



Quarterly Investment Performance Analysis

Montana Board of Investments

Period Ended: March 31, 2021



2020 Greenwich *Quality Leader* Award

Coalition Greenwich recently announced that RVK is 1 of 3 firms among large US consultants to receive the 2020 Greenwich *Quality Leader* award.* RVK is proud to receive this recognition for the 4th consecutive year.

RVK ranked first (or tied for first) in 11 out of 14 key criteria:

- Advice on Long-term Asset Allocation (#1)
- Communication of Philosophy and Beliefs (#1)
- Proactive Advice and Innovative Ideas (#1)
- Usefulness of Written Investment Reviews (#1)
- Client Satisfaction with Manager Recommendations (#1)
- Responsiveness to Client Requests (#1)
- Sufficient Professional Resources to Meet Client Needs (#1)
- Reasonable Fees Relative to Services Delivered (#1)
- Timeliness in Providing Written Info/Reports (#1)
- Advice on DC Plan Structure and Design (tied for #1)
- Usefulness of Personal Meetings (tied for #1)



***We are deeply grateful for your continued confidence and support.
From all of us here at RVK, thank you for the opportunity to serve you!***

*Between July and October 2020, Coalition Greenwich (formerly known as Greenwich Associates) conducted in-person and phone interviews and online surveys with 856 individuals at 704 of the largest tax-exempt funds in the US—including corporate and union funds, public funds, endowments and foundations, insurance general accounts, and healthcare organizations, with either pension or investment pool assets greater than \$150 million. Study participants were asked to provide quantitative and qualitative evaluations of their asset managers and investment consultants, including qualitative assessments of those firms soliciting their business and detailed information on important market trends. RVK is one of three firms recognized in the large investment consultant category. The ratings may not be representative of any one client's experience with RVK; rather they are representative of those clients that chose to participate in the survey. The results are not indicative of RVK's future performance.

To read the Greenwich press release, please refer to the following URL: <https://www.greenwich.com/press-release/covid-19-crisis-put-investment-consultant-advisory-capabilities-test>



Montana Board of Investments
Comparative Performance
Retirement Plans

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Public Employees' Retirement - Net	3.98	19.85	31.08	9.75	10.00	8.40	8.84	6.89	11.94	16.77	-2.63	14.80	7.32	7.98	07/01/1994
Public Employees' Benchmark	4.19	22.94	42.24	10.23	10.21	8.68	9.29	N/A	11.58	20.45	-5.57	15.35	9.12	N/A	
Difference	-0.21	-3.09	-11.16	-0.48	-0.21	-0.28	-0.45	N/A	0.36	-3.68	2.94	-0.55	-1.80	N/A	
Public Employees' Retirement - Gross	4.06	20.24	31.68	10.35	10.57	8.94	9.40	7.32	12.53	17.44	-2.03	15.34	7.78	8.30	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	51	30	35	15	10	47	40	44	42	67	59	49	
Teachers' Retirement - Net	3.99	19.84	31.08	9.75	9.99	8.40	8.84	6.89	11.93	16.78	-2.64	14.76	7.33	7.99	07/01/1994
Teachers' Benchmark	4.19	22.91	42.19	10.21	10.19	8.67	9.28	N/A	11.55	20.42	-5.57	15.32	9.11	N/A	
Difference	-0.20	-3.07	-11.11	-0.46	-0.20	-0.27	-0.44	N/A	0.38	-3.64	2.93	-0.56	-1.78	N/A	
Teachers' Retirement - Gross	4.06	20.23	31.67	10.35	10.56	8.94	9.40	7.32	12.52	17.45	-2.03	15.31	7.80	8.31	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	51	30	35	15	10	47	41	44	42	68	58	49	
Police Retirement - Net	3.98	19.85	31.10	9.77	10.00	8.40	8.84	6.85	11.95	16.80	-2.63	14.79	7.32	7.85	07/01/1994
Police Benchmark	4.20	22.97	42.28	10.23	10.21	8.68	9.28	N/A	11.60	20.44	-5.57	15.33	9.11	N/A	
Difference	-0.22	-3.12	-11.18	-0.46	-0.21	-0.28	-0.44	N/A	0.35	-3.64	2.94	-0.54	-1.79	N/A	
Police Retirement - Gross	4.06	20.24	31.69	10.36	10.57	8.95	9.39	7.27	12.54	17.47	-2.02	15.33	7.78	8.17	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	51	30	35	14	10	53	40	43	42	67	59	59	

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. Since inception performance may vary from State Street reported performance due to calculation methodology differences. Retirement plan benchmarks' inception dates were updated to 1/1/2011.



Montana Board of Investments
Comparative Performance
Retirement Plans

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Firefighters' Retirement - Net	3.98	19.85	31.10	9.77	10.00	8.40	8.84	6.86	11.95	16.79	-2.62	14.79	7.32	7.84	07/01/1994
Firefighters' Benchmark	4.19	22.96	42.27	10.23	10.21	8.68	9.28	N/A	11.59	20.44	-5.57	15.33	9.12	N/A	
Difference	-0.21	-3.11	-11.17	-0.46	-0.21	-0.28	-0.44	N/A	0.36	-3.65	2.95	-0.54	-1.80	N/A	
Firefighters' Retirement - Gross	4.06	20.24	31.70	10.36	10.58	8.95	9.40	7.28	12.53	17.46	-2.01	15.34	7.78	8.16	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	51	30	35	14	10	51	40	43	42	67	59	59	
Sheriffs' Retirement - Net	3.98	19.85	31.09	9.75	10.00	8.40	8.84	6.88	11.94	16.75	-2.62	14.80	7.33	7.88	07/01/1994
Sheriffs' Benchmark	4.19	22.93	42.22	10.22	10.21	8.68	9.28	N/A	11.58	20.43	-5.56	15.35	9.13	N/A	
Difference	-0.21	-3.08	-11.13	-0.47	-0.21	-0.28	-0.44	N/A	0.36	-3.68	2.94	-0.55	-1.80	N/A	
Sheriffs' Retirement - Gross	4.06	20.24	31.68	10.35	10.57	8.94	9.39	7.30	12.53	17.42	-2.02	15.34	7.79	8.19	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	51	30	35	15	10	48	40	44	42	67	58	58	
Highway Patrol Retirement - Net	3.99	19.85	31.08	9.76	10.00	8.40	8.85	6.88	11.94	16.78	-2.62	14.79	7.30	7.87	07/01/1994
Highway Patrol Benchmark	4.21	22.94	42.24	10.24	10.22	8.69	9.29	N/A	11.60	20.45	-5.56	15.34	9.11	N/A	
Difference	-0.22	-3.09	-11.16	-0.48	-0.22	-0.29	-0.44	N/A	0.34	-3.67	2.94	-0.55	-1.81	N/A	
Highway Patrol Retirement - Gross	4.07	20.24	31.67	10.36	10.57	8.95	9.40	7.31	12.53	17.45	-2.01	15.33	7.77	8.19	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	51	30	35	14	10	48	40	44	41	67	59	58	

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. Since inception performance may vary from State Street reported performance due to calculation methodology differences. Retirement plan benchmarks' inception dates were updated to 1/1/2011.



Montana Board of Investments
Comparative Performance
Retirement Plans

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Game Wardens' Retirement - Net	3.99	19.83	31.07	9.74	10.00	8.40	8.83	6.85	11.91	16.77	-2.62	14.81	7.31	7.89	07/01/1994
Game Wardens' Benchmark	4.19	22.92	42.22	10.22	10.21	8.68	9.28	N/A	11.56	20.45	-5.56	15.36	9.14	N/A	
Difference	-0.20	-3.09	-11.15	-0.48	-0.21	-0.28	-0.45	N/A	0.35	-3.68	2.94	-0.55	-1.83	N/A	
Game Wardens' Retirement - Gross	4.06	20.22	31.67	10.34	10.57	8.94	9.38	7.27	12.50	17.44	-2.01	15.35	7.78	8.21	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	51	30	35	15	10	52	42	44	42	66	59	57	
Judges' Retirement - Net	3.99	19.85	31.11	9.75	10.00	8.40	8.84	6.89	11.94	16.78	-2.64	14.82	7.32	7.88	07/01/1994
Judges' Benchmark	4.19	22.95	42.27	10.24	10.22	8.69	9.29	N/A	11.59	20.47	-5.57	15.37	9.13	N/A	
Difference	-0.20	-3.10	-11.16	-0.49	-0.22	-0.29	-0.45	N/A	0.35	-3.69	2.93	-0.55	-1.81	N/A	
Judges' Retirement - Gross	4.06	20.24	31.70	10.35	10.58	8.95	9.39	7.31	12.53	17.45	-2.03	15.36	7.79	8.20	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	51	30	35	14	10	47	40	44	42	66	59	57	
Volunteer Firefighters' Retirement - Net	3.98	19.85	31.11	9.76	9.97	8.39	8.83	7.13	11.94	16.79	-2.64	14.79	7.16	7.69	07/01/1994
Volunteer Firefighters' Benchmark	4.20	22.97	42.31	10.23	10.21	8.68	9.29	N/A	11.59	20.47	-5.59	15.33	9.11	N/A	
Difference	-0.22	-3.12	-11.20	-0.47	-0.24	-0.29	-0.46	N/A	0.35	-3.68	2.95	-0.54	-1.95	N/A	
Volunteer Firefighters' Retirement - Gross	4.06	20.24	31.70	10.35	10.54	8.93	9.38	7.55	12.53	17.46	-2.04	15.34	7.63	8.01	07/01/1994
All Public Plans > \$3B Total Fund Median	3.59	20.10	31.70	9.43	10.27	8.04	8.26	7.28	12.00	17.25	-2.79	16.11	8.01	8.29	
Rank	32	49	50	30	36	15	10	27	40	43	42	67	67	68	

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. Since inception performance may vary from State Street reported performance due to calculation methodology differences. Retirement plan benchmarks' inception dates were updated to 1/1/2011.

