



# State of Montana 401(a) Plan

## Investment Performance Evaluation Report

As of June 30, 2017

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## Introduction

This report reviews the investment performance of the State of Montana's 401(a) Plan for the quarter ending June 30, 2017, as well as other periods ending on that date. While the most recent quarter is the focus point of this report, we recommend concentration on longer time periods for the consideration of any changes to the investment policy or manager structure.

Performance measurement in this report is designed to:

- Provide an understanding of the environment in which the funds were managed;
- Verify that the assets were managed in compliance with guidelines;
- Assess the managers' strengths, continuity of style, and the means of achieving the performance; and
- Serve as a communications tool for internal focus, as well as to fulfill fiduciary obligations.

This report is based upon data provided by the State of Montana, Morningstar, Empower, and fund management firms.

## Plan Overview

### Net Assets

- Plan assets totaled \$192.6 million, as of June 30, 2017. This is up from \$181.9 million, as of March 31, 2017.

### Asset Allocation

- Plan assets were allocated 8% to the Stable Value fund, 2% to Bond funds, 54% to Target Date/Balanced funds, 28% to U.S. Equity funds, and 8% to International Equity funds.

## Fund Overview

As of June 30, 2017

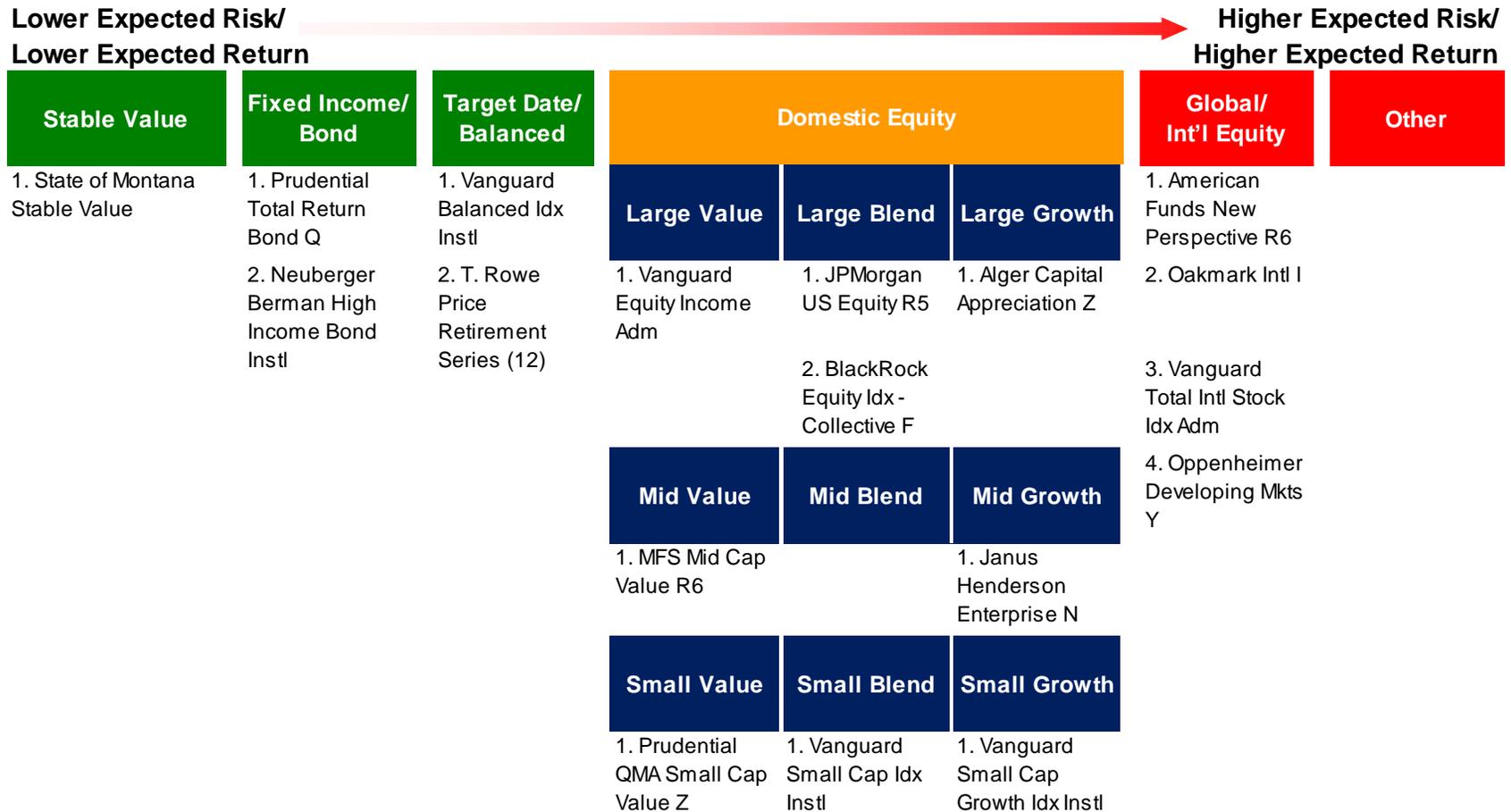
Asset Class	Fund	Ticker	Recommendation	Date of Status Change	Inception Date
Stable Value	State of Montana Stable Value	-	Retain		Sep-13
Fixed Income	Prudential Total Return Bond Q	PTRQX	Retain		Jul-14
Fixed Income	Neuberger Berman High Income Bond Instl	PTRQX	Retain		Oct-15
Balanced	Vanguard Balanced Index Instl	VBAIX	Retain		May-05
Target Date	T. Rowe Price Retirement Balanced	TRRIX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2005	TRRFX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2010	TRRAX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2015	TRRGX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2020	TRRBX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2025	TRRHX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2030	TRRCX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2035	TRRJX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2040	TRRDY	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2045	TRRKX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2050	TRRMX	Retain		Oct-11
Target Date	T. Rowe Price Retirement 2055	TRRNX	Retain		Oct-11
Large Value	Vanguard Equity-Income Adm	VEIRX	Retain		Jul-02
Large Blend	BlackRock Equity Idx - Collective F	-	Retain		Apr-05
Large Blend	JPMorgan US Equity R5	JUSRX	Retain		May-11
Large Growth	Alger Capital Appreciation Z	ACAZX	Retain		Apr-12
Mid Value	MFS Mid Cap Value R6	MVCKX	Retain		Jun-13
Mid Growth	Janus Henderson Enterprise N	JDMNX	Retain		Oct-16
Small Value	Prudential QMA Small Cap Value Z	TASVX	Retain		Oct-08
Small Blend	Vanguard Small Cap Index Instl	VSCIX	Retain		Jul-02
Small Growth	Vanguard Small Cap Growth Index Instl	VSGIX	Retain		Sep-10
International	American Funds New Perspective R6	RNPGX	Retain		Jun-02
International	Oakmark International I	OAKIX	Retain		Sep-03
International	Vanguard Total Intl Stock Index Adm	VTIAX	Retain		Sep-10
International	Oppenheimer Developing Markets Y	ODVYX	Retain		Nov-12

## Asset Allocation

As of June 30, 2017

# of Options	Options	Plan Assets	% of Plan	# of Participants
1	<b>State of Montana Stable Value</b>	<b>\$14,727,106</b>	<b>7.6%</b>	399
	<b>Total Stable Value Fund</b>	<b>\$14,727,106</b>	<b>8%</b>	
2	Prudential Total Return Bond Q	\$3,135,487	1.6%	373
	Neuberger Berman High Income Bond Instl	\$440,217	<1%	58
	<b>Total Bond Funds</b>	<b>\$3,575,704</b>	<b>2%</b>	
13	<b>Vanguard Balanced Index Instl</b>	<b>\$73,699,617</b>	<b>38.3%</b>	1,598
	T. Rowe Price Retirement Balanced	\$84,940	<1%	24
	T. Rowe Price Retirement 2005	\$1,139,565	<1%	100
	T. Rowe Price Retirement 2010	\$181,140	<1%	17
	T. Rowe Price Retirement 2015	\$621,765	<1%	49
	T. Rowe Price Retirement 2020	\$1,549,066	<1%	94
	T. Rowe Price Retirement 2025	\$3,474,058	1.8%	155
	T. Rowe Price Retirement 2030	\$3,178,056	1.7%	151
	T. Rowe Price Retirement 2035	\$5,039,357	2.6%	208
	T. Rowe Price Retirement 2040	\$4,017,015	2.1%	201
	T. Rowe Price Retirement 2045	\$5,101,150	2.6%	263
	T. Rowe Price Retirement 2050	\$4,535,247	2.4%	264
	T. Rowe Price Retirement 2055	\$2,298,429	1.2%	206
	<b>Total Target Date/Balanced Funds</b>	<b>\$104,919,406</b>	<b>54%</b>	
9	<b>Vanguard Equity-Income Adm</b>	<b>\$9,140,662</b>	<b>4.7%</b>	500
	BlackRock Equity Idx - Collective F	\$3,601,323	1.9%	252
	JPMorgan US Equity R5	\$3,947,454	2.0%	291
	<b>Alger Capital Appreciation Z</b>	<b>\$11,487,106</b>	<b>6.0%</b>	516
	MFS Mid Cap Value R6	\$6,965,031	3.6%	477
	Janus Henderson Enterprise N	\$4,856,318	2.5%	383
	Prudential QMA Small Cap Value Z	\$4,293,988	2.2%	334
	Vanguard Small Cap Index Instl	\$4,716,823	2.4%	391
	Vanguard Small Cap Growth Index Instl	\$5,499,717	2.9%	444
	<b>Total U.S. Equity Funds</b>	<b>\$54,508,423</b>	<b>28%</b>	
4	<b>American Funds New Perspective R6</b>	<b>\$7,443,035</b>	<b>3.9%</b>	476
	Oakmark International I	\$4,785,927	2.5%	373
	Vanguard Total Intl Stock Index Adm	\$1,579,646	<1%	213
	Oppenheimer Developing Markets Y	\$1,041,790	<1%	110
<b>Total International Equity Funds</b>	<b>\$14,850,399</b>	<b>8%</b>		
	<b>TOTAL</b>	<b>\$192,581,039</b>		

## Range of Investment Options



## Net-of-Fee Total Returns and Standard Deviations

As of June 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	7/19/17	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
<b>State of Montana Stable Value (net)</b>	-	1.12	1.84	0.18	1.68	1.35	3.83	-	-	0.40
Barclays US Govt/Credit Interm	2.12	0.94	1.73	-0.21	1.92	1.77	3.87	2.19	2.12	-
<b>Prudential Total Return Bond Q</b>	4.66	2.21	4.09	2.39	3.65	4.07	6.17	3.52	3.69	0.44
Barclays US Agg Bond	2.71	1.45	2.27	-0.31	2.48	2.21	4.48	2.90	2.86	-
Avg Intermediate-Term Bond	3.02	1.49	2.57	0.94	2.21	2.45	4.30	2.80	2.90	0.78
<b>Neuberger Berman High Income Bond Instl</b>	4.74	1.39	3.74	10.19	3.01	5.76	7.33	5.66	5.15	0.69
BofAML US HY Master II Constnd	5.77	2.14	4.90	12.74	4.49	6.92	7.63	6.11	5.29	-
Avg High Yield Bond	4.86	1.74	4.09	10.78	3.02	5.70	6.04	5.47	4.98	1.06

Green indicates fund outperformed both benchmarks / Blue indicates fund performed between benchmarks / Red indicates fund underperformed both benchmarks

