# State of Wisconsin



# Investment Performance and Expense Ratio Review

Performance as of March 31, 2019

#### **Bill Thornton**

Investment Director, Great-West Investments 303-737-1514 william.thornton@greatwest.com

# **Table of Contents**

- 1) Executive Summary
- 2) Target Date Summary
- 3) Expense Ratio Information
- 4) Fund Analysis
- 5) Appendix



# **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	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	13.20	-4.66	9.33	4.27	9.94	160,108	0.49
Morningstar Foreign Large Growth Avg	13.00	-3.20	8.05	3.86	9.97	-	1.14
MSCI EAFE Index	9.98	-3.71	7.27	2.33	8.96	-	-
MSCI ACWI ex U.S.	10.31	-4.22	8.09	2.57	8.85	-	-
Blackrock EAFE Equity Index Coll T	10.07	-3.72	7.60	2.59	9.20	-	0.06
MSCI EAFE Index	9.98	-3.71	7.27	2.33	8.96	-	-
DFA US Micro Cap I	11.62	-0.64	10.95	6.33	16.35	6,662	0.52
Morningstar Small Cap Blend Avg	13.34	-0.03	10.17	5.62	14.67	-	1.17
Russell 2000 Index	14.58	2.05	12.92	7.05	15.36	-	-
Blackrock Russell 2000 Index Coll T	14.60	2.15	13.09	7.25	15.53	-	0.05
Russell 2000 Index	14.58	2.05	12.92	7.05	15.36	-	-
T. Rowe Price Mid-Cap Growth	16.21	9.40	14.91	12.12	18.12	32,740	0.76
Morningstar Mid Cap Growth Avg	18.19	8.04	14.18	8.99	15.70	-	1.20
Russell Mid Cap Growth Index	19.62	11.51	15.06	10.89	17.60	-	-
S&P Midcap 400 Index	14.49	2.59	11.24	8.29	16.28	-	-
Blackrock Midcap Equity Index Coll F	14.48	2.61	11.27	8.32	16.29	-	0.04
S&P MidCap 400 Index	14.49	2.59	11.24	8.29	16.28	-	-
Calvert US Large Cap Core Rspnb ldx R6	14.22	9.73	13.52	10.82	16.36	2,657	0.19
S&P 500 Index	13.65	9.50	13.51	10.91	15.92	-	-
Morningstar Socially Resp Large Cap Avg**	13.76	8.28	12.78	9.34	14.72	-	0.97
Morningstar Large Cap Growth Avg	15.67	10.71	15.35	11.26	15.94	-	1.08
Fidelity Contrafund Commingled Pool Cl 2	14.92	9.27	16.34	12.45	-		0.38
Morningstar Large Cap Growth Avg	15.67	10.71	15.35	11.26	15.94	-	1.08
Russell 1000 Growth Index	16.10	12.75	16.53	13.50	17.52	-	-
S&P 500 Index	13.65	9.50	13.51	10.91	15.92	-	-
American Beacon Bridgeway Lg Cap Value I CIT*	11.28	-1.26	8.26	7.19	14.84	4,383	0.55
Morningstar Large Cap Value Avg	11.93	5.67	10.45	7.72	14.52	-	-
Russell 1000 Value Index	11.29	4.48	10.01	7.20	13.68	-	-

<sup>\*</sup> The American Beacon CIT is newly established. Returns presented in italics are linked to mutual fund performance.



<sup>\*\*</sup>This index is a compilation of all Large Cap Socially Conscious Funds in the Morningstar Database

# Performance Benchmarking

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
Vanguard Institutional 500 Index Trust*	13.66	9.48	13.50	10.90	15.93		0.01
S&P 500 Index	13.65	9.50	13.51	10.91	15.92	-	-
Vanguard Wellington Adm	8.66	7.04	9.54	7.57	11.69	103,245	0.17
Morningstar Moderate Allocation Avo	8.89	3.90	7.44	5.12	9.98	-	1.12
Composite 65% S&P 500 / 35% Barclay's Aggregate	9.90	7.74	9.49	8.05	11.67	-	-
Composite 65% S&P 500 / 35% Barclay's U.S. Credit A or Better ldx	10.49	7.85	9.81	8.36	12.54	-	-
Vanguard Long-Term Investment-Grade Adm	7.08	5.48	4.50	5.82	8.65	17,698	0.12
Barclay's LT Corporate A	4.64	4.80	2.95	3.62	6.27	-	-
Morningstar Corp Bond	5.02	4.61	3.71	3.58	6.44	-	0.83
Blackrock US Debt Index Fund Coll W	2.97	4.55	2.08	2.82	3.83	-	0.04
BarCap US Agg Bond TR USE	2.94	4.48	2.03	2.74	3.77	-	-
Federated US Govt 2-5 Yr Instl	1.43	3.08	0.52	0.88	1.19	254	0.59
Morningstar Short Government Avg	1.04	2.43	0.76	0.87	1.23	-	0.76
Barclay's US Treas/Agency 3-5 Y	r 1.59	3.87	0.96	1.75	2.12	-	-
BofA Merrill Lynch US Treas 3-5 Y	r 1.57	3.82	0.96	1.73	2.09	-	-
Vanguard Admiral Treasury Money Mkt Inv	0.58	2.04	1.12	0.69	0.36	25,249	0.09
Morningstar Taxable Money Mkt Av	0.49	1.66	0.81	0.50	0.26	-	0.48
U.S. Treasury 90-Day T-Bil	l 0.59	2.15	1.23	0.77	0.43	-	-
iMoney Net Average Treasury MM	0.46	1.56	0.71	0.43	0.21	-	-
Stable Value Fund	0.61	2.37	2.07	1.97	2.53	668	0.32
5 Yr. Constant Maturity Treasury Yield	0.62	2.73	2.09	1.87	1.69	-	-

<sup>\* \*\*</sup> The Vanguard Institutional 500 Index Trust has an inception date of August, 17, 2018. Performance shown is taken from the Vanguard Institutional Index PL.

# **Name**

American Funds EuroPacific Gr R6
Calvert U.S. Lrg Cap Core Resp Idx\*
DFA U.S. Micro Cap
Federated U.S. Govt: 2-5 Yr Instl
Fidelity Contrafund
T. Rowe Price Mid-Cap Growth
Vanguard Institutional Index Instl PI
Vanguard Long-Term Inv Grade Adm
Vanguard Wellington Adm

<u>2019</u>	<u>2018</u>	2018	<u>2018</u>	2018	2017	2017	2017	<u>2017</u>	<u>2016</u>	<u>2016</u>	<u>2016</u>
<u>Q1</u>	<u>Q4</u>	<u>Q3</u>	<u>Q2</u>	<u>Q1</u>	<u>Q4</u>	<u>Q3</u>	<u>Q2</u>	<u>Q1</u>	<u>Q4</u>	<u>Q3</u>	<u>Q2</u>
69	67	54	56	66	68	69	79	77	80	80	66
85	66	60	35	46	38	44	52	44	52	71	62
58	81	83	83	80	75	82	77	61	71	63	61
24	30	15	14	14	30	55	47	60	45	63	70
64	67	66	79	79	80	71	75	69	59	63	60
60	74	57	71	88	92	96	97	96	95	98	98
85	85	90	89	88	87	87	91	94	95	95	90
77	88	88	98	86	96	99	99	99	99	100	100
90	93	92	93	97	97	97	96	96	97	94	94

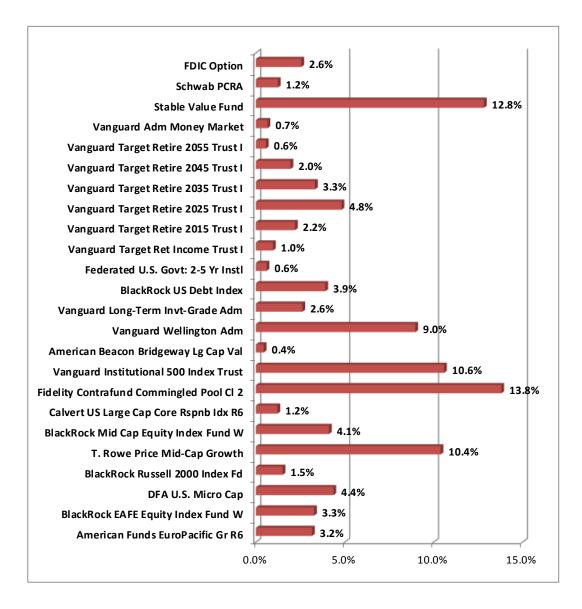
76-100	1st Quartile
51-75	2nd Quartile
26-50	3rd Quartile
1-25	4th Quartile

<sup>\*</sup> Percentile ranks shown for time periods prior to Q3 2018 for the Calvert U.S. Large Cap Core Resp ldx are taken from the Calvert Equity Fund.

Asset Summary 3/31/2019

Plan Inception   Date   Fund Net Assets   Fund   Fund Assets   Fund Assets   Percentage of Fund Assets   Participants   Fund   Fund Assets   Fund A								Percentage of WDC
Date         Fund Net Assets         Fund         Fund Assets         WDC Assets         Participants         Fund           American Funds EuroPacific Gr R6         1/28/2005         \$160,108,130,692         \$164,342,479         0.10%         3.15%         16,071         24.94%           BlackRock EAFE Equity Index Fund W         2/1/2001         \$260,670,000         \$170,608,310         65.45%         3.27%         20,245         31.42%           DFA U.S. Micro Cap         2/1/1997         \$6,662,144,577         \$226,883,117         3.41%         4.35%         18,127         28.13%           BlackRock Russell 2000 Index Fd         2/20/2004         \$318,650,000         \$78,311,119         24.58%         1.50%         14,004         21.73%           T. Rowe Price Mid-Cap Growth         2/1/1998         \$32,739,863,468         \$541,137,988         1.65%         10.39%         31,030         48.15%           BlackRock Mid Cap Equity Index Fund W         2/1/2001         \$4,743,350,000         \$214,174,632         4.52%         4.11%         22,024         34.18%								Participants
BlackRock EAFE Equity Index Fund W       2/1/2001       \$260,670,000       \$170,608,310       65.45%       3.27%       20,245       31.42%         DFA U.S. Micro Cap       2/1/1997       \$6,662,144,577       \$226,883,117       3.41%       4.35%       18,127       28.13%         BlackRock Russell 2000 Index Fd       2/20/2004       \$318,650,000       \$78,311,119       24.58%       1.50%       14,004       21.73%         T. Rowe Price Mid-Cap Growth       2/1/1998       \$32,739,863,468       \$541,137,988       1.65%       10.39%       31,030       48.15%         BlackRock Mid Cap Equity Index Fund W       2/1/2001       \$4,743,350,000       \$214,174,632       4.52%       4.11%       22,024       34.18%		· ·	Fund Net Assets			_		_
DFA U.S. Micro Cap       2/1/1997       \$6,662,144,577       \$226,883,117       3.41%       4.35%       18,127       28.13%         BlackRock Russell 2000 Index Fd       2/20/2004       \$318,650,000       \$78,311,119       24.58%       1.50%       14,004       21.73%         T. Rowe Price Mid-Cap Growth       2/1/1998       \$32,739,863,468       \$541,137,988       1.65%       10.39%       31,030       48.15%         BlackRock Mid Cap Equity Index Fund W       2/1/2001       \$4,743,350,000       \$214,174,632       4.52%       4.11%       22,024       34.18%	American Funds EuroPacific Gr R6	1/28/2005	\$160,108,130,692	\$164,342,479	0.10%	3.15%	16,071	24.94%
BlackRock Russell 2000 Index Fd         2/20/2004         \$318,650,000         \$78,311,119         24.58%         1.50%         14,004         21.73%           T. Rowe Price Mid-Cap Growth         2/1/1998         \$32,739,863,468         \$541,137,988         1.65%         10.39%         31,030         48.15%           BlackRock Mid Cap Equity Index Fund W         2/1/2001         \$4,743,350,000         \$214,174,632         4.52%         4.11%         22,024         34.18%	BlackRock EAFE Equity Index Fund W	2/1/2001	\$260,670,000	\$170,608,310	65.45%	3.27%	20,245	31.42%
T. Rowe Price Mid-Cap Growth       2/1/1998       \$32,739,863,468       \$541,137,988       1.65%       10.39%       31,030       48.15%         BlackRock Mid Cap Equity Index Fund W       2/1/2001       \$4,743,350,000       \$214,174,632       4.52%       4.11%       22,024       34.18%	DFA U.S. Micro Cap	2/1/1997	\$6,662,144,577	\$226,883,117	3.41%	4.35%	18,127	28.13%
BlackRock Mid Cap Equity Index Fund W 2/1/2001 \$4,743,350,000 \$214,174,632 4.52% 4.11% 22,024 34.18%	BlackRock Russell 2000 Index Fd	2/20/2004	\$318,650,000	\$78,311,119	24.58%	1.50%	14,004	21.73%
	T. Rowe Price Mid-Cap Growth	2/1/1998	\$32,739,863,468	\$541,137,988	1.65%	10.39%	31,030	48.15%
	BlackRock Mid Cap Equity Index Fund W	2/1/2001	\$4,743,350,000	\$214,174,632	4.52%	4.11%	22,024	34.18%
Calvert US Large Cap Core Rspnb ldx R6 4/18/2003 \$2,656,831,399 \$63,174,692 2.38% 1.21% 7,019 10.89%	Calvert US Large Cap Core Rspnb ldx R6	4/18/2003	\$2,656,831,399	\$63,174,692	2.38%	1.21%	7,019	10.89%
Fidelity Contrafund Commingled Pool Cl 2         1/31/1994         \$119,279,587,594         \$719,312,341         0.60%         13.81%         32,568         50.54%	Fidelity Contrafund Commingled Pool CI 2	1/31/1994	\$119,279,587,594	\$719,312,341	0.60%	13.81%	32,568	50.54%
Vanguard Institutional 500 Index Trust         9/9/1990         N/A         \$551,317,064         NA         10.58%         28,070         43.56%	Vanguard Institutional 500 Index Trust	9/9/1990	N/A	\$551,317,064	NA	10.58%	28,070	43.56%
American Beacon Bridgeway Lg Cap Val         11/1/2017         \$181,838,149         \$22,891,393         12.59%         0.44%         15,062         23.37%	American Beacon Bridgeway Lg Cap Val	11/1/2017	\$181,838,149	\$22,891,393	12.59%	0.44%	15,062	23.37%
Vanguard Wellington Adm         10/26/2001         \$103,245,205,055         \$467,191,679         0.45%         8.97%         24,465         37.97%	Vanguard Wellington Adm	10/26/2001	\$103,245,205,055	\$467,191,679	0.45%	8.97%	24,465	37.97%
Vanguard Long-Term Invt-Grade Adm         10/26/2001         \$17,698,368,748         \$136,289,244         0.77%         2.62%         16,219         25.17%	Vanguard Long-Term Invt-Grade Adm	10/26/2001	\$17,698,368,748	\$136,289,244	0.77%	2.62%	16,219	25.17%
<b>BlackRock US Debt Index</b> 2/1/2001 \$1,136,500,000 \$203,382,405 17.90% 3.90% 18,280 28.37%	BlackRock US Debt Index	2/1/2001	\$1,136,500,000	\$203,382,405	17.90%	3.90%	18,280	28.37%
Federated U.S. Govt: 2-5 Yr Instl         2/3/1992         \$254,487,722         \$31,347,646         12.32%         0.60%         5,893         9.15%	Federated U.S. Govt: 2-5 Yr Instl	2/3/1992	\$254,487,722	\$31,347,646	12.32%	0.60%	5,893	9.15%
Vanguard Target Ret Income Trust I         7/29/2005         \$1,878,851,903         \$49,862,348         2.65%         0.96%         1,851         2.87%	Vanguard Target Ret Income Trust I	7/29/2005	\$1,878,851,903	\$49,862,348	2.65%	0.96%	1,851	2.87%
Vanguard Target Retire 2015 Trust I         7/29/2005         \$2,281,511,809         \$114,533,581         5.02%         2.20%         2,954         4.58%	Vanguard Target Retire 2015 Trust I	7/29/2005	\$2,281,511,809	\$114,533,581	5.02%	2.20%	2,954	4.58%
Vanguard Target Retire 2025 Trust I 7/29/2005 \$9,497,196,364 \$251,034,885 2.64% 4.82% 6,568 10.19%	Vanguard Target Retire 2025 Trust I	7/29/2005	\$9,497,196,364	\$251,034,885	2.64%	4.82%	6,568	10.19%
Vanguard Target Retire 2035 Trust I         7/29/2005         \$7,905,347,344         \$173,109,093         2.19%         3.32%         6,776         10.52%	Vanguard Target Retire 2035 Trust I	7/29/2005	\$7,905,347,344	\$173,109,093	2.19%	3.32%	6,776	10.52%
Vanguard Target Retire 2045 Trust I         7/29/2005         \$5,581,084,381         \$101,595,353         1.82%         1.95%         6,328         9.82%	Vanguard Target Retire 2045 Trust I	7/29/2005	\$5,581,084,381	\$101,595,353	1.82%	1.95%	6,328	9.82%
Vanguard Target Retire 2055 Trust I         8/18/2010         \$1,957,549,707         \$29,458,979         1.50%         0.57%         3,678         5.71%	Vanguard Target Retire 2055 Trust I	8/18/2010	\$1,957,549,707	\$29,458,979	1.50%	0.57%	3,678	5.71%
Vanguard Adm Money Market         10/1/1993         \$25,248,600,000         \$34,095,023         0.14%         0.65%         6,529         10.13%	Vanguard Adm Money Market	10/1/1993	\$25,248,600,000	\$34,095,023	0.14%	0.65%	6,529	10.13%
Stable Value Fund         9/1/1996         N/A         \$668,305,545         N/A         12.83%         25,709         39.90%	Stable Value Fund	9/1/1996	N/A	\$668,305,545	N/A	12.83%	25,709	39.90%
Schwab PCRA         2/17/2000         N/A         \$64,449,342         N/A         1.24%         1,229         1.91%	Schwab PCRA	2/17/2000	N/A	\$64,449,342	N/A	1.24%	1,229	1.91%
<b>FDIC Option</b> 12/31/1996 N/A \$133,099,740 N/A 2.55% 10,524 16.33%	FDIC Option	12/31/1996	N/A	\$133,099,740	N/A	2.55%	10,524	16.33%

