

State of Wisconsin Deferred Compensation Plan

Investment Performance and Expense Ratio Review

Performance as of December 31, 2019

Bill Thornton

Investment Director, Great-West Investments

303-737-1514

william.thornton@greatwest.com



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Executive Summary



Wisconsin Deferred Compensation Program – Asset Class Coverage

Core "Doers"							
Stable Value/ Money Market	Fixed Income	Large Cap Value	Large Cap Core	Large Cap Growth	Mid Cap	Small Cap	Global/ International
FDIC Bank Option, Vanguard Treasury Money Market, Stable Value Fund	BlackRock US Debt Index, Federated US Gov Securities, Vanguard Long-Term Investment Grade, Dodge & Cox Income	American Beacon Bridgeway Large Cap Value	Vanguard Institutional 500 Trust Index	Fidelity Contrafund Commingled Pool, Calvert U.S. Core Large Cap Resp Idx	BlackRock Mid Cap Equity Index, T.Rowe Price Instl Mid-Cap Equity	BlackRock Russell 2000 Index, DFA US Micro Cap	American Funds Europacific Growth, Blackrock EAFE Equity Index
Asset Allocation "Delegators"							
Balanced/Lifestyle/Lifecycle				Managed Accounts			
Vanguard Target Retirement Trusts, Vanguard Wellington				Professional Management Program - Ibbotson			
Specialty "Sophisticates"							
Brokerage		Other			Company Stock		
Schwab							

This graph is intended to show generally the anticipated relationship between various asset classes and the corresponding funds within each asset class available through your plan. Please note this is not intended to predict an actual level of return or risk for these funds. The historical returns and risk for these funds may vary significantly from the linear relationship represented above. Please refer to the funds' prospectuses and shareholder reports for actual return information.

Generally, the asset allocation of each target date fund will change on an annual basis with the asset allocation becoming more conservative as the fund nears the target retirement date. The target date is the approximate date when investors plan to start withdrawing their money.

The principal value of the fund(s) in a plan's lineup is not guaranteed at any time, including at the time of target date and/or withdrawal.

Name	Total Ret 3 Mth	Total Ret 1 Yr	Total Ret 3 Yr	Total Ret 5 Yr	Total Ret 10 Yr	Total Net Assets \$M	Expense Ratio
American Funds EuroPacific Gr R6	10.09	27.40	12.45	7.41	6.73	173,500	0.49
Morningstar Foreign Large Growth Avg	9.37	27.83	12.69	7.25	6.90	-	1.13
MSCI EAFE Index	8.17	22.01	9.56	5.67	5.50	-	-
MSCI ACWI ex U.S.	8.92	21.51	9.87	5.51	4.97	-	-
Blackrock EAFE Equity Index Coll T	8.21	22.49	9.97	6.20	5.85	-	0.04
MSCI EAFE Index	8.17	22.01	9.56	5.67	5.50	-	-
DFA US Micro Cap I	8.97	20.66	5.85	7.50	12.40	6,841	0.52
Morningstar Small Cap Blend Avg	8.02	23.75	6.84	7.12	11.17	-	1.13
Russell 2000 Index	9.94	25.52	8.59	8.23	11.83	-	-
Blackrock Russell 2000 Index Coll T	9.98	25.69	8.77	8.43	7.73	-	0.03
Russell 2000 Index	9.94	25.52	8.59	8.23	11.83	-	-
T. Rowe Price Mid-Cap Growth	6.63	31.53	17.17	12.75	15.06	35,456	0.61
Morningstar Mid Cap Growth Avg	8.05	32.52	15.57	10.45	12.79	-	1.17
Russell Mid Cap Growth Index	8.17	35.47	17.36	11.60	14.24	-	-
S&P Midcap 400 Index	7.06	26.20	9.26	9.03	12.72	-	-
Blackrock Midcap Equity Index Coll F	7.08	26.20	9.29	9.06	12.74	-	0.02
S&P MidCap 400 Index	7.06	26.20	9.26	9.03	12.72	-	-
Calvert US Large Cap Core Rspnb Idx R6	9.45	32.85	15.58	11.57	13.59	3,766	0.19
S&P 500 Index	9.07	31.49	15.27	11.70	13.56	-	-
Morningstar Socially Resp Large Cap Avg**	8.31	30.10	14.70	10.54	12.38	-	0.98
Morningstar Large Cap Growth Avg	9.36	31.90	18.09	12.10	13.40	-	1.07
Fidelity Contrafund Commingled Pool CI 2*	10.54	31.12	18.92	13.10	13.96		0.38
Morningstar Large Cap Growth Avg	9.36	31.90	18.09	12.10	13.40	-	1.07
Russell 1000 Growth Index	10.62	36.39	20.49	14.63	15.22	-	-
S&P 500 Index	9.07	31.49	15.27	11.70	13.56	-	-
American Beacon Bridgeway Lg Cap Value I CIT*	6.53	23.52	7.84	7.59	12.13	3,495	0.55
Morningstar Large Cap Value Avg	7.41	26.54	9.68	8.29	11.80	-	-
Russell 1000 Value Index	7.38	25.04	9.97	7.99	10.90	-	-

* The Fidelity Contrafund CIT and American Beacon CIT returns presented in italics are linked to mutual fund performance.

**This index is a compilation of all Large Cap Socially Conscious Funds in the Morningstar Database

Past performance is no guarantee of future results. Rankings provided based on total returns. Performance quoted for mutual funds may include performance of a predecessor fund/share class prior to the share class commencement of operations.



Name	Total Ret	Total Net Assets \$M	Expense Ratio				
	3 Mth	1 Yr	3 Yr	5 Yr	10 Yr		
Vanguard Institutional 500 Index Trust*	9.06	31.49	15.27	11.69	13.55		0.01
S&P 500 Index	9.07	31.49	15.27	11.70	13.56	-	-
Vanguard Wellington Adm	5.23	22.61	10.81	8.65	9.99	112,555	0.17
Morningstar Moderate Allocation Avg	5.03	19.23	8.55	6.22	7.90	-	1.10
Composite 65% S&P 500 / 35% Barclay's Aggregate	5.96	23.52	11.34	8.67	10.13	-	-
Composite 65% S&P 500 / 35% Barclay's U.S. Credit A or Better Idx	6.15	25.02	11.80	9.09	10.67	-	-
Vanguard Long-Term Investment-Grade Adm	-0.30	20.52	8.33	6.07	8.08	19,302	0.12
Barclay's LT Corporate A	0.73	13.01	5.36	4.24	5.29	-	-
Morningstar Corp Bond	1.21	13.03	5.22	4.22	5.18	-	0.81
Dodge & Cox Income	0.87	9.75	4.52	3.70	4.43	63,546	0.42
Morningstar Interm Core-Plus Bond Avg	0.38	8.94	4.12	3.14	4.27	-	-
BarCap US Agg Bond TR USD	0.18	8.72	4.03	3.05	3.75	-	-
Blackrock US Debt Index Fund Coll W	0.18	8.74	4.08	3.09	-	-	0.03
BarCap US Agg Bond TR USD	0.18	8.72	4.03	3.05	3.75	-	-
Federated US Govt 2-5 Yr Instl	0.00	4.57	1.92	1.33	1.56	209	0.59
Morningstar Short Government Avg	0.26	3.25	1.65	1.18	1.33	-	0.73
Barclay's US Treas/Agency 3-5 Yr	0.08	5.26	2.56	2.12	2.55	-	-
BofA Merrill Lynch US Treas 3-5 Yr	0.11	5.20	2.52	2.10	2.50	-	-
Vanguard Admiral Treasury Money Mkt Inv	0.43	2.14	1.57	1.00	0.50	31,191	0.09
Morningstar Taxable Money Mkt Avg	0.34	1.78	1.23	0.75	0.38	-	0.46
U.S. Treasury 90-Day T-Bill	0.39	2.06	1.64	1.06	0.56	-	-
iMoney Net Average Treasury MM	0.32	1.63	1.10	0.66	0.33	-	-
Stable Value Fund	0.64	2.56	2.24	2.09	2.40	689	0.32
5 Yr. Constant Maturity Treasury Yield	0.40	1.95	2.20	1.89	1.65	-	-

* Italicized returns are taken from mutual fund share class..

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3-Year Percentile Ranks

12/31/2019

Group/Investment	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4	Q3
	2019	2019	2019	2019	2018	2018	2018	2018	2017	2017
	% of Peer Group Beaten									
American Beacon Bridgeway Lg Cp Val Inst	15	16	21	15	21	62	68	78	84	74
American Funds Europacific Growth R6	53	61	73	72	69	56	59	66	68	69
BlackRock EAFE® Equity Index F	72	87	79	59	59	56	58	46	68	65
Blackrock Mid Cap Eq Idx Fund CF	52	61	61	68	90	73	90	90	93	
BlackRock Russell 2000® Index F	81	69	81	85	73	85	81	82	75	80
Blackrock US Debt Idx Fund CF	78	73	63	61	66	64	70	73	66	72
Calvert US Large Cap Core Rspnb Idx I	87	83	90	88	74	70	54	69	68	86
DFA US Micro Cap I	31	46	54	60	71	83	82	79	73	81
Dodge & Cox Income	75	83	85	87	87	86	91	87	89	82
Federated US Govt 2-5 Yr Instl	81	49	48	33	40	16	24	23	45	55
Fidelity Contrafund Commingled Pl 2	63	68	63	43	53	46	70	71	59	53
T. Rowe Price Mid-Cap Growth	66	71	62	57	72	55	68	86	89	95
Vanguard Institutional Index Instl Pl	83	82	84	87	89	92	93	91	89	90
Vanguard Long-Term Investment-Grade Adm	54	63	55	68	67	69	81	76	83	92
Vanguard Target Retire 2015 Trust I	69	66	67	65	65	62	64	65	63	65
Vanguard Target Retire 2025 Trust I	92	85	81	76	87	85	87	85	82	74
Vanguard Target Retire 2035 Trust I	76	71	81	78	77	74	75	76	67	62
Vanguard Target Retire 2045 Trust I	79	79	79	76	79	82	83	88	81	63
Vanguard Target Retire 2055 Trust I	71	65	72	69	80	69	67	75	63	47
Vanguard Target Retire Inc Trust I	72	67	58	51	68	57	67	75	67	69
Vanguard Wellington™ Admiral™	91	94	90	92	95	92	93	97	97	97

1st Quartile
 2nd Quartile
 3rd Quartile
 4th Quartile

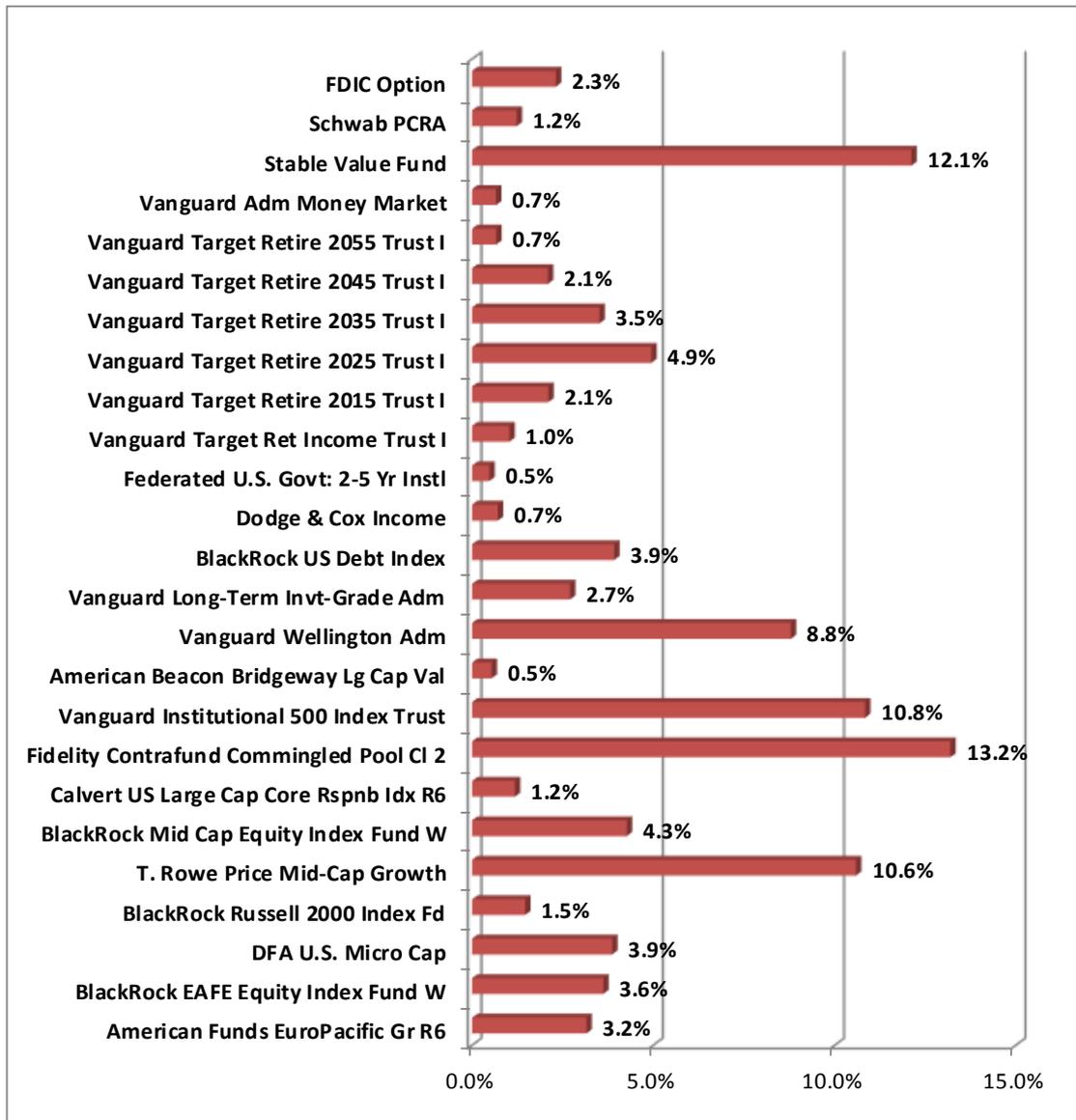
* Percentile ranks shown for American Beacon Bridgeway and Calvert US Large Cap Responsible Index are taken from oldest share class of their respective mutual funds.

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	Plan Inception Date	Fund Net Assets	WDC Assets in Fund	WDC as a Percentage of Fund Assets	Fund as a Percentage of WDC Assets	Number of Participants	Percentage of WDC Participants Utilizing Fund
American Funds EuroPacific Gr R6	1/28/2005	\$173,499,914,047	\$179,426,156	0.10%	3.15%	23,830	36.13%
BlackRock EAFE Equity Index Fund W	2/1/2001	\$42,673,980,000	\$205,879,259	0.48%	3.62%	22,182	33.64%
DFA U.S. Micro Cap	2/1/1997	\$6,840,756,124	\$219,974,510	3.22%	3.87%	11,638	17.65%
BlackRock Russell 2000 Index Fd	2/20/2004	\$760,530,000	\$83,267,978	10.95%	1.46%	15,736	23.86%
T. Rowe Price Mid-Cap Growth	2/1/1998	\$35,456,025,904	\$602,587,658	1.70%	10.59%	32,560	49.37%
BlackRock Mid Cap Equity Index Fund W	2/1/2001	\$5,960,140,000	\$243,005,119	4.08%	4.27%	23,838	36.15%
Calvert US Large Cap Core Rspnb Idx R6	4/18/2003	\$3,766,036,787	\$67,229,546	1.79%	1.18%	3,320	5.03%
Fidelity Contrafund Commingled Pool CI 2	1/31/1994	\$120,128,910,678	\$750,605,165	0.62%	13.19%	32,459	49.22%
Vanguard Institutional 500 Index Trust	9/9/1990	\$79,800,000,000	\$616,679,669	0.77%	10.84%	29,702	45.04%
American Beacon Bridgeway Lg Cap Val	11/1/2017	\$181,838,149	\$30,893,743	16.99%	0.54%	17,312	26.25%
Vanguard Wellington Adm	10/26/2001	\$112,554,914,426	\$500,157,077	0.44%	8.79%	25,073	38.02%
Vanguard Long-Term Invt-Grade Adm	10/26/2001	\$19,301,859,357	\$153,827,110	0.80%	2.70%	15,629	23.70%
BlackRock US Debt Index	2/1/2001	\$2,015,370,000	\$223,073,979	11.07%	3.92%	20,427	30.97%
Dodge & Cox Income	1/2/1989	\$63,545,561,555	\$40,505,796	0.06%	0.71%	12,314	18.67%
Federated U.S. Govt: 2-5 Yr Instl	2/3/1992	\$209,046,568	\$27,102,149	12.96%	0.48%	5,624	8.53%
Vanguard Target Ret Income Trust I	7/29/2005	\$10,700,000,000	\$58,562,872	0.55%	1.03%	1,875	2.84%
Vanguard Target Retire 2015 Trust I	7/29/2005	\$11,700,000,000	\$119,761,607	1.02%	2.10%	2,849	4.32%
Vanguard Target Retire 2025 Trust I	7/29/2005	\$51,400,000,000	\$281,343,480	0.55%	4.95%	6,464	9.80%
Vanguard Target Retire 2035 Trust I	7/29/2005	\$45,900,000,000	\$199,886,282	0.44%	3.51%	6,820	10.34%
Vanguard Target Retire 2045 Trust I	7/29/2005	\$34,000,000,000	\$119,048,516	0.35%	2.09%	6,426	9.74%
Vanguard Target Retire 2055 Trust I	8/18/2010	\$14,300,000,000	\$38,031,139	0.27%	0.67%	4,018	6.09%
Vanguard Adm Money Market	10/1/1993	\$31,191,200,000	\$37,483,141	0.12%	0.66%	6,388	9.69%
Stable Value Fund	9/1/1996	N/A	\$689,462,756	N/A	12.12%	27,811	42.17%
Schwab PCRA	2/17/2000	N/A	\$70,085,445	N/A	1.23%	1,182	1.79%
FDIC Option	12/31/1996	N/A	\$131,520,990	N/A	2.31%	9,333	14.15%



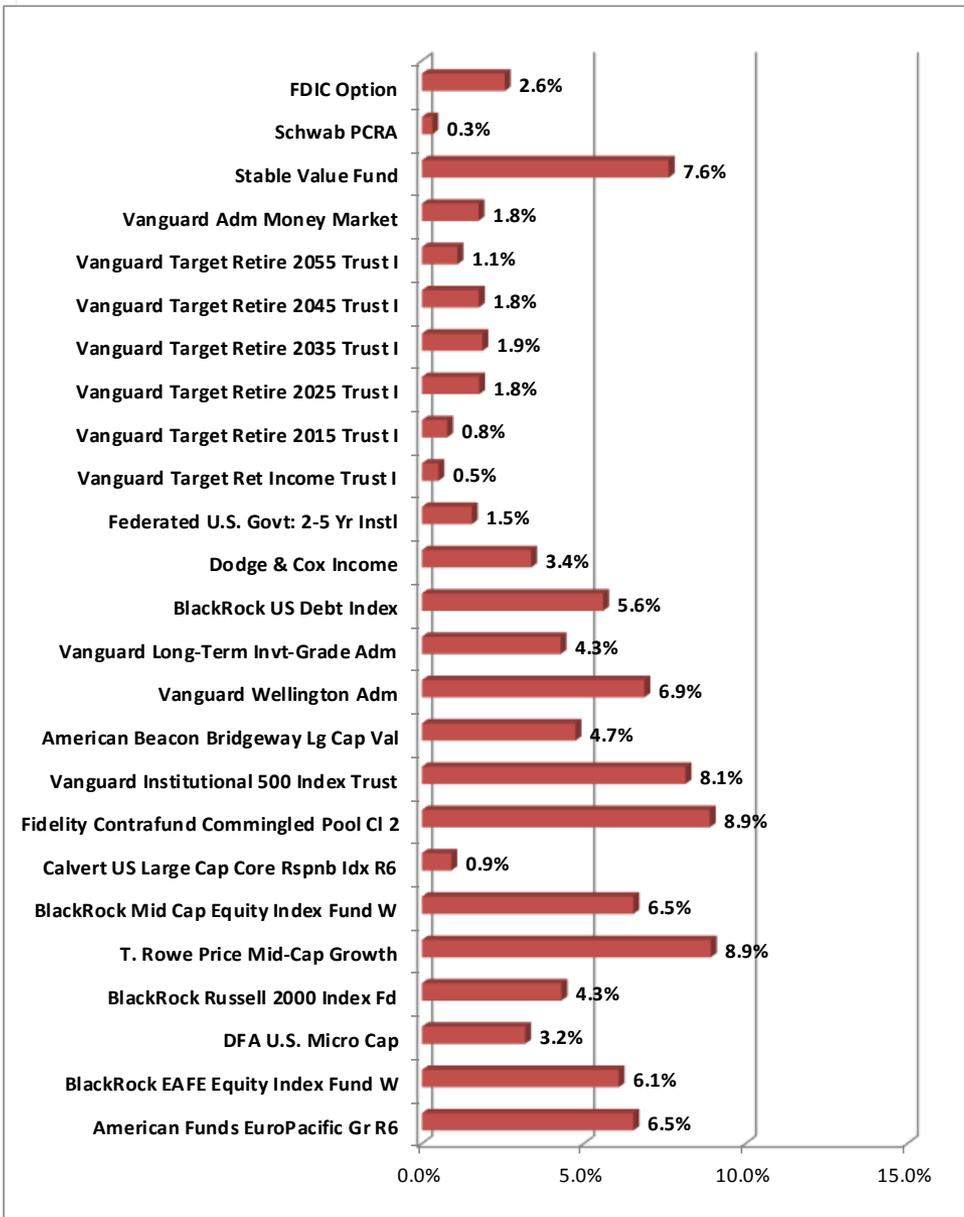


Total WDC Assets

\$5,689,401,143

Domestic Equity	\$2,614,243,388	46%
Intl Equity	\$385,305,415	7%
Asset Allocation	\$1,316,790,974	23%
Fixed Income	\$444,509,035	8%
Cash Equiv.	\$858,466,887	15%
Self-Directed Brok.	\$70,085,445	1%





Total WDC Participants
65,948



Expense Summary

12/31/2019

Name	Expense Ratio	Annual Expense per \$1000
American Funds EuroPacific Gr R6	0.49	\$4.90
Cat: Foreign Large Growth	1.13	
Blackrock EAFE Equity Index Fund W	0.04	\$0.40
Cat: Foreign Large Blend Index	0.42	
DFA U.S. Micro Cap	0.52	\$5.20
Cat: Small Blend	1.13	
Blackrock Russell 2000 Index Fd	0.03	\$0.30
Cat: Small Cap Blend Index	0.42	
T. Rowe Price Mid-Cap Growth	0.61	\$7.50
Cat: Mid Growth	1.17	
Blackrock Mid Cap Equity Index Fund W	0.02	\$0.20
Cat: Mid Cap Blend Index	0.49	
Calvert US Large Cap Core Rspnb Idx R6	0.19	\$1.90
Cat: Socially Resp Large Cap	0.98	
Fidelity Contrafund Commingled Pool CI 2	0.38	\$3.80
Cat: Large Growth	1.07	
Vanguard Institutional 500 Index Trust	0.01	\$0.10
Cat: Large Cap Blend Index	0.45	
American Beacon Bridgeway Lg Cap Val	0.55	\$5.50
Cat: Large Value	0.99	
Stable Value Fund	0.32	\$3.20
Cat: Stable Value	0.70	
Dodge & Cox Income	0.42	\$4.20
Cat: Interm. Core-Plus Bond	0.80	

Asset-Weighted Average Expense Ratio: 0.21%

Name	Expense Ratio	Annual Expense per \$1000
Vanguard Wellington Adm	0.17	\$1.70
Cat: Moderate Allocation	1.10	
Vanguard Target Retirement 2055 Inv	0.07	\$0.70
Cat: Target Date 2050+	0.77	
Vanguard Target Retirement 2045 Inv	0.07	\$0.70
Cat: Target Date 2041-2045	0.76	
Vanguard Target Retirement 2035 Inv	0.07	\$0.70
Cat: Target Date 2031-2035	0.76	
Vanguard Target Retirement 2025 Inv	0.07	\$0.70
Cat: Target Date 2021-2025	0.73	
Vanguard Target Retirement 2015 Inv	0.07	\$0.70
Cat: Target Date 2011-2015	0.67	
Vanguard Target Retirement Income Inv	0.07	\$0.70
Cat: Retirement Income	0.76	
Vanguard Long-Term Invmt-Grade Adm	0.12	\$1.20
Cat: Corporate Bond	0.81	
Blackrock US Debt Index	0.03	\$0.30
Cat: Intermediate Bond Index	0.32	
Federated U.S. Govt. 2-5 Yr Instl*	0.59	\$5.90
Cat: Short Government	0.73	
Vanguard Adm Money Market	0.09	\$0.90
Average US Taxable Money Market Fund	0.46	

* The Federated U.S. Govt. 2-5 Yr Fund shares revenue back to the plan's participants, which is not reflected in the expense ratios above. The expense ratio of the fund including this reimbursement would be 0.44 for the Federated fund.



