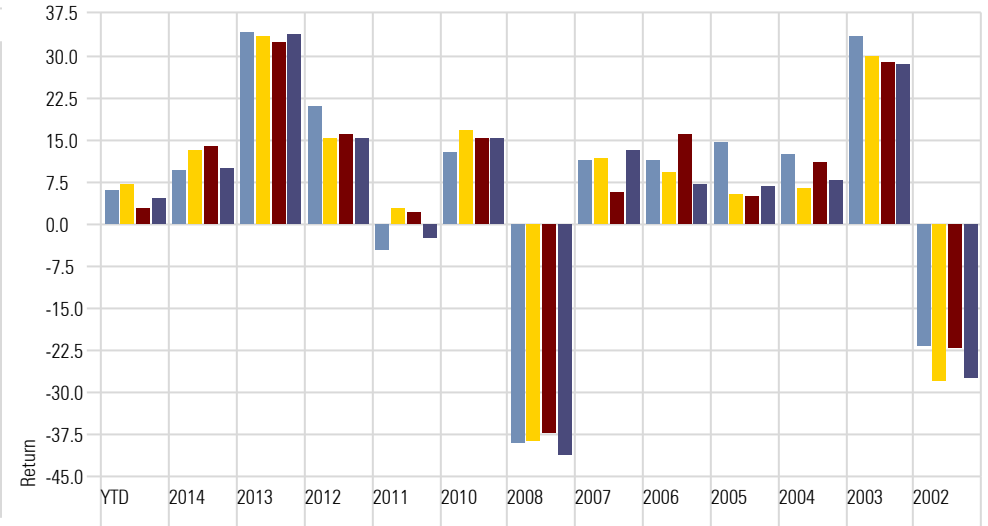
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● American Funds Growth Fund of Amer R5    ◐ Russell 1000 Growth TR USD    ▶ S&P 500 TR USD  
 ◆ US OE Large Growth

## Returns

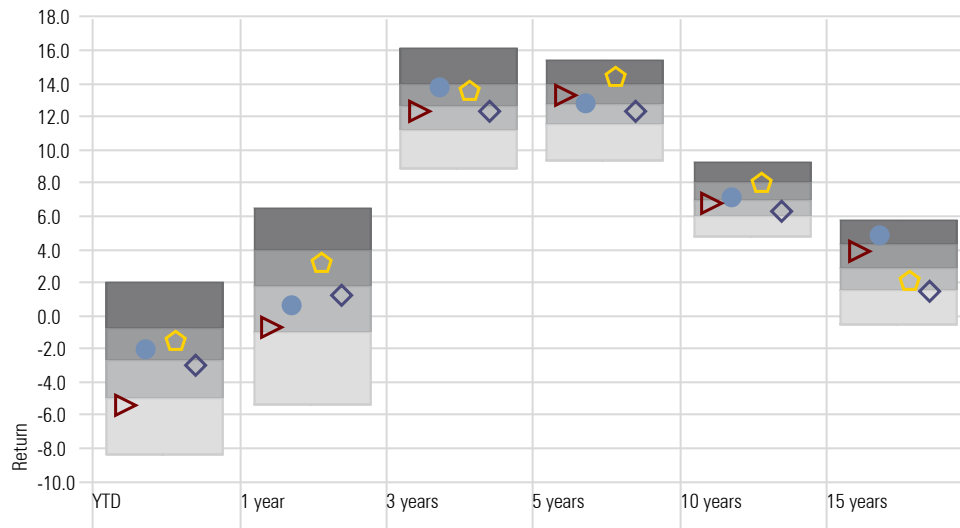


■ American Funds Growth Fund of Amer R5    ■ Russell 1000 Growth TR USD    ■ S&P 500 TR USD  
 ■ US OE Large Growth

## Performance Relative to Peer Group

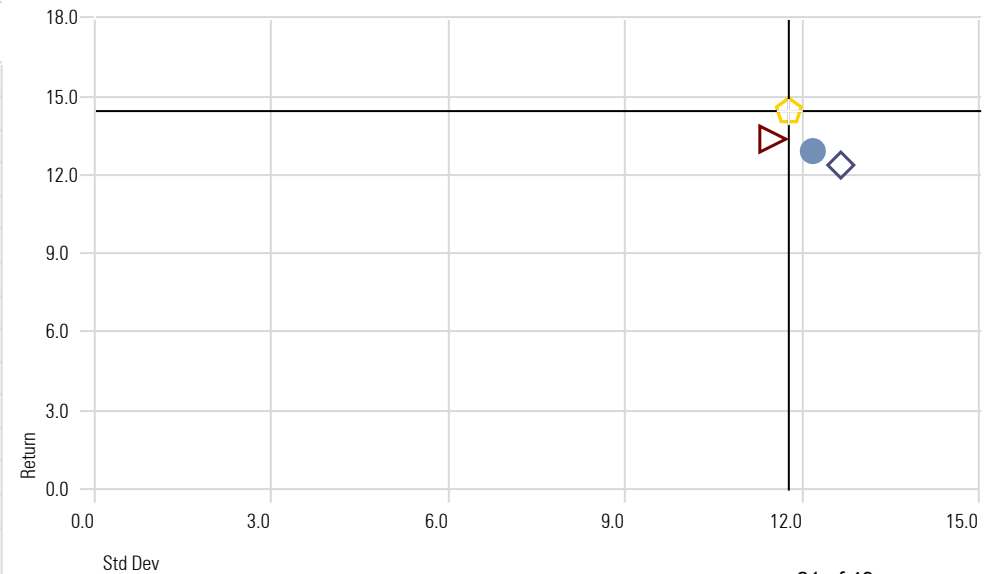
Peer Group (5-95%): Open End Funds - U.S. - Large Growth

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



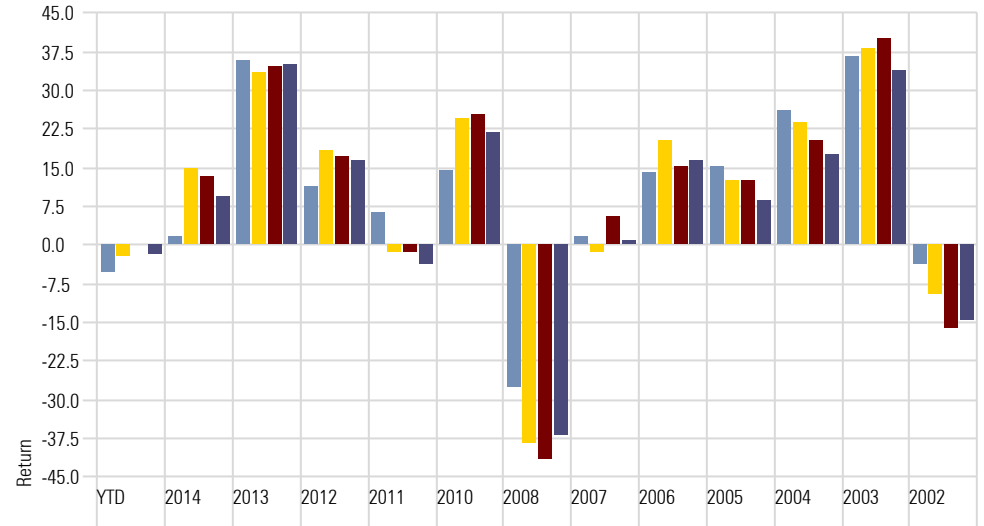
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Artisan Mid Cap Value Investor    ◐ Russell Mid Cap Value TR USD    ▶ Russell Mid Cap TR USD  
◆ US OE Mid-Cap Value

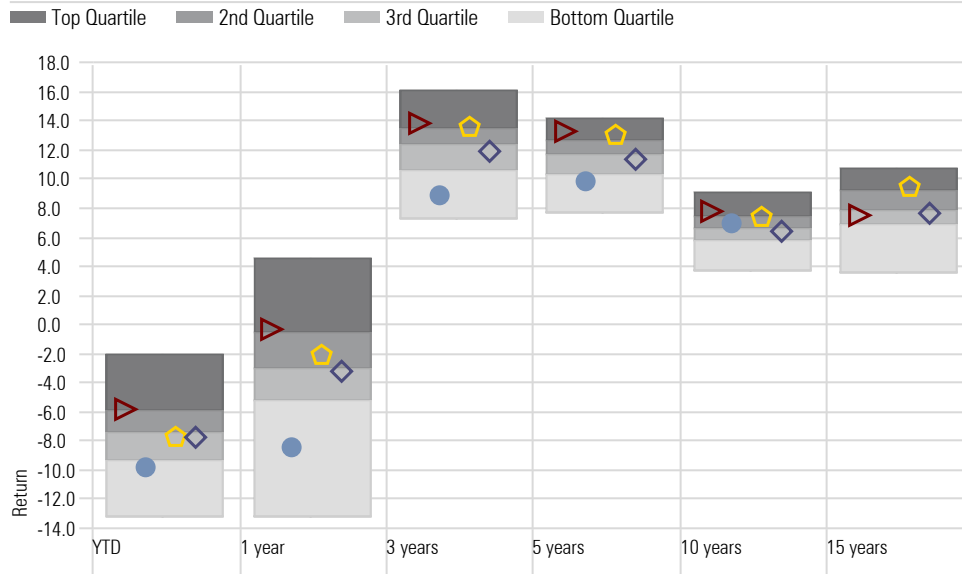
### Returns



■ Artisan Mid Cap Value Investor    ■ Russell Mid Cap Value TR USD    ■ Russell Mid Cap TR USD  
■ US OE Mid-Cap Value

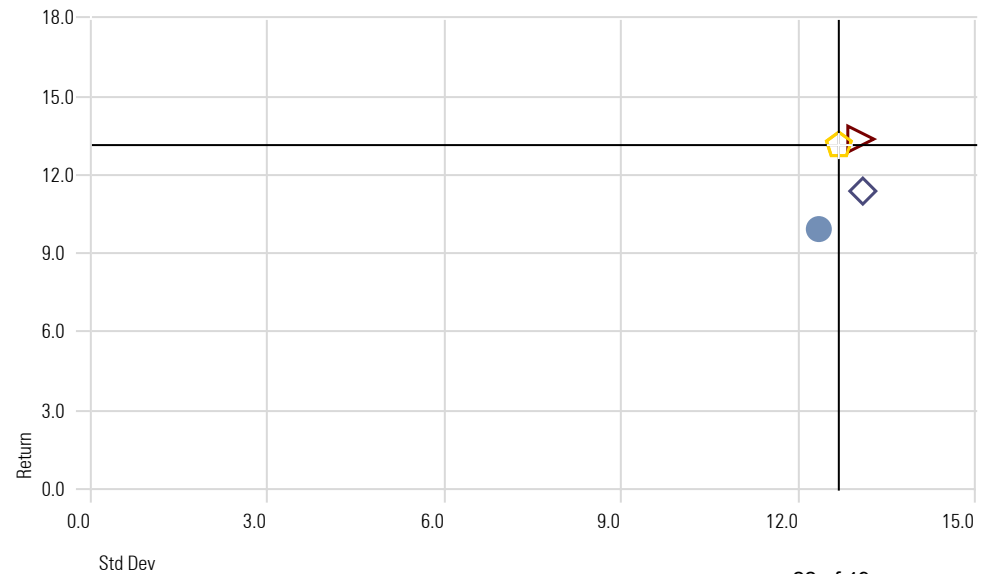
### Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Mid-Cap Value



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# Baron Small Cap Retail

BSCFX

**Benchmark 1:** Russell 2000 Growth TR USD  
**Benchmark 2:** Russell 2000 Growth TR USD  
**Category:** US OE Small Growth

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

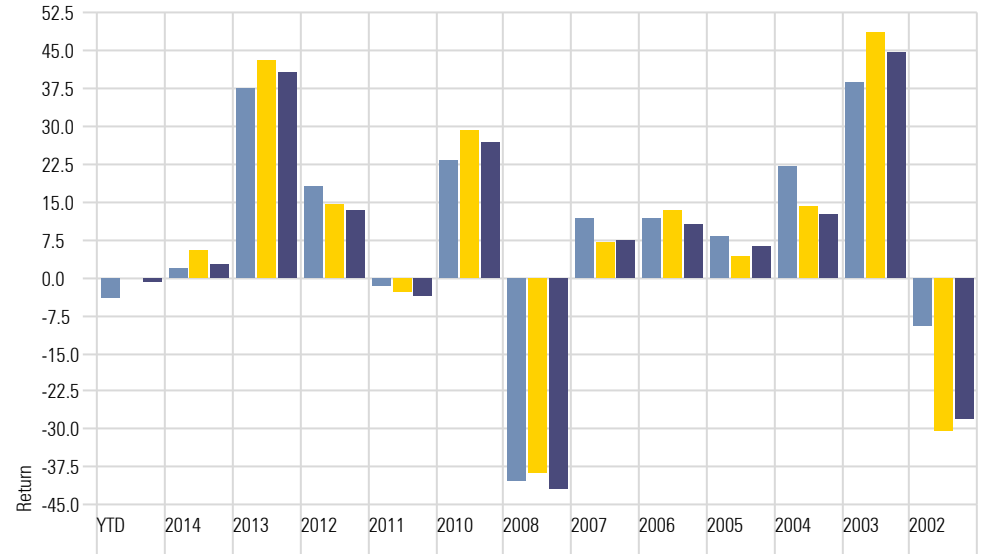
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Baron Small Cap Retail    ◊ Russell 2000 Growth TR USD    ◆ US OE Small Growth

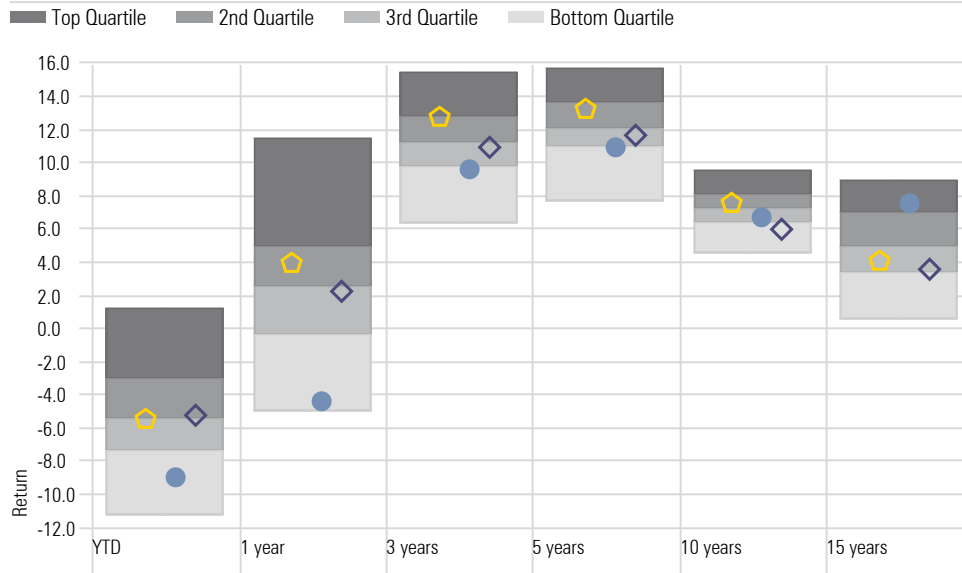
## Returns



■ Baron Small Cap Retail    ■ Russell 2000 Growth TR USD    ■ US OE Small Growth

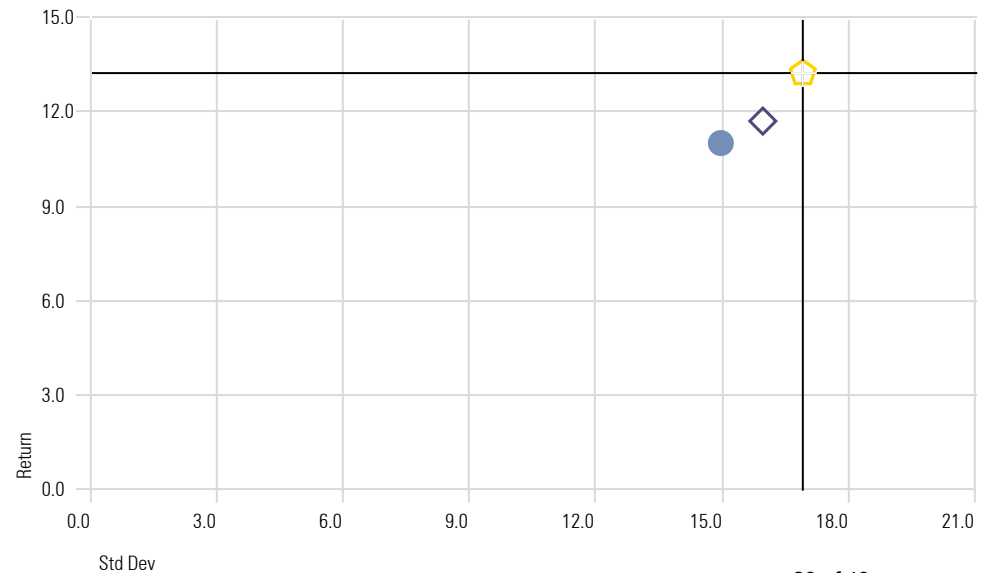
## Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Small Growth



## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



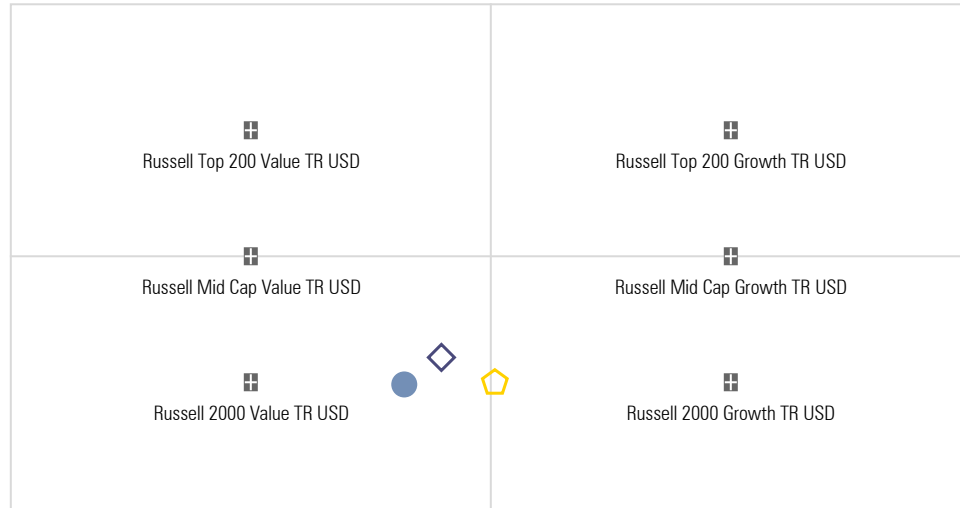
# Columbia Small Cap Core A LSMAX

**Benchmark 1:** Russell 2000 TR USD  
**Benchmark 2:** Russell 2000 TR USD  
**Category:** US OE Small Blend

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

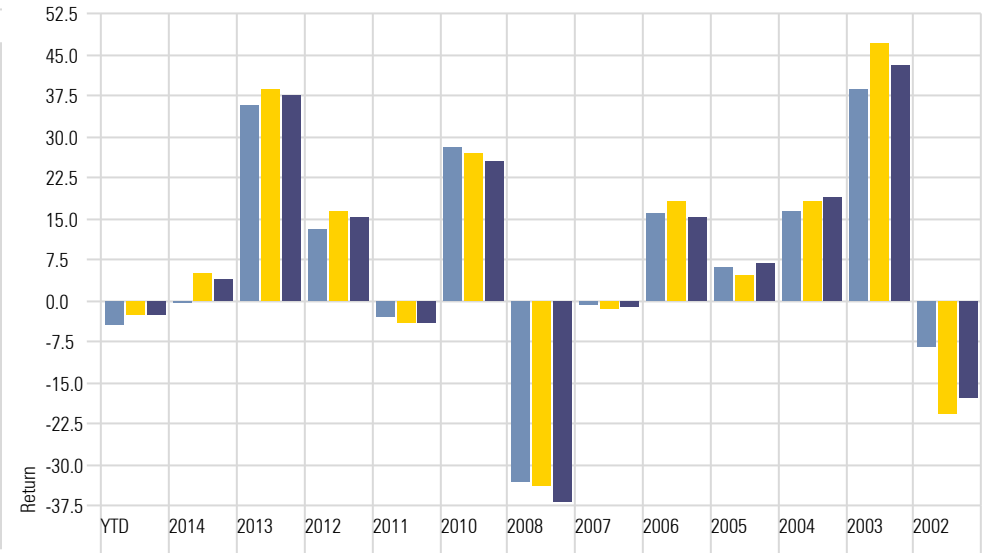
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Columbia Small Cap Core A    ◐ Russell 2000 TR USD    ◆ US OE Small Blend

## Returns

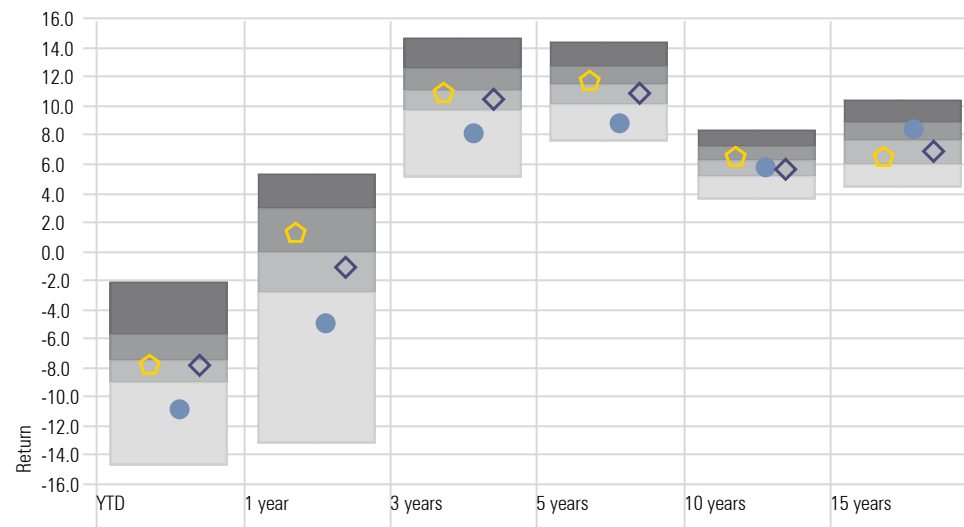


■ Columbia Small Cap Core A    ■ Russell 2000 TR USD    ■ US OE Small Blend

## Performance Relative to Peer Group

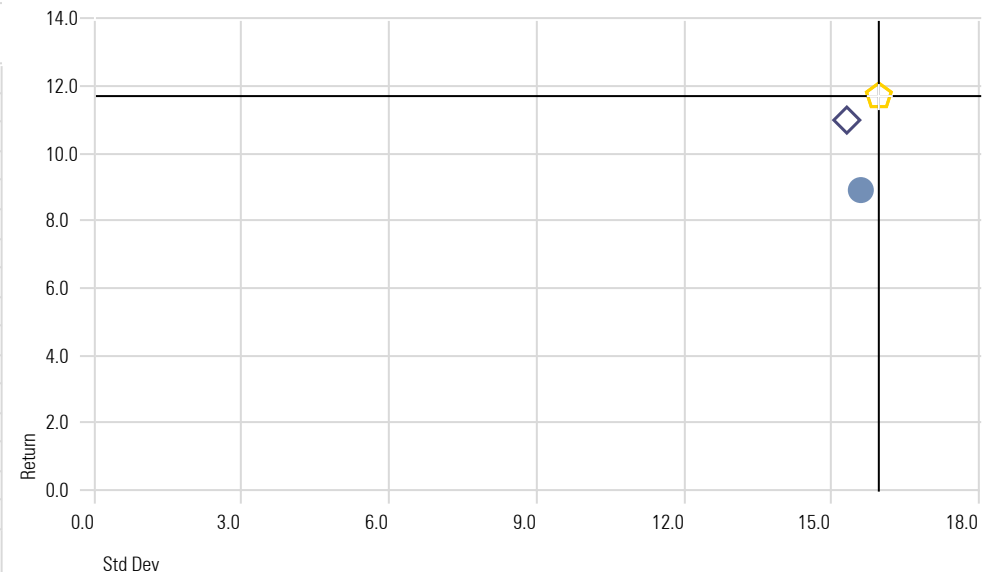
Peer Group (5-95%): Open End Funds - U.S. - Small Blend