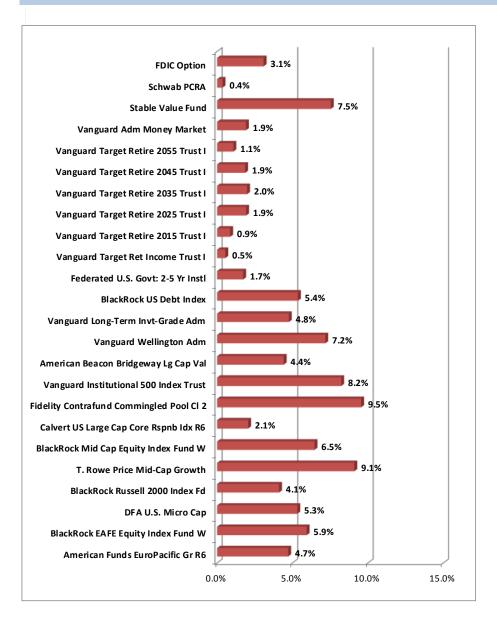
Asset Summary 3/31/2019



### **Total WDC Assets**

# \$5,209,907,997

Domestic Equity	\$2,417,202,347	46%
Intl Equity	\$334,950,789	6%
Asset Allocation	\$1,186,785,918	23%
Fixed Income	\$371,019,294	7%
Cash Equiv.	\$835,500,307	16%
Self-Directed Brok.	\$64,449,342	1%



Total WDC Participants 64,438

Expense Summary 3/31/2019

Name	Expense Ratio	Annual Expense per \$1000
American Funds EuroPacific Gr R6	0.49	\$4.90
Cat: Foreign Large Growth	1.14	
Blackrock EAFE Equity Index Fund W	0.06	\$0.60
Cat: Foreign Large Blend Index	0.41	
DFA U.S. Micro Cap	0.52	\$5.20
Cat: Small Blend	1.17	
Blackrock Russell 2000 Index Fd	0.05	\$0.50
Cat: Small Cap Blend Index	0.41	
T. Rowe Price Mid-Cap Growth	0.76	\$7.60
Cat: Mid Growth	1.20	
Blackrock Mid Cap Equity Index Fund W	0.04	\$0.40
Cat: Mid Cap Blend Index	0.48	
Calvert US Large Cap Core Rspnb ldx R6	0.19	\$1.90
Cat: Socially Resp Large Cap	0.97	
Fidelity Contrafund Commingled Pool Cl 2	0.38	\$3.80
Cat: Large Growth	1.08	
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	1.00	
Stable Value Fund	0.32	\$3.20
Cat: Stable Value	0.70	

		Annual
No	-	Expense per
Name	Ratio	\$1000
Vanguard Wellington Adm	0.17	\$1.70
Cat: Moderate Allocation	1.12	
Vanguard Target Retirement 2055 Inv	0.07	\$0.70
Cat: Target Date 2050+	0.79	
Vanguard Target Retirement 2045 Inv	0.07	\$0.70
Cat: Target Date 2041-2045	0.79	
Vanguard Target Retirement 2035 Inv	0.07	\$0.70
Cat: Target Date 2031-2035	0.78	
Vanguard Target Retirement 2025 Inv	0.07	\$0.70
Cat: Target Date 2021-2025	0.77	
Vanguard Target Retirement 2015 Inv	0.07	\$0.70
Cat: Target Date 2011-2015	0.72	
Vanguard Target Retirement Income Inv	0.07	\$0.70
Cat: Retirement Income	0.77	
Vanguard Long-Term Invmt-Grade Adm	0.12	\$1.20
Cat: Corporate Bond	0.83	
Blackrock US Debt Index	0.04	\$0.40
Cat: Intermediate Bond Index	0.33	
Federated U.S. Govt: 2-5 Yr Instl*	0.59	\$5.90
Cat: Short Government	0.76	
Vanguard Adm Money Market	0.09	\$0.90
Average US Taxable Money Market Fund	0.48	

Asset-Weighted Average Expense Ratio: 0.21%



<sup>\*</sup> 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 0.43 for the Federated fund.



# Target Date Fund Summary

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	5.57	4.00	4.87	4.13	6.69	0	0.07	4	18	11	67	0
S&P Target Date Retirement Income TR USD	5.57	3.72	4.70	3.89	6.38	-	-	-	-	-	-	-
Composite Returns*	5.58	3.87	4.27	3.62	6.05	-	-	-	-	-	-	-
Vanguard Target Retire 2015 Trust I	6.50	3.90	6.28	4.98	9.25	0	0.07	3	25	16	56	0
S&P Target Date 2015 TR USD	6.89	3.90	6.25	4.85	8.57	-	-	-	-	-	-	-
Composite Returns*	6.66	3.66	5.17	3.99	7.01	-	-	-	-	-	-	-
Vanguard Target Retire 2025 Trust I	8.84	3.92	8.20	6.07	10.95	0	0.07	2	38	24	36	0
S&P Target Date 2025 TR USD	8.37	3.90	7.74	5.66	10.32	-	-	-	-	-	-	-
Composite Returns*	8.62	3.31	6.80	4.69	8.76	-	-	-	-	-	-	-
Vanguard Target Retire 2035 Trust I	10.29	3.66	9.52	6.69	12.27	0	0.07	2	46	30	22	0
S&P Target Date 2035 TR USD	10.27	3.66	9.09	6.41	11.65	-	-	-	-	-	-	-
Composite Returns*	9.89	2.99	7.86	5.11	9.88	-	-	-	-	-	-	-
Vanguard Target Retire 2045 Trust I	11.53	3.32	10.43	7.08	12.63	0	0.07	2	53	35	10	0
S&P Target Date 2045 TR USD	11.10	3.46	9.85	6.81	12.34	-	-	-	-	-	-	-
Composite Returns*	10.99	2.74	8.78	5.47	10.83	-	-	-	-	-	-	-
Vanguard Target Retire 2055 Trust I	11.53	3.35	10.43	7.05	-	0	0.07	2	54	34	10	0
S&P Target Date 2055+ TR USD	11.31	3.37	10.29	7.02	-	-	-	-	-	-	-	-
Composite Returns*	11.01	2.83	8.81	5.52	10.87	-	-	-	-	-	-	-

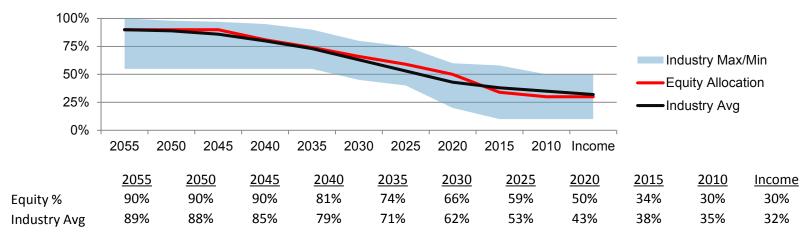


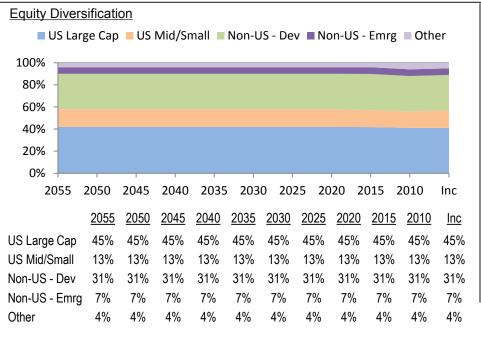
<sup>\*</sup>Composite benchmark consists of the following indices weighted to match the allocation of the specific target date fund: MSCI Broad Market, MSCI EAFE, Barclays Aggregate Bond, and Barclays US Treasury 1-3 Month

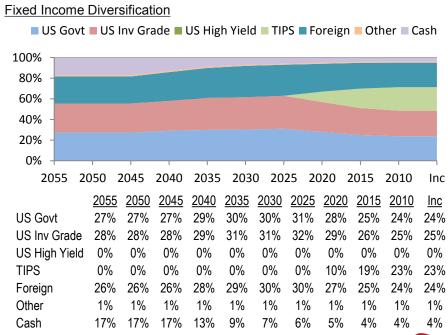
3/31/2019

# Glide Path Summary

Data as of March 31, 2019







**EMPOWER** 



# **Expense Ratio Information**

3/31/2019

# **Expense Summary**

	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		0.60	
Short Government				
Federated US Govt 2-5 Yr Instl	0.59	32	0.92	50
Short Government Median	0.76		0.92	
Intermediate-term Bond				
BlackRock US Debt Index-W	0.04	2	0.04	1
Intermediate-Term Bond Median	0.76		0.93	
Corporate Bond				
Vanguard Long-Term Investment-Grade Adm	0.12	15	0.12	14
Corporate Bond Median	0.64		0.79	
Balanced				
Allocation50% to 70% Equity				
Vanguard Wellington Admiral	0.17	1	0.17	1
Allocation50% to 70% Equity Median	1.16		1.31	
Target-Date Retirement				
The Vanguard Target Retire Inc Trust I	0.07	1	0.07	1
Target-Date Retirement Median	0.80		1.09	
Target-Date 2015				
The Vanguard Target Retire 2015 Trust I	0.07	1	0.07	1
Target-Date 2015 Median	0.85		1.16	
Target-Date 2025				
The Vanguard Target Retire 2025 Trust I	0.07	1	0.07	1
Target-Date 2025 Median	0.83		1.09	
Target-Date 2035				
The Vanguard Target Retire 2035 Trust I	0.07	1	0.07	1
Target-Date 2035 Median	0.82		1.14	

3/31/2019

Franci Data 9945	-		-	
Target-Date 2045 The Vanguard Target Retire 2045 Trust I	0.07	1	0.07	1
Target-Date 2045 Median	0.81	•	1.16	'
•	0.07		1.10	
Target-Date 2055	0.07		0.07	
The Vanguard Target Retire 2055 Trust I	0.07	1	0.07	1
Target-Date 2055 Median	0.79		1.24	
Equity				
_arge Value				
Bridgeway Large Cap Value CIT Class I	0.55	11	0.55	9
Large Value Median	1.04		1.20	
Large Blend				
Vanguard Institutional Index Instl PI	0.01	1	0.02	1
Calvert US Large Cap Core Rspnb ldx R6	0.19	6	0.32	8
Large Blend Median	1.04		1.19	
Large Growth				
Fidelity Contrafund Commingled Pool CI 2	0.38	4	0.38	3
Large Growth Median	1.13		1.28	
Mid-Cap Blend				
BlackRock Mid Cap Equity Index- F	0.04	1	0.04	1
Mid-Cap Blend Median	1.10		1.25	
Mid-Cap Growth				
T. Rowe Price Instl Mid-Cap Equity Gr	0.76	5	0.76	4
Mid-Cap Growth Median	1.25	-	1.45	
Small Blend				
DFA US Micro Cap I	0.52	11	0.52	9
BlackRock Russell 2000 Index-T	0.05	2	0.05	2
Small Blend Median	1.19		1.32	
nternational				
Foreign Large Blend				
BlackRock EAFE Equity Index-T	0.06	2	0.08	3
Foreign Large Blend Median	1.11		1.29	

Expense Summary 3/31/2019

	Net Expense Ratio	Peer Rank	Gross Expense Ratio	Peer Rank
Foreign Large Growth				
American Funds Europacific Growth R6	0.49	4	0.49	3
Foreign Large Growth Median	1.17		1.36	



# 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

# Stable Value (Wisconsin)

# 3/31/2019

Fund Incep Date: 07/01/1998

Benchmark :

Citi Treasury Bill 3 Mon USD

Category : Stable Value Net Assets: \$666.07M Manager Name Team Managed Manager Start Date : 06/30/1998 Expense Ratio : 0.32%

Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

#### Sector Breakdown

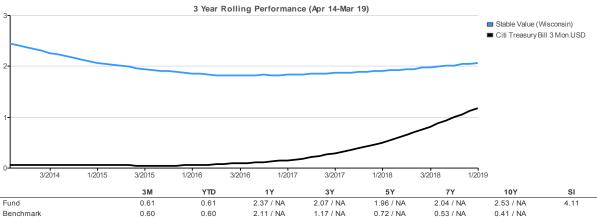
**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

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

### PERFORMANCE



CALENDAR	2018	2017	2016	2015	2014	2013	2012	2011	2010
Fund	2.25	1.89	1.89	1.85	1.73	2.10	2.63	3.13	3.93
Benchmark	1.86	0.84	0.27	0.03	0.03	0.05	0.07	0.08	0.13