Target Date Fund Summary

Target Date Performance

12/31/2019

Name	Total Ret 3 Mth	Total Ret 1 Yr	Total Ret 3 Yr	Total Ret 5 Yr	Total Ret 10 Yr	Total Net Assets \$M	Expense Ratio	% Short- Term	% US Stocks	% Non US Stocks	% Inv Grade Bond	% High Yield Bond
Vanguard Target Retire Inc Trust I	2.65	13.27	6.36	4.80	5.82	10,700	0.07	2	18	12	68	0
S&P Target Date Retirement Income TR USD	3.05	13.33	6.23	4.67	5.50	-	-	-	-	-	-	-
Composite Returns*	2.65	13.76	6.16	4.41	5.25	-	-	-	-	-	-	-
Vanguard Target Retire 2015 Trust I	3.25	14.91	7.50	5.59	7.25	11,700	0.07	2	23	14	61	0
S&P Target Date 2015 TR USD	3.75	15.40	7.39	5.67	6.92	-	-	-	-	-	-	-
Composite Returns*	3.23	15.02	6.69	4.77	5.66	-	-	-	-	-	-	-
Vanguard Target Retire 2025 Trust I	5.29	19.78	9.57	6.99	8.59	51,400	0.07	2	37	23	38	0
S&P Target Date 2025 TR USD	4.97	18.38	8.80	6.73	8.13	-	-	-	-	-	-	-
Composite Returns*	5.12	18.99	8.36	5.85	6.87	-	-	-	-	-	-	-
Vanguard Target Retire 2035 Trust I	6.70	22.58	10.86	7.81	9.54	45,900	0.07	1	47	29	23	0
S&P Target Date 2035 TR USD	6.61	22.18	10.25	7.77	9.13	-	-	-	-	-	-	-
Composite Returns*	6.43	21.84	9.56	6.63	7.76	-	-	-	-	-	-	-
Vanguard Target Retire 2045 Trust I	8.04	25.10	11.80	8.41	9.98	34,000	0.07	1	54	35	10	0
S&P Target Date 2045 TR USD	7.48	24.02	11.01	8.32	9.67	-	-	-	-	-	-	-
Composite Returns*	7.49	24.01	10.47	7.21	8.38	-	-	-	-	-	-	-
Vanguard Target Retire 2055 Trust I	8.05	25.09	11.80	8.38	-	14,300	0.07	1	54	35	10	0
S&P Target Date 2055+ TR USD	7.73	24.48	11.34	8.58	-	-	-	-	-	-	-	-
Composite Returns*	7.49	24.02	10.47	7.21	8.39	-	-	-	-	-	-	-

*Composite benchmark consists of the following indices weighted to match the allocation of the specific target date fund:

MSCI Broad Market, MSCI EAFE, Barclays Aggregate Bond, and Barclays US Treasury 1-3 Month

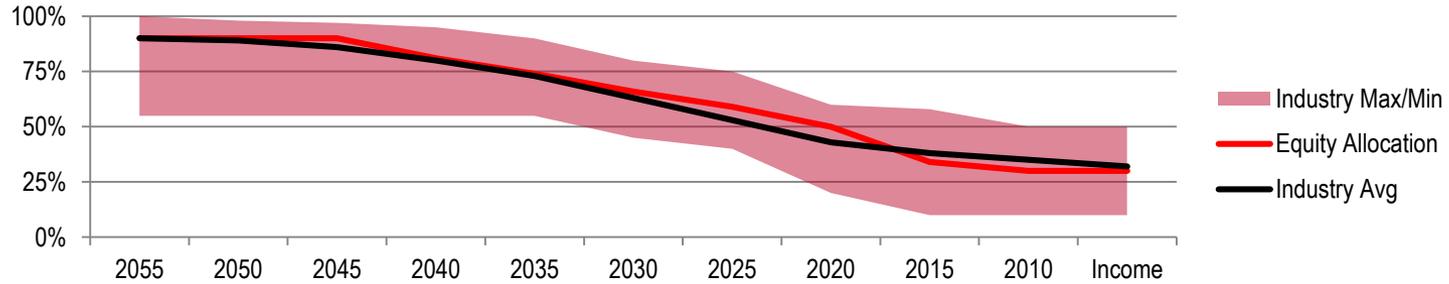
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Glide Path Summary

12/31/2019

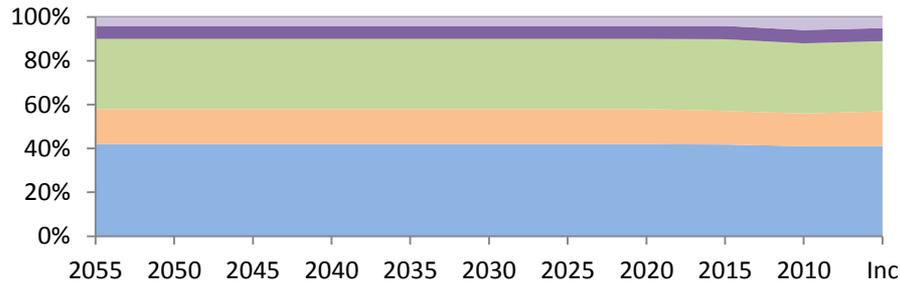
Data as of December 31, 2019



	<u>2055</u>	<u>2050</u>	<u>2045</u>	<u>2040</u>	<u>2035</u>	<u>2030</u>	<u>2025</u>	<u>2020</u>	<u>2015</u>	<u>2010</u>	<u>Income</u>
Equity %	90%	90%	90%	81%	74%	66%	59%	50%	34%	30%	30%
Industry Avg	89%	88%	85%	79%	71%	62%	53%	43%	38%	35%	32%

Equity Diversification

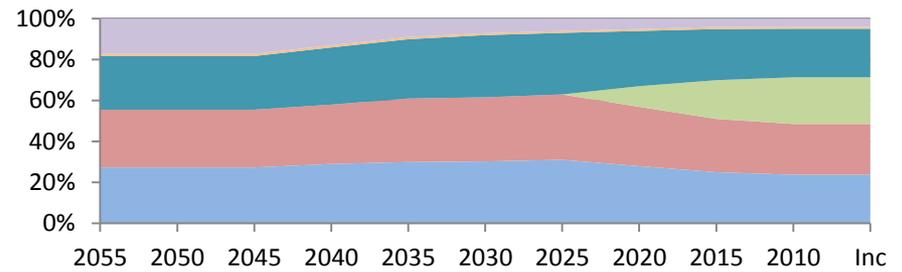
US Large Cap US Mid/Small Non-US - Dev Non-US - Emrg Other



	<u>2055</u>	<u>2050</u>	<u>2045</u>	<u>2040</u>	<u>2035</u>	<u>2030</u>	<u>2025</u>	<u>2020</u>	<u>2015</u>	<u>2010</u>	<u>Inc</u>
US Large Cap	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
US Mid/Small	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
Non-US - Dev	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%	31%
Non-US - Emrg	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Other	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%

Fixed Income Diversification

US Govt US Inv Grade US High Yield TIPS Foreign Other Cash



	<u>2055</u>	<u>2050</u>	<u>2045</u>	<u>2040</u>	<u>2035</u>	<u>2030</u>	<u>2025</u>	<u>2020</u>	<u>2015</u>	<u>2010</u>	<u>Inc</u>
US Govt	27%	27%	27%	29%	30%	30%	31%	28%	25%	24%	24%
US Inv Grade	28%	28%	28%	29%	31%	31%	32%	29%	26%	25%	25%
US High Yield	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TIPS	0%	0%	0%	0%	0%	0%	0%	10%	19%	23%	23%
Foreign	26%	26%	26%	28%	29%	30%	30%	27%	25%	24%	24%
Other	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Cash	17%	17%	17%	13%	9%	7%	6%	5%	4%	4%	4%



Expense Ratio Information

	Net Expense Ratio	Peer Rank	Gross Expense Ratio	Peer Rank
Cash Equiv				
Stable Value				
Stable Value (Wisconsin)	0.32		0.32	
Fixed Income				
Money Market-Taxable				
Vanguard Treasury Money Market Investor	0.09	1	0.09	1
Money Market-Taxable Median	0.50		0.59	
Short Government				
Federated US Govt 2-5 Yr Instl	0.59	34	0.92	51
Short Government Median	0.75		0.91	
Intermediate Core Bond				
BlackRock US Debt Index-W	0.03	3	0.03	2
Intermediate Core Bond Median	0.81		0.98	
Intermediate Core-Plus Bond				
Dodge & Cox Income	0.42	12	0.42	7
Intermediate Core-Plus Bond Median	0.70		0.83	
Long-term Bond				
Vanguard Long-Term Investment-Grade Adm	0.12	15	0.12	15
Long-Term Bond Median	0.76		0.87	
Balanced				
Allocation--50% to 70% Equity				
Vanguard Wellington Admiral	0.17	1	0.17	1
Allocation--50% to 70% Equity Median	1.15		1.30	
Target-Date Retirement				
The Vanguard Target Retire Inc Trust I	0.07	1	0.07	1
Target-Date Retirement Median	0.82		1.13	
Target-Date 2015				
The Vanguard Target Retire 2015 Trust I	0.07	1	0.07	1
Target-Date 2015 Median	0.84		1.17	
Target-Date 2025				
The Vanguard Target Retire 2025 Trust I	0.07	1	0.07	1
Target-Date 2025 Median	0.81		1.05	

Past performance is no guarantee of future results. Rankings provided based on total returns. Performance quoted for mutual funds may include performance of a predecessor fund/share class prior to the share class commencement of operations.



	Net Expense Ratio	Peer Rank	Gross Expense Ratio	Peer Rank
Target-Date 2035				
The Vanguard Target Retire 2035 Trust I	0.07	1	0.07	1
Target-Date 2035 Median	0.82		1.12	
Target-Date 2045				
The Vanguard Target Retire 2045 Trust I	0.07	1	0.07	1
Target-Date 2045 Median	0.81		1.15	
Target-Date 2055				
The Vanguard Target Retire 2055 Trust I	0.07	1	0.07	1
Target-Date 2055 Median	0.79		1.22	
Equity				
Large Value				
Bridgeway Large Cap Value CIT Class I	0.55	12	0.55	10
Large Value Median	1.03		1.20	
Large Blend				
Vanguard Institutional Index Instl PI	0.01	1	0.01	1
Calvert US Large Cap Core Rspnb Idx R6	0.19	6	0.32	9
Large Blend Median	1.00		1.17	
Large Growth				
Fidelity Contrafund Commingled Pool Cl 2	0.38	4	0.38	3
Large Growth Median	1.12		1.27	
Mid-Cap Blend				
BlackRock Mid Cap Equity Index- F	0.02	1	0.02	1
Mid-Cap Blend Median	1.10		1.25	
Mid-Cap Growth				
T. Rowe Price Instl Mid-Cap Equity Gr	0.61	5	0.61	4
Mid-Cap Growth Median	1.24		1.44	
Small Blend				
DFA US Micro Cap I	0.52	11	0.52	10
BlackRock Russell 2000 Index-T	0.03	2	0.03	2
Small Blend Median	1.17		1.29	

Past performance is no guarantee of future results. Rankings provided based on total returns. Performance quoted for mutual funds may include performance of a predecessor fund/share class prior to the share class commencement of operations.



	Net Expense Ratio	Peer Rank	Gross Expense Ratio	Peer Rank
International				
Foreign Large Blend				
BlackRock EAFE Equity Index-T	0.04	2	0.04	3
<i>Foreign Large Blend Median</i>	<i>1.10</i>		<i>1.28</i>	
Foreign Large Growth				
American Funds Europacific Growth R6	0.49	4	0.49	3
<i>Foreign Large Growth Median</i>	<i>1.15</i>		<i>1.32</i>	

Past performance is no guarantee of future results. Rankings provided based on total returns. Performance quoted for mutual funds may include performance of a predecessor fund/share class prior to the share class commencement of operations.



Fund Analysis

Please consider the investment objectives, risks, fees and expenses carefully before investing. The prospectus contains this and other information about the investment options. Depending on the investment options offered in your Plan, your registered representative can provide you with prospectuses for any mutual funds; any applicable annuity contracts and the annuity's underlying funds; and/or disclosure documents for investment options exempt from SEC registration. Please read them carefully before investing.

Past performance is not indicative of future results. Performance includes the reinvestment of any income. Returns will fluctuate; and an investment upon redemption may be worth more or less than its original value. Current performance may be higher or lower than the performance data shown. For up-to-date month end performance information please call 800-345-2345.

Rankings provided based on total return.

Sources: MPI Stylus Web, Morningstar, individual investment managers

In order to present the most complete information possible, mutual fund share classes are used as a proxy in the following pages for the commingled trusts included in the Deferred Compensation Plan. To indicate these pages, the fund name at the top of the page has been italicized.



Fund Incep Date: 07/01/1998	Benchmark: ML 3-month T-Bill	Category: Stable Value	Net Assets: \$689.15M	Manager Name: Team Managed	Manager Start Date: 06/30/1998	Expense Ratio: 0.30%	Expense Rank: NA
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	0.00%
Industrials	0.00%
Technology	0.00%
Energy	0.00%

Cyclical

Basic Materials	0.00%
Consumer Cyclical	0.00%
Real Estate	0.00%
Financial Services	0.00%

Defensive

Consumer Defensive	0.00%
Healthcare	0.00%
Utilities	0.00%

TOP 10 HOLDINGS

Total:		NA%
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ASSET LOADINGS (Returns-based)

FUND EXPOSURES (WEIGHT) (Jan 17-Dec 19)



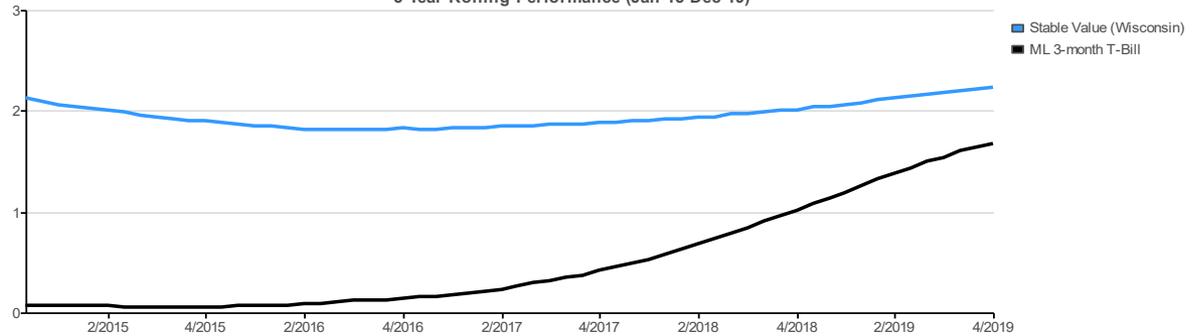
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	100.0	100.0	99.9	100.0
Mortgages	0.0	0.0	0.0	0.0
Gov/Corp Bonds	0.0	0.0	0.1	0.0

INVESTMENT OVERVIEW

To provide safety of principal and a stable crediting rate, while generating a competitive return.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	0.65	2.56	2.56 / NA	2.24 / NA	2.09 / NA	2.04 / NA	2.40 / NA	4.06
Benchmark	0.46	2.28	2.28 / NA	1.67 / NA	1.07 / NA	0.78 / NA	0.58 / NA	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	2.56	2.25	1.89	1.89	1.85	1.73	2.10	2.63	3.13
Benchmark	2.28	1.87	0.86	0.33	0.05	0.03	0.07	0.11	0.10

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark
Alpha	0.56	0.00
Beta	0.00	0.00
R-Squared	0.00	0.00
Sharpe Ratio	5.92	0.00
Up Market Capture	134.03	100.00
Down Market Capture	NA	NA

5 Yr	Fund	Benchmark
Alpha	1.00	0.00
Beta	0.00	0.00
R-Squared	0.00	0.00
Sharpe Ratio	11.01	0.00
Up Market Capture	187.89	100.00
Down Market Capture	-2787.19	100.00

NOTES



Fund Incep Date: 02/18/1983	Benchmark: BofAML US Treasuries 3-5 Yr TR USD	Category: Short Government	Net Assets: \$210.00M	Manager Name: J. Andrew Kirschler	Manager Start Date: 07/05/2013	Expense Ratio: 0.59%	Expense Rank: 34
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



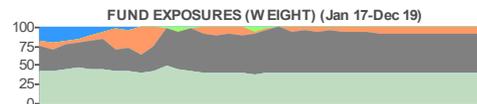
Credit Quality (%)

AAA	100.00%
AA	0.00%
A	0.00%
BBB	0.00%
BB	0.00%
B	0.00%
Below B	0.00%
NR/NA	0.00%
Total:	100.00%

Sector (%)

% Government	87.33%
% Municipal	0.00%
% Corporate	0.00%
% Securitized	12.24%
% Cash and Equivalent	0.43%
% Derivative	0.00%
Total:	100.00%

ASSET LOADINGS (Returns-based)

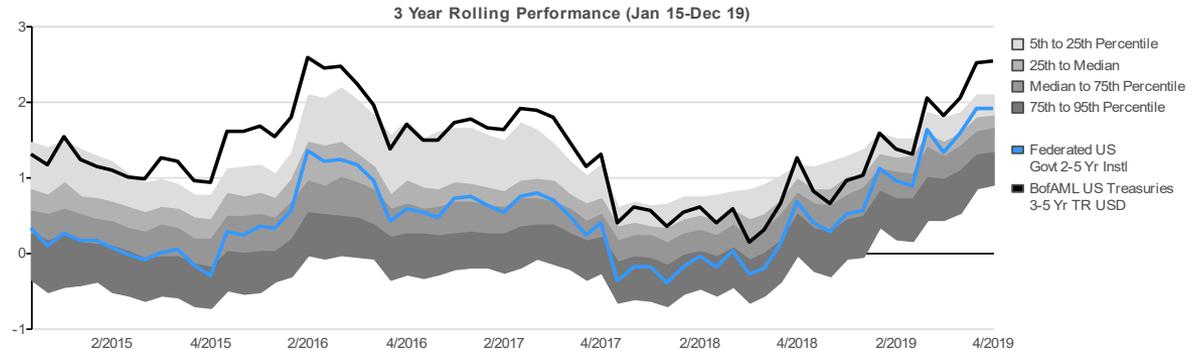


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	39.2	32.9	40.9	32.1
Credit Bond	0.2	0.0	0.0	0.0
Govt Bond	51.5	48.2	46.7	49.6
HY Corp Bond	0.0	0.0	0.0	0.0
MBS	9.1	18.9	9.1	15.9
Muni Bond	0.0	0.0	0.6	1.1
TIPS	0.0	0.0	2.7	1.2

INVESTMENT OVERVIEW

The investment seeks current income. The fund buys and sells portfolio securities based primarily on the Adviser's market outlook and analysis of how securities may perform under different market conditions. It may also use derivative contracts and/or hybrid instruments to implement elements of its strategies, particularly to manage duration and hedge against potential losses. The fund may also invest in government securities that are supported by the full faith and credit of the U.S. government.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	0.00	4.57	4.57 / 2	1.92 / 20	1.33 / 31	0.80 / 58	1.56 / 31	5.47
Benchmark	0.10	5.21	5.21 / 1	2.52 / 1	2.10 / 1	1.67 / 2	2.50 / 3	
Peer Group Median	0.25	3.22	3.22 / 50	1.65 / 50	1.23 / 50	0.90 / 50	1.28 / 50	
Number of Funds			101	101	101	97	93	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	4.57	0.94	0.28	0.80	0.13	0.83	-1.84	1.16	4.67
Benchmark	5.21	1.47	0.95	1.34	1.59	2.14	-0.91	1.58	6.23
Peer Group Median	3.22	1.12	0.49	0.63	0.27	0.80	-0.64	1.07	1.82

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.55	0.00	-0.39
Beta	0.94	1.00	0.40
R-Squared	98.08	100.00	90.85
Sharpe Ratio	0.13	0.40	-0.03
Up Market Capture	86.54	100.00	50.04
Down Market Capture	102.68	100.00	30.95

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.63	0.00	-0.27
Beta	0.88	1.00	0.37
R-Squared	97.03	100.00	88.80
Sharpe Ratio	0.13	0.44	0.12
Up Market Capture	80.62	100.00	44.87
Down Market Capture	98.92	100.00	33.54

NOTES



Fund Incep Date: 07/02/1993	Benchmark: BBgBarc US Aggregate Bond Index	Category: Intermediate Core Bond	Net Assets: \$2,044.00M	Manager Name: Scott Radell	Manager Start Date: 05/01/2009	Expense Ratio: 0.05%	Expense Rank: 3
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



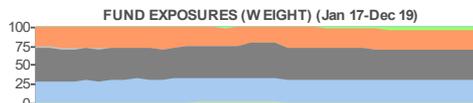
Credit Quality (%)

AAA	73.08%
AA	2.67%
A	10.74%
BBB	13.51%
BB	0.00%
B	0.00%
Below B	0.00%
NR/NA	0.00%
Total:	100.00%

Sector (%)

% Government	42.06%
% Municipal	0.58%
% Corporate	23.41%
% Securitized	25.63%
% Cash and Equivalent	8.33%
% Derivative	0.00%
Total:	100.01%

ASSET LOADINGS (Returns-based)

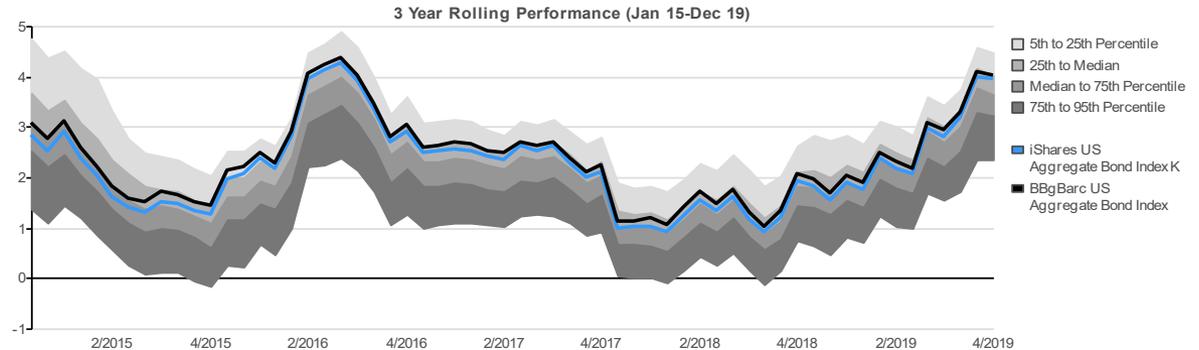


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.8	0.6	0.6
Credit Bond	29.2	30.1	29.9	30.3
Govt Bond	41.4	41.8	42.1	41.2
HY Corp Bond	0.0	0.0	0.3	0.1
MBS	25.6	26.8	25.8	27.4
Muni Bond	3.7	0.6	1.5	0.4
TIPS	0.0	0.0	0.0	0.0