## Net-of-Fee Total Returns and Standard Deviations

As of June 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	7/19/17	3 Months	YTD	1 Yr	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	
<b>T. Rowe Price Retirement Balanced</b>	<b>6.61</b>	<b>2.00</b>	<b>5.46</b>	<b>7.69</b>	<b>3.44</b>	<b>5.86</b>	<b>4.64</b>	<b>4.78</b>	<b>4.54</b>	<b>0.57</b>
DJ Target Today	3.65	1.35	2.99	1.55	1.59	2.67	4.11	2.83	2.89	-
Avg Allocation - 30% to 50% Equity	6.10	1.84	4.90	7.22	2.85	5.73	4.26	5.22	4.96	1.20
<b>T. Rowe Price Retirement 2005</b>	<b>6.92</b>	<b>2.26</b>	<b>5.75</b>	<b>7.75</b>	<b>3.70</b>	<b>6.37</b>	<b>4.76</b>	<b>4.99</b>	<b>4.82</b>	<b>0.60</b>
DJ Target 2005	3.67	1.36	3.01	1.57	1.59	2.73	4.05	2.83	2.91	-
Avg Target Date 2000-2010	6.38	2.04	5.19	7.24	3.26	5.88	3.84	4.92	4.71	0.72
<b>T. Rowe Price Retirement 2010</b>	<b>7.55</b>	<b>2.39</b>	<b>6.22</b>	<b>8.69</b>	<b>4.02</b>	<b>7.10</b>	<b>4.77</b>	<b>5.45</b>	<b>5.27</b>	<b>0.59</b>
DJ Target 2010	3.90	1.43	3.20	1.67	1.71	3.25	4.00	3.12	3.15	-
Avg Target Date 2000-2010	6.38	2.04	5.19	7.24	3.26	5.88	3.84	4.92	4.71	0.72
<b>T. Rowe Price Retirement 2015</b>	<b>8.67</b>	<b>2.84</b>	<b>7.19</b>	<b>10.50</b>	<b>4.53</b>	<b>8.23</b>	<b>5.08</b>	<b>6.27</b>	<b>6.05</b>	<b>0.62</b>
DJ Target 2015	4.91	1.77	4.03	2.37	2.31	4.31	4.03	3.85	3.73	-
Avg Target Date 2015	6.98	2.18	5.66	8.24	3.38	6.61	4.07	5.56	5.38	0.77
<b>T. Rowe Price Retirement 2020</b>	<b>10.34</b>	<b>3.36</b>	<b>8.53</b>	<b>12.67</b>	<b>5.10</b>	<b>9.27</b>	<b>5.29</b>	<b>7.15</b>	<b>6.80</b>	<b>0.66</b>
DJ Target 2020	6.36	2.25	5.16	4.50	2.92	5.62	4.20	4.53	4.41	-
Avg Target Date 2020	7.43	2.34	5.99	8.77	3.50	6.57	3.80	5.80	5.52	0.84
<b>T. Rowe Price Retirement 2025</b>	<b>11.68</b>	<b>3.79</b>	<b>9.61</b>	<b>14.59</b>	<b>5.57</b>	<b>10.21</b>	<b>5.46</b>	<b>7.92</b>	<b>7.51</b>	<b>0.69</b>
DJ Target 2025	7.48	2.44	6.03	7.01	3.55	6.98	4.47	5.51	5.35	-
Avg Target Date 2025	8.92	2.82	7.20	11.04	4.07	7.89	4.17	6.86	6.52	0.82
<b>T. Rowe Price Retirement 2030</b>	<b>12.87</b>	<b>4.23</b>	<b>10.56</b>	<b>16.29</b>	<b>6.01</b>	<b>11.01</b>	<b>5.65</b>	<b>8.57</b>	<b>8.07</b>	<b>0.72</b>
DJ Target 2030	8.92	2.68	7.14	10.01	4.27	8.37	4.76	6.78	6.47	-
Avg Target Date 2030	9.85	3.02	7.91	12.45	4.36	8.39	4.04	7.72	7.22	0.87

## Net-of-Fee Total Returns and Standard Deviations

As of June 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	7/19/17	3 Months	YTD	1 Yr	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	
<b>T. Rowe Price Retirement 2035</b>	<b>13.87</b>	<b>4.49</b>	<b>11.36</b>	<b>17.70</b>	<b>6.29</b>	<b>11.57</b>	<b>5.78</b>	<b>9.15</b>	<b>8.58</b>	<b>0.74</b>
DJ Target 2035	10.20	2.90	8.12	12.74	4.78	9.50	5.01	8.02	7.55	-
Avg Target Date 2035	11.19	3.46	8.99	14.62	4.81	9.41	4.47	8.60	8.01	0.84
<b>T. Rowe Price Retirement 2040</b>	<b>14.61</b>	<b>4.72</b>	<b>11.93</b>	<b>18.85</b>	<b>6.51</b>	<b>11.93</b>	<b>5.95</b>	<b>9.63</b>	<b>8.97</b>	<b>0.76</b>
DJ Target 2040	11.26	3.08	8.92	15.00	5.21	10.36	5.27	9.03	8.41	-
Avg Target Date 2040	11.53	3.47	9.23	15.09	4.88	9.50	4.26	9.02	8.39	0.89
<b>T. Rowe Price Retirement 2045</b>	<b>14.85</b>	<b>4.78</b>	<b>12.16</b>	<b>19.14</b>	<b>6.60</b>	<b>11.99</b>	<b>5.99</b>	<b>9.64</b>	<b>8.98</b>	<b>0.76</b>
DJ Target 2045	12.00	3.21	9.48	16.55	5.49	10.86	5.50	9.68	8.94	-
Avg Target Date 2045	12.27	3.76	9.84	16.30	5.15	10.11	4.61	9.41	8.75	0.85
<b>T. Rowe Price Retirement 2050</b>	<b>14.76</b>	<b>4.84</b>	<b>12.10</b>	<b>19.15</b>	<b>6.60</b>	<b>12.00</b>	<b>5.98</b>	<b>9.64</b>	<b>8.96</b>	<b>0.76</b>
DJ Target 2050	12.33	3.27	9.72	17.21	5.63	10.99	5.56	9.91	9.10	-
Avg Target Date 2050	12.11	3.63	9.66	15.93	5.10	9.94	4.33	9.44	8.81	0.89
<b>T. Rowe Price Retirement 2055</b>	<b>14.81</b>	<b>4.76</b>	<b>12.07</b>	<b>19.14</b>	<b>6.60</b>	<b>11.97</b>	<b>5.97</b>	<b>9.65</b>	<b>8.99</b>	<b>0.76</b>
DJ Target 2055	12.35	3.27	9.73	17.23	5.63	10.99	5.56	9.91	9.10	-
Avg Target Date 2055	12.57	3.84	10.07	16.67	5.34	10.49	5.71	9.55	8.89	0.86
<b>Vanguard Balanced Index Instl</b>	<b>7.83</b>	<b>2.43</b>	<b>6.31</b>	<b>10.59</b>	<b>6.54</b>	<b>9.58</b>	<b>6.58</b>	<b>6.35</b>	<b>5.88</b>	<b>0.06</b>
Custom Vanguard Bal Index <sup>(1)</sup>	7.88	2.44	6.35	10.70	6.66	9.72	6.88	6.35	5.88	-
Avg Allocation - 50% to 70% Equity	7.93	2.35	6.30	10.67	4.00	7.97	4.89	7.10	6.60	1.17
Barclays US Agg Bond	2.71	1.45	2.27	-0.31	2.48	2.21	4.48	2.90	2.86	-
S&P 500	11.72	3.09	9.34	17.90	9.61	14.63	7.18	10.35	9.56	-

<sup>(1)</sup> Reflect's fund's index changes over time. 60% DJ US Total Market Index/40% Barclays US Agg Float Adj Index since 1/14/13.

## Net-of-Fee Total Returns and Standard Deviations

As of June 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	7/19/17	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
<b>Vanguard Equity-Income Adm</b>	<b>8.35</b>	<b>1.98</b>	<b>6.64</b>	<b>13.67</b>	<b>8.51</b>	<b>13.60</b>	<b>7.52</b>	<b>9.63</b>	<b>8.99</b>	<b>0.17</b>
Russell 1000 Value	5.80	1.34	4.66	15.53	7.36	13.94	5.57	10.53	9.89	-
Avg Large Value	7.05	1.78	5.55	16.49	6.40	12.64	5.18	10.98	10.20	1.07
<b>BlackRock Equity Idx - Collective F</b>	-	<b>3.11</b>	<b>9.36</b>	<b>17.93</b>	<b>9.67</b>	<b>14.68</b>	<b>7.30</b>	-	-	<b>0.04</b>
<b>JPMorgan US Equity R5</b>	<b>11.87</b>	<b>2.18</b>	<b>9.05</b>	<b>20.33</b>	<b>9.20</b>	<b>15.26</b>	<b>8.20</b>	<b>11.12</b>	<b>10.38</b>	<b>0.56</b>
S&P 500	11.72	3.09	9.34	17.90	9.61	14.63	7.18	10.35	9.56	-
Avg Large Blend	10.86	2.92	8.65	17.17	7.60	13.35	6.21	10.66	9.96	1.01
<b>Alger Capital Appreciation Z</b>	<b>21.85</b>	<b>4.97</b>	<b>16.72</b>	<b>21.46</b>	<b>10.08</b>	<b>15.36</b>	<b>9.05</b>	<b>12.03</b>	<b>11.04</b>	<b>0.89</b>
Russell 1000 Growth	17.67	4.67	13.99	20.42	11.11	15.30	8.91	11.03	10.08	-
Avg Large Growth	17.89	5.01	14.14	20.02	8.80	13.87	7.51	11.66	11.01	1.14
<b>MFS Mid Cap Value R6</b>	<b>7.93</b>	<b>2.49</b>	<b>6.18</b>	<b>16.06</b>	<b>6.89</b>	<b>14.91</b>	<b>7.24</b>	<b>11.30</b>	<b>10.36</b>	<b>0.74</b>
Russell Mid Cap Value	6.86	1.37	5.18	15.93	7.46	15.14	7.23	11.04	10.32	-
Avg Mid Value	6.46	1.03	4.58	17.26	5.74	13.37	6.17	12.10	11.23	1.16
<b>Janus Henderson Enterprise N</b>	<b>16.89</b>	<b>6.45</b>	<b>14.09</b>	<b>21.16</b>	<b>12.28</b>	<b>16.22</b>	<b>9.57</b>	<b>10.63</b>	<b>9.61</b>	<b>0.68</b>
Russell Mid Cap Growth	13.73	4.21	11.40	17.05	7.83	14.19	7.87	11.71	10.92	-
Avg Mid Growth	14.90	4.68	12.37	18.58	6.86	12.72	6.81	12.52	11.71	1.25

## Net-of-Fee Total Returns and Standard Deviations

As of June 30, 2017

Fund/Benchmark	YTD	(periods longer than 1 year are annualized)						Standard Deviation		Expense Ratio
	7/19/17	3 Months	YTD	1 Year	3 Years	5 Years	10 Years	3 Years	5 Years	
<b>Prudential QMA Small Cap Value Z</b>	<b>0.23</b>	<b>-0.89</b>	<b>-1.71</b>	<b>25.45</b>	<b>7.33</b>	<b>13.92</b>	<b>7.77</b>	<b>16.48</b>	<b>14.09</b>	<b>0.73</b>
Russell 2000 Value	1.98	0.67	0.54	24.86	7.02	13.39	5.92	15.35	13.68	-
Avg Small Value	2.22	0.26	0.52	21.15	5.18	12.47	5.97	14.95	13.50	1.31
<b>Vanguard Small Cap Index Instl</b>	<b>7.91</b>	<b>1.94</b>	<b>5.75</b>	<b>19.13</b>	<b>6.78</b>	<b>14.14</b>	<b>7.86</b>	<b>13.28</b>	<b>12.20</b>	<b>0.05</b>
Custom Vanguard SC Index <sup>(1)</sup>	7.91	1.93	5.75	19.09	6.75	14.10	7.76	13.27	12.18	-
Avg Small Blend	5.15	1.53	3.24	20.96	5.70	12.75	6.12	14.48	13.22	1.22
<b>Vanguard Small Cap Growth Index Instl</b>	<b>12.53</b>	<b>3.79</b>	<b>10.04</b>	<b>19.04</b>	<b>5.85</b>	<b>12.92</b>	<b>7.92</b>	<b>13.43</b>	<b>12.54</b>	<b>0.06</b>
Custom Vanguard SC Growth Index <sup>(2)</sup>	12.50	3.77	10.02	18.95	5.76	12.75	7.69	13.42	12.53	-
Avg Small Growth	12.53	4.33	10.15	23.12	6.67	12.81	7.05	15.02	13.91	1.30
<b>American Funds New Perspective R6</b>	<b>21.31</b>	<b>6.84</b>	<b>17.10</b>	<b>21.56</b>	<b>8.12</b>	<b>13.07</b>	<b>6.65</b>	<b>10.77</b>	<b>10.08</b>	<b>0.45</b>
MSCI ACWI	14.36	4.27	11.48	18.78	4.82	10.54	3.71	10.78	9.97	-
Avg World Large Stock	15.63	5.10	12.88	18.02	4.53	10.57	3.77	10.97	10.39	1.21
<b>Oakmark International I</b>	<b>20.70</b>	<b>6.16</b>	<b>16.17</b>	<b>40.05</b>	<b>3.72</b>	<b>12.68</b>	<b>4.89</b>	<b>15.45</b>	<b>14.19</b>	<b>1.00</b>
MSCI World Ex USA	15.57	5.63	12.82	19.49	0.67	8.15	1.00	12.22	11.51	-
<b>Vanguard Total Intl Stock Index Adm</b>	<b>18.12</b>	<b>5.82</b>	<b>14.79</b>	<b>20.05</b>	<b>1.35</b>	<b>7.68</b>	<b>1.17</b>	<b>11.80</b>	<b>11.24</b>	<b>0.11</b>
Custom Vanguard Intl Index <sup>(3)</sup>	17.47	5.71	14.06	20.41	1.37	7.77	1.18	12.31	11.45	-
Avg Foreign Large Blend	17.29	6.25	14.45	19.13	1.18	7.81	0.96	11.81	11.32	1.09
<b>Oppenheimer Developing Markets Y</b>	<b>23.99</b>	<b>6.93</b>	<b>18.74</b>	<b>22.58</b>	<b>-0.43</b>	<b>4.98</b>	<b>4.62</b>	<b>14.73</b>	<b>13.72</b>	<b>1.07</b>
MSCI EM	24.71	6.27	18.43	23.75	1.07	3.96	1.91	16.06	14.40	-
Avg Diversified Emerging Mkts	23.69	5.87	18.14	20.48	0.48	4.07	1.48	14.81	13.75	1.46

<sup>(1)</sup> Reflects changes to fund's index over time. Russell 2000 Index through 5/16/03; MSCI US Small Cap 1750 Index through 1/30/13; and the CRSP US Small Cap Index thereafter.

