



# Quarterly Investment Performance Analysis

Montana Board of Investments

Period Ended: March 31, 2018



Montana Board of Investments  
Comparative Performance  
Retirement Plans

As of March 31, 2018

	QTD	FYTD	CYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Public Employees' Retirement - Net</b>	<b>0.11</b>	<b>7.13</b>	<b>10.38</b>	<b>7.15</b>	<b>8.66</b>	<b>8.46</b>	<b>6.52</b>	<b>6.14</b>	<b>14.80</b>	<b>7.32</b>	<b>1.86</b>	<b>8.07</b>	<b>17.38</b>	<b>6.95</b>	<b>04/01/1997</b>
Public Employees' Benchmark	-1.26	6.42	9.13	7.15	9.12	8.82	6.76	N/A	15.35	9.09	1.40	9.08	17.94	N/A	
Difference	1.37	0.71	1.25	0.00	-0.46	-0.36	-0.24	N/A	-0.55	-1.77	0.46	-1.01	-0.56	N/A	
<b>Public Employees' Retirement - Gross</b>	<b>0.27</b>	<b>7.55</b>	<b>10.95</b>	<b>7.66</b>	<b>9.18</b>	<b>8.99</b>	<b>7.08</b>	<b>6.47</b>	<b>15.34</b>	<b>7.78</b>	<b>2.31</b>	<b>8.61</b>	<b>17.96</b>	<b>N/A</b>	<b>01/01/1991</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.57	
Rank	22	54	57	20	4	1	6	68	65	57	6	7	8	N/A	
<b>Teachers' Retirement - Net</b>	<b>0.10</b>	<b>7.10</b>	<b>10.35</b>	<b>7.14</b>	<b>8.66</b>	<b>8.46</b>	<b>6.53</b>	<b>6.14</b>	<b>14.76</b>	<b>7.33</b>	<b>1.86</b>	<b>8.09</b>	<b>17.38</b>	<b>6.96</b>	<b>04/01/1997</b>
Teachers' Benchmark	-1.26	6.41	9.11	7.14	9.11	8.82	6.76	N/A	15.32	9.08	1.40	9.11	17.94	N/A	
Difference	1.36	0.69	1.24	0.00	-0.45	-0.36	-0.23	N/A	-0.56	-1.75	0.46	-1.02	-0.56	N/A	
<b>Teachers' Retirement - Gross</b>	<b>0.26</b>	<b>7.53</b>	<b>10.92</b>	<b>7.65</b>	<b>9.17</b>	<b>8.99</b>	<b>7.08</b>	<b>6.48</b>	<b>15.31</b>	<b>7.80</b>	<b>2.32</b>	<b>8.63</b>	<b>17.96</b>	<b>N/A</b>	<b>01/01/1991</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.57	
Rank	22	54	58	20	4	1	6	67	66	57	5	7	8	N/A	
<b>Police Retirement - Net</b>	<b>0.10</b>	<b>7.12</b>	<b>10.37</b>	<b>7.15</b>	<b>8.66</b>	<b>8.45</b>	<b>6.50</b>	<b>6.06</b>	<b>14.79</b>	<b>7.32</b>	<b>1.86</b>	<b>8.07</b>	<b>17.41</b>	<b>6.86</b>	<b>04/01/1997</b>
Police Benchmark	-1.26	6.40	9.12	7.14	9.11	8.81	6.73	N/A	15.33	9.08	1.41	9.10	17.92	N/A	
Difference	1.36	0.72	1.25	0.01	-0.45	-0.36	-0.23	N/A	-0.54	-1.76	0.45	-1.03	-0.51	N/A	
<b>Police Retirement - Gross</b>	<b>0.26</b>	<b>7.54</b>	<b>10.94</b>	<b>7.65</b>	<b>9.18</b>	<b>8.98</b>	<b>7.05</b>	<b>6.39</b>	<b>15.33</b>	<b>7.78</b>	<b>2.31</b>	<b>8.61</b>	<b>18.00</b>	<b>N/A</b>	<b>12/01/1993</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.10	
Rank	22	54	57	20	4	1	7	76	65	57	6	7	7	N/A	

Net performance shown is net of all manager fees and expenses (Net-All). All Public Plans > \$3B Total Fund Median is reported gross of fees. Benchmark returns reflect unmanaged indices which are not impacted by management fees. Fiscal year ends on 06/30.



Montana Board of Investments  
Comparative Performance  
Retirement Plans

As of March 31, 2018

	QTD	FYTD	CYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Firefighters' Retirement - Net</b>	<b>0.10</b>	<b>7.12</b>	<b>10.37</b>	<b>7.15</b>	<b>8.66</b>	<b>8.45</b>	<b>6.52</b>	<b>6.07</b>	<b>14.79</b>	<b>7.32</b>	<b>1.87</b>	<b>8.07</b>	<b>17.41</b>	<b>6.87</b>	<b>04/01/1997</b>
Firefighters' Benchmark	-1.26	6.41	9.12	7.15	9.11	8.81	6.75	N/A	15.33	9.09	1.41	9.10	17.92	N/A	
Difference	1.36	0.71	1.25	0.00	-0.45	-0.36	-0.23	N/A	-0.54	-1.77	0.46	-1.03	-0.51	N/A	
<b>Firefighters' Retirement - Gross</b>	<b>0.26</b>	<b>7.55</b>	<b>10.94</b>	<b>7.65</b>	<b>9.18</b>	<b>8.99</b>	<b>7.07</b>	<b>6.40</b>	<b>15.34</b>	<b>7.78</b>	<b>2.32</b>	<b>8.61</b>	<b>17.99</b>	<b>N/A</b>	<b>12/01/1993</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.10	
Rank	22	54	57	20	4	1	7	75	65	57	5	7	7	N/A	
<b>Sheriffs' Retirement - Net</b>	<b>0.10</b>	<b>7.12</b>	<b>10.37</b>	<b>7.16</b>	<b>8.65</b>	<b>8.44</b>	<b>6.52</b>	<b>6.10</b>	<b>14.80</b>	<b>7.33</b>	<b>1.86</b>	<b>8.05</b>	<b>17.35</b>	<b>6.91</b>	<b>04/01/1997</b>
Sheriffs' Benchmark	-1.25	6.42	9.13	7.15	9.11	8.82	6.77	N/A	15.34	9.10	1.40	9.07	17.91	N/A	
Difference	1.35	0.70	1.24	0.01	-0.46	-0.38	-0.25	N/A	-0.54	-1.77	0.46	-1.02	-0.56	N/A	
<b>Sheriffs' Retirement - Gross</b>	<b>0.26</b>	<b>7.55</b>	<b>10.94</b>	<b>7.66</b>	<b>9.17</b>	<b>8.98</b>	<b>7.07</b>	<b>6.43</b>	<b>15.34</b>	<b>7.79</b>	<b>2.32</b>	<b>8.59</b>	<b>17.93</b>	<b>N/A</b>	<b>12/01/1993</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.10	
Rank	22	54	57	20	4	1	7	71	65	57	6	7	8	N/A	
<b>Highway Patrol Retirement - Net</b>	<b>0.12</b>	<b>7.14</b>	<b>10.38</b>	<b>7.15</b>	<b>8.66</b>	<b>8.46</b>	<b>6.52</b>	<b>6.08</b>	<b>14.79</b>	<b>7.30</b>	<b>1.87</b>	<b>8.08</b>	<b>17.38</b>	<b>6.89</b>	<b>04/01/1997</b>
Highway Patrol Benchmark	-1.25	6.42	9.13	7.15	9.12	8.83	6.77	N/A	15.34	9.09	1.41	9.10	17.94	N/A	
Difference	1.37	0.72	1.25	0.00	-0.46	-0.37	-0.25	N/A	-0.55	-1.79	0.46	-1.02	-0.56	N/A	
<b>Highway Patrol Retirement - Gross</b>	<b>0.28</b>	<b>7.57</b>	<b>10.96</b>	<b>7.65</b>	<b>9.18</b>	<b>8.99</b>	<b>7.07</b>	<b>6.42</b>	<b>15.33</b>	<b>7.77</b>	<b>2.32</b>	<b>8.62</b>	<b>17.96</b>	<b>N/A</b>	<b>12/01/1993</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.10	
Rank	22	54	57	20	4	1	6	75	65	57	5	7	8	N/A	

Net performance shown is net of all manager fees and expenses (Net-All). All Public Plans > \$3B Total Fund Median is reported gross of fees. Benchmark returns reflect unmanaged indices which are not impacted by management fees. Fiscal year ends on 06/30.

Montana Board of Investments  
Comparative Performance  
Retirement Plans

As of March 31, 2018

	QTD	FYTD	CYTD/ 1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Game Wardens' Retirement - Net</b>	<b>0.11</b>	<b>7.13</b>	<b>10.38</b>	<b>7.17</b>	<b>8.65</b>	<b>8.44</b>	<b>6.51</b>	<b>6.08</b>	<b>14.81</b>	<b>7.31</b>	<b>1.88</b>	<b>8.03</b>	<b>17.34</b>	<b>6.90</b>	<b>04/01/1997</b>
Game Wardens' Benchmark	-1.25	6.43	9.13	7.16	9.12	8.82	6.77	N/A	15.36	9.11	1.41	9.06	17.90	N/A	
Difference	1.36	0.70	1.25	0.01	-0.47	-0.38	-0.26	N/A	-0.55	-1.80	0.47	-1.03	-0.56	N/A	
<b>Game Wardens' Retirement - Gross</b>	<b>0.27</b>	<b>7.56</b>	<b>10.95</b>	<b>7.67</b>	<b>9.17</b>	<b>8.97</b>	<b>7.06</b>	<b>6.41</b>	<b>15.35</b>	<b>7.78</b>	<b>2.33</b>	<b>8.57</b>	<b>17.92</b>	<b>N/A</b>	<b>12/01/1993</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.10	
Rank	22	54	57	19	4	1	7	75	64	57	5	7	8	N/A	
<b>Judges' Retirement - Net</b>	<b>0.10</b>	<b>7.13</b>	<b>10.38</b>	<b>7.16</b>	<b>8.66</b>	<b>8.45</b>	<b>6.53</b>	<b>6.09</b>	<b>14.82</b>	<b>7.32</b>	<b>1.86</b>	<b>8.06</b>	<b>17.36</b>	<b>6.90</b>	<b>04/01/1997</b>
Judges' Benchmark	-1.26	6.43	9.14	7.16	9.12	8.82	6.78	N/A	15.37	9.10	1.40	9.08	17.92	N/A	
Difference	1.36	0.70	1.24	0.00	-0.46	-0.37	-0.25	N/A	-0.55	-1.78	0.46	-1.02	-0.56	N/A	
<b>Judges' Retirement - Gross</b>	<b>0.26</b>	<b>7.56</b>	<b>10.96</b>	<b>7.66</b>	<b>9.18</b>	<b>8.98</b>	<b>7.08</b>	<b>6.43</b>	<b>15.36</b>	<b>7.79</b>	<b>2.32</b>	<b>8.60</b>	<b>17.94</b>	<b>N/A</b>	<b>12/01/1993</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.10	
Rank	22	54	57	19	4	1	6	72	64	57	6	7	8	N/A	
<b>Volunteer Firefighters' Retirement - Net</b>	<b>0.10</b>	<b>7.13</b>	<b>10.39</b>	<b>7.12</b>	<b>8.65</b>	<b>8.43</b>	<b>6.51</b>	<b>6.43</b>	<b>14.79</b>	<b>7.16</b>	<b>1.91</b>	<b>8.09</b>	<b>17.42</b>	<b>7.01</b>	<b>04/01/1997</b>
Volunteer Firefighters' Benchmark	-1.26	6.43	9.13	7.14	9.12	8.82	6.76	N/A	15.33	9.08	1.42	9.11	17.97	N/A	
Difference	1.36	0.70	1.26	-0.02	-0.47	-0.39	-0.25	N/A	-0.54	-1.92	0.49	-1.02	-0.55	N/A	
<b>Volunteer Firefighters' Retirement - Gross</b>	<b>0.26</b>	<b>7.56</b>	<b>10.96</b>	<b>7.62</b>	<b>9.16</b>	<b>8.97</b>	<b>7.06</b>	<b>6.76</b>	<b>15.34</b>	<b>7.63</b>	<b>2.36</b>	<b>8.63</b>	<b>18.00</b>	<b>N/A</b>	<b>12/01/1993</b>
All Public Plans > \$3B Total Fund Median	0.00	7.66	11.13	7.04	7.91	7.65	6.38	6.65	16.02	7.96	0.51	6.76	14.47	8.10	
Rank	22	54	57	21	4	1	7	33	65	65	5	7	7	N/A	

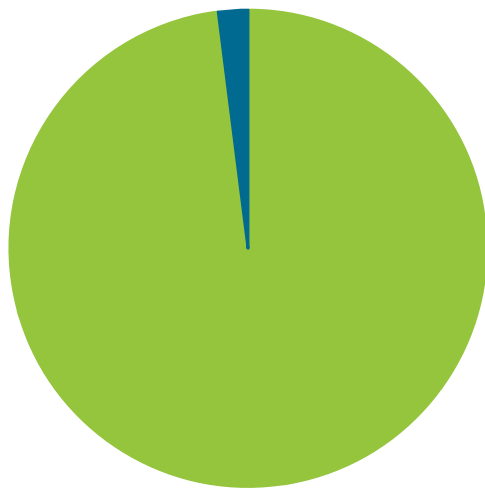
Net performance shown is net of all manager fees and expenses (Net-All). All Public Plans > \$3B Total Fund Median is reported gross of fees. Benchmark returns reflect unmanaged indices which are not impacted by management fees. Fiscal year ends on 06/30.