#### Total: NA%

#### ASSET LOADINGS (Returns-based)

FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19)

75-50-25-

100-

		Cui	rent	Av erage		
		Fund	Bmk	Fund	Bmk	
Т	Cash	100.0	100.0	99.9	100.0	
1	Mortgages	0.0	0.0	0.0	0.0	
1	Gov/Corp Bonds	0.0	0.0	0.1	0.0	

#### RISK & PERFORMANCE STATISTICS

3 Yr Fund Benchmark Alpha 0.00 0.87 0.52 1.00 Beta 100.00 R-Squared 1.77 Sharpe Ratio 11.40 -0.10 Up Market Capture 176.22 100.00 Down Market Capture NA NA

5 Yr	Fund	Benchmark
Alpha	1.22	0.00
Beta	0.59	1.00
R-Squared	1.46	100.00
Sharpe Ratio	16.72	-0.10
Up Market Capture	271.91	100.00
Down Market Capture	NA	NA

# Vanguard Treasury Money Market Investor VUSXX

0.00%

3/31/2019

Fund Incep Date: 12/14/1992

Benchmark

FTSE Treasury Bill 3 Mon

Category Money Market-Taxable

Net Assets: \$25.017.00M Manager Name

Manager Start Date :

Expense Ratio: 0.09%

Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)

A	55	se	τs	,



#### Credit Quality (%)

AAA AA Α

BBB BB

В Below B

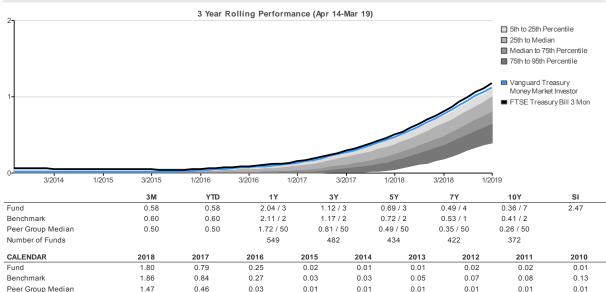
NR/NA Total:

Sector (%)	
% Government	11.43%
% Municipal	0.00%
% Corporate	0.00%
% Securitized	0.00%
% Cash and Equivalent	88.57%
% Derivative	0.00%
Total:	100.00%

#### INVESTMENT OVERVIEW

The investment seeks to provide current income while maintaining liquidity and a stable share price of \$1. The fund invests solely in high-quality, short-term money market securities whose interest and principal payments are backed by the full faith and credit of the U.S. government. At least 80% of the fund's assets will be invested in U.S. Treasury securities; the remainder of the assets may be invested in securities issued by U.S. governmental agencies. The fund maintains a dollar-weighted average maturity of 60 days or less and a dollar-weighted average life of 120 days or less.

#### PERFORMANCE



NOTES

#### **RISK & PERFORMANCE STATISTICS**

Fund

-0.05

1.00

95.71

-0.34

95.69

3 Yr

Alpha

Beta

R-Squared

Sharpe Ratio

Up Market Capture

Benchmark	Peer Group Median
0.00	-0.36
1.00	0.95
100.00	64.24
-0.10	-1.86
100.00	68.71

Down Market Capture	NA	NA	NA	
5 Yr	Fund	Benchmark	Peer Group Median	
Alpha	-0.03	0.00	-0.23	
Beta	0.99	1.00	1.01	
R-Squared	94.00	100.00	30.95	
Sharpe Ratio	-0.25	-0.10	-1.31	
Up Market Capture	95.25	100.00	67.58	
Down Market Capture	NA	NA	NA	

#### ASSET LOADINGS (Returns-based)

FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19) 100-

75-50-25-

		Current		Ave	rage
		Fund	Bmk	Fund	Bmk
Т	Cash	100.0	100.0	100.0	100.0
	Credit Bond	0.0	0.0	0.0	0.0
1	Govt Bond	0.0	0.0	0.0	0.0
	HY Corp Bond	0.0	0.0	0.0	0.0
I.	MBS	0.0	0.0	0.0	0.0
I.	Muni Bond	0.0	0.0	0.0	0.0
I.	TIPS	0.0	0.0	0.0	0.0

## Federated US Govt 2-5 Yr Instl FIGTX

3/31/2019

Fund Incep Date: 02/18/1983

Benchmark

BofAML US Treasuries 3-5 Yr TR USD

Category: Short Government Net Assets: \$252.00M

Manager Name : J. Andrew Kirschler

Manager Start Date : 07/05/2013

Expense Ratio: 0.59%

Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)



C 414	0	/0/ \
Crean	Quality	(%)

100.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
100.00%

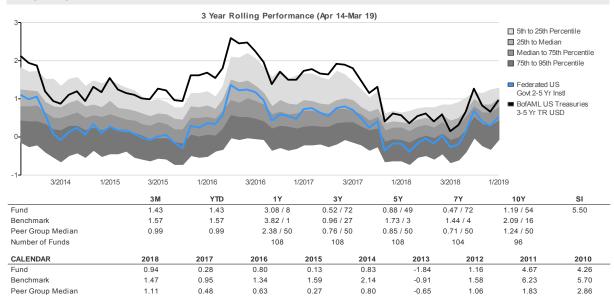
#### Sector (%)

Total:	100.00%
% Derivative	0.00%
% Cash and Equivalent	0.78%
% Securitized	11.03%
% Corporate	0.00%
% Municipal	0.00%
% Government	88.19%

#### 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



NOTES

#### **RISK & PERFORMANCE STATISTICS**

R-Squared

Sharpe Ratio

Up Market Capture

Down Market Capture

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.47	0.00	-0.34
Beta	0.87	1.00	0.38
R-Squared	97.68	100.00	88.29
Sharpe Ratio	-0.34	-0.09	-0.40
Up Market Capture	82.97	100.00	48.34
Down Market Capture	95.45	100.00	34.73
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.68	0.00	-0.25
Beta	0.83	1.00	0.35

100.00

100.00

100.00

0.45

88.98

0.13

39.42

36.78

96.41

0.08

73.78

93.30

#### ASSET LOADINGS (Returns-based)

100- FUND EX	XPOSURES (	W EIGHT)	(Apr 16-Mar	19)
75-		A		
50-				
25-				
0-				
	Cu	rrent	Ave	rage
	Fund	Bmk	Fund	Bmk
Cash	39.2	33.6	41.8	30.7
0 111 0 1				

Credit Bond 0.0 0.0 0.0 Govt Bond 53.7 61.0 42.8 53.0 HY Corp Bond 0.0 0.0 0.0 0.0 MBS 7.1 5.4 8.2 12.6 Muni Bond 0.0 0.0 0.3 1.0 TIPS 0.0 6.9 2.8

# BlackRock US Debt Index-W

### 3/31/2019

Fund Incep Date: 02/01/2001

Benchmark:

BBgBarc US Aggregate Bond Index

Category : Intermediate-term Bond Net Assets:

Manager Name: Team Managed Manager Start Date: 02/01/2001

Expense Ratio : 0.04%

Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

0.00%

#### Credit Quality (%)

AAA AA

A BBB

BB B

Below B

NR/NA Total:

#### Sector (%)

% Government

% Municipal

% Corporate

% Securitized

% Cash and Equivalent

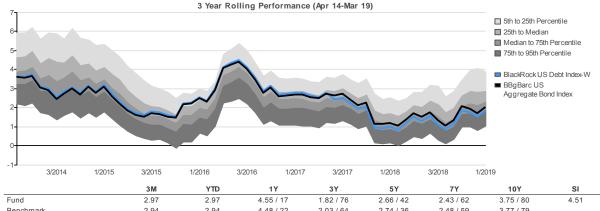
% Derivative

Total: 0.00%

#### INVESTMENT OVERVIEW

The Fund is an "index fund" that seeks investment results that correspond

#### PERFORMANCE



Benchmark Peer Group Median Number of Funds	2.94 3.24	2.94 3.24	4.48 / 22 4.02 / 50 1052	2.03 / 64 2.31 / 50 990		2.74 / 36 2.56 / 50 920	2.48 / 59 2.60 / 50 888	3.77 / 79 4.69 / 50 812	
CALENDAR	2018	2017	2016	2015	2014	2013	2012	2011	2010
Fund	0.04	2.83	2.72	0.56	6.19	-1.99	4.24	7.82	6.67
Benchmark	0.01	3.54	2.65	0.55	5.97	-2.02	4.22	7.84	6.54
Peer Group Median	-0.58	3.76	3.00	-0.02	5.48	-1.63	6.67	6.35	7.48

#### **RISK & PERFORMANCE STATISTICS**

NOTES

#### 

Fund 0.0	Bmk_	Aver Fund	Bmk
0.0	0.6		
	0.0	2.3	0.5
29.7	30.2	29.3	30.3
24.9	40.7	29.1	40.8
0.0	0.0	1.3	0.1
44.7	28.0	35.1	28.0
0.7	0.6	3.0	0.3
0.0	0.0	0.0	0.0
	24.9 0.0 44.7 0.7	24.9 40.7 0.0 0.0 44.7 28.0 0.7 0.6	24.9 40.7 29.1 0.0 0.0 1.3 44.7 28.0 35.1 0.7 0.6 3.0

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.18	0.00	0.35
Beta	0.98	1.00	0.91
R-Squared	97.54	100.00	92.75
Sharpe Ratio	0.23	0.29	0.40
Up Market Capture	95.49	100.00	97.40
Down Market Capture	99.44	100.00	84.59

Down Market Capture	99.44	100.00	84.59
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.05	0.00	0.01
Beta	0.99	1.00	0.90
R-Squared	98.36	100.00	89.56
Sharpe Ratio	0.68	0.70	0.66
Up Market Capture	97.79	100.00	91.80
Down Market Capture	98.80	100.00	92.03

# Vanguard Long-Term Investment-Grade Adm VWETX

3/31/2019

Fund Incep Date: 02/12/2001

Benchmark

BBgBarc US Credit A+ Long TR USD

Category Corporate Bond

Net Assets: \$17.698.00M Manager Name Scott I. St. John

Manager Start Date : 05/28/2014

Expense Ratio : 0.12% Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)

#### Assets



#### Credit Quality (%)

AAA	14.44%
AA	27.64%
A	51.55%
BBB	4.80%
BB	0.13%
В	0.06%
Below B	0.00%
NR/NA	1.38%
Total:	100.00%

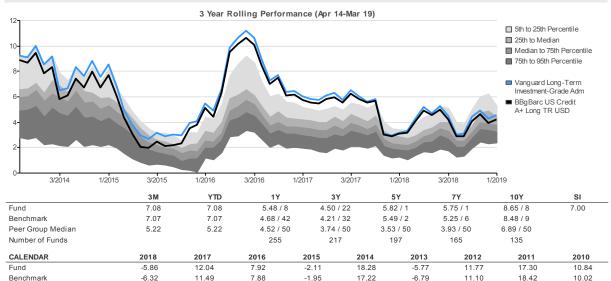
#### Sector (%)

00010. (70)	
% Government	8.01%
% Municipal	10.52%
% Corporate	77.90%
% Securitized	1.60%
% Cash and Equivalent	1.97%
% Derivative	0.00%
Total:	100.00%

#### 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



-0.97

NOTES

7.07

-0.91

10.73

6.55

#### **RISK & PERFORMANCE STATISTICS**

Peer Group Median

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.24	0.00	0.86
Beta	1.01	1.00	0.49
R-Squared	99.18	100.00	85.19
Sharpe Ratio	0.49	0.45	0.65
Up Market Capture	100.04	100.00	51.98
Down Market Capture	96.51	100.00	36.48

-2.80

6.07

6.44

Peer Group Median 0.55 0.47 80.16 0.73 48.57 40.42

5 Yr	Fund	Benchmark
Alpha	0.21	0.00
Beta	1.02	1.00
R-Squared	98.99	100.00
Sharpe Ratio	0.70	0.68
Up Market Capture	103.30	100.00
Down Market Capture	101.12	100.00

#### ASSET LOADINGS (Returns-based)

100-	FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19)			
100-				
75-				
50-				
25-				
0				

		Current		Ave	rage
		Fund	Bmk	Fund	Bmk
1 1	Cash	0.0	0.0	0.0	0.0
1 (	Credit Bond	100.0	100.0	100.0	100.0
1 (	Govt Bond	0.0	0.0	0.0	0.0
1 1	HY Corp Bond	0.0	0.0	0.0	0.0
1 1	MBS	0.0	0.0	0.0	0.0
1 1	Muni Bond	0.0	0.0	0.0	0.0
100	TIPS	0.0	0.0	0.0	0.0

9.81

# Vanguard Wellington Admiral VWENX

### 3/31/2019

Fund Incep Date: Benchmark: Category Net Assets: Manager Name Manager Start Date : Expense Ratio : Expense Rank: 05/14/2001 S&P 500 Index Allocation--50% to 70% Equity \$103.245.00M Edward P. Bousa 12/31/2002 0.17%

#### PORTFOLIO COMPOSITION (Holdings-based)

Assets



#### Sector Breakdown

Sensitive	
Communication Services	8.24%
Industrials	9.91%
Technology	14.29%
Energy	8.52%
Cyclical	
Basic Materials	2.75%
Consumer Cyclical	5.39%
Real Estate	1.26%
Financial Services	21.96%
Defensive	
Consumer Defensive	6.90%
Healthcare	15.74%
Utilities	5.04%
TOP 10 HOLDINGS	
Microsoft Corp	2.76%
Verizon Communications Inc	2.53%
JPMorgan Chase & Co	2.25%
Bank of America Corporation	2.01%
Alphabet Inc A	1.83%
Chevron Corp	1.76%
Comcast Corp Class A	1.55%
Comoda Corp Grass A	1.55 /6

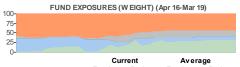
#### ASSET LOADINGS (Returns-based)

Bristol-Myers Squibb Company

AstraZeneca PLC ADR

Chubb Ltd

Total:

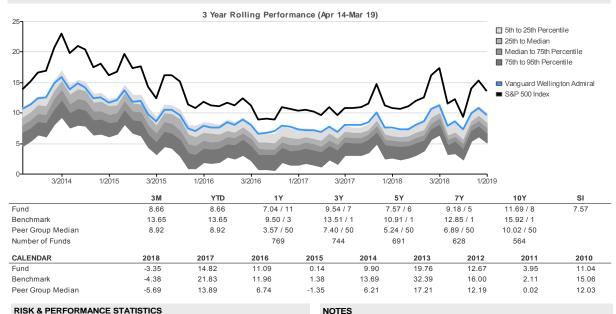


-		Current		Ave	rage
		Fund	Bmk	Fund	Bmk
Т	Cash	29.1	1.1	17.2	0.2
1	US Bonds	9.8	0.0	18.3	1.5
1	Intl Bonds	0.0	1.1	0.0	0.9
	Intl Equity	17.0	4.2	11.3	4.3
1	US Equity	44.1	93.6	53.2	93.2

#### 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



#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	1.01	0.00	-1.05
Beta	0.59	1.00	0.61
R-Squared	91.63	100.00	89.66
Sharpe Ratio	1.23	1.13	0.92
Up Market Capture	65.00	100.00	56.86
Down Market Capture	61.27	100.00	63.54
5 Vr	Fund	Renchmark	Peer Gro

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.42	0.00	-1.67
Beta	0.62	1.00	0.62
R-Squared	94.10	100.00	90.46
Sharpe Ratio	0.95	0.92	0.63
Up Market Capture	65.33	100.00	57.37
Down Market Capture	65.73	100.00	70.51

1.44%

1.34%

1.31%

18.78%

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

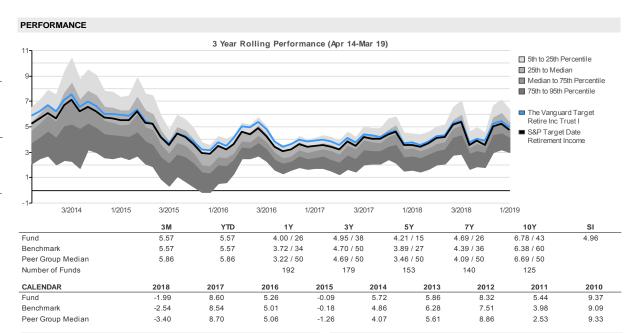
#### Sector Breakdown

**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

Simple fund of funds structure seeks to build appropriate asset allocation from preselected stock and bond portfolios.