<sup>(2)</sup> Reflects changes to fund's index over time. S&P SmallCap 600 Growth Index through 5/16/03; MSCI US Small Cap Growth Index through 4/16/13; and the CRSP US Small Cap Growth Index thereafter.

<sup>(3)</sup> Reflects changes to fund's index over time. MSCI EAFE & EM Index through 12/15/10; MSCI ACWI ex US Index through 6/02/13; and the FTSE Global All Cap ex US Index thereafter.

## Modern Portfolio Theory (MPT) Analytics

As of June 30, 2017

Fund/Benchmark	5 - Year					10 Year Batting Average	
	Alpha	Beta	Tracking Error	Information Ratio	Upside Capture		Downside Capture
<b>Vanguard Equity-Income Adm</b>	<b>0.31</b>	<b>0.91</b>	<b>2.49</b>	<b>-0.42</b>	<b>93</b>	<b>93</b>	<b>44</b>
Avg Large Value	-1.57	0.99	3.76	-0.58	93	105	42
<b>JPMorgan US Equity R5</b>	<b>-0.24</b>	<b>1.06</b>	<b>2.23</b>	<b>0.28</b>	<b>104</b>	<b>104</b>	<b>59</b>
Avg Large Blend	-1.12	1.00	2.47	-1.33	96	105	42
<b>Alger Capital Appreciation Z</b>	<b>0.22</b>	<b>1.04</b>	<b>4.80</b>	<b>0.15</b>	<b>104</b>	<b>102</b>	<b>52</b>
Avg Large Growth	-0.92	1.03	4.83	-0.19	99	107	51
<b>MFS Mid Cap Value R6</b>	<b>0.43</b>	<b>0.99</b>	<b>4.16</b>	<b>0.07</b>	<b>101</b>	<b>100</b>	<b>54</b>
Avg Mid Value	-1.39	1.03	5.37	-0.22	98	110	49
<b>Janus Henderson Enterprise N</b>	<b>3.14</b>	<b>0.88</b>	<b>4.86</b>	<b>0.33</b>	<b>98</b>	<b>76</b>	<b>55</b>
Avg Mid Growth	-2.04	1.04	6.14	-0.31	97	114	51
<b>Prudential QMA Small Cap Value Z</b>	<b>-2.17</b>	<b>1.15</b>	<b>8.96</b>	<b>-0.08</b>	<b>105</b>	<b>122</b>	<b>52</b>
Avg Small Value	-2.53	1.08	8.78	-0.25	99	124	49
<b>Vanguard Small Cap Index Instl</b>	<b>-1.57</b>	<b>1.10</b>	<b>6.23</b>	<b>-0.08</b>	<b>106</b>	<b>122</b>	<b>54</b>
Avg Small Blend	-2.62	1.10	8.10	-0.23	101	126	50
<b>Vanguard Small Cap Growth Index Instl</b>	<b>-2.45</b>	<b>1.09</b>	<b>7.03</b>	<b>-0.24</b>	<b>103</b>	<b>128</b>	<b>56</b>
Avg Small Growth	-2.61	1.11	9.04	-0.20	103	130	53
<b>American Funds New Perspective R6</b>	<b>6.71</b>	<b>0.80</b>	<b>4.73</b>	<b>1.24</b>	<b>98</b>	<b>56</b>	<b>56</b>
Avg World Stock	4.57	0.79	5.63	0.60	92	63	54
<b>Oakmark International I</b>	<b>4.56</b>	<b>1.10</b>	<b>6.32</b>	<b>0.86</b>	<b>123</b>	<b>96</b>	<b>58</b>
<b>Vanguard Total Intl Stock Index Adm</b>	<b>0.68</b>	<b>0.96</b>	<b>1.71</b>	<b>0.27</b>	<b>99</b>	<b>95</b>	<b>48</b>
Avg Foreign Large Blend	1.10	0.92	3.86	0.16	97	91	49
<b>Oppenheimer Developing Markets Y</b>	<b>-2.29</b>	<b>1.06</b>	<b>6.22</b>	<b>-0.36</b>	<b>98</b>	<b>113</b>	<b>60</b>
Avg Diversified Emerging Mkts	-2.74	1.00	7.45	-0.43	92	111	51

Reported modern portfolio theory (MPT) statistics are calculated with respect to the S&P 500 Index for domestic equity funds and the MSCI EAFE Index for international equity funds.

## Stable Value and Bond Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>State of Montana Stable Value</b>	<b>2.13</b>	<b>0.84</b>	<b>2.15</b>	<b>-1.95</b>	<b>4.82</b>	<b>5.04</b>	<b>6.47</b>	<b>13.71</b>	<b>-3.45</b>	<b>9.35</b>
Barclays US Govt/Credit Interm	2.08	1.07	3.13	-0.86	3.89	5.80	5.89	5.24	5.08	7.39
<b>Prudential Total Return Bond Q</b>	<b>4.83</b>	<b>0.09</b>	<b>7.25</b>	<b>-0.91</b>	<b>9.96</b>	<b>7.93</b>	<b>9.73</b>	<b>19.68</b>	<b>-3.55</b>	<b>5.42</b>
Barclays US Agg Bond	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
Avg Intermediate-Term Bond	3.23	-0.26	5.18	-1.42	7.01	5.86	7.72	13.97	-4.70	4.70
<b>Neuberger Berman High Income Bond Instl</b>	<b>14.17</b>	<b>-4.77</b>	<b>1.51</b>	<b>7.57</b>	<b>14.64</b>	<b>3.12</b>	<b>14.71</b>	<b>52.16</b>	<b>-19.09</b>	<b>1.61</b>
BofAML US HY Master II Constnd	17.49	-4.61	2.51	7.41	15.55	4.37	15.07	58.10	-26.11	2.53
Avg High Yield Bond	13.30	-4.01	1.11	6.90	14.67	2.83	14.24	46.70	-26.41	1.47

Green indicates fund outperformed both benchmarks / Blue indicates fund performed between benchmarks / Red indicates fund underperformed both benchmarks

## Target Date Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>T. Rowe Price Retirement Balanced</b>	<b>6.48</b>	<b>-0.74</b>	<b>3.91</b>	<b>9.15</b>	<b>10.05</b>	<b>1.43</b>	<b>10.10</b>	<b>22.07</b>	<b>-18.39</b>	<b>6.09</b>
DJ Target Today	3.01	-0.63	3.86	1.41	5.44	5.26	8.53	10.83	-3.06	6.48
Avg Allocation - 30% to 50% Equity	6.63	-2.32	4.02	7.23	9.40	1.70	10.03	20.77	-18.61	4.53
<b>T. Rowe Price Retirement 2005</b>	<b>6.72</b>	<b>-0.75</b>	<b>4.72</b>	<b>9.74</b>	<b>11.35</b>	<b>1.43</b>	<b>11.51</b>	<b>24.55</b>	<b>-22.24</b>	<b>6.67</b>
DJ Target 2005	3.00	-0.63	3.92	1.54	5.66	5.15	8.90	11.89	-5.47	6.84
Avg Target Date 2000-2010	5.90	-1.18	4.10	8.30	9.61	0.91	10.68	22.42	-22.46	5.22
<b>T. Rowe Price Retirement 2010</b>	<b>7.11</b>	<b>-0.76</b>	<b>4.99</b>	<b>11.93</b>	<b>12.44</b>	<b>0.54</b>	<b>12.70</b>	<b>27.95</b>	<b>-26.71</b>	<b>6.65</b>
DJ Target 2010	3.33	-0.72	4.20	3.00	6.40	4.49	9.71	14.11	-10.81	7.73
Avg Target Date 2000-2010	5.90	-1.18	4.10	8.30	9.61	0.91	10.68	22.42	-22.46	5.22
<b>T. Rowe Price Retirement 2015</b>	<b>7.31</b>	<b>-0.58</b>	<b>5.37</b>	<b>15.18</b>	<b>13.81</b>	<b>-0.32</b>	<b>13.79</b>	<b>31.35</b>	<b>-30.22</b>	<b>6.75</b>
DJ Target 2015	4.51	-0.97	4.48	5.49	7.65	3.42	10.94	17.32	-16.65	7.78
Avg Target Date 2015	6.02	-1.34	4.48	9.65	10.65	-0.27	11.50	23.55	-27.76	5.84
<b>T. Rowe Price Retirement 2020</b>	<b>7.41</b>	<b>-0.31</b>	<b>5.63</b>	<b>18.05</b>	<b>15.01</b>	<b>-1.20</b>	<b>14.74</b>	<b>34.19</b>	<b>-33.48</b>	<b>6.73</b>
DJ Target 2020	5.27	-1.04	4.81	9.05	9.23	2.01	12.42	20.95	-22.31	8.11
Avg Target Date 2020	6.12	-1.57	4.72	11.57	11.68	-0.22	12.27	24.25	-29.46	6.02
<b>T. Rowe Price Retirement 2025</b>	<b>7.55</b>	<b>-0.17</b>	<b>5.84</b>	<b>20.78</b>	<b>16.00</b>	<b>-2.06</b>	<b>15.37</b>	<b>36.29</b>	<b>-35.90</b>	<b>6.81</b>
DJ Target 2025	6.39	-1.11	5.14	12.84	10.94	0.49	14.12	25.36	-27.61	8.31
Avg Target Date 2025	6.61	-1.59	5.07	15.30	13.03	-2.06	13.29	28.32	-34.15	6.52
<b>T. Rowe Price Retirement 2030</b>	<b>7.69</b>	<b>-0.02</b>	<b>6.05</b>	<b>23.09</b>	<b>16.82</b>	<b>-2.70</b>	<b>16.01</b>	<b>37.99</b>	<b>-37.79</b>	<b>6.83</b>
DJ Target 2030	7.50	-1.21	5.50	16.59	12.56	-1.20	15.67	29.50	-32.02	8.43
Avg Target Date 2030	7.21	-1.79	5.04	16.65	13.59	-2.26	13.47	28.87	-36.04	6.50

## Target Date Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>T. Rowe Price Retirement 2035</b>	<b>7.64</b>	<b>0.13</b>	<b>6.07</b>	<b>24.86</b>	<b>17.35</b>	<b>-3.26</b>	<b>16.34</b>	<b>39.04</b>	<b>-38.88</b>	<b>6.81</b>
DJ Target 2035	8.49	-1.61	5.80	19.90	13.92	-2.62	16.89	32.71	-35.15	8.48
Avg Target Date 2035	7.45	-1.76	5.24	20.00	14.64	-3.51	14.28	30.06	-37.04	7.02
<b>T. Rowe Price Retirement 2040</b>	<b>7.63</b>	<b>0.17</b>	<b>6.18</b>	<b>25.93</b>	<b>17.55</b>	<b>-3.49</b>	<b>16.51</b>	<b>39.07</b>	<b>-38.85</b>	<b>6.77</b>
DJ Target 2040	9.30	-1.94	6.03	22.38	14.88	-3.59	17.67	34.64	-36.80	8.48
Avg Target Date 2040	7.84	-1.99	5.25	19.97	14.64	-3.49	14.37	30.90	-37.94	6.21
<b>T. Rowe Price Retirement 2045</b>	<b>7.69</b>	<b>0.17</b>	<b>6.14</b>	<b>25.93</b>	<b>17.62</b>	<b>-3.47</b>	<b>16.44</b>	<b>39.10</b>	<b>-38.83</b>	<b>6.84</b>
DJ Target 2045	9.85	-2.15	6.16	23.71	15.32	-3.99	17.95	35.09	-37.03	8.46
Avg Target Date 2045	7.78	-1.87	5.35	22.00	15.31	-4.10	14.60	30.88	-38.11	6.89
<b>T. Rowe Price Retirement 2050</b>	<b>7.71</b>	<b>0.19</b>	<b>6.19</b>	<b>25.90</b>	<b>17.55</b>	<b>-3.36</b>	<b>16.41</b>	<b>38.92</b>	<b>-38.80</b>	<b>6.82</b>
DJ Target 2050	10.10	-2.23	6.19	23.89	15.35	-4.00	17.95	35.09	-37.03	8.46
Avg Target Date 2050	8.15	-2.01	5.42	21.02	15.07	-3.82	14.53	32.02	-38.67	5.91
<b>T. Rowe Price Retirement 2055</b>	<b>7.73</b>	<b>0.18</b>	<b>6.18</b>	<b>25.86</b>	<b>17.60</b>	<b>-3.35</b>	<b>16.41</b>	<b>38.97</b>	<b>-38.89</b>	<b>6.82</b>
DJ Target 2055	10.11	-2.23	6.19	23.89	15.35	-4.00	17.95	35.09	-37.03	8.47
Avg Target Date 2055	7.83	-1.71	5.49	23.14	15.52	-4.13	14.45	32.20	-38.86	5.94
<b>Vanguard Balanced Index Instl</b>	<b>8.81</b>	<b>0.52</b>	<b>10.00</b>	<b>18.11</b>	<b>11.51</b>	<b>4.31</b>	<b>13.34</b>	<b>20.18</b>	<b>-22.10</b>	<b>6.34</b>
Custom Vanguard Bal Index	8.89	0.76	10.06	18.25	11.71	4.66	13.45	20.34	-20.94	6.53
Avg Allocation - 50% to 70% Equity	7.32	-1.93	6.21	16.48	11.72	-0.11	11.83	24.13	-28.00	5.99
Barclays US Agg Bond	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	6.97
S&P 500	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	5.49