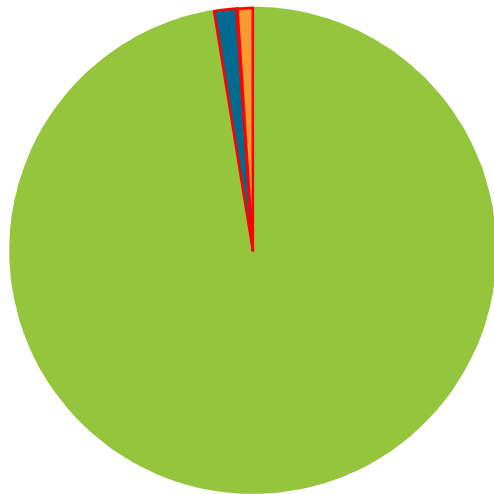


Montana Board of Investments
 Asset Allocation by Segment
 Retirement Plans

As of March 31, 2021

	Consolidated Asset Pension Pool (CAPP)		Short Term Investment Pool (STIP)		Total Fund	
	(\$)	%	(\$)	%	(\$)	%
Public Employees' Retirement	6,743,887,599	49.49	69,213,546	49.63	6,813,101,146	49.49
Teachers' Retirement	4,766,385,772	34.98	48,356,612	34.67	4,814,742,384	34.97
Firefighters' Retirement	553,706,927	4.06	5,796,799	4.16	559,503,726	4.06
Police Retirement	516,802,225	3.79	5,421,611	3.89	522,223,836	3.79
Sheriffs' Retirement	451,074,533	3.31	4,696,315	3.37	455,770,848	3.31
Game Wardens' Retirement	253,243,545	1.86	2,528,689	1.81	255,772,235	1.86
Highway Patrol Retirement	173,730,339	1.27	1,749,699	1.25	175,480,039	1.27
Judges' Retirement	124,153,562	0.91	1,247,869	0.89	125,401,431	0.91
Volunteer Firefighters' Retirement	44,488,790	0.33	447,086	0.32	44,935,877	0.33
Retirement Plans Total Fund Composite	13,627,473,294	98.99	139,458,227	1.01	13,766,931,520	100.00

March 31, 2021 : \$13,766,931,520

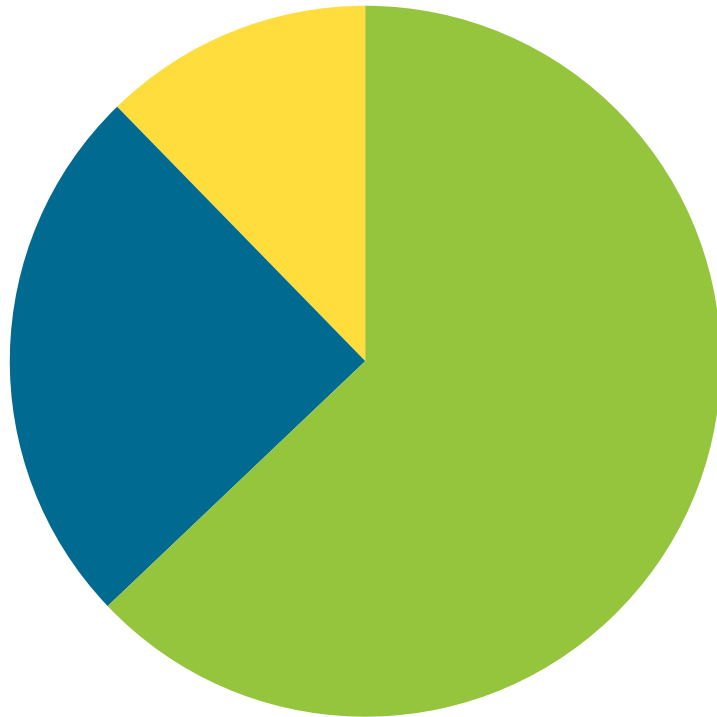


Segments	Market Value (\$)	Allocation (%)
CAPP Ex Cash	13,414,882,293	97.44
CAPP Cash Pension	203,250,493	1.48
CAPP Asset Class Cash	9,340,507	0.07
Short Term Investment Pool (STIP)	139,458,227	1.01
Total Cash	352,049,227	2.56

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, 2021 : \$21,664,238,303



	Market Value (\$)	Allocation (%)
Consolidated Asset Pension Pool (CAPP)	13,627,473,325	62.90
Short Term Investment Pool	5,371,517,239	24.79
Trust Funds Investment Pool	2,665,247,739	12.30

Allocations shown may not sum up to 100% exactly due to rounding. Market values do not include pending transactions.

Montana Board of Investments
Comparative Performance
Investment Pools

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Consolidated Asset Pension Pool (CAPP)	4.03	20.09	31.50	9.89	N/A	N/A	N/A	12.10	17.12	-2.74	N/A	N/A	10.07	04/01/2017
CAPP Custom Benchmark	4.24	23.22	42.81	10.37	N/A	N/A	N/A	11.73	20.88	-5.73	N/A	N/A	10.11	
Difference	-0.21	-3.13	-11.31	-0.48	N/A	N/A	N/A	0.37	-3.76	2.99	N/A	N/A	-0.04	
Trust Funds Investment Pool	-2.24	-0.51	3.04	5.09	3.76	4.09	4.44	7.23	8.98	0.45	4.01	4.02	5.99	10/01/1995
Bloomberg US Agg Bond Index	-3.38	-2.13	0.71	4.65	3.10	3.31	3.44	7.51	8.72	0.01	3.54	2.65	5.08	
Difference	1.14	1.62	2.33	0.44	0.66	0.78	1.00	-0.28	0.26	0.44	0.47	1.37	0.91	
Short Term Investment Pool	0.04	0.19	0.38	1.55	1.32	1.00	0.77	0.73	2.28	1.98	1.11	0.61	2.36	04/01/1997
Short Term Custom Index	0.01	0.06	0.09	1.34	1.20	0.92	0.71	0.36	2.14	1.95	1.15	0.52	2.27	
Difference	0.03	0.13	0.29	0.21	0.12	0.08	0.06	0.37	0.14	0.03	-0.04	0.09	0.09	
iMoney.net Money Fund (Gross) Median	0.05	0.16	0.42	1.65	1.41	1.08	0.83	0.73	2.45	2.15	1.21	0.61	2.35	
Difference	-0.01	0.03	-0.04	-0.10	-0.09	-0.08	-0.06	0.00	-0.17	-0.17	-0.10	0.00	0.01	

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. See the 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, 2021

March 31, 2021 : \$13,627,473,425



	Market Value (\$)	Allocation (%)
Domestic Equity	4,326,137,263	31.75
International Equity	2,538,817,396	18.63
Core Fixed Income	2,051,555,164	15.05
Private Investments	1,893,489,895	13.89
Real Estate	1,243,638,846	9.13
Non-Core Fixed Income	794,990,854	5.83
Real Assets*	575,593,514	4.22
Cash Pension	203,250,493	1.49

Allocations shown may not sum up to 100% due to rounding.
 *Formerly the Natural Resources pension asset class.



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

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Domestic Equity	7.46	34.72	63.74	16.32	15.97	12.96	13.43	20.09	30.75	-7.09	20.79	11.46	10.33	05/01/2003
Domestic Equity Custom Index	6.29	33.16	62.82	17.20	16.60	13.69	13.96	21.10	31.14	-5.20	21.05	13.03	11.06	
Difference	1.17	1.56	0.92	-0.88	-0.63	-0.73	-0.53	-1.01	-0.39	-1.89	-0.26	-1.57	-0.73	
International Equity	3.59	30.66	54.12	7.23	10.39	6.05	5.48	13.35	22.86	-14.99	28.67	3.87	5.36	04/01/1997
International Equity Custom Index	3.77	29.91	51.94	6.51	9.84	5.45	5.09	11.12	21.63	-14.76	27.81	4.41	5.56	
Difference	-0.18	0.75	2.18	0.72	0.55	0.60	0.39	2.23	1.23	-0.23	0.86	-0.54	-0.20	
Core Fixed Income	-3.32	-1.94	1.50	4.43	2.91	3.30	3.70	8.23	6.90	0.95	2.29	3.19	5.86	04/01/1995
Core Fixed Income Custom Index	-3.37	-2.12	0.71	3.96	2.60	2.95	3.19	7.51	6.39	0.68	2.57	2.65	5.20	
Difference	0.05	0.18	0.79	0.47	0.31	0.35	0.51	0.72	0.51	0.27	-0.28	0.54	0.66	
Non-Core Fixed Income	-0.44	9.91	19.83	6.03	6.36	4.62	5.87	6.37	13.98	-2.27	5.99	12.47	7.95	06/01/2009
Bloomberg US HY 2% Issuer Cap Index	0.86	12.27	23.65	6.82	8.04	5.42	6.47	7.05	14.32	-2.08	7.50	17.13	9.06	
Difference	-1.30	-2.36	-3.82	-0.79	-1.68	-0.80	-0.60	-0.68	-0.34	-0.19	-1.51	-4.66	-1.11	
Real Assets	6.03	9.87	9.71	-1.65	N/A	N/A	N/A	-13.43	-2.18	5.55	N/A	N/A	0.13	04/01/2017
Real Assets Custom Index	5.04	25.27	50.50	-1.84	4.99	-1.90	-2.82	-12.32	13.06	-11.75	13.70	32.44	1.50	
Difference	0.99	-15.40	-40.79	0.19	N/A	N/A	N/A	-1.11	-15.24	17.30	N/A	N/A	-1.37	
Real Estate	3.22	5.35	5.68	5.59	6.77	8.56	9.24	-0.35	6.97	9.19	9.17	8.82	3.98	06/01/2006
Real Estate Custom Index	1.10	-0.41	11.25	2.00	1.81	4.81	7.07	-19.66	25.84	-4.57	5.99	9.08	4.34	
Difference	2.12	5.76	-5.57	3.59	4.96	3.75	2.17	19.31	-18.87	13.76	3.18	-0.26	-0.36	
Cash Pension	0.05	0.16	0.36	1.56	N/A	N/A	N/A	0.84	2.28	2.00	N/A	N/A	1.49	05/01/2017
Short Term Custom Index	0.01	0.06	0.09	1.34	1.20	0.92	0.71	0.36	2.14	1.95	1.15	0.52	1.35	
Difference	0.04	0.10	0.27	0.22	N/A	N/A	N/A	0.48	0.14	0.05	N/A	N/A	0.14	
Private Investments*	7.40	24.15	18.33	13.22	12.99	11.91	12.51	10.91	12.95	11.55	15.20	7.37	12.44	05/01/2002
Private Investments Custom Index	10.52	50.45	91.17	14.83	15.18	14.02	16.03	18.90	27.38	-9.99	20.59	20.11	12.14	
Difference	-3.12	-26.30	-72.84	-1.61	-2.19	-2.11	-3.52	-7.99	-14.43	21.54	-5.39	-12.74	0.30	

For additional information on the Private Investments Custom Index, please see the Addendum.