INVESTMENT OVERVIEW

The investment seeks to provide investment results that correspond to the total return performance of fixed-income securities in the aggregate, as represented by the Bloomberg Barclays U.S. Aggregate Bond Index. The fund is a "feeder" fund that invests all of its assets in the Master Portfolio of MIP, which has the same investment objective and strategies as the fund. Under normal circumstances, at least 90% of the value of the fund's assets, plus the amount of any borrowing for investment purposes, is invested in securities comprising the Barclays U.S. Aggregate Index.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	0.18	8.71	8.71 / 32	3.94 / 33	2.94 / 36	2.58 / 36	3.62 / 50	5.03
Benchmark	0.18	8.72	8.72 / 32	4.03 / 26	3.05 / 24	2.72 / 25	3.75 / 41	
Peer Group Median	0.09	8.32	8.32 / 50	3.65 / 50	2.76 / 50	2.45 / 50	3.62 / 50	
Number of Funds			439	416	391	383	359	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	8.71	-0.08	3.39	2.53	0.38	5.93	-2.35	3.93	7.54
Benchmark	8.72	0.01	3.54	2.65	0.55	5.97	-2.02	4.22	7.84
Peer Group Median	8.32	-0.39	3.31	2.52	0.16	5.39	-2.08	5.80	6.43

RISK & PERFORMANCE STATISTICS

	3 Yr	Fund	Benchmark	Peer Group Median
Alpha		-0.09	0.00	-0.15
Beta		1.00	1.00	0.95
R-Squared		99.77	100.00	96.78
Sharpe Ratio		0.77	0.80	0.73
Up Market Capture		98.88	100.00	93.40
Down Market Capture		100.90	100.00	97.03

	5 Yr	Fund	Benchmark	Peer Group Median
Alpha		-0.11	0.00	-0.13
Beta		1.00	1.00	0.95
R-Squared		99.76	100.00	96.30
Sharpe Ratio		0.61	0.65	0.59
Up Market Capture		99.25	100.00	94.10
Down Market Capture		102.59	100.00	97.36

NOTES



Fund Incep Date: 01/03/1989	Benchmark: BBgBarc US Aggregate Bond Index	Category: Intermediate Core-Plus Bond	Net Assets: \$63,222.00M	Manager Name: Dana M. Emery	Manager Start Date: 01/03/1989	Expense Ratio: 0.42%	Expense Rank: 12
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



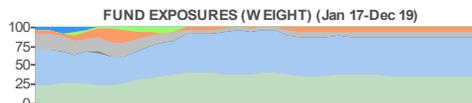
Credit Quality (%)

AAA	53.00%
AA	5.60%
A	5.90%
BBB	29.90%
BB	5.60%
B	0.00%
Below B	0.01%
NR/NA	0.00%
Total:	100.01%

Sector (%)

% Government	10.96%
% Municipal	2.81%
% Corporate	36.89%
% Securitized	43.44%
% Cash and Equivalent	5.89%
% Derivative	0.00%
Total:	99.99%

ASSET LOADINGS (Returns-based)

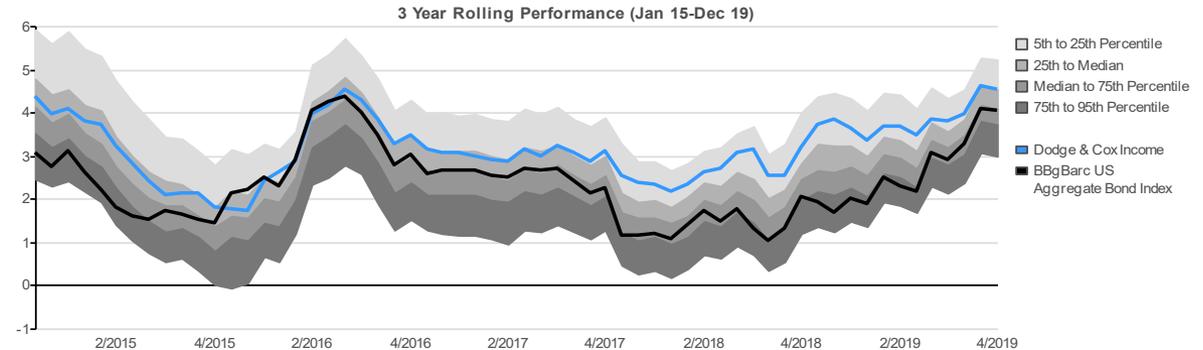


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	35.9	0.8	33.7	0.6
Credit Bond	49.7	30.1	48.1	30.3
Govt Bond	0.0	41.8	0.1	41.2
HY Corp Bond	6.8	0.0	9.8	0.1
MBS	7.7	26.8	6.1	27.4
Muni Bond	0.0	0.6	1.4	0.4
TIPS	0.0	0.0	0.8	0.0

INVESTMENT OVERVIEW

The investment seeks a high and stable rate of current income, consistent with long-term preservation of capital. The fund invests in a diversified portfolio of bonds and other debt securities. Under normal circumstances, the fund will invest at least 80% of its total assets in (1) investment-grade debt securities and (2) cash equivalents. "Investment grade" means securities rated Baa3 or higher by Moody's Investors Service, or BBB- or higher by Standard & Poor's Ratings Group or Fitch Ratings, or equivalently rated by any nationally recognized statistical rating organization, or, if unrated, deemed to be of similar quality by Dodge & Cox.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	0.87	9.75	9.75 / 32	4.52 / 25	3.70 / 17	3.51 / 17	4.43 / 39	6.66
Benchmark	0.18	8.72	8.72 / 66	4.03 / 57	3.05 / 60	2.72 / 62	3.75 / 82	
Peer Group Median	0.33	9.24	9.24 / 50	4.10 / 50	3.17 / 50	2.89 / 50	4.27 / 50	
Number of Funds			624	579	528	513	461	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	9.75	-0.31	4.36	5.61	-0.59	5.48	0.64	7.94	4.76
Benchmark	8.72	0.01	3.54	2.65	0.55	5.97	-2.02	4.22	7.84
Peer Group Median	9.24	-0.80	4.22	3.80	-0.26	5.58	-1.05	7.92	6.26

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	1.39	0.00	0.48
Beta	0.60	1.00	0.85
R-Squared	73.31	100.00	89.24
Sharpe Ratio	1.36	0.80	0.93
Up Market Capture	83.10	100.00	93.25
Down Market Capture	26.44	100.00	77.03

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	1.34	0.00	0.41
Beta	0.63	1.00	0.88
R-Squared	59.62	100.00	84.73
Sharpe Ratio	1.03	0.65	0.73
Up Market Capture	86.71	100.00	94.33
Down Market Capture	47.02	100.00	86.21

NOTES



Vanguard Long-Term Investment-Grade Adm VWETX

12/31/2019

Fund Incep Date: 02/12/2001	Benchmark: BBgBarc US Credit A+ Long TR USD	Category: Long-term Bond	Net Assets: \$19,302.00M	Manager Name: Scott I. St. John	Manager Start Date: 05/28/2014	Expense Ratio: 0.12%	Expense Rank: 15
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



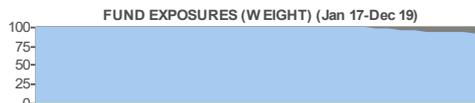
Credit Quality (%)

AAA	15.87%
AA	17.91%
A	60.24%
BBB	5.04%
BB	0.08%
B	0.03%
Below B	0.00%
NR/NA	0.83%
Total:	100.00%

Sector (%)

% Government	7.51%
% Municipal	10.36%
% Corporate	76.40%
% Securitized	2.73%
% Cash and Equivalent	3.00%
% Derivative	0.00%
Total:	100.00%

ASSET LOADINGS (Returns-based)

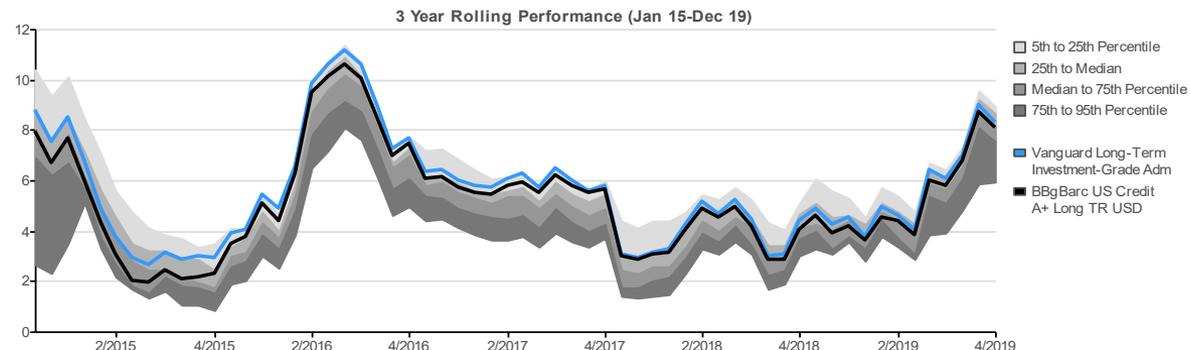


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.0	0.0	0.0
Credit Bond	91.5	100.0	98.5	100.0
Govt Bond	8.5	0.0	1.5	0.0
HY Corp Bond	0.0	0.0	0.0	0.0
MBS	0.0	0.0	0.0	0.0
Muni Bond	0.0	0.0	0.0	0.0
TIPS	0.0	0.0	0.0	0.0

INVESTMENT OVERVIEW

The investment seeks to provide a high and sustainable level of current income. The fund invests in a variety of high-quality and, to a lesser extent, medium-quality fixed income securities, at least 80% of which will be intermediate- and long-term investment-grade securities. High-quality fixed income securities are those rated the equivalent of A3 or better; medium-quality fixed income securities are those rated the equivalent of Baa1, Baa2, or Baa3. The fund's dollar-weighted average maturity is expected to fall within a range that is five years shorter than or five years longer than that of its benchmark index.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	-0.30	20.52	20.52 / 49	8.33 / 39	6.07 / 22	5.93 / 6	8.08 / 18	7.38
Benchmark	0.11	20.85	20.85 / 46	8.07 / 60	5.95 / 31	5.54 / 31	7.76 / 36	
Peer Group Median	0.22	20.47	20.47 / 50	8.11 / 50	5.46 / 50	5.14 / 50	7.59 / 50	
Number of Funds			40	40	38	37	35	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	20.52	-5.86	12.04	7.92	-2.11	18.28	-5.77	11.77	17.30
Benchmark	20.85	-6.32	11.49	7.88	-1.95	17.22	-6.79	11.10	18.42
Peer Group Median	20.47	-5.24	11.54	6.76	-3.37	16.61	-5.82	11.77	16.90

RISK & PERFORMANCE STATISTICS

	Fund	Benchmark	Peer Group Median
3 Yr			
Alpha	0.14	0.00	0.58
Beta	1.02	1.00	0.95
R-Squared	99.15	100.00	95.49
Sharpe Ratio	0.92	0.91	0.98
Up Market Capture	100.45	100.00	95.28
Down Market Capture	96.80	100.00	80.75
5 Yr			
Alpha	-0.02	0.00	-0.13
Beta	1.03	1.00	0.96
R-Squared	99.04	100.00	95.34
Sharpe Ratio	0.65	0.65	0.62
Up Market Capture	102.54	100.00	98.51
Down Market Capture	102.55	100.00	94.50

NOTES



Fund Incep Date: 05/14/2001	Benchmark: S&P 500 Index	Category: Allocation--50% to 70% Equity	Net Assets: \$112,555.00M	Manager Name: Edward P. Bousa	Manager Start Date: 12/31/2002	Expense Ratio: 0.17%	Expense Rank: 1
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	7.53%
Industrials	10.33%
Technology	15.80%
Energy	6.85%

Cyclical

Basic Materials	1.63%
Consumer Cyclical	5.80%
Real Estate	2.79%
Financial Services	22.66%

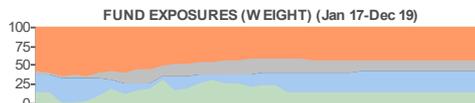
Defensive

Consumer Defensive	7.37%
Healthcare	14.36%
Utilities	4.88%

TOP 10 HOLDINGS

Microsoft Corp	3.24%
Verizon Communications Inc	2.51%
JPMorgan Chase & Co	2.39%
Bank of America Corp	2.15%
Alphabet Inc A	2.00%
Comcast Corp Class A	1.78%
Chubb Ltd	1.63%
Chevron Corp	1.58%
Medtronic PLC	1.26%
AstraZeneca PLC ADR	1.18%
Total:	19.72%

ASSET LOADINGS (Returns-based)

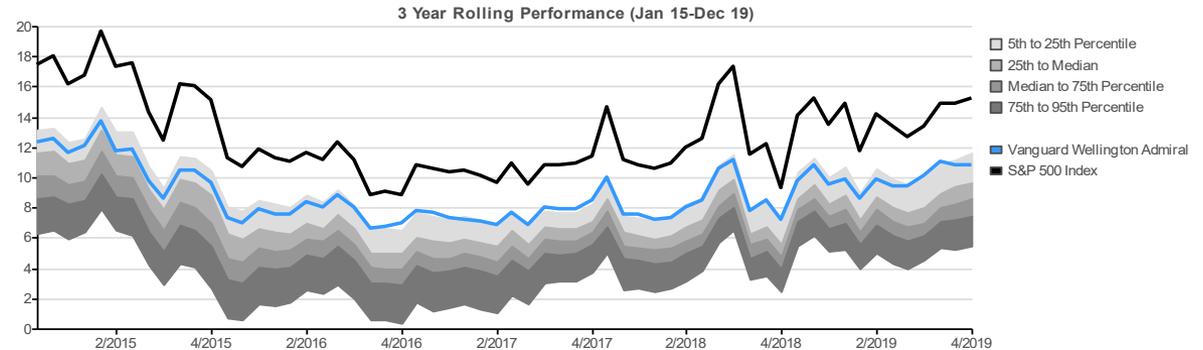


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	12.9	0.3	15.8	0.3
US Bonds	28.1	0.0	21.3	0.2
Intl Bonds	0.0	1.6	0.0	1.1
Intl Equity	15.6	3.8	14.4	4.4
US Equity	43.3	94.3	48.5	94.0

INVESTMENT OVERVIEW

The investment seeks to provide long-term capital appreciation and moderate current income. The fund invests 60% to 70% of its assets in dividend-paying and, to a lesser extent, non-dividend-paying common stocks of established large companies. The remaining 30% to 40% of the fund's assets are invested mainly in fixed income securities that the advisor believes will generate a moderate level of current income. These securities include investment-grade corporate bonds, with some exposure to U.S. Treasury and government agency bonds, and mortgage-backed securities.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	5.23	22.61	22.61 / 10	10.81 / 8	8.65 / 4	10.35 / 5	9.99 / 7	7.95
Benchmark	9.07	31.49	31.49 / 1	15.27 / 1	11.70 / 1	14.73 / 1	13.56 / 1	
Peer Group Median	5.24	19.38	19.38 / 50	8.60 / 50	6.26 / 50	7.77 / 50	8.00 / 50	
Number of Funds			707	685	649	634	536	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	22.61	-3.35	14.82	11.09	0.14	9.90	19.76	12.67	3.95
Benchmark	31.49	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11
Peer Group Median	19.38	-5.78	13.93	6.76	-1.38	6.19	17.15	12.19	-0.04

RISK & PERFORMANCE STATISTICS

	Fund	Benchmark	Peer Group Median
3 Yr			
Alpha	1.32	0.00	-0.93
Beta	0.57	1.00	0.59
R-Squared	92.97	100.00	92.55
Sharpe Ratio	1.25	1.10	0.93
Up Market Capture	60.96	100.00	55.77
Down Market Capture	53.55	100.00	59.11
5 Yr			
Alpha	1.05	0.00	-1.21
Beta	0.60	1.00	0.61
R-Squared	93.70	100.00	91.30
Sharpe Ratio	1.01	0.90	0.70
Up Market Capture	64.20	100.00	56.66
Down Market Capture	59.69	100.00	64.04

NOTES



Fund Incep Date: 02/03/2012	Benchmark: Russell 1000 Value Index	Category: Large Value	Net Assets: \$3,618.00M	Manager Name: John N.R. Montgomery	Manager Start Date: 10/31/2003	Expense Ratio: 0.79%	Expense Rank: 30
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	5.58%
Industrials	9.41%
Technology	8.49%
Energy	6.59%

Cyclical

Basic Materials	4.49%
Consumer Cyclical	12.89%
Real Estate	4.89%
Financial Services	29.62%

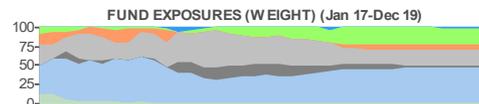
Defensive

Consumer Defensive	8.08%
Healthcare	8.99%
Utilities	0.97%

TOP 10 HOLDINGS

Procter & Gamble Co	1.84%
Merck & Co Inc	1.80%
Bank of America Corp	1.77%
Marathon Petroleum Corp	1.75%
Norfolk Southern Corp	1.69%
Pfizer Inc	1.68%
Alexandria Real Estate Equities Inc	1.68%
LyondellBasell Industries NV	1.68%
Air Products & Chemicals Inc	1.61%
Citigroup Inc	1.58%
Total:	17.08%

ASSET LOADINGS (Returns-based)



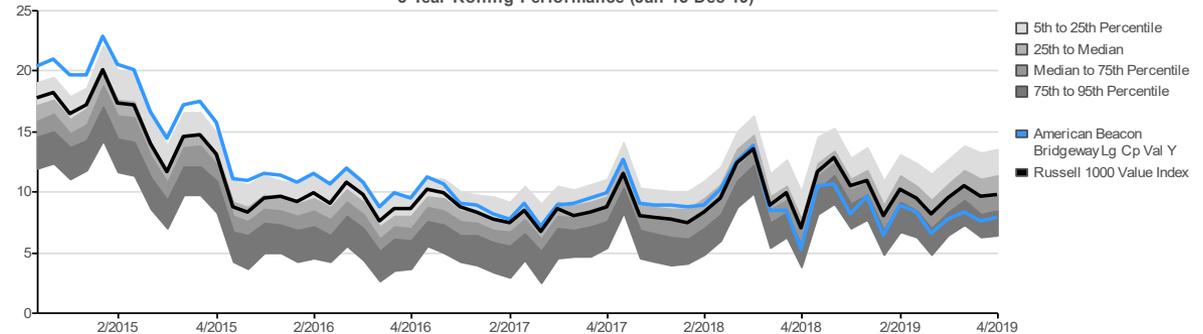
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.0	1.1	0.0
Top Value	46.6	67.6	44.0	67.9
Top Growth	3.0	0.1	7.0	0.1
Mid Value	19.4	32.3	28.6	31.9
Mid Growth	6.7	0.0	5.6	0.0
Sm Value	22.2	0.0	12.9	0.0
Sm Growth	2.1	0.0	0.9	0.0

INVESTMENT OVERVIEW

The investment seeks to provide long-term total return on capital, primarily through capital appreciation and some income. The fund invests in a diversified portfolio of stocks of large capitalization companies that are listed on the New York Stock Exchange, NYSE American, or NASDAQ. Under normal market conditions, at least 80% of Fund net assets (plus borrowings for investment purposes) are invested in stocks from among those in the large-cap value category at the time of purchase.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	7.34	25.06	25.06 / 53	7.86 / 85	7.56 / 62	12.36 / 26	12.07 / 17	12.41
Benchmark	7.41	26.54	26.54 / 33	9.68 / 54	8.29 / 42	12.20 / 30	11.80 / 23	
Peer Group Median	7.19	25.24	25.24 / 50	9.80 / 50	7.97 / 50	11.59 / 50	10.91 / 50	
Number of Funds			1227	1176	1082	1035	948	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	25.06	-13.35	15.81	16.16	-1.24	14.15	37.55	17.98	2.33
Benchmark	26.54	-8.27	13.66	17.34	-3.83	13.45	32.53	17.51	0.39
Peer Group Median	25.24	-8.81	16.13	14.32	-3.58	10.96	31.61	14.97	-0.79

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-2.39	0.00	0.29
Beta	1.11	1.00	0.99
R-Squared	95.91	100.00	95.55
Sharpe Ratio	0.50	0.69	0.70
Up Market Capture	99.77	100.00	99.77
Down Market Capture	113.38	100.00	98.81

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.94	0.00	-0.27
Beta	1.05	1.00	0.99
R-Squared	94.91	100.00	94.62
Sharpe Ratio	0.55	0.64	0.60
Up Market Capture	96.96	100.00	97.70
Down Market Capture	100.96	100.00	99.46

NOTES



Fund Incep Date: 07/07/1997	Benchmark: S&P 500 Index	Category: Large Blend	Net Assets: \$242,173.00M	Manager Name: Donald M. Butler	Manager Start Date: 12/31/2000	Expense Ratio: 0.02%	Expense Rank: 1
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	10.40%
Industrials	9.82%
Technology	19.38%
Energy	4.23%

Cyclical

Basic Materials	2.30%
Consumer Cyclical	9.62%
Real Estate	2.99%
Financial Services	15.98%

Defensive

Consumer Defensive	7.59%
Healthcare	14.40%
Utilities	3.30%

TOP 10 HOLDINGS

Microsoft Corp	4.41%
Apple Inc	4.33%
Amazon.com Inc	2.86%
Facebook Inc A	1.85%
Berkshire Hathaway Inc B	1.65%
JPMorgan Chase & Co	1.59%
Alphabet Inc Class C	1.50%
Alphabet Inc A	1.49%
Johnson & Johnson	1.38%
Visa Inc Class A	1.22%
Total:	22.28%

ASSET LOADINGS (Returns-based)



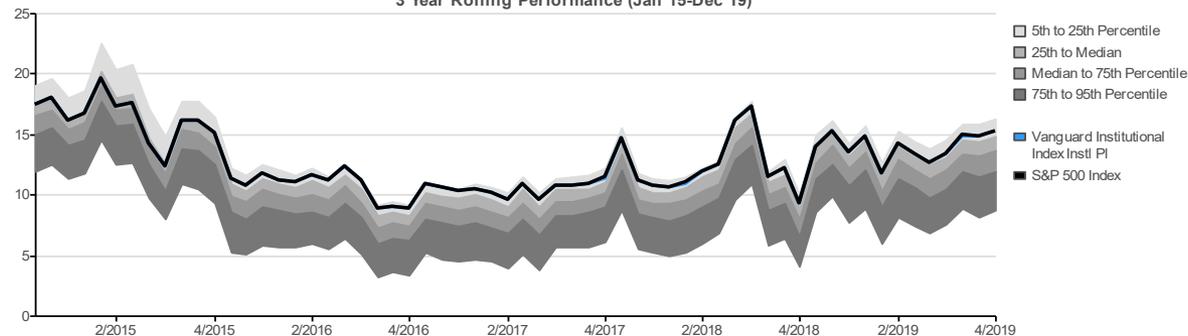
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.2	0.2	0.1	0.1
Top Value	39.2	39.2	39.8	39.8
Top Growth	44.1	44.0	42.8	42.7
Mid Value	12.4	12.4	11.3	11.4
Mid Growth	4.2	4.2	6.1	6.1
Sm Value	0.0	0.0	0.0	0.0
Sm Growth	0.0	0.0	0.0	0.0