## Large and Mid-Cap Stock Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Vanguard Equity-Income Adm</b>	<b>14.82</b>	<b>0.86</b>	<b>11.38</b>	<b>30.19</b>	<b>13.58</b>	<b>10.69</b>	<b>14.99</b>	<b>17.26</b>	<b>-30.86</b>	<b>4.99</b>
Russell 1000 Value	17.34	-3.83	13.45	32.53	17.51	0.39	15.51	19.69	-36.85	-0.17
Avg Large Value	14.81	-4.05	10.21	31.21	14.57	-0.75	13.66	24.13	-37.09	1.42
<b>BlackRock Equity Idx - Collective F</b>	<b>11.99</b>	<b>1.45</b>	<b>13.70</b>	<b>32.41</b>	<b>16.00</b>	<b>2.20</b>	-	-	-	-
<b>JPMorgan US Equity R5</b>	<b>10.86</b>	<b>0.84</b>	<b>13.95</b>	<b>36.07</b>	<b>17.40</b>	<b>-1.48</b>	<b>14.42</b>	<b>33.29</b>	<b>-34.51</b>	<b>10.49</b>
S&P 500	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	5.49
Avg Large Blend	10.37	-1.07	10.96	31.50	14.96	-1.27	14.01	28.17	-37.79	6.16
<b>Alger Capital Appreciation Z</b>	<b>0.66</b>	<b>6.56</b>	<b>13.50</b>	<b>35.31</b>	<b>18.27</b>	<b>-0.69</b>	<b>12.15</b>	<b>48.45</b>	<b>-44.85</b>	<b>31.01</b>
Russell 1000 Growth	7.08	5.67	13.05	33.48	15.26	2.64	16.71	37.21	-38.44	11.81
Avg Large Growth	3.23	3.60	10.00	33.92	15.34	-2.46	15.53	35.68	-40.67	13.35
<b>MFS Mid Cap Value R6</b>	<b>15.86</b>	<b>-2.14</b>	<b>10.29</b>	<b>36.63</b>	<b>18.52</b>	<b>-2.04</b>	<b>27.08</b>	<b>39.75</b>	<b>-41.90</b>	<b>1.67</b>
Russell Mid Cap Value	20.00	-4.78	14.75	33.46	18.51	-1.38	24.75	34.21	-38.44	-1.42
Avg Mid Value	18.06	-5.41	9.31	35.14	16.60	-3.96	21.92	35.41	-36.77	0.83
<b>Janus Henderson Enterprise N</b>	<b>12.18</b>	<b>3.57</b>	<b>12.19</b>	<b>30.94</b>	<b>17.79</b>	<b>-1.78</b>	<b>25.93</b>	<b>42.90</b>	<b>-43.13</b>	<b>21.81</b>
Russell Mid Cap Growth	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38	46.29	-44.32	11.43
Avg Mid Growth	6.03	-0.95	7.00	34.93	14.07	-3.96	24.61	39.11	-43.77	15.09

## Small Cap and International Stock Funds

Annual Net-of-Fee Total Returns

Fund/Benchmark	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Prudential QMA Small Cap Value Z</b>	<b>33.94</b>	<b>-7.04</b>	<b>5.89</b>	<b>35.87</b>	<b>14.14</b>	<b>-0.48</b>	<b>23.63</b>	<b>26.69</b>	<b>-27.45</b>	<b>0.52</b>
Russell 2000 Value	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50	20.58	-28.92	-9.78
Avg Small Value	25.99	-6.71	3.34	36.22	16.00	-4.45	26.17	31.32	-32.24	-6.08
<b>Vanguard Small Cap Index Instl</b>	<b>18.32</b>	<b>-3.63</b>	<b>7.53</b>	<b>37.80</b>	<b>18.26</b>	<b>-2.65</b>	<b>27.95</b>	<b>36.40</b>	<b>-35.98</b>	<b>1.29</b>
Custom Vanguard SC Index	18.26	-3.68	7.54	37.77	18.20	-2.75	27.82	36.15	-36.20	1.20
Avg Small Blend	20.78	-5.38	3.79	37.39	15.46	-4.07	25.61	31.80	-36.56	-1.10
<b>Vanguard Small Cap Growth Index Instl</b>	<b>10.74</b>	<b>-2.52</b>	<b>4.04</b>	<b>38.20</b>	<b>17.68</b>	<b>-1.40</b>	<b>30.96</b>	<b>42.13</b>	<b>-39.91</b>	<b>9.78</b>
Custom Vanguard SC Growth Index	10.62	-2.60	3.98	37.87	17.24	-1.64	30.58	41.79	-40.17	9.62
Avg Small Growth	11.20	-2.41	2.44	40.91	13.15	-3.55	26.98	35.46	-41.55	7.59
<b>American Funds New Perspective R6</b>	<b>2.19</b>	<b>5.63</b>	<b>3.56</b>	<b>27.23</b>	<b>21.19</b>	<b>-7.33</b>	<b>13.11</b>	<b>37.73</b>	<b>-37.83</b>	<b>16.04</b>
MSCI ACWI	7.86	-2.36	4.16	22.80	16.13	-7.35	12.67	34.63	-42.19	11.66
Avg World Large Stock	5.54	-1.69	2.79	25.19	15.84	-7.93	13.74	35.27	-41.91	11.28
<b>Oakmark International I</b>	<b>7.91</b>	<b>-3.83</b>	<b>-5.41</b>	<b>29.34</b>	<b>29.22</b>	<b>-14.07</b>	<b>16.22</b>	<b>56.30</b>	<b>-41.06</b>	<b>-0.51</b>
MSCI World Ex USA	2.75	-3.04	-4.32	21.02	16.41	-12.21	8.95	33.67	-43.56	12.44
<b>Vanguard Total Intl Stock Index Adm</b>	<b>4.67</b>	<b>-4.26</b>	<b>-4.17</b>	<b>15.14</b>	<b>18.21</b>	<b>-14.52</b>	<b>11.04</b>	<b>36.73</b>	<b>-44.10</b>	<b>15.52</b>
Custom Vanguard Intl Index	4.72	-4.29	-3.39	15.76	17.04	-14.31	10.70	40.44	-45.52	15.85
Avg Foreign Large Blend	0.79	-1.59	-4.98	19.44	18.29	-13.97	10.24	31.24	-43.99	12.71
<b>Oppenheimer Developing Markets Y</b>	<b>7.17</b>	<b>-13.84</b>	<b>-4.55</b>	<b>8.68</b>	<b>21.29</b>	<b>-17.85</b>	<b>27.39</b>	<b>82.10</b>	<b>-47.84</b>	<b>34.30</b>
MSCI EM	11.19	-14.92	-2.19	-2.60	18.22	-18.42	18.88	78.51	-53.33	39.42
Avg Diversified Emerging Mkts	8.47	-13.79	-3.01	-0.14	18.15	-19.86	19.26	73.81	-54.44	36.68

## Peer Group Rankings

As of June 30, 2017

Yellow shading indicates above median performance in Morningstar peer group (1 = Best Ranking / 100 = Worst Ranking)

Fund	Morningstar Category	3 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr
Prudential Total Return Bond Q	Intermediate-Term Bond	4	4	14	4	3	2
Neuberger Berman High Income Bond Instl	High Yield Bond	78	72	66	54	50	9
T. Rowe Price Retirement Balanced	Allocation - 30% to 50% Equity	49	33	43	36	44	35
T. Rowe Price Retirement 2005	Target Date 2000-2010	28	19	36	33	34	7
T. Rowe Price Retirement 2010	Target Date 2000-2010	15	11	19	12	5	5
T. Rowe Price Retirement 2015	Target Date 2015	6	7	12	6	1	1
T. Rowe Price Retirement 2020	Target Date 2020	3	1	3	2	1	1
T. Rowe Price Retirement 2025	Target Date 2025	3	1	1	1	2	1
T. Rowe Price Retirement 2030	Target Date 2030	1	1	4	3	3	2
T. Rowe Price Retirement 2035	Target Date 2035	1	1	5	4	2	3
T. Rowe Price Retirement 2040	Target Date 2040	1	1	2	3	2	2
T. Rowe Price Retirement 2045	Target Date 2045	1	2	1	3	2	3
T. Rowe Price Retirement 2050	Target Date 2050	3	3	1	3	2	3
T. Rowe Price Retirement 2055	Target Date 2055	3	4	4	3	3	1
Vanguard Balanced Index Instl	Allocation - 50% to 70% Equity	51	52	52	7	16	9

## Peer Group Rankings

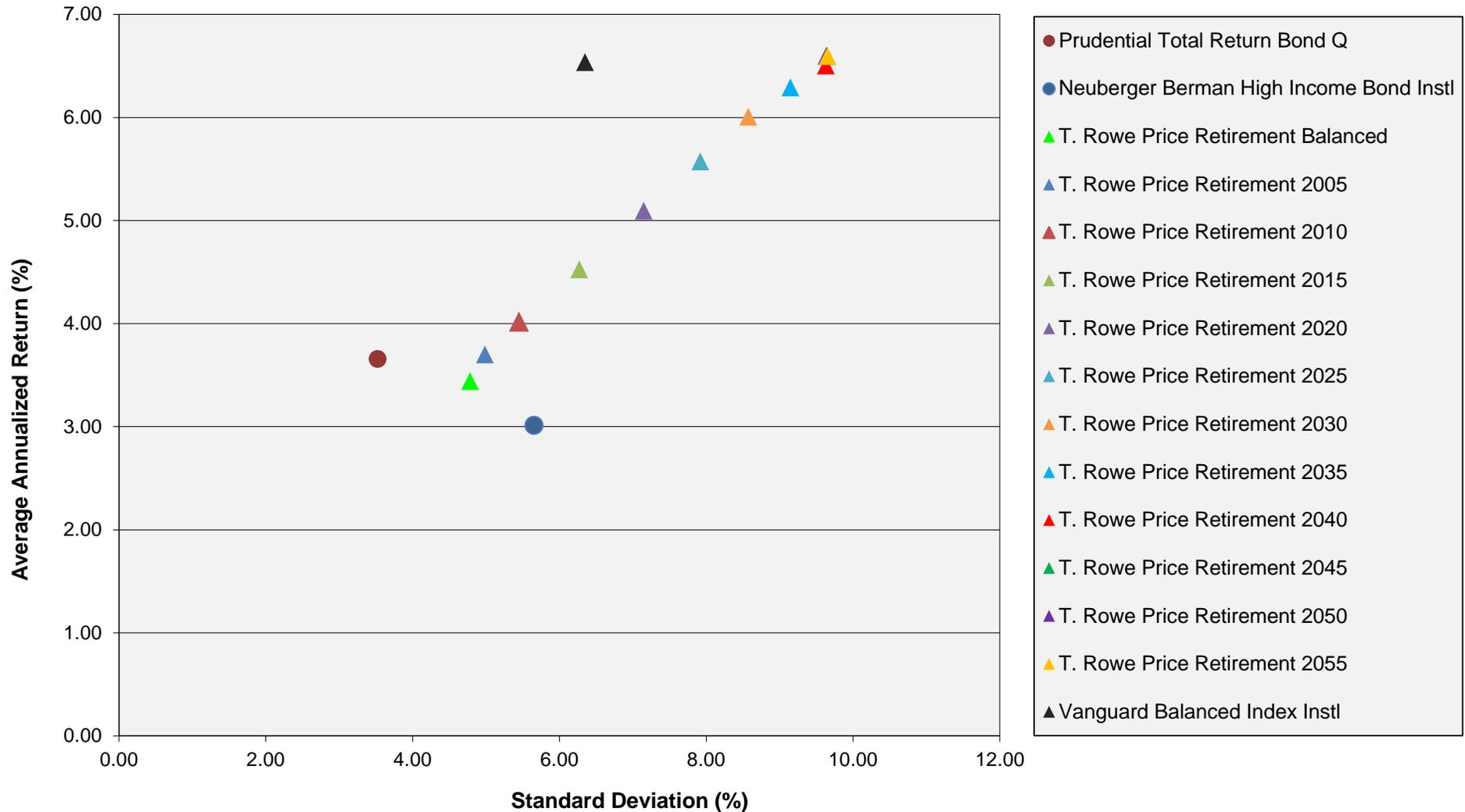
As of June 30, 2017

Yellow shading indicates above median performance in Morningstar peer group (1 = Best Ranking / 100 = Worst Ranking)