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

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
Investment Pools

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Domestic Equity	7.52	34.96	64.11	16.65	16.30	13.28	13.77	20.37	31.13	-6.78	21.16	11.77	10.62	05/01/2003
All Public Plans-US Equity Segment Median	6.78	33.78	63.57	15.98	16.09	12.75	13.32	18.92	30.04	-5.83	20.31	12.78	11.02	
Rank	30	40	44	36	41	27	28	32	28	74	31	74	71	
Population	74	68	66	61	57	54	40	67	65	66	89	90	14	
International Equity	3.67	30.96	54.59	7.58	10.74	6.39	5.83	13.71	23.28	-14.72	29.06	4.24	5.78	04/01/1997
All Public Plans-Intl. Equity Segment Median	4.23	31.61	54.76	8.18	10.96	6.72	6.62	12.76	23.71	-13.63	28.75	4.00	N/A	
Rank	66	62	51	67	61	73	80	45	62	78	46	44	N/A	
Population	70	66	66	62	61	56	40	68	65	68	84	88	N/A	
Core Fixed Income	-3.30	-1.89	1.56	4.48	2.95	3.34	3.74	8.29	6.94	1.00	2.34	3.21	5.99	04/01/1995
All Public Plans-US Fixed Income Segment Median	-2.74	0.75	5.80	5.34	4.05	3.88	4.14	8.59	9.25	-0.25	4.59	4.61	N/A	
Rank	73	86	81	85	95	85	77	58	86	12	90	73	N/A	
Population	75	72	70	65	64	61	47	74	68	72	85	90	N/A	
Trust Funds Investment Pool	-2.22	-0.45	3.12	5.17	3.84	4.17	4.53	7.30	9.06	0.53	4.10	4.12	6.05	10/01/1995
All Public Plans-US Fixed Income Segment Median	-2.74	0.75	5.80	5.34	4.05	3.88	4.14	8.59	9.25	-0.25	4.59	4.61	N/A	
Rank	38	72	69	55	59	43	40	78	53	22	62	61	N/A	
Population	75	72	70	65	64	61	47	74	68	72	85	90	N/A	
Real Estate	3.38	5.96	6.79	7.13	8.42	10.11	10.83	1.11	8.65	11.12	10.91	10.26	5.42	06/01/2006
All Public Plans-Real Estate Segment Median	2.37	4.72	3.34	6.26	7.34	9.33	10.47	1.66	7.65	9.04	8.84	9.98	N/A	
Rank	22	30	14	29	29	24	40	72	39	15	26	47	N/A	
Population	46	40	39	30	25	18	14	38	35	27	32	28	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, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Domestic Large Cap Equity - Net	6.63	32.50	60.97	17.65	16.79	13.93	14.05	21.44	31.06	-4.71	21.66	11.30	9.82	12/01/2006
S&P 500 Index (Cap Wtd)	6.17	29.71	56.35	16.78	16.29	13.59	13.91	18.40	31.49	-4.38	21.83	11.96	9.80	
Difference	0.46	2.79	4.62	0.87	0.50	0.34	0.14	3.04	-0.43	-0.33	-0.17	-0.66	0.02	
Domestic Large Cap Equity - Gross	6.68	32.67	61.25	17.87	16.98	14.12	14.25	21.66	31.29	-4.52	21.82	11.45	10.04	12/01/2006
IM U.S. Large Cap Equity (SA+CF) Median	6.64	30.88	59.60	16.53	16.26	13.30	13.82	17.85	30.27	-5.01	21.73	11.07	10.03	
Rank	50	41	41	34	38	35	38	34	41	45	49	47	49	
Domestic Large Cap Active - Net	8.23	34.74	63.18	17.79	16.85	13.90	14.08	21.48	31.03	-5.88	21.85	9.63	9.52	07/01/2007
S&P 500 Index (Cap Wtd)	6.17	29.71	56.35	16.78	16.29	13.59	13.91	18.40	31.49	-4.38	21.83	11.96	9.59	
Difference	2.06	5.03	6.83	1.01	0.56	0.31	0.17	3.08	-0.46	-1.50	0.02	-2.33	-0.07	
Domestic Large Cap Active - Gross	8.37	35.32	64.13	18.50	17.48	14.50	14.66	22.24	31.82	-5.34	22.40	10.12	10.05	07/01/2007
IM U.S. Large Cap Equity (SA+CF) Median	6.64	30.88	59.60	16.56	16.26	13.31	13.84	17.90	30.27	-5.01	21.73	11.07	9.81	
Rank	40	29	29	31	33	30	32	33	34	55	43	58	42	
Domestic Mid Cap Equity - Net	13.54	47.84	83.41	13.84	14.25	10.24	11.70	13.53	28.03	-10.75	19.45	12.30	9.64	01/01/2005
Russell Mid Cap Index	8.14	39.35	73.64	14.73	14.67	11.65	12.47	17.10	30.54	-9.06	18.52	13.80	10.32	
Difference	5.40	8.49	9.77	-0.89	-0.42	-1.41	-0.77	-3.57	-2.51	-1.69	0.93	-1.50	-0.68	
Domestic Mid Cap Equity - Gross	13.54	47.84	83.41	14.00	14.62	10.69	12.19	13.53	28.11	-10.28	20.18	12.97	10.11	01/01/2005
IM U.S. Mid Cap Equity (SA+CF) Median	8.69	40.59	74.49	14.51	15.09	11.54	12.72	14.95	30.14	-9.08	19.52	12.76	10.92	
Rank	27	25	26	55	54	68	61	58	65	58	48	49	82	
Domestic Small Cap Equity - Net	14.74	54.45	88.04	13.52	15.19	10.91	11.81	13.07	25.76	-10.51	15.65	19.31	12.49	03/01/2003
Russell 2000 Index	12.70	55.36	94.85	14.76	16.35	11.05	11.68	19.96	25.53	-11.01	14.65	21.31	12.06	
Difference	2.04	-0.91	-6.81	-1.24	-1.16	-0.14	0.13	-6.89	0.23	0.50	1.00	-2.00	0.43	
Domestic Small Cap Equity - Gross	14.86	54.92	88.75	13.97	15.74	11.49	12.45	13.50	26.25	-10.09	16.27	19.97	13.04	03/01/2003
IM U.S. Small Cap Equity (SA+CF) Median	13.60	53.90	94.07	14.80	16.11	11.53	12.64	16.51	25.86	-10.62	15.16	20.87	13.40	
Rank	43	48	63	55	54	51	54	57	48	48	44	57	59	

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, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
International Large Cap Passive - Net	3.59	28.71	49.65	6.62	10.00	5.64	5.18	10.81	21.59	-14.04	27.79	4.87	7.45	06/01/2009
MSCI ACW Ex US Index (USD) (Net)	3.49	28.67	49.41	6.51	9.76	5.26	4.93	10.65	21.51	-14.20	27.19	4.50	7.23	
Difference	0.10	0.04	0.24	0.11	0.24	0.38	0.25	0.16	0.08	0.16	0.60	0.37	0.22	
International Large Cap Passive - Gross	3.60	28.76	49.74	6.68	10.08	5.72	5.26	10.88	21.66	-13.98	27.88	4.96	7.53	06/01/2009
International Equity Active - Net	3.63	32.92	59.55	8.26	11.11	7.14	6.48	15.91	25.83	-16.18	30.82	2.63	4.44	04/01/1997
MSCI ACW Ex US Index (USD) (Net)	3.49	28.67	49.41	6.51	9.76	5.26	4.93	10.65	21.51	-14.20	27.19	4.50	5.62	
Difference	0.14	4.25	10.14	1.75	1.35	1.88	1.55	5.26	4.32	-1.98	3.63	-1.87	-1.18	
International Equity Active - Gross	3.76	33.42	60.34	8.81	11.69	7.69	7.00	16.50	26.48	-15.73	31.50	3.17	4.96	04/01/1997
IM International Large Cap Core Equity (SA+CF) Median	4.04	28.41	50.45	7.02	9.80	6.21	6.83	10.83	23.88	-14.34	26.34	1.60	7.03	
Rank	55	18	14	29	25	19	46	28	29	68	12	31	100	
International Value - Net	4.69	32.61	52.34	5.94	10.26	5.85	5.34	9.31	20.76	-13.97	30.72	5.59	3.30	11/01/2006
MSCI ACW Ex US Val Index (USD) (Net)	7.06	31.85	48.68	2.40	7.25	2.61	3.02	-0.77	15.72	-13.97	22.66	8.92	2.55	
Difference	-2.37	0.76	3.66	3.54	3.01	3.24	2.32	10.08	5.04	0.00	8.06	-3.33	0.75	
International Value - Gross	4.82	33.11	53.09	6.48	10.83	6.40	5.90	9.87	21.37	-13.52	31.39	6.17	3.88	11/01/2006
IM International Large Cap Value Equity (SA+CF) Median	6.07	32.15	52.00	5.68	8.95	5.18	6.23	5.02	21.17	-14.58	26.02	4.29	4.89	
Rank	68	44	46	40	26	23	60	33	47	39	12	31	69	
International Growth - Net	1.99	31.15	59.38	11.90	11.92	8.16	6.89	23.08	31.39	-16.09	28.01	0.51	5.06	11/01/2006
MSCI ACW Ex US Grth Index (USD) (Net)	-0.08	25.40	49.36	10.31	12.03	7.74	6.69	22.20	27.34	-14.43	32.01	0.12	5.54	
Difference	2.07	5.75	10.02	1.59	-0.11	0.42	0.20	0.88	4.05	-1.66	-4.00	0.39	-0.48	
International Growth - Gross	2.12	31.67	60.22	12.51	12.55	8.75	7.44	23.74	32.10	-15.61	28.74	1.12	5.61	11/01/2006
IM International Large Cap Growth Equity (SA+CF) Median	1.15	28.46	54.48	10.86	12.61	8.33	8.44	20.41	28.38	-13.91	31.26	-0.04	6.49	
Rank	31	27	25	34	52	44	72	38	18	66	68	34	73	
International Small Cap - Net	4.76	36.01	69.78	6.16	10.57	6.80	7.10	14.63	23.91	-18.90	33.61	1.84	5.73	09/01/2006
MSCI ACWI Ex US Sm Cap Index IMI (USD) (Net)	5.53	38.25	69.82	6.61	10.40	6.67	6.32	14.24	22.42	-18.20	31.65	3.91	6.25	
Difference	-0.77	-2.24	-0.04	-0.45	0.17	0.13	0.78	0.39	1.49	-0.70	1.96	-2.07	-0.52	