INVESTMENT OVERVIEW

The investment seeks to track the performance of a benchmark index that measures the investment return of large-capitalization stocks. The fund employs an indexing investment approach designed to track the performance of the Standard & Poor's 500 Index, a widely recognized benchmark of U.S. stock market performance that is dominated by the stocks of large U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	9.07	31.48	31.48 / 22	15.26 / 15	11.69 / 8	14.72 / 7	13.55 / 7	7.84
Benchmark	9.07	31.49	31.49 / 22	15.27 / 15	11.70 / 8	14.73 / 7	13.56 / 7	
Peer Group Median	8.65	29.65	29.65 / 50	13.63 / 50	10.13 / 50	13.33 / 50	12.30 / 50	
Number of Funds			1410	1293	1208	1129	1045	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	31.48	-4.41	21.82	11.95	1.39	13.68	32.37	16.00	2.12
Benchmark	31.49	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11
Peer Group Median	29.65	-5.88	20.99	10.65	-0.19	11.79	31.96	15.41	-0.16

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.01	0.00	-1.22
Beta	1.00	1.00	1.00
R-Squared	100.00	100.00	96.32
Sharpe Ratio	1.10	1.10	0.98
Up Market Capture	99.95	100.00	94.68
Down Market Capture	100.04	100.00	101.13

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.01	0.00	-1.25
Beta	1.00	1.00	1.00
R-Squared	100.00	100.00	95.68
Sharpe Ratio	0.90	0.90	0.77
Up Market Capture	99.97	100.00	95.03
Down Market Capture	100.02	100.00	102.26

NOTES



Fund Incep Date: 10/03/2017	Benchmark: S&P 500 Index	Category: Large Blend	Net Assets: \$2,191.00M	Manager Name: Thomas C. Seto	Manager Start Date: 12/31/2016	Expense Ratio: 0.19%	Expense Rank: 6
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	9.57%
Industrials	10.67%
Technology	22.42%
Energy	0.20%

Cyclical

Basic Materials	1.81%
Consumer Cyclical	11.09%
Real Estate	0.31%
Financial Services	17.32%

Defensive

Consumer Defensive	7.95%
Healthcare	15.45%
Utilities	3.22%

TOP 10 HOLDINGS

Microsoft Corp	4.24%
Apple Inc	4.21%
Amazon.com Inc	2.96%
Alphabet Inc A	2.88%
JPMorgan Chase & Co	1.52%
Visa Inc Class A	1.33%
Procter & Gamble Co	1.29%
Bank of America Corp	1.15%
AT&T Inc	1.14%
Mastercard Inc A	1.09%
Total:	21.82%

ASSET LOADINGS (Returns-based)



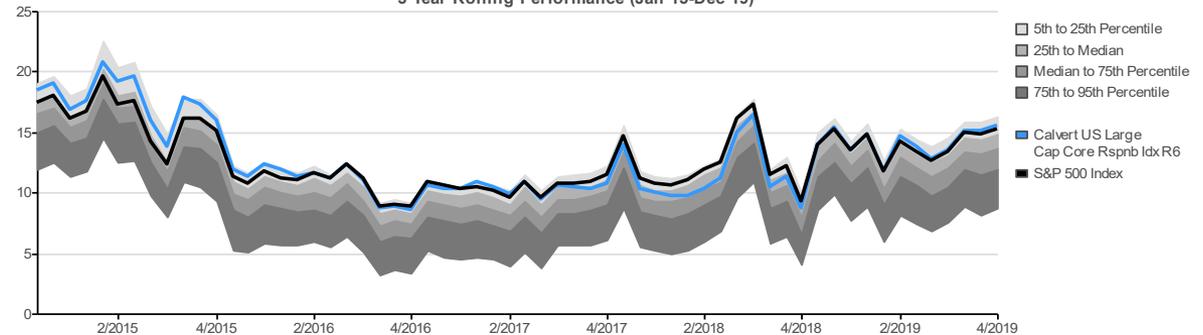
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.2	0.3	0.1
Top Value	43.7	39.2	40.2	39.8
Top Growth	28.0	44.0	29.3	42.7
Mid Value	1.9	12.4	1.9	11.4
Mid Growth	20.6	4.2	25.1	6.1
Sm Value	0.0	0.0	0.4	0.0
Sm Growth	5.7	0.0	2.8	0.0

INVESTMENT OVERVIEW

The investment seeks to track the performance of the Calvert US Large-Cap Core Responsible Index, which measures the investment return of large-capitalization stocks. The fund normally invests at least 95% of its net assets, including borrowings for investment purposes, in securities contained in the index. The index is composed of the common stocks of large companies that operate their businesses in a manner consistent with the Calvert Principles for Responsible Investment.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	9.45	32.85	32.85 / 10	15.58 / 12	11.57 / 12	15.07 / 4	13.59 / 6	14.07
Benchmark	9.07	31.49	31.49 / 22	15.27 / 15	11.70 / 8	14.73 / 7	13.56 / 7	
Peer Group Median	8.65	29.65	29.65 / 50	13.63 / 50	10.13 / 50	13.33 / 50	12.30 / 50	
Number of Funds			1410	1293	1208	1129	1045	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	32.85	-4.06	21.12	10.71	1.14	14.41	35.04	17.71	0.05
Benchmark	31.49	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11
Peer Group Median	29.65	-5.88	20.99	10.65	-0.19	11.79	31.96	15.41	-0.16

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.08	0.00	-1.22
Beta	1.03	1.00	1.00
R-Squared	98.96	100.00	96.32
Sharpe Ratio	1.09	1.10	0.98
Up Market Capture	102.04	100.00	94.68
Down Market Capture	101.65	100.00	101.13

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.43	0.00	-1.25
Beta	1.04	1.00	1.00
R-Squared	98.65	100.00	95.68
Sharpe Ratio	0.86	0.90	0.77
Up Market Capture	101.88	100.00	95.03
Down Market Capture	104.18	100.00	102.26

NOTES



Fund Incep Date: 05/17/1967	Benchmark: Russell 1000 Growth Index	Category: Large Growth	Net Assets: \$120,129.00M	Manager Name: William Danoff	Manager Start Date: 09/17/1990	Expense Ratio: 0.82%	Expense Rank: 25
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	18.03%
Industrials	2.68%
Technology	24.08%
Energy	1.13%

Cyclical

Basic Materials	2.11%
Consumer Cyclical	11.84%
Real Estate	0.85%
Financial Services	21.53%

Defensive

Consumer Defensive	4.10%
Healthcare	13.46%
Utilities	0.20%

TOP 10 HOLDINGS

Facebook Inc A	7.40%
Amazon.com Inc	6.56%
Berkshire Hathaway Inc A	5.45%
Microsoft Corp	5.42%
Visa Inc Class A	3.91%
Salesforce.com Inc	3.81%
UnitedHealth Group Inc	2.97%
Alphabet Inc A	2.76%
Adobe Inc	2.75%
Mastercard Inc A	2.57%
Total:	43.60%

ASSET LOADINGS (Returns-based)

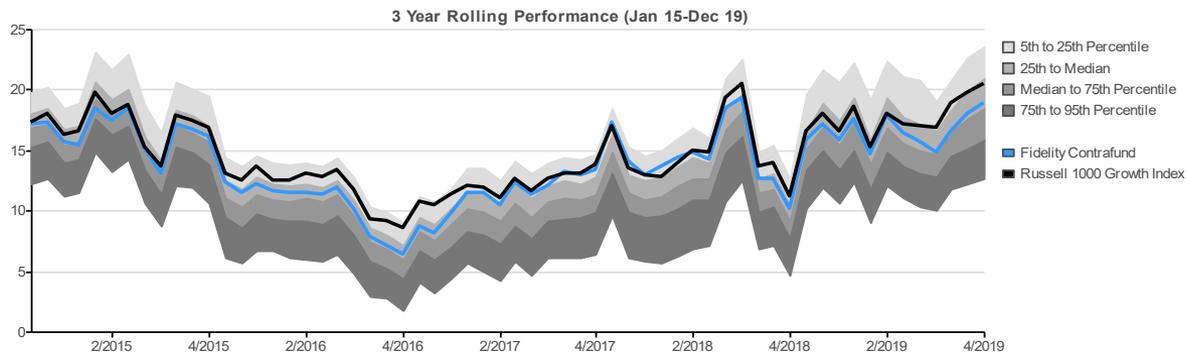


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.1	0.0	0.1
Top Value	0.0	0.0	0.0	0.0
Top Growth	81.0	77.1	91.5	76.2
Mid Value	0.0	0.3	0.0	0.1
Mid Growth	19.0	22.2	8.4	23.4
Sm Value	0.0	0.0	0.0	0.0
Sm Growth	0.0	0.3	0.0	0.2

INVESTMENT OVERVIEW

The investment seeks capital appreciation. The fund normally invests primarily in common stocks. It invests in securities of companies whose value the advisor believes is not fully recognized by the public. The fund invests in domestic and foreign issuers. It invests in either "growth" stocks or "value" stocks or both. The fund uses fundamental analysis of factors such as each issuer's financial condition and industry position, as well as market and economic conditions to select investments.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	10.30	29.98	29.98 / 71	18.92 / 46	13.10 / 39	15.37 / 46	13.96 / 40	12.58
Benchmark	10.62	36.39	36.39 / 18	20.49 / 30	14.63 / 15	16.92 / 13	15.22 / 11	
Peer Group Median	9.46	32.31	32.31 / 50	18.40 / 50	12.41 / 50	15.13 / 50	13.62 / 50	
Number of Funds			1378	1323	1268	1236	1108	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	29.98	-2.13	32.21	3.36	6.46	9.56	34.15	16.26	-0.14
Benchmark	36.39	-1.51	30.21	7.08	5.67	13.05	33.48	15.26	2.64
Peer Group Median	32.31	-2.16	28.27	3.18	3.76	10.33	34.20	15.25	-1.86

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-1.67	0.00	-1.45
Beta	1.02	1.00	0.99
R-Squared	95.77	100.00	93.55
Sharpe Ratio	1.21	1.36	1.20
Up Market Capture	96.28	100.00	92.92
Down Market Capture	103.27	100.00	99.39

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.97	0.00	-1.96
Beta	0.97	1.00	0.99
R-Squared	95.02	100.00	92.83
Sharpe Ratio	0.94	1.04	0.86
Up Market Capture	92.05	100.00	93.86
Down Market Capture	96.40	100.00	104.66

NOTES



T. Rowe Price Instl Mid-Cap Equity Gr PMEGX

12/31/2019

Fund Incep Date: 07/31/1996	Benchmark: Russell Mid-Cap Growth Index	Category: Mid-Cap Growth	Net Assets: \$8,122.00M	Manager Name: Brian W.H. Berghuis	Manager Start Date: 07/31/1996	Expense Ratio: 0.61%	Expense Rank: 5
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	0.00%
Industrials	20.38%
Technology	22.02%
Energy	2.63%

Cyclical

Basic Materials	3.36%
Consumer Cyclical	14.19%
Real Estate	0.96%
Financial Services	8.84%

Defensive

Consumer Defensive	6.59%
Healthcare	18.73%
Utilities	2.30%

TOP 10 HOLDINGS

Teleflex Inc	2.52%
Ball Corp	2.12%
The Cooper Companies Inc	2.06%
Hologic Inc	2.03%
L3Harris Technologies Inc	1.81%
Textron Inc	1.70%
Microchip Technology Inc	1.70%
Agilent Technologies Inc	1.69%
Dollar General Corp	1.61%
IAC/InterActiveCorp	1.58%
Total:	18.84%

ASSET LOADINGS (Returns-based)

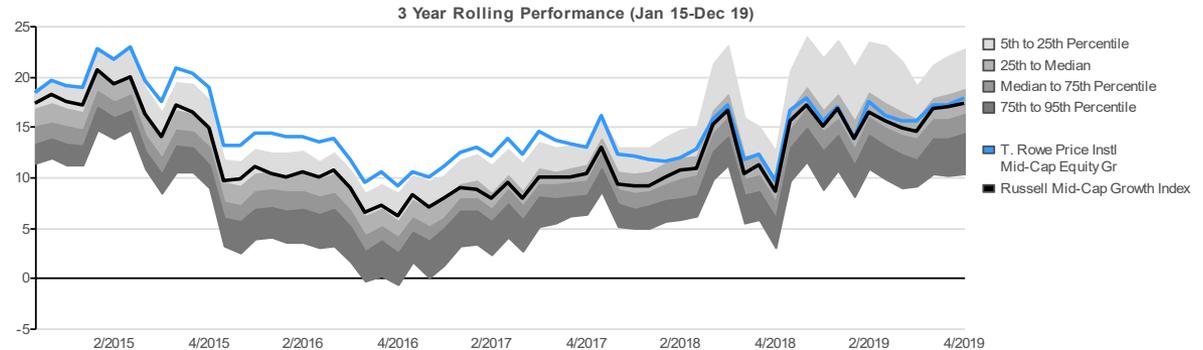


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.8	0.0	2.0	0.0
Top Value	26.7	0.0	20.6	0.0
Top Growth	0.0	0.0	1.9	0.0
Mid Value	8.2	0.0	3.1	0.0
Mid Growth	64.3	100.0	71.1	100.0
Sm Value	0.0	0.0	0.0	0.0
Sm Growth	0.0	0.0	1.3	0.0

INVESTMENT OVERVIEW

The investment seeks to provide long-term capital appreciation. The fund will normally invest at least 80% of its net assets (including any borrowings for investment purposes) in a diversified portfolio of common stocks of mid-cap companies whose earnings T. Rowe Price expects to grow at a faster rate than the average company. The advisor defines mid-cap companies as those whose market capitalization (number of shares outstanding multiplied by share price) falls within the range of either the S&P MidCap 400® Index or the Russell Midcap® Growth Index.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	6.90	33.09	33.09 / 54	17.92 / 33	13.40 / 12	16.67 / 5	15.70 / 5	12.54
Benchmark	8.17	35.47	35.47 / 36	17.36 / 38	11.60 / 38	14.81 / 29	14.24 / 25	
Peer Group Median	7.77	33.65	33.65 / 50	16.35 / 50	10.87 / 50	13.58 / 50	13.05 / 50	
Number of Funds			626	601	567	546	516	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	33.09	-2.23	26.02	6.94	6.94	13.79	37.89	14.50	-1.28
Benchmark	35.47	-4.75	25.27	7.33	-0.20	11.90	35.74	15.81	-1.65
Peer Group Median	33.65	-5.67	24.72	5.56	-0.52	7.39	35.49	14.50	-4.09

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	1.91	0.00	-0.52
Beta	0.90	1.00	1.00
R-Squared	94.33	100.00	93.37
Sharpe Ratio	1.21	1.10	1.02
Up Market Capture	94.65	100.00	95.11
Down Market Capture	85.01	100.00	99.44

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	2.26	0.00	-0.66
Beta	0.93	1.00	0.99
R-Squared	95.26	100.00	91.82
Sharpe Ratio	0.95	0.80	0.72
Up Market Capture	100.66	100.00	97.01
Down Market Capture	88.92	100.00	100.45

NOTES



Fund Incep Date: 05/13/2015	Benchmark: Russell Mid-Cap Index	Category: Mid-Cap Blend	Net Assets: \$1,271.00M	Manager Name: Alan Mason	Manager Start Date: 05/13/2015	Expense Ratio: 0.07%	Expense Rank: 3
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	4.21%
Industrials	14.09%
Technology	16.28%
Energy	3.65%

Cyclical

Basic Materials	3.74%
Consumer Cyclical	11.80%
Real Estate	10.60%
Financial Services	13.88%

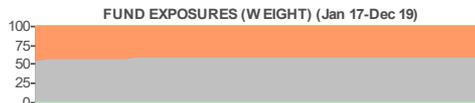
Defensive

Consumer Defensive	4.96%
Healthcare	10.28%
Utilities	6.50%

TOP 10 HOLDINGS

Fiserv Inc	0.82%
Global Payments Inc	0.67%
L3Harris Technologies Inc	0.56%
iShares Russell Mid-Cap ETF	0.51%
Dollar General Corp	0.51%
Sempra Energy	0.51%
Advanced Micro Devices Inc	0.49%
Lam Research Corp	0.48%
Welltower Inc	0.43%
O'Reilly Automotive Inc	0.42%
Total:	5.39%

ASSET LOADINGS (Returns-based)

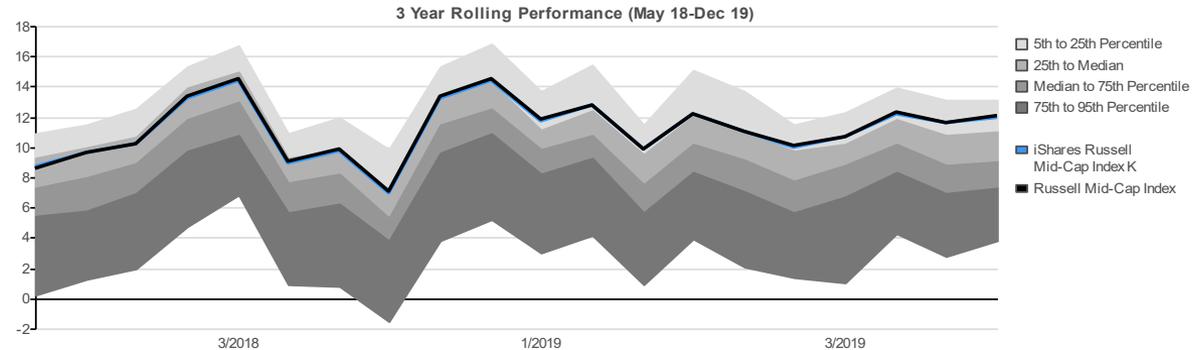


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.1	0.0	0.1	0.1
Top Value	0.3	0.0	0.2	0.0
Top Growth	0.0	0.5	0.0	0.5
Mid Value	58.2	58.7	57.6	57.4
Mid Growth	40.9	40.4	41.7	41.7
Sm Value	0.5	0.5	0.3	0.3
Sm Growth	0.0	0.0	0.2	0.1

INVESTMENT OVERVIEW

The investment seeks to track the investment results of the Russell Midcap® Index (the "underlying index"), which measures the performance of the mid-capitalization sector of the U.S. equity market. The fund generally invests at least 90% of its assets, plus the amount of any borrowing for investment purposes, in securities of the underlying index. The underlying index is a float-adjusted, capitalization-weighted index of equity securities issued by approximately 800 of the smallest issuers in the Russell 1000® Index.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	7.05	30.43	30.43 / 21	11.99 / 15				9.28
Benchmark	7.06	30.54	30.54 / 20	12.06 / 14	9.33 / 12	13.21 / 9	13.19 / 4	
Peer Group Median	6.93	26.82	26.82 / 50	9.06 / 50	7.33 / 50	11.31 / 50	11.19 / 50	
Number of Funds			408	388	342	324	296	

	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	30.43	-9.05	18.40	13.76					
Benchmark	30.54	-9.06	18.52	13.80	-2.44	13.22	34.76	17.28	-1.55
Peer Group Median	26.82	-11.42	15.97	15.13	-3.46	9.10	34.20	17.05	-2.64

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.05	0.00	-2.71
Beta	1.00	1.00	1.01
R-Squared	99.99	100.00	94.63
Sharpe Ratio	0.81	0.81	0.59
Up Market Capture	99.86	100.00	93.44
Down Market Capture	100.25	100.00	106.25

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	NA	0.00	-1.87
Beta	NA	1.00	1.05
R-Squared	NA	100.00	93.28
Sharpe Ratio	NA	0.68	0.51
Up Market Capture	NA	100.00	95.50
Down Market Capture	NA	100.00	105.74

NOTES



Fund Incep Date: 12/23/1981	Benchmark: Russell 2000 Index	Category: Small Blend	Net Assets: \$6,762.00M	Manager Name: Jed S. Fogdall	Manager Start Date: 02/28/2012	Expense Ratio: 0.52%	Expense Rank: 11
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	2.82%
Industrials	19.69%
Technology	13.23%
Energy	5.24%

Cyclical

Basic Materials	5.06%
Consumer Cyclical	13.79%
Real Estate	0.72%
Financial Services	22.64%

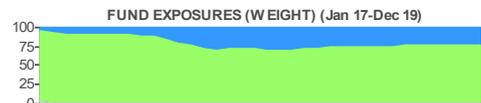
Defensive

Consumer Defensive	4.03%
Healthcare	10.63%
Utilities	2.15%

TOP 10 HOLDINGS

E-mini S&P 500 Futures Dec19	0.86%
Conmed Corp	0.40%
NMI Holdings Inc A	0.39%
Innospec Inc	0.37%
Fabrinet	0.36%
Callaway Golf Co	0.35%
Walker & Dunlop Inc	0.34%
Federal Signal Corp	0.33%
Casella Waste Systems Inc Class A	0.33%
OSI Systems Inc	0.33%
Total:	4.05%

ASSET LOADINGS (Returns-based)



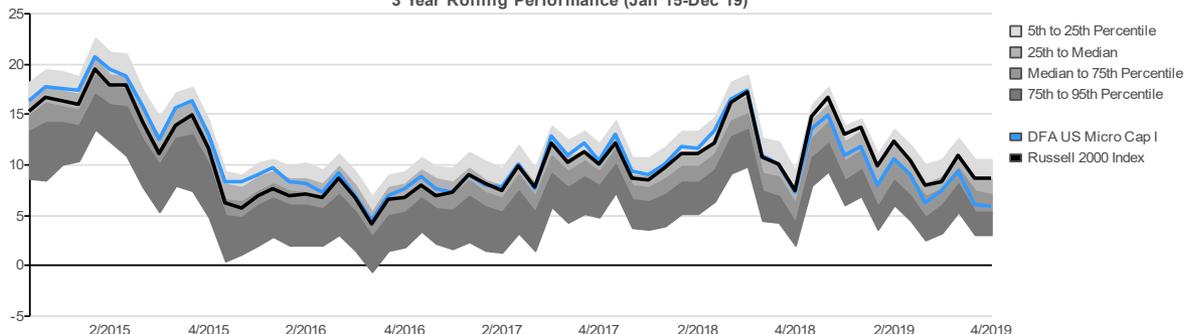
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.0	0.0	0.0
Top Value	0.0	0.0	0.0	0.0
Top Growth	0.0	0.0	0.0	0.0
Mid Value	0.0	0.1	0.0	0.1
Mid Growth	0.0	0.0	0.0	0.0
Sm Value	76.7	48.7	78.9	49.2
Sm Growth	23.3	51.1	21.1	50.7

INVESTMENT OVERVIEW

The investment seeks long-term capital appreciation. The fund, using a market capitalization weighted approach, purchases a broad and diverse group of the securities of U.S. micro cap companies. It may purchase or sell futures contracts and options on futures contracts for U.S. equity securities and indices, to adjust market exposure based on actual or expected cash inflows to or outflows from the fund.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	8.97	20.66	20.66 / 82	5.85 / 67	7.50 / 46	11.51 / 36	12.40 / 19	11.61
Benchmark	9.94	25.52	25.52 / 36	8.59 / 24	8.23 / 31	11.65 / 33	11.83 / 36	
Peer Group Median	8.14	24.25	24.25 / 50	7.10 / 50	7.33 / 50	11.02 / 50	11.31 / 50	
Number of Funds			714	685	622	565	506	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	20.66	-11.60	11.18	25.63	-3.62	2.92	45.06	18.24	-3.25
Benchmark	25.52	-11.01	14.65	21.31	-4.41	4.89	38.82	16.35	-4.18
Peer Group Median	24.25	-12.21	12.84	20.71	-4.34	4.95	37.56	15.62	-3.17

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-2.68	0.00	-1.02
Beta	1.03	1.00	0.98
R-Squared	96.77	100.00	95.59
Sharpe Ratio	0.33	0.49	0.42
Up Market Capture	98.62	100.00	92.94
Down Market Capture	112.43	100.00	100.40

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.61	0.00	-0.50
Beta	1.00	1.00	0.95
R-Squared	95.81	100.00	94.57
Sharpe Ratio	0.46	0.51	0.46
Up Market Capture	98.87	100.00	91.53
Down Market Capture	102.18	100.00	95.28