Fund	Morningstar Category	3 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr
Vanguard Equity-Income Adm	Large Value	44	26	76	9	24	4
JPMorgan US Equity R5	Large Blend	81	41	16	18	7	5
Alger Capital Appreciation Z	Large Growth	48	27	32	32	21	15
MFS Mid Cap Value R6	Mid-Cap Value	9	24	57	31	19	24
Janus Henderson Enterprise N	Mid-Cap Growth	16	28	24	1	5	6
Prudential QMA Small Cap Value Z	Small Value	87	84	15	26	26	11
Vanguard Small Cap Index Instl	Small Blend	42	18	74	40	27	13
Vanguard Small Cap Growth Index Instl	Small Growth	59	50	84	63	48	28
American Funds New Perspective R6	World Large Stock	19	14	20	7	9	4
Oakmark International I	Foreign Large Blend	57	17	1	10	2	3
Vanguard Total Intl Stock Index Adm	Foreign Large Blend	73	41	37	44	53	38
Oppenheimer Developing Markets Y	Diversified Emerging Mkts	27	49	42	70	29	2

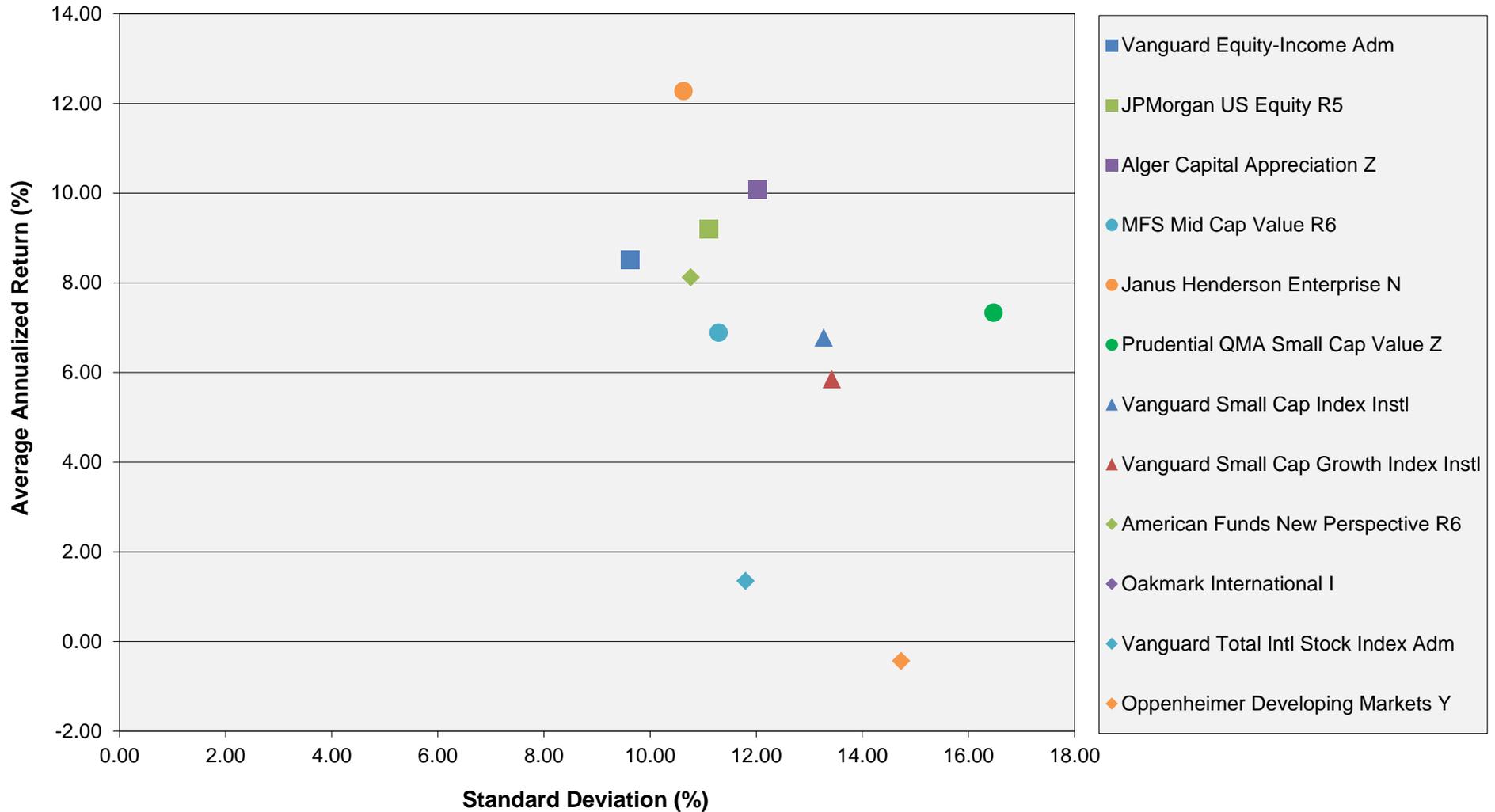
## Three Year Risk/Return Profile

Bond and Target Date/Balanced Funds  
As of June 30, 2017



## Three Year Risk/Return Profile

Equity Funds  
As of June 30, 2017



## Stable Value Performance as of June 30, 2017

	Quarter	YTD	1 Year	Annualized			Management Fees	Wrap Fees
				3 Years	5 years	10 years		
<b>Montana Stable Value (market, gross)</b>	<b>1.17</b>	<b>1.94</b>	<b>0.38</b>	<b>1.90</b>	<b>1.59</b>	<b>4.10</b>	<b>0.20</b>	<b>0.20</b>
Barclays US Govt/Credit Interm	0.94	1.73	-0.21	1.92	1.77	3.87	-	-

## Stable Value Portfolio Characteristics as of June 30, 2017

	Yield-to Maturity (%)	Effective Duration (years)	Effective Maturity (years)	Average Credit Quality	Credit Quality Distribution (%)				
					Investment Grade				High Yield
					AAA	AA	A	BBB	Below BBB
<b>Montana Stable Value</b>	<b>2.29</b>	<b>3.93</b>	<b>4.33</b>	<b>AA</b>	<b>47</b>	<b>1</b>	<b>33</b>	<b>19</b>	<b>0</b>
Barclays US Govt/Credit Interm	2.08	4.07	4.42	AA	64	6	13	17	-

## Market to Book Value Ratio

End of Month	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17
<b>Market-to-Book Value Ratio (%)</b>	<b>103.3</b>	<b>104.1</b>	<b>103.0</b>	<b>103.2</b>	<b>104.2</b>	<b>102.9</b>	<b>103.0</b>	<b>101.7</b>	<b>103.4</b>	<b>104.3</b>	<b>104.1</b>	<b>101.3</b>	<b>101.4</b>	<b>101.9</b>

## Fixed Income Portfolio Characteristics

As of June 30, 2017

Fund/Benchmark	Average Maturity (years)	Average Duration (years)	Average Credit Quality	Total Number of Holdings
<b>Prudential Total Return Bond Q</b>	<b>7.9</b>	<b>6.1</b>	<b>BBB</b>	<b>2,316</b>
BarCap Aggregate	8.3	6.0	AA	9,347
Avg Intermediate Term Bond	7.1	5.3	BBB	749
<b>Neuberger Berman High Income Bond Instl</b>	<b>5.1</b>	<b>3.7</b>	<b>B</b>	<b>380</b>
Avg High Yield Bond	4.9	3.3	B	591

Fund/Benchmark	Investment Grade				High Yield Bonds			Other
	AAA	AA	A	BBB	BB	B	Below B	NR/NA
<b>Prudential Total Return Bond Q</b>	<b>36</b>	<b>8</b>	<b>17</b>	<b>21</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>5</b>
BarCap Aggregate	72	5	10	14	0	0	0	0
Avg Intermediate Term Bond	34	10	27	23	4	1	1	0
<b>Neuberger Berman High Income Bond Instl</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>50</b>	<b>35</b>	<b>8</b>	<b>0</b>
Avg High Yield Bond	3	0	2	5	30	40	17	2

## Equity Portfolio Style Characteristics

As of June 30, 2017

Vanguard Equity-Income Adm

40	31	17
7	2	0
2	1	0

JPMorgan US Equity R5

23	30	36
5	3	4
0	0	0

Alger Capital Appreciation Z

4	32	54
1	1	7
0	0	1

MFS Mid Cap Value R6

7	9	3
30	28	9
6	8	2

Janus Henderson Enterprise N

1	6	18
4	18	46
2	2	3

Prudential QMA Small Cap Value Z

0	0	0
4	0	0
64	29	3

Vanguard Small Cap Index Instl

0	0	0
9	13	19
20	19	19

Vanguard Small Cap Growth Index Instl

0	0	0
3	12	33
5	14	34

American Funds New Perspective R6

12	26	54
1	3	4
0	0	0

Oakmark International I

34	29	26
1	10	0
0	0	0

Vanguard Total Intl Stock Index Adm

29	28	23
6	6	5
2	1	1

Oppenheimer Developing Markets Y

6	38	48
1	3	3
0	0	0

### Style Legend

Large Value	Large Core	Large Growth	> 50%	54
Mid Value	Mid Core	Mid Growth	> 25%	27
Small Value	Small Core	Small Growth	> 10%	19

## Equity Portfolio Characteristics

As of June 30, 2017

Fund/Benchmark	Geo Avg Market Cap \$MM	P/E Ratio	P/B Ratio	Total Number of Holdings	% Assets in Top 10 Holdings	Turnover Ratio	% Non- US Equity	% Emerging Mkts Equity
<b>Vanguard Equity-Income Adm</b>	<b>\$85,897</b>	<b>20.6</b>	<b>2.7</b>	<b>224</b>	<b>28</b>	<b>26</b>	<b>9</b>	<b>0</b>
Russell 1000 Value	\$56,409	18.2	2.0	719	22			
Avg Large Value	\$84,994	18.4	2.3	-	33	60	5	0
<b>JPMorgan US Equity R5</b>	<b>\$91,511</b>	<b>21.6</b>	<b>2.8</b>	<b>154</b>	<b>27</b>	<b>83</b>	<b>3</b>	<b>1</b>
S&P 500	\$87,979	21.4	3.0	505	19			
Avg Large Blend	\$113,221	21.8	2.9	-	34	57	3	1
<b>Alger Capital Appreciation Z</b>	<b>\$108,480</b>	<b>27.8</b>	<b>4.7</b>	<b>102</b>	<b>44</b>	<b>104</b>	<b>4</b>	<b>4</b>
Russell 1000 Growth	\$80,219	25.4	6.3	557	29			
Avg Large Growth	\$108,066	27.0	5.0	-	46	59	5	3
<b>MFS Mid Cap Value R6</b>	<b>\$10,074</b>	<b>19.5</b>	<b>2.1</b>	<b>151</b>	<b>11</b>	<b>27</b>	<b>3</b>	<b>0</b>
Russell Mid Cap Value	\$11,176	17.9	1.9	590	7			
Avg Mid Value	\$9,973	17.6	1.9	-	15	63	5	1
<b>Janus Henderson Enterprise N</b>	<b>\$9,656</b>	<b>28.4</b>	<b>4.4</b>	<b>87</b>	<b>20</b>	<b>8</b>	<b>11</b>	<b>2</b>
Russell Mid Cap Growth	\$11,880	26.8	5.6	426	9			
Avg Mid Growth	\$11,292	28.0	4.2	-	25	66	3	1