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



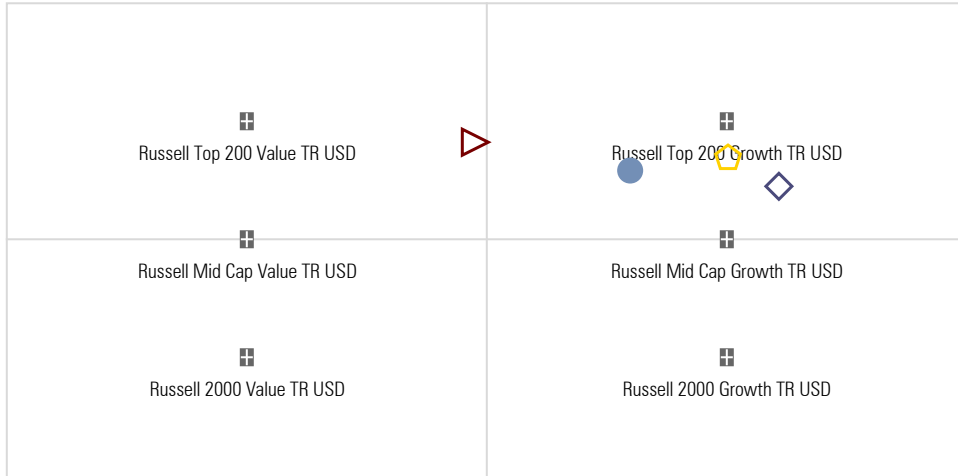
## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



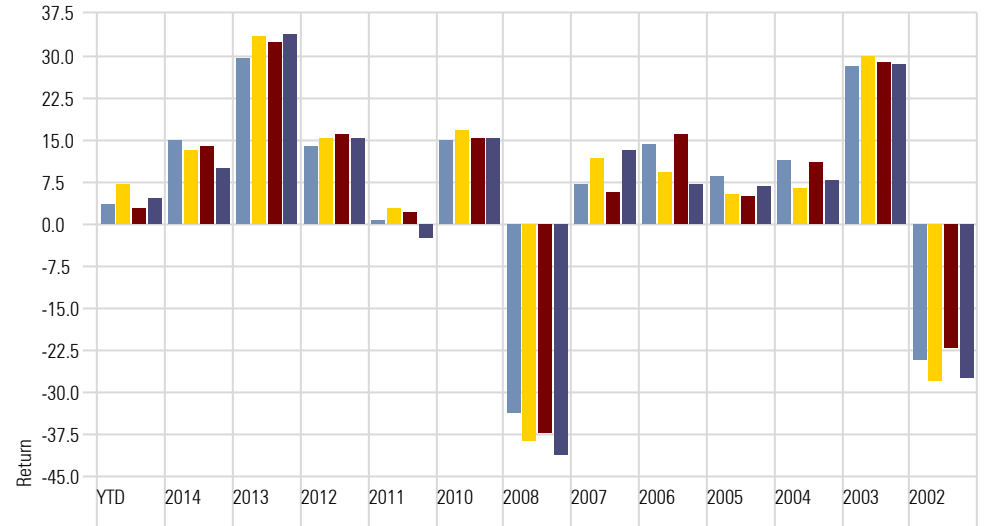
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Franklin Growth A      ◇ Russell 1000 Growth TR USD      ▷ S&P 500 TR USD  
◇ US OE Large Growth

### Returns

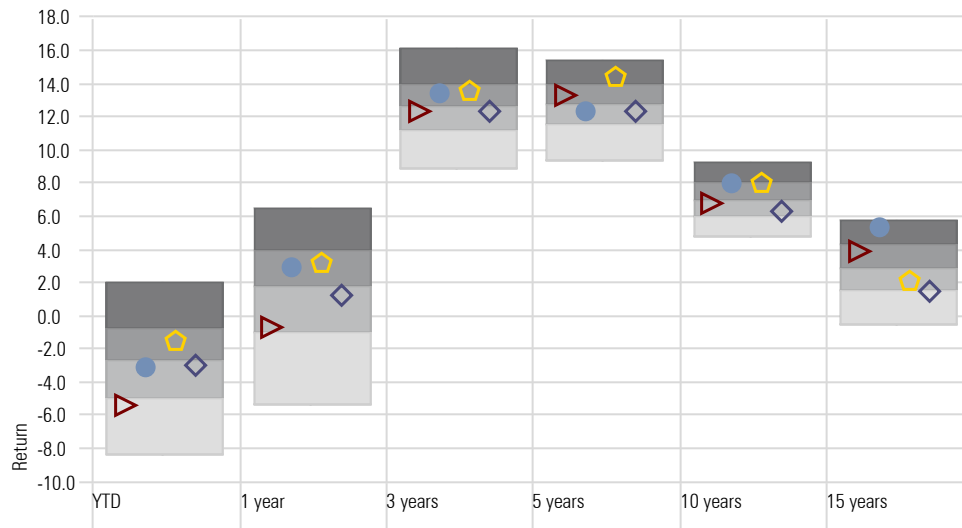


■ Franklin Growth A      ■ Russell 1000 Growth TR USD      ■ S&P 500 TR USD  
■ US OE Large Growth

### Performance Relative to Peer Group

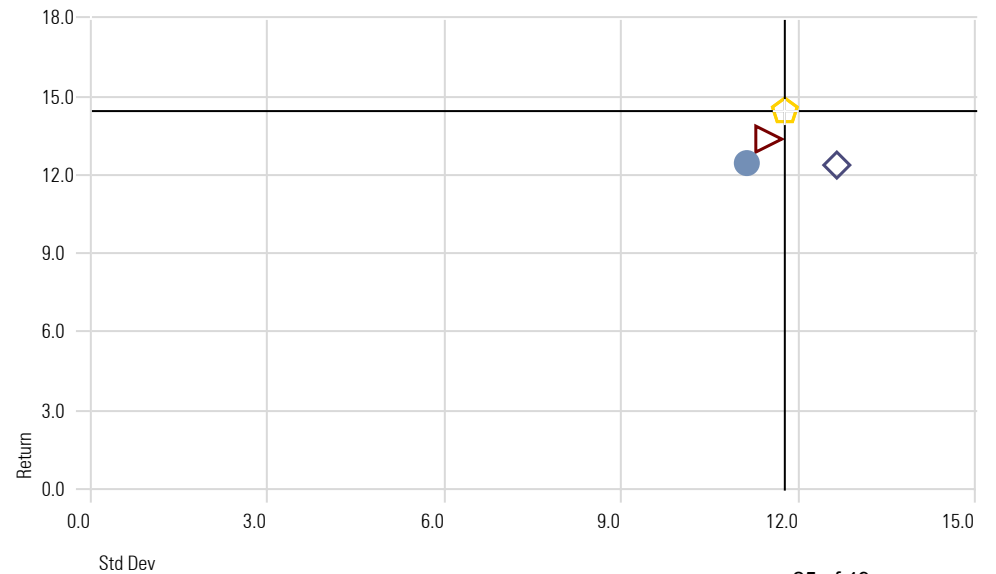
Peer Group (5-95%): Open End Funds - U.S. - Large Growth

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



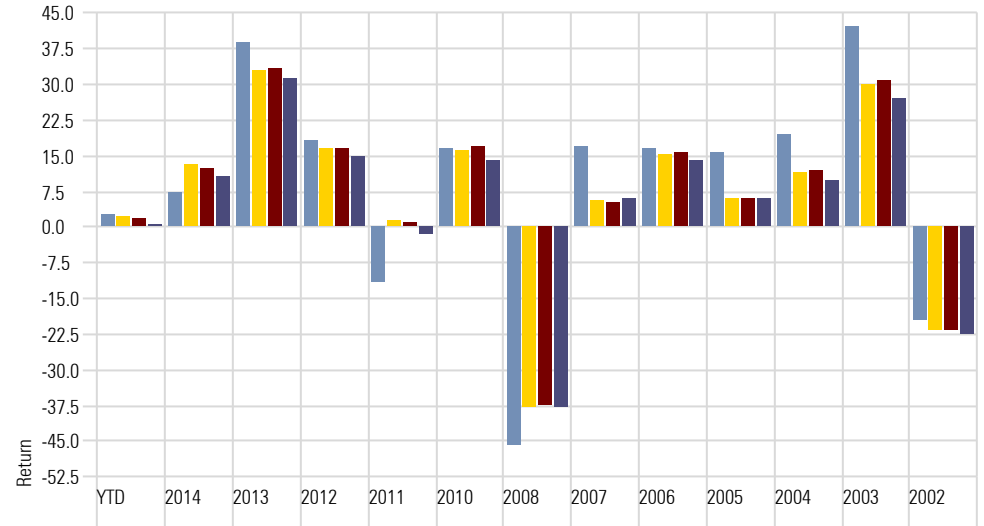
**Returns-Based Style Map**

Time Period: 10/1/2010 to 9/30/2015



● Hartford Capital Appreciation HLS IA    ◊ Russell 1000 TR USD    ▶ Russell 3000 TR USD  
 ◊ US OE Large Blend

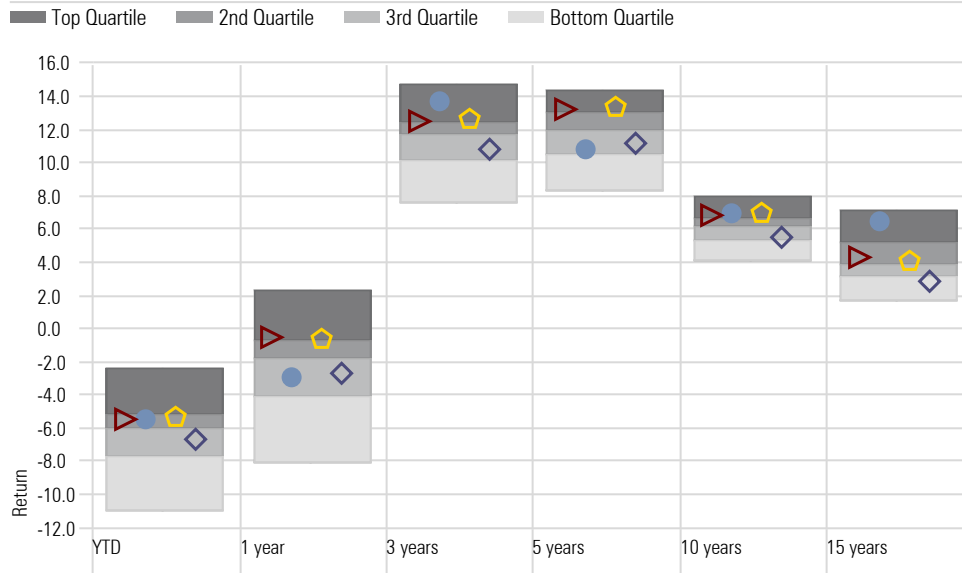
**Returns**



■ Hartford Capital Appreciation HLS IA    ■ Russell 1000 TR USD    ■ Russell 3000 TR USD  
 ■ US OE Large Blend

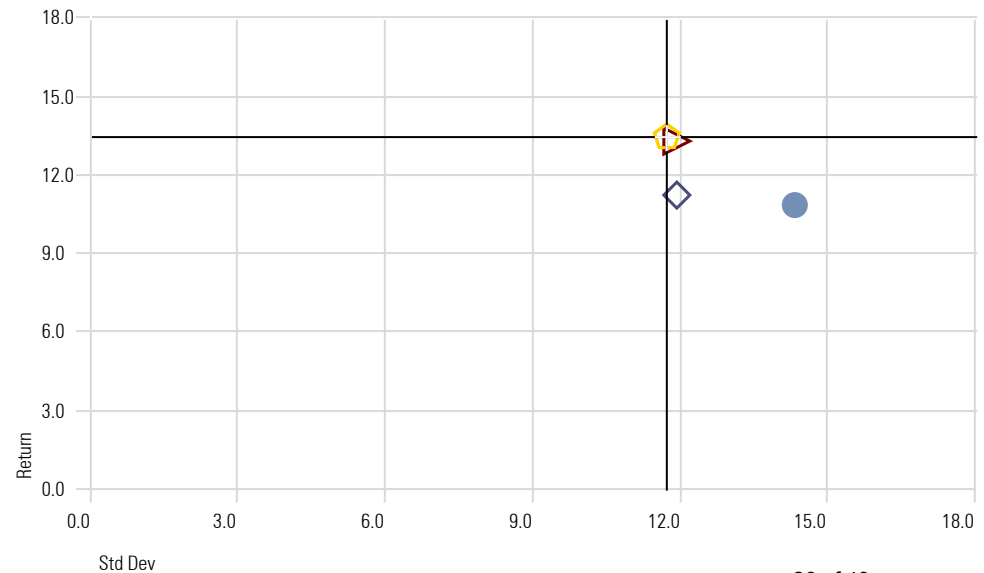
**Performance Relative to Peer Group**

Peer Group (5-95%): Open End Funds - U.S. - Large Blend



**Risk-Reward**

Time Period: 10/1/2010 to 9/30/2015



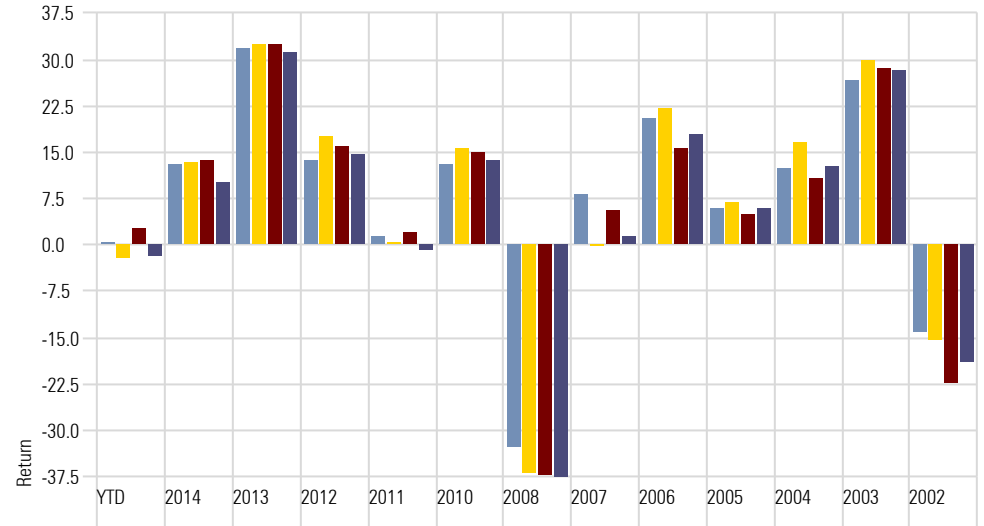
**Returns-Based Style Map**

Time Period: 10/1/2010 to 9/30/2015



● Hartford Dividend and Growth HLS IA    ◊ Russell 1000 Value TR USD    ▶ S&P 500 TR USD  
 ◆ US OE Large Value

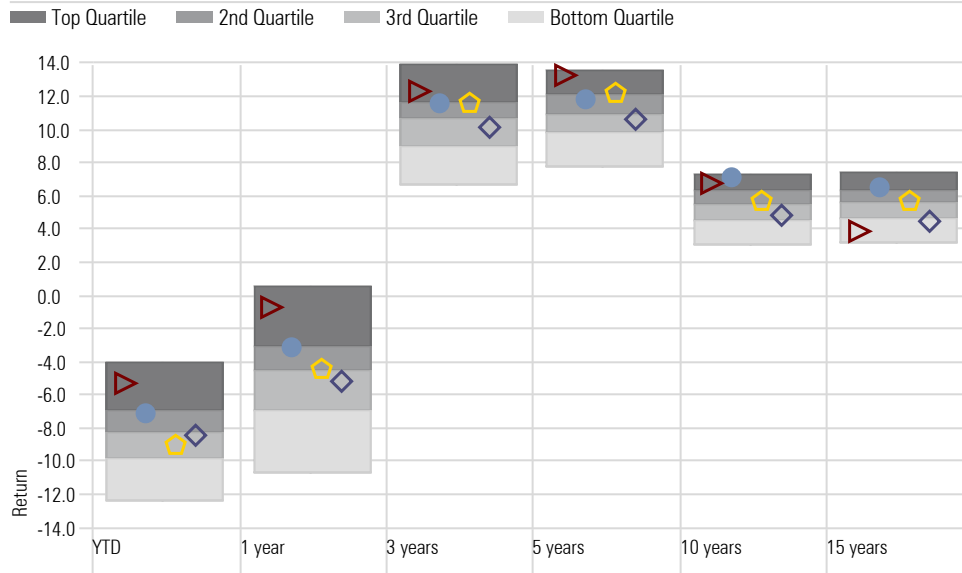
**Returns**



■ Hartford Dividend and Growth HLS IA    ■ Russell 1000 Value TR USD    ■ S&P 500 TR USD  
 ■ US OE Large Value

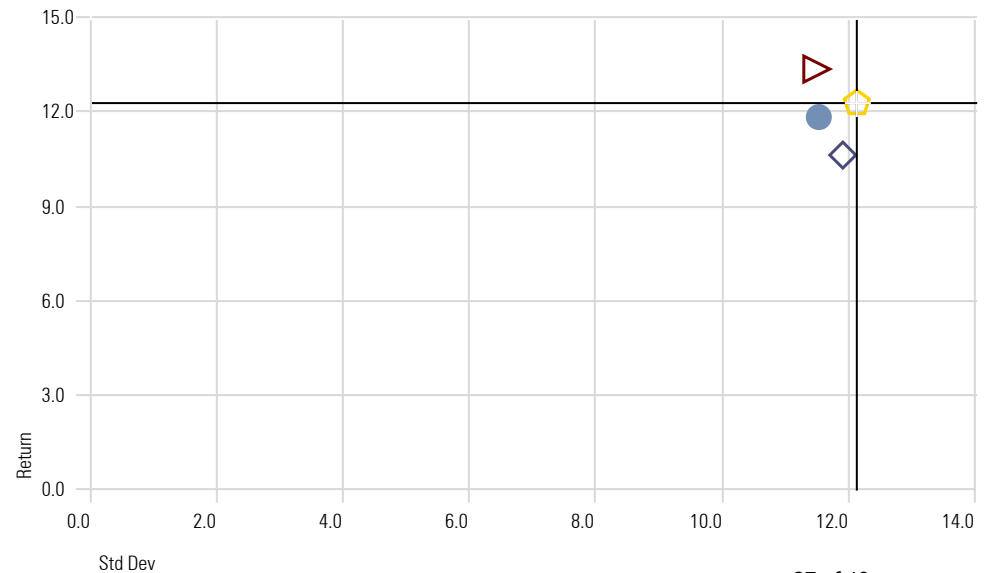
**Performance Relative to Peer Group**

Peer Group (5-95%): Open End Funds - U.S. - Large Value



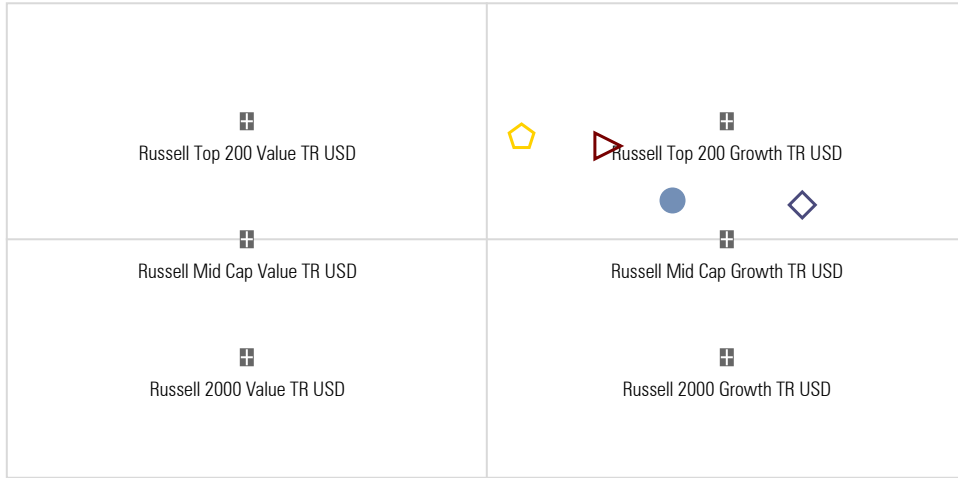
**Risk-Reward**

Time Period: 10/1/2010 to 9/30/2015



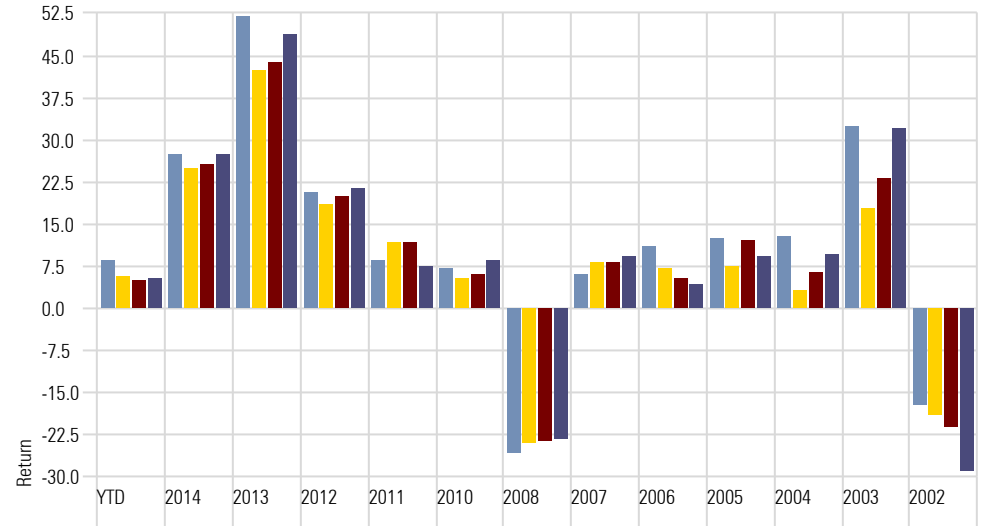
**Returns-Based Style Map**

Time Period: 10/1/2010 to 9/30/2015



● Hartford Healthcare HLS IA    ◊ S&P 1500 Health Care TR    ▶ S&P North American Health Care TR  
◊ US OE Health