NOTES



Fund Incep Date: 03/31/2011	Benchmark: Russell 2000 Index	Category: Small Blend	Net Assets: \$2,304.00M	Manager Name: Greg Savage	Manager Start Date: 04/27/2012	Expense Ratio: 0.07%	Expense Rank: 3
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	2.56%
Industrials	16.88%
Technology	13.32%
Energy	2.89%

Cyclical

Basic Materials	3.56%
Consumer Cyclical	9.92%
Real Estate	9.23%
Financial Services	16.38%

Defensive

Consumer Defensive	3.72%
Healthcare	17.84%
Utilities	3.71%

TOP 10 HOLDINGS

iShares Russell 2000 ETF	1.16%
NovoCure Ltd	0.39%
Arrowhead Pharmaceuticals Inc	0.33%
The Medicines Co	0.31%
Haemonetics Corp	0.30%
Generac Holdings Inc	0.29%
Teladoc Health Inc	0.29%
Lumentum Holdings Inc	0.27%
First Industrial Realty Trust Inc	0.26%
Radian Group Inc	0.25%
Total:	3.84%

ASSET LOADINGS (Returns-based)



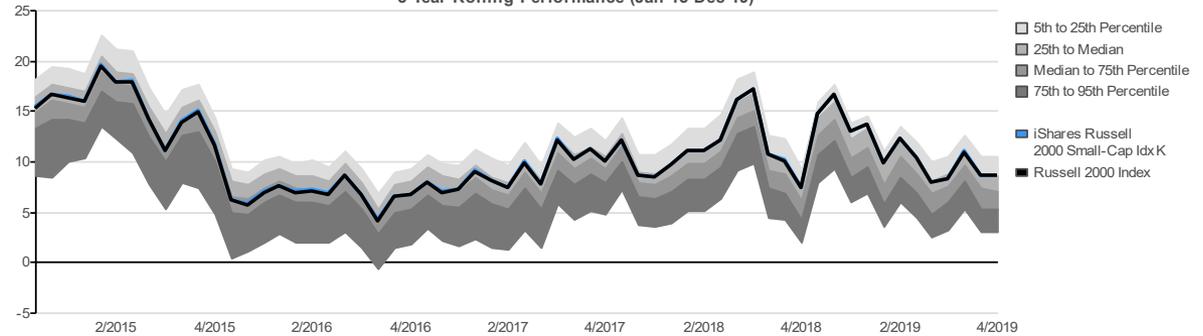
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.0	0.0	0.0
Top Value	0.0	0.0	0.3	0.0
Top Growth	0.3	0.0	0.1	0.0
Mid Value	0.0	0.1	0.0	0.1
Mid Growth	0.0	0.0	0.0	0.0
Sm Value	48.6	48.7	48.6	49.2
Sm Growth	51.2	51.1	51.0	50.7

INVESTMENT OVERVIEW

The investment seeks to match the performance of the Russell 2000® Index as closely as possible before the deduction of fund expenses. The fund is a "feeder" fund that invests all of its assets in the Series, a series of the Master LLC, which has the same investment objective and strategies as the fund. It will be substantially invested in securities in the Russell 2000, and will invest, under normal circumstances, at least 80% of its assets in securities or other financial instruments that are components of or have economic characteristics similar to the securities included in the Russell 2000.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	9.95	25.62	25.62 / 34	8.67 / 23	8.29 / 30	11.72 / 30	11.84 / 35	9.64
Benchmark	9.94	25.52	25.52 / 36	8.59 / 24	8.23 / 31	11.65 / 33	11.83 / 36	
Peer Group Median	8.14	24.25	24.25 / 50	7.10 / 50	7.33 / 50	11.02 / 50	11.31 / 50	
Number of Funds			714	685	622	565	506	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	25.62	-10.93	14.69	21.40	-4.41	4.86	39.13	16.30	-4.45
Benchmark	25.52	-11.01	14.65	21.31	-4.41	4.89	38.82	16.35	-4.18
Peer Group Median	24.25	-12.21	12.84	20.71	-4.34	4.95	37.56	15.62	-3.17

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.06	0.00	-1.02
Beta	1.00	1.00	0.98
R-Squared	100.00	100.00	95.59
Sharpe Ratio	0.50	0.49	0.42
Up Market Capture	100.19	100.00	92.94
Down Market Capture	99.86	100.00	100.40

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.06	0.00	-0.50
Beta	1.00	1.00	0.95
R-Squared	99.99	100.00	94.57
Sharpe Ratio	0.51	0.51	0.46
Up Market Capture	100.07	100.00	91.53
Down Market Capture	99.79	100.00	95.28

NOTES



Fund Incep Date: 03/31/2011	Benchmark: MSCI EAFE	Category: Foreign Large Blend	Net Assets: \$8,244.00M	Manager Name: Greg Savage	Manager Start Date: 04/27/2012	Expense Ratio: 0.06%	Expense Rank: 2
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PORTFOLIO COMPOSITION (Holdings-based)



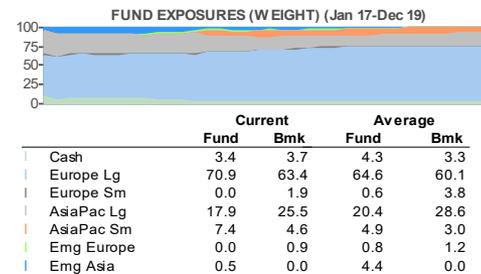
Sector Breakdown

Sensitive	
Communication Services	4.13%
Industrials	13.74%
Technology	8.02%
Energy	5.16%
Cyclical	
Basic Materials	7.70%
Consumer Cyclical	11.74%
Real Estate	3.71%
Financial Services	19.73%
Defensive	
Consumer Defensive	12.23%
Healthcare	10.23%
Utilities	3.61%

TOP 10 HOLDINGS

Nestle SA	2.24%
Novartis AG	1.40%
Roche Holding AG	1.39%
HSBC Holdings PLC	1.18%
Royal Dutch Shell PLC Class A	1.04%
Toyota Motor Corp	1.00%
BP PLC	0.99%
SAP SE	0.95%
Total SA	0.94%
Alia Group Ltd	0.92%
Total:	12.03%

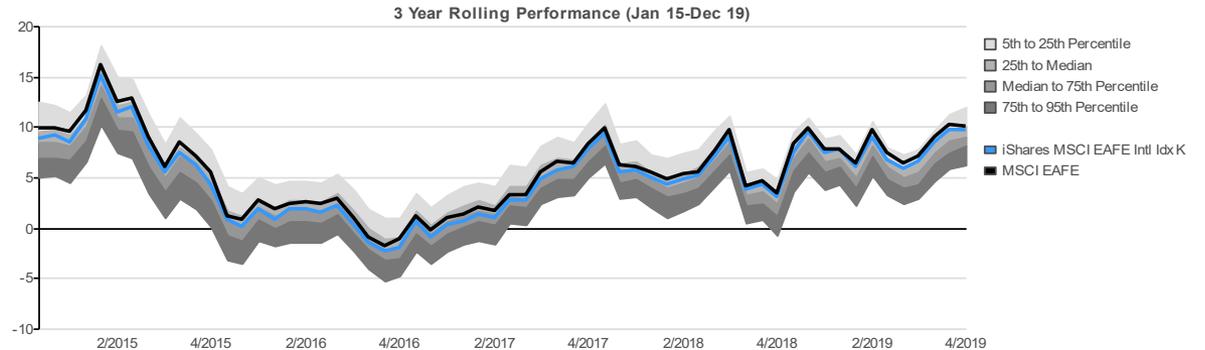
ASSET LOADINGS (Returns-based)



INVESTMENT OVERVIEW

The investment seeks to match the performance of the MSCI EAFE Index (Europe, Australasia, Far East) in U.S. dollars with net dividends as closely as possible before the deduction of fund expenses. The fund will be substantially invested in securities in the MSCI EAFE Index, and will invest at least 80% of its assets in securities or other financial instruments that are components of or have economic characteristics similar to the securities included in the MSCI EAFE Index.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI	
Fund	7.90	21.94	21.94 / 49	9.78 / 32	5.80 / 30	6.09 / 34	5.35 / 46	4.89	
Benchmark	8.21	22.66	22.66 / 40	10.11 / 22	6.18 / 20	6.85 / 10	6.00 / 20		
Peer Group Median	8.71	21.84	21.84 / 50	9.07 / 50	5.32 / 50	5.74 / 50	5.25 / 50		
Number of Funds			753	698	603	573	512		
CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	21.94	-13.33	25.17	1.03	-0.81	-6.12	21.57	18.65	-12.56
Benchmark	22.66	-13.36	25.62	1.51	-0.39	-4.48	23.29	17.90	-11.73
Peer Group Median	21.84	-15.05	25.32	0.82	-1.10	-5.45	20.13	17.92	-13.54

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.34	0.00	-1.10
Beta	1.01	1.00	1.03
R-Squared	98.67	100.00	94.20
Sharpe Ratio	0.75	0.79	0.66
Up Market Capture	98.06	100.00	97.37
Down Market Capture	99.47	100.00	102.46
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.17	0.00	-0.55
Beta	0.96	1.00	0.96
R-Squared	98.11	100.00	92.31
Sharpe Ratio	0.45	0.46	0.40
Up Market Capture	95.53	100.00	93.32
Down Market Capture	96.97	100.00	97.00

NOTES



American Funds Europacific Growth R6 RERGX

12/31/2019

Fund Incep Date: 05/01/2009	Benchmark: MSCI ACWI ex USA GDP NR USD	Category: Foreign Large Growth	Net Assets: \$171,878.00M	Manager Name: Carl M. Kawaja	Manager Start Date: 06/01/2001	Expense Ratio: 0.49%	Expense Rank: 4
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	1.54%
Industrials	11.80%
Technology	20.19%
Energy	6.20%

Cyclical

Basic Materials	8.12%
Consumer Cyclical	12.80%
Real Estate	1.32%
Financial Services	17.79%

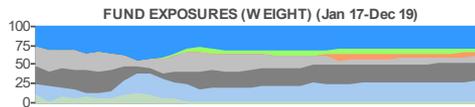
Defensive

Consumer Defensive	6.11%
Healthcare	10.86%
Utilities	3.27%

TOP 10 HOLDINGS

Airbus SE	2.61%
AIA Group Ltd	2.56%
Nintendo Co Ltd	2.41%
Reliance Industries Ltd	2.38%
HDFC Bank Ltd	2.32%
Alibaba Group Holding Ltd ADR	2.12%
ASML Holding NV	1.95%
Samsung Electronics Co Ltd	1.61%
Daiichi Sankyo Co Ltd	1.56%
Kotak Mahindra Bank Ltd	1.39%
Total:	20.92%

ASSET LOADINGS (Returns-based)

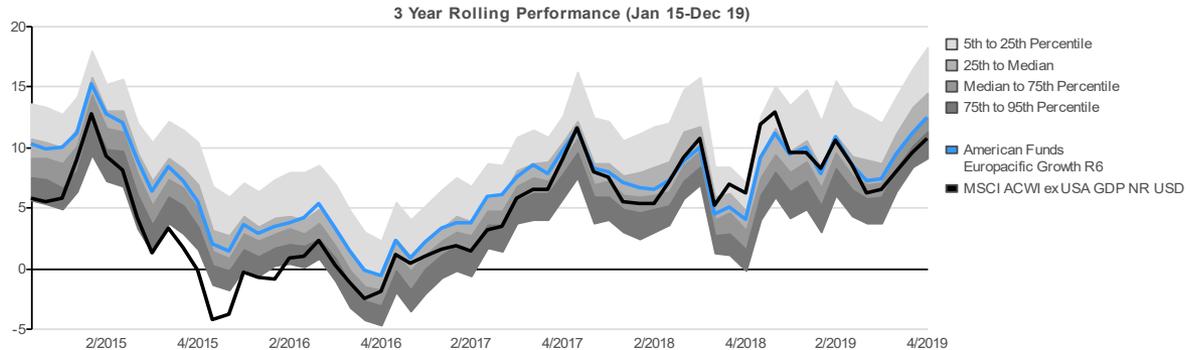


	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.0	2.1	0.0
Europe Lg	26.9	37.5	20.8	34.8
Europe Sm	23.3	4.9	22.2	3.7
AsiaPac Lg	9.1	1.3	15.6	6.0
AsiaPac Sm	4.9	0.0	2.0	0.0
Emg Europe	5.8	19.7	4.3	17.3
Emg Asia	29.9	36.7	33.0	38.2

INVESTMENT OVERVIEW

The investment seeks long-term growth of capital. The fund invests primarily in common stocks of issuers in Europe and the Pacific Basin that the investment adviser believes have the potential for growth. Growth stocks are stocks that the investment adviser believes have the potential for above-average capital appreciation. It normally will invest at least 80% of its net assets in securities of issuers in Europe and the Pacific Basin. The fund may invest a portion of its assets in common stocks and other securities of companies in emerging markets.

PERFORMANCE



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	10.09	27.40	27.40 / 60	12.45 / 50	7.41 / 43	7.73 / 34	6.73 / 52	9.43
Benchmark	9.70	20.09	20.09 / 96	10.65 / 83	5.80 / 78	5.18 / 92	4.44 / 97	
Peer Group Median	9.69	27.86	27.86 / 50	12.45 / 50	7.11 / 50	7.13 / 50	6.78 / 50	
Number of Funds			496	475	429	407	346	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	27.40	-14.91	31.17	1.01	-0.48	-2.29	20.58	19.64	-13.31
Benchmark	20.09	-14.51	31.95	5.95	-7.66	-3.48	11.29	19.07	-16.24
Peer Group Median	27.86	-14.56	30.68	-1.98	0.48	-4.31	19.97	18.86	-12.82

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	2.29	0.00	2.69
Beta	0.92	1.00	0.87
R-Squared	93.66	100.00	81.12
Sharpe Ratio	0.89	0.72	0.88
Up Market Capture	98.39	100.00	93.97
Down Market Capture	86.22	100.00	79.11

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	2.29	0.00	2.14
Beta	0.82	1.00	0.79
R-Squared	88.90	100.00	78.06
Sharpe Ratio	0.56	0.40	0.53
Up Market Capture	88.86	100.00	84.80
Down Market Capture	78.81	100.00	77.44

NOTES



Fund Incep Date: 10/27/2003	Benchmark: S&P Target Date Retirement Income	Category: Target-Date Retirement	Net Assets: \$17,261.00M	Manager Name: William A. Coleman	Manager Start Date: 02/22/2013	Expense Ratio: 0.12%	Expense Rank: 2
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	8.56%
Industrials	11.61%
Technology	15.16%
Energy	4.91%

Cyclical

Basic Materials	4.47%
Consumer Cyclical	10.22%
Real Estate	4.25%
Financial Services	17.58%

Defensive

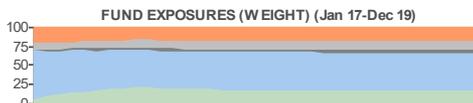
Consumer Defensive	7.81%
Healthcare	12.17%
Utilities	3.25%

TOP 10 HOLDINGS

Vanguard Total Bond Market II Idx Inv	37.23%
Vanguard Total Stock Mkt Idx Inv	18.24%
Vanguard Shrt-Term Infl-Prot Sec Idx Inv	16.60%
Vanguard Total Intl Bd Idx Investor	15.75%
Vanguard Total Intl Stock Index Inv	12.13%

Total: 99.97%

ASSET LOADINGS (Returns-based)



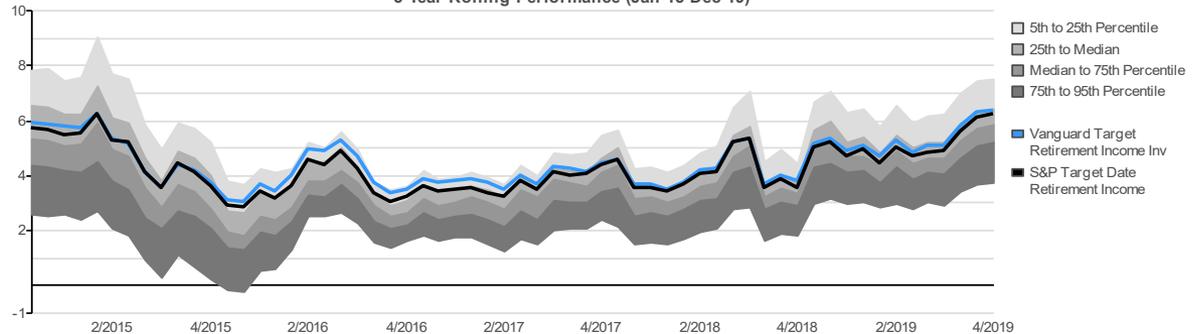
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	16.4	20.8	16.1	21.0
US Bonds	49.2	43.9	50.9	45.0
Intl Bonds	4.4	1.5	3.5	1.4
Intl Equity	10.3	10.8	10.4	10.2
US Equity	19.7	23.0	19.1	22.5

INVESTMENT OVERVIEW

The investment seeks to provide current income and some capital appreciation. The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors currently in retirement. Its indirect bond holdings are a diversified mix of short-, intermediate-, and long-term U.S. government, U.S. agency, and investment-grade U.S. corporate bonds; inflation-protected public obligations issued by the U.S. Treasury; mortgage-backed and asset-backed securities; and government, agency, corporate, and securitized investment-grade foreign bonds issued in currencies other than the U.S. dollar.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	2.60	13.16	13.16 / 48	6.36 / 30	4.80 / 22	5.06 / 29	5.82 / 15	5.37
Benchmark	3.05	13.33	13.33 / 42	6.23 / 35	4.67 / 28	4.93 / 35	5.50 / 36	
Peer Group Median	2.53	12.99	12.99 / 50	5.83 / 50	4.19 / 50	4.52 / 50	5.22 / 50	
Number of Funds			190	174	159	141	122	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	13.16	-1.99	8.47	5.25	-0.17	5.54	5.87	8.23	5.25
Benchmark	13.33	-2.54	8.54	5.01	-0.18	4.86	6.28	7.51	3.98
Peer Group Median	12.99	-3.39	8.65	5.05	-1.27	3.98	5.58	8.84	2.42

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.55	0.00	-0.32
Beta	0.90	1.00	0.95
R-Squared	97.96	100.00	95.58
Sharpe Ratio	1.29	1.15	1.05
Up Market Capture	95.08	100.00	94.69
Down Market Capture	80.95	100.00	96.56

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.31	0.00	-0.52
Beta	0.95	1.00	1.02
R-Squared	97.98	100.00	93.59
Sharpe Ratio	1.00	0.92	0.77
Up Market Capture	96.88	100.00	95.98
Down Market Capture	89.26	100.00	105.02

NOTES



Vanguard Target Retirement 2015 Inv VTXVX

12/31/2019

Fund Incep Date: 10/27/2003	Benchmark: S&P Target Date 2015	Category: Target-Date 2015	Net Assets: \$15,836.00M	Manager Name: William A. Coleman	Manager Start Date: 02/22/2013	Expense Ratio: 0.13%	Expense Rank: 3
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	8.56%
Industrials	11.61%
Technology	15.17%
Energy	4.91%

Cyclical

Basic Materials	4.47%
Consumer Cyclical	10.22%
Real Estate	4.25%
Financial Services	17.58%

Defensive

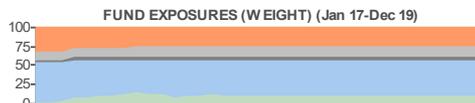
Consumer Defensive	7.81%
Healthcare	12.17%
Utilities	3.25%

TOP 10 HOLDINGS

Vanguard Total Bond Market II Idx Inv	34.37%
Vanguard Total Stock Mkt Idx Inv	22.50%
Vanguard Total Intl Stock Index Inv	14.95%
Vanguard Total Intl Bd Idx Investor	14.77%
Vanguard Sht-Term Infl-Prot Sec Idx Inv	13.37%

Total: 99.95%

ASSET LOADINGS (Returns-based)



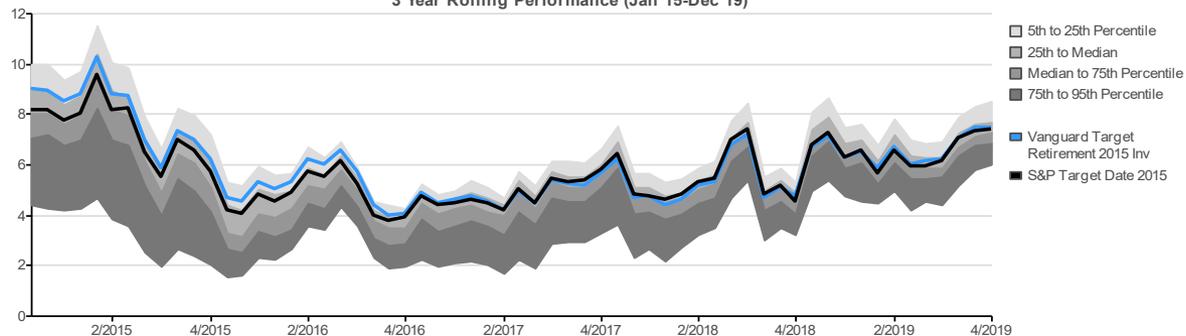
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	9.9	14.7	9.0	13.6
US Bonds	45.1	39.4	46.3	40.8
Intl Bonds	5.7	0.5	4.5	0.3
Intl Equity	12.8	13.6	13.6	13.4
US Equity	26.5	31.7	26.6	32.0

INVESTMENT OVERVIEW

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2015 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	3.20	14.81	14.81 / 63	7.50 / 34	5.59 / 43	6.76 / 43	7.25 / 31	6.25
Benchmark	3.75	15.40	15.40 / 47	7.39 / 41	5.67 / 41	6.54 / 56	6.92 / 58	
Peer Group Median	3.90	15.22	15.22 / 50	7.26 / 50	5.48 / 50	6.61 / 50	7.02 / 50	
Number of Funds			135	114	97	77	74	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	14.81	-2.97	11.50	6.16	-0.46	6.56	13.00	11.37	1.71
Benchmark	15.40	-3.67	11.39	6.56	-0.16	5.49	12.16	10.32	1.53
Peer Group Median	15.22	-3.91	11.50	6.42	-1.13	4.85	11.59	11.07	-0.11

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.79	0.00	0.12
Beta	0.87	1.00	1.02
R-Squared	98.14	100.00	97.44
Sharpe Ratio	1.25	1.08	1.09
Up Market Capture	94.06	100.00	97.19
Down Market Capture	81.92	100.00	101.00

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.26	0.00	-0.17
Beta	0.92	1.00	1.03
R-Squared	98.29	100.00	97.35
Sharpe Ratio	0.89	0.84	0.80
Up Market Capture	94.48	100.00	98.90
Down Market Capture	90.32	100.00	102.30

NOTES



Fund Incep Date: 10/27/2003	Benchmark: S&P Target Date 2025	Category: Target-Date 2025	Net Assets: \$46,628.00M	Manager Name: William A. Coleman	Manager Start Date: 02/22/2013	Expense Ratio: 0.13%	Expense Rank: 3
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	8.57%
Industrials	11.59%
Technology	15.21%
Energy	4.90%

Cyclical

Basic Materials	4.45%
Consumer Cyclical	10.21%
Real Estate	4.25%
Financial Services	17.56%

Defensive

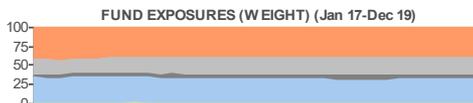
Consumer Defensive	7.80%
Healthcare	12.20%
Utilities	3.25%

TOP 10 HOLDINGS

Vanguard Total Stock Mkt Idx Inv	37.02%
Vanguard Total Bond Market II Idx Inv	27.38%
Vanguard Total Intl Stock Index Inv	24.17%
Vanguard Total Intl Bd Idx Investor	11.41%

Total: 99.97%

ASSET LOADINGS (Returns-based)