## Equity Portfolio Characteristics

As of June 30, 2017

Fund/Benchmark	Geo Avg Market Cap \$MM	P/E Ratio	P/B Ratio	Total Number of Holdings	% Assets in Top 10 Holdings	Turnover Ratio	% Non- US Equity	% Emerging Mkts Equity
<b>Prudential QMA Small Cap Value Z</b>	<b>\$1,524</b>	<b>13.4</b>	<b>1.3</b>	<b>322</b>	<b>10</b>	<b>72</b>	<b>1</b>	<b>0</b>
Russell 2000 Value	\$1,463	18.1	1.4	1,399	4			
Avg Small Value	\$2,951	17.7	1.7	-	23	78	3	0
<b>Vanguard Small Cap Index Instl</b>	<b>\$3,540</b>	<b>19.2</b>	<b>2.3</b>	<b>1,444</b>	<b>3</b>	<b>14</b>	<b>1</b>	<b>0</b>
CRSP US Small Cap	\$3,540	19.2	2.3	1,418	3			
Avg Small Blend	\$3,087	21.2	2.4	-	23	64	2	0
<b>Vanguard Small Cap Growth Index Instl</b>	<b>\$3,837</b>	<b>27.1</b>	<b>3.3</b>	<b>686</b>	<b>5</b>	<b>27</b>	<b>0</b>	<b>0</b>
CRSP US Small Cap Growth	\$3,839	27.1	3.3	654	6			
Avg Small Growth	\$3,531	29.2	3.9	-	25	73	3	0
<b>American Funds New Perspective R6</b>	<b>\$63,010</b>	<b>25.1</b>	<b>3.3</b>	<b>319</b>	<b>20</b>	<b>22</b>	<b>44</b>	<b>7</b>
MSCI ACWI	\$51,719	19.1	2.2	2,501	9			
Avg World Large Stock	\$67,980	21.0	2.5	-	27	56	45	6
<b>Oakmark International I</b>	<b>\$31,297</b>	<b>17.7</b>	<b>1.6</b>	<b>74</b>	<b>33</b>	<b>44</b>	<b>90</b>	<b>8</b>
MSCI World Ex USA	\$33,944	17.9	1.7	1,021	10			
<b>Vanguard Total Intl Stock Index Adm</b>	<b>\$21,357</b>	<b>16.7</b>	<b>1.6</b>	<b>6,118</b>	<b>8</b>	<b>3</b>	<b>95</b>	<b>15</b>
FTSE Global All Cap ex US	\$21,307	16.6	1.6	5,839	8			
Avg Foreign Large Blend	\$39,888	17.7	1.8	-	15	61	91	7
<b>Oppenheimer Developing Markets Y</b>	<b>\$31,927</b>	<b>20.8</b>	<b>2.9</b>	<b>99</b>	<b>0</b>	<b>18</b>	<b>89</b>	<b>70</b>
MSCI EM	\$27,944	14.6	1.7	838	24			
Avg Diversified Emerging Mkts	\$25,890	15.5	2.0	-	26	68	94	70

## Equity Portfolio Sector Allocation

As of June 30, 2017

(yellow shading indicates largest sector allocation)

Fund/Benchmark	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Healthcare	Financials	Real Estate	Information Technology	Telecom Services	Utilities
<b>Vanguard Equity-Income Adm</b>	<b>10.1</b>	<b>3.2</b>	<b>11.8</b>	<b>5.2</b>	<b>12.9</b>	<b>13.8</b>	<b>17.6</b>	<b>0.0</b>	<b>14.4</b>	<b>3.6</b>	<b>7.5</b>
Russell 1000 Value	10.5	2.7	8.7	6.9	9.2	14.2	25.5	5.0	8.0	3.1	6.1
Avg Large Value	10.0	2.7	10.9	9.4	9.2	12.8	22.7	2.1	12.3	3.0	4.8
<b>JPMorgan US Equity R5</b>	<b>6.5</b>	<b>2.2</b>	<b>12.3</b>	<b>14.6</b>	<b>6.8</b>	<b>13.4</b>	<b>15.4</b>	<b>0.6</b>	<b>24.5</b>	<b>1.2</b>	<b>2.6</b>
S&P 500	6.0	2.8	10.3	12.3	9.0	14.5	14.5	2.9	22.3	2.1	3.2
Avg Large Blend	5.9	3.3	10.9	12.9	8.8	14.3	13.8	2.6	23.4	1.6	2.6
<b>Alger Capital Appreciation Z</b>	<b>1.8</b>	<b>1.2</b>	<b>6.5</b>	<b>20.8</b>	<b>3.8</b>	<b>14.4</b>	<b>5.2</b>	<b>1.7</b>	<b>43.2</b>	<b>1.2</b>	<b>0.0</b>
Russell 1000 Growth	0.8	3.9	12.3	18.6	7.6	13.7	3.4	2.6	36.2	1.0	0.0
Avg Large Growth	2.3	2.3	8.7	19.8	5.5	15.7	5.4	1.8	37.9	0.3	0.3
<b>MFS Mid Cap Value R6</b>	<b>7.3</b>	<b>6.5</b>	<b>15.0</b>	<b>11.3</b>	<b>5.9</b>	<b>7.0</b>	<b>22.3</b>	<b>6.3</b>	<b>10.2</b>	<b>0.0</b>	<b>8.3</b>
Russell Mid Cap Value	7.9	5.1	11.3	12.1	4.3	7.1	19.7	14.7	6.3	0.9	10.6
Avg Mid Value	8.2	5.3	14.0	14.4	4.8	7.6	20.0	6.8	12.3	0.6	6.0
<b>Janus Henderson Enterprise N</b>	<b>0.6</b>	<b>2.1</b>	<b>18.3</b>	<b>11.3</b>	<b>0.0</b>	<b>20.3</b>	<b>8.0</b>	<b>4.7</b>	<b>34.7</b>	<b>0.0</b>	<b>0.0</b>
Russell Mid Cap Growth	2.3	6.5	16.6	18.1	4.5	15.1	6.8	3.3	26.4	0.2	0.0
Avg Mid Growth	2.4	5.1	12.2	16.2	2.9	15.2	12.6	3.6	28.7	0.3	0.8

## Equity Portfolio Sector Allocation

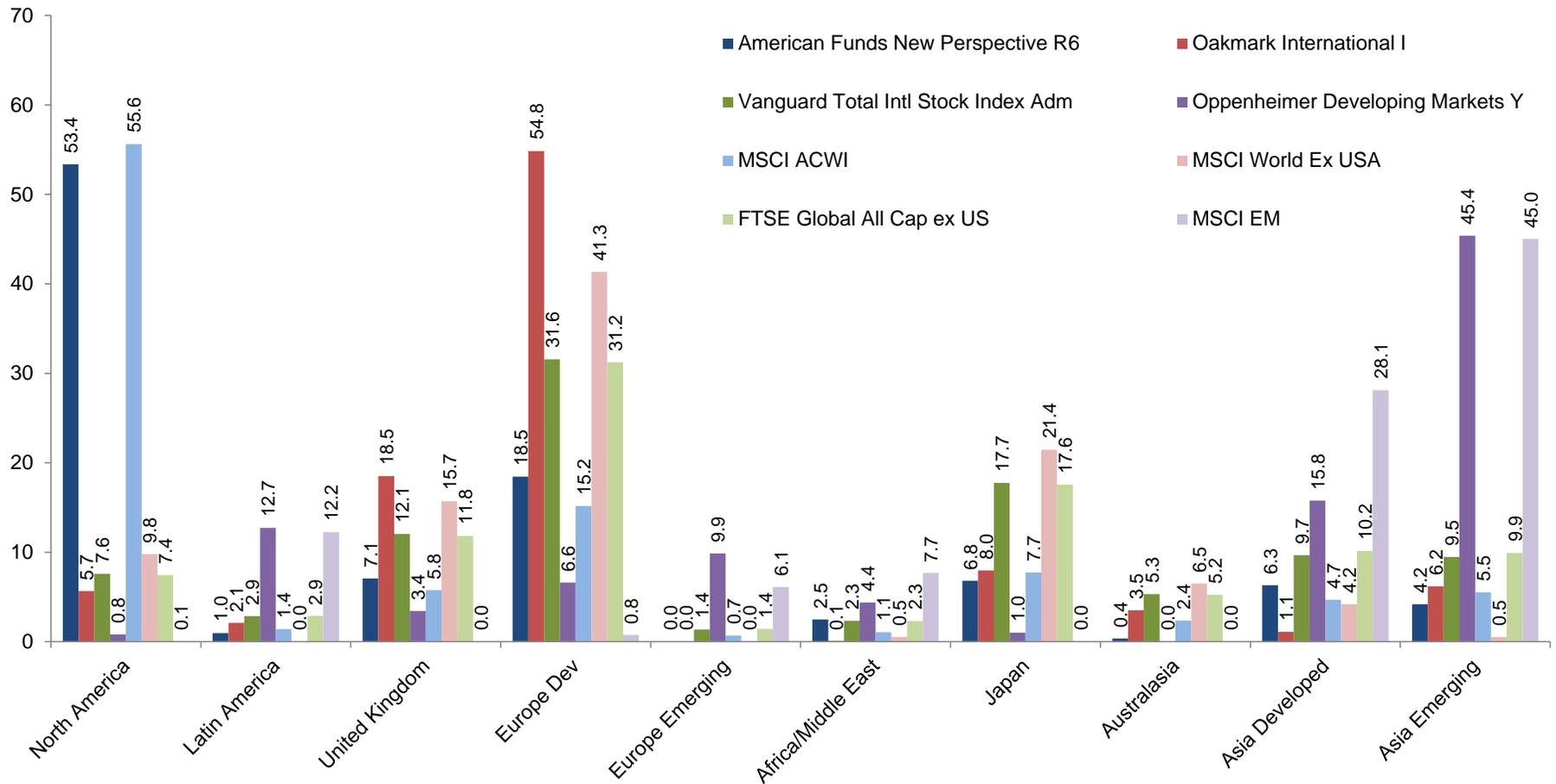
As of June 30, 2017

(yellow shading indicates largest sector allocation)

Fund/Benchmark	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Healthcare	Financials	Real Estate	Information Technology	Telecom Services	Utilities
<b>Prudential QMA Small Cap Value Z</b>	<b>4.2</b>	<b>4.8</b>	<b>14.2</b>	<b>16.1</b>	<b>4.3</b>	<b>2.2</b>	<b>39.0</b>	<b>8.8</b>	<b>4.4</b>	<b>0.8</b>	<b>1.2</b>
Russell 2000 Value	6.1	4.1	11.7	10.6	2.8	5.6	30.6	11.6	9.5	0.7	6.7
Avg Small Value	5.0	7.6	17.9	10.3	3.5	5.1	26.6	6.6	13.3	0.4	3.6
<b>Vanguard Small Cap Index Instl</b>	<b>4.3</b>	<b>5.8</b>	<b>15.2</b>	<b>12.2</b>	<b>3.3</b>	<b>11.8</b>	<b>14.7</b>	<b>11.0</b>	<b>17.2</b>	<b>0.4</b>	<b>4.1</b>
CRSP US Small Cap	4.3	5.8	15.2	12.2	3.3	11.8	14.8	11.0	17.2	0.4	4.1
Avg Small Blend	3.4	6.2	16.7	14.8	3.1	10.5	19.1	7.1	15.1	0.7	3.1
<b>Vanguard Small Cap Growth Index Instl</b>	<b>4.5</b>	<b>3.1</b>	<b>13.3</b>	<b>13.9</b>	<b>2.7</b>	<b>17.5</b>	<b>6.7</b>	<b>12.8</b>	<b>24.7</b>	<b>0.4</b>	<b>0.4</b>
CRSP US Small Cap Growth	4.5	3.0	13.3	13.9	2.7	17.5	6.7	12.8	24.7	0.4	0.4
Avg Small Growth	2.5	4.1	16.2	14.6	2.2	17.7	11.0	3.4	26.9	0.4	1.0
<b>American Funds New Perspective R6</b>	<b>5.1</b>	<b>4.4</b>	<b>9.5</b>	<b>20.6</b>	<b>11.7</b>	<b>10.2</b>	<b>10.4</b>	<b>0.3</b>	<b>25.7</b>	<b>1.6</b>	<b>0.7</b>
MSCI ACWI	6.1	5.2	10.9	12.1	9.3	11.4	18.6	3.1	16.9	3.2	3.1
Avg World Large Stock	4.3	4.0	10.2	14.3	10.7	12.6	15.5	1.6	21.8	2.8	2.2
<b>Oakmark International I</b>	<b>0.0</b>	<b>8.1</b>	<b>20.2</b>	<b>28.2</b>	<b>6.1</b>	<b>1.2</b>	<b>31.3</b>	<b>0.0</b>	<b>4.9</b>	<b>0.0</b>	<b>0.0</b>
MSCI World Ex USA	6.2	7.7	14.0	11.5	10.9	9.9	23.2	3.4	5.8	4.1	3.3
<b>Vanguard Total Intl Stock Index Adm</b>	<b>6.1</b>	<b>8.3</b>	<b>13.6</b>	<b>11.5</b>	<b>9.7</b>	<b>8.3</b>	<b>21.9</b>	<b>3.8</b>	<b>9.6</b>	<b>4.1</b>	<b>3.0</b>
FTSE Global All Cap ex US	6.1	8.2	13.6	11.5	9.6	8.1	22.4	3.9	9.5	4.0	3.0
Avg Foreign Large Blend	5.0	7.3	15.0	11.9	11.3	10.0	20.8	2.7	9.2	4.3	2.4
<b>Oppenheimer Developing Markets Y</b>	<b>2.9</b>	<b>4.7</b>	<b>6.1</b>	<b>19.4</b>	<b>10.4</b>	<b>5.4</b>	<b>22.3</b>	<b>2.5</b>	<b>26.3</b>	<b>0.0</b>	<b>0.0</b>
MSCI EM	6.5	7.1	5.8	10.6	6.8	2.4	23.6	2.6	26.7	5.4	2.6
Avg Diversified Emerging Mkts	5.7	5.8	5.2	11.7	9.7	3.1	23.9	2.6	25.3	4.6	2.2