Montana Board of Investments  
 Asset Allocation by Segment  
 Retirement Plans

As of March 31, 2018

	Consolidated Asset Pension Pool (CAPP)		Short Term Investment Pool (STIP)		Total Fund	
	(\$)	%	(\$)	%	(\$)	%
Public Employees' Retirement	5,608,613,061	49.99	113,189,288	49.16	5,721,802,349	49.98
Teachers' Retirement	4,003,361,069	35.68	84,563,127	36.73	4,087,924,196	35.70
Police Retirement	391,338,306	3.49	7,758,522	3.37	399,096,828	3.49
Firefighters' Retirement	405,373,378	3.61	8,104,487	3.52	413,477,865	3.61
Sheriffs' Retirement	345,400,164	3.08	7,244,432	3.15	352,644,597	3.08
Highway Patrol Retirement	143,690,821	1.28	2,908,615	1.26	146,599,436	1.28
Game Wardens' Retirement	185,844,650	1.66	3,749,329	1.63	189,593,979	1.66
Judges' Retirement	99,595,015	0.89	1,992,429	0.87	101,587,444	0.89
Volunteer Firefighters' Retirement	35,756,407	0.32	726,394	0.32	36,482,801	0.32
<b>Retirement Plans Total Fund Composite</b>	<b>11,218,972,872</b>	<b>97.99</b>	<b>230,236,623</b>	<b>2.01</b>	<b>11,449,209,494</b>	<b>100.00</b>

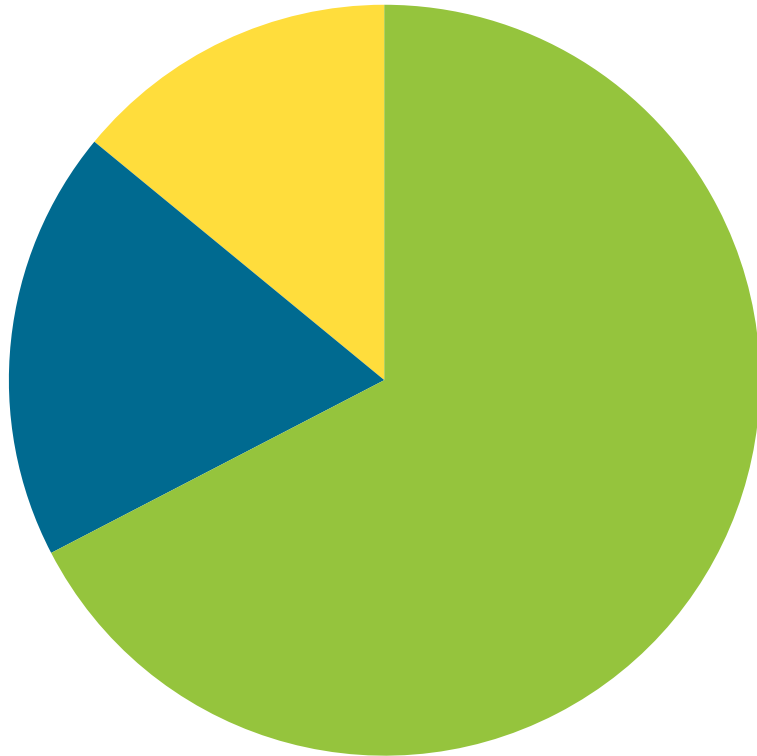
December 31, 2017 : \$11,449,209,494



Segments	Market Value (\$)	Allocation (%)
Consolidated Asset Pension Pool (CAPP)	11,218,972,872	97.99
Short Term Investment Pool (STIP)	230,236,623	2.01

Allocations shown may not sum up to 100% exactly due to rounding. Retirement Plan market values may differ from State Street due to uninvested amounts not included in segment totals.

March 31, 2018 : \$16,647,771,251



	Market Value (\$)	Allocation (%)
Consolidated Asset Pension Pool (CAPP)	11,218,972,866	67.39
Short Term Investment Pool	3,091,719,799	18.57
Trust Funds Investment Pool	2,337,078,586	14.04

Allocations shown may not sum up to 100% exactly due to rounding.

Montana Board of Investments  
Comparative Performance  
Investment Pools

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Consolidated Asset Pension Pool (CAPP)</b>	<b>0.10</b>	<b>7.27</b>	<b>10.62</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.62</b>	<b>04/01/2017</b>
CAPP Custom Benchmark	-1.29	6.55	9.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.34	
Difference	1.39	0.72	1.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.28	
<b>Trust Funds Investment Pool</b>	<b>-1.14</b>	<b>0.24</b>	<b>1.85</b>	<b>2.21</b>	<b>2.98</b>	<b>4.16</b>	<b>4.88</b>	<b>4.01</b>	<b>4.02</b>	<b>1.83</b>	<b>6.96</b>	<b>-0.25</b>	<b>6.17</b>	<b>04/01/1997</b>
Bloomberg US Agg Bond Index	-1.46	-0.24	1.20	1.20	1.82	2.92	3.63	3.54	2.65	0.55	5.97	-2.02	5.16	
Difference	0.32	0.48	0.65	1.01	1.16	1.24	1.25	0.47	1.37	1.28	0.99	1.77	1.01	
<b>Short Term Investment Pool</b>	<b>0.37</b>	<b>1.00</b>	<b>1.26</b>	<b>0.76</b>	<b>0.51</b>	<b>0.44</b>	<b>0.60</b>	<b>1.11</b>	<b>0.61</b>	<b>0.22</b>	<b>0.10</b>	<b>0.19</b>	<b>2.48</b>	<b>04/01/1997</b>
ICE 1 Mo LIBOR Index (USD)	0.42	1.09	1.36	0.75	0.52	0.44	0.55	1.15	0.52	0.21	0.16	0.19	N/A	
Difference	-0.05	-0.09	-0.10	0.01	-0.01	0.00	0.05	-0.04	0.09	0.01	-0.06	0.00	N/A	
iMoney.net Money Fund (Gross) Median	0.41	1.08	1.37	0.81	0.56	0.48	0.64	1.21	0.61	0.25	0.17	0.22	2.45	
Difference	-0.04	-0.08	-0.11	-0.05	-0.05	-0.04	-0.04	-0.10	0.00	-0.03	-0.07	-0.03	0.03	

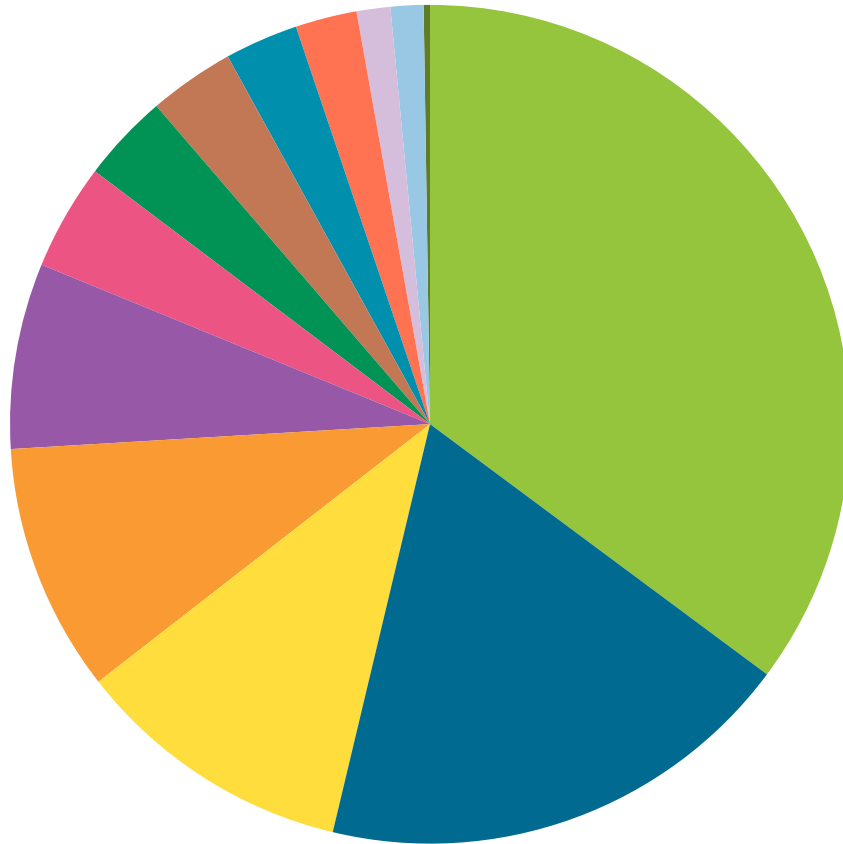
Performance shown is net of all manager fees and expenses (Net-All). Benchmark returns reflect unmanaged indices which are not impacted by management fees. Fiscal year ends on 06/30. Please see Addendum for custom index specification. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
 Asset Allocation  
 Consolidated Asset Pension Pool (CAPP)

As of March 31, 2018

March 31, 2018 : \$11,218,972,878



	Market Value (\$)	Allocation (%)
Domestic Equity	3,945,662,594	35.17
International Equity	2,080,998,929	18.55
Private Equity	1,206,815,336	10.76
US Treasury & Agency	1,075,494,334	9.59
Real Estate	801,646,009	7.15
Mortgage - Backed	459,321,548	4.09
TIPS	382,673,681	3.41
Investment Grade Credit	370,205,883	3.30
High Yield	315,741,458	2.81
Natural Resources	265,988,435	2.37
Broad Fixed Income	146,336,649	1.30
Cash Pension	142,009,544	1.27
Diversifying Strategies	26,078,478	0.23

Allocations shown may not sum up to 100% exactly due to rounding.





Montana Board of Investments  
Comparative Performance  
Consolidated Asset Pension Pool (CAPP)

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Domestic Equity</b>	<b>-0.41</b>	<b>10.50</b>	<b>13.64</b>	<b>9.92</b>	<b>12.87</b>	<b>12.21</b>	<b>9.44</b>	<b>20.80</b>	<b>11.46</b>	<b>0.86</b>	<b>12.28</b>	<b>34.19</b>	<b>9.16</b>	<b>05/01/2003</b>
Domestic Equity Custom Index	-0.61	10.54	13.78	10.65	13.22	12.59	9.68	21.05	13.03	1.01	13.08	32.80	9.87	
Difference	0.20	-0.04	-0.14	-0.73	-0.35	-0.38	-0.24	-0.25	-1.57	-0.15	-0.80	1.39	-0.71	
<b>International Equity</b>	<b>-0.55</b>	<b>11.17</b>	<b>18.22</b>	<b>7.26</b>	<b>6.69</b>	<b>4.74</b>	<b>2.41</b>	<b>28.67</b>	<b>3.87</b>	<b>-3.57</b>	<b>-4.00</b>	<b>16.39</b>	<b>5.10</b>	<b>04/01/1997</b>
International Equity Custom Index	-1.06	10.63	17.10	6.75	6.21	4.49	2.97	27.81	4.41	-4.60	-4.03	15.62	5.43	
Difference	0.51	0.54	1.12	0.51	0.48	0.25	-0.56	0.86	-0.54	1.03	0.03	0.77	-0.33	
<b>Broad Fixed Income</b>	<b>-0.97</b>	<b>0.13</b>	<b>1.22</b>	<b>1.34</b>	<b>2.10</b>	<b>3.51</b>	<b>4.49</b>	<b>2.41</b>	<b>3.98</b>	<b>0.48</b>	<b>6.19</b>	<b>-0.95</b>	<b>5.88</b>	<b>04/01/1997</b>
Bloomberg US Agg Bond Index	-1.46	-0.24	1.20	1.20	1.82	2.92	3.63	3.54	2.65	0.55	5.97	-2.02	5.16	
Difference	0.49	0.37	0.02	0.14	0.28	0.59	0.86	-1.13	1.33	-0.07	0.22	1.07	0.72	
<b>Investment Grade Credit</b>	<b>-1.55</b>	<b>-0.27</b>	<b>1.29</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.29</b>	<b>04/01/2017</b>
Bloomberg US Corp Int Bond Index	-1.50	-0.30	1.19	1.85	2.25	3.56	4.58	3.92	4.04	1.08	4.35	0.08	1.19	
Difference	-0.05	0.03	0.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.10	
<b>US Treasury &amp; Agency</b>	<b>-0.74</b>	<b>-0.75</b>	<b>0.04</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.04</b>	<b>04/01/2017</b>
Bloomberg US Trsy Int Trm Index	-0.75	-0.82	-0.16	0.45	0.73	1.71	2.21	1.14	1.06	1.18	2.57	-1.34	-0.16	
Difference	0.01	0.07	0.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.20	
<b>High Yield</b>	<b>-1.04</b>	<b>0.67</b>	<b>2.59</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.59</b>	<b>04/01/2017</b>
Bloomberg US HY 2% Issuer Cap Index	-0.86	1.58	3.78	5.18	5.00	6.32	8.32	7.50	17.13	-4.43	2.46	7.44	3.78	
Difference	-0.18	-0.91	-1.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.19	
<b>Mortgage - Backed</b>	<b>-0.88</b>	<b>0.13</b>	<b>1.25</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.25</b>	<b>04/01/2017</b>
Bloomberg US MBS Index	-1.19	-0.10	0.77	1.12	1.80	2.44	3.46	2.47	1.67	1.51	6.08	-1.41	0.77	
Difference	0.31	0.23	0.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.48	
<b>TIPS</b>	<b>-0.38</b>	<b>0.85</b>	<b>0.44</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.44</b>	<b>04/01/2017</b>
Bloomberg US Trsy Infl Notes 1-10 Yr Index	-0.40	0.83	0.43	1.24	-0.06	1.61	2.22	1.90	4.01	-0.52	0.91	-5.58	0.43	
Difference	0.02	0.02	0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.01	
<b>Natural Resources</b>	<b>-0.39</b>	<b>0.67</b>	<b>5.67</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.67</b>	<b>04/01/2017</b>
MSCI ACW Cmtty Producers Index (USD) (Net)	-2.84	16.70	12.22	4.31	-0.48	-3.23	-1.80	13.70	32.44	-25.83	-14.69	3.31	12.22	
Difference	2.45	-16.03	-6.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-6.55	
<b>Real Estate</b>	<b>2.03</b>	<b>5.16</b>	<b>7.17</b>	<b>10.33</b>	<b>11.01</b>	<b>10.85</b>	<b>3.25</b>	<b>9.17</b>	<b>8.82</b>	<b>14.27</b>	<b>12.13</b>	<b>10.16</b>	<b>3.57</b>	<b>06/01/2006</b>
Real Estate Custom Index	-8.09	-5.93	-4.38	5.51	8.13	9.32	2.94	5.99	9.08	13.86	11.36	11.97	4.94	
Difference	10.12	11.09	11.55	4.82	2.88	1.53	0.31	3.18	-0.26	0.41	0.77	-1.81	-1.37	