Gross of fees performance is not available (N/A) for the International Small Cap composite which currently consists of DFA Intl Sm Co;I (DFISX), DFA Emg Mkts Sm Cap;I (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, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Domestic Large Cap Passive - Net	5.49	30.78	59.09	17.47	16.65	13.76	14.04	21.33	30.99	-3.94	21.34	12.01	7.06	05/01/2000
S&P 500 Index (Cap Wtd)	6.17	29.71	56.35	16.78	16.29	13.59	13.91	18.40	31.49	-4.38	21.83	11.96	6.99	
Difference	-0.68	1.07	2.74	0.69	0.36	0.17	0.13	2.93	-0.50	0.44	-0.49	0.05	0.07	
Domestic Large Cap Passive - Gross	5.50	30.79	59.11	17.48	16.66	13.77	14.05	21.35	31.00	-3.93	21.35	12.03	7.10	05/01/2000
IM U.S. Large Cap Index Equity (SA+CF) Median	6.18	31.76	59.50	17.07	16.58	13.59	13.90	19.39	31.42	-4.75	21.74	12.02	7.19	
Rank	84	54	54	22	37	22	22	20	66	20	61	49	54	
Domestic Large Cap Enhanced - Net	5.14	30.68	57.67	16.69	16.60	13.92	14.16	18.62	32.81	-4.20	24.21	9.73	9.97	06/01/2006
S&P 500 Index (Cap Wtd)	6.17	29.71	56.35	16.78	16.29	13.59	13.91	18.40	31.49	-4.38	21.83	11.96	10.25	
Difference	-1.03	0.97	1.32	-0.09	0.31	0.33	0.25	0.22	1.32	0.18	2.38	-2.23	-0.28	
Domestic Large Cap Enhanced - Gross	5.21	30.96	58.11	17.01	16.91	14.25	14.49	18.97	33.17	-3.96	24.53	10.05	10.29	06/01/2006
IM U.S. Large Cap Core Equity (SA+CF) Median	6.74	30.56	57.18	16.15	16.14	13.25	13.77	17.19	30.06	-5.17	21.85	10.63	10.38	
Rank	75	48	46	35	31	24	24	39	15	30	21	58	57	
Domestic Large Cap 130/30 - Net	8.86	35.58	64.32	17.73	16.61	13.54	14.12	21.97	30.67	-7.10	20.28	9.54	11.28	03/01/2008
S&P 500 Index (Cap Wtd)	6.17	29.71	56.35	16.78	16.29	13.59	13.91	18.40	31.49	-4.38	21.83	11.96	11.02	
Difference	2.69	5.87	7.97	0.95	0.32	-0.05	0.21	3.57	-0.82	-2.72	-1.55	-2.42	0.26	
Domestic Large Cap 130/30 - Gross	9.02	36.22	65.36	18.57	17.42	14.31	14.89	22.79	31.57	-6.32	21.10	10.22	12.03	03/01/2008
IM U.S. Large Cap Core Equity (SA+CF) Median	6.74	30.56	57.18	16.15	16.14	13.25	13.77	17.13	30.06	-5.17	21.85	10.63	11.09	
Rank	27	18	17	15	24	21	16	24	33	71	63	56	20	

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, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Domestic Large Cap Equity														
BlackRock MSCI US Equity Index (SA) - Net	5.49	30.85	59.29	N/A	N/A	N/A	N/A	21.33	N/A	N/A	N/A	N/A	21.60	04/01/2019
MSCI US Index (USD) (Gross)	5.48	30.86	59.33	17.44	16.75	13.79	14.06	21.37	31.64	-4.50	21.90	11.61	21.64	
Difference	0.01	-0.01	-0.04	N/A	N/A	N/A	N/A	-0.04	N/A	N/A	N/A	N/A	-0.04	
BlackRock MSCI US Equity Index (SA) - Gross	5.49	30.86	59.31	N/A	N/A	N/A	N/A	21.34	N/A	N/A	N/A	N/A	21.61	04/01/2019
IM U.S. Large Cap Core Equity (SA+CF) Median	6.74	30.56	57.18	16.15	16.14	13.25	13.77	17.19	30.06	-5.17	21.85	10.63	20.27	
Rank	72	49	41	N/A	N/A	N/A	N/A	28	N/A	N/A	N/A	N/A	31	
SPDR S&P 500 ETF (SPY) - Net	6.28	29.87	56.12	17.56	N/A	N/A	N/A	19.28	31.49	-5.30	N/A	N/A	16.26	07/01/2017
S&P 500 Index (Cap Wtd)	6.17	29.71	56.35	16.78	16.29	13.59	13.91	18.40	31.49	-4.38	21.83	11.96	16.29	
Difference	0.11	0.16	-0.23	0.78	N/A	N/A	N/A	0.88	0.00	-0.92	N/A	N/A	-0.03	
Northern Trust MSCI US Index (SA) - Net	5.49	30.84	59.30	N/A	N/A	N/A	N/A	21.34	31.70	N/A	N/A	N/A	20.32	11/01/2018
MSCI US Index (USD) (Gross)	5.48	30.86	59.33	17.44	16.75	13.79	14.06	21.37	31.64	-4.50	21.90	11.61	20.31	
Difference	0.01	-0.02	-0.03	N/A	N/A	N/A	N/A	-0.03	0.06	N/A	N/A	N/A	0.01	
Northern Trust MSCI US Index (SA) - Gross	5.49	30.85	59.31	N/A	N/A	N/A	N/A	21.36	31.71	N/A	N/A	N/A	20.33	11/01/2018
IM U.S. Large Cap Core Equity (SA+CF) Median	6.74	30.56	57.18	16.15	16.14	13.25	13.77	17.19	30.06	-5.17	21.85	10.63	18.93	
Rank	72	49	41	N/A	N/A	N/A	N/A	28	33	N/A	N/A	N/A	33	
T. Rowe U.S. Structured Research (SA) - Net	5.55	31.18	58.28	16.84	16.85	14.05	14.25	18.62	32.81	-4.20	23.94	10.68	10.72	06/01/2006
S&P 500 Index (Cap Wtd)	6.17	29.71	56.35	16.78	16.29	13.59	13.91	18.40	31.49	-4.38	21.83	11.96	10.25	
Difference	-0.62	1.47	1.93	0.06	0.56	0.46	0.34	0.22	1.32	0.18	2.11	-1.28	0.47	
T. Rowe U.S. Structured Research (SA) - Gross	5.62	31.46	58.72	17.16	17.16	14.36	14.58	18.97	33.17	-3.96	24.24	10.98	11.05	06/01/2006
IM U.S. Large Cap Core Equity (SA+CF) Median	6.74	30.56	57.18	16.15	16.14	13.25	13.77	17.13	30.06	-5.17	21.85	10.63	10.38	
Rank	71	43	43	32	27	20	23	39	15	30	25	47	26	
Jacobs Levy 130/30 (SA) - Net	11.13	37.83	64.38	16.67	N/A	N/A	N/A	17.03	31.63	N/A	N/A	N/A	16.67	04/01/2018
MSCI US Index (USD) (Gross)	5.48	30.86	59.33	17.44	16.75	13.79	14.06	21.37	31.64	-4.50	21.90	11.61	17.44	
Difference	5.65	6.97	5.05	-0.77	N/A	N/A	N/A	-4.34	-0.01	N/A	N/A	N/A	-0.77	
Jacobs Levy 130/30 (SA) - Gross	11.30	38.50	65.43	17.52	N/A	N/A	N/A	17.81	32.55	N/A	N/A	N/A	17.52	04/01/2018
IM U.S. Large Cap Core Equity (SA+CF) Median	6.74	30.56	57.18	16.15	16.14	13.25	13.77	17.19	30.06	-5.17	21.85	10.63	16.15	
Rank	15	12	17	26	N/A	N/A	N/A	47	22	N/A	N/A	N/A	26	