## International Fund Regional Allocations

As of June 30, 2017



## International Fund Country Allocations

As of June 30, 2017

	Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Hungary	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Mexico	Netherlands
American Funds New Perspective R6		0.4			0.4	1.7		2.7		1.3	0.5	4.4	1.8		1.6		1.2		0.8			6.8		0.6	4.1
MSCI ACWI		2.3		0.4	0.8	3.1	0.1	3.6		0.6	0.3	3.3	3.1		1.0		1.0	0.3	0.1	0.2	0.6	7.7	0.3	0.4	1.2
Oakmark International I		3.5						2.0				16.5	11.1				1.1	2.0			4.7	8.0		2.1	4.4
MSCI World Ex USA		6.4	0.2	1.0		8.5		0.4		1.7	0.9	9.1	8.7		2.7				0.3	0.5	1.8	21.4			3.2

	New Zealand	Norway	Pakistan	Philippines	Poland	Portugal	Russia	Singapore	Slovakia	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	United Kingdom	United States	Non-US	Venezuela	Vietnam	Lithuania	Latvia	Estonia
American Funds New Perspective R6		0.3						0.1		2.3	2.0	0.6	0.7	3.9	2.6			7.1	51.6	48.4					
MSCI ACWI		0.2		0.1	0.1		0.4	0.5		0.7	1.8	1.1	1.0	3.0	1.4	0.2	0.1	5.8	52.5	47.5					
Oakmark International I				1.1						0.9		6.5	11.8	0.3				18.5	5.7	94.3					
MSCI World Ex USA	0.2	0.6				0.1		1.4				3.1	2.7	7.8				15.7	1.2	98.8					

## International Fund Country Allocations

As of June 30, 2017

	Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Czech Republic	Denmark	Finland	France	Germany	Greece	Hong Kong	Hungary	India	Indonesia	Ireland	Israel	Italy	Japan	Malaysia	Mexico	Netherlands
Vanguard Total Intl Stock Index Adm		5.1	0.3	0.9	1.6	6.7	0.3	4.6		1.3	0.8	6.4	6.5		1.4		2.5	0.5	0.3	0.4	1.6	17.7	0.7	0.9	2.3
FTSE Global All Cap ex US		5.0	0.3	0.9	1.6	6.6	0.3	5.0		1.3	0.8	6.4	6.5		2.0		2.4	0.6	0.3	0.4	1.6	17.6	0.7	0.9	2.3
Oppenheimer Developing Markets Y					5.4			22.0				4.0			4.2		14.9	2.4			1.4	1.0	1.8	5.6	1.3
MSCI EM					6.6		1.1	28.0	0.2					0.4		0.3	8.8	2.5					2.4	3.7	0.3

	New Zealand	Norway	Pakistan	Philippines	Poland	Portugal	Russia	Singapore	Slovakia	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	United Kingdom	United States	Non-US	Venezuela	Vietnam	Lithuania	Latvia	Estonia
Vanguard Total Intl Stock Index Adm	0.2	0.5		0.4	0.3	0.1	0.7	1.1		1.5	3.7	2.3	2.2	5.8	3.3	0.7	0.2	12.1	0.8	99.2					
FTSE Global All Cap ex US	0.2	0.5		0.4	0.3	0.1	0.7	1.1		1.5	3.7	2.3	2.2	5.7	3.3	0.7	0.3	11.8	0.8	99.2					
Oppenheimer Developing Markets Y				3.9	0.9		7.8	1.8		1.1	3.4				6.4	0.3	1.2	3.4	0.8	99.2		0.2			
MSCI EM				1.2	1.3		3.1			6.2	15.6				12.5	2.2	1.2			99.9					

## General Fund Information

As of June 30, 2017

Fund	Manager	Average Tenure (years)	Longest Tenure (years)	Total Assets (\$MM)	Morningstar Rating Overall	Morningstar Analyst Rating	Prospectus Net Expense Ratio
Prudential Total Return Bond Q	Robert Tipp (4)*	8	15	\$36,411	★★★★★	Silver	0.43
Neuberger Berman High Income Bond Instl	Thomas P. O'Reilly (4)*	6	12	\$3,428	★★★	Silver	0.71
T. Rowe Price Retirement Balanced	Jerome A. Clark (2)*	8	15	\$2,813	★★★	Silver	0.57
T. Rowe Price Retirement 2005	Jerome A. Clark (2)*	8	13	\$1,810	★★★★	Silver	0.60
T. Rowe Price Retirement 2010	Jerome A. Clark (2)*	8	15	\$5,569	★★★★	Silver	0.59
T. Rowe Price Retirement 2015	Jerome A. Clark (2)*	8	13	\$9,535	★★★★★	Silver	0.62
T. Rowe Price Retirement 2020	Jerome A. Clark (2)*	8	15	\$26,263	★★★★★	Silver	0.66
T. Rowe Price Retirement 2025	Jerome A. Clark (2)*	8	13	\$21,609	★★★★★	Silver	0.69
T. Rowe Price Retirement 2030	Jerome A. Clark (2)*	8	15	\$27,501	★★★★★	Silver	0.72
T. Rowe Price Retirement 2035	Jerome A. Clark (2)*	8	13	\$16,488	★★★★★	Silver	0.74
T. Rowe Price Retirement 2040	Jerome A. Clark (2)*	8	15	\$19,281	★★★★★	Silver	0.76
T. Rowe Price Retirement 2045	Jerome A. Clark (2)*	7	12	\$10,168	★★★★★	Silver	0.76
T. Rowe Price Retirement 2050	Jerome A. Clark (2)*	6	11	\$8,052	★★★★★	Silver	0.76
T. Rowe Price Retirement 2055	Jerome A. Clark (2)*	6	11	\$3,423	★★★★★	Silver	0.76
Vanguard Balanced Index Instl	Joshua C. Barrickman (4)*	2	4	\$34,484	★★★★★	Gold	0.06

\* Longest tenured manager listed with total number of fund managers listed in parentheses

## General Fund Information

As of June 30, 2017

Fund	Manager	Average Tenure (years)	Longest Tenure (years)	Total Assets (\$MM)	Morningstar Rating Overall	Morningstar Analyst Rating	Prospectus Net Expense Ratio
Vanguard Equity-Income Adm	James P. Stetler (3)*	8	14	\$27,718	★★★★★	Silver	0.17
JPMorgan US Equity R5	Susan Bao (4)*	8	17	\$14,222	★★★★★	Silver	0.56
Alger Capital Appreciation Z	Patrick Kelly (2)*	7	13	\$2,652	★★★★	Bronze	0.89
MFS Mid Cap Value R6	Brooks A. Taylor (2)*	9	9	\$6,367	★★★★		0.75
Janus Henderson Enterprise N	Brian Demain (2)*	5	10	\$13,146	★★★★★	Bronze	0.68
Prudential QMA Small Cap Value Z	Mitchell B. Stern (3)*	3	3	\$1,526	★★★★★		0.73
Vanguard Small Cap Index Instl	Gerard C. O'Reilly (2)*	1	1	\$78,105	★★★★	Gold	0.05
Vanguard Small Cap Growth Index Instl	Gerard C. O'Reilly (2)*	7	13	\$19,461	★★★	Silver	0.06
American Funds New Perspective R6	Robert W. Lovelace (7)*	11	17	\$63,377	★★★★★	Gold	0.45
Oakmark International I	David G. Herro (2)*	13	25	\$29,648	★★★★★	Gold	1.00
Vanguard Total Intl Stock Index Adm	Michael Perre (2)*	5	9	\$287,887	★★★	Gold	0.11
Oppenheimer Developing Markets Y	Justin M. Leverenz	10	10	\$34,073	★★★★	Silver	1.07

\* Longest tenured manager listed with total number of fund managers listed in parentheses

## Fee and Revenue Sharing

Fund	Prospectus Net Expense Ratio	Revenue Sharing	Expense Ratio Net of Revenue Sharing	Morningstar Category Avg Expense Ratio
Prudential Total Return Bond Q	0.43	0.00	0.43	0.78
Neuberger Berman High Income Bond Instl	0.71	0.10	0.61	1.06
T. Rowe Price Retirement Balanced	0.57	0.15	0.42	1.20
T. Rowe Price Retirement 2005	0.60	0.15	0.45	0.72
T. Rowe Price Retirement 2010	0.59	0.15	0.44	0.72
T. Rowe Price Retirement 2015	0.62	0.15	0.47	0.77
T. Rowe Price Retirement 2020	0.66	0.15	0.51	0.84
T. Rowe Price Retirement 2025	0.69	0.15	0.54	0.82
T. Rowe Price Retirement 2030	0.72	0.15	0.57	0.87
T. Rowe Price Retirement 2035	0.74	0.15	0.59	0.84
T. Rowe Price Retirement 2040	0.76	0.15	0.61	0.89
T. Rowe Price Retirement 2045	0.76	0.15	0.61	0.85
T. Rowe Price Retirement 2050	0.76	0.15	0.61	0.89
T. Rowe Price Retirement 2055	0.76	0.15	0.61	0.86
Vanguard Balanced Index Instl	0.06	0.00	0.06	1.17
Vanguard Equity-Income Adm	0.17	0.00	0.17	1.06
JPMorgan US Equity R5	0.56	0.10	0.46	1.00
Alger Capital Appreciation Z	0.89	0.00	0.89	1.14
MFS Mid Cap Value R6	0.75	0.00	0.75	1.16
Janus Henderson Enterprise N	0.68	0.50	0.18	1.24
Prudential QMA Small Cap Value Z	0.73	0.05	0.68	1.31
Vanguard Small Cap Index Instl	0.05	0.00	0.05	1.21
Vanguard Small Cap Growth Index Instl	0.06	0.00	0.06	1.30
American Funds New Perspective R6	0.45	0.00	0.45	1.24
Oakmark International I	1.00	0.25	0.75	1.10
Vanguard Total Intl Stock Index Adm	0.11	0.00	0.11	1.10
Oppenheimer Developing Markets Y	1.07	0.25	0.82	1.46

## Index Fund Fee comparison

Fund	Prospectus Net Expense Ratio	Annual Report Net Expense Ratio	Morningstar Category	Primary Prospectus Benchmark
<b>Vanguard Total Bond Market Index I</b>	0.04	0.04	US Fund Intermediate-Term Bond	BBgBarc US Agg Float Adj TR USD
<b>Fidelity US Bond Index I</b>	0.04	0.06	US Fund Intermediate-Term Bond	BBgBarc US Agg Bond TR USD
<b>Schwab US Aggregate Bond Index</b>	0.04	-	US Fund Intermediate-Term Bond	BBgBarc US Agg Bond TR USD
<b>Vanguard Total Stock Market Index I</b>	0.04	0.03	US Fund Large Blend	CRSP US Total Market TR USD
<b>Fidelity Total Market Index I</b>	0.04	0.04	US Fund Large Blend	DJ US Total Stock Market TR USD
<b>Schwab Total Stock Market Index</b>	0.03	0.09	US Fund Large Blend	DJ US Total Stock Market TR USD
<b>Vanguard Institutional Index I</b>	0.04	0.04	US Fund Large Blend	S&P 500 TR USD
<b>Fidelity 500 Index I</b>	0.04	0.04	US Fund Large Blend	S&P 500 TR USD
<b>Schwab S&amp;P 500 Index</b>	0.03	0.09	US Fund Large Blend	S&P 500 TR USD
<b>Vanguard Extended Market Index I</b>	0.06	0.06	US Fund Mid-Cap Blend	S&P Completion TR USD
<b>Fidelity Extended Market Index Prem</b>	0.07	0.07	US Fund Mid-Cap Blend	DJ US Completion Total Stock Mkt TR USD
<b>Vanguard Mid Cap Index I</b>	0.05	0.05	US Fund Mid-Cap Blend	CRSP US Mid Cap TR USD
<b>Fidelity Mid Cap Index I</b>	0.06	0.06	US Fund Mid-Cap Blend	Russell Mid Cap TR USD
<b>Vanguard Small Cap Index I</b>	0.05	0.05	US Fund Small Blend	CRSP US Small Cap TR USD
<b>Fidelity Small Cap Index I</b>	0.06	0.06	US Fund Small Blend	Russell 2000 TR USD
<b>Schwab Small Cap Index</b>	0.05	0.17	US Fund Small Blend	Russell 2000 TR USD
<b>Vanguard Total Intl Stock Index I</b>	0.09	0.09	US Fund Foreign Large Blend	FTSE Global All Cap ex US (USA) NR USD
<b>Fidelity Total Intl Index I</b>	0.09	0.09	US Fund Foreign Large Blend	MSCI ACWI Ex USA IMI NR USD
<b>Vanguard Developed Markets Index I</b>	0.06	0.06	US Fund Foreign Large Blend	FTSE Dvlp ex US All Cap(US RIC)NR USD
<b>Fidelity International Index I</b>	0.06	0.06	US Fund Foreign Large Blend	MSCI EAFE NR USD
<b>Schwab International Index</b>	0.06	0.19	US Fund Foreign Large Blend	MSCI EAFE NR USD
<b>Vanguard Emerging Mkts Stock Index I</b>	0.11	0.11	US Fund Diversified Emerging Mkts	FTSE EMs AC China A Incl (US RIC) NR USD
<b>Fidelity Emerging Markets Index I</b>	0.11	0.12	US Fund Diversified Emerging Mkts	MSCI EM NR USD

## Glossary of Investment Terms

**Alpha** is a measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. A positive Alpha figure indicates the portfolio has performed better than its beta would predict. In contrast, a negative Alpha indicates the portfolio has underperformed, given the expectations established by beta.