Performance shown is net of all manager fees and expenses (Net-All). Benchmark returns reflect unmanaged indices which are not impacted by management fees. Fiscal year ends on 06/30. Please see Addendum for custom index specification. Since inception performance may vary from State Street reported performance due to calculation methodology differences.

Montana Board of Investments  
 Comparative Performance  
 Consolidated Asset Pension Pool (CAPP)

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Diversifying Strategies</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.20	03/01/2018
Bloomberg US Trsy Int Trm Index	-0.75	-0.82	-0.16	0.45	0.73	1.71	2.21	1.14	1.06	1.18	2.57	-1.34	0.53	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.67	
<b>Cash Pension</b>	0.48	0.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.17	05/01/2017
ICE 1 Mo LIBOR Index (USD)	0.42	1.09	1.36	0.75	0.52	0.44	0.55	1.15	0.52	0.21	0.16	0.19	1.28	
Difference	0.06	-0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.11	

Performance shown is net of all manager fees and expenses (Net-All). Benchmark returns reflect unmanaged indices which are not impacted by management fees. Fiscal year ends on 06/30. Please see Addendum for custom index specification. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
Comparative Performance

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Private Equity Pool*</b>	<b>3.41</b>	<b>11.58</b>	<b>16.32</b>	<b>10.85</b>	<b>12.12</b>	<b>12.21</b>	<b>8.63</b>	<b>15.20</b>	<b>7.37</b>	<b>7.20</b>	<b>15.47</b>	<b>14.52</b>	<b>12.30</b>	<b>05/01/2002</b>
Private Equity Custom Index	-0.48	10.13	12.56	11.60	17.69	16.35	11.77	19.15	20.11	3.68	23.31	25.24	11.55	
<i>Difference</i>	3.89	1.45	3.76	-0.75	-5.57	-4.14	-3.14	-3.95	-12.74	3.52	-7.84	-10.72	0.75	

Performance shown is net of all manager fees and expenses (Net-All). For additional information on the Private Equity Custom Index, please see the Addendum.

\*Performance is based on prior quarter's fair market value adjusted for cash flows during the most recent quarterly period.

Benchmark returns reflect unmanaged indices that are not impacted by management fees. Fiscal year ends on 06/30.

Since Inception performance may vary from State Street reported performance due to calculation methodology differences.

Montana Board of Investments  
Comparative Performance  
Investment Pools

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Domestic Equity</b>	<b>-0.25</b>	<b>10.94</b>	<b>14.23</b>	<b>10.31</b>	<b>13.24</b>	<b>12.58</b>	<b>9.82</b>	<b>21.31</b>	<b>11.76</b>	<b>1.14</b>	<b>12.59</b>	<b>34.61</b>	<b>9.45</b>	<b>05/01/2003</b>
All Public Plans-US Equity Segment Median	-0.47	10.53	13.80	9.95	12.75	11.95	9.61	20.32	12.90	0.21	11.42	33.76	10.11	
Rank	40	31	41	36	28	15	35	31	74	25	21	42	80	
Population	106	102	100	94	76	66	44	93	97	86	48	46	26	
<b>International Equity</b>	<b>-0.47</b>	<b>11.40</b>	<b>18.54</b>	<b>7.55</b>	<b>6.99</b>	<b>5.03</b>	<b>2.76</b>	<b>29.01</b>	<b>4.15</b>	<b>-3.35</b>	<b>-3.77</b>	<b>16.80</b>	<b>5.49</b>	<b>04/01/1997</b>
All Public Plans-Intl. Equity Segment Median	-0.32	11.05	18.53	7.61	7.19	6.04	4.04	28.59	3.95	-2.60	-2.99	18.71	N/A	
Rank	56	42	50	52	62	89	90	44	46	64	77	77	N/A	
Population	99	95	93	87	71	55	40	90	93	80	46	43	N/A	
<b>Broad Fixed Income</b>	<b>-0.85</b>	<b>0.44</b>	<b>1.69</b>	<b>1.61</b>	<b>2.31</b>	<b>3.69</b>	<b>4.64</b>	<b>2.91</b>	<b>4.09</b>	<b>0.59</b>	<b>6.30</b>	<b>-0.83</b>	<b>6.09</b>	<b>04/01/1997</b>
All Public Plans-US Fixed Income Segment Median	-1.01	0.58	1.84	1.99	2.36	3.51	4.35	4.54	4.53	0.26	6.01	-1.39	N/A	
Rank	38	56	62	65	54	43	40	83	60	35	39	38	N/A	
Population	99	96	93	91	78	66	44	86	93	80	49	49	N/A	
<b>Trust Funds Investment Pool</b>	<b>-1.12</b>	<b>0.31</b>	<b>1.93</b>	<b>2.29</b>	<b>3.07</b>	<b>4.26</b>	<b>4.96</b>	<b>4.10</b>	<b>4.12</b>	<b>1.89</b>	<b>7.08</b>	<b>-0.14</b>	<b>6.17</b>	<b>10/01/1995</b>
All Public Plans-US Fixed Income Segment Median	-1.01	0.58	1.84	1.99	2.36	3.51	4.35	4.54	4.53	0.26	6.01	-1.39	N/A	
Rank	59	64	49	39	29	29	27	63	59	5	26	27	N/A	
Population	99	96	93	91	78	66	44	86	93	80	49	49	N/A	
<b>Real Estate</b>	<b>2.64</b>	<b>6.38</b>	<b>8.99</b>	<b>11.90</b>	<b>12.52</b>	<b>12.45</b>	<b>4.66</b>	<b>10.91</b>	<b>10.26</b>	<b>15.68</b>	<b>13.51</b>	<b>11.73</b>	<b>4.99</b>	<b>06/01/2006</b>
All Public Plans-Real Estate Segment Median	1.82	6.06	8.57	10.80	11.88	12.46	5.65	8.77	9.91	13.44	14.67	13.69	N/A	
Rank	16	46	47	17	29	52	67	24	45	12	68	67	N/A	
Population	52	45	42	31	24	18	12	39	31	28	16	15	N/A	

Performance shown is gross of fees. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.

Montana Board of Investments  
Comparative Performance  
Equity Composites

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Domestic Large Cap Equity - Net</b>	<b>-0.69</b>	<b>10.59</b>	<b>13.71</b>	<b>10.57</b>	<b>13.37</b>	<b>12.54</b>	<b>9.41</b>	<b>21.66</b>	<b>11.30</b>	<b>1.76</b>	<b>13.82</b>	<b>33.14</b>	<b>7.50</b>	<b>07/01/2007</b>
S&P 500 Index (Cap Wtd)	-0.76	10.58	13.99	10.78	13.31	12.71	9.49	21.83	11.96	1.38	13.69	32.39	7.67	
Difference	0.07	0.01	-0.28	-0.21	0.06	-0.17	-0.08	-0.17	-0.66	0.38	0.13	0.75	-0.17	
<b>Domestic Large Cap Equity - Gross</b>	<b>-0.66</b>	<b>10.71</b>	<b>13.87</b>	<b>10.73</b>	<b>13.53</b>	<b>12.73</b>	<b>9.65</b>	<b>21.82</b>	<b>11.45</b>	<b>1.91</b>	<b>13.99</b>	<b>33.34</b>	<b>7.73</b>	<b>07/01/2007</b>
IM U.S. Large Cap Equity (SA+CF) Median	-0.68	10.61	13.99	10.19	13.20	12.64	9.74	21.69	10.99	0.95	12.91	33.51	8.01	
Rank	50	50	52	39	40	47	54	49	46	40	32	53	60	
<b>Domestic Large Cap Active - Net</b>	<b>-0.87</b>	<b>10.44</b>	<b>13.63</b>	<b>10.01</b>	<b>13.45</b>	<b>12.51</b>	<b>9.37</b>	<b>21.85</b>	<b>9.63</b>	<b>2.40</b>	<b>14.01</b>	<b>34.90</b>	<b>7.31</b>	<b>07/01/2007</b>
S&P 500 Index (Cap Wtd)	-0.76	10.58	13.99	10.78	13.31	12.71	9.49	21.83	11.96	1.38	13.69	32.39	7.67	
Difference	-0.11	-0.14	-0.36	-0.77	0.14	-0.20	-0.12	0.02	-2.33	1.02	0.32	2.51	-0.36	
<b>Domestic Large Cap Active - Gross</b>	<b>-0.74</b>	<b>10.86</b>	<b>14.19</b>	<b>10.52</b>	<b>13.99</b>	<b>13.04</b>	<b>9.87</b>	<b>22.40</b>	<b>10.12</b>	<b>2.88</b>	<b>14.56</b>	<b>35.55</b>	<b>7.80</b>	<b>07/01/2007</b>
IM U.S. Large Cap Equity (SA+CF) Median	-0.68	10.61	13.99	10.19	13.20	12.64	9.74	21.69	10.99	0.95	12.91	33.51	8.01	
Rank	53	48	47	42	32	37	46	43	57	32	25	33	57	
<b>Domestic Mid Cap Equity - Net</b>	<b>0.93</b>	<b>10.82</b>	<b>14.05</b>	<b>7.74</b>	<b>10.89</b>	<b>11.01</b>	<b>9.84</b>	<b>19.29</b>	<b>12.29</b>	<b>-3.31</b>	<b>6.45</b>	<b>38.18</b>	<b>8.82</b>	<b>01/01/2005</b>
Russell Mid Cap Index	-0.46	9.25	12.20	8.01	12.09	11.51	10.21	18.52	13.80	-2.44	13.22	34.76	9.34	
Difference	1.39	1.57	1.85	-0.27	-1.20	-0.50	-0.37	0.77	-1.51	-0.87	-6.77	3.42	-0.52	
<b>Domestic Mid Cap Equity - Gross</b>	<b>1.07</b>	<b>11.30</b>	<b>14.73</b>	<b>8.39</b>	<b>11.55</b>	<b>11.64</b>	<b>10.47</b>	<b>20.01</b>	<b>12.96</b>	<b>-2.74</b>	<b>7.07</b>	<b>38.95</b>	<b>9.34</b>	<b>01/01/2005</b>
IM U.S. Mid Cap Equity (SA+CF) Median	-0.26	10.31	12.73	8.81	12.54	11.84	11.01	19.95	12.54	-1.19	9.78	36.37	9.97	
Rank	39	39	42	57	75	55	67	50	49	68	74	34	79	
<b>Domestic Small Cap Equity - Net</b>	<b>-0.18</b>	<b>10.25</b>	<b>12.29</b>	<b>8.88</b>	<b>12.35</b>	<b>11.08</b>	<b>10.40</b>	<b>15.65</b>	<b>19.31</b>	<b>-1.61</b>	<b>5.44</b>	<b>40.65</b>	<b>12.29</b>	<b>03/01/2003</b>
Russell 2000 Index	-0.08	9.11	11.79	8.39	11.47	10.39	9.84	14.65	21.31	-4.41	4.89	38.82	11.53	
Difference	-0.10	1.14	0.50	0.49	0.88	0.69	0.56	1.00	-2.00	2.80	0.55	1.83	0.76	
<b>Domestic Small Cap Equity - Gross</b>	<b>-0.04</b>	<b>10.67</b>	<b>12.85</b>	<b>9.51</b>	<b>13.05</b>	<b>11.80</b>	<b>11.11</b>	<b>16.27</b>	<b>19.97</b>	<b>-0.93</b>	<b>6.16</b>	<b>41.54</b>	<b>12.85</b>	<b>03/01/2003</b>
IM U.S. Small Cap Equity (SA+CF) Median	-0.17	9.50	12.09	9.15	12.50	11.50	11.06	15.18	20.87	-2.33	5.36	41.31	12.79	
Rank	48	40	44	45	40	42	49	44	57	36	43	49	48	

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all composites. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.