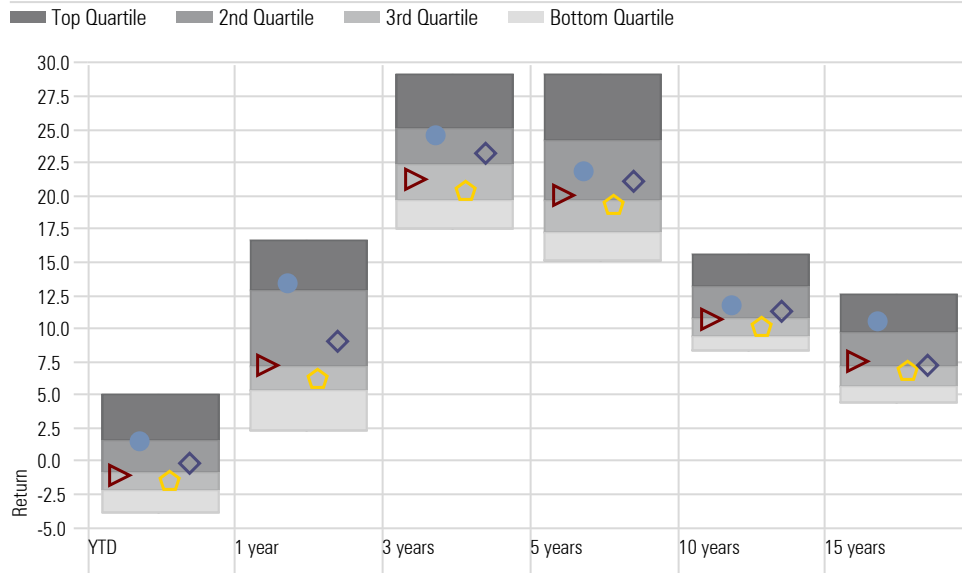
**Returns**



■ Hartford Healthcare HLS IA    ■ S&P 1500 Health Care TR    ■ S&P North American Health Care TR  
■ US OE Health

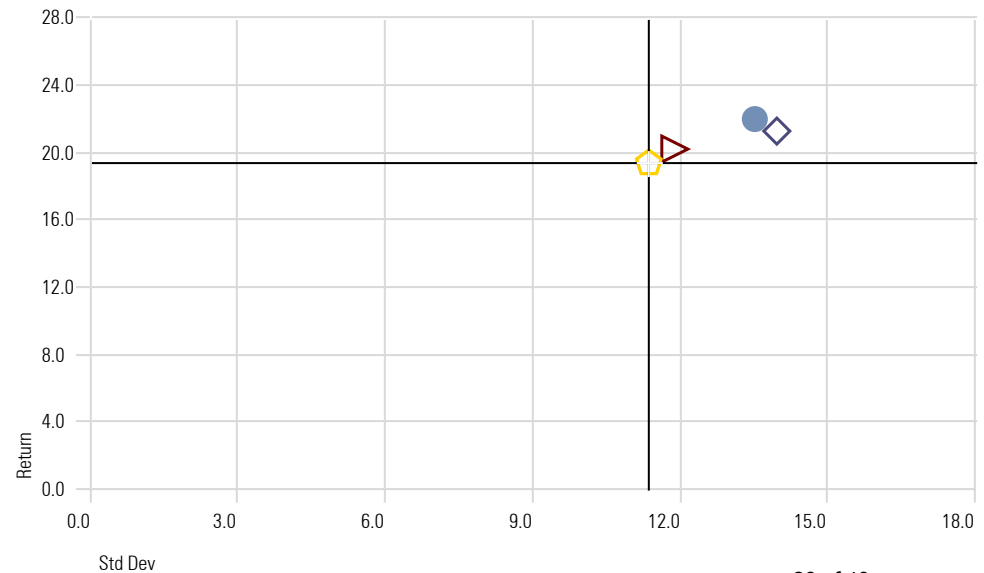
**Performance Relative to Peer Group**

Peer Group (5-95%): Open End Funds - U.S. - Health



**Risk-Reward**

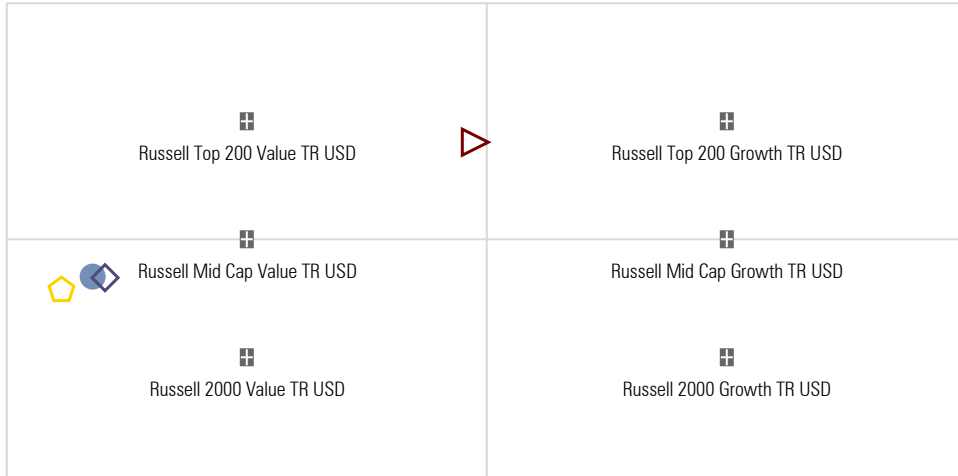
Time Period: 10/1/2010 to 9/30/2015





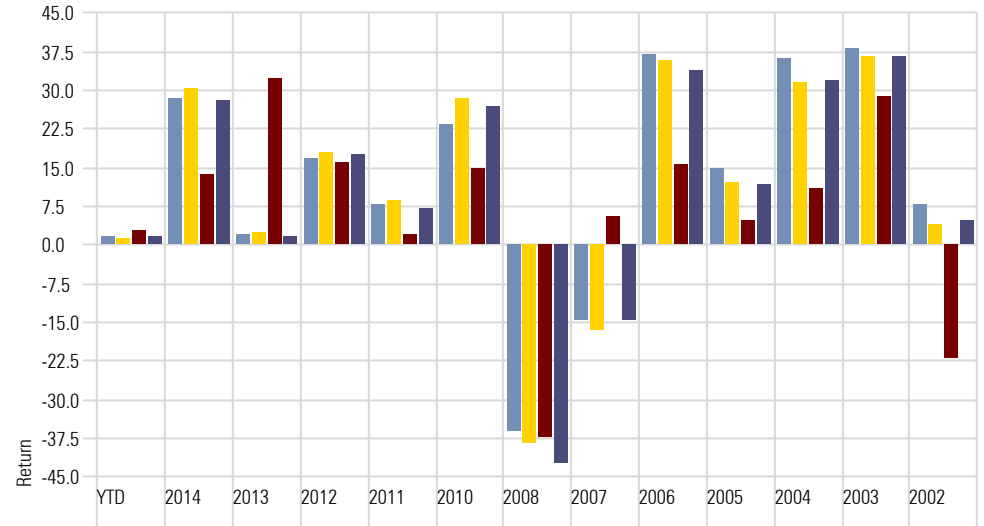
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Invesco Real Estate R5    ◐ S&P United States REIT TR USD    ▶ S&P 500 TR USD  
◊ US OE Real Estate

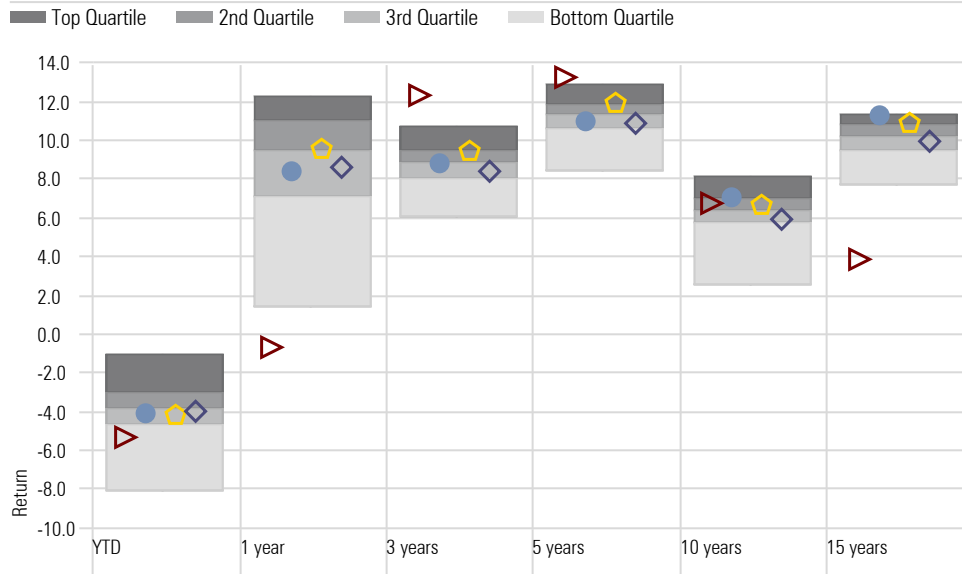
### Returns



■ Invesco Real Estate R5    ■ S&P United States REIT TR USD    ■ S&P 500 TR USD  
■ US OE Real Estate

### Performance Relative to Peer Group

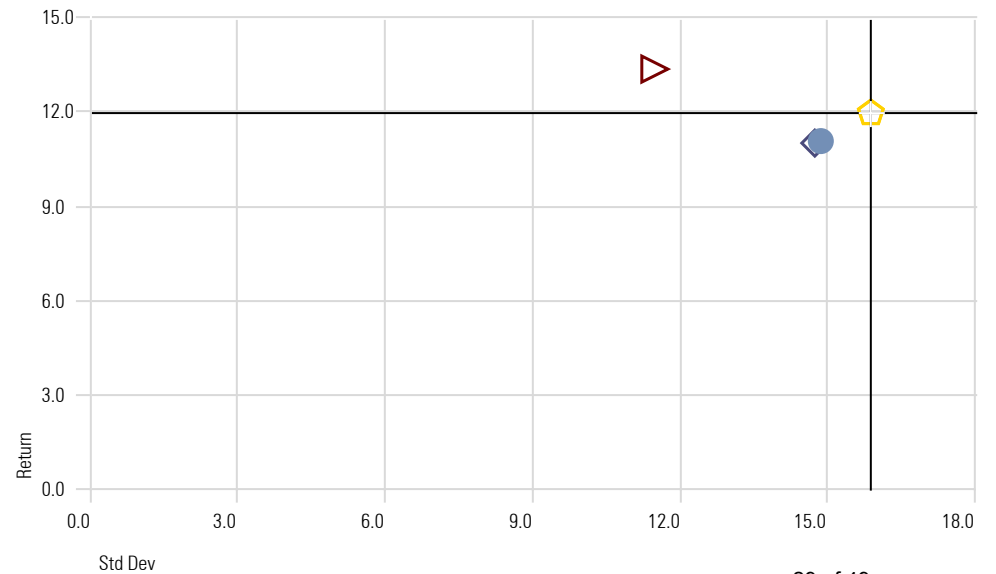
Peer Group (5-95%): Open End Funds - U.S. - Real Estate



Source: Morningstar Direct

### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# Invesco Small Cap Discovery Y

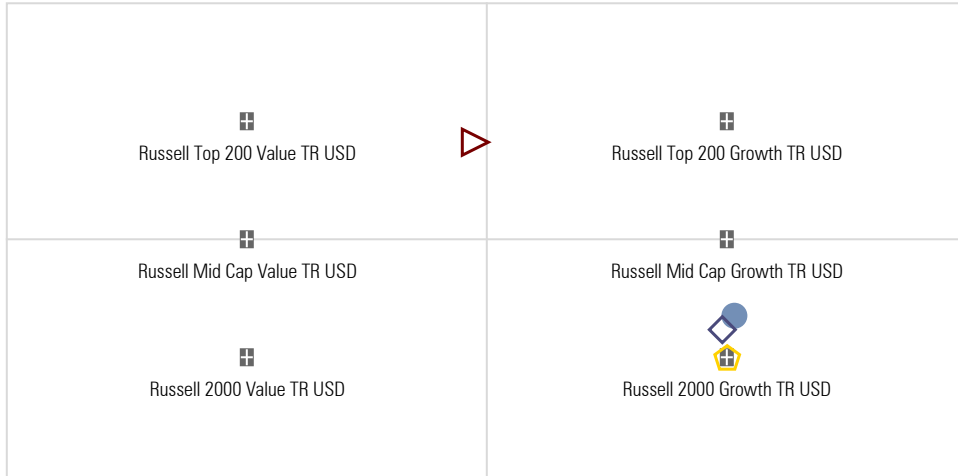
VISCX

**Benchmark 1:** Russell 2000 Growth TR USD  
**Benchmark 2:** S&P 500 TR USD  
**Category:** US OE Small Growth

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

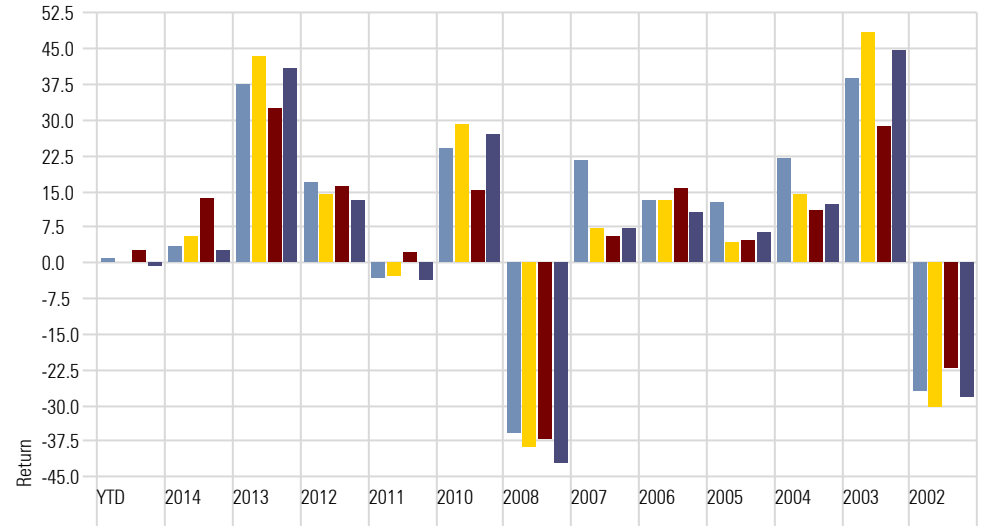
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Invesco Small Cap Discovery Y    ◊ Russell 2000 Growth TR USD    ▶ S&P 500 TR USD  
 ◆ US OE Small Growth

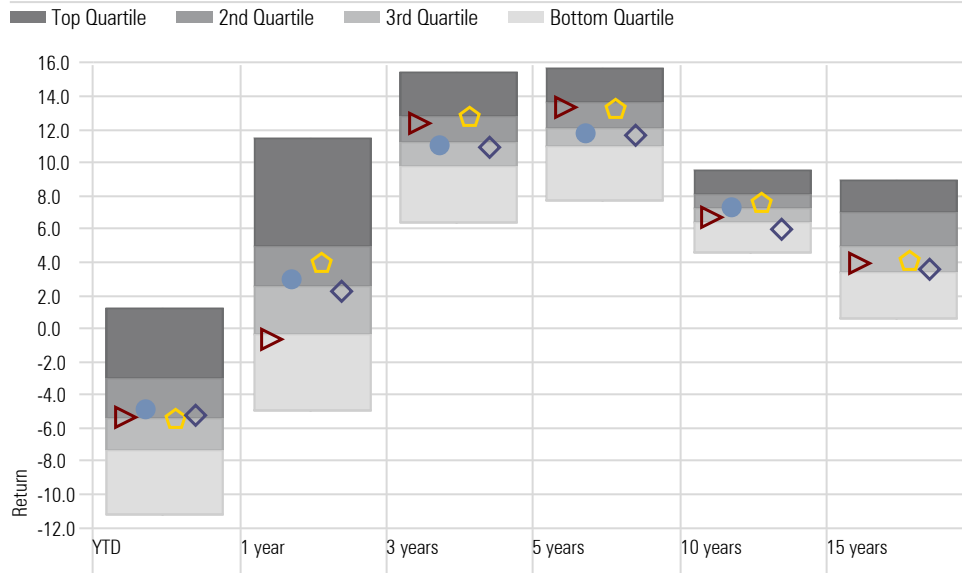
## Returns



■ Invesco Small Cap Discovery Y    ■ Russell 2000 Growth TR USD    ■ S&P 500 TR USD  
 ■ US OE Small Growth

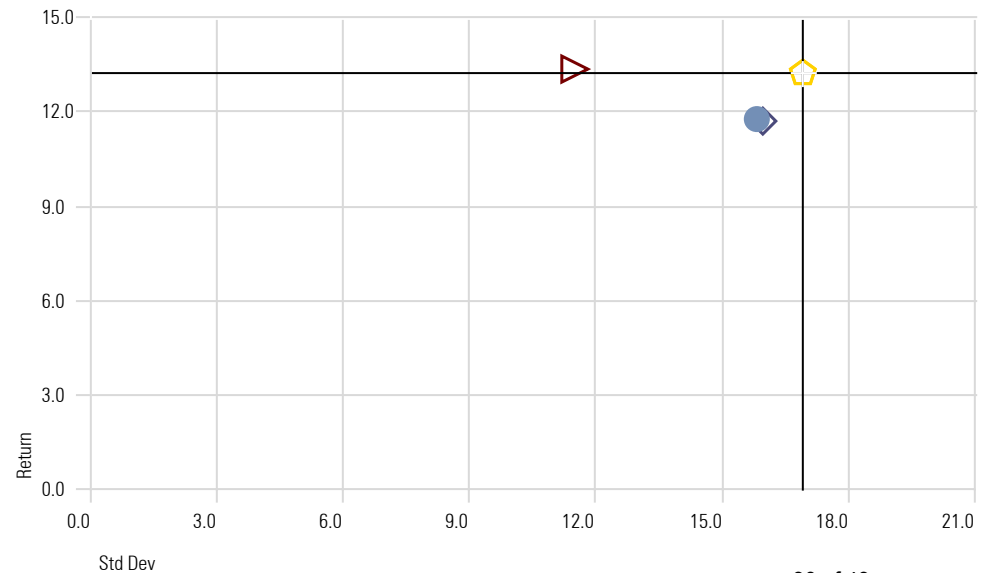
## Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Small Growth



## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



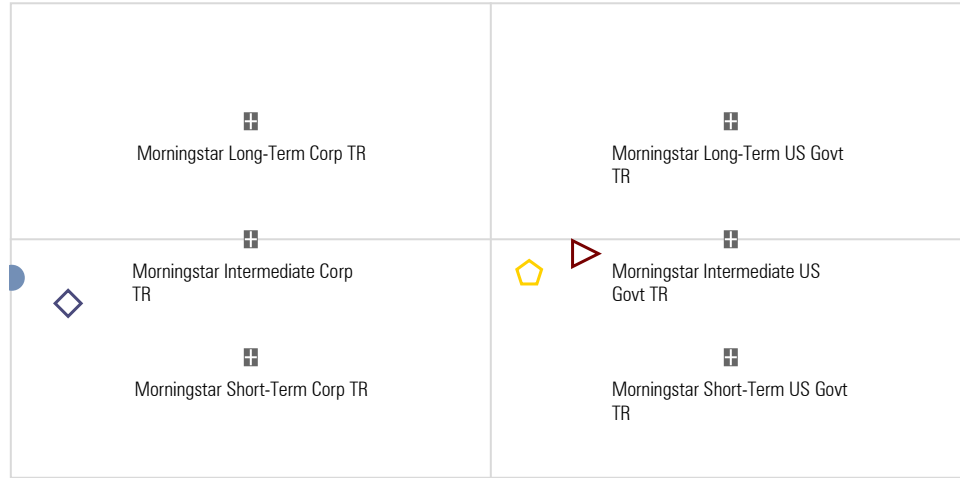
# Loomis Sayles Bond Instl LSBDX

**Benchmark 1:** Barclays US Universal TR USD  
**Benchmark 2:** Barclays US Govt/Credit TR USD  
**Category:** US OE Multisector Bond

**Return Date:** 9/30/2015

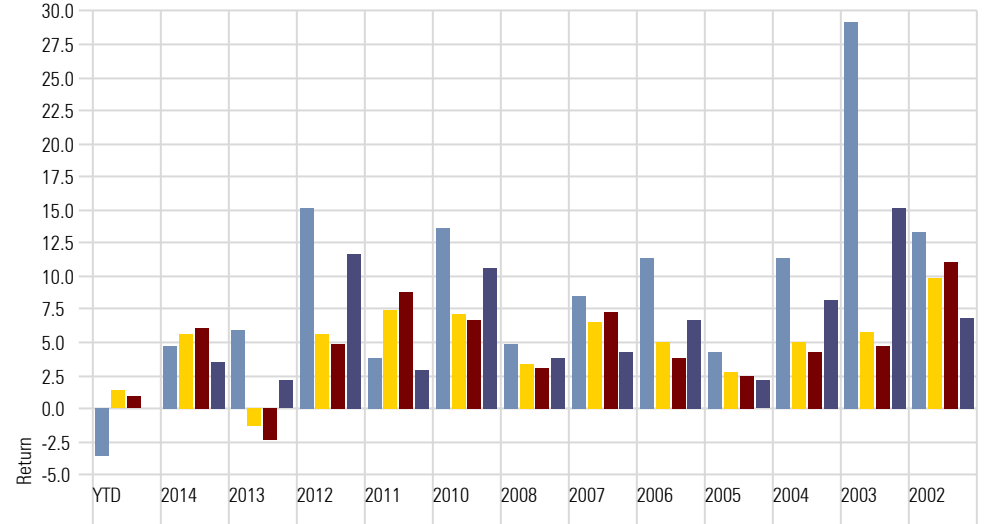
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Loomis Sayles Bond Instl    ● Barclays US Universal TR USD    ▲ Barclays US Govt/Credit TR USD  
 ◆ US OE Multisector Bond

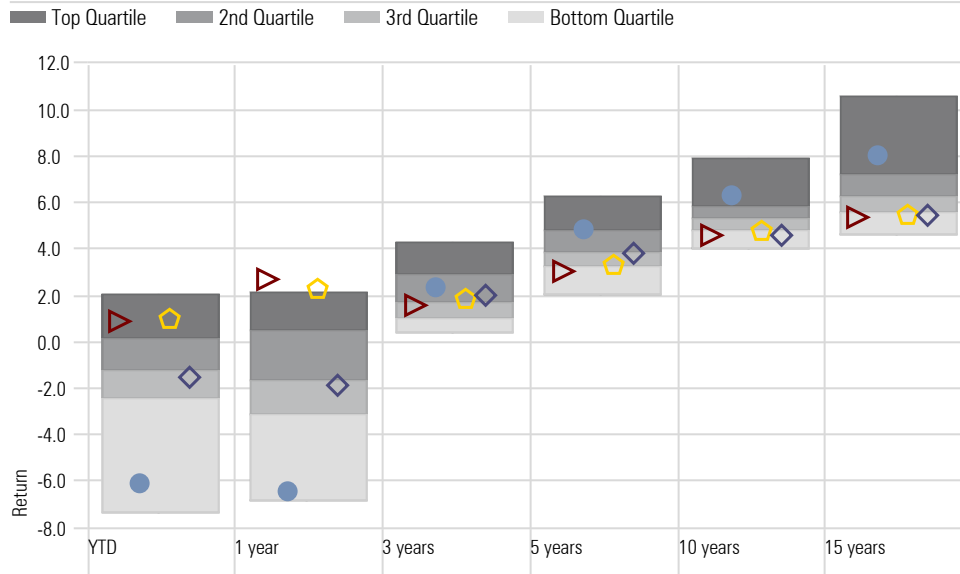
## Returns



■ Loomis Sayles Bond Instl    ■ Barclays US Universal TR USD    ■ Barclays US Govt/Credit TR USD  
 ■ US OE Multisector Bond