#### Total: NA%

#### ASSET LOADINGS (Returns-based)

FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19) 100-75-50-25-

		Current		Average	
		Fund	Bmk	Fund	Bmk
Т	Cash	15.3	21.0	13.0	19.1
1	US Bonds	51.7	44.4	55.2	48.0
1	Intl Bonds	3.1	0.9	2.6	1.4
	Intl Equity	10.5	10.6	9.1	9.0
1	US Equity	19.4	23.2	20.2	22.6

#### **RISK & PERFORMANCE STATISTICS**

Peer Group 3 Yr Fund Benchmark Median Alpha 0.46 0.00 0.00 Beta 0.94 1.00 0.99 100.00 R-Squared 97.82 95.81 Sharpe Ratio 1.07 0.95 0.91 Up Market Capture 99.07 100.00 99.54 Down Market Capture 89.38 100.00 103.38

Domi manor captaro	00.00	100.00	.00.00
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.42	0.00	-0.58
Beta	0.96	1.00	1.11
R-Squared	98.33	100.00	95.10
Sharpe Ratio	0.94	0.83	0.66
Up Market Capture	99.97	100.00	99.60
Down Market Capture	91.29	100.00	114.66

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

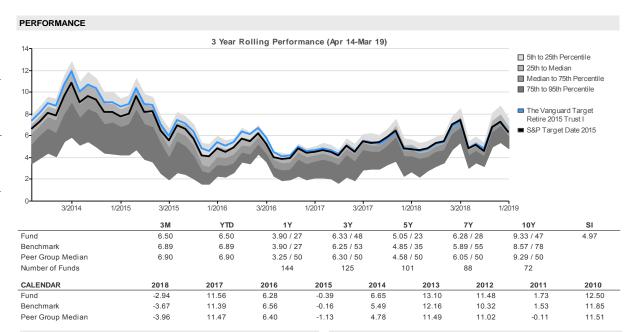
#### Sector Breakdown

**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

Simple fund of funds structure seeks to build appropriate asset allocation from preselected stock and bond portfolios.



#### Total: NA%

#### ASSET LOADINGS (Returns-based)

FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19) 100-75-50-25-

-		Current		Average	
		Fund	Bmk	Fund	Bmk
T	Cash	10.2	14.0	7.2	10.2
-1	US Bonds	44.8	39.4	46.9	43.3
- 1	Intl Bonds	4.4	0.5	3.4	0.3
- 1	Intl Equity	15.1	14.0	14.3	12.7
- 1	US Equity	25.6	32.1	28.2	33.5

#### **RISK & PERFORMANCE STATISTICS**

Peer Group 3 Yr Fund Benchmark Median Alpha 0.54 0.00 0.07 Beta 0.90 1.00 1.03 R-Squared 97.93 100.00 97.04 Sharpe Ratio 1.15 1.04 1.04 Up Market Capture 95.59 100.00 100.20

Down Market Capture	87.12 100.00		100.52	
5 Yr	Fund	Benchmark	Peer Group Median	
Alpha	0.40	0.00	-0.42	
Beta	0.95	1.00	1.06	
R-Squared	98.57	100.00	97.05	
Sharpe Ratio	0.84	0.77	0.69	
Up Market Capture	97.56	100.00	101.03	
Down Market Capture	91.88	100.00	108.24	

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

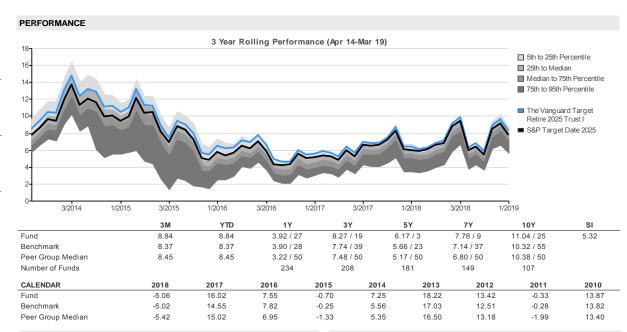
#### Sector Breakdown

**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

Simple fund of funds structure seeks to build appropriate asset allocation from preselected stock and bond portfolios.



#### Total: NA%

#### ASSET LOADINGS (Returns-based)

FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19) 100-75-50-25-

		Current		Average	
		Fund	Bmk	Fund	Bmk
T	Cash	0.0	7.1	0.1	4.9
- 1	US Bonds	31.5	30.7	32.2	33.3
- 1	Intl Bonds	6.1	1.3	5.3	0.6
	Intl Equity	22.6	18.8	21.4	17.0
1	US Equity	39.8	42.1	41.0	44.2

#### **RISK & PERFORMANCE STATISTICS**

3 Yr

Peer Group Fund Benchmark Median 0.34 0.00 -0.11

Alpha Beta 1.03 1.00 1.00 100.00 97.77 R-Squared 98.86 Sharpe Ratio 1.08 1.04 1.00 Up Market Capture 104.51 100.00 98.01 Down Market Capture 100.67 100.00 99.94

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.37	0.00	-0.39
Beta	1.02	1.00	1.00
R-Squared	99.21	100.00	97.95
Sharpe Ratio	0.77	0.72	0.66
Up Market Capture	104.50	100.00	98.36
Down Market Capture	100.59	100.00	102.27

Assets

Utilities

**TOP 10 HOLDINGS** 

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

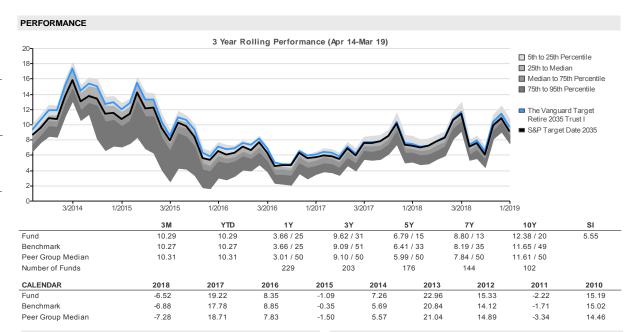
0.00%

#### 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%

#### INVESTMENT OVERVIEW

Simple fund of funds structure seeks to build appropriate asset allocation from preselected stock and bond portfolios.



#### Total: NA%

#### ASSET LOADINGS (Returns-based)

FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19)
7550250-

		Current		Average	
		Fund	Bmk	Fund	Bmk
T	Cash	0.0	0.0	0.0	1.1
- 1	US Bonds	15.6	19.0	16.9	20.9
- 1	Intl Bonds	7.2	1.6	6.1	1.0
- 1	Intl Equity	27.7	24.4	26.6	21.7
- 1	US Equity	49.5	55.0	50.3	55.4

#### **RISK & PERFORMANCE STATISTICS**

Peer Group 3 Yr Fund Benchmark Median Alpha 0.65 0.00 0.06 Beta 0.98 1.00 1.01 R-Squared 98.89 100.00 98.24 Sharpe Ratio 1.05 0.98 0.97 100.74 Up Market Capture 101.54 100.00

Down Market Capture	95.98	100.00	99.58
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.29	0.00	-0.51
Beta	1.01	1.00	1.04
R-Squared	99.05	100.00	98.39
Sharpe Ratio	0.71	0.68	0.62
Up Market Capture	103.06	100.00	101.25
Down Market Capture	100.66	100.00	104 83

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

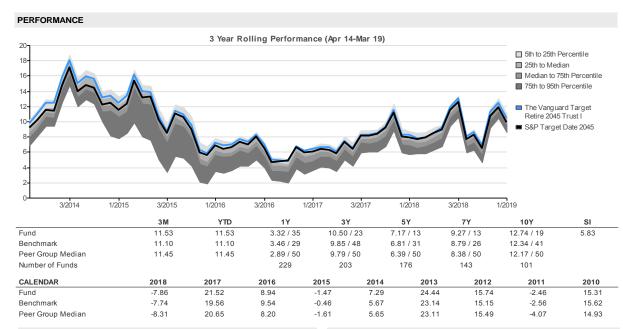
#### Sector Breakdown

**TOP 10 HOLDINGS** 

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%

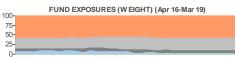
#### INVESTMENT OVERVIEW

Simple fund of funds structure seeks to build appropriate asset allocation from preselected stock and bond portfolios.



#### Total: NA%

#### ASSET LOADINGS (Returns-based)



-		Current		Average	
		Fund	Bmk	Fund	Bmk
T	Cash	0.0	0.0	0.0	0.7
-1	US Bonds	2.5	10.2	5.5	13.0
- 1	Intl Bonds	7.8	2.0	6.8	1.2
- 1	Intl Equity	31.9	27.4	30.4	24.2
- 1	US Equity	57.8	60.4	57.4	61.0

#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.42	0.00	-0.13
Beta	1.02	1.00	1.03
R-Squared	99.12	100.00	98.53
Sharpe Ratio	1.01	0.97	0.94
Up Market Capture	104.51	100.00	100.68
Down Market Capture	101.36	100.00	101.90

Down Warker Capture	101.30	100.00	101.90
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.15	0.00	-0.57
Beta	1.04	1.00	1.04
R-Squared	99.23	100.00	98.55
Sharpe Ratio	0.68	0.67	0.60
Up Market Capture	104.47	100.00	100.72
Down Market Capture	103.21	100.00	104.86

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

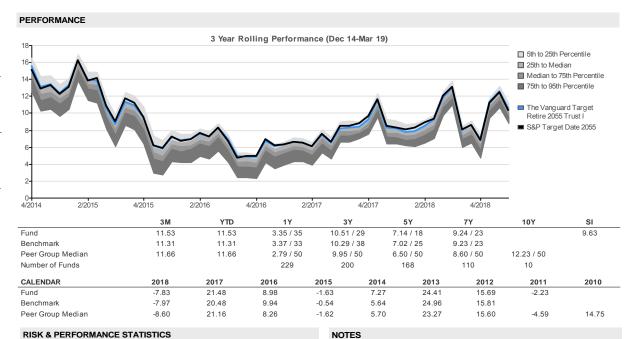
#### Sector Breakdown

**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

Simple fund of funds structure seeks to build appropriate asset allocation from preselected stock and bond portfolios.



#### Total: NA%

#### ASSET LOADINGS (Returns-based)



-		Current		Average	
		Fund	Bmk	Fund	Bmk
T	Cash	0.0	0.0	0.0	0.7
1	US Bonds	2.5	7.2	5.4	9.3
-1	Intl Bonds	7.8	2.5	6.8	1.2
- 1	Intl Equity	32.2	28.4	30.5	25.2
1	US Equity	57.6	61.9	57.2	63.7

#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.30	0.00	-0.29
Beta	0.99	1.00	1.01
R-Squared	99.00	100.00	98.43
Sharpe Ratio	1.01	0.98	0.94
Up Market Capture	100.46	100.00	98.91
Down Market Capture	98.38	100.00	100.32

Down Market Capture	90.30	100.00	100.32
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.16	0.00	-0.53
Beta	0.99	1.00	1.01
R-Squared	99.19	100.00	98.49
Sharpe Ratio	0.67	0.66	0.60
Up Market Capture	99.64	100.00	97.90
Down Market Capture	98.42	100.00	101.84

# Bridgeway Large Cap Value CIT Class I

3/31/2019

Fund Incep Date: 10/31/2003

Benchmark:

Russell 1000 Value Index

Category: Large Value Net Assets:

Manager Name: John N.R. Montgomery Manager Start Date :

Expense Ratio : 0.55%

Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

#### Sector Breakdown

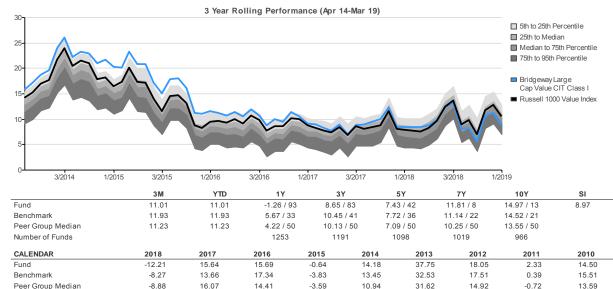
**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

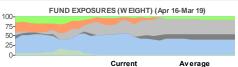
The Fund seeks to provide long-term total return on capital, primarily through capital appreciation and, to a lesser extent, income.