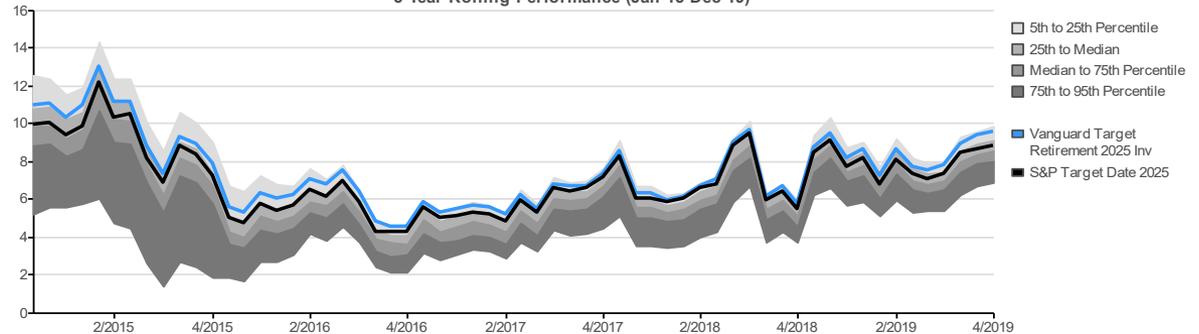
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	8.9	0.1	7.4
US Bonds	31.5	29.8	32.4	31.6
Intl Bonds	6.7	1.1	5.7	0.6
Intl Equity	21.4	19.2	21.6	18.3
US Equity	40.5	41.1	40.2	42.1

INVESTMENT OVERVIEW

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2025 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	5.22	19.63	19.63 / 17	9.57 / 13	6.99 / 12	8.54 / 8	8.59 / 11	6.98
Benchmark	4.97	18.38	18.38 / 47	8.80 / 39	6.73 / 20	7.98 / 30	8.13 / 33	
Peer Group Median	4.79	18.28	18.28 / 50	8.60 / 50	6.26 / 50	7.56 / 50	7.90 / 50	
Number of Funds			239	215	192	168	120	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	19.63	-5.15	15.94	7.48	-0.85	7.17	18.14	13.29	-0.37
Benchmark	18.38	-5.02	14.55	7.82	-0.25	5.56	17.03	12.51	-0.28
Peer Group Median	18.28	-5.40	15.00	6.96	-1.30	5.38	16.53	13.21	-2.00

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.56	0.00	0.17
Beta	1.02	1.00	0.97
R-Squared	99.37	100.00	98.01
Sharpe Ratio	1.10	1.02	1.04
Up Market Capture	104.99	100.00	96.66
Down Market Capture	99.03	100.00	95.54

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.12	0.00	-0.36
Beta	1.02	1.00	0.99
R-Squared	99.32	100.00	97.91
Sharpe Ratio	0.81	0.80	0.74
Up Market Capture	103.16	100.00	96.43
Down Market Capture	102.12	100.00	100.01

NOTES



Fund Incep Date: 10/27/2003	Benchmark: S&P Target Date 2035	Category: Target-Date 2035	Net Assets: \$39,752.00M	Manager Name: William A. Coleman	Manager Start Date: 02/22/2013	Expense Ratio: 0.14%	Expense Rank: 3
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	8.57%
Industrials	11.60%
Technology	15.18%
Energy	4.91%

Cyclical

Basic Materials	4.46%
Consumer Cyclical	10.22%
Real Estate	4.25%
Financial Services	17.57%

Defensive

Consumer Defensive	7.81%
Healthcare	12.18%
Utilities	3.25%

TOP 10 HOLDINGS

Vanguard Total Stock Mkt Idx Inv	45.92%
Vanguard Total Intl Stock Index Inv	30.32%
Vanguard Total Bond Market II Idx Inv	16.77%
Vanguard Total Intl Bd Idx Investor	6.93%

Total: 99.95%

ASSET LOADINGS (Returns-based)



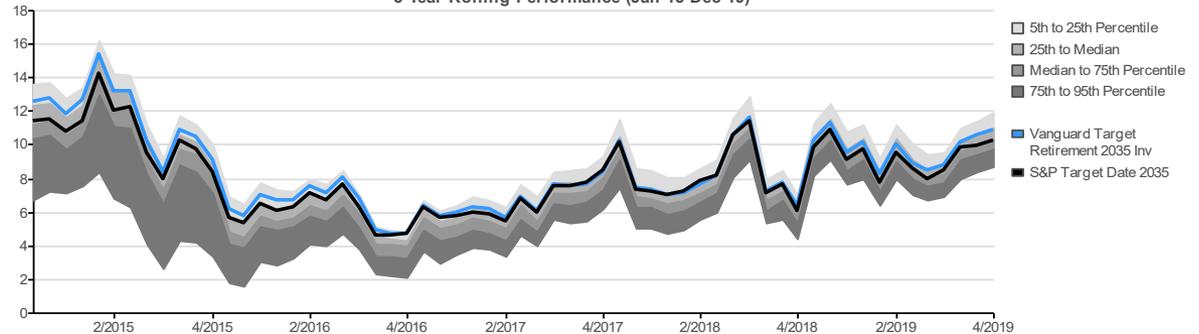
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	3.0	0.0	2.1
US Bonds	15.2	16.3	16.7	18.8
Intl Bonds	7.8	1.3	6.4	0.8
Intl Equity	27.9	26.4	27.8	24.2
US Equity	49.1	53.1	49.0	54.0

INVESTMENT OVERVIEW

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2035 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	6.68	22.44	22.44 / 44	10.86 / 28	7.81 / 26	9.76 / 19	9.54 / 16	7.63
Benchmark	6.61	22.18	22.18 / 52	10.25 / 53	7.77 / 30	9.24 / 33	9.13 / 40	-1.71
Peer Group Median	6.53	22.22	22.22 / 50	10.31 / 50	7.32 / 50	8.87 / 50	8.80 / 50	-3.34
Number of Funds			233	209	186	162	114	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	22.44	-6.58	19.12	8.26	-1.26	7.24	22.82	15.16	-2.24
Benchmark	22.18	-6.88	17.78	8.85	-0.35	5.69	20.84	14.12	-1.71
Peer Group Median	22.22	-7.28	18.71	7.83	-1.50	5.57	21.04	14.89	-3.34

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.81	0.00	0.26
Beta	0.97	1.00	0.99
R-Squared	99.32	100.00	98.62
Sharpe Ratio	1.03	0.94	0.97
Up Market Capture	100.40	100.00	99.30
Down Market Capture	93.92	100.00	96.35

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.01	0.00	-0.47
Beta	1.01	1.00	1.02
R-Squared	99.09	100.00	98.51
Sharpe Ratio	0.75	0.76	0.70
Up Market Capture	100.62	100.00	99.23
Down Market Capture	100.54	100.00	102.43

NOTES



Fund Incep Date: 10/27/2003	Benchmark: S&P Target Date 2045	Category: Target-Date 2045	Net Assets: \$28,962.00M	Manager Name: William A. Coleman	Manager Start Date: 02/22/2013	Expense Ratio: 0.15%	Expense Rank: 3
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	8.57%
Industrials	11.60%
Technology	15.20%
Energy	4.90%

Cyclical

Basic Materials	4.45%
Consumer Cyclical	10.22%
Real Estate	4.25%
Financial Services	17.57%

Defensive

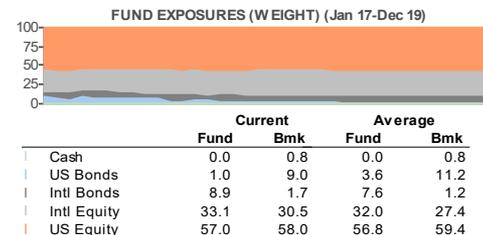
Consumer Defensive	7.81%
Healthcare	12.19%
Utilities	3.25%

TOP 10 HOLDINGS

Vanguard Total Stock Mkt Idx Inv	54.33%
Vanguard Total Intl Stock Index Inv	35.60%
Vanguard Total Bond Market II Idx Inv	7.02%
Vanguard Total Intl Bd Idx Investor	3.01%

Total: 99.95%

ASSET LOADINGS (Returns-based)

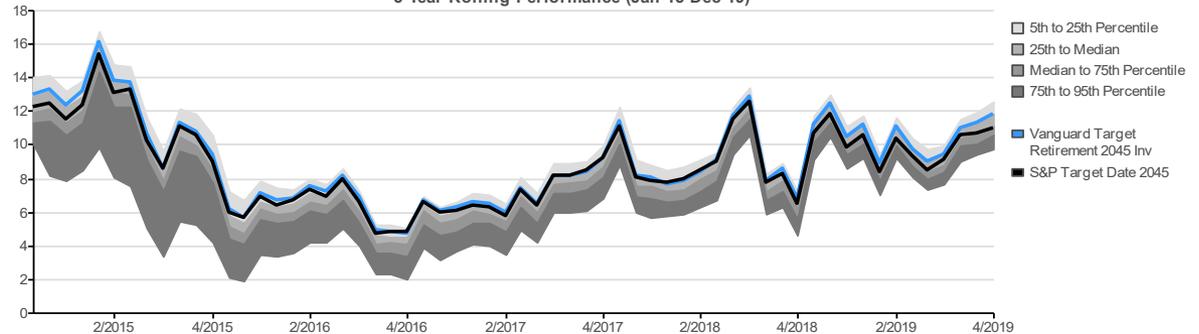


INVESTMENT OVERVIEW

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2045 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	8.00	24.94	24.94 / 37	11.80 / 25	8.41 / 23	10.37 / 14	9.98 / 15	8.10
Benchmark	7.48	24.02	24.02 / 64	11.01 / 53	8.32 / 25	9.94 / 27	9.67 / 23	
Peer Group Median	7.57	24.57	24.57 / 50	11.09 / 50	7.82 / 50	9.47 / 50	9.28 / 50	
Number of Funds			233	209	186	161	113	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	24.94	-7.90	21.42	8.87	-1.57	7.16	24.37	15.58	-2.51
Benchmark	24.02	-7.74	19.56	9.54	-0.46	5.67	23.14	15.15	-2.56
Peer Group Median	24.57	-8.31	20.65	8.20	-1.61	5.65	23.11	15.49	-4.07

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.54	0.00	0.04
Beta	1.02	1.00	1.02
R-Squared	99.50	100.00	98.84
Sharpe Ratio	0.98	0.93	0.92
Up Market Capture	104.49	100.00	100.64
Down Market Capture	100.86	100.00	99.92

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.15	0.00	-0.57
Beta	1.04	1.00	1.02
R-Squared	99.33	100.00	98.68
Sharpe Ratio	0.73	0.74	0.68
Up Market Capture	103.08	100.00	99.68
Down Market Capture	104.16	100.00	103.82

NOTES



Fund Incep Date: 08/18/2010	Benchmark: S&P Target Date 2055	Category: Target-Date 2055	Net Assets: \$11,351.00M	Manager Name: William A. Coleman	Manager Start Date: 02/22/2013	Expense Ratio: 0.15%	Expense Rank: 4
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PORTFOLIO COMPOSITION (Holdings-based)

Assets



Sector Breakdown

Sensitive

Communication Services	8.57%
Industrials	11.60%
Technology	15.18%
Energy	4.91%

Cyclical

Basic Materials	4.46%
Consumer Cyclical	10.22%
Real Estate	4.25%
Financial Services	17.57%

Defensive

Consumer Defensive	7.81%
Healthcare	12.18%
Utilities	3.25%

TOP 10 HOLDINGS

Vanguard Total Stock Mkt Idx Inv	54.11%
Vanguard Total Intl Stock Index Inv	35.75%
Vanguard Total Bond Market II Idx Inv	7.03%
Vanguard Total Intl Bd Idx Investor	3.01%

Total: 99.90%

ASSET LOADINGS (Returns-based)



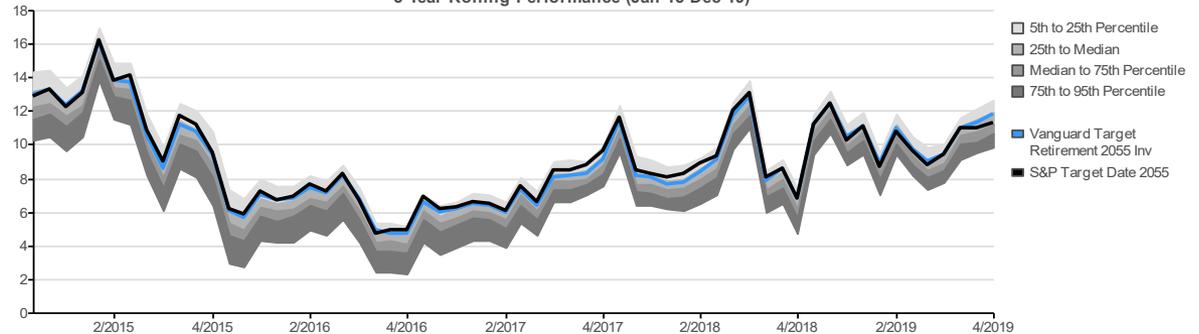
	Current		Average	
	Fund	Bmk	Fund	Bmk
Cash	0.0	0.4	0.0	0.7
US Bonds	0.4	6.2	3.5	8.1
Intl Bonds	9.5	2.2	7.8	1.4
Intl Equity	32.7	31.7	31.8	28.4
US Equity	57.4	59.5	56.9	61.4

INVESTMENT OVERVIEW

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. The fund invests in other Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2055 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

PERFORMANCE

3 Year Rolling Performance (Jan 15-Dec 19)



	3M	YTD	1Y	3Y	5Y	7Y	10Y	SI
Fund	8.02	24.98	24.98 / 44	11.80 / 34	8.38 / 28	10.35 / 19		10.69
Benchmark	7.73	24.48	24.48 / 64	11.34 / 45	8.58 / 22	10.35 / 19		
Peer Group Median	7.79	24.85	24.85 / 50	11.23 / 50	7.95 / 50	9.76 / 50	9.16 / 50	
Number of Funds			233	206	181	130	20	

CALENDAR	2019	2018	2017	2016	2015	2014	2013	2012	2011
Fund	24.98	-7.89	21.38	8.88	-1.72	7.19	24.33	15.58	-2.27
Benchmark	24.48	-7.97	20.48	9.94	-0.54	5.64	24.96	15.81	
Peer Group Median	24.85	-8.60	21.16	8.26	-1.62	5.70	23.27	15.60	-4.59

RISK & PERFORMANCE STATISTICS

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.50	0.00	-0.04
Beta	0.99	1.00	0.99
R-Squared	99.51	100.00	98.91
Sharpe Ratio	0.98	0.93	0.92
Up Market Capture	100.94	100.00	99.63
Down Market Capture	97.47	100.00	98.76

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.12	0.00	-0.53
Beta	0.99	1.00	1.01
R-Squared	99.32	100.00	98.67
Sharpe Ratio	0.72	0.74	0.68
Up Market Capture	98.50	100.00	97.40
Down Market Capture	99.39	100.00	101.41

NOTES



Capital Markets Overview

Fourth Quarter 2019

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Macroeconomic Summary

• US Economy

- The US economy continues to look resilient and recent upticks in the global picture are providing welcome relief
 - GDP continues to be a low but respectable 2% off the back of a strong consumer
 - Muted business investment continues to be of concern, but may find some relief as trade and geopolitical tensions have abated at the margin
 - We align with the consensus views of continued accommodative policies from the Fed and central banks globally, especially in the presence of benign inflation
- Rising Federal and Corporate debt have continued to climb through much of the decade and show no signs of slowing – this *could* constrain economic growth at some point

• Global Economy

- The US-China “Phase 1 Deal” is expected to be signed in January, 2020 and a recent de-escalation of US-Iran tensions have helped send several indices to record highs
- Global manufacturing PMI’s remain depressed, particularly across the EU and export-heavy Germany
 - However, central banks remain accommodative globally and several leading economic indicators demonstrated positive trends in 4Q19, possibly signaling a bottom has been reached
- Several items remain on-watch for 2020:
 - Impeachment
 - Brexit
 - Middle East
 - US-China Trade Deal



Market Summary

• US Markets

- 2019 equity markets were driven by multiple expansion despite sluggish earnings growth, with the S&P 500 providing a total return of over 31.4%
 - The “risk-off” environment that ended 2018 faded and strong returns in nearly every sector saved Energy
- Returns in fixed income indices generally had their best year this decade
 - The Bloomberg Barclays US Aggregate Index, “the Agg”, posted equity-like returns with 8.7% for 2019
 - An even more impressive 14.3% was posted in high yield market, as measured by the Bloomberg Barclays High Yield Corporate Index

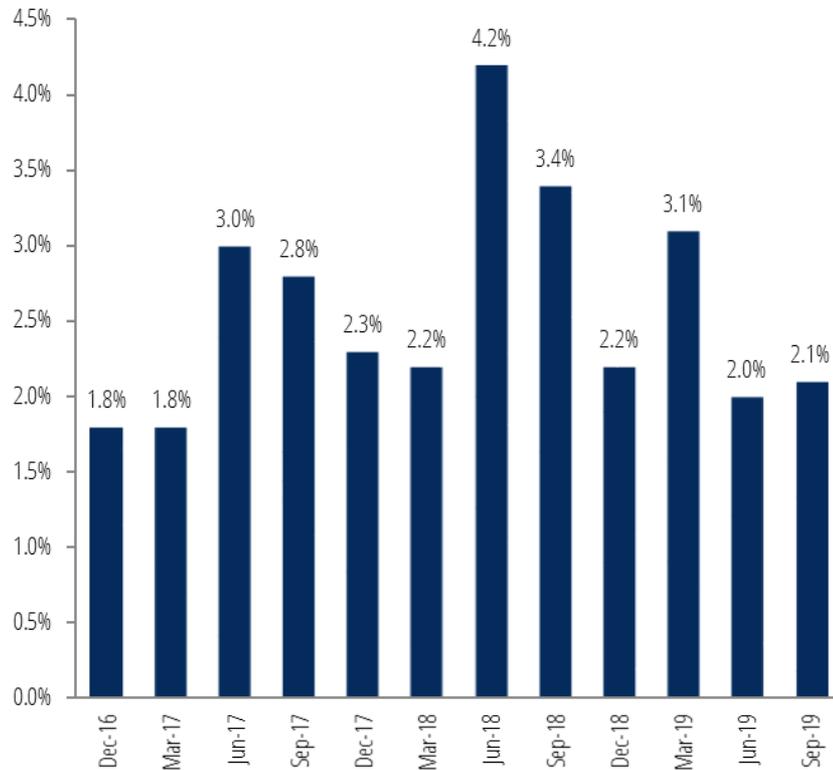
Global Markets

- The global equity markets were also strong though look dull next to the US performance
 - The MSCI EAFE Index, a prominent proxy for Developed Markets ex-US, returned 22.0%
 - The MSCI EM Index, the standard bearer for the Emerging Markets, returned 18.4%
- Global fixed income indices closed 2019 in a similar fashion to their equity counterparts, which is to say respectively positive though generally behind their US peers
- Experimental monetary policy and negative yielding debt continues to be a concern, though central bankers remain committed to providing stimulative measures
 - A trend that continues to cascade across the capital markets as yield seeking investors shift toward riskier instruments to compensate (equities, higher yield debt, etc.)



State of the U.S. Economy

Real GDP Growth
quarter over quarter annualized, through Sept. 2019



U.S. Consumer Price Index
annual percent change, through December 2019

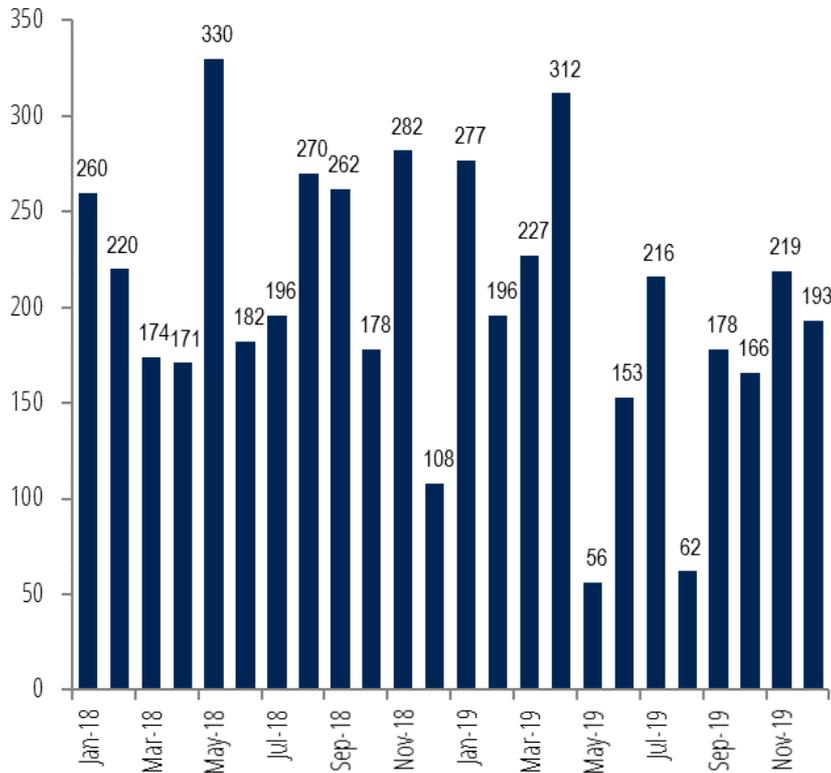


Source: Bloomberg; GWCM Analysis
The core measure of inflation excludes food and energy prices while the headline measure of inflation does not
GDP estimates presented reflect the median estimate provided by Bloomberg
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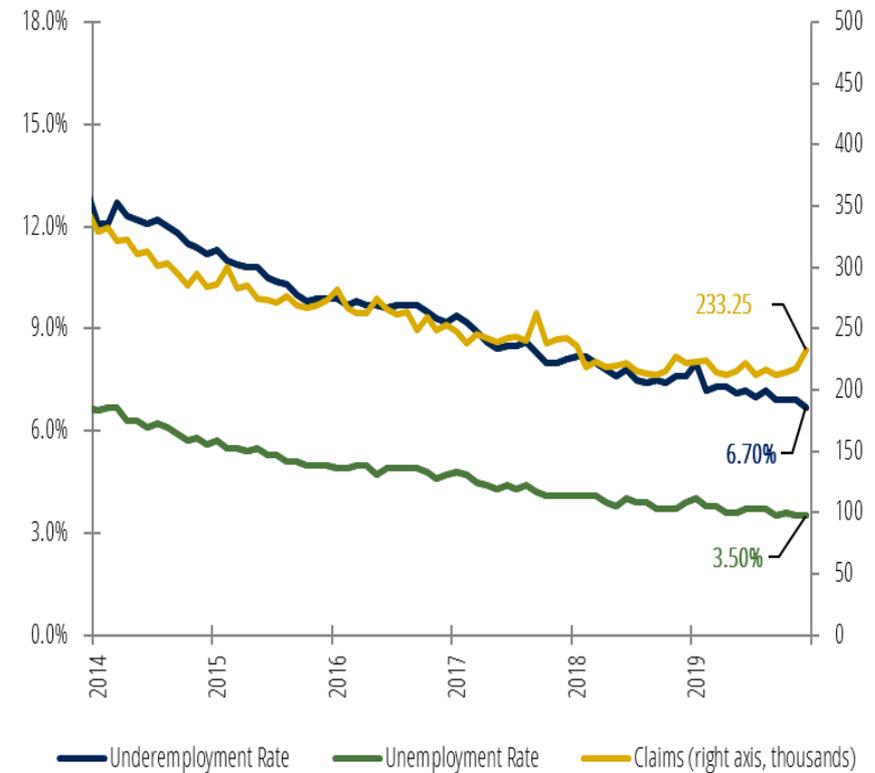


U.S. Labor Market Trends

Number of Jobs Created Per Month
thousands, through December 2019



Unemployment and Underemployment Rates and Claims
through December 2019



Source: Bloomberg; Bureau of Labor Statistics; GWCM Analysis

The Unemployment Rate represents total unemployed, as a percent of the civilian labor force