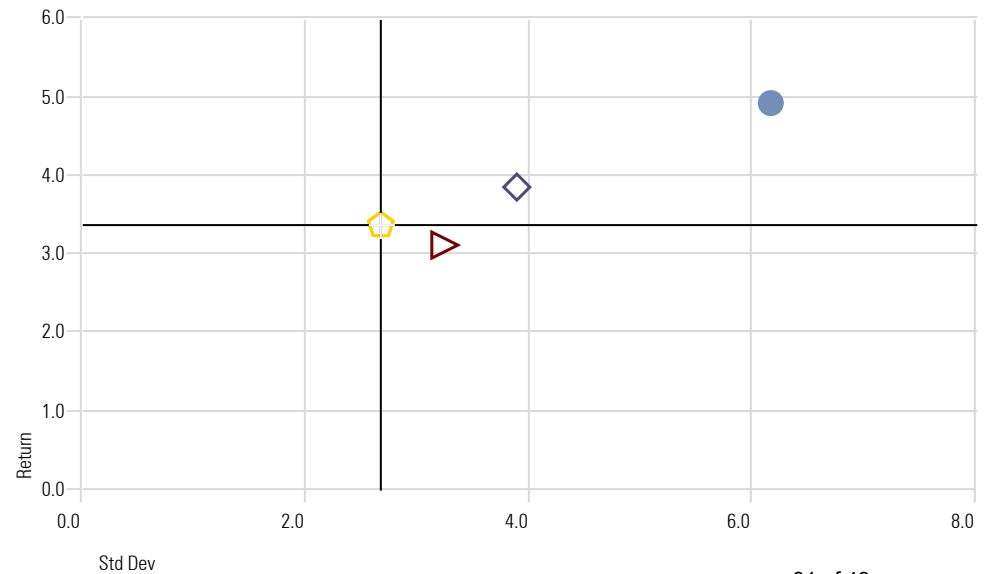
## Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Multisector Bond



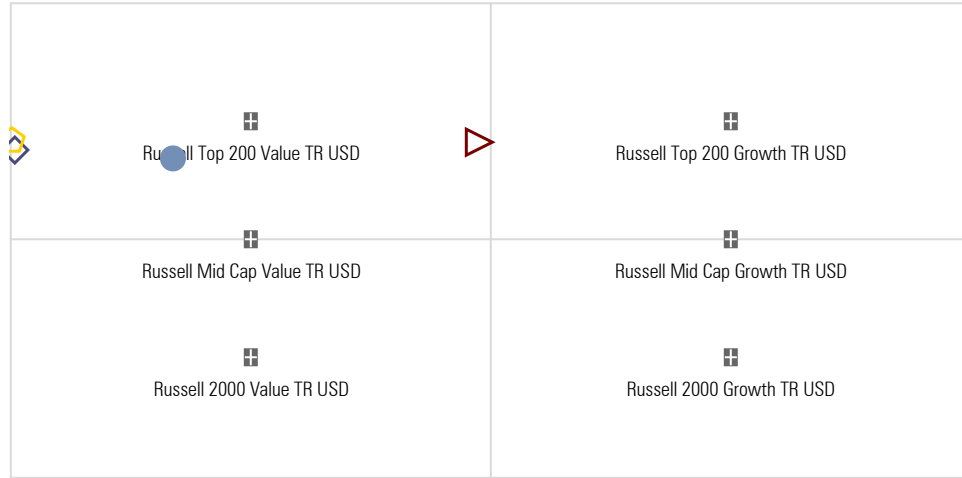
## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



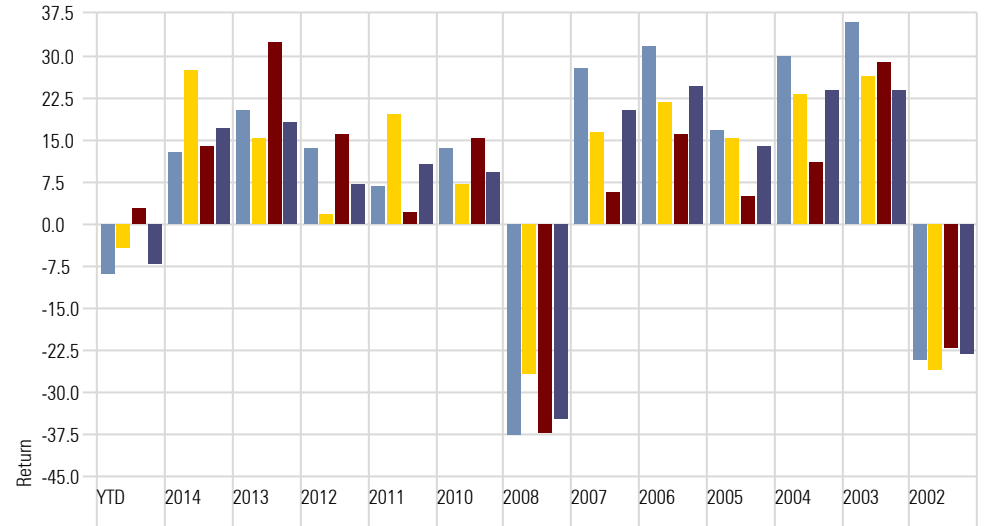
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● MFS Utilities A      ◊ S&P 1500 Utilities TR      ▶ S&P 500 TR USD  
◊ US OE Utilities

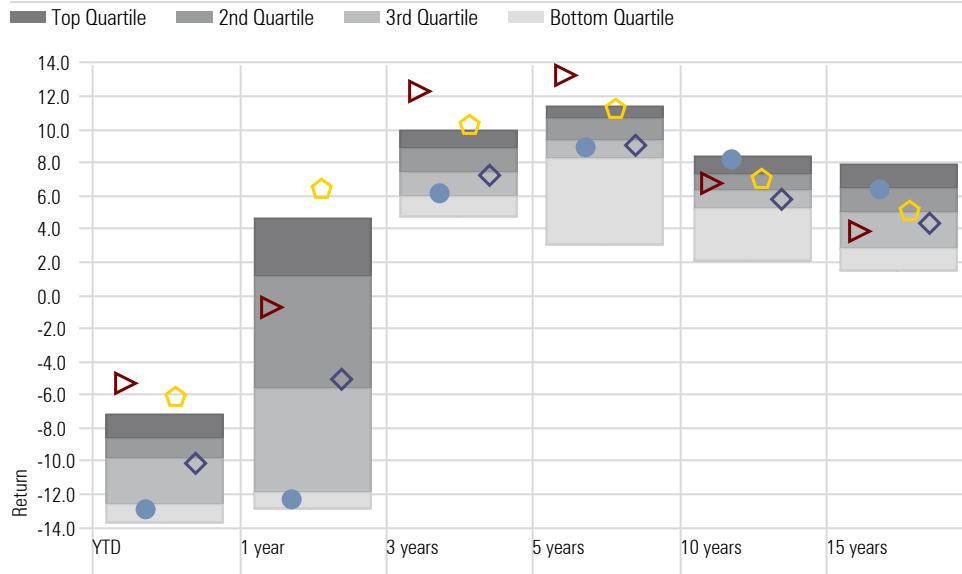
### Returns



■ MFS Utilities A      ■ S&P 1500 Utilities TR      ■ S&P 500 TR USD  
■ US OE Utilities

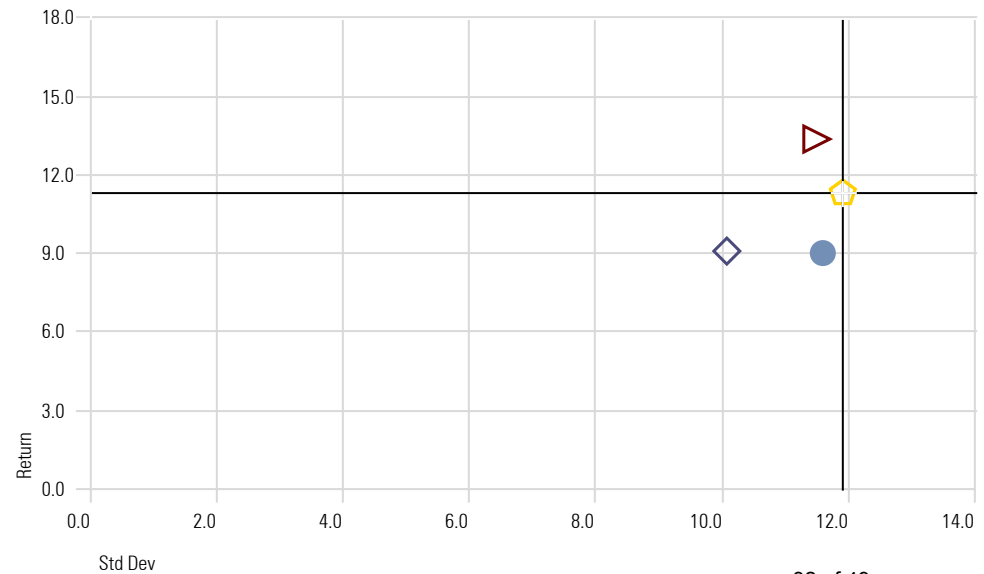
### Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Utilities



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# Oakmark Equity & Income I

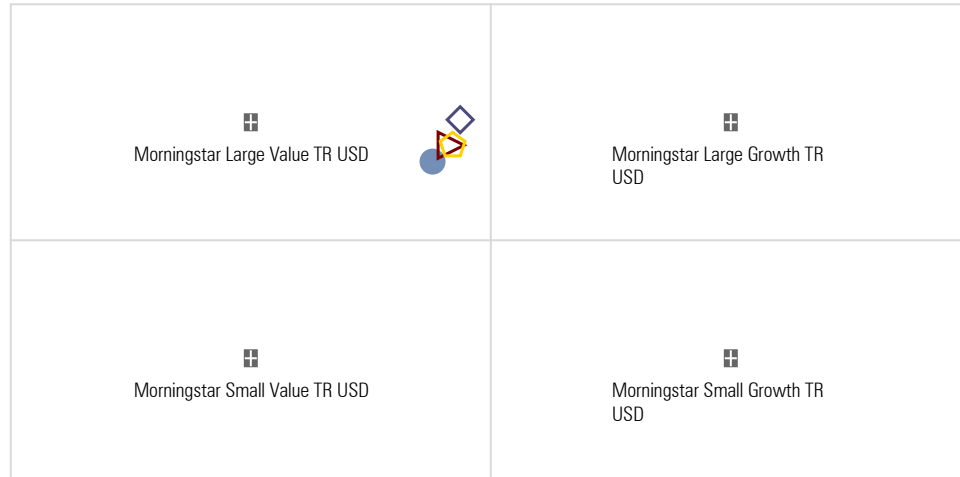
## OAKBX

**Benchmark 1:** Morningstar Mod Agg Tgt Risk TR USD  
**Benchmark 2:** S&P 500 TR USD  
**Category:** US OE Moderate Allocation

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

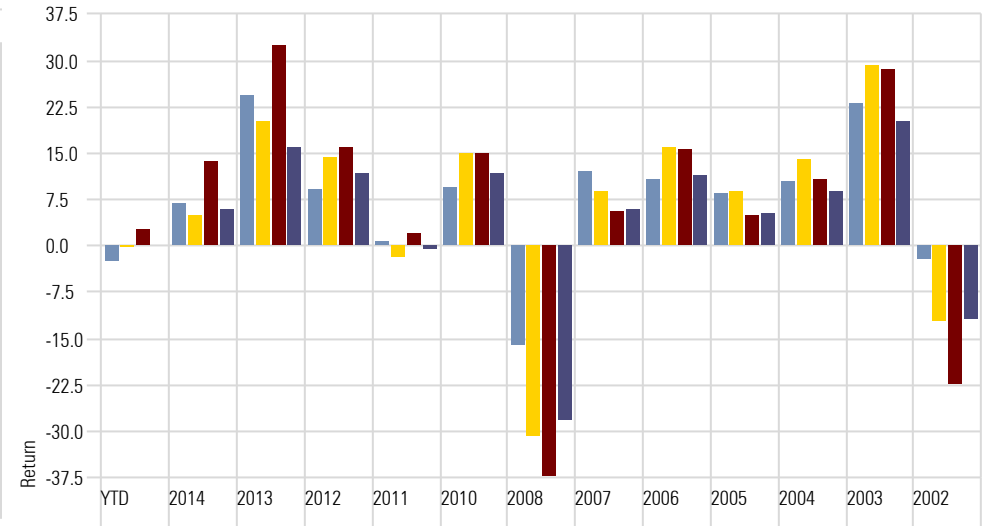
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Oakmark Equity & Income I  
 ◆ US OE Moderate Allocation  
 ◊ Morningstar Mod Agg Tgt Risk TR USD  
 ▶ S&P 500 TR USD

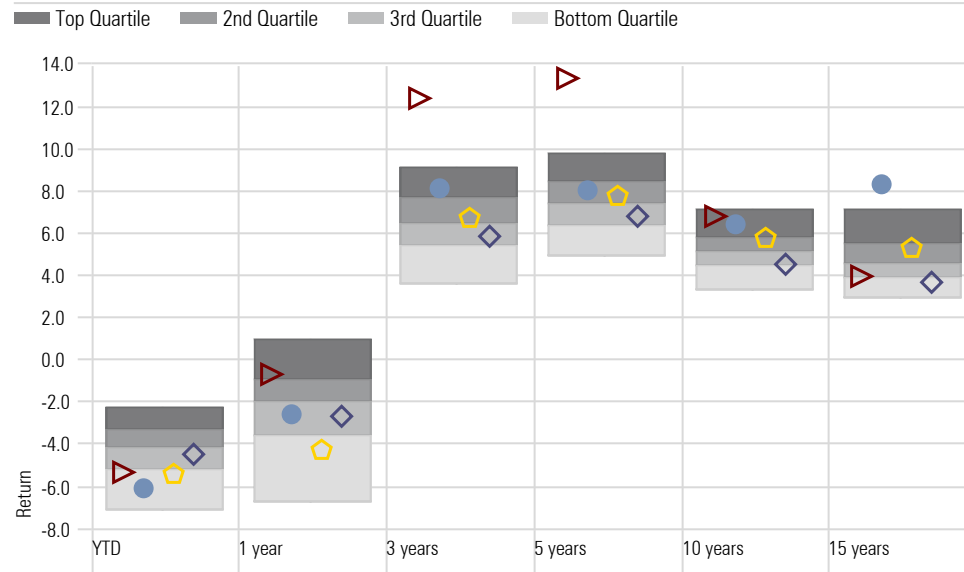
### Returns



■ Oakmark Equity & Income I  
 ■ US OE Moderate Allocation  
 ■ Morningstar Mod Agg Tgt Risk TR USD  
 ■ S&P 500 TR USD

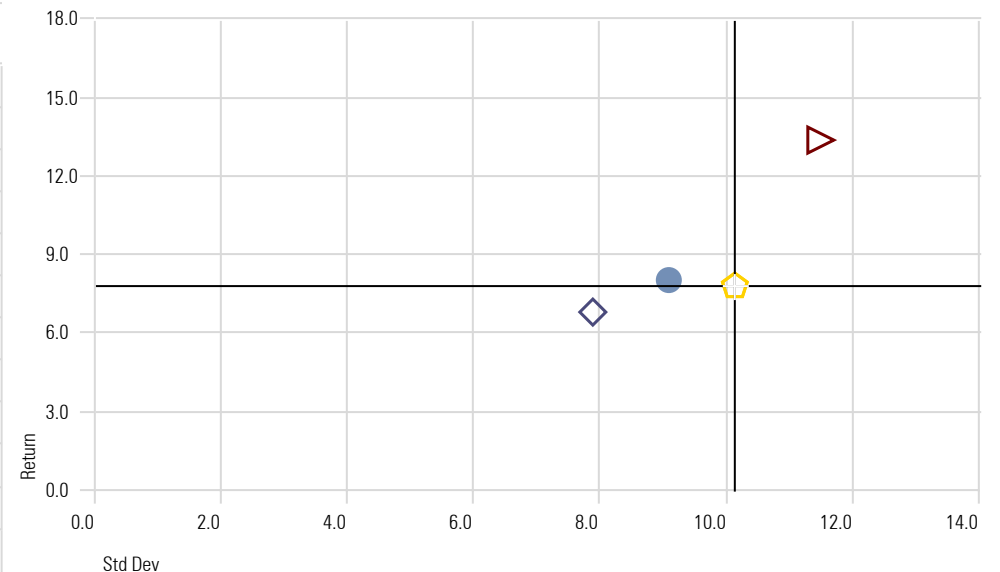
### Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Moderate Allocation



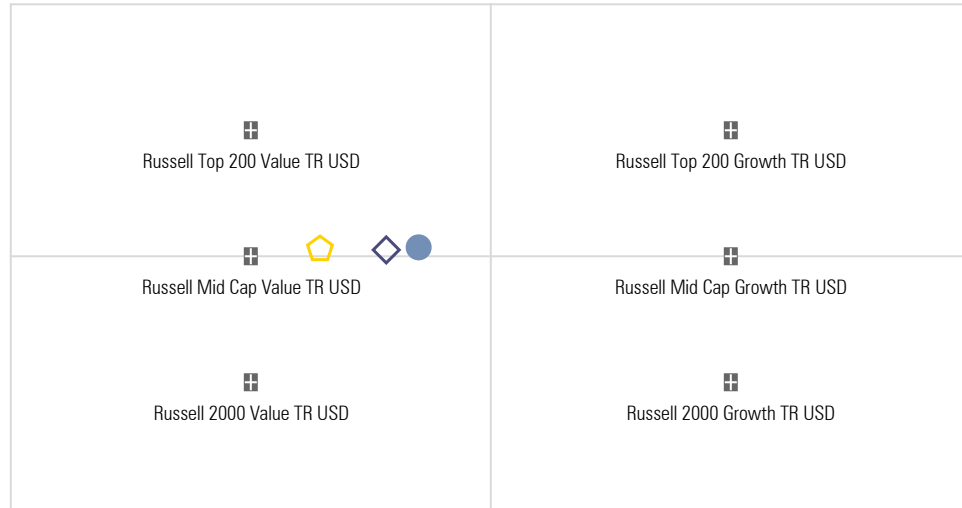
### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



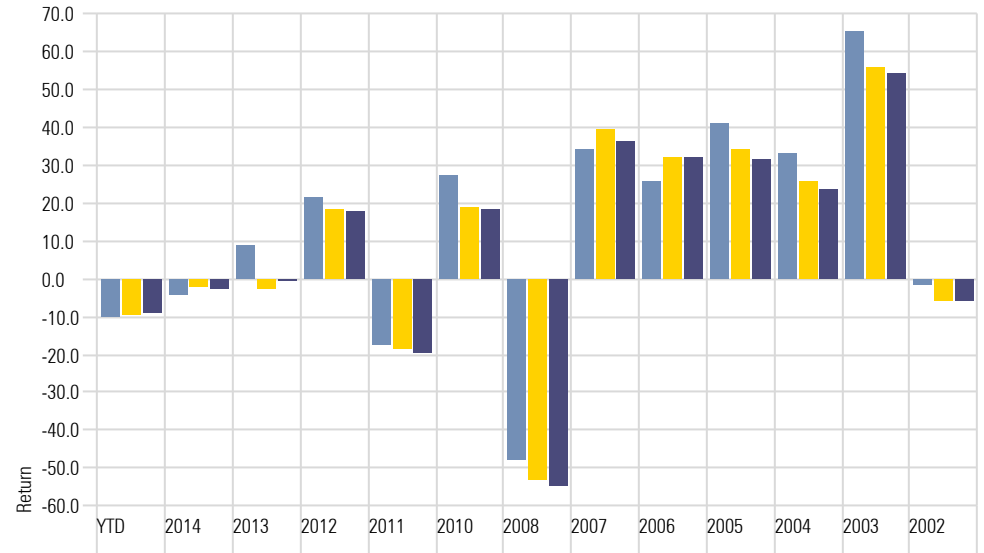
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Oppenheimer Developing Markets Y    ◊ MSCI EM NR USD    ◆ US OE Diversified Emerging Mkts

### Returns

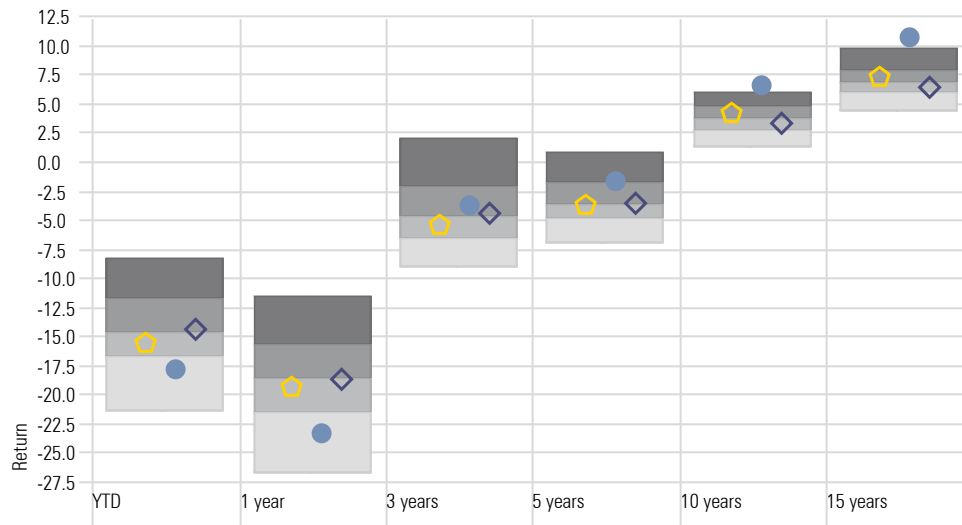


■ Oppenheimer Developing Markets Y    ■ MSCI EM NR USD    ■ US OE Diversified Emerging Mkts