Montana Board of Investments  
Comparative Performance  
Equity Composites

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>International Large Cap Passive - Net</b>	<b>-1.00</b>	<b>10.51</b>	<b>17.00</b>	<b>6.89</b>	<b>6.32</b>	<b>4.57</b>	<b>N/A</b>	<b>27.79</b>	<b>4.87</b>	<b>-4.71</b>	<b>-3.70</b>	<b>14.95</b>	<b>7.74</b>	<b>06/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	-1.18	10.16	16.53	6.18	5.89	4.26	2.70	27.19	4.50	-5.66	-3.87	15.29	7.47	
Difference	0.18	0.35	0.47	0.71	0.43	0.31	N/A	0.60	0.37	0.95	0.17	-0.34	0.27	
<b>International Large Cap Passive - Gross</b>	<b>-0.99</b>	<b>10.56</b>	<b>17.08</b>	<b>6.97</b>	<b>6.40</b>	<b>4.66</b>	<b>N/A</b>	<b>27.88</b>	<b>4.96</b>	<b>-4.63</b>	<b>-3.62</b>	<b>15.05</b>	<b>7.82</b>	<b>06/01/2009</b>
<b>International Equity Active - Net</b>	<b>-0.14</b>	<b>11.76</b>	<b>20.34</b>	<b>8.81</b>	<b>7.98</b>	<b>5.72</b>	<b>3.12</b>	<b>30.82</b>	<b>2.63</b>	<b>0.41</b>	<b>-4.39</b>	<b>19.23</b>	<b>3.91</b>	<b>04/01/1997</b>
MSCI ACW Ex US Index (USD) (Net)	-1.18	10.16	16.53	6.18	5.89	4.26	2.70	27.19	4.50	-5.66	-3.87	15.29	N/A	
Difference	1.04	1.60	3.81	2.63	2.09	1.46	0.42	3.63	-1.87	6.07	-0.52	3.94	N/A	
<b>International Equity Active - Gross</b>	<b>0.00</b>	<b>12.20</b>	<b>20.97</b>	<b>9.37</b>	<b>8.51</b>	<b>6.23</b>	<b>3.63</b>	<b>31.50</b>	<b>3.17</b>	<b>0.90</b>	<b>-3.94</b>	<b>19.75</b>	<b>4.43</b>	<b>04/01/1997</b>
IM International Large Cap Core Equity (SA+CF) Median	-0.92	9.60	16.74	6.60	7.77	6.59	4.09	26.34	1.19	0.29	-3.78	23.11	7.02	
Rank	22	16	9	8	23	59	71	10	26	43	51	73	100	
<b>International Value - Net</b>	<b>-0.01</b>	<b>13.04</b>	<b>21.33</b>	<b>8.07</b>	<b>7.63</b>	<b>5.08</b>	<b>2.04</b>	<b>30.72</b>	<b>5.59</b>	<b>-5.94</b>	<b>-1.49</b>	<b>17.15</b>	<b>2.62</b>	<b>11/01/2006</b>
MSCI ACW Ex US Val Index (USD) (Net)	-1.50	8.82	13.26	5.04	4.88	3.30	2.10	22.66	8.92	-10.06	-5.10	15.04	2.59	
Difference	1.49	4.22	8.07	3.03	2.75	1.78	-0.06	8.06	-3.33	4.12	3.61	2.11	0.03	
<b>International Value - Gross</b>	<b>0.13</b>	<b>13.48</b>	<b>21.96</b>	<b>8.64</b>	<b>8.20</b>	<b>5.66</b>	<b>2.62</b>	<b>31.39</b>	<b>6.17</b>	<b>-5.46</b>	<b>-0.94</b>	<b>17.82</b>	<b>3.21</b>	<b>11/01/2006</b>
IM International Large Cap Value Equity (SA+CF) Median	-1.26	8.98	15.24	6.70	7.63	6.23	4.29	26.26	4.01	-1.92	-4.26	23.25	4.41	
Rank	11	4	8	20	37	63	93	11	28	83	15	76	91	
<b>International Growth - Net</b>	<b>-1.23</b>	<b>8.10</b>	<b>16.10</b>	<b>6.84</b>	<b>6.54</b>	<b>4.81</b>	<b>2.70</b>	<b>28.01</b>	<b>0.51</b>	<b>1.69</b>	<b>-6.15</b>	<b>18.55</b>	<b>3.33</b>	<b>11/01/2006</b>
MSCI ACW Ex US Grth Index (USD) (Net)	-0.87	11.49	19.92	7.28	6.84	5.17	3.25	32.01	0.12	-1.25	-2.65	15.49	4.32	
Difference	-0.36	-3.39	-3.82	-0.44	-0.30	-0.36	-0.55	-4.00	0.39	2.94	-3.50	3.06	-0.99	
<b>International Growth - Gross</b>	<b>-1.08</b>	<b>8.56</b>	<b>16.77</b>	<b>7.46</b>	<b>7.10</b>	<b>5.34</b>	<b>3.25</b>	<b>28.74</b>	<b>1.12</b>	<b>2.21</b>	<b>-5.72</b>	<b>19.09</b>	<b>3.87</b>	<b>11/01/2006</b>
IM International Large Cap Growth Equity (SA+CF) Median	-0.10	10.86	19.95	8.37	8.39	7.12	5.06	31.38	-0.04	2.12	-3.34	20.63	5.62	
Rank	75	82	82	61	85	97	89	71	34	49	79	69	89	
<b>International Small Cap - Net</b>	<b>0.86</b>	<b>14.65</b>	<b>23.07</b>	<b>11.33</b>	<b>10.11</b>	<b>7.50</b>	<b>5.39</b>	<b>33.61</b>	<b>1.84</b>	<b>5.16</b>	<b>-4.87</b>	<b>25.30</b>	<b>5.61</b>	<b>09/01/2006</b>
MSCI ACWI Ex US Sm Cap Index IMI (USD) (Net)	-0.35	13.52	20.60	10.40	8.57	6.20	5.51	31.65	3.91	2.60	-4.03	19.73	6.15	
Difference	1.21	1.13	2.47	0.93	1.54	1.30	-0.12	1.96	-2.07	2.56	-0.84	5.57	-0.54	
<b>International Small Cap - Gross</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>09/01/2006</b>
IM International Small Cap Equity (SA+CF) Median	0.36	15.11	24.97	12.19	11.32	9.92	8.05	34.97	1.19	10.24	-3.41	31.17	8.00	
Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Gross of fees performance is not available (N/A) for the International Small Cap composite which currently consists of DFA Intl Sm Co;l (DFISX), DFA Emg Mkts Sm Cap;l (DEMSX), BlackRock ACWI Ex-US Small Cap (CF), Templeton Investment Counsel (SA), and American Century Investment Mgmt (SA).

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all composites. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
Comparative Performance  
Equity Sub Composites

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Domestic Large Cap Passive - Net</b>	<b>-0.64</b>	<b>10.61</b>	<b>13.63</b>	<b>10.49</b>	<b>13.14</b>	<b>12.60</b>	<b>9.49</b>	<b>21.34</b>	<b>12.01</b>	<b>0.83</b>	<b>13.73</b>	<b>32.41</b>	<b>5.41</b>	<b>05/01/2000</b>
S&P 500 Index (Cap Wtd)	-0.76	10.58	13.99	10.78	13.31	12.71	9.49	21.83	11.96	1.38	13.69	32.39	5.43	
Difference	0.12	0.03	-0.36	-0.29	-0.17	-0.11	0.00	-0.49	0.05	-0.55	0.04	0.02	-0.02	
<b>Domestic Large Cap Passive - Gross</b>	<b>-0.63</b>	<b>10.61</b>	<b>13.64</b>	<b>10.50</b>	<b>13.15</b>	<b>12.61</b>	<b>9.49</b>	<b>21.35</b>	<b>12.03</b>	<b>0.84</b>	<b>13.74</b>	<b>32.42</b>	<b>5.45</b>	<b>05/01/2000</b>
IM U.S. Large Cap Index Equity (SA+CF) Median	-0.71	10.56	13.93	10.54	13.19	12.60	9.63	21.71	12.03	0.94	13.28	32.58	5.55	
Rank	32	32	74	51	56	48	73	58	52	56	18	64	77	
<b>Domestic Large Cap Enhanced - Net</b>	<b>-0.15</b>	<b>11.29</b>	<b>16.13</b>	<b>11.32</b>	<b>13.85</b>	<b>13.09</b>	<b>9.76</b>	<b>24.21</b>	<b>9.73</b>	<b>3.18</b>	<b>13.19</b>	<b>32.89</b>	<b>8.33</b>	<b>06/01/2006</b>
S&P 500 Index (Cap Wtd)	-0.76	10.58	13.99	10.78	13.31	12.71	9.49	21.83	11.96	1.38	13.69	32.39	8.66	
Difference	0.61	0.71	2.14	0.54	0.54	0.38	0.27	2.38	-2.23	1.80	-0.50	0.50	-0.33	
<b>Domestic Large Cap Enhanced - Gross</b>	<b>-0.08</b>	<b>11.50</b>	<b>16.43</b>	<b>11.63</b>	<b>14.18</b>	<b>13.43</b>	<b>10.09</b>	<b>24.53</b>	<b>10.05</b>	<b>3.50</b>	<b>13.54</b>	<b>33.31</b>	<b>8.65</b>	<b>06/01/2006</b>
IM U.S. Large Cap Core Equity (SA+CF) Median	-0.44	10.79	14.02	10.23	13.32	12.73	9.75	21.82	10.50	1.39	13.43	32.98	9.00	
Rank	34	43	27	18	27	26	37	19	57	23	49	48	66	
<b>Domestic Large Cap 130/30 - Net</b>	<b>-1.21</b>	<b>10.77</b>	<b>12.33</b>	<b>9.09</b>	<b>13.29</b>	<b>12.61</b>	<b>9.55</b>	<b>20.28</b>	<b>9.54</b>	<b>1.61</b>	<b>14.84</b>	<b>36.94</b>	<b>9.44</b>	<b>03/01/2008</b>
S&P 500 Index (Cap Wtd)	-0.76	10.58	13.99	10.78	13.31	12.71	9.49	21.83	11.96	1.38	13.69	32.39	9.37	
Difference	-0.45	0.19	-1.66	-1.69	-0.02	-0.10	0.06	-1.55	-2.42	0.23	1.15	4.55	0.07	
<b>Domestic Large Cap 130/30 - Gross</b>	<b>-1.01</b>	<b>11.41</b>	<b>13.14</b>	<b>9.80</b>	<b>14.03</b>	<b>13.35</b>	<b>10.27</b>	<b>21.10</b>	<b>10.22</b>	<b>2.26</b>	<b>15.59</b>	<b>37.83</b>	<b>10.16</b>	<b>03/01/2008</b>
IM U.S. Large Cap Core Equity (SA+CF) Median	-0.44	10.79	14.02	10.23	13.32	12.73	9.75	21.82	10.50	1.39	13.43	32.98	9.57	
Rank	69	43	66	58	29	27	29	62	55	37	21	13	28	