#### PERFORMANCE



#### Total: NA%

#### ASSET LOADINGS (Returns-based)



	Cu	rrent	Average			
	Fund	Bmk	Fund	Bmk		
Cash	0.0	0.0	2.7	0.1		
Top Value	40.1	67.8	43.0	68.3		
Top Growth	12.7	0.1	6.7	0.1		
Mid Value	37.7	31.8	27.3	31.4		
Mid Growth	0.0	0.0	10.9	0.0		
Sm Value	9.4	0.0	9.3	0.0		
Sm Growth	0.0	0.1	0.0	0.1		
	Top Value Top Growth Mid Value Mid Growth Sm Value	Cash         0.0           Top Value         40.1           Top Growth         12.7           Mid Value         37.7           Mid Growth         0.0           Sm Value         9.4	Cash         0.0         0.0           Top Value         40.1         67.8           Top Growth         12.7         0.1           Mid Value         37.7         31.8           Mid Growth         0.0         0.0           Sm Value         9.4         0.0	Fund         Bmk         Fund           Cash         0.0         0.0         2.7           Top Value         40.1         67.8         43.0           Top Growth         12.7         0.1         6.7           Mid Value         37.7         31.8         27.3           Mid Growth         0.0         0.0         10.9           Sm Value         9.4         0.0         9.3		

#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Grou Median
Alpha	-1.96	0.00	-0.36
Beta	1.04	1.00	1.00
R-Squared	93.92	100.00	93.25
Sharpe Ratio	0.68	0.88	0.82
Up Market Capture	89.75	100.00	97.44
Down Market Capture	98.71	100.00	98.64

5 Yr	Fund	Benchmark	Peer Grou Median
Alpha	-0.30	0.00	-0.52
Beta	1.01	1.00	1.00
R-Squared	93.97	100.00	94.08
Sharpe Ratio	0.62	0.66	0.59
Up Market Capture	94.78	100.00	96.81
Down Market Capture	94.69	100.00	99.70

# Vanguard Institutional Index Instl PI VIIIX

3/31/2019

Fund Incep Date: Benchmark: Category Net Assets: Manager Name Manager Start Date : Expense Ratio : Expense Rank: 07/07/1997 S&P 500 Index Large Blend \$224,719,00M Donald M. Butler 12/31/2000 0.02%

#### PORTFOLIO COMPOSITION (Holdings-based)



#### Sooter Proakdown

Communication Services         3.49%           Industrials         10.53%           Technology         22.33%           Energy         5.40%           Cyclical           Basic Materials         2.49%           Consumer Cyclical         11.84%           Real Estate         2.43%           Financial Services         15.94%           Defensive         7.57%           Consumer Defensive         7.57%           Healthcare         14.74%	Sector Breakdown	
Industrials 10.53% Technology 22.33% Energy 5.40%  Cyclical  Basic Materials 2.49% Consumer Cyclical 11.84% Real Estate 2.43% Financial Services 15.94%  Defensive 7.57% Healthcare 14.74% Utilities 3.25%  TOP 10 HOLDINGS  Microsoft Corp 3.69% Apple Inc 3.32% Amazon.com Inc 2.87% Facebook Inc A 1.65% Berkshire Hathaway Inc B	Sensitive	
Technology	Communication Services	3.49%
Energy 5,40%  Cyclical  Basic Materials 2,49% Consumer Cyclical 11,84% Real Estate 2,43% Financial Services 15,94%  Defensive  Consumer Defensive 7,57% Healthcare 14,74% Utilities 3,25%  TOP 10 HOLDINGS  Microsoft Corp 3,69% Apple Inc 3,32% Amazon.com Inc 2,87% Facebook Inc A 1,65% Berkshire Hathaway Inc B 1,64%	Industrials	10.53%
Cyclical     Basic Materials   2,49%     Consumer Cyclical   11.84%     Real Estate   2,43%     Estate   15.94%     Defensive   7.57%     Consumer Defensive   7.57%     Healthcare   14.74%     Utilities   3.25%     TOP 10 HOLDINGS     Microsoft Corp   3.69%     Apple Inc   3.32%     Amazon.com Inc   2.87%     Facebook Inc A   1.65%     Berkshire Hathaway Inc B   1.64%	Technology	22.33%
Basic Materials         2.49%           Consumer Cyclical         11.84%           Real Estate         2.43%           Financial Services         15.94%           Defensive           Consumer Defensive           Healthcare         14.74%           Utilities         3.25%           TOP 10 HOLDINGS           Microsoft Corp         3.69%           Apple Inc         3.32%           Amazon.com Inc         2.87%           Facebook Inc A         1.65%           Berkshire Hathaway Inc B         1.64%	Energy	5.40%
11.84%   Real Estate   2.43%   Financial Services   15.94%	Cyclical	
Real Estate       2.43%         Financial Services       15.94%         Defensive       7.57%         Consumer Defensive       7.57%         Healthcare       14.74%         Utilities       3.25%         TOP 10 HOLDINGS         Microsoft Corp       3.69%         Apple Inc       3.32%         Amazon.com Inc       2.87%         Facebook Inc A       1.65%         Berkshire Hathaway Inc B       1.64%	Basic Materials	2.49%
Financial Services     15.94%       Defensive     7.57%       Consumer Defensive     7.57%       Healthcare     14.74%       Utilities     3.25%       TOP 10 HOLDINGS       Microsoft Corp     3.69%       Apple Inc     3.32%       Amazon.com Inc     2.87%       Facebook Inc A     1.65%       Berkshire Hathaway Inc B     1.64%	Consumer Cyclical	11.84%
Defensive           Consumer Defensive         7.57%           Healthcare         14.74%           Utilities         3.25%           TOP 10 HOLDINGS           Microsoft Corp         3.69%           Apple Inc         3.32%           Amazon.com Inc         2.87%           Facebook Inc A         1.65%           Berkshire Hathaway Inc B         1.64%	Real Estate	2.43%
Consumer Defensive         7.57%           Healthcare         14.74%           Utilities         3.25%           TOP 10 HOLDINGS           Microsoft Corp         3.69%           Apple Inc         3.32%           Amazon.com Inc         2.87%           Facebook Inc A         1.65%           Berkshire Hathaway Inc B         1.64%	Financial Services	15.94%
Healthcare       14.74%         Utilities       3.25%         TOP 10 HOLDINGS         Microsoft Corp       3.69%         Apple Inc       3.32%         Amazon.com Inc       2.87%         Facebook Inc A       1.65%         Berkshire Hathaway Inc B       1.64%	Defensive	
Utilities       3.25%         TOP 10 HOLDINGS       3.69%         Microsoft Corp       3.69%         Apple Inc       3.32%         Amazon.com Inc       2.87%         Facebook Inc A       1.65%         Berkshire Hathaway Inc B       1.64%	Consumer Defensive	7.57%
TOP 10 HOLDINGS           Microsoft Corp         3.69%           Apple Inc         3.32%           Amazon.com Inc         2.87%           Facebook Inc A         1.65%           Berkshire Hathaway Inc B         1.64%	Healthcare	14.74%
Microsoft Corp       3.69%         Apple Inc       3.32%         Amazon.com Inc       2.87%         Facebook Inc A       1.65%         Berkshire Hathaway Inc B       1.64%	Utilities	3.25%
Apple Inc       3.32%         Amazon.com Inc       2.87%         Facebook Inc A       1.65%         Berkshire Hathaway Inc B       1.64%	TOP 10 HOLDINGS	
Amazon.com Inc         2.87%           Facebook Inc A         1.65%           Berkshire Hathaway Inc B         1.64%	Microsoft Corp	3.69%
Facebook Inc A 1.65% Berkshire Hathaway Inc B 1.64%	Apple Inc	3.32%
Berkshire Hathaway Inc B 1.64%	Amazon.com Inc	2.87%
	Facebook Inc A	1.65%
	Berkshire Hathaway Inc B	1.64%
	Johnson & Johnson	1.56%

#### ASSET LOADINGS (Returns-based)

JPMorgan Chase & Co

Mid Growth

Sm Value

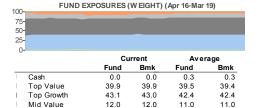
Sm Growth

Alphabet Inc Class C

Alphabet Inc A

Total:

Exxon Mobil Corp



5.1

0.0

0.0

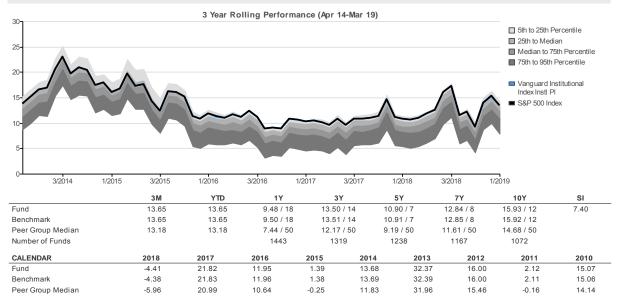
5.1

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



NOTES

#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.01	0.00	-1.07
Beta	1.00	1.00	1.00
R-Squared	100.00	100.00	94.55
Sharpe Ratio	1.13	1.13	1.00
Up Market Capture	99.95	100.00	94.00
Down Market Capture	100.04	100.00	101.07
5 Yr	Fund	Benchmark	Peer Group Median
<b>5 Yr</b> Alpha	<b>Fund</b> -0.01	Benchmark 0.00	
			Median
Alpha	-0.01	0.00	Median -1.45
Alpha Beta	-0.01 1.00	0.00	<b>Median</b> -1.45 1.00
Alpha Beta R-Squared	-0.01 1.00 100.00	0.00 1.00 100.00	Median -1.45 1.00 95.35

6.8

0.0

1.48%

1.47%

1.43%

1.42%

20.53%

6.8

0.0

0.0

# Calvert US Large Cap Core Rspnb Idx R6 CSXRX

1.40%

1.31%

1.12%

1.05%

1.03%

20.13%

6.8

0.0

3/31/2019

Fund Incep Date: Benchmark 10/03/2017 S&P 500 Index Category: Large Blend

Net Assets: \$1.585.00M

Manager Name Thomas C. Seto

Manager Start Date : 12/31/2016

Expense Ratio : 0.19% Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)



Sector Breakdown	
Sensitive	
Communication Services	3.24%
Industrials	11.94%
Technology	24.22%
Energy	0.31%
Cyclical	
Basic Materials	2.23%
Consumer Cyclical	13.88%
Real Estate	0.35%
Financial Services	18.89%
Defensive	
Consumer Defensive	7.25%
Healthcare	15.49%
Utilities	2.20%
TOP 10 HOLDINGS	
Apple Inc	3.36%
Microsoft Corp	3.27%
Alphabet Inc A	3.04%
Amazon.com Inc	2.98%
JPMorgan Chase & Co	1.57%

#### ASSET LOADINGS (Returns-based)

Bank of America Corporation

Verizon Communications Inc

Procter & Gamble Co

Mid Growth

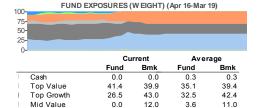
Sm Value

Sm Growth

Visa Inc Class A

Pfizer Inc

Total:



5.1

0.0

0.0

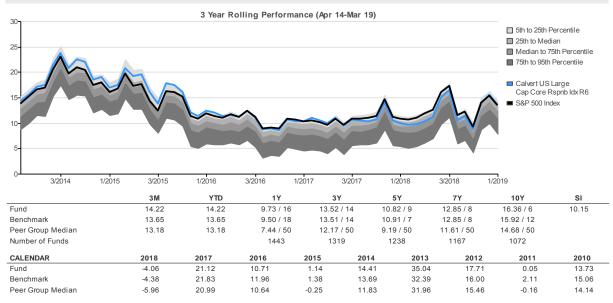
32.1

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



NOTES

#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.40	0.00	-1.07
Beta	1.04	1.00	1.00
R-Squared	98.58	100.00	94.55
Sharpe Ratio	1.09	1.13	1.00
Up Market Capture	100.61	100.00	94.00
Down Market Capture	101.23	100.00	101.07
5 Yr	Fund	Benchmark	Peer Group Median
<b>5 Yr</b> Alpha	Fund -0.42	Benchmark 0.00	
			Median
Alpha	-0.42	0.00	Median -1.45
Alpha Beta	-0.42 1.04	0.00	<b>Median</b> -1.45 1.00
Alpha Beta R-Squared	-0.42 1.04 98.17	0.00 1.00 100.00	<b>Median</b> -1.45 1.00 95.35

25.4

1.2

# Fidelity Contrafund Commingled Pool CI 2

3/31/2019

Fund Incep Date: 01/17/2014

Benchmark:

Russell 1000 Growth Index

Category : Large Growth Net Assets:

Manager Name : William Danoff Manager Start Date : 01/17/2014

Expense Ratio : 0.38%

Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

#### Sector Breakdown

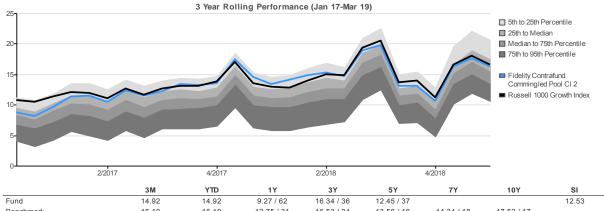
**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

The investment seeks capital appreciation. The fund normally invests prima

#### PERFORMANCE



	SIVI	לו ז	11	31		31	/ 1	101	SI
Fund	14.92	14.92	9.27 / 62	16.34 / 36	3 1	2.45 / 37			12.53
Benchmark	16.10	16.10	12.75 / 31	16.53 / 34	1 1	3.50 / 19	14.34 / 18	17.52 / 17	
Peer Group Median	15.94	15.94	11.11 / 50	15.43 / 50	) 1	1.75 / 50	12.98 / 50	16.04 / 50	
Number of Funds			1428	1367		1313	1254	1125	
CALENDAR	2018	2017	2016	2015	2014	2013	2012	2011	2010
Fund	-1.87	32.97	3.59	6.27					
Benchmark	-1.51	30.21	7.08	5.67	13.05	33.48	15.26	2.64	16.71
Peer Group Median	-2.08	28.39	3.06	3.92	10.34	34.13	15.22	-1.82	15.61

Total: NA%

#### ASSET LOADINGS (Returns-based)



		Current		Average	
		Fund	Bmk	Fund	Bmk
	Cash	0.0	0.1	2.1	0.1
П	Top Value	0.0	0.1	0.0	0.1
	Top Growth	91.8	76.5	93.3	75.0
	Mid Value	0.0	0.0	0.0	0.0
L	Mid Growth	8.2	23.1	3.9	24.7
	Sm Value	0.0	0.0	0.0	0.0
i.	Sm Growth	0.0	0.2	0.7	0.1

#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund Benchmark		Peer Group Median
Alpha	-0.46	0.00	-0.67
Beta	1.02	1.00	0.99
R-Squared	94.78	100.00	91.60
Sharpe Ratio	1.16	1.23	1.12
Up Market Capture	97.96	100.00	94.54
Down Market Capture	97.11	100.00	97.48

P. C.	er Group Nedian	
Beta 0.97 1.00	-1.55	
	0.99	
R-Squared 94.52 100.00	92.15	
Sharpe Ratio 0.96 1.04	0.88	
Up Market Capture 92.13 100.00	94.77	
Down Market Capture 93.55 100.00	104.24	

# BlackRock Mid Cap Equity Index- F

3/31/2019

Fund Incep Date: 06/16/1997

Benchmark

Russell Mid-Cap Index

Category: Mid-Cap Blend Net Assets:

Manager Name Amy Whitelaw, Alan Mason

Manager Start Date : 06/16/1997

Expense Ratio: 0.03% Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

#### Sector Breakdown

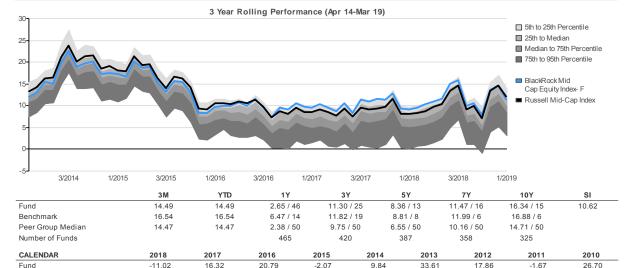
**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

The Fund is an "index fund" that seeks investment results that correspond generally to the price and yield performance

#### **PERFORMANCE**



-2.44

-3.28

NOTES

13.80

14.94

13.22

9.11

34.76

34.20

17.28

17.08

#### **RISK & PERFORMANCE STATISTICS**

Benchmark

Peer Group Median

3 Yr	Fund	Benchmark	Peer Group Median	
Alpha	-1.21	0.00	-2.00	
Beta	1.09	1.00	1.02	
R-Squared	95.37	100.00	93.10	
Sharpe Ratio	0.77	0.88	0.69	
Up Market Capture	103.70	100.00	90.37	
Down Market Capture	111 45	100.00	101 92	

-9.06

-11.44

18.52

15.73

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.77	0.00	-2.15
Beta	1.06	1.00	1.01
R-Squared	95.43	100.00	92.92
Sharpe Ratio	0.61	0.69	0.49
Up Market Capture	105.36	100.00	91.38
Down Market Capture	111.04	100.00	106.48