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, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
J.P. Morgan 130/30 (SA) - Net	6.16	32.28	63.14	18.62	17.85	14.10	14.51	27.16	30.55	-6.93	22.86	10.30	12.28	03/01/2008
JPM US Equity Custom Benchmark	5.48	30.86	59.33	17.46	16.70	13.88	14.11	21.37	31.37	-4.38	21.83	11.96	11.17	
Difference	0.68	1.42	3.81	1.16	1.15	0.22	0.40	5.79	-0.82	-2.55	1.03	-1.66	1.11	
J.P. Morgan 130/30 (SA) - Gross	6.29	32.88	64.14	19.45	18.70	14.92	15.34	28.00	31.42	-6.13	23.79	11.09	13.09	03/01/2008
IM U.S. Large Cap Core Equity (SA+CF) Median	6.74	30.56	57.18	16.15	16.14	13.25	13.77	17.13	30.06	-5.17	21.85	10.63	11.09	
Rank	61	32	20	7	11	11	7	5	36	67	28	46	3	
Domestic Mid Cap Equity														
iShares:Core S&P Md-Cp (IJH) - Net	13.54	47.84	83.41	13.20	N/A	N/A	N/A	13.53	26.24	-13.95	N/A	N/A	12.14	07/01/2017
S&P Mid Cap 400 Index (Cap Wtd)	13.47	47.86	83.46	13.40	14.37	11.31	11.92	13.66	26.20	-11.08	16.24	20.74	13.11	
Difference	0.07	-0.02	-0.05	-0.20	N/A	N/A	N/A	-0.13	0.04	-2.87	N/A	N/A	-0.97	

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, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Domestic Small Cap Equity														
Vaughan Nelson Management (SA) - Net	12.65	50.88	75.58	10.88	11.44	9.12	10.29	9.83	25.34	-13.78	6.83	20.50	9.92	03/01/2007
Russell 2000 Val Index	21.17	65.72	97.05	11.57	13.56	8.93	10.06	4.63	22.39	-12.86	7.84	31.74	7.22	
Difference	-8.52	-14.84	-21.47	-0.69	-2.12	0.19	0.23	5.20	2.95	-0.92	-1.01	-11.24	2.70	
Vaughan Nelson Management (SA) - Gross	12.85	51.68	76.82	11.69	12.28	9.96	11.17	10.64	26.25	-13.13	7.66	21.49	10.82	03/01/2007
IM U.S. Small Cap Value Equity (SA+CF) Median	18.86	59.27	92.55	11.17	13.22	9.42	11.11	5.19	25.07	-14.11	11.61	26.80	9.26	
Rank	87	74	81	43	66	41	48	28	35	38	77	76	19	
BlackRock MSCI US Sm Cap Equity Index (CF) - Net	12.83	53.58	95.13	15.61	N/A	N/A	N/A	18.93	27.30	-9.96	N/A	N/A	15.24	07/01/2017
MSCI US Sm Cap Index (USD) (Net)	12.75	53.12	94.35	15.08	15.91	11.28	12.02	18.32	26.74	-10.40	16.75	19.15	14.70	
Difference	0.08	0.46	0.78	0.53	N/A	N/A	N/A	0.61	0.56	0.44	N/A	N/A	0.54	
BlackRock MSCI US Sm Cap Equity Index (CF) - Gross	12.84	53.61	95.18	15.65	N/A	N/A	N/A	18.96	27.34	-9.93	N/A	N/A	15.28	07/01/2017
DFA US Sm Cap Tr (CF) - Net	17.97	58.47	94.97	12.49	13.98	10.28	11.76	11.63	21.66	-12.27	11.86	24.42	12.57	03/01/2003
Russell 2000 Index	12.70	55.36	94.85	14.76	16.35	11.05	11.68	19.96	25.53	-11.01	14.65	21.31	12.06	
Difference	5.27	3.11	0.12	-2.27	-2.37	-0.77	0.08	-8.33	-3.87	-1.26	-2.79	3.11	0.51	
DFA US Sm Cap Tr (CF) - Gross	18.07	58.87	95.57	12.88	14.37	10.66	12.15	11.98	22.07	-11.95	12.25	24.85	12.90	03/01/2003
IM U.S. Small Cap Core Equity (SA+CF) Median	13.83	53.92	92.88	15.00	16.11	12.06	12.74	17.76	25.11	-10.69	15.13	20.77	13.41	
Rank	23	29	40	68	78	75	66	73	73	64	72	21	61	
iShares:Russ 2000 ETF (IWM) - Net	12.89	55.96	96.83	N/A	N/A	N/A	N/A	20.90	25.52	N/A	N/A	N/A	15.20	05/01/2018
Russell 2000 Index	12.70	55.36	94.85	14.76	16.35	11.05	11.68	19.96	25.53	-11.01	14.65	21.31	14.87	
Difference	0.19	0.60	1.98	N/A	N/A	N/A	N/A	0.94	-0.01	N/A	N/A	N/A	0.33	

Gross of fees performance is not available (N/A) for the following funds: SPDR S&P 500 ETF (SPY), iShares:Core S&P Md-Cp (IJH), and iShares:Russ 2000 ETF (IWM).

The current annual expense ratios for the SPDR S&P 500 ETF (SPY), iShares:Core S&P Md-Cp (IJH), and iShares:Russ 2000 ETF (IWM) are 0.09%, 0.05%, and 0.19%, respectively.

See the Addendum for custom index specification.

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, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
International Developed Large Cap Equity														
Acadian Asset Non-US Equity (SA) - Net	8.85	38.41	58.86	6.72	13.07	7.51	7.31	8.89	19.38	-13.44	34.76	12.40	4.45	11/01/2006
MSCI ACW Ex US Val Index (USD) (Net)	7.06	31.85	48.68	2.40	7.25	2.61	3.02	-0.77	15.72	-13.97	22.66	8.92	2.55	
Difference	1.79	6.56	10.18	4.32	5.82	4.90	4.29	9.66	3.66	0.53	12.10	3.48	1.90	
Acadian Asset Non-US Equity (SA) - Gross	8.99	38.93	59.65	7.27	13.65	8.07	7.88	9.45	19.98	-12.99	35.45	13.01	5.02	11/01/2006
IM ACWI Ex US Value (SA+CF) Median	6.26	34.87	57.35	7.01	10.67	5.68	6.13	6.65	21.34	-14.78	26.02	4.87	4.87	
Rank	18	28	40	46	14	15	22	44	59	26	8	10	49	
Lazard Asset Management (SA) - Net	1.93	28.79	48.03	5.40	7.98	N/A	N/A	9.59	21.70	-14.32	27.00	0.22	5.28	06/01/2015
Lazard Custom Index	3.49	28.67	49.41	6.06	9.53	4.16	4.12	10.65	21.51	-15.55	22.66	8.92	5.08	
Difference	-1.56	0.12	-1.38	-0.66	-1.55	N/A	N/A	-1.06	0.19	1.23	4.34	-8.70	0.20	
Lazard Asset Management (SA) - Gross	2.06	29.26	48.75	5.93	8.53	N/A	N/A	10.14	22.31	-13.88	27.65	0.77	5.83	06/01/2015
IM ACWI Ex US Value (SA+CF) Median	6.26	34.87	57.35	7.01	10.67	5.68	6.13	6.65	21.34	-14.78	26.02	4.87	6.68	
Rank	92	81	75	63	69	N/A	N/A	42	43	35	38	86	67	
BlackRock ACW Ex US SuperFund A (CF) - Net	3.56	28.76	49.66	6.78	10.00	5.48	5.14	10.81	21.77	-13.99	27.49	4.77	7.43	06/01/2009
MSCI ACW Ex US Index (USD) (Net)	3.49	28.67	49.41	6.51	9.76	5.26	4.93	10.65	21.51	-14.20	27.19	4.50	7.23	
Difference	0.07	0.09	0.25	0.27	0.24	0.22	0.21	0.16	0.26	0.21	0.30	0.27	0.20	
BlackRock ACW Ex US SuperFund A (CF) - Gross	3.58	28.83	49.77	6.85	10.08	5.56	5.22	10.89	21.85	-13.93	27.58	4.86	7.52	06/01/2009
IM All ACWI Ex US (SA+CF) Median	3.25	31.26	55.53	8.34	10.85	6.50	7.00	14.60	24.97	-14.64	28.74	2.12	9.20	
Rank	45	66	73	64	63	70	91	60	66	43	62	25	86	
iShares:MSCI EAFE ETF (EFA) - Net	3.99	25.82	45.38	5.97	N/A	N/A	N/A	7.71	22.03	-12.88	N/A	N/A	7.21	07/01/2017
MSCI EAFE Index (USD) (Net)	3.48	25.84	44.57	6.02	8.85	4.80	5.52	7.82	22.01	-13.79	25.03	1.00	7.01	
Difference	0.51	-0.02	0.81	-0.05	N/A	N/A	N/A	-0.11	0.02	0.91	N/A	N/A	0.20	
Baillie Gifford (SA) - Net	0.88	34.25	69.11	14.87	14.72	N/A	N/A	34.22	34.34	-17.35	31.99	0.73	11.18	06/01/2015
MSCI ACW Ex US Grth Index (USD) (Net)	-0.08	25.40	49.36	10.31	12.03	7.74	6.69	22.20	27.34	-14.43	32.01	0.12	8.45	
Difference	0.96	8.85	19.75	4.56	2.69	N/A	N/A	12.02	7.00	-2.92	-0.02	0.61	2.73	
Baillie Gifford (SA) - Gross	0.99	34.71	69.88	15.42	15.29	N/A	N/A	34.86	34.99	-16.93	32.66	1.28	11.74	06/01/2015
IM ACWI Ex US Growth (SA+CF) Median	1.15	28.82	55.34	10.99	13.36	8.93	8.76	22.06	29.57	-13.78	32.56	-0.76	9.84	
Rank	54	9	10	13	22	N/A	N/A	12	9	85	49	33	22	

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. See the Addendum for custom index specification.