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all composites. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
Comparative Performance  
Domestic Equity Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Domestic Large Cap Equity</b>														
<b>BlackRock MSCI US Equity Index (CF) - Net</b>	<b>-0.63</b>	<b>10.61</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.61</b>	<b>07/01/2017</b>
MSCI US Index (USD) (Gross)	-0.63	10.60	14.03	10.55	13.23	12.65	9.52	21.90	11.61	1.32	13.36	32.61	10.60	
Difference	0.00	0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.01	
<b>BlackRock MSCI US Equity Index (CF) - Gross</b>	<b>-0.63</b>	<b>10.61</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.61</b>	<b>07/01/2017</b>
<b>SPDR S&amp;P 500 ETF (SPY) - Net</b>	<b>-2.82</b>	<b>8.31</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.31</b>	<b>07/01/2017</b>
S&P 500 Index (Cap Wtd)	-0.76	10.58	13.99	10.78	13.31	12.71	9.49	21.83	11.96	1.38	13.69	32.39	10.58	
Difference	-2.06	-2.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-2.27	
<b>Domestic Equity Pool STIF - Net</b>	<b>0.35</b>	<b>0.95</b>	<b>1.19</b>	<b>0.65</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.00</b>	<b>0.50</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.65</b>	<b>04/01/2015</b>
ICE 1 Mo LIBOR Index (USD)	0.42	1.09	1.36	0.75	0.52	0.44	0.55	1.15	0.52	0.21	0.16	0.19	0.75	
Difference	-0.07	-0.14	-0.17	-0.10	N/A	N/A	N/A	-0.15	-0.02	N/A	N/A	N/A	-0.10	
<b>T. Rowe U.S. Structured Research (SA) - Net</b>	<b>-0.15</b>	<b>11.28</b>	<b>15.87</b>	<b>11.74</b>	<b>13.96</b>	<b>13.16</b>	<b>10.06</b>	<b>23.94</b>	<b>10.68</b>	<b>3.30</b>	<b>12.58</b>	<b>33.23</b>	<b>9.22</b>	<b>06/01/2006</b>
S&P 500 Index (Cap Wtd)	-0.76	10.58	13.99	10.78	13.31	12.71	9.49	21.83	11.96	1.38	13.69	32.39	8.66	
Difference	0.61	0.70	1.88	0.96	0.65	0.45	0.57	2.11	-1.28	1.92	-1.11	0.84	0.56	
<b>T. Rowe U.S. Structured Research (SA) - Gross</b>	<b>-0.08</b>	<b>11.50</b>	<b>16.16</b>	<b>12.04</b>	<b>14.28</b>	<b>13.49</b>	<b>10.39</b>	<b>24.24</b>	<b>10.98</b>	<b>3.61</b>	<b>12.92</b>	<b>33.63</b>	<b>9.55</b>	<b>06/01/2006</b>
IM U.S. Large Cap Core Equity (SA+CF) Median	-0.44	10.79	14.02	10.23	13.32	12.73	9.75	21.82	10.50	1.39	13.43	32.98	9.00	
Rank	34	43	30	15	25	25	25	22	45	23	59	45	26	
<b>Jacobs Levy Partial L/S (SA) - Net</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>04/01/2018</b>
MSCI US Index (USD)	-0.63	10.60	14.03	10.55	13.23	12.65	9.52	21.90	11.61	1.32	13.36	32.61	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Jacobs Levy Partial L/S (SA) - Gross</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>04/01/2018</b>
IM U.S. Large Cap Core Equity (SA+CF) Median	-0.44	10.79	14.02	10.23	13.32	12.73	9.75	21.82	10.50	1.39	13.43	32.98	N/A	
Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>J.P. Morgan 130/30 (SA) - Net</b>	<b>-1.72</b>	<b>10.34</b>	<b>12.54</b>	<b>9.40</b>	<b>13.73</b>	<b>12.80</b>	<b>10.59</b>	<b>22.86</b>	<b>10.30</b>	<b>0.01</b>	<b>15.38</b>	<b>37.55</b>	<b>10.46</b>	<b>03/01/2008</b>
S&P 500 Index (Cap Wtd)	-0.76	10.58	13.99	10.78	13.31	12.71	9.49	21.83	11.96	1.38	13.69	32.39	9.37	
Difference	-0.96	-0.24	-1.45	-1.38	0.42	0.09	1.10	1.03	-1.66	-1.37	1.69	5.16	1.09	
<b>J.P. Morgan 130/30 (SA) - Gross</b>	<b>-1.51</b>	<b>11.01</b>	<b>13.43</b>	<b>10.20</b>	<b>14.55</b>	<b>13.62</b>	<b>11.39</b>	<b>23.79</b>	<b>11.09</b>	<b>0.72</b>	<b>16.21</b>	<b>38.53</b>	<b>11.26</b>	<b>03/01/2008</b>
IM U.S. Large Cap Core Equity (SA+CF) Median	-0.44	10.79	14.02	10.23	13.32	12.73	9.75	21.82	10.50	1.39	13.43	32.98	9.57	
Rank	79	47	60	51	20	22	8	26	44	58	15	11	9	

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all funds. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
Comparative Performance  
Domestic Equity Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Domestic Mid Cap Equity</b>														
<b>Artisan Partners (SA) - Net</b>	<b>-2.37</b>	<b>6.14</b>	<b>7.76</b>	<b>6.65</b>	<b>8.33</b>	<b>9.47</b>	<b>9.64</b>	<b>13.81</b>	<b>23.60</b>	<b>-9.68</b>	<b>2.12</b>	<b>37.20</b>	<b>8.10</b>	<b>03/01/2007</b>
Russell Mid Cap Val Index	-2.50	5.07	6.50	7.23	11.11	11.21	9.81	13.34	20.00	-4.78	14.75	33.46	7.43	
Difference	0.13	1.07	1.26	-0.58	-2.78	-1.74	-0.17	0.47	3.60	-4.90	-12.63	3.74	0.67	
<b>Artisan Partners (SA) - Gross</b>	<b>-2.22</b>	<b>6.63</b>	<b>8.43</b>	<b>7.34</b>	<b>9.04</b>	<b>10.19</b>	<b>10.39</b>	<b>14.51</b>	<b>24.41</b>	<b>-9.09</b>	<b>2.79</b>	<b>38.11</b>	<b>8.85</b>	<b>03/01/2007</b>
IM U.S. Mid Cap Value Equity (SA+CF) Median	-1.50	7.53	9.10	8.27	11.91	11.57	10.84	15.65	18.23	-3.19	11.73	35.97	8.81	
Rank	77	62	57	66	95	82	62	59	14	89	97	39	47	
<b>Iridian Asset Management (SA) - Net</b>	<b>-2.06</b>	<b>7.52</b>	<b>11.63</b>	<b>6.54</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>24.06</b>	<b>3.29</b>	<b>-1.62</b>	<b>12.84</b>	<b>N/A</b>	<b>12.28</b>	<b>05/01/2013</b>
Russell Mid Cap Val Index	-2.50	5.07	6.50	7.23	11.11	11.21	9.81	13.34	20.00	-4.78	14.75	33.46	11.05	
Difference	0.44	2.45	5.13	-0.69	N/A	N/A	N/A	10.72	-16.71	3.16	-1.91	N/A	1.23	
<b>Iridian Asset Management (SA) - Gross</b>	<b>-1.88</b>	<b>8.10</b>	<b>12.45</b>	<b>7.33</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>24.96</b>	<b>4.07</b>	<b>-0.87</b>	<b>13.73</b>	<b>N/A</b>	<b>13.14</b>	<b>05/01/2013</b>
IM U.S. Mid Cap Value Equity (SA+CF) Median	-1.50	7.53	9.10	8.27	11.91	11.57	10.84	15.65	18.23	-3.19	11.73	35.97	11.95	
Rank	58	44	16	66	N/A	N/A	N/A	4	100	23	24	N/A	29	
<b>iShares:Core S&amp;P Md-Cp (IJH) - Net</b>	<b>-3.48</b>	<b>5.95</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.95</b>	<b>07/01/2017</b>
S&P Mid Cap 400 Index (Cap Wtd)	-0.77	8.83	10.97	8.96	11.97	11.29	10.90	16.24	20.74	-2.18	9.77	33.50	8.83	
Difference	-2.71	-2.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-2.88	
<b>Congress Mid Cap Growth (SA) - Net</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.09</b>	<b>03/01/2018</b>
Russell Mid Cap Grth Index	2.17	14.89	19.74	9.17	13.31	11.92	10.61	25.27	7.33	-0.20	11.90	35.74	-0.16	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.07	
<b>Congress Mid Cap Growth (SA) - Gross</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.05</b>	<b>03/01/2018</b>
IM U.S. Mid Cap Growth Equity (SA+CF) Median	2.98	14.07	19.94	9.27	13.19	11.86	11.05	25.47	5.51	0.79	8.63	36.40	0.10	
Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	65	
<b>TimesSquare Capital Management (SA) - Net</b>	<b>2.71</b>	<b>13.78</b>	<b>18.47</b>	<b>8.89</b>	<b>11.97</b>	<b>11.93</b>	<b>10.80</b>	<b>23.02</b>	<b>7.91</b>	<b>0.96</b>	<b>5.69</b>	<b>37.79</b>	<b>9.55</b>	<b>03/01/2007</b>
Russell Mid Cap Grth Index	2.17	14.89	19.74	9.17	13.31	11.92	10.61	25.27	7.33	-0.20	11.90	35.74	9.12	
Difference	0.54	-1.11	-1.27	-0.28	-1.34	0.01	0.19	-2.25	0.58	1.16	-6.21	2.05	0.43	
<b>TimesSquare Capital Management (SA) - Gross</b>	<b>2.88</b>	<b>14.35</b>	<b>19.27</b>	<b>9.62</b>	<b>12.73</b>	<b>12.70</b>	<b>11.58</b>	<b>23.84</b>	<b>8.65</b>	<b>1.65</b>	<b>6.42</b>	<b>38.75</b>	<b>10.33</b>	<b>03/01/2007</b>
IM U.S. Mid Cap Growth Equity (SA+CF) Median	2.98	14.07	19.94	9.27	13.19	11.86	11.05	25.47	5.51	0.79	8.63	36.40	9.97	
Rank	53	44	53	45	60	30	33	60	23	42	71	36	43	

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all funds. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
Comparative Performance  
Domestic Equity Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Domestic Small Cap Equity</b>														
<b>Vaughan Nelson Management (SA) - Net</b>	<b>-1.92</b>	<b>5.98</b>	<b>4.20</b>	<b>5.96</b>	<b>11.24</b>	<b>10.04</b>	<b>11.22</b>	<b>6.83</b>	<b>20.50</b>	<b>0.16</b>	<b>9.09</b>	<b>39.30</b>	<b>9.66</b>	<b>03/01/2007</b>
Russell 2000 Val Index	-2.64	4.43	5.13	7.87	9.96	9.42	8.61	7.84	31.74	-7.47	4.22	34.52	6.07	
Difference	0.72	1.55	-0.93	-1.91	1.28	0.62	2.61	-1.01	-11.24	7.63	4.87	4.78	3.59	
<b>Vaughan Nelson Management (SA) - Gross</b>	<b>-1.74</b>	<b>6.57</b>	<b>4.99</b>	<b>6.80</b>	<b>12.14</b>	<b>10.95</b>	<b>12.15</b>	<b>7.66</b>	<b>21.49</b>	<b>0.98</b>	<b>10.00</b>	<b>40.47</b>	<b>10.59</b>	<b>03/01/2007</b>
IM U.S. Small Cap Value Equity (SA+CF) Median	-1.78	7.45	8.37	8.71	11.68	11.11	10.74	11.60	26.10	-4.27	5.66	38.07	8.52	
Rank	49	63	80	81	39	56	19	77	76	8	10	35	10	
<b>BlackRock MSCI US Sm Cap Equity Index (CF) - Net</b>	<b>-0.46</b>	<b>10.14</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.14</b>	<b>07/01/2017</b>
MSCI US Sm Cap Index (USD) (Net)	-0.60	9.75	12.04	8.19	11.62	10.73	10.78	16.75	19.15	-4.11	7.07	37.64	9.75	
Difference	0.14	0.39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.39	
<b>BlackRock MSCI US Sm Cap Equity Index (CF) - Gross</b>	<b>-0.45</b>	<b>10.19</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.19</b>	<b>07/01/2017</b>
<b>DFA US Small Cap Trust (CF) - Net</b>	<b>-1.27</b>	<b>8.15</b>	<b>9.68</b>	<b>8.78</b>	<b>12.19</b>	<b>11.44</b>	<b>10.87</b>	<b>11.86</b>	<b>24.42</b>	<b>-2.64</b>	<b>4.75</b>	<b>42.42</b>	<b>12.59</b>	<b>03/01/2003</b>
Russell 2000 Index	-0.08	9.11	11.79	8.39	11.47	10.39	9.84	14.65	21.31	-4.41	4.89	38.82	11.53	
Difference	-1.19	-0.96	-2.11	0.39	0.72	1.05	1.03	-2.79	3.11	1.77	-0.14	3.60	1.06	
<b>DFA US Small Cap Trust (CF) - Gross</b>	<b>-1.19</b>	<b>8.43</b>	<b>10.05</b>	<b>9.17</b>	<b>12.58</b>	<b>11.84</b>	<b>11.26</b>	<b>12.25</b>	<b>24.85</b>	<b>-2.29</b>	<b>5.12</b>	<b>42.90</b>	<b>12.91</b>	<b>03/01/2003</b>
IM U.S. Small Cap Core Equity (SA+CF) Median	-0.13	9.52	12.04	9.44	12.78	11.70	10.82	15.21	20.64	-1.36	6.57	41.28	12.79	
Rank	76	63	68	55	56	48	39	72	21	63	64	41	47	
<b>Alliance Bernstein (SA) - Net</b>	<b>5.23</b>	<b>21.75</b>	<b>29.21</b>	<b>12.40</b>	<b>14.13</b>	<b>N/A</b>	<b>N/A</b>	<b>34.73</b>	<b>6.82</b>	<b>-0.84</b>	<b>-1.61</b>	<b>45.22</b>	<b>13.10</b>	<b>04/01/2012</b>
Russell 2000 Grth Index	2.30	13.64	18.63	8.77	12.90	11.29	10.95	22.17	11.32	-1.38	5.60	43.30	13.17	
Difference	2.93	8.11	10.58	3.63	1.23	N/A	N/A	12.56	-4.50	0.54	-7.21	1.92	-0.07	
<b>Alliance Bernstein (SA) - Gross</b>	<b>5.44</b>	<b>22.52</b>	<b>30.32</b>	<b>13.39</b>	<b>15.15</b>	<b>N/A</b>	<b>N/A</b>	<b>35.88</b>	<b>7.80</b>	<b>0.05</b>	<b>-0.71</b>	<b>46.52</b>	<b>14.11</b>	<b>04/01/2012</b>
IM U.S. Small Cap Growth Equity (SA+CF) Median	2.90	14.22	20.28	10.06	13.59	12.14	11.70	23.71	11.40	-0.74	4.13	45.47	13.92	
Rank	21	10	10	18	24	N/A	N/A	8	70	42	81	46	47	
<b>Voya Investment Management (SA) - Net</b>	<b>-0.49</b>	<b>7.50</b>	<b>11.08</b>	<b>7.91</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>18.69</b>	<b>13.14</b>	<b>-1.01</b>	<b>5.41</b>	<b>N/A</b>	<b>11.89</b>	<b>05/01/2013</b>
Russell 2000 Grth Index	2.30	13.64	18.63	8.77	12.90	11.29	10.95	22.17	11.32	-1.38	5.60	43.30	13.28	
Difference	-2.79	-6.14	-7.55	-0.86	N/A	N/A	N/A	-3.48	1.82	0.37	-0.19	N/A	-1.39	
<b>Voya Investment Management (SA) - Gross</b>	<b>-0.28</b>	<b>8.18</b>	<b>12.03</b>	<b>8.85</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>19.71</b>	<b>14.14</b>	<b>-0.15</b>	<b>6.35</b>	<b>N/A</b>	<b>12.87</b>	<b>05/01/2013</b>
IM U.S. Small Cap Growth Equity (SA+CF) Median	2.90	14.22	20.28	10.06	13.59	12.14	11.70	23.71	11.40	-0.74	4.13	45.47	14.16	
Rank	87	92	89	66	N/A	N/A	N/A	72	36	44	30	N/A	72	