### Performance Relative to Peer Group

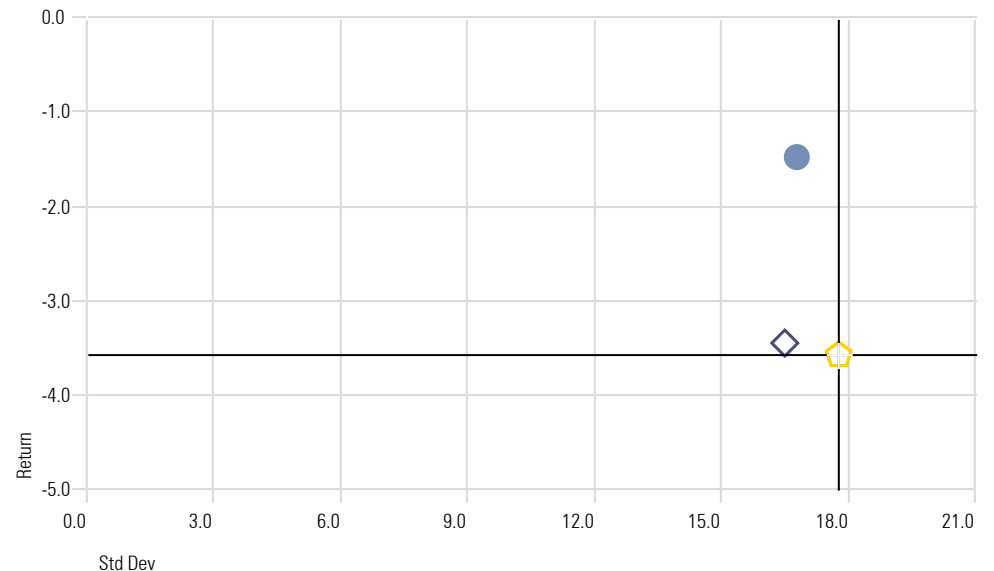
Peer Group (5-95%): Open End Funds - U.S. - Diversified Emerging Mkts

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# Oppenheimer International Bond Y OIBYX

**Benchmark 1:** Citi WGBI NonUSD USD  
**Benchmark 2:** Citi WGBI NonUSD USD  
**Category:** US OE World Bond

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

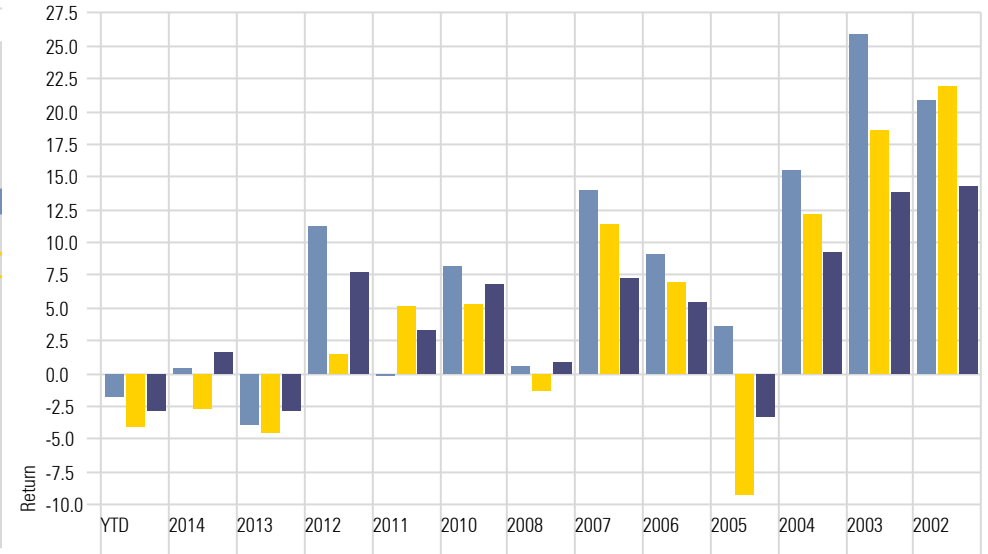
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Oppenheimer International Bond Y    ◆ Citi WGBI NonUSD USD    ◆ US OE World Bond

## Returns

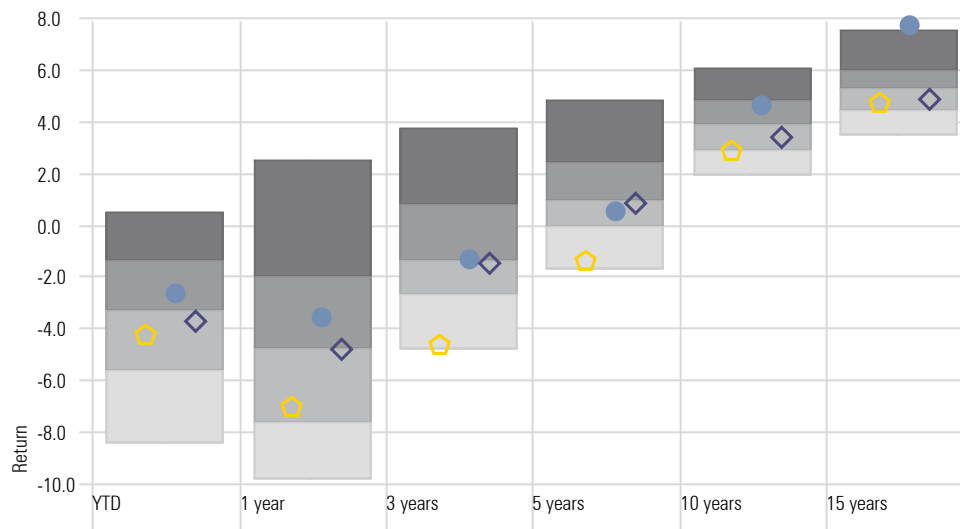


■ Oppenheimer International Bond Y    ■ Citi WGBI NonUSD USD    ■ US OE World Bond

## Performance Relative to Peer Group

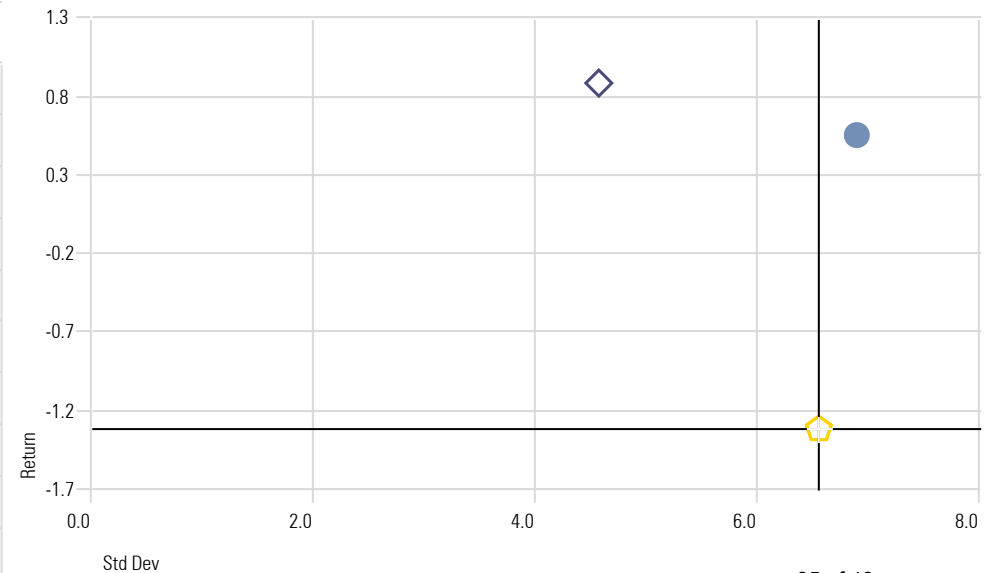
Peer Group (5-95%): Open End Funds - U.S. - World Bond

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



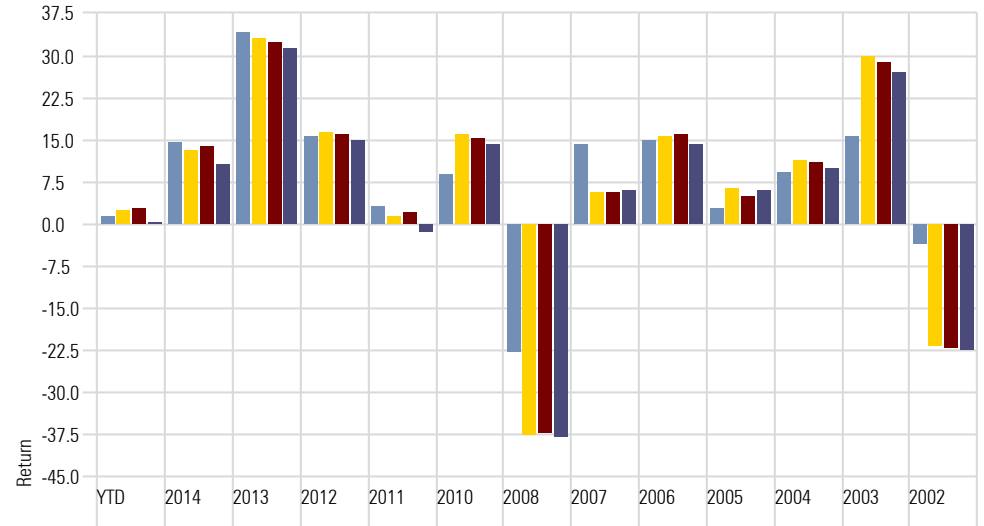
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Parnassus Core Equity Investor    ◊ Russell 1000 TR USD    ▶ S&P 500 TR USD  
◆ US OE Large Blend

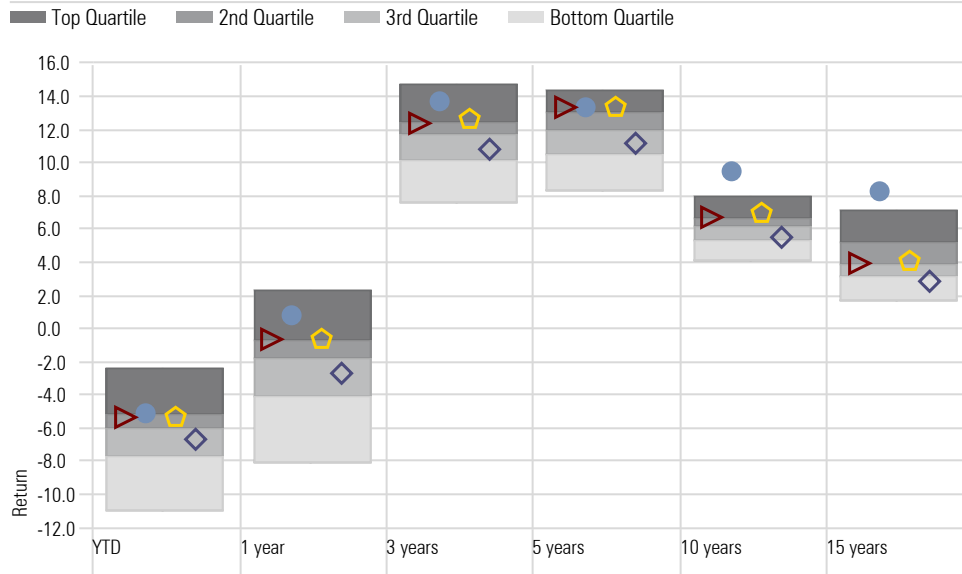
### Returns



■ Parnassus Core Equity Investor    ■ Russell 1000 TR USD    ■ S&P 500 TR USD  
■ US OE Large Blend

### Performance Relative to Peer Group

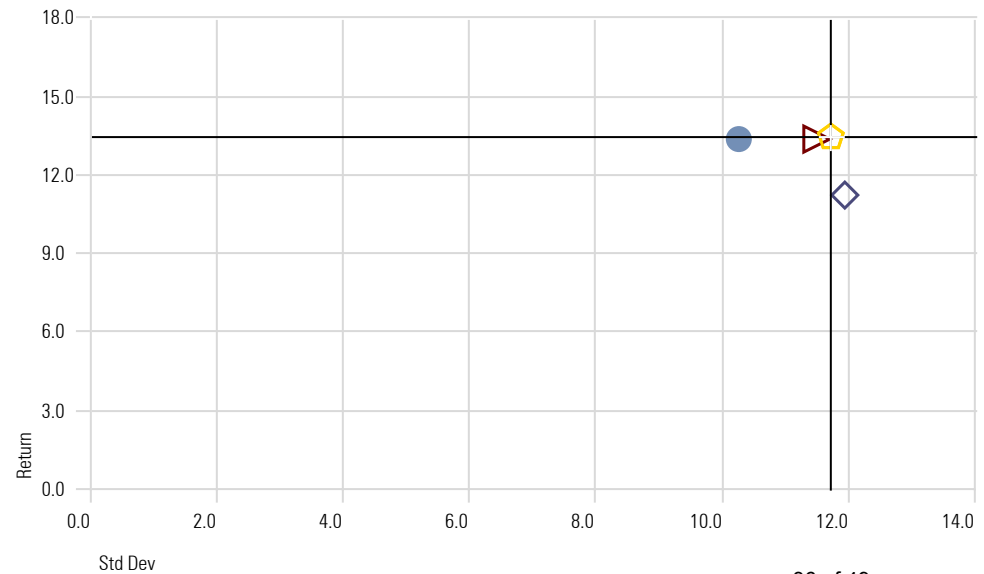
Peer Group (5-95%): Open End Funds - U.S. - Large Blend



Source: Morningstar Direct

### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015





# PIMCO Real Return A

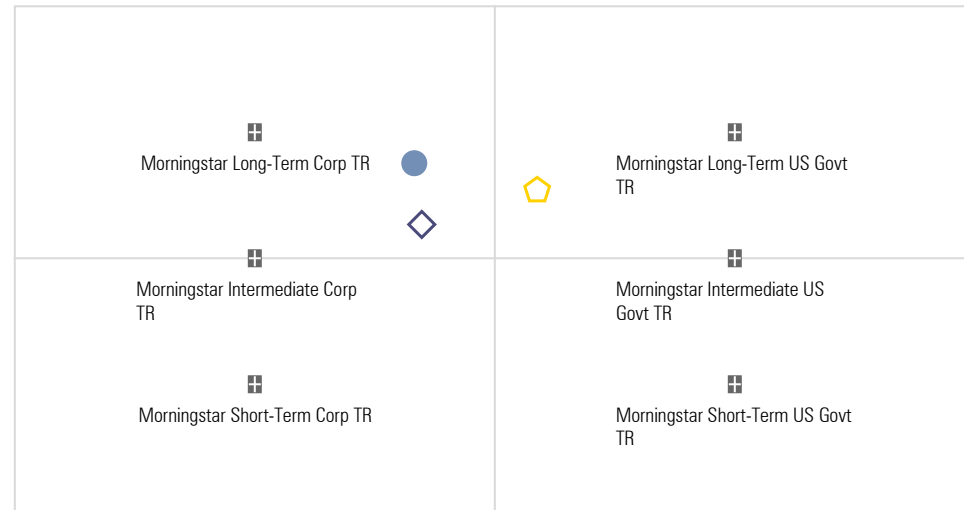
## PRTNX

**Benchmark 1:** Barclays US Treasury US TIPS TR USD  
**Benchmark 2:** Barclays US Treasury US TIPS TR USD  
**Category:** US OE Inflation-Protected Bond

**Return Date:** 9/30/2015

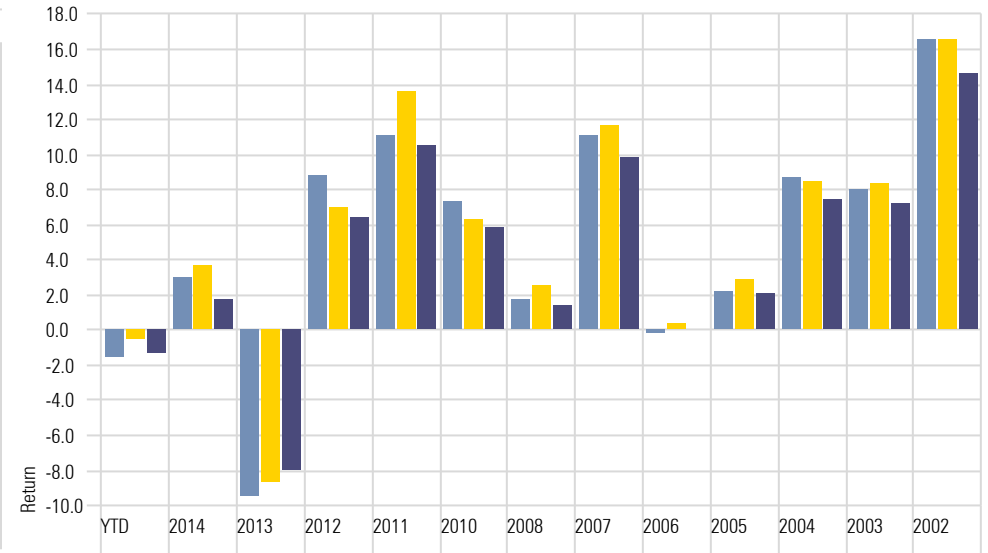
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● PIMCO Real Return A    ⬠ Barclays US Treasury US TIPS TR USD    ◆ US OE Inflation-Protected Bond

### Returns

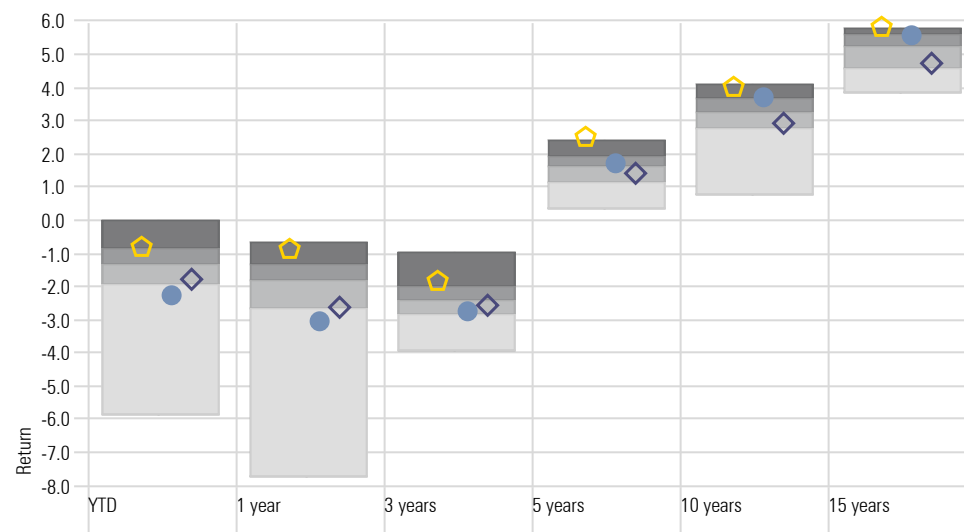


■ PIMCO Real Return A    ■ Barclays US Treasury US TIPS TR USD    ■ US OE Inflation-Protected Bond

### Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Inflation-Protected Bond

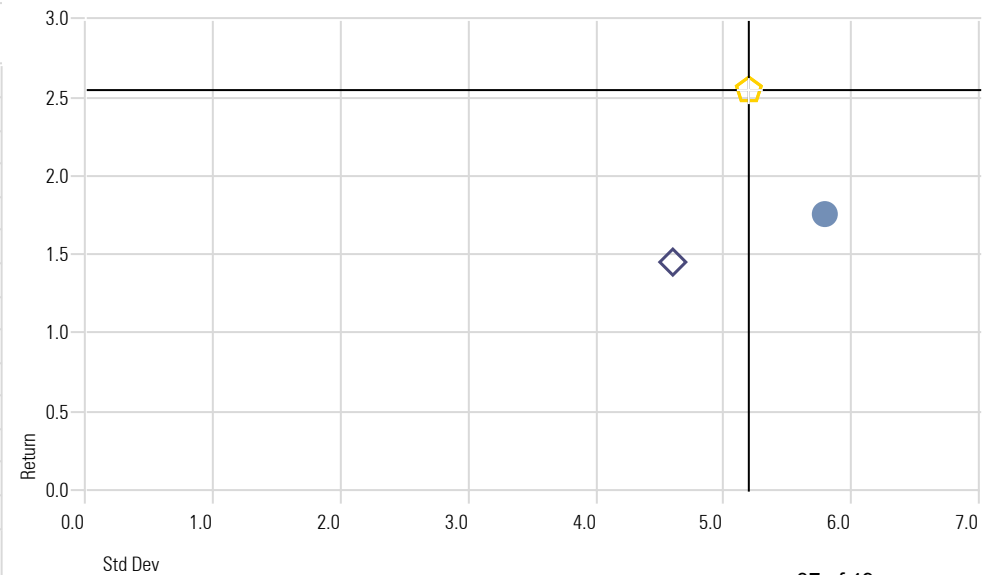
■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



Source: Morningstar Direct

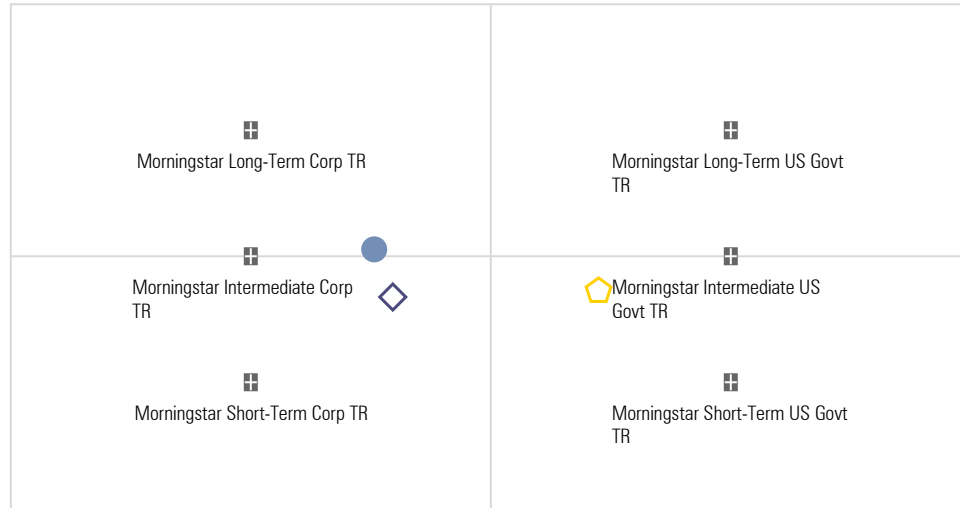
### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



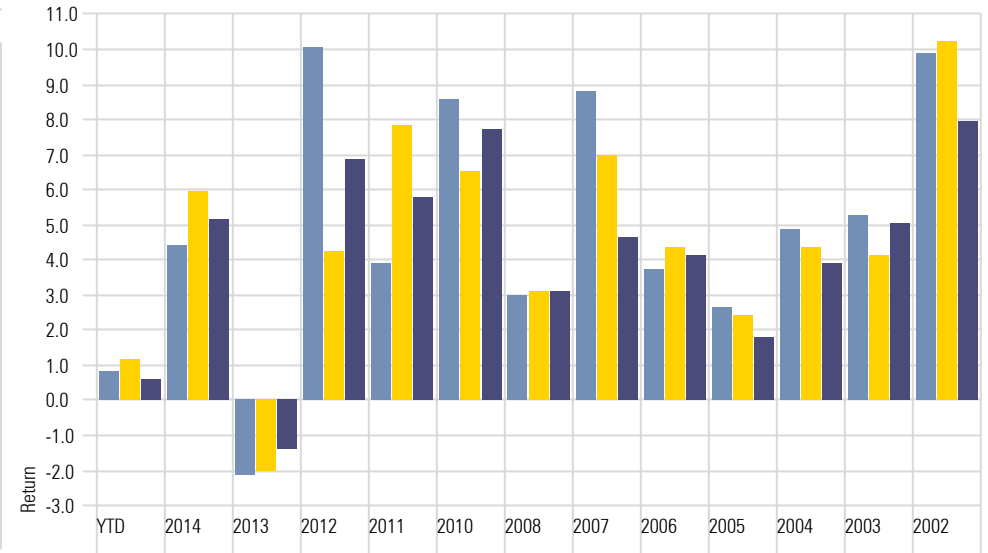
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● PIMCO Total Return Admin    ◇ Barclays US Agg Bond TR USD    ◇ US OE Intermediate-Term Bond