Montana Board of Investments
Comparative Performance
International Equity Managers

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Invesco (SA) - Net	2.95	28.64	51.98	9.61	9.73	N/A	N/A	14.84	29.29	-15.17	24.92	0.32	7.05	06/01/2015
MSCI ACW Ex US Grth Index (USD) (Net)	-0.08	25.40	49.36	10.31	12.03	7.74	6.69	22.20	27.34	-14.43	32.01	0.12	8.45	
Difference	3.03	3.24	2.62	-0.70	-2.30	N/A	N/A	-7.36	1.95	-0.74	-7.09	0.20	-1.40	
Invesco (SA) - Gross	3.09	29.19	52.84	10.26	10.40	N/A	N/A	15.51	30.05	-14.64	25.70	1.01	7.72	06/01/2015
IM ACWI Ex US Growth (SA+CF) Median	1.15	28.82	55.34	10.99	13.36	8.93	8.76	22.06	29.57	-13.78	32.56	-0.76	9.84	
Rank	14	49	68	63	79	N/A	N/A	83	44	56	91	36	76	
International Developed Small Cap Equity														
American Century Investment Mgmt (SA) - Net	0.33	30.10	71.93	9.23	13.82	9.25	N/A	31.60	29.44	-20.76	43.80	-5.31	9.03	03/01/2014
MSCI ACW Ex US Sm Cap Grth Index (USD) (Net)	3.34	35.74	72.65	8.89	11.70	8.10	7.18	23.69	24.61	-18.27	33.64	-0.28	7.96	
Difference	-3.01	-5.64	-0.72	0.34	2.12	1.15	N/A	7.91	4.83	-2.49	10.16	-5.03	1.07	
American Century Investment Mgmt (SA) - Gross	0.53	30.89	73.31	10.14	14.77	10.17	N/A	32.68	30.50	-20.09	44.99	-4.49	9.95	03/01/2014
IM ACWI Ex US Growth (SA+CF) Median	1.15	28.82	55.34	10.99	13.36	8.93	8.76	22.06	29.57	-13.78	32.56	-0.76	8.78	
Rank	66	39	7	64	32	26	N/A	24	42	100	6	79	27	
BlackRock MSCI ACW Ex US Sm Cap Index (CF) - Net	5.43	38.04	69.65	6.91	10.68	6.95	N/A	14.45	22.68	-17.85	31.96	4.26	8.78	02/01/2012
MSCI ACWI Ex US Sm Cap Index IMI (USD) (Net)	5.53	38.25	69.82	6.61	10.40	6.67	6.32	14.24	22.42	-18.20	31.65	3.91	8.55	
Difference	-0.10	-0.21	-0.17	0.30	0.28	0.28	N/A	0.21	0.26	0.35	0.31	0.35	0.23	
BlackRock MSCI ACW Ex US Sm Cap Index (CF) - Gross	5.47	38.16	69.85	7.04	10.83	7.10	N/A	14.50	22.90	-17.74	32.15	4.44	8.94	02/01/2012
DFA Intl Sm Co;l (DFISX) - Net	5.82	36.90	65.64	5.12	9.68	6.14	6.88	9.24	24.21	-19.41	30.24	5.74	8.15	11/01/2004
MSCI Wrld Ex US Sm Cap Index (USD) (Net)	4.88	35.76	65.17	6.89	10.55	6.97	7.14	12.78	25.41	-18.07	31.04	4.32	7.94	
Difference	0.94	1.14	0.47	-1.77	-0.87	-0.83	-0.26	-3.54	-1.20	-1.34	-0.80	1.42	0.21	
Templeton Investment Counsel (SA) - Net	6.19	37.86	70.25	5.30	9.53	6.13	N/A	9.98	24.17	-18.48	33.07	-1.13	6.08	03/01/2014
Templeton Custom Index	5.53	38.25	69.82	6.36	10.36	6.09	6.05	14.24	22.42	-19.75	29.72	8.24	6.10	
Difference	0.66	-0.39	0.43	-1.06	-0.83	0.04	N/A	-4.26	1.75	1.27	3.35	-9.37	-0.02	
Templeton Investment Counsel (SA) - Gross	6.41	38.71	71.63	6.18	10.47	7.05	N/A	10.91	25.20	-17.78	34.21	-0.23	7.00	03/01/2014
IM ACWI Ex US Value (SA+CF) Median	6.26	34.87	57.35	7.01	10.67	5.68	6.13	6.65	21.34	-14.78	26.02	4.87	5.75	
Rank	49	28	13	62	54	26	N/A	36	26	84	8	89	25	

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. See the Addendum for custom index specification.



Montana Board of Investments
Comparative Performance
International Equity Managers

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
International Emerging Equity														
BlackRock MSCI Emg Mkts Index NL (CF) - Net	2.19	33.62	57.71	6.25	11.80	6.32	N/A	17.92	18.12	-14.69	37.05	10.85	5.06	02/01/2012
MSCI Emg Mkts Index (USD) (Net)	2.29	34.13	58.39	6.48	12.07	6.58	3.65	18.31	18.44	-14.58	37.28	11.19	5.32	
Difference	-0.10	-0.51	-0.68	-0.23	-0.27	-0.26	N/A	-0.39	-0.32	-0.11	-0.23	-0.34	-0.26	
BlackRock MSCI Emg Mkts Index NL (CF) - Gross	2.22	33.73	57.88	6.37	11.93	6.47	N/A	18.04	18.25	-14.60	37.16	11.08	5.22	02/01/2012
iShares:MSCI Em Mkts (EEM) - Net	3.23	34.65	58.49	5.66	N/A	N/A	N/A	16.99	18.12	-16.45	36.86	N/A	12.20	01/01/2017
MSCI Emg Mkts Index (USD) (Net)	2.29	34.13	58.39	6.48	12.07	6.58	3.65	18.31	18.44	-14.58	37.28	11.19	12.99	
Difference	0.94	0.52	0.10	-0.82	N/A	N/A	N/A	-1.32	-0.32	-1.87	-0.42	N/A	-0.79	
DFA Emg Mkts Sm Cap;I (DEMSX) - Net	7.04	40.66	77.95	4.38	N/A	N/A	N/A	13.79	14.88	-17.56	N/A	N/A	9.76	02/01/2017
MSCI Emg Mkts Sm Cap Index (USD) (Net)	7.67	47.18	87.13	5.19	9.59	5.46	3.33	19.29	11.51	-18.59	33.84	2.28	10.05	
Difference	-0.63	-6.52	-9.18	-0.81	N/A	N/A	N/A	-5.50	3.37	1.03	N/A	N/A	-0.29	

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), DFA Intl Sm Co;I (DFISX), iShares:MSCI Em Mkts (EEM), and DFA Emg Mkts Sm Cap;I (DEMSX) are 0.32%, 0.44%, 0.68%, and 0.60%, 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. See the Addendum for custom index specification.



Montana Board of Investments
 Comparative Performance
 Core Fixed Income Managers

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
US Fixed Income Aggregate - Net	-3.30	-2.32	0.76	N/A	N/A	N/A	N/A	7.65	N/A	N/A	N/A	N/A	3.01	12/01/2019
Bloomberg US Agg Bond Index	-3.38	-2.13	0.71	4.65	3.10	3.31	3.44	7.51	8.72	0.01	3.54	2.65	2.84	
Difference	0.08	-0.19	0.05	N/A	N/A	N/A	N/A	0.14	N/A	N/A	N/A	N/A	0.17	
Reams Asset Core Plus (SA) - Net	-3.39	0.30	8.45	7.78	5.09	4.61	4.82	17.14	8.08	1.31	3.21	4.18	5.99	10/01/2008
Reams Custom Index	-3.05	-0.83	2.95	4.79	3.49	3.50	3.72	7.58	8.72	0.01	3.83	3.91	4.50	
Difference	-0.34	1.13	5.50	2.99	1.60	1.11	1.10	9.56	-0.64	1.30	-0.62	0.27	1.49	
Reams Asset Core Plus (SA) - Gross	-3.34	0.44	8.65	7.97	5.28	4.79	5.00	17.35	8.28	1.49	3.38	4.35	6.18	10/01/2008
IM U.S. Broad Market Core+ FI (SA+CF) Median	-2.74	0.87	7.02	5.75	4.49	4.17	4.50	8.95	9.88	-0.25	4.79	4.68	5.73	
Rank	88	62	32	2	21	17	26	1	93	4	95	58	31	

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
Non-Core Fixed Income Managers

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Neuberger Berman High Yield (SA) - Net	0.64	11.64	21.82	6.42	6.93	4.68	5.83	6.30	13.75	-1.99	5.80	14.98	6.99	01/01/2010
Bloomberg US HY 2% Issuer Cap Index	0.86	12.27	23.65	6.82	8.04	5.42	6.47	7.05	14.32	-2.08	7.50	17.13	7.41	
Difference	-0.22	-0.63	-1.83	-0.40	-1.11	-0.74	-0.64	-0.75	-0.57	0.09	-1.70	-2.15	-0.42	
Neuberger Berman High Yield (SA) - Gross	0.74	11.97	22.32	6.88	7.40	5.14	6.30	6.75	14.26	-1.56	6.27	15.50	7.47	01/01/2010
IM U.S. High Yield Bonds (SA+CF) Median	0.99	12.06	22.49	6.71	7.80	5.37	6.51	6.52	14.25	-1.64	7.49	14.07	7.49	
Rank	69	51	52	41	61	64	61	43	50	49	79	33	52	
Oaktree US High Yield (SA) (CAPP) - Net	0.44	11.34	21.72	6.48	N/A	N/A	N/A	6.56	15.44	-3.99	N/A	N/A	5.40	01/01/2018
Bloomberg US HY 2% Issuer Cap Index	0.86	12.27	23.65	6.82	8.04	5.42	6.47	7.05	14.32	-2.08	7.50	17.13	6.00	
Difference	-0.42	-0.93	-1.93	-0.34	N/A	N/A	N/A	-0.49	1.12	-1.91	N/A	N/A	-0.60	
Oaktree US High Yield (SA) (CAPP) - Gross	0.56	11.75	22.29	7.00	N/A	N/A	N/A	7.07	16.02	-3.47	N/A	N/A	5.92	01/01/2018
IM U.S. High Yield Bonds (SA+CF) Median	0.99	12.06	22.49	6.71	7.80	5.37	6.51	6.52	14.25	-1.66	7.49	14.07	5.93	
Rank	74	53	53	35	N/A	N/A	N/A	39	16	92	N/A	N/A	52	
Shenkman High Yield Fixed Income (SA) (CAPP) - Net	0.37	10.24	19.84	6.28	N/A	N/A	N/A	6.32	13.65	-1.96	N/A	N/A	5.21	12/01/2017
Bloomberg US HY 2% Issuer Cap Index	0.86	12.27	23.65	6.82	8.04	5.42	6.47	7.05	14.32	-2.08	7.50	17.13	5.94	
Difference	-0.49	-2.03	-3.81	-0.54	N/A	N/A	N/A	-0.73	-0.67	0.12	N/A	N/A	-0.73	
Shenkman High Yield Fixed Income (SA) (CAPP) - Gross	0.49	10.62	20.39	6.78	N/A	N/A	N/A	6.82	14.18	-1.46	N/A	N/A	5.71	12/01/2017
IM U.S. High Yield Bonds (SA+CF) Median	0.99	12.06	22.49	6.71	7.80	5.37	6.51	6.52	14.25	-1.66	7.49	14.07	5.90	
Rank	78	67	68	46	N/A	N/A	N/A	43	52	46	N/A	N/A	60	
Cohen & Steers Preferred Securities (SA) - Net	-0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.35	11/01/2020
Cohen & Steers Preferred Securities Custom Benchmark	-0.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.54	
Difference	0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.81	
Cohen & Steers Preferred Securities (SA) - Gross	-0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.51	11/01/2020
Payden & Rygel EMD (SA) - Net	-5.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-5.27	01/01/2021
Payden & Rygel EMD Custom Benchmark	-5.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-5.18	
Difference	-0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.09	
Payden & Rygel EMD (SA) - Gross	-5.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-5.18	01/01/2021
IM Emerging Markets Debt (SA+CF) Median	-4.55	5.62	19.05	3.52	5.56	4.60	5.17	6.71	14.24	-5.33	12.43	11.04	-4.55	
Rank	67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	67	