Gross of fees performance is not available (N/A) for the following funds: SPDR S&P 500 ETF (SPY), Domestic Equity Pool STIF, and iShares:Core S&P Md-Cp (IJH).

The current annual expense ratios for the SPDR S&P 500 ETF (SPY), Domestic Equity Pool STIF, and iShares:Core S&P Md-Cp (IJH) are 0.09%, 0.15%, and 0.09%, respectively.

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all funds. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
Comparative Performance  
International Equity Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>International Developed Large Cap Equity</b>														
<b>Acadian Asset Non-US Equity (SA) - Net</b>	<b>0.76</b>	<b>14.75</b>	<b>24.36</b>	<b>11.66</b>	<b>9.45</b>	<b>7.57</b>	<b>3.48</b>	<b>34.76</b>	<b>12.40</b>	<b>-7.75</b>	<b>0.00</b>	<b>17.60</b>	<b>3.86</b>	<b>11/01/2006</b>
MSCI ACW Ex US Val Index (USD) (Net)	-1.50	8.82	13.26	5.04	4.88	3.30	2.10	22.66	8.92	-10.06	-5.10	15.04	2.59	
Difference	2.26	5.93	11.10	6.62	4.57	4.27	1.38	12.10	3.48	2.31	5.10	2.56	1.27	
<b>Acadian Asset Non-US Equity (SA) - Gross</b>	<b>0.89</b>	<b>15.20</b>	<b>25.00</b>	<b>12.24</b>	<b>10.02</b>	<b>8.15</b>	<b>4.05</b>	<b>35.45</b>	<b>13.01</b>	<b>-7.26</b>	<b>0.52</b>	<b>18.22</b>	<b>4.44</b>	<b>11/01/2006</b>
IM ACWI Ex US Value (SA+CF) Median	-1.26	9.79	15.45	6.83	7.61	6.19	4.36	26.02	4.87	-3.25	-3.87	20.09	4.52	
Rank	5	1	3	1	8	16	62	8	10	85	17	61	52	
<b>Lazard Asset Management (SA) - Net</b>	<b>-0.53</b>	<b>11.61</b>	<b>18.72</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>27.00</b>	<b>0.22</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.15</b>	<b>06/01/2015</b>
MSCI ACW Ex US Val Index (USD) (Net)	-1.50	8.82	13.26	5.04	4.88	3.30	2.10	22.66	8.92	-10.06	-5.10	15.04	4.05	
Difference	0.97	2.79	5.46	N/A	N/A	N/A	N/A	4.34	-8.70	N/A	N/A	N/A	1.10	
<b>Lazard Asset Management (SA) - Gross</b>	<b>-0.39</b>	<b>12.04</b>	<b>19.34</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>27.65</b>	<b>0.77</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.72</b>	<b>06/01/2015</b>
IM ACWI Ex US Value (SA+CF) Median	-1.26	9.79	15.45	6.83	7.61	6.19	4.36	26.02	4.87	-3.25	-3.87	20.09	5.90	
Rank	25	17	17	N/A	N/A	N/A	N/A	38	86	N/A	N/A	N/A	54	
<b>BlackRock ACWI Ex-US SuperFund A (CF) - Net</b>	<b>-1.27</b>	<b>10.10</b>	<b>16.61</b>	<b>6.37</b>	<b>6.08</b>	<b>4.45</b>	<b>N/A</b>	<b>27.49</b>	<b>4.77</b>	<b>-5.49</b>	<b>-3.73</b>	<b>15.51</b>	<b>7.66</b>	<b>06/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	-1.18	10.16	16.53	6.18	5.89	4.26	2.70	27.19	4.50	-5.66	-3.87	15.29	7.47	
Difference	-0.09	-0.06	0.08	0.19	0.19	0.19	N/A	0.30	0.27	0.17	0.14	0.22	0.19	
<b>BlackRock ACWI Ex-US SuperFund A (CF) - Gross</b>	<b>-1.26</b>	<b>10.15</b>	<b>16.69</b>	<b>6.45</b>	<b>6.16</b>	<b>4.53</b>	<b>N/A</b>	<b>27.58</b>	<b>4.86</b>	<b>-5.42</b>	<b>-3.65</b>	<b>15.61</b>	<b>7.75</b>	<b>06/01/2009</b>
IM All ACWI Ex US (SA+CF) Median	-0.38	10.57	18.00	7.50	8.14	6.65	4.60	28.68	2.09	-0.53	-3.38	20.39	9.66	
Rank	74	57	63	67	87	91	N/A	60	25	85	54	84	88	
<b>iShares:MSCI EAFE ETF (EFA) - Net</b>	<b>0.07</b>	<b>9.09</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.09</b>	<b>07/01/2017</b>
MSCI EAFE Index (USD) (Net)	-1.53	8.18	14.80	5.55	6.50	5.31	2.74	25.03	1.00	-0.81	-4.90	22.78	8.18	
Difference	1.60	0.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.91	
<b>Baillie Gifford (SA) - Net</b>	<b>-0.81</b>	<b>9.45</b>	<b>19.08</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>31.99</b>	<b>0.73</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.41</b>	<b>06/01/2015</b>
MSCI ACW Ex US Grth Index (USD) (Net)	-0.87	11.49	19.92	7.28	6.84	5.17	3.25	32.01	0.12	-1.25	-2.65	15.49	6.51	
Difference	0.06	-2.04	-0.84	N/A	N/A	N/A	N/A	-0.02	0.61	N/A	N/A	N/A	0.90	
<b>Baillie Gifford (SA) - Gross</b>	<b>-0.68</b>	<b>9.87</b>	<b>19.69</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>32.66</b>	<b>1.28</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>7.98</b>	<b>06/01/2015</b>
IM ACWI Ex US Growth (SA+CF) Median	0.26	12.25	21.73	8.81	8.71	7.45	5.44	32.96	-0.32	1.31	-1.78	20.39	7.92	
Rank	74	73	70	N/A	N/A	N/A	N/A	52	34	N/A	N/A	N/A	48	

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all funds. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.

Montana Board of Investments  
Comparative Performance  
International Equity Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Invesco (SA) - Net</b>	<b>-1.54</b>	<b>7.06</b>	<b>13.80</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>24.92</b>	<b>0.32</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>4.41</b>	<b>06/01/2015</b>
MSCI ACW Ex US Grth Index (USD) (Net)	-0.87	11.49	19.92	7.28	6.84	5.17	3.25	32.01	0.12	-1.25	-2.65	15.49	6.51	
Difference	-0.67	-4.43	-6.12	N/A	N/A	N/A	N/A	-7.09	0.20	N/A	N/A	N/A	-2.10	
<b>Invesco (SA) - Gross</b>	<b>-1.38</b>	<b>7.55</b>	<b>14.51</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>25.70</b>	<b>1.01</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5.10</b>	<b>06/01/2015</b>
IM ACWI Ex US Growth (SA+CF) Median	0.26	12.25	21.73	8.81	8.71	7.45	5.44	32.96	-0.32	1.31	-1.78	20.39	7.92	
Rank	90	94	97	N/A	N/A	N/A	N/A	92	37	N/A	N/A	N/A	89	
<b>International Equity Pool STIF - Net</b>	<b>0.38</b>	<b>0.93</b>	<b>1.14</b>	<b>0.62</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.92</b>	<b>0.47</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.62</b>	<b>04/01/2015</b>
ICE 1 Mo LIBOR Index (USD)	0.42	1.09	1.36	0.75	0.52	0.44	0.55	1.15	0.52	0.21	0.16	0.19	0.75	
Difference	-0.04	-0.16	-0.22	-0.13	N/A	N/A	N/A	-0.23	-0.05	N/A	N/A	N/A	-0.13	
<b>International Developed Small Cap Equity</b>														
<b>American Century Investment Mgmt (SA) - Net</b>	<b>3.91</b>	<b>23.84</b>	<b>35.02</b>	<b>14.08</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>43.80</b>	<b>-5.31</b>	<b>11.32</b>	<b>N/A</b>	<b>N/A</b>	<b>8.89</b>	<b>03/01/2014</b>
MSCI ACW Ex US Sm Cap Grth Index (USD) (Net)	0.84	15.59	23.62	11.05	9.03	6.46	5.30	33.64	-0.28	6.50	-3.59	18.52	7.28	
Difference	3.07	8.25	11.40	3.03	N/A	N/A	N/A	10.16	-5.03	4.82	N/A	N/A	1.61	
<b>American Century Investment Mgmt (SA) - Gross</b>	<b>4.12</b>	<b>24.63</b>	<b>36.18</b>	<b>15.04</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>44.99</b>	<b>-4.49</b>	<b>12.25</b>	<b>N/A</b>	<b>N/A</b>	<b>9.81</b>	<b>03/01/2014</b>
IM ACWI Ex US Growth (SA+CF) Median	0.26	12.25	21.73	8.81	8.71	7.45	5.44	32.96	-0.32	1.31	-1.78	20.39	6.68	
Rank	5	1	3	3	N/A	N/A	N/A	6	80	1	N/A	N/A	8	
<b>BlackRock ACWI Ex-US Small Cap (CF) - Net</b>	<b>-0.48</b>	<b>13.51</b>	<b>20.73</b>	<b>10.61</b>	<b>8.79</b>	<b>N/A</b>	<b>N/A</b>	<b>31.96</b>	<b>4.26</b>	<b>2.87</b>	<b>-3.84</b>	<b>19.87</b>	<b>9.70</b>	<b>02/01/2012</b>
MSCI ACWI Ex US Sm Cap Index IMI (USD) (Net)	-0.35	13.52	20.60	10.40	8.57	6.20	5.51	31.65	3.91	2.60	-4.03	19.73	9.50	
Difference	-0.13	-0.01	0.13	0.21	0.22	N/A	N/A	0.31	0.35	0.27	0.19	0.14	0.20	
<b>BlackRock ACWI Ex-US Small Cap (CF) - Gross</b>	<b>-0.45</b>	<b>13.60</b>	<b>20.89</b>	<b>10.78</b>	<b>8.97</b>	<b>N/A</b>	<b>N/A</b>	<b>32.15</b>	<b>4.44</b>	<b>3.04</b>	<b>-3.67</b>	<b>20.08</b>	<b>9.88</b>	<b>02/01/2012</b>
<b>DFA Intl Sm Co;l (DFISX) - Net</b>	<b>-0.38</b>	<b>11.48</b>	<b>19.70</b>	<b>11.82</b>	<b>10.32</b>	<b>7.65</b>	<b>6.15</b>	<b>30.24</b>	<b>5.74</b>	<b>5.89</b>	<b>-6.29</b>	<b>27.49</b>	<b>8.84</b>	<b>11/01/2004</b>
MSCI Wrld Ex US Sm Cap Index (USD) (Net)	-0.50	12.93	21.16	11.30	9.71	7.25	5.81	31.04	4.32	5.46	-5.35	25.55	8.17	
Difference	0.12	-1.45	-1.46	0.52	0.61	0.40	0.34	-0.80	1.42	0.43	-0.94	1.94	0.67	
<b>Templeton Investment Counsel (SA) - Net</b>	<b>1.26</b>	<b>13.08</b>	<b>23.39</b>	<b>8.82</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>33.07</b>	<b>-1.13</b>	<b>1.81</b>	<b>N/A</b>	<b>N/A</b>	<b>6.65</b>	<b>03/01/2014</b>
MSCI ACW Ex US Sm Cap Val Index (USD) (Net)	-1.55	11.44	17.65	9.71	8.07	5.92	5.69	29.72	8.24	-1.25	-4.49	20.92	5.91	
Difference	2.81	1.64	5.74	-0.89	N/A	N/A	N/A	3.35	-9.37	3.06	N/A	N/A	0.74	
<b>Templeton Investment Counsel (SA) - Gross</b>	<b>1.48</b>	<b>13.80</b>	<b>24.45</b>	<b>9.78</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>34.21</b>	<b>-0.23</b>	<b>2.73</b>	<b>N/A</b>	<b>N/A</b>	<b>7.61</b>	<b>03/01/2014</b>
IM ACWI Ex US Value (SA+CF) Median	-1.26	9.79	15.45	6.83	7.61	6.19	4.36	26.02	4.87	-3.25	-3.87	20.09	4.88	
Rank	4	2	4	12	N/A	N/A	N/A	8	89	9	N/A	N/A	11	

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all funds. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.