### Returns

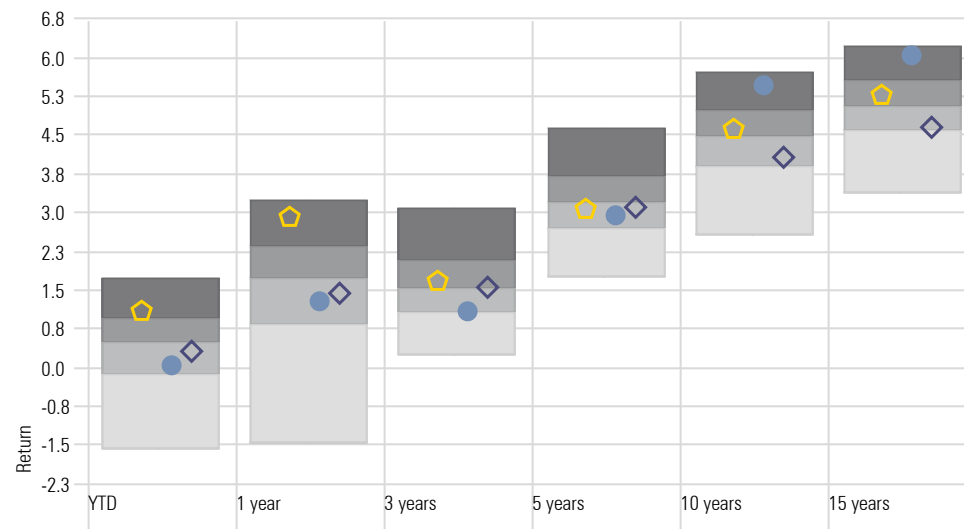


■ PIMCO Total Return Admin    ■ Barclays US Agg Bond TR USD    ■ US OE Intermediate-Term Bond

### Performance Relative to Peer Group

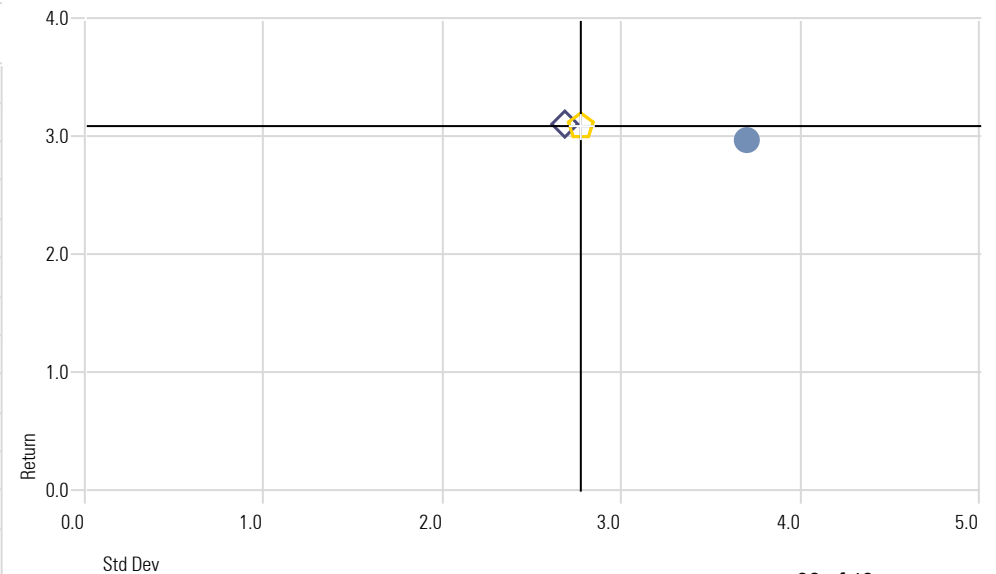
Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# Prudential Jennison Mid Cap Growth A PEEAX

**Benchmark 1:** Russell Mid Cap Growth TR USD  
**Benchmark 2:** Russell Mid Cap Growth TR USD  
**Category:** US OE Mid-Cap Growth

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

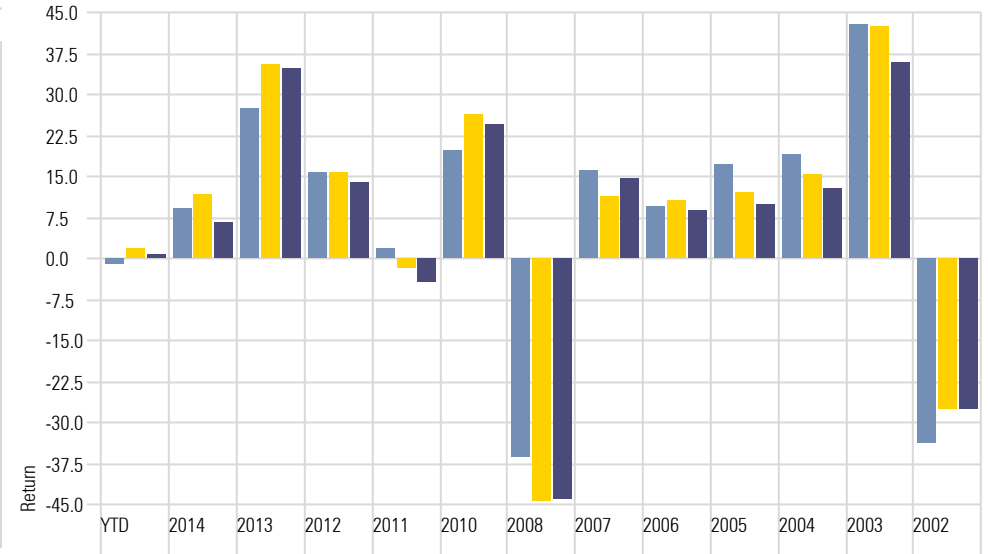
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Prudential Jennison Mid Cap Growth A    ◊ Russell Mid Cap Growth TR USD    ◆ US OE Mid-Cap Growth

## Returns

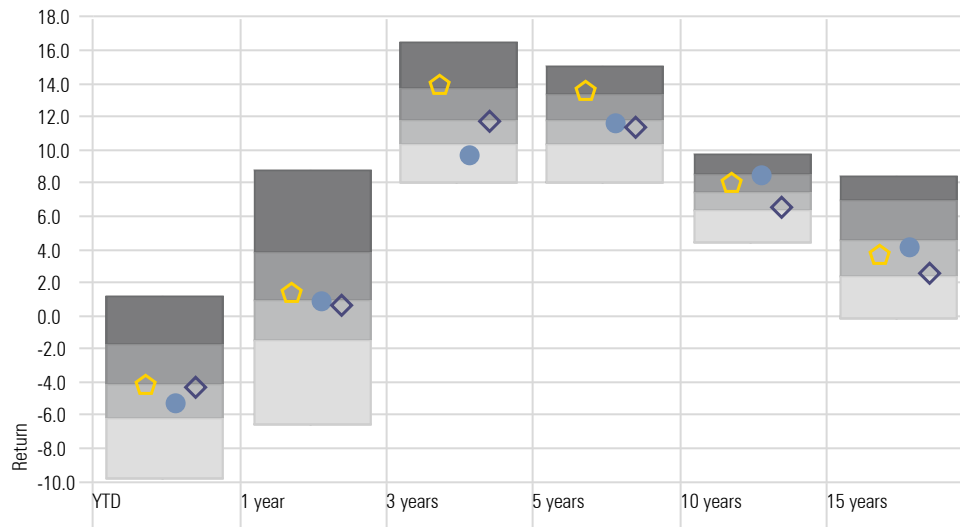


■ Prudential Jennison Mid Cap Growth A    ■ Russell Mid Cap Growth TR USD    ■ US OE Mid-Cap Growth

## Performance Relative to Peer Group

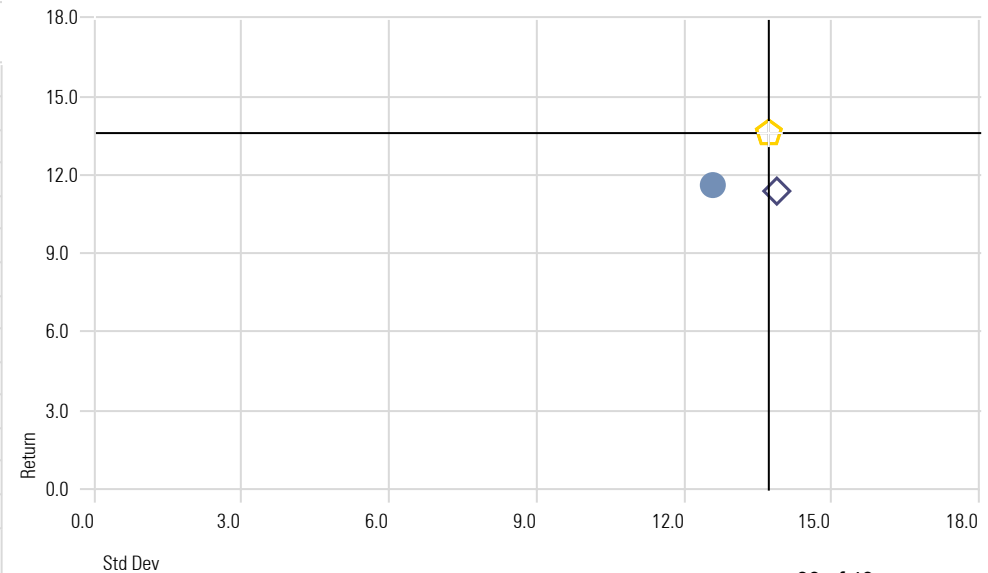
Peer Group (5-95%): Open End Funds - U.S. - Mid-Cap Growth

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



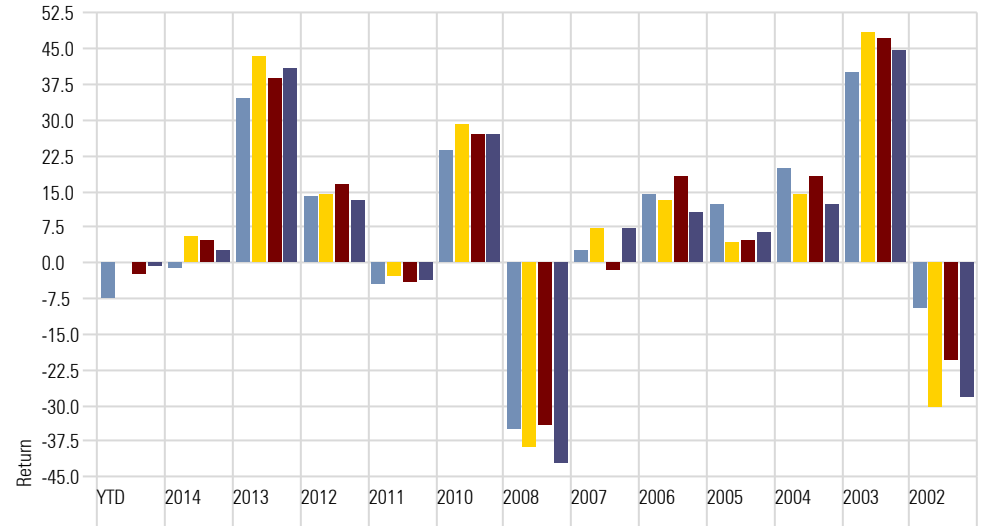
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Royce Pennsylvania Mutual Svc    ◊ Russell 2000 Growth TR USD    ▶ Russell 2000 TR USD  
◆ US OE Small Growth

### Returns

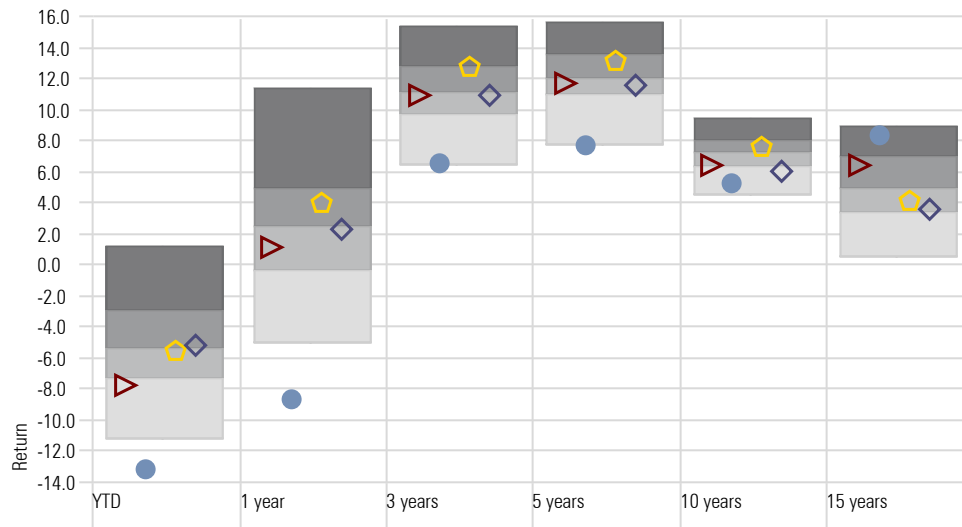


■ Royce Pennsylvania Mutual Svc    ■ Russell 2000 Growth TR USD    ■ Russell 2000 TR USD  
■ US OE Small Growth

### Performance Relative to Peer Group

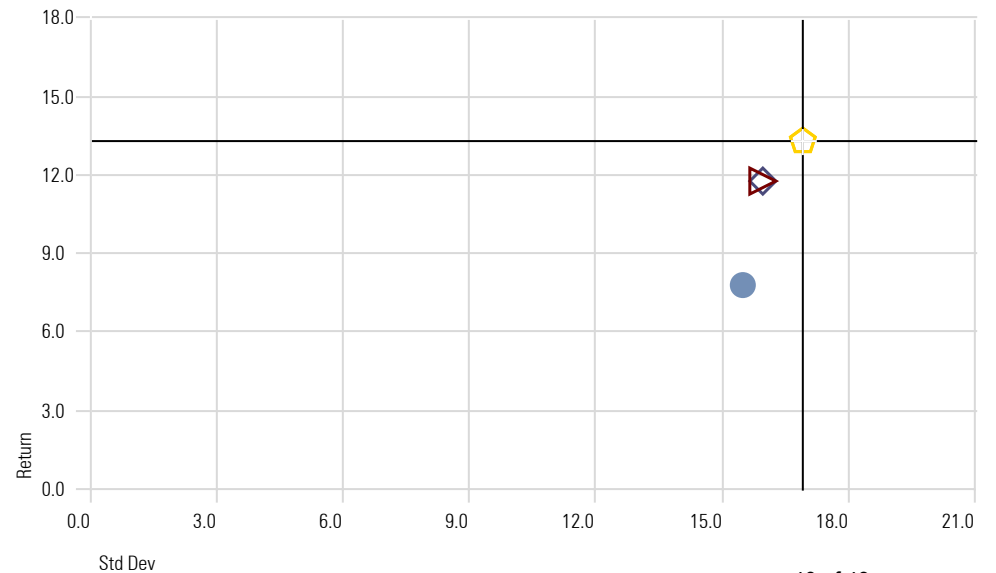
Peer Group (5-95%): Open End Funds - U.S. - Small Growth

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



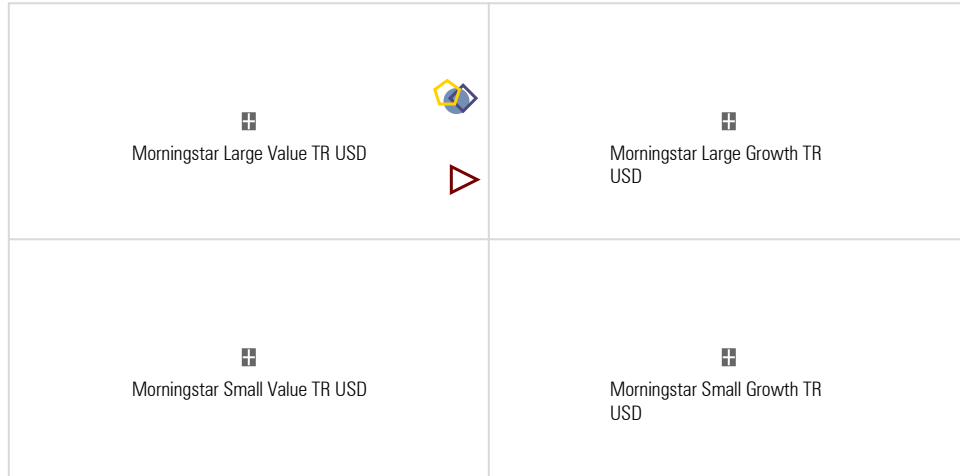
### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



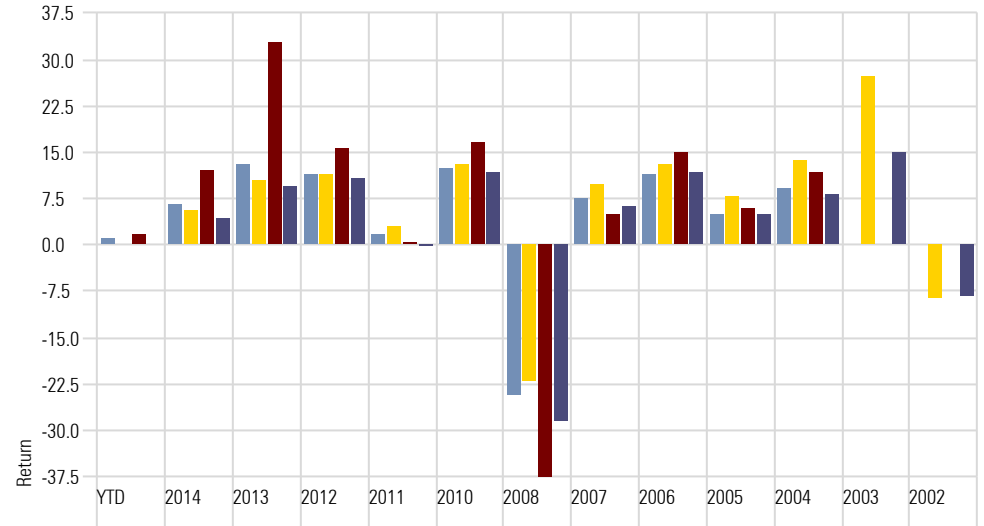
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Vanguard Target Retirement 2015 Inv    ◊ Morningstar Lifetime Mod 2015 TR USD    ► MSCI US Broad Market NR USD  
◊ US OE Target Date 2011-2015

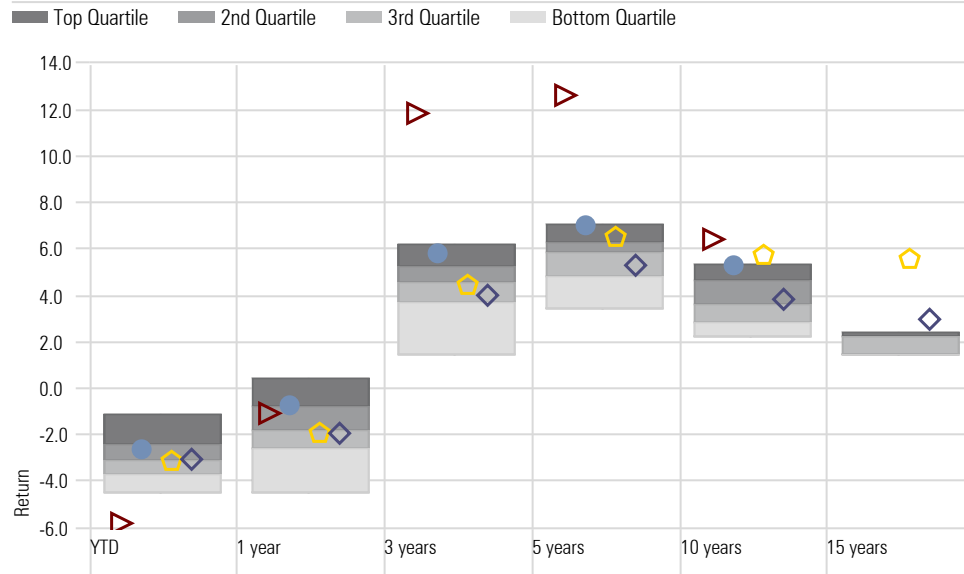
### Returns



■ Vanguard Target Retirement 2015 Inv    ■ Morningstar Lifetime Mod 2015 TR USD    ■ MSCI US Broad Market NR USD  
■ US OE Target Date 2011-2015

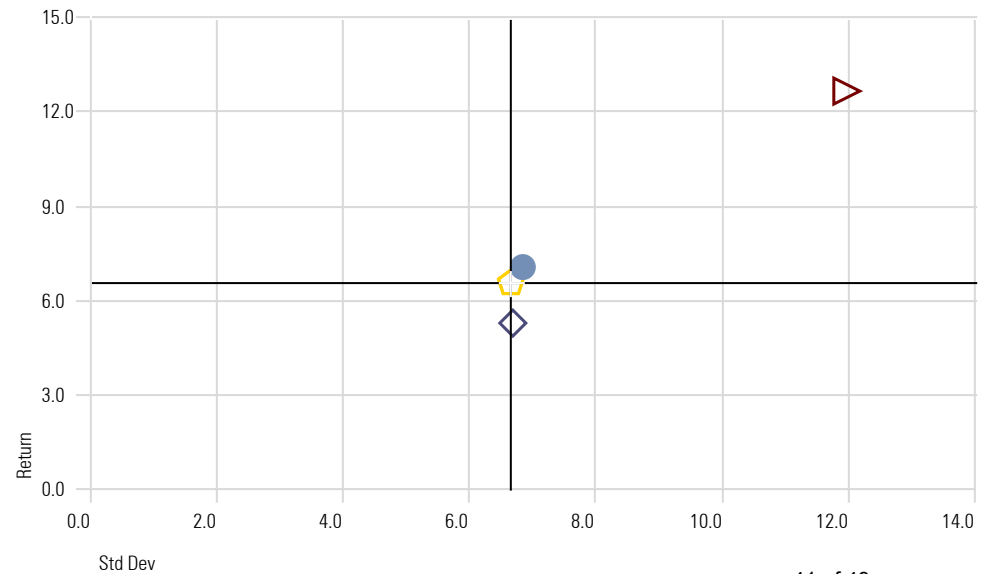
### Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Target Date 2011-2015