#### Total: NA%

#### ASSET LOADINGS (Returns-based)

400	FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19)
100-	
75-	
50-	
25-	
0-	

		Current		Average	
		Fund	Bmk	Fund	Bmk
	Cash	0.0	0.0	0.3	0.1
- 1	Top Value	0.0	0.0	0.2	0.3
- 1	Top Growth	0.0	0.7	1.2	0.4
	Mid Value	31.8	58.0	35.0	55.5
- 1	Mid Growth	28.2	41.2	28.4	43.5
- 1	Sm Value	26.5	0.2	29.3	0.2
- 1	Sm Growth	13.6	0.0	5.7	0.1

25.48

23.41

-1.55

-2.56

### T. Rowe Price Instl Mid-Cap Equity Gr PMEGX

3/31/2019

Fund Incep Date: 07/31/1996

Benchmark

Russell Mid-Cap Growth Index

Category: Mid-Cap Growth

Net Assets: \$7.549.00M

Manager Name Brian W.H. Berghuis

Manager Start Date : 07/31/1996

Expense Ratio : 0.61% Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)



#### Sector Breakdown

Ocolor Broakdown	
Sensitive	
Communication Services	0.00%
Industrials	21.09%
Technology	24.16%
Energy	2.52%
Cyclical	
Basic Materials	3.18%
Consumer Cyclical	14.41%
Real Estate	0.93%
Financial Services	9.24%
Defensive	
Consumer Defensive	6.40%
Healthcare	16.82%
Utilities	1.24%
TOP 10 HOLDINGS	
Teleflex Inc	2.71%
The Cooper Companies Inc	2.18%
Microchip Technology Inc	2.09%
Keysight Technologies Inc	2.01%
Hologic Inc	2.00%
Textron Inc	1.83%
Willis Towers Watson PLC	1.82%
Agilent Technologies Inc	1 80%

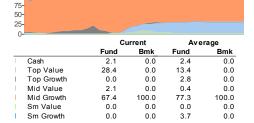
#### ASSET LOADINGS (Returns-based)

Harris Corp

Ball Corp

Total:

100-

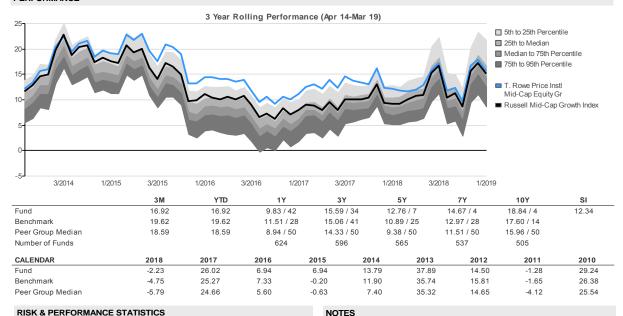


FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19)

#### 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**



#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	1.75	0.00	-0.28
Beta	0.90	1.00	1.00
R-Squared	94.83	100.00	92.76
Sharpe Ratio	1.15	1.04	0.98
Up Market Capture	97.38	100.00	96.73
Down Market Capture	89.97	100.00	99.17
5 Yr	Fund	Benchmark	Peer Group Median
<b>5 Yr</b> Alpha	<b>Fund</b> 2.29	Benchmark 0.00	
			Median
Alpha	2.29	0.00	Median -1.34
Alpha Beta	2.29	0.00	<b>Median</b> -1.34 1.00
Alpha Beta R-Squared	2.29 0.94 95.15	0.00 1.00 100.00	Median -1.34 1.00 91.43

1.73%

1.63%

19.80%

Fund Incep Date: Benchmark Category Net Assets: Manager Name Manager Start Date : Expense Ratio : Expense Rank: 12/23/1981 Russell 2000 Index Small Blend \$6,400,00M Jed S. Fogdall 02/28/2012 0.52%

#### PORTFOLIO COMPOSITION (Holdings-based)



Inter Parfums Inc

Conmed Corp

Innospec Inc

Total:

Integer Holdings Corp

Mid Value

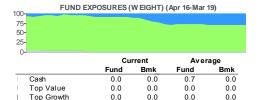
Mid Growth

Sm Value

Sm Growth

Sector Breakdown	
Sensitive	
Communication Services	1.31%
Industrials	16.73%
Technology	14.46%
Energy	5.46%
Cyclical	
Basic Materials	6.87%
Consumer Cyclical	16.08%
Real Estate	1.06%
Financial Services	22.44%
Defensive	
Consumer Defensive	4.30%
Healthcare	9.04%
Utilities	2.24%
TOP 10 HOLDINGS	
S+p500 Emini Fut Mar19 Xcme 20190315	0.87%
Chart Industries Inc	0.43%
Ensign Group Inc	0.37%
Fabrinet	0.35%
BioTelemetry Inc	0.34%
California Water Service Group	0.33%

#### ASSET LOADINGS (Returns-based)



0.1

0.0

48.8

51.1

0.0

0.0

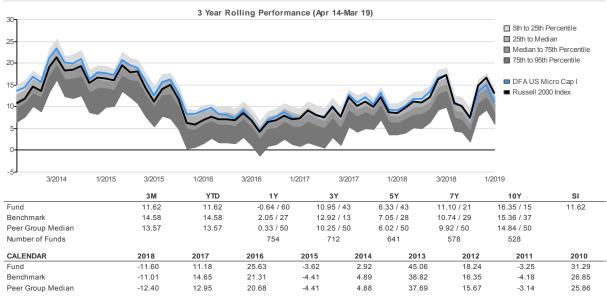
70.7

29.3

#### 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



NOTES

#### **RISK & PERFORMANCE STATISTICS**

Down Market Capture

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-1.90	0.00	-1.59
Beta	1.02	1.00	0.96
R-Squared	96.52	100.00	95.36
Sharpe Ratio	0.64	0.77	0.64
Up Market Capture	96.38	100.00	88.32
Down Market Capture	106.27	100.00	99.77
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.51	0.00	-0.53
Beta	0.97	1.00	0.93
Beta R-Squared	0.97 96.25	1.00 100.00	0.93 95.19

100.00

93.26

98.17

0.0

0.0

82.5

0.33%

0.32%

0.31%

0.31%

3.97%

0.0

0.0

49.8

50.2

### BlackRock Russell 2000 Index-T

3/31/2019

Fund Incep Date: 01/02/2001

Benchmark : Russell 2000 Index Category: Small Blend Net Assets:

Manager Name : Team Managed Manager Start Date : 01/02/2001

Expense Ratio : 0.05%

Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

#### Sector Breakdown

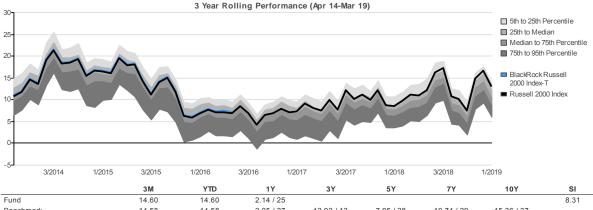
**TOP 10 HOLDINGS** 

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%

#### INVESTMENT OVERVIEW

The Fund is an "index fund" that seeks investment results that correspond

#### PERFORMANCE



Benchmark	14.58	14.58	2.05 / 27	12.92	/ 13	7.05 / 28	10.74 / 29	15.36 / 37	
Peer Group Median	13.57	13.57	0.33 / 50	10.25	/ 50	6.02 / 50	9.92 / 50	14.84 / 50	
Number of Funds			754	71:	2	641	578	528	
CALENDAR	2018	2017	2016	2015	2014	2013	2012	2011	2010
Fund	-10.89	14.88		-4.21	5.09	39.10	16.54	-4.16	26.83
Benchmark	-11.01	14.65	21.31	-4.41	4.89	38.82	16.35	-4.18	26.85
Peer Group Median	-12.40	12.95	20.68	-4.41	4.88	37.69	15.67	-3.14	25.86

Total: NA%

#### ASSET LOADINGS (Returns-based)

FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19)

7550250

		Current		Ave	rage
		Fund	Bmk	Fund	Bmk
T	Cash	0.0	0.0	0.0	0.0
11	Top Value	0.0	0.0	0.0	0.0
- 1	Top Growth	0.0	0.0	0.0	0.0
	Mid Value	0.0	0.1	0.0	0.0
-1	Mid Growth	0.0	0.0	0.0	0.0
1.	Sm Value	48.5	48.8	49.6	49.8
1	Sm Growth	51.5	51.1	50.4	50.2

#### **RISK & PERFORMANCE STATISTICS**

Peer Group 3 Yr Fund Benchmark Median NA 0.00 Alpha -1.59 Beta NA 1.00 0.96 100.00 95.36 R-Squared NA Sharpe Ratio NA 0.77 0.64 NA 100.00 88.32 Up Market Capture Down Market Capture NA 100.00 99.77

5 Yr	Fund	Benchmark	Peer Group Median
Alpha	NA	0.00	-0.53
Beta	NA	1.00	0.93
R-Squared	NA	100.00	95.19
Sharpe Ratio	NA	0.46	0.41
Up Market Capture	NA	100.00	88.18
Down Market Capture	NA	100.00	93.26

#### NOTES

### BlackRock EAFE Equity Index-T

### 3/31/2019

Fund Incep Date: Benchmark : Category : Net Assets : Manager Name : Manager Start Date : Expense Ratio : Dolong Category : Team Manager Name : Manager N

#### PORTFOLIO COMPOSITION (Holdings-based)

Assets

Cash	0.00%
US Stocks	0.00%
US Bonds	0.00%
Non-US Stocks	0.00%
Preferred Stocks	0.00%
Convertible Bonds	0.00%
Other	0.00%
Non-US Bonds	0.00%

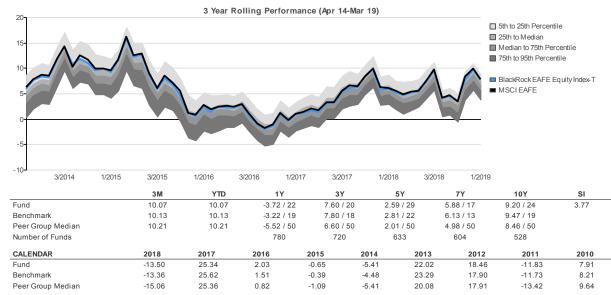
#### Sector Breakdown

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	

#### INVESTMENT OVERVIEW

The Fund is an "index fund" that seeks investment results that correspond

#### PERFORMANCE



NOTES

#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.10	0.00	-0.93
Beta	0.99	1.00	0.98
R-Squared	98.87	100.00	91.74
Sharpe Ratio	0.64	0.66	0.54
Up Market Capture	96.59	100.00	91.92
Down Market Capture	96.62	100.00	96.78

Down Market Capture	30.02	100.00	30.70
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	-0.17	0.00	-0.67
Beta	0.97	1.00	0.95
R-Squared	98.39	100.00	91.56
Sharpe Ratio	0.21	0.23	0.16
Up Market Capture	96.55	100.00	90.33
Down Market Capture	97.86	100.00	94.74

Total: NA%

#### ASSET LOADINGS (Returns-based)

100- 75- 50- 25-	FUND EXPOSURES (W EIGHT) (Apr 16-Mar 19)
0-	
	Current Average

Cu	rrent	Avei	rage	
Fund	Bmk	Fund	Bmk	
3.5	3.1	5.1	2.5	
65.6	61.9	61.9	59.3	
2.0	3.2	3.4	3.5	
20.5	27.6	24.0	32.4	
7.7	3.4	4.4	1.5	
0.6	0.8	0.4	0.8	
0.0	0.0	0.8	0.0	
	Fund 3.5 65.6 2.0 20.5 7.7 0.6	3.5 3.1 65.6 61.9 2.0 3.2 20.5 27.6 7.7 3.4 0.6 0.8	Fund         Bmk         Fund           3.5         3.1         5.1           65.6         61.9         61.9           2.0         3.2         3.4           20.5         27.6         24.0           7.7         3.4         4.4           0.6         0.8         0.4	

# American Funds Europacific Growth R6 RERGX

1.91%

1.65%

1.63%

1.47%

1.44%

19.52%

17.6

36.6

3/31/2019

Fund Incep Date: 05/01/2009

Benchmark

MSCI ACWI ex USA GDP NR USD

Category Foreign Large Growth

Net Assets: \$156.745.00M Manager Name Mark E. Denning

Manager Start Date : 12/31/1991

Expense Ratio : 0.49% Expense Rank:

#### PORTFOLIO COMPOSITION (Holdings-based)



Nintendo Co Ltd

Tencent Holdings Ltd

Emg Europe

Emg Asia

ASML Holding NV

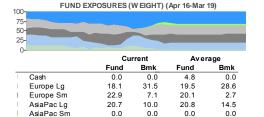
Total:

Alibaba Group Holding Ltd ADR

Sector Breakdown	
Sensitive	
Communication Services	2.30%
Industrials	10.55%
Technology	19.50%
Energy	6.48%
Cyclical	
Basic Materials	8.10%
Consumer Cyclical	12.74%
Real Estate	1.59%
Financial Services	19.55%
Defensive	
Consumer Defensive	6.87%
Healthcare	9.04%
Utilities	3.29%
TOP 10 HOLDINGS	
AIA Group Ltd	2.67%
HDFC Bank Ltd	2.44%
Reliance Industries Ltd	2.27%
Airbus SE	2.10%
Samsung Electronics Co Ltd	1.93%

#### ASSET LOADINGS (Returns-based)

Taiwan Semiconductor Manufacturing Co Ltd



20.7

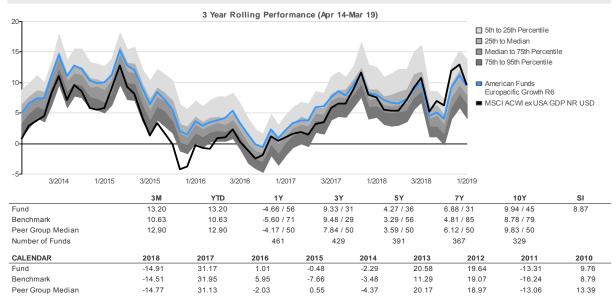
30.7

5.9

#### 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



NOTES

#### **RISK & PERFORMANCE STATISTICS**

3 Yr	Fund	Benchmark	Peer Group Median
Alpha	0.52	0.00	-0.42
Beta	0.92	1.00	0.86
R-Squared	88.97	100.00	74.17
Sharpe Ratio	0.74	0.73	0.60
Up Market Capture	92.53	100.00	84.94
Down Market Capture	89.78	100.00	90.65
5 Yr	Fund	Benchmark	Peer Group Median
Alpha	1.39	0.00	0.76
Beta	0.80	1.00	0.78
R-Squared	86.81	100.00	76.28
R-Squared Sharpe Ratio	86.81 0.36	100.00 0.25	76.28 0.29
•			

2.7



# Capital Markets Overview

### First Quarter 2019

Circulation, disclosure, or dissemination of all or any part of this material to any unauthorized persons is prohibited. This material is being offered as informational and educational material provided to a Plan Sponsor or a Representative, duly authorized and acting on behalf of a Plan Sponsor, to assist the Plan Sponsor in understanding the general investment environment. This document is not intended as a recommendation, solicitation or offering of any particular securities.

The purpose of this document is to provide investment-related information only for the benefit of the Plan Sponsor in its role as a fiduciary to the plan, not as investment advice for plans or plan participants.