Montana Board of Investments  
Comparative Performance  
International Equity Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>International Emerging Equity</b>														
<b>BlackRock Emerging Mkts (CF) - Net</b>	<b>1.23</b>	<b>17.23</b>	<b>24.62</b>	<b>8.51</b>	<b>4.75</b>	<b>N/A</b>	<b>N/A</b>	<b>37.05</b>	<b>10.85</b>	<b>-15.15</b>	<b>-2.49</b>	<b>-2.79</b>	<b>4.49</b>	<b>02/01/2012</b>
MSCI Emg Mkts Index (USD) (Net)	1.42	17.56	24.93	8.81	4.99	2.47	3.02	37.28	11.19	-14.92	-2.19	-2.60	4.76	
Difference	-0.19	-0.33	-0.31	-0.30	-0.24	N/A	N/A	-0.23	-0.34	-0.23	-0.30	-0.19	-0.27	
<b>BlackRock Emerging Mkts (CF) - Gross</b>	<b>1.26</b>	<b>17.31</b>	<b>24.66</b>	<b>8.67</b>	<b>4.93</b>	<b>N/A</b>	<b>N/A</b>	<b>37.16</b>	<b>11.08</b>	<b>-14.99</b>	<b>-2.30</b>	<b>-2.57</b>	<b>4.67</b>	<b>02/01/2012</b>
<b>iShares:MSCI Em Mkts (EEM) - Net</b>	<b>1.03</b>	<b>16.69</b>	<b>22.90</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>36.86</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>29.60</b>	<b>01/01/2017</b>
MSCI Emg Mkts Index (USD) (Net)	1.42	17.56	24.93	8.81	4.99	2.47	3.02	37.28	11.19	-14.92	-2.19	-2.60	30.31	
Difference	-0.39	-0.87	-2.03	N/A	N/A	N/A	N/A	-0.42	N/A	N/A	N/A	N/A	-0.71	
<b>DFA Emg Mkts Sm Cap;I (DEMSX) - Net</b>	<b>1.42</b>	<b>16.80</b>	<b>19.46</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>24.90</b>	<b>02/01/2017</b>
MSCI Emg Mkts Sm Cap Index (USD) (Net)	0.17	15.58	18.62	7.23	4.58	2.55	4.36	33.84	2.28	-6.85	1.01	1.04	23.62	
Difference	1.25	1.22	0.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.28	

Gross of fees performance is not available (N/A) for the following funds: iShares:MSCI EAFE ETF (EFA), International Equity Pool STIF, DFA Intl Sm Co;I (DFISX), iShares:MSCI Em Mkts (EEM), and DFA Emg Mkts Sm Cap;I (DEMSX).

The current annual expense ratios for the iShares:MSCI EAFE ETF (EFA), International Equity Pool STIF, DFA Intl Sm Co;I (DFISX), iShares:MSCI Em Mkts (EEM), and DFA Emg Mkts Sm Cap;I (DEMSX) are 0.32%, 0.18%, 0.53%, 0.69%, and 0.73%, respectively.

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. A peer group of similar managers may not exist for all funds. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.

Montana Board of Investments  
Comparative Performance  
Fixed Income Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Trust Funds Bond Portfolio</b>	<b>-1.30</b>	<b>-0.02</b>	<b>1.55</b>	<b>1.63</b>	<b>2.39</b>	<b>3.63</b>	<b>4.39</b>	<b>3.78</b>	<b>3.41</b>	<b>1.03</b>	<b>6.79</b>	<b>-1.43</b>	<b>5.89</b>	<b>10/01/1995</b>
Bloomberg US Agg Bond Index	-1.46	-0.24	1.20	1.20	1.82	2.92	3.63	3.54	2.65	0.55	5.97	-2.02	5.14	
Difference	0.16	0.22	0.35	0.43	0.57	0.71	0.76	0.24	0.76	0.48	0.82	0.59	0.75	
<b>Trust Funds Bond Portfolio</b>	<b>-1.30</b>	<b>-0.02</b>	<b>1.55</b>	<b>1.63</b>	<b>2.39</b>	<b>3.63</b>	<b>4.39</b>	<b>3.78</b>	<b>3.41</b>	<b>1.03</b>	<b>6.79</b>	<b>-1.43</b>	<b>5.89</b>	<b>10/01/1995</b>
IM U.S. Broad Market Core FI (SA+CF) Median	-1.37	0.09	1.65	1.56	2.15	3.36	4.29	4.05	3.10	0.82	6.16	-1.56	5.54	
Rank	34	56	56	45	32	32	40	66	42	29	25	42	13	
<b>Reams Asset Core Plus (SA) - Net</b>	<b>-1.02</b>	<b>0.06</b>	<b>1.35</b>	<b>1.57</b>	<b>1.93</b>	<b>3.57</b>	<b>N/A</b>	<b>3.21</b>	<b>4.18</b>	<b>0.07</b>	<b>4.47</b>	<b>-0.85</b>	<b>5.44</b>	<b>10/01/2008</b>
Reams Custom Index	-1.46	-0.24	1.20	1.62	2.13	3.26	3.98	3.83	3.91	0.43	5.56	-1.35	4.41	
Difference	0.44	0.30	0.15	-0.05	-0.20	0.31	N/A	-0.62	0.27	-0.36	-1.09	0.50	1.03	
<b>Reams Asset Core Plus (SA) - Gross</b>	<b>-0.97</b>	<b>0.20</b>	<b>1.53</b>	<b>1.75</b>	<b>2.11</b>	<b>3.75</b>	<b>N/A</b>	<b>3.38</b>	<b>4.35</b>	<b>0.24</b>	<b>4.65</b>	<b>-0.68</b>	<b>5.62</b>	<b>10/01/2008</b>
IM U.S. Broad Market Core+ FI (SA+CF) Median	-1.21	0.55	2.28	2.24	2.67	3.99	5.10	4.85	4.72	0.27	6.19	-0.49	5.79	
Rank	22	79	87	78	90	68	N/A	96	59	51	91	57	59	
<b>Post High Yield Plus (SA) - Net</b>	<b>-0.74</b>	<b>1.13</b>	<b>3.61</b>	<b>4.38</b>	<b>5.34</b>	<b>6.52</b>	<b>N/A</b>	<b>6.52</b>	<b>9.58</b>	<b>0.82</b>	<b>4.99</b>	<b>10.19</b>	<b>9.14</b>	<b>06/01/2009</b>
Bloomberg US HY 2% Issuer Cap Index	-0.86	1.58	3.78	5.18	5.00	6.32	8.32	7.50	17.13	-4.43	2.46	7.44	9.83	
Difference	0.12	-0.45	-0.17	-0.80	0.34	0.20	N/A	-0.98	-7.55	5.25	2.53	2.75	-0.69	
<b>Post High Yield Plus (SA) - Gross</b>	<b>-0.59</b>	<b>1.58</b>	<b>4.22</b>	<b>4.99</b>	<b>5.97</b>	<b>7.15</b>	<b>N/A</b>	<b>7.15</b>	<b>10.23</b>	<b>1.43</b>	<b>5.62</b>	<b>10.85</b>	<b>9.80</b>	<b>06/01/2009</b>
IM U.S. High Yield Bonds (SA+CF) Median	-0.54	1.90	4.19	4.86	4.91	6.16	7.89	7.58	14.10	-2.15	2.61	7.57	9.58	
Rank	52	70	47	45	10	10	N/A	60	85	7	2	10	40	
<b>Post Trad'l High Yield LP (CF) - Gross</b>	<b>-0.63</b>	<b>1.52</b>	<b>4.07</b>	<b>5.01</b>	<b>6.08</b>	<b>7.14</b>	<b>N/A</b>	<b>7.09</b>	<b>10.62</b>	<b>1.42</b>	<b>6.01</b>	<b>9.98</b>	<b>9.16</b>	<b>09/01/2009</b>
IM U.S. High Yield Bonds (SA+CF) Median	-0.54	1.90	4.19	4.86	4.91	6.16	7.89	7.58	14.10	-2.15	2.61	7.57	8.59	
Rank	53	71	54	44	10	10	N/A	61	81	8	2	13	21	
<b>Neuberger Berman High Yield (SA) - Net</b>	<b>-1.04</b>	<b>0.80</b>	<b>2.24</b>	<b>3.98</b>	<b>4.27</b>	<b>5.58</b>	<b>N/A</b>	<b>5.80</b>	<b>14.98</b>	<b>-4.32</b>	<b>1.93</b>	<b>7.78</b>	<b>7.20</b>	<b>01/01/2010</b>
Bloomberg US HY 2% Issuer Cap Index	-0.86	1.58	3.78	5.18	5.00	6.32	8.32	7.50	17.13	-4.43	2.46	7.44	7.63	
Difference	-0.18	-0.78	-1.54	-1.20	-0.73	-0.74	N/A	-1.70	-2.15	0.11	-0.53	0.34	-0.43	
<b>Neuberger Berman High Yield (SA) - Gross</b>	<b>-0.93</b>	<b>1.14</b>	<b>2.70</b>	<b>4.45</b>	<b>4.74</b>	<b>6.05</b>	<b>N/A</b>	<b>6.27</b>	<b>15.50</b>	<b>-3.89</b>	<b>2.38</b>	<b>8.26</b>	<b>7.68</b>	<b>01/01/2010</b>
IM U.S. High Yield Bonds (SA+CF) Median	-0.54	1.90	4.19	4.86	4.91	6.16	7.89	7.58	14.10	-2.15	2.61	7.57	7.59	
Rank	69	81	89	68	59	58	N/A	79	32	75	56	31	44	

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
Comparative Performance  
Fixed Income Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Oaktree U.S. High Yield (SA) - Net</b>	<b>-1.74</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-1.74</b>	<b>01/01/2018</b>
Bloomberg US HY 2% Issuer Cap Index	-0.86	1.58	3.78	5.18	5.00	6.32	8.32	7.50	17.13	-4.43	2.46	7.44	-0.86	
Difference	-0.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.88	
<b>Oaktree U.S. High Yield (SA) - Gross</b>	<b>-1.58</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-1.58</b>	<b>01/01/2018</b>
IM U.S. High Yield Bonds (SA+CF) Median	-0.54	1.90	4.19	4.86	4.91	6.16	7.89	7.58	14.10	-2.15	2.61	7.57	-0.54	
Rank	94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	94	
<b>Shenkman High Yield Fixed Income (SA) - Net</b>	<b>-0.94</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.94</b>	<b>01/01/2018</b>
Bloomberg US HY 2% Issuer Cap Index	-0.86	1.58	3.78	5.18	5.00	6.32	8.32	7.50	17.13	-4.43	2.46	7.44	-0.86	
Difference	-0.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.08	
<b>Shenkman High Yield Fixed Income (SA) - Gross</b>	<b>-0.80</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.80</b>	<b>01/01/2018</b>
IM U.S. High Yield Bonds (SA+CF) Median	-0.54	1.90	4.19	4.86	4.91	6.16	7.89	7.58	14.10	-2.15	2.61	7.57	-0.54	
Rank	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	62	

Trust Funds Bond Portfolio and Post Trad'l High Yield LP (CF) are part of the Trust Funds Investment Pool.

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.