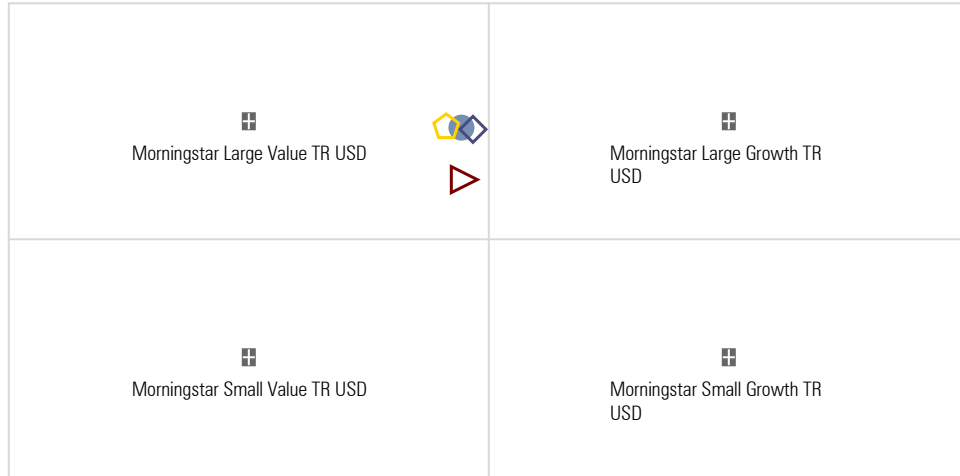
### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



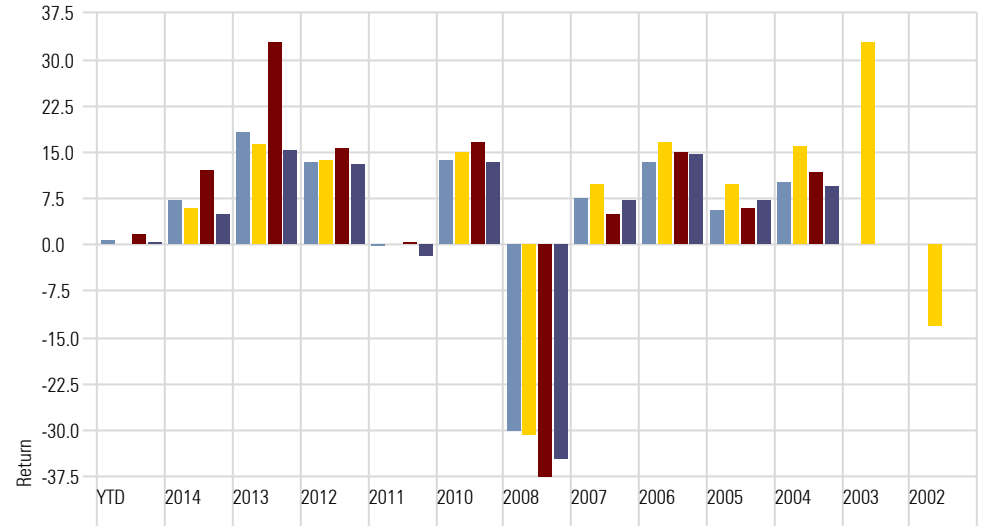
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Vanguard Target Retirement 2025 Inv    ◊ Morningstar Lifetime Mod 2025 TR USD    ▶ MSCI US Broad Market NR USD  
◊ US OE Target Date 2021-2025

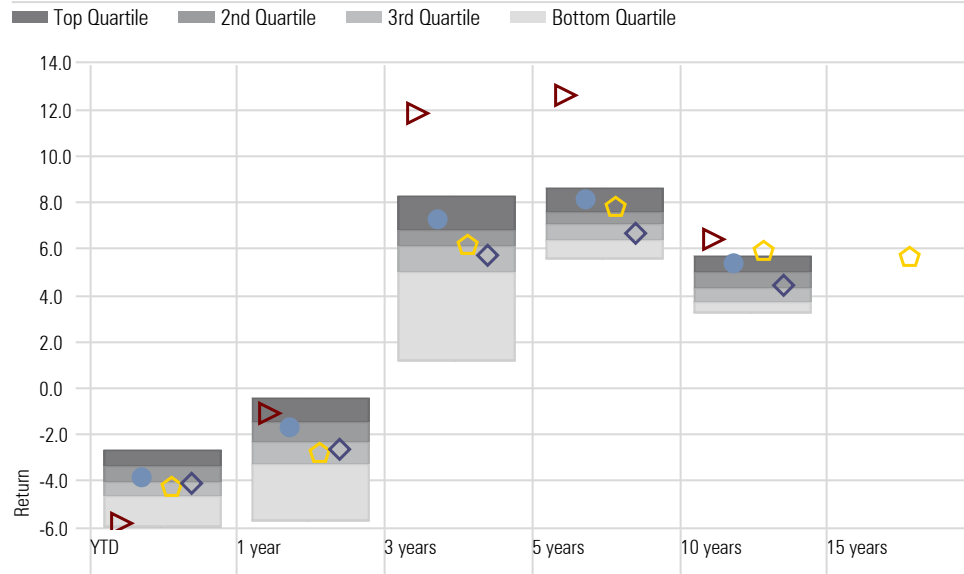
### Returns



■ Vanguard Target Retirement 2025 Inv    ■ Morningstar Lifetime Mod 2025 TR USD    ■ MSCI US Broad Market NR USD  
■ US OE Target Date 2021-2025

### Performance Relative to Peer Group

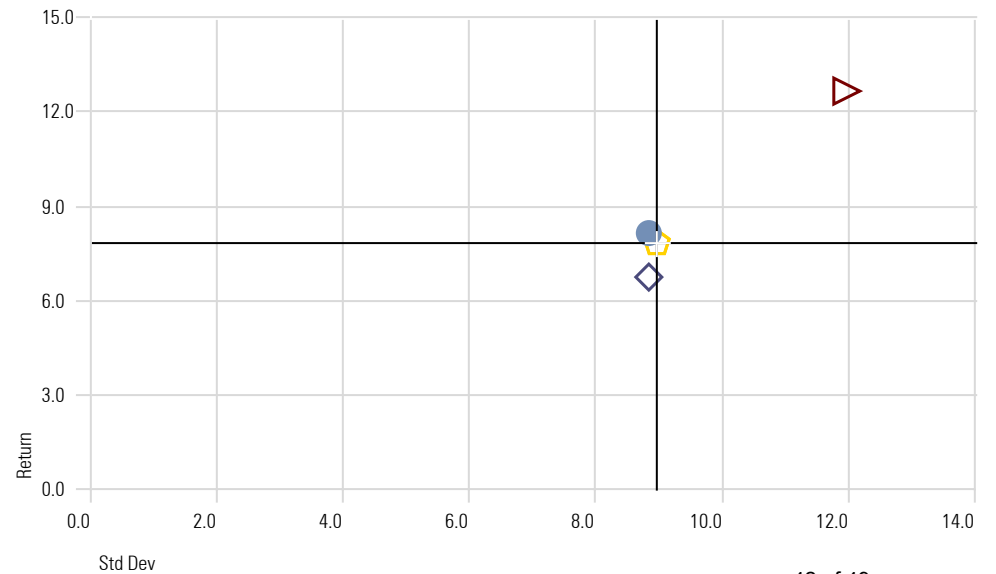
Peer Group (5-95%): Open End Funds - U.S. - Target Date 2021-2025



Source: Morningstar Direct

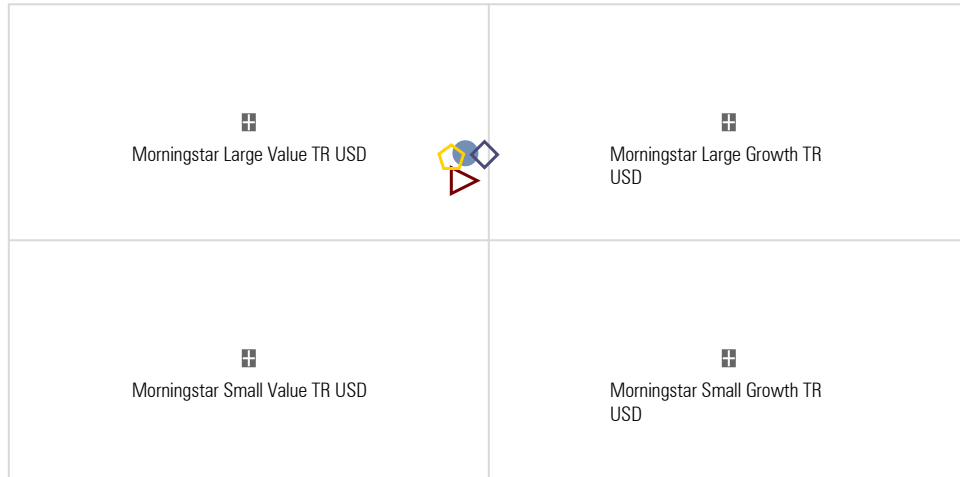
### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



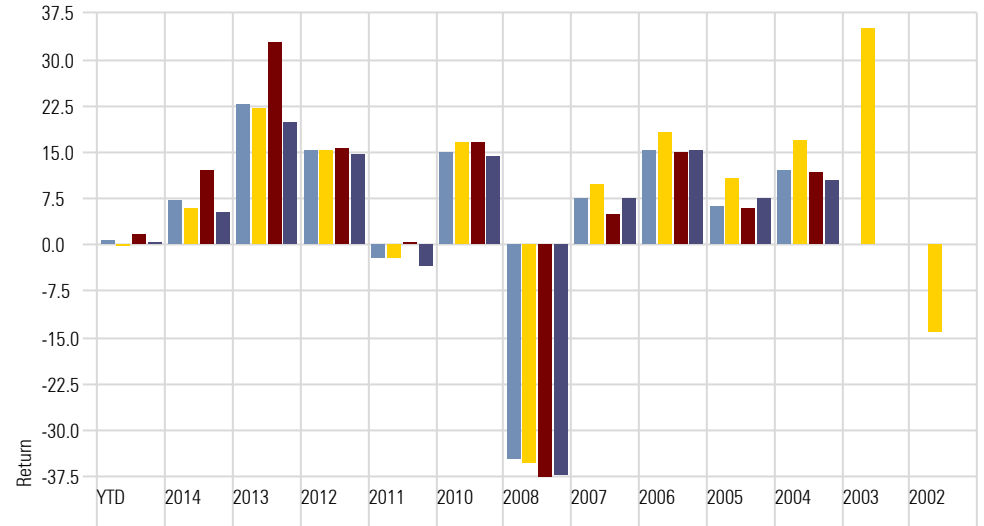
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Vanguard Target Retirement 2035 Inv    ◊ US OE Target Date 2031-2035  
 ◊ Morningstar Lifetime Mod 2035 TR USD    ▶ MSCI US Broad Market NR USD

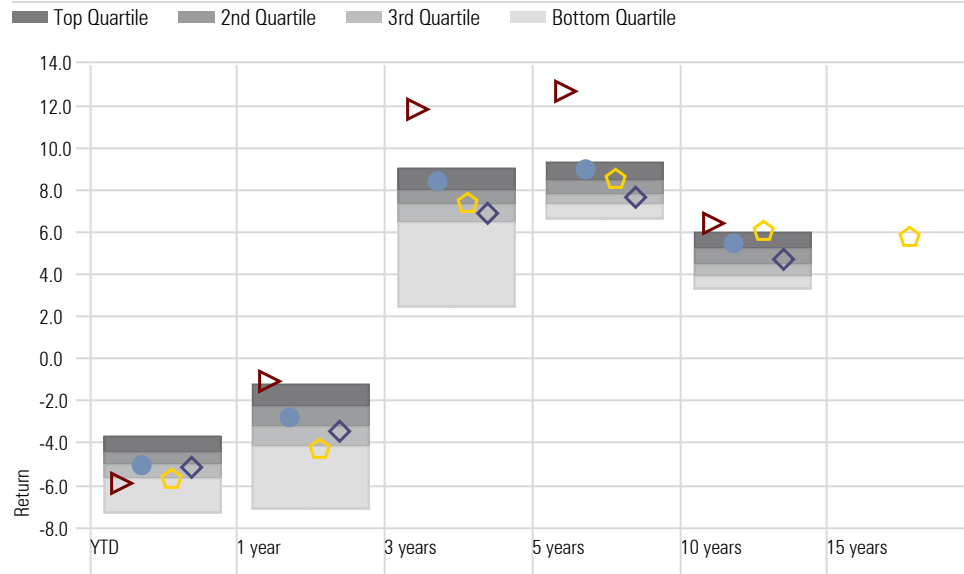
### Returns



■ Vanguard Target Retirement 2035 Inv    ■ Morningstar Lifetime Mod 2035 TR USD    ■ MSCI US Broad Market NR USD  
 ■ US OE Target Date 2031-2035

### Performance Relative to Peer Group

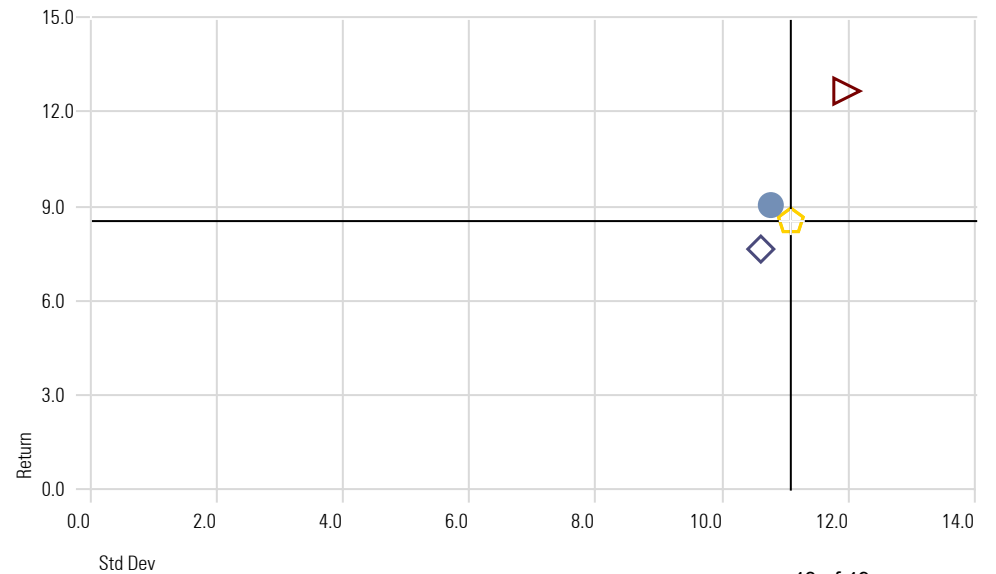
Peer Group (5-95%): Open End Funds - U.S. - Target Date 2031-2035



Source: Morningstar Direct

### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# Vanguard Target Retirement 2045 Inv

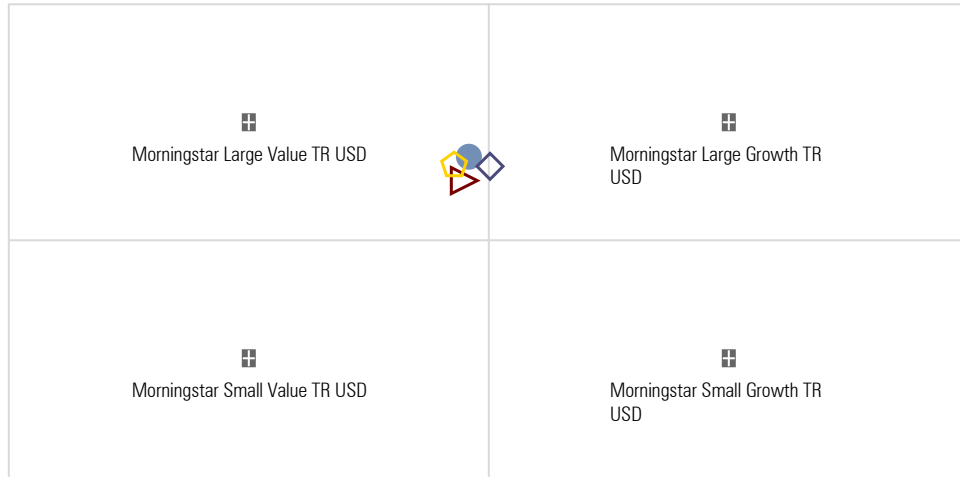
## VTIVX

**Benchmark 1:** Morningstar Lifetime Mod 2045 TR USD  
**Benchmark 2:** MSCI US Broad Market NR USD  
**Category:** US OE Target Date 2041-2045

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

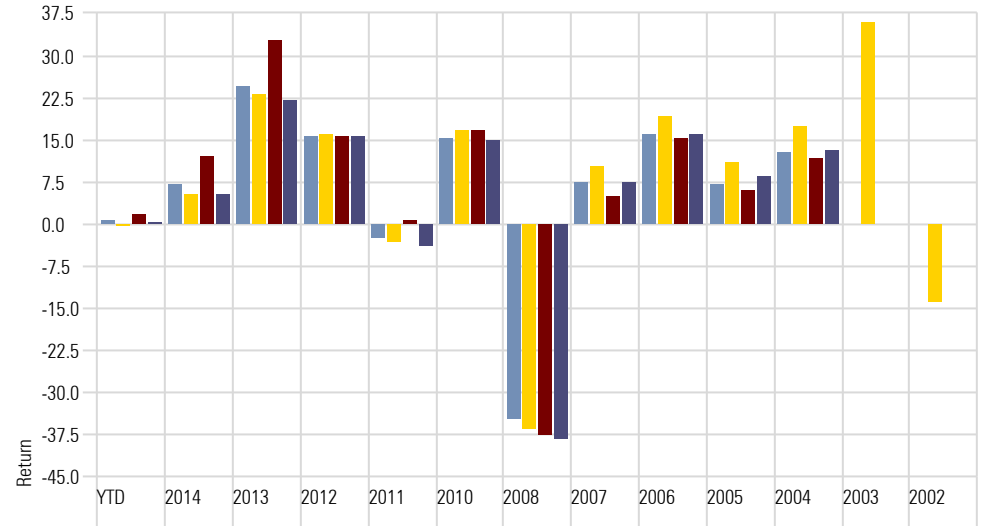
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Vanguard Target Retirement 2045 Inv    ◊ US OE Target Date 2041-2045  
 ◊ Morningstar Lifetime Mod 2045 TR USD    ▶ MSCI US Broad Market NR USD

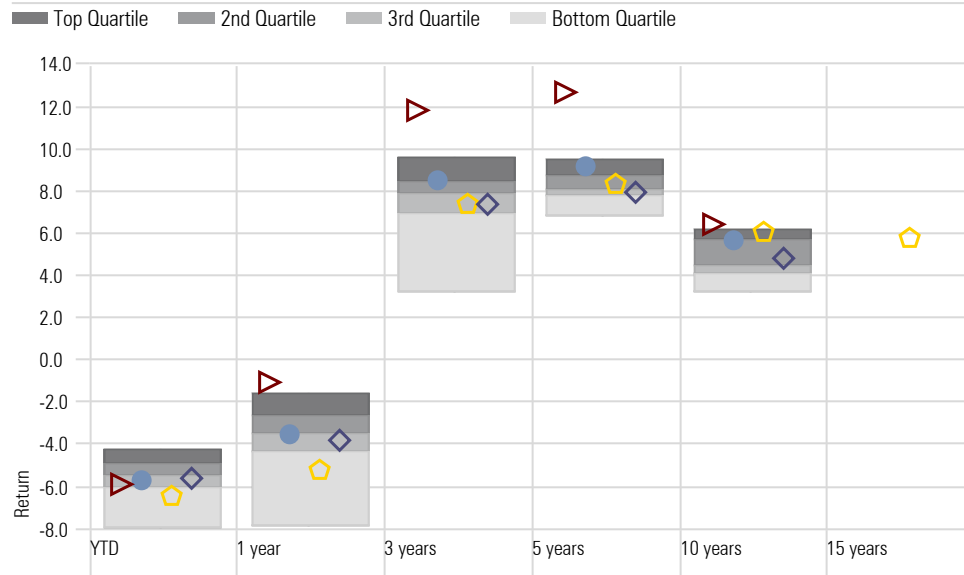
### Returns



■ Vanguard Target Retirement 2045 Inv    ■ Morningstar Lifetime Mod 2045 TR USD    ■ MSCI US Broad Market NR USD  
 ■ US OE Target Date 2041-2045

### Performance Relative to Peer Group

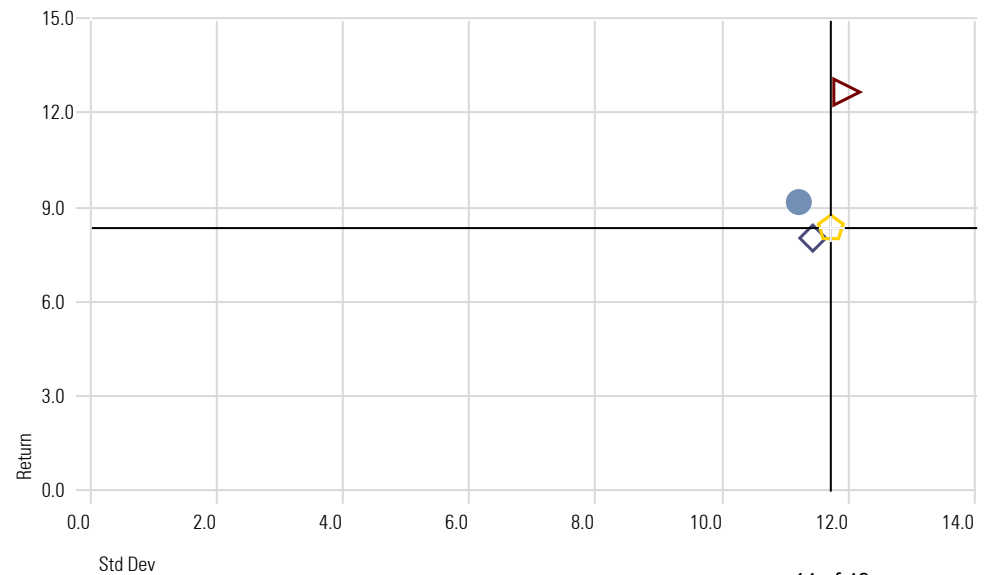
Peer Group (5-95%): Open End Funds - U.S. - Target Date 2041-2045