Although we believe the data contained in this report is generally from reliable sources, we cannot guarantee its completeness or accuracy. Economic data and information are derived from a variety of financial publications and economic reporting companies. All material presented is compiled from sources believed to be reliable and current, but accuracy cannot be guaranteed.

Plan fiduciaries should review the educational material provided and consult with their investment advisers if necessary to make investment decisions as the information provided herein is not legal, ERISA, or tax advice. Any discussion of these matters included or related to this document or other educational information is provided for informational purposes only. Such discussion does not purport to be complete or to cover every situation. Current tax and ERISA law are subject to interpretation and legislative change. The appropriateness of any product for any specific taxpayer may vary depending on the particular set of facts and circumstances. You should consult with and rely on your own legal and tax advisers.

## **Macroeconomic Summary**

### U.S. Economy

- U.S. economic growth decreased in the fourth quarter of 2018 but remained positive at an estimated 2.2% annualized growth
  - This marks the second quarter in a row of decreasing growth rates
- Job creation through Q1 is mixed, with January posting a robust 311,000 jobs and February disappointing with 20,000
  - The unemployment rate decreased to 3.8%, just over its all time low of 3.7% which was set in October 2018
- Consumer confidence reflected some of the mixed economic signals and has decreased nearly 16 points to 121.7 since its October 2018 high of 137.9
- In December, the Fed approved another quarter-point hike, moving the Fed Funds rate to 2.50% which led to yield curve inversion at several points on the yield curve
  - The 10y-2y spread, widely covered as a recession indicator, remains positive
- During 1Q, the Fed has kept the Fed Funds rate the same but has indicated that they'll slow the pace at which they're reducing their balance sheet — an accommodative stance off which markets rallied

### **Global Economy**

- UK and EU leadership agreed to delay Brexit until October 31 as both sides seek to avoid a "no-deal" exit
  - Both sides acknowledge a frustrating lack of movement and EU leadership has urged the UK to "not waste this time"
- Positive steps in EU-China trade relations
  - On April 9th, the EU and China reached a "breakthrough" in trade negotiations over forced transfer of technologies when operating in China; a key point of contention US-China trade relations
  - The same day, President Trump threatened the EU with \$11bn of tariffs in an escalation of trade-tensions over US aircraft subsidies
- Central bank activity was silent this quarter, with central banks fro the US, UK, ECB and BoJapan making no adjustments to their rates
- Oil tumbled nearly 40% in Q4 to close the year at \$45.41 and has since gained 30% to close at \$60.14 on March 29
  - This can affect importers and exporters in opposite directions
  - · Market participants will be watching China to see if this induces any economic pressure on a potentially slowing global powerhouse

# **Market Summary**

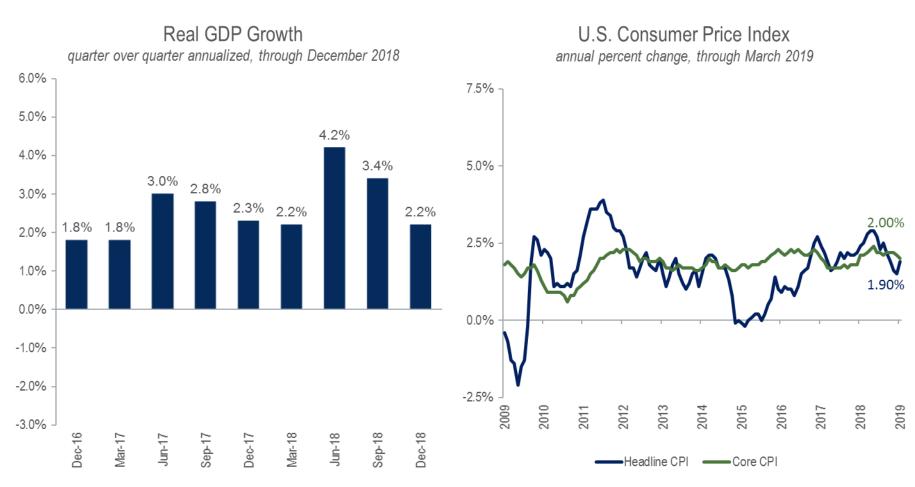
### U.S. Markets

- The S&P 500 Index closed Q1 gaining 13.65% after posting losses of 13.52% in Q4
  - This index remains down ~3% from its October 2018 high
- Growth across all capitalization ranges outperformed their value counterparts
- Information Technology led all sectors with a 19.9% quarterly return
- Performance was strong across most sectors with 9 of the 11 S&P 500 Sectors posting double-digit returns
- Fixed income markets struggled in 2018 with riskier and longer duration segments providing negative returns
- Those same market segments rebounded in Q1, particularly High Yield, which returned 7.3%, and US Govt/Credit Long, which returned 6.5%, following a similar trend to equities of regaining lost ground

### **Global Markets**

- Equities in the MSCI EAFE (developed countries ex-US and Canada) and MSCI Emerging Markets indices returned 10% and 9.9%, respectively, in Q1
  - Canada performed well with a 15.4% return, though not in the EAFE index, and markets globally posted positive returns but to lesser extents
  - Within Emerging Markets China led the way with 17.7% quarterly returns, followed by Russia with 12.5% with all other countries enjoying single digit growth
- Emerging Markets bonds, represented by the JPM EMBI, posted 7% returns and outperformed all US bond indices save for US High Yield
- Sovereign yield curves globally are relatively flat (US, UK) or inverted (ECB, BoJapan) across 10y-2y duration spread

# State of the U.S. Economy

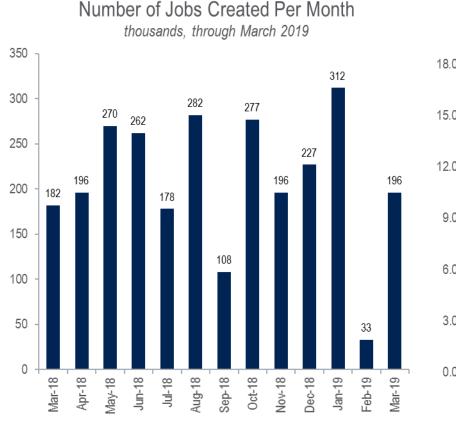


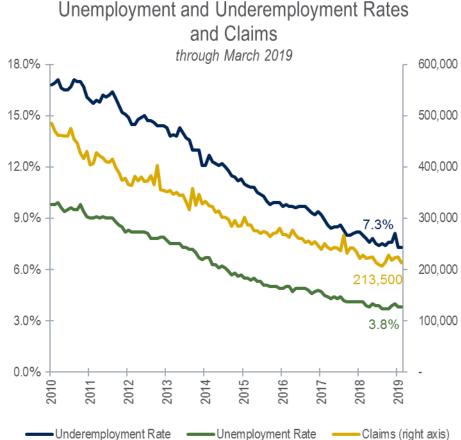
Source: Bloomberg; GWCM Analysis

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



### **U.S. Labor Market Trends**





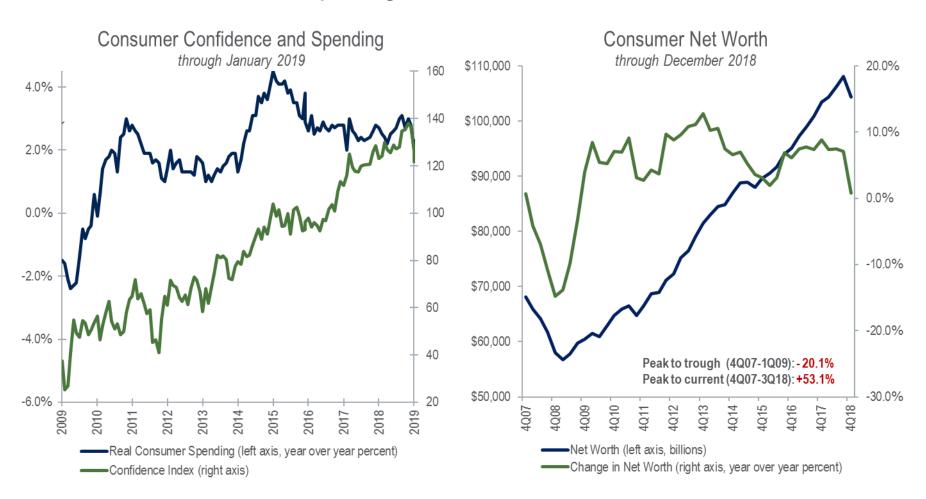
Source: Bloomberg; Bureau of Labor Statistics; GWCM Analysis

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

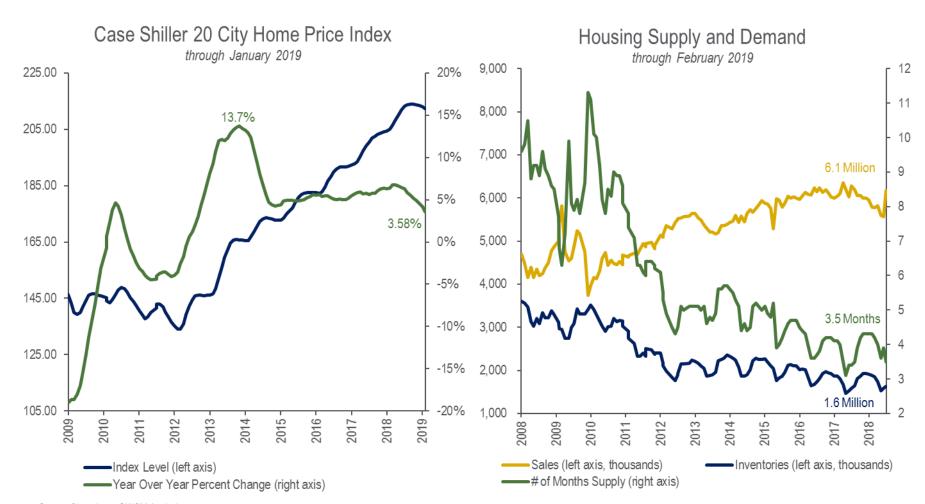


# U.S. Consumer Confidence, Spending and Net Worth



Source: Bloomberg; Federal Reserve; GWCM Analysis

# **U.S Housing Market Trends**



Source: Bloomberg; GWCM Analysis

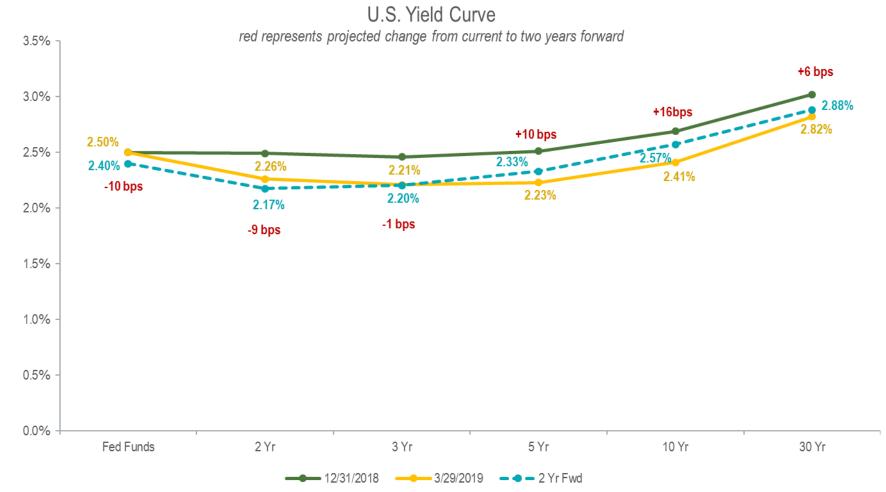
# **Energy Inflation and Oil**



Source: Bloomberg; GWCM Analysis

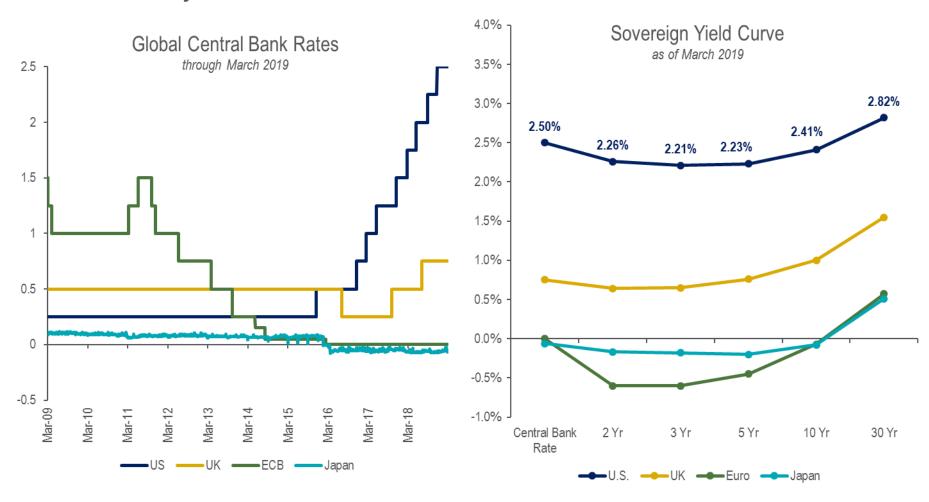
Oil prices shown for West Texas Intermediate (WTI) Crude

# **Historical, Current and Forward Rates**



Source: Bloomberg; GWCM Analysis

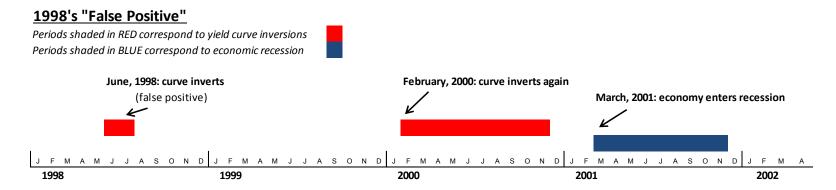
# **Global Monetary Policies and Interest Rates**



Source: Bloomberg; GWCM Analysis

## Do inverted yield curves really predict recession?

- As the 10y Treasury yield (2.41%) approaches the 2y Treasury yield (2.26%) it may help to get some historical context on the predictive power of the "inverted yield curve"
- The reality is that it is far from a perfect predictor, as false positives can be observed through time; for example:



- In fact, since 1960 there have been nearly as many false positives<sup>1</sup> (5) as there have been recessions (7)
- Even when correctly predicting a recession there
  is an average lag of 13 months between the start
  of the inversion and the onset of recession

	FIRST INVERSION OF			FIRST INVERSION OF	
	THE YIELD CURVE	RESULT		THE YIELD CURVE	RESULT
1	November 1965	False positive	8	January 1982	Intra-recession inversion
2	August 1967	False positive	9	December 1988	False positive
3	December 1968	RECESSION	10	March 1990	RECESSION
4	July 1971	False positive	11	June 1998	False positive
5	February 1973	RECESSION	12	February 2000	RECESSION
6	August 1978	RECESSION	13	December 2005	RECESSION
7	September 1980	RECESSION			

<sup>1.</sup> An inversion was counted as unique if there was a period of at least 12 weeks until a reinversion occurred Source: Bloomberg, GWCM Analysis.