**Average Credit Quality** gives a snapshot of the portfolio's overall credit quality. It is an average of each bond's credit rating, adjusted for its relative weighting in the portfolio. For corporate bond and municipal bond funds, Morningstar also shows the percentage of fixed-income securities that fall within each credit-quality rating, as assigned by Standard & Poor's or Moody's. Because it's rare to find individual bonds in a portfolio with a rating below B, the average credit quality of bond funds in Morningstar's database ranges from AAA (highest) to B (lowest). AAA bonds carry the highest credit rating, while bonds issued by speculative companies usually carry the lowest credit ratings. For taxable bonds, anything at or below BB is considered a high-yield or junk bond. For the purpose of Morningstar's calculations, U.S. government bonds are considered AAA and other nonrated bonds generally are considered B.

**Average Duration** is a measure of a fund's interest-rate sensitivity. The longer a fund's duration, the more sensitive the fund is to shifts in interest rates. Duration is determined by a formula that includes coupon rates and bond maturities. Small coupons tend to increase duration, while shorter maturities and higher coupons shorten duration.

**Average Maturity** is a weighted average of all the maturities of the bonds in a portfolio, computed by weighting each bond's effective maturity by the market value of the security. Average effective maturity takes into consideration all mortgage prepayments, puts, and adjustable coupons. Longer-maturity funds are generally considered more interest-rate sensitive than their shorter counterparts.

**Batting Average** is a measure of a manager's ability to consistently beat the market. It is calculated by dividing the number of months in which the manager beat or matched an index by the total number of months in the period. For example, a manager who meets or outperforms the market every month in a given period would have a batting average of 100. A manager who beats the market half of the time would have a batting average of 50.

**Beta** is a measure of systematic risk with respect to a benchmark. Systematic risk is the tendency of the value of the fund and the value of benchmark to move together. Beta measures the sensitivity of the fund's excess return (total return minus the risk-free return) with respect to the benchmark's excess return that results from their systematic co-movement. It is the ratio of what the excess return of the fund would be to the excess return of the benchmark if there were no fund-specific sources of return. If beta is greater than one, movements in value of the fund that are associated with movements in the value of the benchmark tend to be amplified. If beta is one, they tend to be the same, and if beta is less than one, they tend to be dampened. If such movements tend to be in opposite directions, beta is negative. Beta is measured as the slope of the regression of the excess return on the fund as the dependent variable and the excess return on the benchmark as the independent variable. The beta of the market is 1.00 by definition. Morningstar calculates beta by comparing a portfolio's excess return over T-bills to the benchmark's excess return over T-bills, so a beta of 1.10 shows that the portfolio has performed 10% better than its benchmark in up markets and 10% worse in down markets, assuming all other factors remain constant. Conversely, a beta of 0.85 indicates that the portfolio's excess return is expected to perform 15% worse than the benchmark's excess return during up markets and 15% better during down markets.

**Downside Capture Ratio** measures a manager's performance in down markets relative to the market (benchmark) itself. For example, if the ratio is 90%, the manager has captured 90% of the down-market and outperformed the market on the downside.

**Geometric Average Market Cap** provides a measure of the size of the companies in which the fund invests. It is the weighted mean of the market capitalizations of the stocks in the fund's portfolio and is calculated by raising the market capitalization of each stock to a power equal to that stock's stake in the portfolio. The resulting numbers are multiplied together to produce the geometric mean of the market caps of the stocks in the portfolio, which is reported as average market capitalization.

**Information Ratio** is a risk-adjusted performance measure. The information ratio is a special version of the Sharpe Ratio in that the benchmark is typically the fund's performance benchmark instead of the risk free rate. A higher information ratio indicates higher active returns per unit of active risk while a lower information ratio may indicate low levels of active returns, high levels of active risk or both.

**Morningstar Analyst Rating** is based on the Morningstar analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over the long term. The 5 ratings include Gold, Silver, Bronze, Neutral, and Negative. If a fund receives a positive rating of Gold, Silver, or Bronze, it means Morningstar analysts think highly of the fund and expect it to outperform over a full market cycle of at least five years.

**Morningstar Star Rating** funds are ranked within their Morningstar categories according to their risk-adjusted return (after accounting for all sales charges and expenses), and stars are assigned such that the distribution reflects a classic bell-shaped curve with the largest section in the center. The 10% of funds in each category with the highest risk-adjusted return receive five stars, the next 22.5% receive four stars, the middle 35% receive three stars, the next 22.5% receive two stars, and the bottom 10% receive one star.

**P/B Ratio** is the weighted average of the price/book ratios of all the stocks in a portfolio. The P/B ratio of a company is calculated by dividing the market price of its stock by the company's per-share book value. Stocks with negative book values are excluded from this calculation. In theory, a high P/B ratio indicates that the price of the stock exceeds the actual worth of the company's assets, while a low P/B ratio indicates that the stock is a bargain. In practice, book value is an accounting number and for a variety of reasons may not reflect the actual value assigned to a company or security by market participants.

**P/E Ratio** is the weighted average of the price/earnings ratios of all the stocks in a portfolio. A fund's price/earnings ratio can act as a gauge of the fund's investment strategy in the current market climate, and whether it has a value or growth orientation. Companies in those industries enjoying a surge of popularity tend to have high P/E ratios, reflecting a growth orientation. More staid industries tend to have low P/E ratios, reflecting a value orientation. Morningstar generates this figure in-house on a monthly basis, based on the most-recent portfolio holdings submitted by the fund and stock statistics gleaned from our internal U.S. equities databases. Negative P/Es are not used, and any P/E greater than 60 is capped at 60 in the calculation of the average.

**Peer Group Ranking** is the fund's total-return percentile rank relative to all funds that have the same Morningstar Category. Morningstar categorizes funds based on their portfolio holdings (portfolio statistics and compositions over the past 3 years). The highest (or most favorable) percentile rank is 1 and the lowest (or least favorable) percentile rank is 100. The top-performing fund in a category will always receive a rank of 1.

**Sharpe Ratio** is a risk-adjusted measure developed by Nobel Laureate William Sharpe. It is calculated by using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the fund's historical risk-adjusted performance. The Sharpe ratio is calculated for the past 36-month period by dividing a fund's annualized excess returns by the standard deviation of a fund's annualized excess returns. Since this ratio uses standard deviation as its risk measure, it is most appropriately applied when analyzing a fund that is an investor's sole holding. The Sharpe Ratio can be used to compare two funds directly on how much risk a fund had to bear to earn excess return over the risk-free rate.

**Standard Deviation** is a statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that are most likely for a given fund. When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

**Total Return** is determined by taking the change in net asset value, reinvesting all income and capital-gains distributions, and dividing by the starting net asset value (NAV). Reinvestments are made using the actual reinvestment NAV, and daily payoffs are reinvested monthly. Total return is expressed as a percentage.

**Tracking Error** is a measure of the volatility of excess returns relative to a benchmark.

**Turnover Ratio** is a measure of the fund's trading activity which is computed by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year) and dividing by average monthly net assets. A turnover ratio of 100% or more does not necessarily suggest that all securities in the portfolio have been traded. In practical terms, the resulting percentage loosely represents the percentage of the portfolio's holdings that have changed over the past year. A low turnover figure (20% to 30%) would indicate a buy-and-hold strategy while a high turnover (more than 100%) would indicate an investment strategy involving considerable buying and selling of securities.

**Upside Capture Ratio** measures a manager's performance in up markets relative to the market (benchmark) itself. For example, if the ratio is 110%, the manager has captured 110% of the up-market and outperformed the market on the upside.

## Sector Definitions

- **Energy Sector:** The Energy Sector comprises companies whose businesses are dominated by either of the following activities: The construction or provision of oil rigs, drilling equipment and other energy related service and equipment, including seismic data collection. Companies engaged in the exploration, production, marketing, refining, and/or transportation of oil and gas products, coal and other consumer fuels.
- **Materials Sector:** The Materials Sector encompasses a wide range of commodity-related manufacturing industries. Included in this sector are companies that manufacture chemicals, construction materials, glass, paper, forest products and related packaging products, and metals, minerals and mining companies, including producers of steel.
- **Industrials Sector:** The Industrials Sector includes companies whose businesses are dominated by one of the following activities: The manufacture and distribution of capital goods, including aerospace and defense, construction, engineering and building products, electrical equipment and industrial machinery. The provision of commercial services and supplies, including printing, employment, environmental and office services. The provision of transportation services, including airlines, couriers, marine, road and rail and transportation infrastructure.
- **Consumer Discretionary Sector:** The Consumer Discretionary Sector encompasses those industries that tend to be the most sensitive to economic cycles. Its manufacturing segment includes automotive, household durable goods, textiles and apparel and leisure equipment. The services segment includes hotels, restaurants and other leisure facilities, media production and services, and consumer retailing and services.
- **Consumer Staples Sector:** The Consumer Staples Sector comprises companies whose businesses are less sensitive to economic cycles. It includes manufacturers and distributors of food, beverages and tobacco and producers of non-durable household goods and personal products. It also includes food and drug retailing companies as well as hypermarkets and consumer super centers.
- **Health Care Sector:** The Health Care Sector encompasses two main industry groups. The first includes companies who manufacture health care equipment and supplies or provide health care related services, including distributors of health care products, providers of basic health-care services, and owners and operators of health care facilities and organizations. The second regroups companies primarily involved in the research, development, production and marketing of pharmaceuticals and biotechnology products.
- **Financials Sector:** The Financials Sector contains companies involved in banking, thrifts & mortgage finance, specialized finance, consumer finance, asset management and custody banks, investment banking and brokerage and insurance. It also includes Financial Exchanges & Data and Mortgage REITs.
- **Real Estate Sector:** The Real Estate Sector contains companies engaged in real estate development and operation. It also includes companies offering real estate related services and Equity Real Estate Investment Trusts (REITs).
- **Information Technology Sector:** The Information Technology Sector covers the following areas: firstly, Technology Software and Services, including companies that primarily develop software in various fields such as the Internet, applications, systems, database management and/or home entertainment, and companies that provide information technology consulting and services, as well as data processing and outsourced services; secondly, Technology Hardware and Equipment, including manufacturers and distributors of communications equipment, computers and peripherals, electronic equipment and related instruments; and thirdly, Semiconductors and Semiconductor Equipment Manufacturers.

- **Telecommunications Services Sector:** The Telecommunications Services Sector contains companies that provide communications services primarily through a fixed-line, cellular, wireless, high bandwidth and/or fiber optic cable network.
- **Utilities Sector:** The Utilities Sector encompasses those companies considered electric, gas or water utilities, or companies that operate as independent producers and/or distributors of power.

## Regional Definitions

- **North America:** United States and Canada
- **Emerging Central & Latin America:** Mexico and Central and South America
- **United Kingdom:** England, Northern Ireland, Scotland, Wales
- **Developed Europe:** Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain
- **Emerging Europe:** Russia and other Eastern European countries
- **Africa/Middle East:** Africa and Western Asian countries
- **Japan:** Japan
- **Australasia:** Australia and New Zealand
- **Developed Asia:** Hong Kong, Singapore, South Korea
- **Emerging Asia:** China, India, Indonesia, Malaysia, Philippines, Thailand

# CONDUENT



**Client has the authority to select investments and investment managers. Past performance is not indicative of future results. We do not guarantee the performance of any investment, fund, or manager.**

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