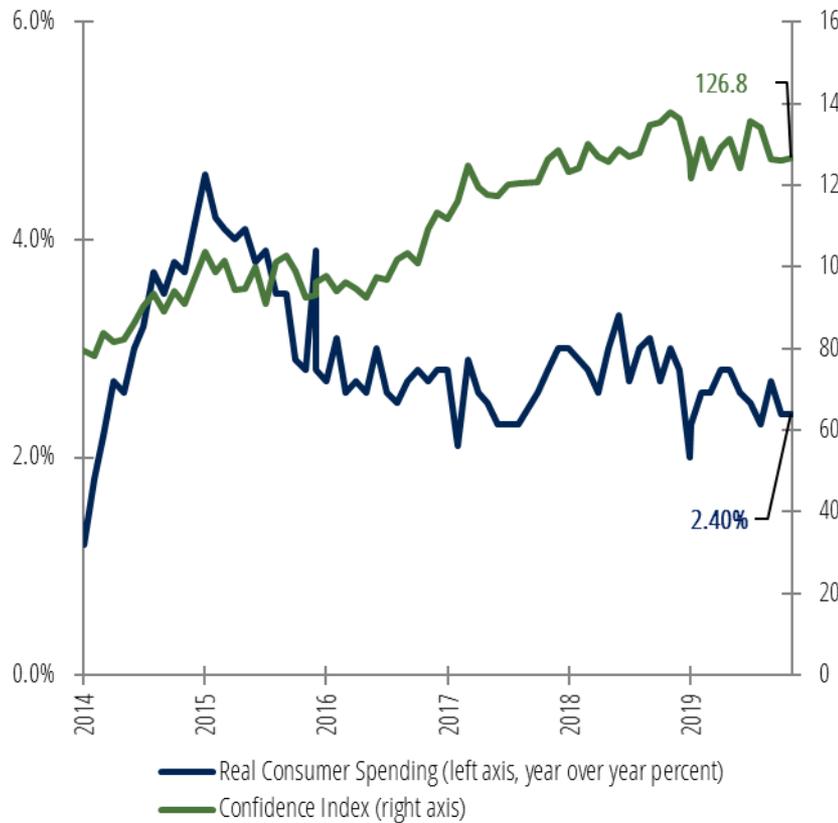
The Underemployment Rate represents total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers

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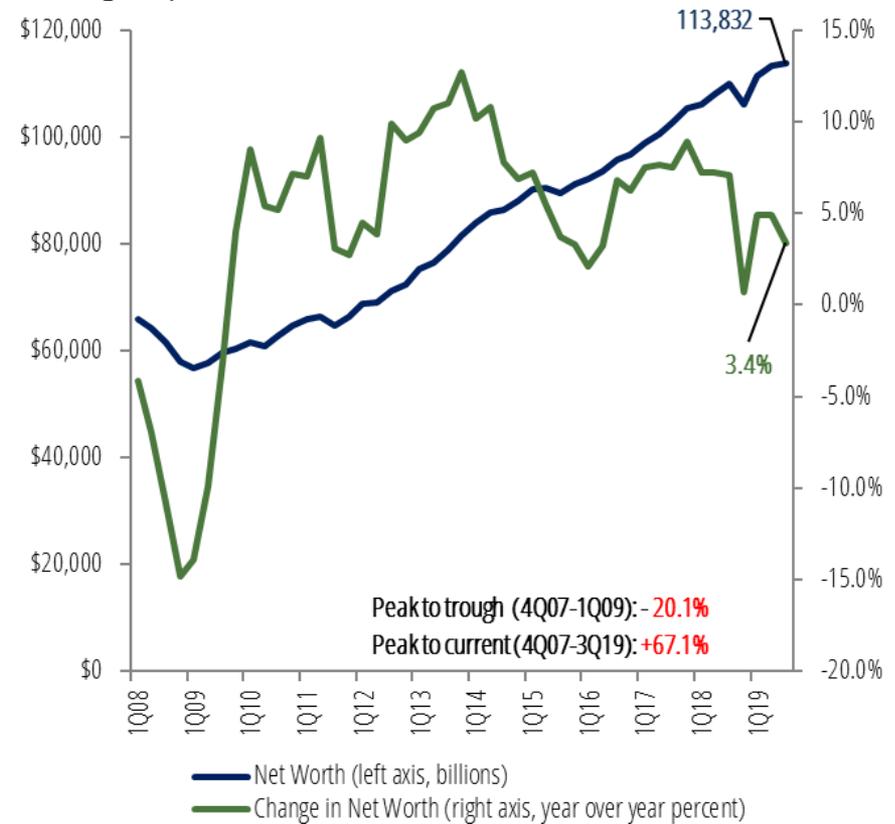


U.S. Consumer Confidence, Spending and Net Worth

Consumer Confidence and Spending through November 2019



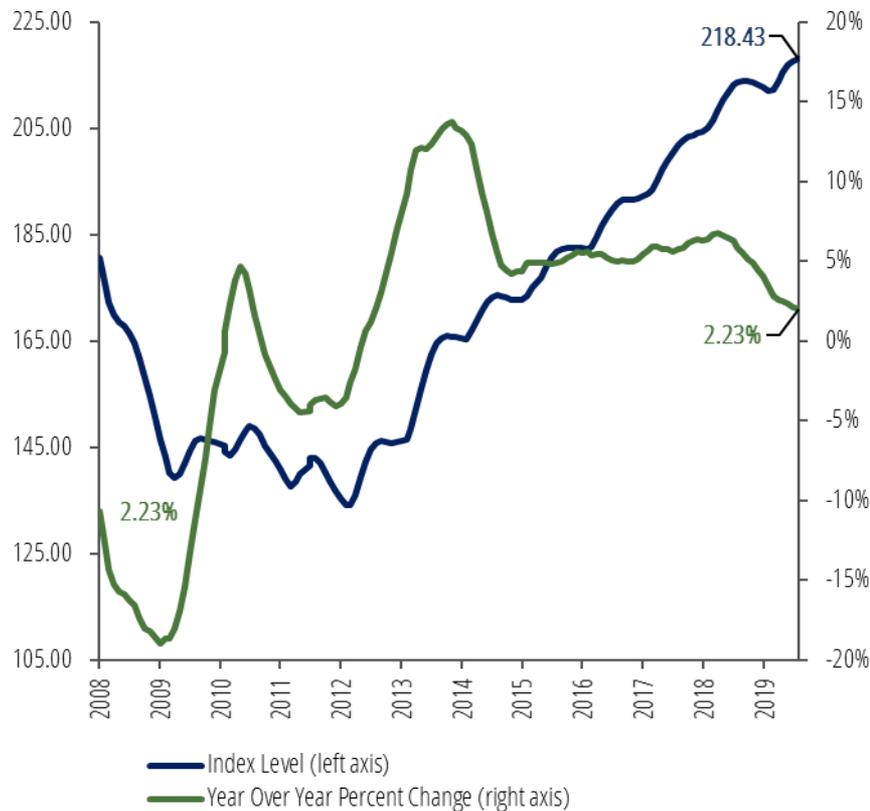
Consumer Net Worth through September 2019



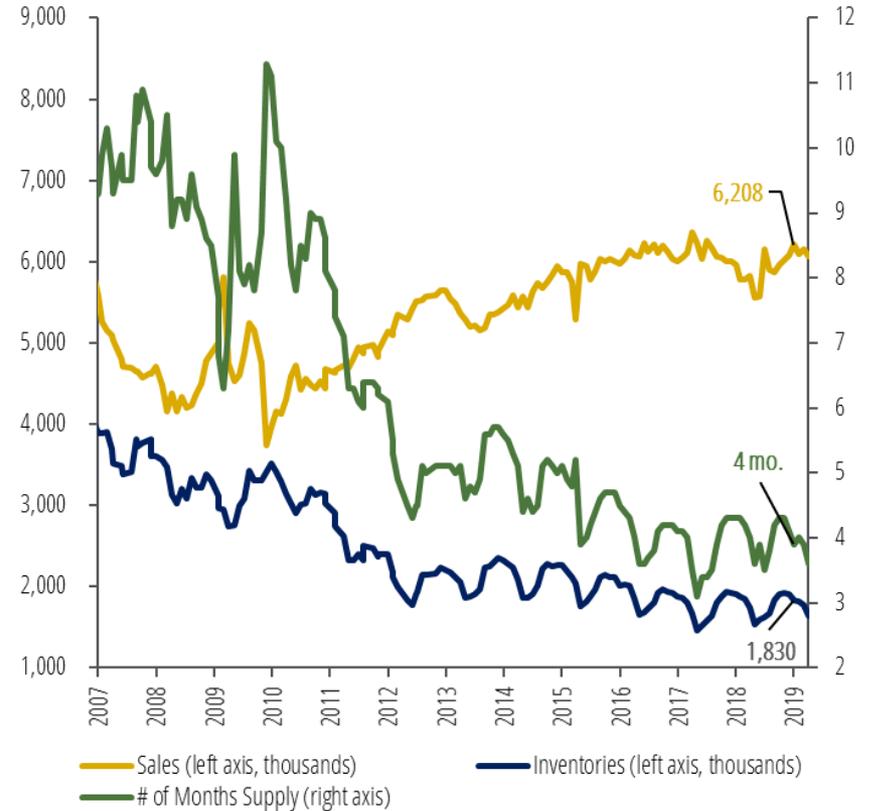


U.S. Housing Market Trends

Case Shiller 20 City Home Price Index through October 2019



Housing Supply and Demand through November 2019





Energy Inflation and Oil

Energy Inflation

year-over-year percent change, through November 2019



Oil Price

\$/Barrel, through December 2019



Source: Bloomberg; GWCM Analysis

Oil prices shown for West Texas Intermediate (WTI) Crude

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Historical, Current and Forward Rates

U.S. Yield Curve

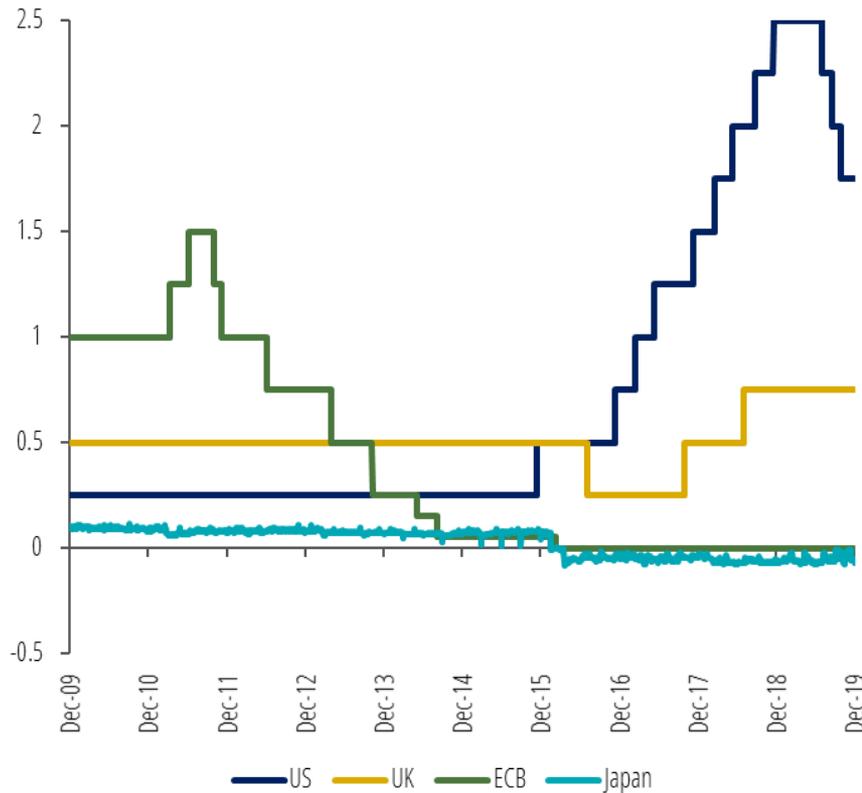
red represents projected change from current to two years forward



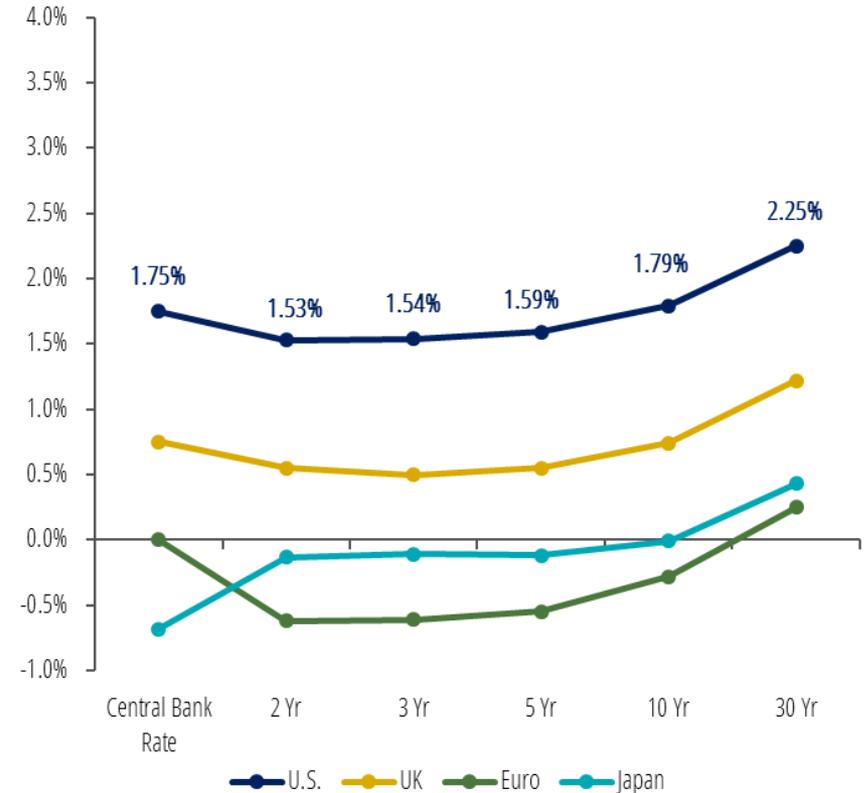


Global Monetary Policies and Interest Rates

Global Central Bank Rates through December 2019

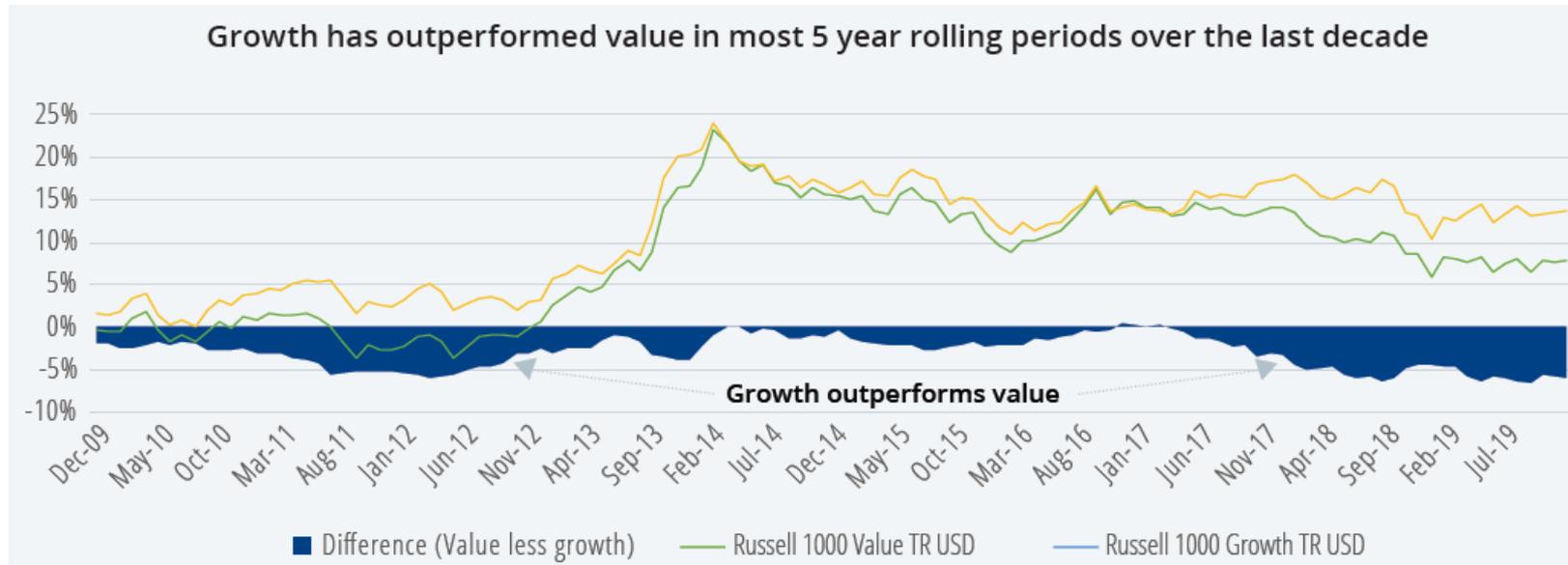


Sovereign Yield Curve as of December 2019





A historic decade for “Growth” leaves investors waiting for “Value” to have its day



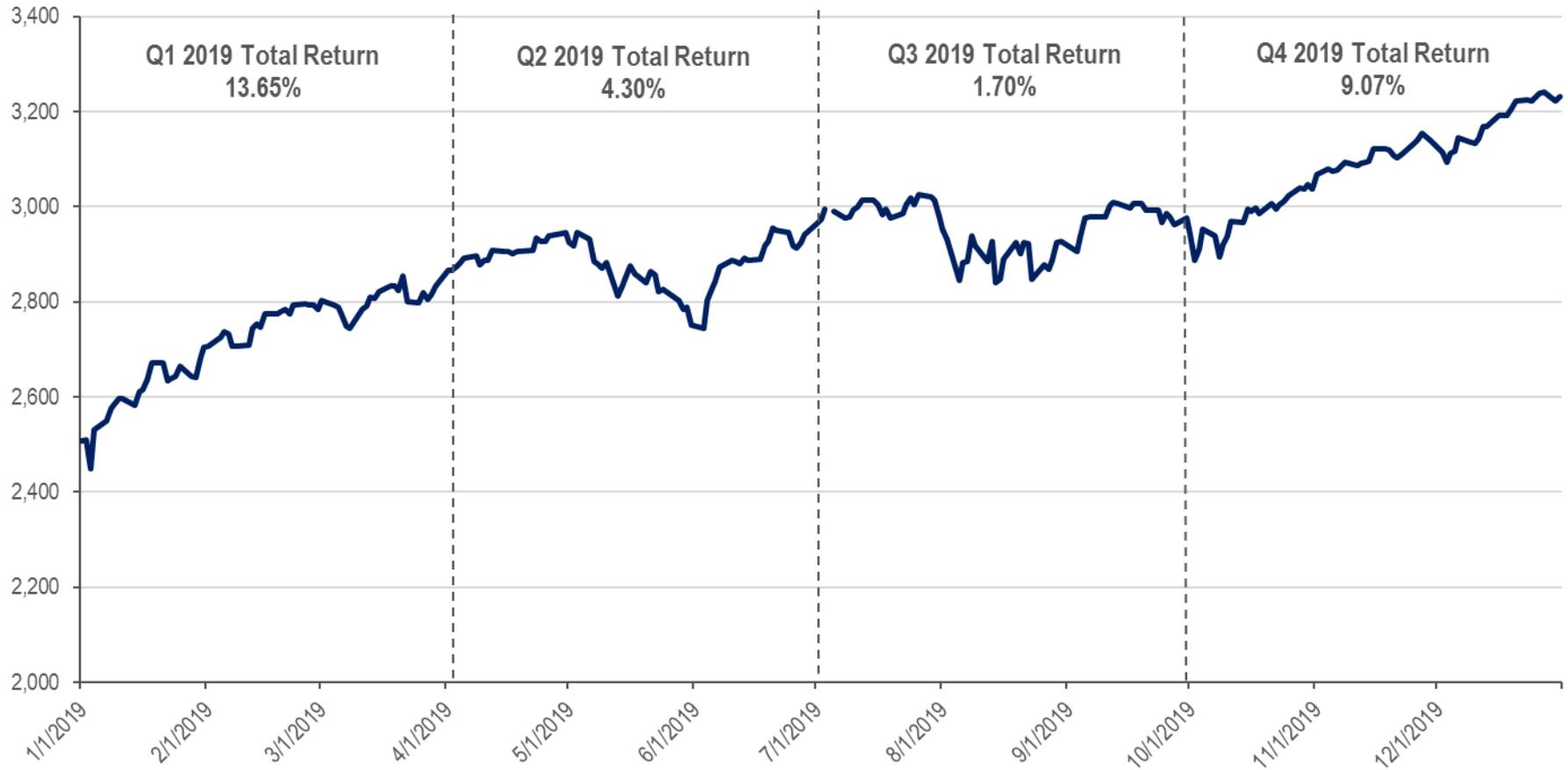
- By one metric¹, Growth is **54% more expensive** than Value
- This would imply that such companies need to continue to grow their earnings at above-average rates or risk declines in their share prices

1. Forward price to earnings ratio is the measure of a firm's share price relative to its estimated annual net income per share.
Source: Morningstar Direct; Bloomberg; GWCM Analysis; http://greatwestfunds.com/pdf/GWI_Research_Note_Invest_With_Style.pdf