# The S&P 500 index regained much of territory it had lost in the 4th quarter

S&P 500 Index



Source: Morningstar Direct; GWCM Analysis

# **Equity Market Returns**

(as of	March 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														
ар	S&P 500	13.6%	13.6%	9.5%	13.5%	10.9%	15.9%	-4.4%	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%
Large Cap	Russell 1000 Value	11.9%	11.9%	5.7%	10.5%	7.7%	14.5%	-8.3%	13.7%	17.3%	-3.8%	13.5%	32.5%	17.5%
Larç	Russell 1000 Growth	16.1%	16.1%	12.7%	16.5%	13.5%	17.5%	-1.5%	30.2%	7.1%	5.7%	13.0%	33.5%	15.3%
90	Russell Mid Cap	16.5%	16.5%	6.5%	11.8%	8.8%	16.9%	-9.1%	18.5%	13.8%	-2.4%	13.2%	34.8%	17.3%
Mid Cap	Russell Mid Cap Value	14.4%	14.4%	2.9%	9.5%	7.2%	16.4%	-12.3%	13.3%	20.0%	-4.8%	14.7%	33.5%	18.5%
Ē	Russell Mid Cap Growth	19.6%	19.6%	11.5%	15.1%	10.9%	17.6%	-4.8%	25.3%	7.3%	-0.2%	11.9%	35.7%	15.8%
Sap	Russell 2000	14.6%	14.6%	2.0%	12.9%	7.1%	15.4%	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%
Small Cap	Russell 2000 Value	11.9%	11.9%	0.2%	10.9%	5.6%	14.1%	-12.9%	7.8%	31.7%	-7.5%	4.2%	34.5%	18.1%
Sm	Russell 2000 Growth	17.1%	17.1%	3.9%	14.9%	8.4%	16.5%	-9.3%	22.2%	11.3%	-1.4%	5.6%	43.3%	14.6%
Inte	rnational Equity													
	MSCIEAFE	10.0%	10.0%	-3.7%	7.3%	2.3%	9.0%	-13.8%	25.0%	1.0%	-0.8%	-4.9%	22.8%	17.3%
रु	Australia	11.4%	11.4%	4.5%	8.7%	1.5%	10.2%	-12.0%	19.9%	11.4%	-10.0%	-3.4%	4.2%	22.1%
arke	Canada	15.4%	15.4%	3.1%	7.5%	0.9%	7.6%	-17.2%	16.1%	24.6%	-24.2%	1.5%	5.6%	9.1%
Σ̈́ρ	France	10.7%	10.7%	-3.7%	9.2%	2.7%	8.4%	-12.8%	28.7%	4.9%	-0.1%	-9.9%	26.3%	21.3%
obe	Germany	6.9%	6.9%	-13.7%	3.8%	-0.7%	8.6%	-22.2%	27.7%	2.8%	-1.9%	-10.4%	31.4%	30.9%
Developed Markets	Japan	6.7%	6.7%	-7.8%	8.1%	5.6%	8.0%	-12.9%	24.0%	2.4%	9.6%	-4.0%	27.2%	8.2%
	Switzerland	13.1%	13.1%	7.5%	8.2%	2.8%	11.0%	-9.1%	22.5%	-4.9%	0.4%	-0.1%	26.6%	20.4%
	UK	11.9%	11.9%	-0.1%	6.3%	0.7%	9.3%	-14.2%	22.3%	-0.1%	-7.6%	-5.4%	20.7%	15.3%
	MSCI Emerging Markets	9.9%	9.9%	-7.4%	10.7%	3.7%	8.9%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
S	Brazil	8.1%	8.1%	-4.2%	20.0%	1.7%	4.7%	-0.5%	24.1%	66.2%	-41.4%	-14.0%	-16.0%	0.0%
rket	China	17.7%	17.7%	-6.2%	16.0%	9.4%	9.9%	-18.9%	54.1%	0.9%	-7.8%	8.0%	3.6%	22.7%
у Ма	India	7.2%	7.2%	6.8%	11.7%	7.9%	11.6%	-7.3%	38.8%	-1.4%	-6.1%	23.9%	-3.8%	26.0%
Emerging Markets	Indonesia	4.3%	4.3%	2.0%	7.3%	3.0%	13.6%	-9.2%	24.2%	17.0%	-19.5%	26.6%	-23.5%	4.6%
mer	Korea	4.9%	4.9%	-16.7%	8.1%	2.4%	10.3%	-20.9%	47.3%	8.7%	-6.7%	-11.1%	3.9%	21.2%
Ш	Mexico	5.5%	5.5%	-11.7%	-4.7%	-5.2%	6.8%	-15.5%	16.0%	-9.2%	-14.4%	-9.3%	0.2%	29.1%
	Russia	12.5%	12.5%	2.2%	16.3%	3.6%	8.0%	-0.7%	5.2%	54.8%	4.2%	-46.3%	0.8%	13.7%

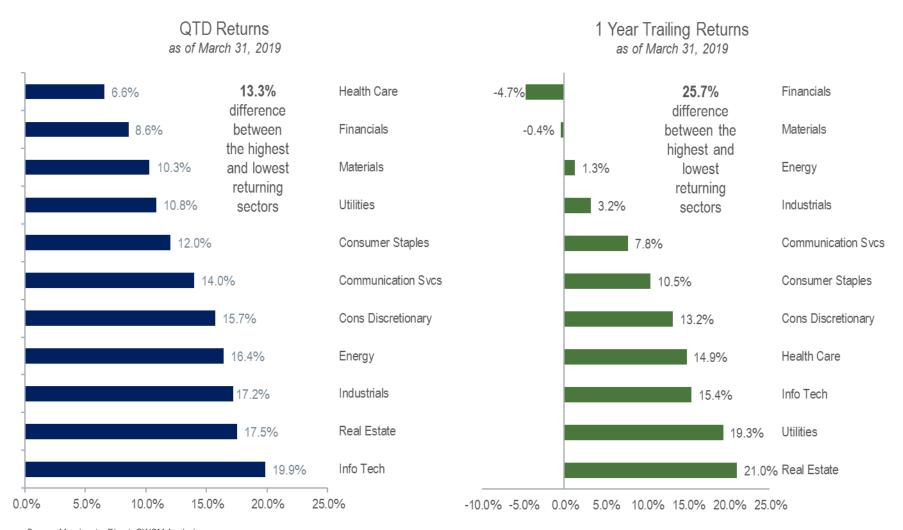
Source: Morningstar Direct; GWCM Analysis

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

<sup>\*</sup>Canada is not part of the EAFE Index

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

### **S&P 500 Sector Returns**



Source: Morningstar Direct; GWCM Analysis

# **Returns by Style**

		3 Months				1 Year			Since Mark	ket Peak (Oc	tober, 2007)
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	11.9%	13.6%	16.1%	Large	5.7%	9.5%	12.7%	Large	67.2%	131.5%	186.5%
Mid	14.4%	16.5%	19.6%	Mid	2.9%	6.5%	11.5%	Mid	118.9%	137.1%	159.2%
Small	11.9%	14.6%	17.1%	Small	0.2%	2.0%	3.9%	Small	89.9%	-78.6%	137.5%
		3 Year				5 Year			Since Ma	rket Low (Ma	arch, 2009)
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	10.5%	13.5%	16.5%	Large	7.7%	10.9%	13.5%	Large	317.0%	417.3%	484.3%
Mid	9.5%	11.8%	15.1%	Mid	7.2%	8.8%	10.9%	Mid	458.8%	472.2%	499.3%
Small	10.9%	12.9%	14.9%	Small	5.6%	7.1%	8.4%	Small	369.5%	-48.3%	460.4%

performance as of 3/31/2019

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 2000 Value Index, Small Value - Russell 2000 Value Index, Small Growth - Russell 2000 Growth Index



# **Fixed Income and Specialty Returns**

(on of Morah 21, 2010)	QTD	VTD	1 Year	3 Year	5 Year	10 Year	2018	2017	2016	2015	2014	2013	2012
(as of March 31, 2019)	QID	YTD	Trailing	Trailing	Trailing	Trailing	2010	2017	2010	2015	2014	2013	2012
Fixed Income													
Bloomberg Barclays US Aggregate	2.9%	2.9%	4.5%	2.0%	2.7%	3.8%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
Bloomberg Barclays US Treasury	2.1%	2.1%	4.2%	1.0%	2.2%	2.4%	0.9%	2.3%	1.0%	0.8%	5.1%	-2.7%	2.0%
Bloomberg Barclays US Govt/Credit Intermediate	2.3%	2.3%	4.2%	1.7%	2.1%	3.1%	0.9%	2.1%	2.1%	1.1%	3.1%	-0.9%	3.9%
Bloomberg Barclays US Govt/Credit Long	6.5%	6.5%	5.2%	3.8%	5.3%	7.2%	-4.7%	10.7%	6.7%	-3.3%	19.3%	-8.8%	8.8%
Bloomberg Barclays US TIPS	3.2%	3.2%	2.7%	1.7%	1.9%	3.4%	-1.3%	3.0%	4.7%	-1.4%	3.6%	-8.6%	7.0%
Bloomberg Barclays US Corporate High Yield	7.3%	7.3%	5.9%	8.6%	4.7%	11.3%	-2.1%	7.5%	17.1%	-4.5%	2.5%	7.4%	15.8%
Citi WGBI	1.7%	1.7%	-1.6%	1.0%	0.6%	2.2%	-0.8%	7.5%	1.6%	-3.6%	-0.5%	-4.0%	1.6%
JPM EMBI Global Diversified	7.0%	7.0%	4.2%	5.8%	5.4%	8.5%	-4.3%	10.3%	10.2%	1.2%	7.4%	-5.3%	17.4%
Citi Treasury Bill 3 Month	0.6%	0.6%	2.1%	1.2%	0.7%	0.4%	1.9%	0.8%	0.3%	0.0%	0.0%	0.1%	0.1%
Specialty													
Bloomberg Commodity	6.3%	6.3%	-5.3%	2.2%	-8.9%	-2.6%	-11.2%	1.7%	11.8%	-24.7%	-17.0%	-9.5%	-1.1%
DJ US Select REIT	15.7%	15.7%	19.7%	5.3%	8.9%	18.5%	-4.2%	3.8%	6.7%	4.5%	32.0%	1.2%	17.1%
FTSE EPRA/NAREIT Developed Ex US	13.7%	13.7%	7.7%	7.9%	5.9%	12.5%	-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.



# **Calendar Year Returns by Asset Class**

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Cumulative Return*
Agg Bond	Emrg Mkt	Sm Growth	Agg Bond	Mid Value	Sm Growth	Mid Value	Lg Growth	Sm Value	Emrg Mkt	Agg Bond	Lg Growth
5.2	78.5	29.1	7.8	18.5	43.3	14.7	5.7	31.7	37.3	0.01	196.49
Balanced	Mid Growth	Mid Growth	Balanced	Emrg Mkt	Mid Growth	Lg Value	Balanced	Mid Value	Lg Growth	Lg Growth	Mid Growth
-22.1	46.3	26.4	4.7	18.2	35.7	13.5	1.3	20.0	30.2	-1.51	172.26
Sm Value	Lg Growth	Mid Value	Lg Growth	Sm Value	Sm Value	Lg Growth	Agg Bond	Lg Value	Mid Growth 25.3	Balanced	Sm Growth
-28.9	37.2	24.8	2.6	18.1	34.5	13.0	0.5	17.3		-2.35	155.93
Lg Value	Sm Growth	Sm Value	Lg Value	Lg Value	Lg Growth	Mid Growth	Mid Growth	Sm Growth	International 25.0	Mid Growth	Mid Value
-36.8	34.5	24.5	0.4	17.5	33.5	11.9	-0.2	11.3		-4.75	139.64
Lg Growth	Mid Value	Emrg Mkt	Mid Value	International	Mid Value	Balanced	International -0.8	Emrg Mkt	Sm Growth	Lg Value	Sm Value
-38.4	34.2	18.9	-1.4	17.3	33.5	10.6		11.2	22.2	-8.27	113.95
Mid Value	International 31.8	Lg Growth	Mid Growth	Mid Growth	Lg Value	Agg Bond	Sm Growth	Balanced	Balanced	Sm Growth	Balanced
-38.4		16.7	-1.7	15.8	32.5	6.0	-1.4	8.3	14.2	-9.31	109.67
Sm Growth	Sm Value	Lg Value	Sm Growth	Lg Growth	International 22.8	Sm Growth	Lg Value	Mid Growth	Lg Value	Mid Value	Lg Value
-38.5	20.6	15.5	-2.9	15.3		5.6	-3.8	7.3	13.7	-12.29	103.96
International -43.4	Lg Value	Balanced	Sm Value	Sm Growth	Balanced	Sm Value	Mid Value	Lg Growth	Mid Value	Sm Value	Agg Bond
	19.7	12.1	-5.5	14.6	17.6	4.2	-4.8	7.1	13.3	-12.86	52.48
Mid Growth	Balanced	International 7.8	International	Balanced	Agg Bond	Emrg Mkt	Sm Value	Agg Bond	Sm Value	International	International
-44.3	18.4		-12.1	11.3	-2.0	-2.2	-7.5	2.6	7.8	-13.79	14.90
Emrg Mkt	Agg Bond	Agg Bond	Emrg Mkt	Agg Bond	Emrg Mkt	International	Emrg Mkt	International	Agg Bond	Emrg Mkt	Emrg Mkt
-53.3	5.9	6.5	-18.4	4.2	-2.6	-4.9	-14.9	1.0	3.5	-14.58	10.96

<sup>\*</sup>Cumulative return is for the time period 1/1/2008-12/31/2018

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.

1000 Value Index, Mid Growth – Russell Mid Cap Growth Index, Mid Value – Russell 2000 Value Index, International – MSCI EAFE NR Index, Emrg Mkt – MSCI EM NR Index, Agg Bond – Bloomberg Barclays US Aggregate Bond Index.



### Disclosures and Benchmark Definitions

The opinions expressed herein are subject to change. The opinions are not investment advice, and should not be relied on as such. The information presented in this report was developed internally and/or obtained from sources believed to be reliable; however, GWFS Equities, Inc., and its parent company, Great-West Life & Annuity Insurance Company (GWL&A), do not guarantee the accuracy, adequacy, or completeness of such information. Predictions, opinions, and other information contained in this report are subject to change continually and without notice of any kind and may no longer be true after the date indicated.

Any forward-looking statements speak only as of the date they are made. GWFS Equities, Inc. assumes no duty to and does not undertake to update forward-looking statements. Forward looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results could differ materially from those anticipated in forward-looking statements. No forecast is guaranteed.

Past performance, where discussed in this material, is not a guarantee of future results. As with any investment, there is a potential for profit as well as the possibility of loss.

MSCI EAFE® Index is a registered trademark of Morgan Stanley Capital International. Inc. and is an unmanaged index considered indicative of the International equity market. S&P 500® Index is an unmanaged index considered indicative of the domestic Large-Cap equity market. S&P MidCap 400® Index is an unmanaged index considered indicative of the domestic Mid-Cap equity market. S&P Small Cap 600® Index is an unmanaged index considered indicative of the domestic Small-Cap equity market. S&P 500® Index, S&P MidCap 400® Index, and S&P Small Cap 600® Index are registered trademarks of Standard & Poor's Financial Services LLC and have been licensed for use by Great-West Life & Annuity Insurance Company.

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 MSCI Emerging Markets Index represents the performance of stocks in 26 emerging market countries in Europe, Latin America and the Pacific Basin.

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.

The Bloomberg Barclays US Corporate High Yield Index measures the US corporate market of non-investment grade, fixed-rate corporate bonds. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below.

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.

### **Disclosures and Benchmark Definitions**

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.