Montana Board of Investments  
 Comparative Performance  
 Diversifying Strategies Managers

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
<b>Long U.S. Treasuries Portfolio</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.20	03/01/2018
Bloomberg 20+ Yr Trsy Strips Index	-4.57	0.43	6.57	0.11	5.31	11.01	8.25	13.66	1.41	-3.74	46.38	-20.95	4.41	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.21	
<b>Long U.S. Treasuries Portfolio</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.20	03/01/2018
IM U.S. Long Duration (SA+CF) Median	-3.58	0.80	5.22	2.66	4.49	7.32	7.62	11.23	7.44	-3.33	18.31	-7.16	1.42	
Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	

Net performance shown is net of all manager fees and expenses (Net-All). Gross returns are compared to median performance of similar managers. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



Montana Board of Investments  
Comparative Performance  
Trust Accounts

As of March 31, 2018

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2017	2016	2015	2014	2013	Since Incep.	Inception Date
Abandoned Mine Trust	0.18	0.71	0.98	0.87	1.01	1.31	1.96	1.04	1.10	0.90	1.49	0.63	4.12	12/01/1993
Big Sky Economic Development Fund	-1.11	0.26	1.86	2.19	2.95	4.08	4.77	3.97	3.98	1.82	6.77	-0.22	4.85	07/01/2005
Butte Area One Restoration	-0.62	0.46	1.58	1.63	1.86	2.44	N/A	2.92	2.60	1.20	3.57	-0.08	3.11	11/01/2008
Clark Fork River Restoration	-0.63	0.44	1.52	1.64	2.02	2.74	N/A	2.85	2.72	1.37	4.26	-0.12	3.51	11/01/2008
Coal Tax Cultural Trust Fund	-1.11	0.25	1.84	2.18	2.93	4.07	4.77	3.96	3.95	1.79	6.79	-0.23	6.07	12/01/1993
Coal Tax Park Acquisition	-1.10	0.27	1.86	2.17	2.89	4.04	4.75	3.96	3.90	1.78	6.66	-0.25	6.04	12/01/1993
East Helena Compensation Fund	-0.39	0.62	1.57	1.43	1.58	N/A	N/A	2.56	2.12	0.91	3.01	-0.13	1.53	01/01/2013
Endowment for Children	-1.11	0.27	1.82	2.04	2.81	3.96	4.65	3.89	3.66	1.70	6.66	-0.28	4.90	08/01/2007
FWP License Account	-0.03	0.49	0.78	0.74	0.66	0.87	1.44	1.11	0.84	0.61	0.59	0.42	3.00	11/01/1997
FWP Mitigation Trust Fund	-0.46	0.00	0.35	0.57	0.78	1.15	1.75	1.15	0.67	0.87	1.37	0.61	3.92	12/01/1993
FWP Real Property Trust	-1.09	0.24	1.76	2.10	2.81	3.90	4.58	3.80	3.82	1.73	6.47	-0.24	5.38	12/01/1993
Group Benefits	-0.20	0.44	0.80	0.86	0.91	1.18	1.94	1.30	1.16	1.06	1.17	0.32	3.97	12/01/1993
Harold Hamm Endowment	-1.04	-0.42	-0.16	N/A	N/A	N/A	N/A	1.11	N/A	N/A	N/A	N/A	0.23	07/01/2016
Montana Pole	-0.84	0.38	1.71	1.89	2.45	3.36	4.03	3.38	3.23	1.56	5.44	-0.17	5.15	09/01/1996
Montana State University	0.25	0.96	1.35	0.91	0.77	0.86	1.13	1.39	0.95	0.39	0.85	0.12	2.00	08/01/2004
Montana Tech-UM Agency Funds	0.31	0.97	1.28	0.81	0.59	0.59	0.81	1.22	0.72	0.27	0.35	0.17	1.78	03/01/2003
MT BOI - Clark Fork Site	-0.93	0.34	1.79	2.06	2.56	3.36	N/A	3.64	3.63	1.56	5.37	-0.09	4.17	11/01/2008
MT BOI UOFM Other	-0.24	0.73	1.39	1.45	1.51	1.72	2.07	2.15	2.34	1.13	2.57	-0.12	2.94	08/01/2002
MUS Group Insurance	0.33	0.88	1.17	1.05	1.05	N/A	N/A	1.09	1.33	1.26	1.30	0.17	1.11	10/01/2011
MUS Workers Compensation	-0.01	0.81	1.39	N/A	N/A	N/A	N/A	1.80	N/A	N/A	N/A	N/A	0.80	04/01/2016
Older Montanans Trust	-1.09	0.27	1.82	2.13	2.85	3.59	4.44	3.87	3.86	1.72	6.57	-0.23	4.68	08/01/2007
Permanent Coal Trust Excl Crp	-0.54	0.74	2.14	2.41	3.09	4.02	4.56	3.49	3.79	2.23	6.14	0.99	5.81	12/01/1993
PERS Defined Cont Disability	-0.84	6.33	9.29	N/A	N/A	N/A	N/A	14.57	3.42	N/A	N/A	N/A	6.48	09/01/2015
Potter Trust Fund	-1.08	0.26	1.82	N/A	N/A	N/A	N/A	3.87	N/A	N/A	N/A	N/A	1.56	06/01/2016
Resource Indemnity Trust	-1.14	0.24	1.85	2.20	2.97	4.12	4.79	4.01	4.02	1.82	6.94	-0.27	6.15	12/01/1993
Smelter Hill Up Restoration	-0.14	0.62	1.27	1.21	1.34	1.68	N/A	1.85	1.79	0.92	2.49	0.01	1.98	11/01/2008
State Fund Insurance	-0.89	1.20	2.60	2.74	3.27	4.16	4.63	5.05	3.50	2.21	5.00	3.11	5.58	12/01/1993
Streamside Tailings Operable Unit	-0.96	0.35	1.81	2.03	2.72	3.71	4.33	3.69	3.58	1.69	6.22	-0.21	5.37	02/01/1999
Subsequent Injury Fund	0.37	1.00	1.26	0.76	0.50	0.45	-0.31	1.11	0.61	0.22	0.11	0.13	3.14	12/01/1993
Tobacco Trust Fund	-1.13	0.24	1.82	2.19	2.95	4.09	4.79	3.96	3.99	1.82	6.89	-0.27	5.64	01/01/2001
Treasurers	0.37	0.98	1.24	0.76	0.55	0.48	0.63	1.07	0.68	0.27	0.19	0.23	2.96	12/01/1993
Treasure State Endowment	-1.13	0.25	1.86	2.20	2.96	4.10	4.80	4.00	3.98	1.82	6.84	-0.21	6.01	12/01/1993
Treasure State Reg. Water System	-1.13	0.25	1.86	2.19	2.95	4.08	4.77	4.00	3.96	1.82	6.80	-0.22	5.80	06/01/2000
Trust and Legacy Account	-1.15	0.23	1.84	2.20	2.97	4.09	4.78	4.00	4.01	1.82	6.92	-0.26	6.77	07/01/1991
UCFRB Assess/Litig Cost Rec	-1.09	0.22	1.73	2.09	2.77	3.76	4.56	3.77	3.84	1.65	6.40	-0.24	5.73	07/01/1999
UCFRB Restoration Fund	-0.99	0.32	1.80	2.01	2.72	3.81	4.50	3.73	3.52	1.70	6.28	-0.20	5.62	06/01/1999
Upper Blackfoot Response	-0.11	0.68	1.35	1.24	1.19	1.39	N/A	1.90	1.74	0.84	1.59	0.13	1.31	09/01/2010
Weed Control Trust	-1.15	0.24	1.85	2.20	2.98	4.01	4.54	4.01	4.02	1.82	6.94	-0.23	5.22	12/01/1993
Wildlife Habitat Trust	-1.09	0.25	1.75	2.08	2.80	3.89	4.57	3.78	3.79	1.73	6.49	-0.24	5.39	12/01/1993
Zortman/Landusky LT H2O	0.38	1.00	1.23	0.90	0.90	3.03	4.05	1.01	1.36	0.84	1.78	-0.51	6.98	09/01/1999
Z/L Long Term H2O Trust Fund	0.38	1.01	1.24	1.00	0.90	2.86	3.47	1.08	1.39	1.15	1.76	-0.96	4.71	09/01/2005

Performance shown is gross of fees. Fiscal year ends on 06/30. Since inception performance may vary from State Street reported performance due to calculation methodology differences.



### Performance Notes

- All gross and net performance data is provided by State Street Analytics (SSA). Reported gross returns for the retirement plans prior to 07/01/2002 are net of all fees.
- Gross performance for the retirement plans is calculated with fee accruals provided by Montana's Accounting department.
- Retirement plan custom benchmarks are provided by State Street Bank and are calculated daily using actual allocations.
- Gross of fees performance is not available (N/A) for the following funds: SPDR S&P 500 ETF (SPY), Domestic Equity Pool STIF, iShares:Core S&P Md-Cp (IJH), DFA Intl Sm Co;I (DFISX), iShares:MSCI EAFE ETF (EFA), International Equity Pool STIF, iShares:MSCI Em Mkts (EEM), and DFA Emg Mkts Sm Cap;I (DEMSX). The current annual expense ratios are as listed below.

### Index Notes

- The Domestic Equity Custom Index consists of 100% S&P 1500 Comp Index through 04/30/2017 and 100% MSCI USA IM Index (USD) (Net) thereafter.
- The International Equity Custom Index consists of 100% MSCI EAFE Index (USD) (Net) through 10/31/2006, 100% MSCI ACW Ex US Index (USD) (Net) through 06/30/2007, 92.5% MSCI ACW Ex US Index (USD) (Net) and 7.5% MSCI ACW Ex US SC IM Index (USD) (Net) through 02/28/2014, and 100% MSCI ACW Ex-US IM Index thereafter.
- The Reams Custom Index consists of 100% Bloomberg US Unv Bond Index through 03/31/2017 and 100% Bloomberg US Agg Bond Index thereafter.
- The Real Estate Custom Index consists of 100% NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) through 03/31/2017 and 100% MSCI US REIT Index (USD) (Net) thereafter.
- The Private Equity Custom Index consists of 100% S&P 1500 Comp Index+4% (1 Qtr Lag) through 03/31/2017 and 100% MSCI US Small Cap Index (USD) (Gross) thereafter.

### Trust Accounts Comments

- The Potter Trust Fund and the Harold Hamm Endowment were added in 06/2016.
- MUS Workers Compensation was added in 04/2016.

### Manager Transition Comments

- Jacobs Levy Partial L/S (SA) was funded in 03/2018.
- Congress Mid Cap Growth (SA) was funded in 02/2018.
- Oaktree U.S. High Yield (SA) and Shenkman High Yield Fixed Income (SA) were funded in 12/2017.
- Analytic Investors 130/30 (SA) was liquidated in 09/2017.
- BlackRock MSCI US Equity Index (CF), BlackRock MSCI US Sm Cap Equity Index (CF), and iShares:Core S&P Md-Cp (IJH) were funded in 06/2017.
- SPDR S&P 500 ETF (SPY) and iShares:MSCI EAFE ETF (EFA) were re-funded in 06/2017.
- INTECH Enhanced Plus was liquidated in 06/2017.
- Residual assets from the liquidation of AllianceBernstein Int'l Value (SA), Martin Currie (SA), Hansberger Global Investors (SA), and Aberdeen Total Return Bond Strategy (SA) were distributed in 06/2017.
- BlackRock Equity Index Fund A (CF) and BlackRock Mid Cap Equity Index A (CF) were liquidated in 05/2017.
- DFA Emg Mkts Sm Cap;I (DEMSX) was funded in 02/2017.
- SPDR S&P 500 ETF (SPY) was liquidated in 01/2017.
- iShares:MSCI Em Mkts (EEM) was funded in 12/2016.
- SPDR S&P 500 ETF (SPY) was initially funded in 09/2015, was then liquidated in 12/2015, and was re-funded in 10/2016.
- Wells Capital Management (SA), Domestic Equity Pool SPIF, and International Equity Pool SPIF were liquidated in 10/2016. Wells Capital Management (SA) residual assets from liquidation were distributed in 03/2017.
- Nicholas Investment Partners was liquidated in 07/2016. Residual assets from liquidation were distributed in 03/2017.
- Effective 07/2016, the Metropolitan West Capital Management legal entity merged into the Wells Capital Management Incorporated legal entity. The Metropolitan West Capital Mgmt (SA) has been updated to Wells Capital Management (SA) to reflect the change.
- iShares S&P SmallCap 600 Index ETF (IJR) was liquidated in 01/2016.
- Effective 05/2014, ING rebranded to Voya. The ING Investment Management (SA) has been updated to Voya Investment Management (SA) to reflect the change.

### Miscellaneous Comments

- Fiscal year ends on 06/30.

### Expense Ratios

• SPDR S&P 500 ETF (SPY):	0.09%
• Domestic Equity Pool STIF:	0.15%
• DFA Intl Sm Co;I (DFISX):	0.53%
• iShares:MSCI EAFE ETF (EFA):	0.32%
• International Equity Pool STIF:	0.18%
• iShares:MSCI Em Mkts (EEM):	0.69%

**Montana Board of Investments  
Addendum**

**As of March 31, 2018**

- DFA Emg Mkts Sm Cap;I (DEMSX): 0.73%
- iShares:Core S&P Md-Cp (IJH): 0.09%

PORTLAND

CHICAGO

NEW YORK

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