Solid Q4 performance rounds out a strong 2019 for the S&P 500

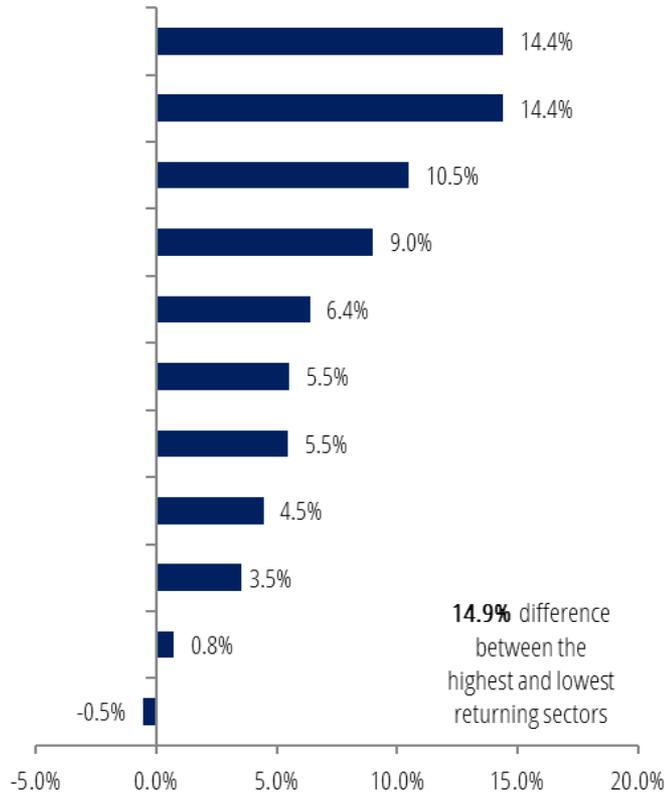
S&P 500 Index



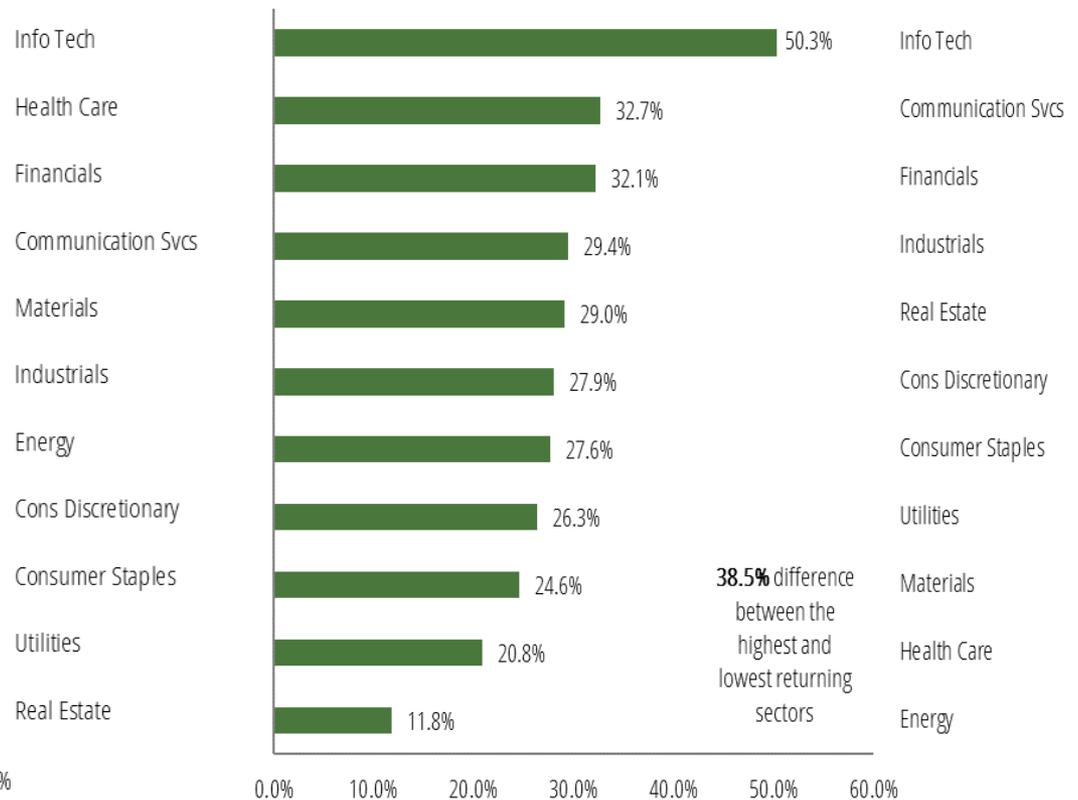


S&P 500 Sector Returns

QTD Returns
as of December 31, 2019



1 Year Trailing Returns
as of December 31, 2019





Equity Market Returns

(as of December 31, 2019)		QTD	YTD	1 Year Trailing	3 Year Trailing	5 Year Trailing	10 Year Trailing	2018	2017	2016	2015	2014	2013	2012
Domestic Equity														
Large Cap	S&P 500	9.1%	31.5%	31.5%	15.3%	11.7%	13.6%	-4.4%	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%
	Russell 1000 Value	7.4%	26.5%	26.5%	9.7%	8.3%	11.8%	-8.3%	13.7%	17.3%	-3.8%	13.5%	32.5%	17.5%
	Russell 1000 Growth	10.6%	36.4%	36.4%	20.5%	14.6%	15.2%	-1.5%	30.2%	7.1%	5.7%	13.0%	33.5%	15.3%
Mid Cap	Russell Mid Cap	7.1%	30.5%	30.5%	12.1%	9.3%	13.2%	-9.1%	18.5%	13.8%	-2.4%	13.2%	34.8%	17.3%
	Russell Mid Cap Value	6.4%	27.1%	27.1%	8.1%	7.6%	12.4%	-12.3%	13.3%	20.0%	-4.8%	14.7%	33.5%	18.5%
	Russell Mid Cap Growth	8.2%	35.5%	35.5%	17.4%	11.6%	14.2%	-4.8%	25.3%	7.3%	-0.2%	11.9%	35.7%	15.8%
Small Cap	Russell 2000	9.9%	25.5%	25.5%	8.6%	8.2%	11.8%	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%
	Russell 2000 Value	8.5%	22.4%	22.4%	4.8%	7.0%	10.6%	-12.9%	7.8%	31.7%	-7.5%	4.2%	34.5%	18.1%
	Russell 2000 Growth	11.4%	28.5%	28.5%	12.5%	9.3%	13.0%	-9.3%	22.2%	11.3%	-1.4%	5.6%	43.3%	14.6%
International Equity														
Developed Markets	MSCI EAFE	8.2%	22.0%	22.0%	9.6%	5.7%	5.5%	-13.8%	25.0%	1.0%	-0.8%	-4.9%	22.8%	17.3%
	Australia	4.3%	22.9%	22.9%	9.1%	5.4%	5.0%	-12.0%	19.9%	11.4%	-10.0%	-3.4%	4.2%	22.1%
	Canada	4.9%	27.5%	27.5%	7.0%	3.0%	3.6%	-17.2%	16.1%	24.6%	-24.2%	1.5%	5.6%	9.1%
	France	8.5%	25.7%	25.7%	12.2%	8.1%	5.0%	-12.8%	28.7%	4.9%	-0.1%	-9.9%	26.3%	21.3%
	Germany	9.9%	20.8%	20.8%	6.3%	3.9%	5.2%	-22.2%	27.7%	2.8%	-1.9%	-10.4%	31.4%	30.9%
	Japan	7.6%	19.6%	19.6%	8.9%	7.7%	6.6%	-12.9%	24.0%	2.4%	9.6%	-4.0%	27.2%	8.2%
	Switzerland	7.6%	32.3%	32.3%	13.8%	7.1%	8.4%	-9.1%	22.5%	-4.9%	0.4%	-0.1%	26.6%	20.4%
	UK	10.0%	21.0%	21.0%	8.3%	3.3%	5.0%	-14.2%	22.3%	-0.1%	-7.6%	-5.4%	20.7%	15.3%
Emerging Markets	MSCI Emerging Markets	11.8%	18.4%	18.4%	11.6%	5.6%	3.7%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
	Brazil	14.2%	26.3%	26.3%	16.0%	8.7%	-0.9%	-0.5%	24.1%	66.2%	-41.4%	-14.0%	-16.0%	0.0%
	China	14.7%	23.5%	23.5%	15.6%	7.5%	5.3%	-18.9%	54.1%	0.9%	-7.8%	8.0%	3.6%	22.7%
	India	5.3%	7.6%	7.6%	11.4%	5.1%	3.9%	-7.3%	38.8%	-1.4%	-6.1%	23.9%	-3.8%	26.0%
	Indonesia	7.0%	9.1%	9.1%	7.2%	3.0%	5.2%	-9.2%	24.2%	17.0%	-19.5%	26.6%	-23.5%	4.6%
	Korea	13.4%	12.5%	12.5%	9.4%	5.9%	5.2%	-20.9%	47.3%	8.7%	-6.7%	-11.1%	3.9%	21.2%
	Mexico	6.2%	11.4%	11.4%	2.9%	-3.2%	1.1%	-15.5%	16.0%	-9.2%	-14.4%	-9.3%	0.2%	29.1%
	Russia	16.8%	50.9%	50.9%	16.5%	20.6%	4.2%	-0.4%	5.2%	54.8%	4.2%	-46.3%	0.8%	13.7%

Source: Morningstar Direct; GWCM Analysis

Individual country returns are represented by MSCI indices and shown as USD returns

*Canada is not part of the EAFE Index

Past performance is not a guarantee or prediction of future results.

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Returns by Style

3 Months				1 Year				Since Market Peak (October, 2007)			
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	7.4%	9.1%	10.6%	Large	26.5%	31.5%	36.4%	Large	111.6%	167.8%	236.6%
Mid	6.4%	7.1%	8.2%	Mid	27.1%	30.5%	35.5%	Mid	143.1%	165.6%	193.6%
Small	8.5%	9.9%	11.4%	Small	22.4%	25.5%	28.5%	Small	107.6%	134.0%	160.5%

3 Year				5 Year				Since Market Low (March, 2009)			
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	9.7%	15.3%	20.5%	Large	8.3%	11.7%	14.6%	Large	427.7%	498.5%	586.5%
Mid	8.1%	12.1%	17.4%	Mid	7.6%	9.3%	11.6%	Mid	520.8%	541.0%	578.7%
Small	4.8%	8.6%	12.5%	Small	7.0%	8.2%	9.3%	Small	413.4%	464.2%	514.6%

performance as of December 31, 2019

Source: Morningstar Direct; GWCM Analysis; Large Blend – S&P 500 Index, Large Value – Russell 1000 Value Index, Large Growth – Russell 1000 Growth Index, Mid Blend – Russell Mid Cap Index, Mid Value – Russell Mid Cap Value Index, Mid Growth – Russell Mid Cap Growth Index, Small Blend – Russell 2000 Index, Small Value – Russell 2000 Value Index, Small Growth – Russell 2000 Growth Index

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Fixed Income and Specialty Returns

(as of December 31, 2019)	QTD	YTD	1 Year Trailing	3 Year Trailing	5 Year Trailing	10 Year Trailing	2018	2017	2016	2015	2014	2013	2012
Fixed Income													
Bloomberg Barclays US Aggregate	0.2%	8.7%	8.7%	4.0%	3.0%	3.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
Bloomberg Barclays US Treasury	-0.8%	6.9%	6.9%	3.3%	2.4%	3.1%	0.9%	2.3%	1.0%	0.8%	5.1%	-2.7%	2.0%
Bloomberg Barclays US Govt/Credit Intermedia	0.4%	6.8%	6.8%	3.2%	2.6%	3.1%	0.9%	2.1%	2.1%	1.1%	3.1%	-0.9%	3.9%
Bloomberg Barclays US Govt/Credit Long	-1.1%	19.6%	19.6%	8.1%	5.4%	7.6%	-4.7%	10.7%	6.7%	-3.3%	19.3%	-8.8%	8.8%
Bloomberg Barclays US TIPS	0.8%	8.4%	8.4%	3.3%	2.6%	3.4%	-1.3%	3.0%	4.7%	-1.4%	3.6%	-8.6%	7.0%
Bloomberg Barclays US Corporate High Yield	2.6%	14.3%	14.3%	6.4%	6.1%	7.6%	-2.1%	7.5%	17.1%	-4.5%	2.5%	7.4%	15.8%
FTSE WGBI	-0.4%	5.9%	5.9%	4.1%	2.0%	1.9%	-0.8%	7.5%	1.6%	-3.6%	-0.5%	-4.0%	1.6%
JPM EMBI Global Diversified	1.8%	15.0%	15.0%	6.7%	6.2%	6.9%	-4.3%	10.3%	10.2%	1.2%	7.4%	-5.3%	17.4%
FTSE Treasury Bill 3 Month	0.5%	2.3%	2.3%	1.7%	1.0%	0.6%	1.9%	0.8%	0.3%	0.0%	0.0%	0.1%	0.1%
Specialty													
Bloomberg Commodity	4.4%	7.7%	7.7%	-0.9%	-3.9%	-4.7%	-11.2%	1.7%	11.8%	-24.7%	-17.0%	-9.5%	-1.1%
DJ US Select REIT	-1.2%	23.1%	23.1%	7.0%	6.4%	11.6%	-4.2%	3.8%	6.7%	4.5%	32.0%	1.2%	17.1%
FTSE EPRA/NAREIT Developed Ex US	5.7%	21.8%	21.8%	11.5%	6.5%	7.4%	-5.8%	20.8%	2.0%	-3.2%	3.2%	6.1%	38.6%

Source: Morningstar Direct; GWCM Analysis
 Past performance is not a guarantee or prediction of future results.

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Calendar Year Returns by Asset Class

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative Return*
Sm Growth 29.1	Agg Bond 7.8	Mid Value 18.5	Sm Growth 43.3	Mid Value 14.7	Lg Growth 5.7	Sm Value 31.7	Emrg Mkt 37.3	Agg Bond 0.01	Lg Growth 36.39	Lg Growth 312.34
Mid Growth 26.4	Balanced 4.7	Emrg Mkt 18.2	Mid Growth 35.7	Lg Value 13.5	Balanced 1.3	Mid Value 20.0	Lg Growth 30.2	Lg Growth -1.51	Mid Growth 35.47	Mid Growth 278.56
Mid Value 24.8	Lg Growth 2.6	Sm Value 18.1	Sm Value 34.5	Lg Growth 13.0	Agg Bond 0.5	Lg Value 17.3	Mid Growth 25.3	Balanced -2.35	Sm Growth 28.48	Sm Growth 239.65
Sm Value 24.5	Lg Value 0.4	Lg Value 17.5	Lg Growth 33.5	Mid Growth 11.9	Mid Growth -0.2	Sm Growth 11.3	International 25.0	Mid Growth -4.75	Mid Value 27.06	Mid Value 222.26
Emrg Mkt 18.9	Mid Value -1.4	International 17.3	Mid Value 33.5	Balanced 10.6	International -0.8	Emrg Mkt 11.2	Sm Growth 22.2	Lg Value -8.27	Lg Value 26.54	Lg Value 205.05
Lg Growth 16.7	Mid Growth -1.7	Mid Growth 15.8	Lg Value 32.5	Agg Bond 6.0	Sm Growth -1.4	Balanced 8.3	Balanced 14.2	Sm Growth -9.31	Sm Value 22.39	Sm Value 172.99
Lg Value 15.5	Sm Growth -2.9	Lg Growth 15.3	International 22.8	Sm Growth 5.6	Lg Value -3.8	Mid Growth 7.3	Lg Value 13.7	Mid Value -12.29	Balanced 22.18	Balanced 153.98
Balanced 12.1	Sm Value -5.5	Sm Growth 14.6	Balanced 17.6	Sm Value 4.2	Mid Value -4.8	Lg Growth 7.1	Mid Value 13.3	Sm Value -12.86	International 22.01	International 70.85
International 7.8	International -12.1	Balanced 11.3	Agg Bond -2.0	Emrg Mkt -2.2	Sm Value -7.5	Agg Bond 2.6	Sm Value 7.8	International -13.79	Emrg Mkt 18.42	Agg Bond 44.45
Agg Bond 6.5	Emrg Mkt -18.4	Agg Bond 4.2	Emrg Mkt -2.6	International -4.9	Emrg Mkt -14.9	International 1.0	Agg Bond 3.5	Emrg Mkt -14.58	Agg Bond 8.72	Emrg Mkt 43.50

*Cumulative return is for the time period 1/1/2010 - 12/31/2019

Source: Morningstar Direct; GWCM Analysis; Lg Growth – Russell 1000 Growth Index, Lg Value – Russell 1000 Value Index, Mid Growth – Russell Mid Cap Growth Index, Mid Value – Russell Mid Cap Value Index, Sm Growth – Russell 2000 Growth Index, Sm Value – Russell 2000 Value Index, International – MSCI EAFE NR Index, Emrg Mkt – MSCI EM NR Index, Agg Bond – Bloomberg Barclays US Aggregate Bond Index, Balanced – 60% S&P 500 Index and 40% Bloomberg Barclays US Aggregate Bond Index.



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- The Bloomberg Barclays Capital US Aggregate Bond Index includes fixed rate debt issues rated investment grade or higher by Moody's Investors Service, Standard and Poor's, or Fitch Investor's Service, in that order. All issues must have at least 1 year left to maturity and have an outstanding par value of at least \$100 million. The Aggregate Index is comprised of the Government/Corporate, the Mortgage-Backed Securities, and the Asset-Backed Securities indices.
- The Standard & Poor's 500 is a market capitalization-weighted index of 500 widely held stocks often used as a proxy for the stock market. Standard and Poor's chooses the member companies for the 500 based on market size, liquidity and industry group representation. Included are the stocks of industrial, financial, utility, and transportation companies. Since mid-1989, this composition has been more flexible and the number of issues in each sector has varied. The returns presented for the S&P 500 are total returns, including the reinvestment of dividends each month.
- The Russell 1000 Value - Market capitalization-weighted index of those firms in the Russell 1000 with lower price-to-book ratios and lower forecasted growth values. The Russell 1000 includes the largest 1000 firms in the Russell 3000, which represents approximately 98% of the investable U.S. equity market.
- The Russell 1000 Growth - Market capitalization-weighted index of those firms in the Russell 1000 with higher price-to-book ratios and higher forecasted growth values. The Russell 1000 includes the largest 1000 firms in the Russell 3000, which represents approximately 98% of the investable U.S. equity market.



Disclosures and Benchmark Definitions

- The Russell 2000 - Consists of the smallest 2000 companies in the Russell 3000 Index, representing approximately 7% of the Russell 3000 total market capitalization. Returns include reinvestment of dividends.
- The Russell 2000 Value - Market-weighted total return index that measures the performance of companies within the Russell 2000 Index having lower price-to-book ratios and lower forecasted growth values. The Russell 2000 Index includes the 2000 firms from the Russell 3000 Index with the smallest market capitalizations.
- The Russell 2000 Growth - Market-weighted total return index that measures the performance of companies within the Russell 2000 Index having higher price-to-book ratios and higher forecasted growth values. The Russell 2000 Index includes the 2000 firms from the Russell 3000 Index with the smallest market capitalizations.
- The Russell Mid-Cap - Measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 24% of the total market capitalization of the Russell 1000 Index.
- The Russell Mid-Cap Value - Market-weighted total return index that measures the performance of companies within the Russell Mid-Cap Index having lower price-to-book ratios and lower forecasted growth values. The Russell Mid-Cap Index includes firms 201 through 1000, based on market capitalization, from the Russell 3000 Index.
- The Russell Mid-Cap Growth - Market-weighted total return index that measures the performance of companies within the Russell Mid-Cap Index having higher price-to-book ratios and higher forecasted growth values. The Russell Mid-Cap Index includes firms 201 through 1000, based on market capitalization, from the Russell 3000 Index.
- The Bloomberg Barclays U.S. Treasury Index includes public obligations of the U.S. Treasury with a remaining maturity of one year or more.
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- The Bloomberg Commodity Index measures price movements of the commodities included in the appropriate sub index. It does not account for effects of rolling futures contracts or costs associated with holding the physical commodity.
- The Bloomberg Barclays US Government/Credit Intermediate Index measures the performance of U.S. Dollar denominated U.S. Treasuries, government-related and investment grade U.S. corporate securities that have a remaining maturity of greater than one year and less than ten years.



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- The Bloomberg Barclays US Government/Credit Long Index includes publicly issued U.S. Treasury debt, U.S. government agency debt, taxable debt issued by U.S. states and territories and their political subdivisions, debt issued by U.S. and non-U.S. corporations, non-U.S. government debt and supranational debt.
- The Citi World Government Bond Index is an index of bonds issued by governments in the U.S., Europe and Asia.
- The Citigroup 3-Month T-Bill Index – The Citigroup 3-Month T-Bill Index is an unmanaged index that is generally representative of 3-month Treasury bills and consists of an average of the last 3-month U.S. Treasury Bill issues.
- The JPMorgan Emerging Markets Bond Index Global tracks total returns for traded external debt instruments in the emerging markets, and is an expanded version of the JPMorgan EMBI+. As with the EMBI+, the EMBI Global includes U.S. dollar-denominated Brady bonds, loans, and Eurobonds with an outstanding face value of at least \$500 million. It covers more of the eligible instruments than the EMBI+ by relaxing somewhat the strict EMBI+ limits on secondary market trading liquidity.
- The Bloomberg Barclays US TIPS Index includes all publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have \$250 million or more of outstanding face value.
- The Dow Jones U.S. Select REIT Index intends to measure the performance of publicly traded REITs and REIT-like securities. The index is a subset of the Dow Jones U.S. Select Real Estate Securities Index (RESI), which represents equity real estate investment trusts (REITs) and real estate operating companies (REOCs) traded in the U.S.
- The FTSE EPRA/NAREIT Developed ex US Index is a subset of the FTSE EPRA/NAREIT Developed Index and is designed to track the performance of listed real estate companies and REITs.

Source: Morningstar Direct.

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Asset allocation and balanced investment options and models are subject to the risks of the underlying investments, which can be a mix of stocks/stock funds and bonds/bond funds. For more information, see the prospectus and/or disclosure documents.

The value of commodity-linked investments may be affected by financial factors, political developments and natural disasters. As such, investment options that invest primarily in commodities may experience greater volatility than investments in traditional securities.

Equity securities of small and mid-sized companies may be more volatile than securities of larger, more established companies.

Real estate securities and trusts involve greater risks than other non-diversified investments, including but not limited to: declining property values, varying economic conditions, changes in zoning laws, or losses from casualty. Real estate securities that invest in foreign real estate involve additional risk, including currency fluctuations and political developments.

Investment return and principal value of a variable investment will fluctuate so that an investor's shares when redeemed, may be worth more or less than the original cost.

There is no guarantee that companies that can issue dividends will declare, continue to pay, or increase dividends.

The JPMCB SmartRetirement Funds indirectly bear their proportionate share of the operating expenses of any underlying funds in which they may invest (excluding management fees and service fees).

The Trustee of the JPMCB SmartRetirement Funds agrees to reimburse the Fund for such fund operating expenses, and/or to waive a portion of the Trustee's management fee, to the extent that the fund's total annual operating expenses (excluding management fees, service fees, underlying fund fees attributable to dividend and interest expenses on short sales, interest, expenses related to litigation and potential litigation, and extraordinary expenses not incurred in the ordinary course of the Fund's business) exceeds 0.04% of the Fund's average daily new assets through the expense cap expiration date.

The price of equity securities may rise or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries selected for the Fund's portfolio or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general (or in particular, the prices of the types of securities in which a fund invests) may decline over short or extended periods of time. When the value of a fund's securities goes down, an investment in a fund decreases in value.

Some of the data may have been obtained from Standard & Poor's ("S&P") © 2015 The McGraw-Hill Companies, Inc. S&P is a division of The McGraw-Hill Companies, Inc.

A benchmark index is not actively managed, does not have a defined investment objective, and does not incur fees or expenses. Therefore, performance of a fund will generally be less than its benchmark index. You cannot invest directly in a benchmark index.

Services offered by Advised Assets Group, LLC, a registered investment adviser.

Empower Retirement is not acting as an investment advisor for the plan. The information, analyses and fund alternatives described in this material are intended to provide assistance to the plan sponsor or other fiduciary responsible for plan investments and should not be relied upon as the sole basis for any investment decision. GWFS Equities, LLC and its affiliates may receive compensation with respect to proprietary investments and may receive compensation with respect to other plan investments. Other share classes may be available for the investment products described, and the plan sponsor is welcome to request more information on the options available.

Shares of Great-West Funds, Inc. are not sold directly to the general public but are offered to permitted accounts as defined in the prospectus. Asset allocation funds of Great-West Funds may invest in funds that are advised by Great-West Capital Management, LLC or are sub-advised by affiliates of GWCM. Asset allocation funds may also invest in a fixed-interest contract issued by GWL&A. While certain sub-advised funds may be managed similar to or modeled after other mutual funds with similar names and investment objectives, the Great-West Funds are not directly related to them. Consequently, the investment performance and other features of other mutual funds and any similarly named Great-West Fund may differ substantially.

The principal underwriter of Great-West Funds, Inc. is its affiliate GWFS Equities, Inc., Member FINRA/SIPC. Great-West Capital Management, LLC is the investment adviser.

advised by Great-West Capital Management, LLC (GWCM), funds that are sub-advised by affiliated and unaffiliated sub-advisers retained by GWCM or funds that are advised by affiliated and unaffiliated investment advisers of GWCM or in a fixed-interest contract issued and guaranteed by Great-West Life & Annuity Insurance Company.

The guaranteed fund is a general account group annuity contract issued by Great-West Life & Annuity Insurance Company or, in New York, by Great-West Life & Annuity Insurance Company of New York that guarantees principal and credited interest for eligible participant-initiated withdrawals and transfers. The guarantee is backed by the general assets of the insurance company issuing the contract. The strength of the guarantee is dependent on the financial strength of the insurance company issuing the contract. Depending on the terms of the contract and/or the contract form, there may also be investment risks associated with certain plan sponsor actions, including but not limited to a termination of the contract that could result in a negative market value adjustment to the proceeds paid to the plan sponsor or an extended payment period. For more information, please contact Empower Retirement or refer to the contract.