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. No peer group is shown for Cohen & Steers Preferred Securities (SA) due to the lack of suitable Preferred Securities peer groups.



Montana Board of Investments
Comparative Performance
TFIP Fixed Income Managers

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Trust Funds Investment Pool Fixed Income	-2.91	-0.68	3.22	5.42	3.73	3.96	4.20	8.84	9.12	0.25	3.83	3.44	5.90	10/01/1995
Bloomberg US Agg Bond Index	-3.38	-2.13	0.71	4.65	3.10	3.31	3.44	7.51	8.72	0.01	3.54	2.65	5.08	
Difference	0.47	1.45	2.51	0.77	0.63	0.65	0.76	1.33	0.40	0.24	0.29	0.79	0.82	
Trust Funds Investment Pool Fixed Income	-2.91	-0.68	3.22	5.42	3.73	3.96	4.20	8.84	9.12	0.25	3.83	3.44	5.90	10/01/1995
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-3.18	-0.97	3.43	5.27	3.76	3.82	3.98	8.54	9.19	0.07	4.03	3.10	5.47	
Rank	30	40	52	39	53	40	33	37	55	32	62	42	11	
Shenkman High Yield Fixed Income (SA) (TFIP) - Net	0.37	10.22	19.71	N/A	N/A	N/A	N/A	6.05	N/A	N/A	N/A	N/A	5.97	07/01/2019
Bloomberg US HY 2% Issuer Cap Index	0.86	12.27	23.65	6.82	8.04	5.42	6.47	7.05	14.32	-2.08	7.50	17.13	6.83	
Difference	-0.49	-2.05	-3.94	N/A	N/A	N/A	N/A	-1.00	N/A	N/A	N/A	N/A	-0.86	
Shenkman High Yield Fixed Income (SA) (TFIP) - Gross	0.49	10.61	20.25	N/A	N/A	N/A	N/A	6.54	N/A	N/A	N/A	N/A	6.46	07/01/2019
IM U.S. High Yield Bonds (SA+CF) Median	0.99	12.06	22.49	6.71	7.80	5.37	6.51	6.52	14.25	-1.66	7.49	14.07	6.81	
Rank	78	67	69	N/A	N/A	N/A	N/A	49	N/A	N/A	N/A	N/A	64	
Oaktree US High Yield (SA) (TFIP) - Net	0.59	11.46	22.14	N/A	N/A	N/A	N/A	6.72	N/A	N/A	N/A	N/A	6.94	08/01/2019
Bloomberg US HY 2% Issuer Cap Index	0.86	12.27	23.65	6.82	8.04	5.42	6.47	7.05	14.32	-2.08	7.50	17.13	6.83	
Difference	-0.27	-0.81	-1.51	N/A	N/A	N/A	N/A	-0.33	N/A	N/A	N/A	N/A	0.11	
Oaktree US High Yield (SA) (TFIP) - Gross	0.71	11.87	22.72	N/A	N/A	N/A	N/A	7.25	N/A	N/A	N/A	N/A	7.46	08/01/2019
IM U.S. High Yield Bonds (SA+CF) Median	0.99	12.06	22.49	6.71	7.80	5.37	6.51	6.52	14.25	-1.66	7.49	14.07	6.83	
Rank	69	52	47	N/A	N/A	N/A	N/A	36	N/A	N/A	N/A	N/A	33	
Neuberger Berman High Yield (SA) (TFIP) - Net	0.58	11.77	20.67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.67	04/01/2020
Bloomberg US HY 2% Issuer Cap Index	0.86	12.27	23.65	6.82	8.04	5.42	6.47	7.05	14.32	-2.08	7.50	17.13	23.65	
Difference	-0.28	-0.50	-2.98	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-2.98	
Neuberger Berman High Yield (SA) (TFIP) - Gross	0.68	12.13	21.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.16	04/01/2020
IM U.S. High Yield Bonds (SA+CF) Median	0.99	12.06	22.49	6.71	7.80	5.37	6.51	6.52	14.25	-1.66	7.49	14.07	22.49	
Rank	70	49	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61	

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, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Abandoned Mine Trust	0.04	0.19	0.38	1.61	1.30	1.31	1.40	0.73	2.41	1.85	1.04	1.10	3.84	12/01/1993
Barker Hughesville St Response	-2.11	-0.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.28	05/01/2020
Belt Water Treatment Plant Fund	-2.06	-0.44	2.90	4.97	N/A	N/A	N/A	6.80	8.56	N/A	N/A	N/A	4.90	03/01/2018
Big Sky Economic Development Fund	-2.20	-0.50	2.99	4.97	3.69	4.01	4.34	7.12	8.67	0.48	3.97	3.98	4.87	07/01/2005
Butte Area One Restoration	-1.81	-0.40	2.58	4.24	3.11	3.03	2.97	6.07	6.76	1.24	2.92	2.60	3.38	11/01/2008
Clark Fork River Restoration	-1.76	-0.38	2.36	4.12	3.03	3.08	3.15	5.65	7.04	0.96	2.85	2.72	3.66	11/01/2008
Coal Tax Cultural Trust Fund	-2.14	-0.46	2.98	4.94	3.67	3.99	4.33	6.99	8.64	0.47	3.96	3.95	5.95	12/01/1993
Coal Tax Park Acquisition	-2.08	-0.44	2.93	4.92	3.65	3.96	4.30	6.86	8.63	0.48	3.96	3.90	5.92	12/01/1993
East Helena Compensation Fund	-0.34	0.09	1.10	3.13	2.43	2.37	N/A	2.65	5.52	1.20	2.56	2.12	2.11	01/01/2013
East Helena Greenway Trail Maintenance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	03/01/2021
Endowment for Children	-2.17	-0.46	2.96	4.90	3.62	3.90	4.24	7.01	8.54	0.46	3.89	3.66	4.90	08/01/2007
Flying J CECRA Facilities Fund	-2.10	-0.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.35	05/01/2020
FWP License Account	-1.05	-0.48	0.17	1.87	1.42	1.22	1.17	1.85	3.33	1.50	1.11	0.84	2.86	11/01/1997
FWP Mitigation Trust Fund	-1.55	-0.50	1.22	3.09	1.99	1.78	1.73	3.84	5.46	1.14	1.15	0.67	3.83	12/01/1993
FWP Real Property Trust	-2.08	-0.45	2.90	4.91	3.62	3.90	4.20	6.83	8.62	0.51	3.80	3.82	5.33	12/01/1993
Group Benefits	-0.33	0.11	0.94	2.43	1.72	1.64	1.55	2.05	4.01	1.37	1.30	1.16	3.80	12/01/1993
Harold Hamm Endowment	-2.04	-0.44	2.86	4.83	N/A	N/A	N/A	6.71	8.45	0.57	1.11	N/A	3.11	07/01/2016
Invasive Species Trust Fund	-1.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.20	10/01/2020
Libby Asbestos Site State Cost	-2.08	-0.46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.34	05/01/2020
Luttrell Pit - Operational & Maintenance	-2.10	-0.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.23	05/01/2020
Montana Pole	-1.64	-0.32	2.32	4.29	3.21	3.41	3.64	5.61	7.48	0.74	3.38	3.23	5.05	09/01/1996
Montana State University	-0.12	0.19	0.68	1.89	1.57	1.32	1.17	1.30	2.87	1.87	1.39	0.95	1.98	08/01/2004
Montana Tech-UM Agency Funds	-0.06	0.16	0.50	1.70	1.42	1.12	0.92	1.01	2.56	1.91	1.22	0.72	1.77	03/01/2003
MT BOI - Clark Fork Site	-2.10	-0.49	2.78	4.64	3.46	3.63	3.74	6.65	8.00	0.67	3.64	3.63	4.29	11/01/2008
MT BOI UOFM Other	-0.65	0.46	1.85	3.00	2.34	2.31	2.10	3.47	4.54	1.42	2.15	2.34	2.95	08/01/2002
MUS Group Insurance	-0.29	0.09	0.76	2.13	1.65	1.63	N/A	1.70	3.39	1.96	1.09	1.33	1.43	10/01/2011
MUS Workers Compensation	-0.58	0.02	1.16	2.66	2.01	N/A	N/A	2.55	4.43	1.62	1.80	N/A	2.01	04/01/2016