Source: Morningstar Direct

### Risk-Reward

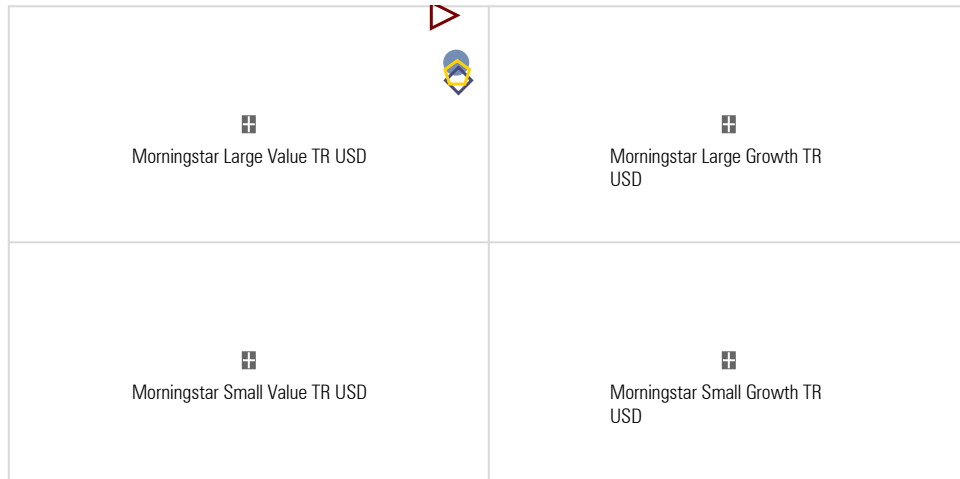
Time Period: 10/1/2010 to 9/30/2015





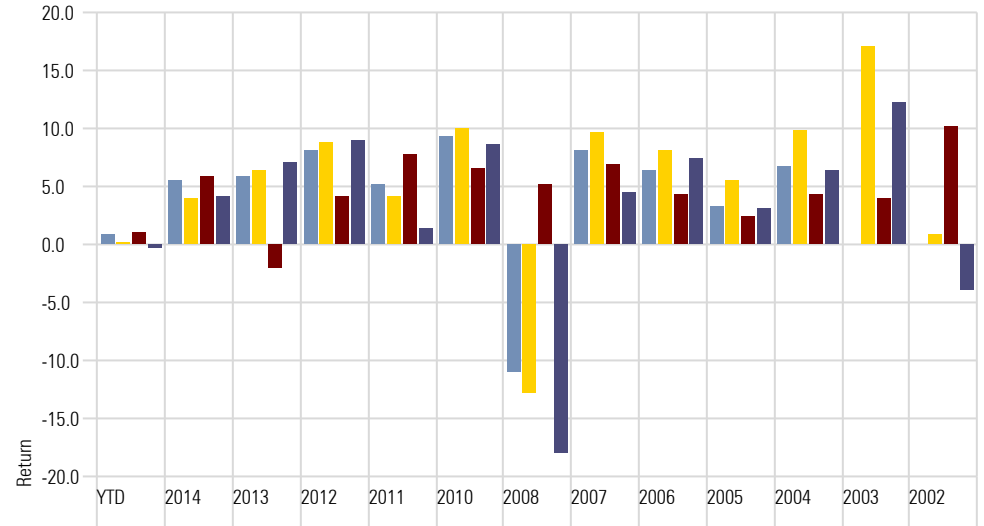
## Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Vanguard Target Retirement Income Inv    ● Morningstar Lifetime Mod Incm TR USD    ▲ Barclays US Agg Bond TR USD  
◆ US OE Retirement Income

## Returns

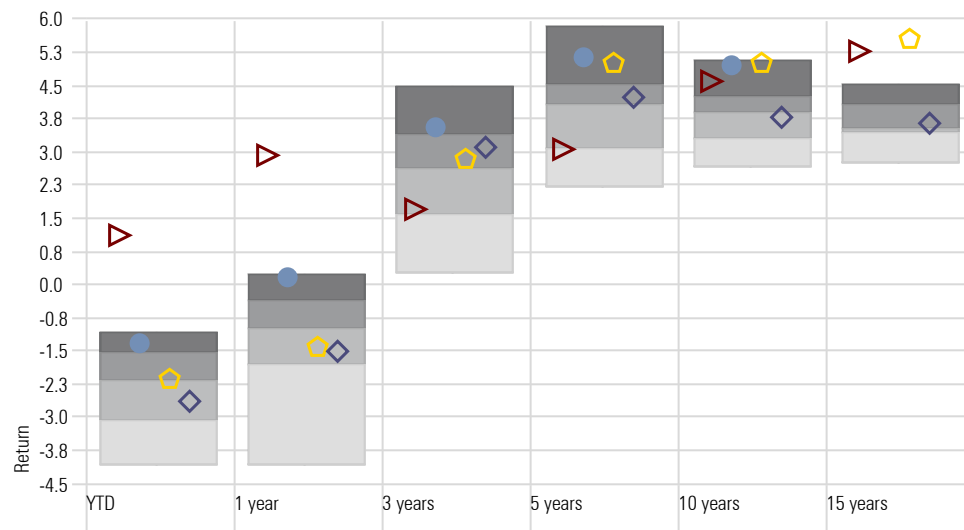


■ Vanguard Target Retirement Income Inv    ■ Morningstar Lifetime Mod Incm TR USD    ■ Barclays US Agg Bond TR USD  
■ US OE Retirement Income

## Performance Relative to Peer Group

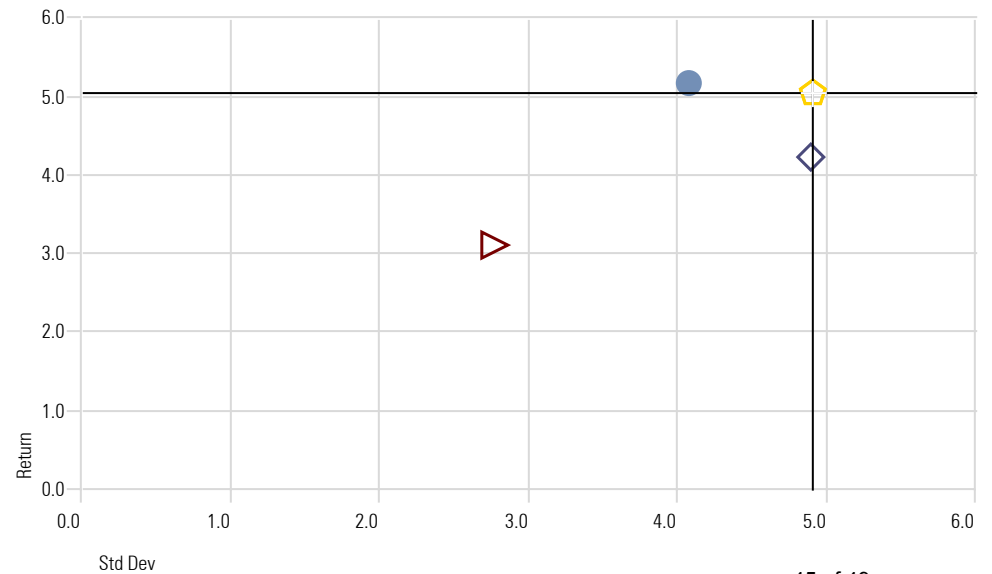
Peer Group (5-95%): Open End Funds - U.S. - Retirement Income

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



## Risk-Reward

Time Period: 10/1/2010 to 9/30/2015



# Vanguard Total Stock Mkt Idx Inv

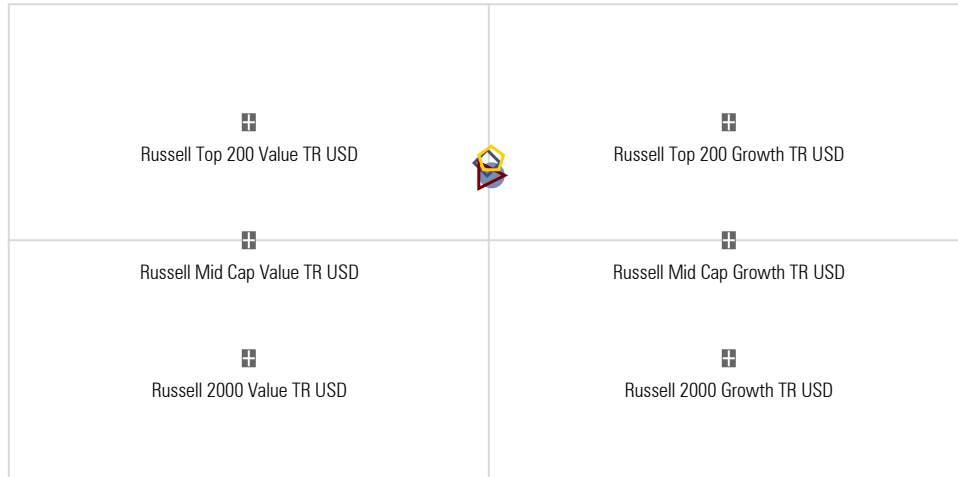
## VTSMX

**Benchmark 1:** Russell 1000 TR USD  
**Benchmark 2:** CRSP US Total Market TR USD  
**Category:** US OE Large Blend

**Return Date:** 9/30/2015  
**Portfolio Date:** 9/30/2015

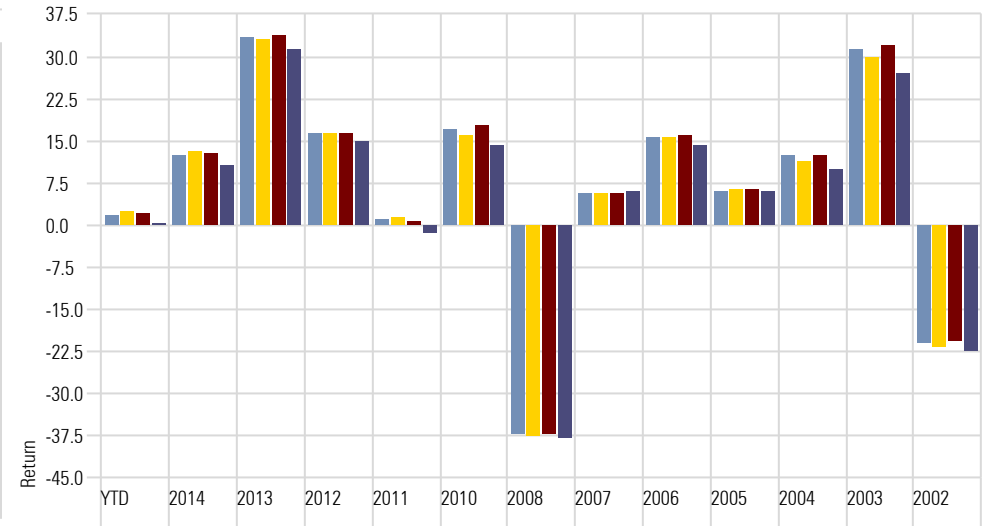
### Returns-Based Style Map

Time Period: 10/1/2010 to 9/30/2015



● Vanguard Total Stock Mkt Idx Inv    ◆ Russell 1000 TR USD    ▶ CRSP US Total Market TR USD  
 ◆ US OE Large Blend

### Returns

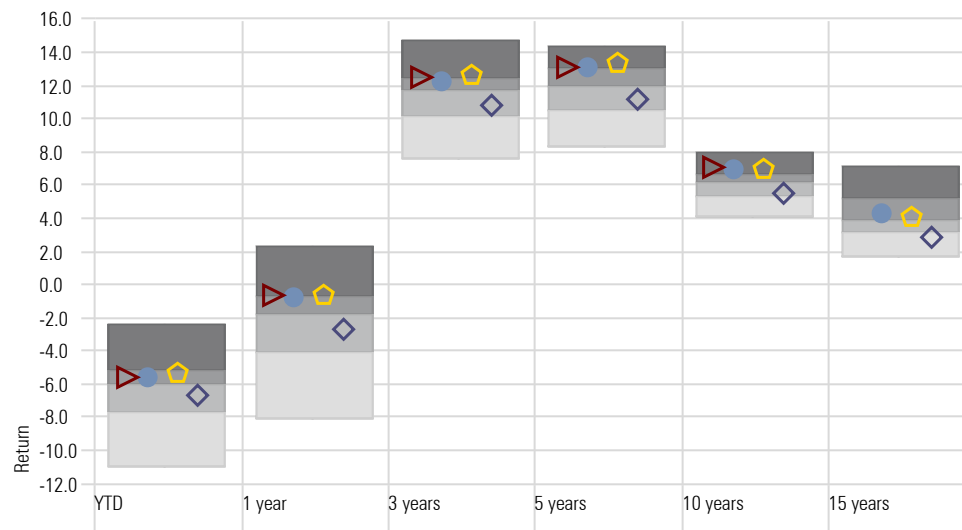


■ Vanguard Total Stock Mkt Idx Inv    ■ Russell 1000 TR USD    ■ CRSP US Total Market TR USD  
 ■ US OE Large Blend

### Performance Relative to Peer Group

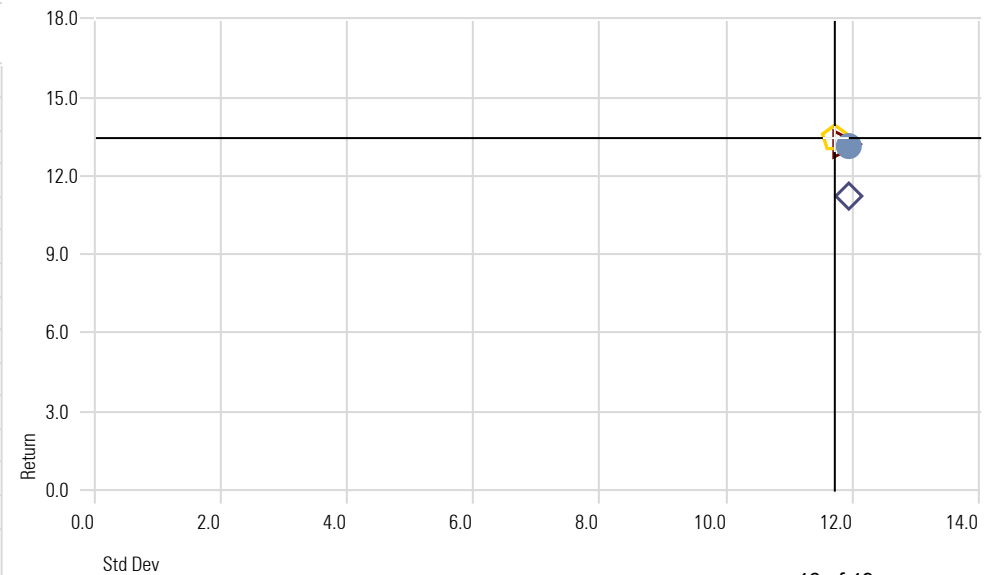
Peer Group (5-95%): Open End Funds - U.S. - Large Blend

■ Top Quartile    ■ 2nd Quartile    ■ 3rd Quartile    ■ Bottom Quartile



### Risk-Reward

Time Period: 10/1/2010 to 9/30/2015





## Morningstar Disclosure

### IF MORNINGSTAR CATEGORY IS USED:

- The Morningstar category identifies funds based on their underlying portfolio holdings. Classifications are based on portfolio statistics and compositions over the past three years. For funds less than three years old, category classifications are based on life of fund.
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#### **Barclays Capital Aggregate Bond Index**

The Barclays Capital Aggregate Bond Index is a measure of the U.S. bond market.

#### **Barclays Capital Government Credit Index**

The Barclays Capital Government/Credit Index measures the performance of all debt obligations of the U.S. Treasury and U.S. government agencies, and all investment-grade domestic corporate debt.

#### **Morgan Stanley Capital International (MSCI) EAFE (Europe, Australasia, Far East) Index**

The Morgan Stanley Capital International (MSCI) EAFE (Europe, Australasia, Far East) Index is a commonly used measure of the international stock market.

#### **Morgan Stanley Capital International (MSCI) World (ex-US) Index**

The Morgan Stanley Capital International (MSCI) World (ex-US) Index measures the performance of stock markets in the developed world (excluding the United States).

#### **Morgan Stanley Capital International (MSCI) World Index**

The Morgan Stanley Capital International (MSCI) World Index measures the performance of stock markets in the developed world.

#### **Russell 1000 Growth Index**

The Russell 1000 Growth Index measures the performance of large-cap U.S. growth stocks.

#### **Russell 1000 Value Index**

The Russell 1000 Value Index measures the performance of large-cap U.S. value stocks.

#### **Russell 1000 Index**

The Russell 1000 Index measures the performance of large-cap U.S. stocks.

#### **Russell 2000 Growth Index**

The Russell 2000 Growth Index measures the performance of U.S. small-cap growth stocks.

#### **Russell 2000 Value Index**

The Russell 2000 Value Index measures the performance of U.S. small-cap value stocks.

#### **Russell 2000 Index**

The Russell 2000 Index measures U.S. small-cap stocks.

#### **Russell Mid Cap Growth Index**

The Russell MidCap Growth Index measures the performance of U.S. mid-cap growth stocks.



## Morningstar Disclosure

It is not possible to invest directly in an index.

Asset Allocation Conservative Index- 50% Barclays Capital Aggregate Bond Index, 35% S&P 500 Stock Index, 10% Barclays Capital Three-Month Treasury Bill Index, 5% MSCI EAFE Index

Asset Allocation Growth Index- 60% S&P 500 Stock Index, 20% Barclays Capital Aggregate Bond Index, 20% MSCI EAFE Index

Asset Allocation Moderate Index- 50% S&P 500 Stock Index, 10% MSCI EAFE Index, 35% Barclays Capital Aggregate Bond Index, 5% Barclays Capital Three-Month Treasury Bill Index

Asset Allocation Aggressive Growth Index- 80% S&P 500 Index, 20% MSCI EAFE Index

### **Russell Mid Cap Value Index**

The Russell Midcap Value Index measures the performance of U.S. mid-cap value stocks.

### **Russell 3000 Growth Index**

The Russell 3000 Growth Index measures the performance of U.S. growth stocks.

### **Standard & Poor's 500 Stock Index**

Standard & Poor's 500 Stock Index is an unmanaged but commonly used measure of common stock total return performance.

It is not possible to invest directly in an index.

**Beta** is a measure of sensitivity to market movements. The beta of the market is 1.00. A beta of 1.10 shows that the fund's excess return is expected to be 10% better than the market's excess return in an up market or 10% worse in a down market. A beta of .85 indicates that the fund's excess return is expected to perform 15% less than the market's excess return during up markets and 15% greater during down markets.

**Standard deviation** is a statistical measurement, which for a mutual fund depicts how widely the returns varied over a certain period of time. When a fund has a high standard deviation, performance is wide, implying greater volatility.

**R-squared** measures the degree of relationship between the performance of the fund and that of the index. The higher the R-squared, the more related the fund's performance is to its index.

**Sharpe ratio** measures risk adjusted performance; it is calculated as the real total return of the fund (total return-risk free rate) divided by the risk of the fund (standard deviation).

**Expense Ratio** is the percentage of fund assets paid for operating expenses and management fees as per a fund's most recent prospectus. The expense ratio typically includes the following types of fees: accounting, administrator, advisor, auditor, board of directors, custodial, distribution (12b-1), legal, organizational, professional, registration, shareholder reporting, sub-advisor, and transfer agency. The expense ratio does not reflect the fund's brokerage costs or any investor sales charges.

**Gross Expense Ratio** does not reflect any fee waivers in effect during the time period, in contrast to the net expense ratio. Also known as the Total Annual Fund Operating Expense Ratio, Morningstar pulls the prospectus gross expense ratio from the fund's most recent prospectus. Prospectus expense ratios reflect material changes to the expense structure for the current period.

**Net Expense Ratio** is the net operating expenses are the expenses you are currently paying to own the Fund. If the net operating expenses shown are lower than the gross operating expenses, then the net operating expenses reflect voluntary fee waivers and/or expense reimbursements from the investment advisor that may be discontinued at any time. For more information on fee waivers and/or expense reimbursements, please see the expense table in the prospectus

***The performance data shown represents past performance and is no guarantee of future results. Current performance may be lower than higher than that shown.***

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# San Mateo County Investment Menu Mapping Schedule

Asset Class	Old Fund	New Fund
Large Cap Value	American Funds American Mutual R4	American Funds American Mutual R6 RMFGX
Large Cap Value	Hartford Dividend and Growth HLS IA	American Funds American Mutual R6 RMFGX
Large Blend	SSgA S&P 500 Index A	Vanguard Inst Index I VINIX
Large Blend	Parnassus Core Equity Fund Inst PRILX	Parnassus Core Equity Fund Inst PRILX
Large Blend	Vanguard Total Stock Market Index Inv	Vanguard Total Stock Market Index Inv
Large Blend	American Funds Fundamental Invs R5	American Funds Fundamental Invs R6 RFNGX
Large Blend	Hartford Capital Appreciation HLS IA	American Funds Fundamental Invs R6 RFNGX
Large Growth	American Funds Growth Fund of America R5	American Funds Growth Fund of American R6 RGAGX
Large Growth	Franklin Growth A	American Funds Growth Fund of American R6 RGAGX
Mid Cap Value	Artisan Mid Cap Value	American Century Mid Cap Value R6 AMDVX
Mid Cap Blend	SSgA Mid Cap Index A	Vanguard Mid Cap Index Instl VMCIX
Mid Cap Growth	Prudential Jenison Mid Cap Growth A	MassMutual Select Mid Cap Growth II I MEFZX
Small Cap Blend	SSgA Small Cap Index	Vanguard Small Cap Index Inst VSCIX
Small Cap Blend	Columbia Small Cap Core	Vanguard Small Cap Index Inst VSCIX
Small Cap Growth	Barron Small Cap Retail	Wells Fargo Adv Sm Co Gr Adv WSCGX
Small Cap Growth	Royce PA Mutual	Wells Fargo Adv Sm Co Gr Adv WSCGX
Small Cap Growth	Invesco Small Cap Discovery	Wells Fargo Adv Sm Co Gr Adv WSCGX
Small Cap Value	None	JP Morgan Small Cap Value R6 JSVUX
Foreign Large Growth	American Funds Europac R5	American Funds Europac R6 RERGX
Foreign Large Blend	None	Vanguard Developed Markets Index Inv VDVIX
World Stock	American Funds Capital World Growth & Income R5	American Funds Capital World Growth & Income R6 RWIGX
Diversified Emerging Mkts	Oppenheimer Developing Mkts Y	Oppenheimer Developing Mkts Instl ODVIX
Utilities	MFS Utilities Fund A	MFS Utilities Fund R4 MMUJX
Health Care	Hartford Healthcare HLS IA HIAHX	Hartford Healthcare HLS IA HIAHX
Real Estate	INVESCO Real Estate Fund R5 IARIX	INVESCO Real Estate Fund R5 IARIX
Conservative Allocation	American Century Strategic Allocation Conservative Inv	Vanguard Target Retirement 2015 Inv VTXVX
Moderate Allocation	American Century Strategic Allocaion Moderate Inv	Vanguard Target Retirement 2025 Inv VTTVX
Aggressive Allocation	American Century Strategic Allocation Aggressive	Vanguard Target Retirement 2035 Inv VTTHX
Balanced Fund	Oakmark Equity & Income I	Oakmark Equity & Income I OAKBX
Target Date	Vanguard Target Retirement Income Inv	Vanguard Target Retirement Income Inv VTINX
Target Date	Vanguard Target Retirement 2015 Inv	Vanguard Target Retirement 2015 Inv VTXVX
Target Date	Vanguard Target Retirement 2025 Inv	Vanguard Target Retirement 2025 Inv VTTVX

Asset Class	Old Fund	New Fund
Target Date	Vanguard Target Retirement 2035 Inv	Vanguard Target Retirement 2035 Inv VTTHX
Target Date	Vanguard Target Retirement 2045 Inv	Vanguard Target Retirement 2045 Inv VTIVX
2055 Target Date	None	Vanguard Target Retirement 2055 Inv VFFVX
Inflation Protected Bond	PIMCO Real Return A	PIMCO Real Return Inst PRAIX
Intermediate Bond	PIMCO Total Return Admin	PIMCO Total Return Inst PTTRX
Multi Sector Bond	Loomis Sayles Bond Inst LSBDX	Loomis Sayles Bond Inst LSBDX
Bond Market Index	None	Vanguard Total Bond Market Index I VBTIX
World Bond	Oppenheimer International Bond Y	Oppenheimer International Bond Inst OIBIX
High Yield	None	MassMutual Premier High Yield I MPHZ X
Stable Value	General Account	MassMutual SAGIC
	Bank of the West	Bank of the West
	Schwab	Schwab

Red=Funds Being Eliminated

Green=New Funds or Shareclass

Black=Existing Fund