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
Trust Accounts

As of March 31, 2021

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2020	2019	2018	2017	2016	Since Incep.	Inception Date
Older Montanans Trust	-2.18	-0.50	2.93	4.98	3.68	3.96	4.01	7.19	8.62	0.49	3.87	3.86	4.75	08/01/2007
Permanent Coal Trust Excl Crp	-1.21	0.23	2.90	4.29	3.41	3.71	4.10	5.57	6.81	1.28	3.49	3.79	5.64	12/01/1993
PERS Defined Cont Disability	3.08	20.74	37.52	10.85	9.83	N/A	N/A	14.06	20.77	-4.88	14.57	3.42	8.81	09/01/2015
Potter Trust Fund	-2.09	-0.45	2.87	4.84	N/A	N/A	N/A	6.78	8.47	0.51	3.87	N/A	3.58	06/01/2016
Resource Indemnity Trust	-2.24	-0.51	3.04	5.06	3.74	4.07	4.40	7.23	8.88	0.44	4.01	4.02	6.03	12/01/1993
School Facilities Fund	-2.17	-0.49	2.92	4.51	N/A	N/A	N/A	6.97	7.88	-0.13	N/A	N/A	3.76	01/01/2018
Smelter Hill Up Restorative	-1.89	-0.45	2.30	3.65	2.63	2.43	2.27	5.62	5.64	1.57	1.85	1.79	2.38	11/01/2008
State Fund Insurance	-0.54	3.49	9.04	5.93	4.62	4.45	4.69	7.62	9.65	0.38	5.05	3.50	5.62	12/01/1993
Streamside Tailings Operable Unit	-1.88	-0.31	2.85	4.61	3.44	3.71	3.98	6.47	7.92	0.57	3.69	3.58	5.26	02/01/1999
Subsequent Injury Fund	0.04	0.19	0.38	1.55	1.32	1.00	0.78	0.73	2.28	1.98	1.11	0.61	2.96	12/01/1993
Tobacco Trust Fund	-2.14	-0.43	3.06	4.98	3.68	4.02	4.36	7.10	8.67	0.46	3.96	3.99	5.54	01/01/2001
Treasurers	0.04	0.16	0.27	1.51	1.29	1.01	0.79	0.63	2.28	1.97	1.07	0.68	2.80	12/01/1993
Treasure State Endowment	-2.22	-0.50	2.93	5.02	3.72	4.04	4.37	7.15	8.81	0.46	4.00	3.98	5.90	12/01/1993
Treasure State Reg. Water System	-2.22	-0.50	3.01	5.02	3.72	4.03	4.36	7.15	8.80	0.45	4.00	3.96	5.69	06/01/2000
Trust and Legacy Account	-2.23	-0.50	3.04	5.04	3.72	4.06	4.38	7.19	8.84	0.43	4.00	4.01	6.60	07/01/1991
UCFRB Assess/Litig Cost Rec	-2.14	-0.55	2.72	4.79	3.55	3.83	4.07	6.68	8.50	0.49	3.77	3.84	5.60	07/01/1999
UCFRB Restoration Fund	-2.15	-0.50	2.86	4.90	3.59	3.83	4.14	6.90	8.52	0.67	3.73	3.52	5.52	06/01/1999
Upper Blackfoot Response	-0.20	0.11	0.62	2.39	1.90	1.81	1.69	1.55	4.24	1.49	1.90	1.74	1.62	09/01/2010
Weed Control Trust	-2.24	-0.51	3.04	5.06	3.74	4.07	4.32	7.23	8.88	0.44	4.01	4.02	5.21	12/01/1993
Wildlife Habitat Trust	-2.04	-0.42	2.89	4.87	3.59	3.87	4.18	6.75	8.54	0.51	3.78	3.79	5.33	12/01/1993
Zortman/Landusky LT H2O	0.04	0.19	0.38	1.55	1.32	1.32	2.58	0.73	2.28	1.98	1.01	1.36	6.21	09/01/1999
Z/L Long Term H2O Trust Fund	0.04	0.19	0.38	1.55	1.33	1.41	2.47	0.73	2.28	1.98	1.08	1.39	4.09	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.
- 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), iShares:Russ 2000 ETF (IWM), 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

- Retirement plan custom benchmarks are provided by State Street Bank and are calculated daily using actual allocations.
- The CAPP Custom Benchmark consists of the portfolio weighted average of the primary benchmark for each CAPP asset class.
- The Short Term Custom Benchmark consists of 100% ICE 1 Mo LIBOR Index (USD) through 4/30/2018, and 100% Federal Reserve US Treasury 1 Mo Constant Maturity Index thereafter.
- The Domestic Equity Custom Index consists of 100% S&P 1500 Comp Index through 04/30/2017 and 100% MSCI USA IM Index (USD) (Gross) 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 Real Estate Custom Index consists of 100% NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag) through 03/31/2017, 100% MSCI US REIT Index (USD) (Gross) through 06/30/2020, and 100% NCREIF ODCE Value Weighted (1 Qtr Lag) Index thereafter.
- The Private Investments Custom Index consists of 100% S&P 1500 Comp Index+4% (1 Qtr Lag) through 03/31/2017, 100% MSCI US Small Cap Index (USD) (Gross) through 12/31/2020, and the portfolio weighted MSCI US SC / S&P LSTA US Leverage Loan 100 Index for PE / PC thereafter.
- The Lazard Custom Index consists of 100% MSCI ACW Ex US Value Index (USD) (Net) through 6/30/2018 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- The Templeton Custom Index consists of 100% MSCI ACW Ex US Small Cap Value Index (USD) (Net) through 5/31/2018, and 100% MSCI ACW Ex US Small Cap Index (USD) (Net) thereafter.
- The Reams Custom Index consists of 100% Bloomberg US Unv Bond Index through 03/31/2017, 100% Bloomberg US Agg Bond Index through 12/31/2019, and 100% Bloomberg US Unv Bond Index thereafter.
- The Cohen & Steers Custom Index consists of 60% ICE BofAML US IG Institutional Capital Securities Index, 20% ICE BofAML Core Fixed Rate Preferred Securities Index, and 20% Bloomberg Barclays Developed Market USD Contingent Capital Index.
- The Payden & Rygel Custom Index consists of 70% JP Morgan EMBI Global Diversified Index, 30% JP Morgan GBI-EM Global Diversified Index.
- The JPM US Equity Custom Benchmark consists of 100% S&P 500 Index (Cap Weighted) through 06/30/2019 and 100% MSCI US Index (USD) (Gross) thereafter.
- The Real Assets Custom Index consists of 100% MSCI All Country World Commodity Producers Index (USD) (Net) through 12/31/2020 and 33.33% MSCI All Country World Commodity Producers Index (USD) (Net), 33.33% MSCI All Country World Infrastructure Index, 33.33% Bloomberg Barclays Global Inflation Linked US TIPS Index thereafter.

Trust Accounts Comments

- Barker Hughesville St Response, Libby Asbestos Site State Cost, Flying J CECRA Facilities Fund, and Luttrell Pit - Operations and Maintenance were added in 05/2020.
- The Belt Water Treatment Plant Fund was added in 03/2018.
- The School Facilities Fund was added in 01/2018.
- The Potter Trust Fund and the Harold Hamm Endowment were added in 06/2016.
- MUS Workers Compensation was added in 04/2016.
- The Invasive Species Trust Fund was added in 10/2020.
- The East Helena Greenway Trail Maintenance Fund was added in 03/2021.

Manager Transition Comments

- Neuberger Berman High Yield (SA) and TFIP Private Real Estate were funded in the Trust Fund Investment Pool during Q1 2020.
- Post High Yield Plus (SA), GMO:Bchmk-Fr All;III (GBMFX), and PIMCO:All Asset;Inst (PAAIX) were liquidated during Q3 2019.
- Oaktree US High Yield Fixed Income (SA) and Shenkman High Yield Fixed Income (SA) were funded in the Trust Fund Investment Pool during Q3 2019.
- Artisan Partners (SA), Iridian Asset Management (SA), Congress Mid Cap Growth (SA), TimeSquare Capital Management (SA), and Alliance Bernstein (SA) were liquidated in Q2 2019.
- BlackRock MSCI US Equity Index (CF) was transitioned into a separately managed account during Q1 2019.
- Northern Trust MSCI US Equity Index (SA), GMO:Bchmk-Fr All;III (GBMFX), and PIMCO:All Asset;Inst (PAAIX) were funded during Q4 2018.
- Voya Investment Management (SA) was liquidated in 07/2018.
- iShares:Russ 2000 ETF (IWM) was funded in 04/2018.

- Jacobs Levy 130/30 Large Cap (SA) was funded in 03/2018.
- Congress Mid Cap Growth (SA) was funded in 02/2018.
- Oaktree US 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.

Manager Transition Comments (cont.)

- 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.
- Cohen & Steers Preferred Securities (SA) was funded in 10/2020.
- Payden & Rygel EMD (SA) was funded in 12/2020.

Miscellaneous Comments

- Fiscal year ends on 06/30.
- During Q4 2019 Diversifying Strategies investments were liquidated and Investment Grade Credit, US Treasury & Agency, and TIPS were consolidated into the Core Fixed Income composite.
- Non-Core Fixed Income currently consists of High Yield and EMD.
- Private Investments currently consist of Private Equity, Private Credit, Venture Capital, and Passive ETFs.
- During Q1 2021 the Natural Resources PAC was renamed to the Real Assets PAC.

PORTLAND

BOISE

CHICAGO

NEW YORK

Disclaimer of Warranties and Limitation of Liability - This document was prepared by RVK, Inc. (RVK) and may include information and data from some or all of the following sources: client staff; custodian banks; investment managers; specialty investment consultants; actuaries; plan administrators/record-keepers; index providers; as well as other third-party sources as directed by the client or as we believe necessary or appropriate. RVK has taken reasonable care to ensure the accuracy of the information or data, but makes no warranties and disclaims responsibility for the accuracy or completeness of information or data provided or methodologies employed by any external source. This document is provided for the client's internal use only and does not constitute a recommendation by RVK or an offer of, or a solicitation for, any particular security and it is not intended to convey any guarantees as to the future performance of the investment products, asset classes, or capital markets.

