

MONTANA

BOARD OF INVESTMENTS

REGULAR BOARD MEETING
May 24-25, 2023

COMMITTEE MEETINGS

- A. **Audit Committee – Mark Barry, Chair**
Committee Members – Peterson, Bennett, Trost **9:30 AM**
1. Public Comment – *Public Comment on Issues with Committee Jurisdiction*
 2. Approval of April 12, 2023, Committee Meeting Minutes
 3. Executive Director Comments
 4. Audit Checklist
 5. Accounting Staff Review – **Closed Session***
- B. **Loan Committee – Jeff Meredith, Chair**
Committee Members – Barry, Kober, Bennett, Younkin **10:00 AM**
1. Public Comment – *Public Comment on Issues with Committee Jurisdiction*
 2. Approval of April 12, 2023, and May 4, 2023, Committee Meeting Minutes
 3. Executive Director Comments
 4. In-State Loan Requests – **Decisions**
 5. Montana Down Payment Assistance Loan Program
 - a. Denial Appeal – Yellowstone Bank & MC Holdings LLC – **Decision**
- C. **Human Resource Committee – Maggie Peterson, Chair**
Committee Members – Meredith, Kober, Trost, Younkin **11:00 AM**
1. Public Comment – *Public Comment on Issues with Committee Jurisdiction*
 2. Executive Director Comments
 3. Staffing Level Review – **Closed Session***
 4. Exempt Staff Compensation Review – **Decisions, Closed Session***

* **CLOSED SESSION** – *This portion of the meeting relates to matters of individual privacy. The Committee Chair may determine that the demand of individual privacy clearly exceeds the merit of public disclosure. As such, this portion of the meeting may be closed.*

BREAK FOR LUNCH **12:00 PM**

- Tab 1 CALL TO ORDER – Jack Prothero, Board Chair** **1:00 PM**
- A. Notice of Video Recording of Meeting
 - B. Roll Call
 - C. Public Comment – *Public Comment on issues with Board Jurisdiction*
 - D. Approval of the April 12, 2023, Board Meeting Minutes
 - E. Administrative Business
 1. Audit Committee Report
 2. Loan Committee Report – **Decisions**
 3. Human Resource Committee Report – **Decisions**
 - F. Comments from Pension Board Members

- G. Comments from Board Legislative Liaisons
- H. Introduction of New Staff
 - Willie Gross, Fixed Income Analyst

Tab 2 EXECUTIVE DIRECTOR REPORTS – Dan Villa 1:15 PM
A. Member Requests from Prior Meeting
B. Monthly Snapshot
C. Budget Status FYTD
D. State Government Customer Relationships

Tab 3 INVESTMENT POLICY STATEMENT REVIEW – Jon Putnam, CFA, FRM, CAIA 1:30 PM

BREAK 2:15 PM

Tab 4 REAL ASSETS ASSET CLASS REVIEW – Ethan Hurley, CAIA and Rob Samson 2:30 PM

Tab 5 MONTANA LOAN PROGRAM – Doug Hill 3:45 PM
A. Commercial and Residential Portfolios Report

Tab 6 BOND PROGRAM – Louise Welsh 4:00 PM
A. INTERCAP
1. Activity Report
2. Staff Approved Loans Report

ADJOURN

AGENDA DAY 2

RECONVENE AND CALL TO ORDER – Jack Prothero, Board Chair 9:30 AM
A. Roll Call
B. Notice of Video Recording and Meeting
C. Public Comment – *Public Comment on issues within Board Jurisdiction*

Tab 7 RVK 9:45 AM

Tab 8 INVESTMENT UPDATE 10:45 AM

RECAP OF STAFF TO DO LIST AND ADJOURNMENT – Jack Prothero, Board Chair 12:00 PM

Appendix

- A. Annual Board Meeting Schedule
- B. 2022/2023 Work Plan
- C. Acronym Index/Terminology List

MONTANA

BOARD OF INVESTMENTS

REGULAR BOARD MEETING MINUTES

April 12, 2023

Meeting recordings are posted at: <https://leg.mt.gov/lsc/>
(timestamps may differ)

Call to Order

The Board of Investment's meeting was called to order by Board Chairman Jack Prothero at 11:30 a.m. on Wednesday, April 12, 2023.

Attendance

Board Members Present: Jack Prothero, Maggie Peterson, Jeff Meredith, Tim Kober, Mark Barry, Porter Bennett, Daniel Trost, Cindy Younkin

Board Members Absent: None

(Ninth Board member appointment expired 1/1/2023)

Legislative Liaisons Present: None

Legislative Liaisons Absent: N/A

Board Staff Present: Dan Villa, Doug Hill, Eron Krpan, Ethan Hurley, Jason Brent, John Carpenter, John Romasko, Jon Putnam, Julie Feldman, Kirsten Haswell, Louise Welsh, Peggy MacEwen, Peggy Saarela, Polly Boutin, Roberta Diaz, Rob Samson, Sam Holman, Savannah Morgan, Sheli Jacoby, Steve Strong, Tammy Lindgren, Tim House

Interested Parties Present: Becky Gratsinger – RVK; Paige Blaser – RVK; Jim Voytko – RVK; Matt Rogers – With Intelligence; Kevin Balaod – With Intelligence; Mike Barela – Voya Investment Management

Tab 1 CALL TO ORDER (00:02)

A. Notice of Video Recording (00:12)

Chairman Prothero advised of audio and video recording of the meeting.

B. Roll Call (00:20)

Roll was taken. Eight Board members were present, forming a quorum.

C. Public Comment (01:40)

Chairman Prothero asked for public comment. None was given.

D. Approval of Minutes (01:55)

February 22, 2023, Regular Board Meeting Minutes

Member Barry motioned to approve. Member Bennett seconded the motion, which passed unanimously.

E. Administrative Business

1. Audit Committee Report (02:44)

Committee Chair Barry briefed the Board.

2. Loan Committee Report (05:48)

Committee Chair Meredith briefed the Board.

3. HR Committee Report (06:30)

Committee Chair Peterson briefed the Board.

F. Comments from Pension Board Members (07:38)

Member Peterson briefed the Board.

Member Trost briefed the Board.

G. Comments from Board Legislative Liaisons (13:15)

No Legislative Liaisons have been appointed at this time.

Tab 2 EXECUTIVE DIRECTOR REPORTS (13:28)

A. Member Requests from Prior Meeting

There were no Board member requests from the prior meeting.

B. Monthly Snapshot

Executive Director Villa briefed the Board.

C. Benchmarks Used by the Board

Executive Director Villa briefed the Board.

Tab 3 CAPITAL MARKET ASSUMPTIONS (24:23)

Becky Gratsinger, Paige Blaser, and Jim Voytko with RVK briefed the Board and answered questions.

Tab 4 INTERNATIONAL EQUITY ASSET CLASS REVIEW (01:40:35)

Jason Brent and Steve Strong briefed the Board and answered questions.

RECAP OF STAFF TO DO LIST AND ADJOURNMENT (02:48:45)

Chairman Prothero adjourned the meeting at 3:45 p.m.

MONTANA BOARD OF INVESTMENTS

APPROVE: _____

Jack Prothero, Chairman

ATTEST: _____

Dan Villa, Executive Director

DATE: _____

MONTANA

BOARD OF INVESTMENTS

To: Members of the Board
From: Dan Villa, Executive Director
Date: May 24, 2023
Re: Executive Director Report

- A. Member Requests from Prior Meeting
- B. Monthly Snapshot – *attached*
- C. Budget Status FYTD – *attached*
- D. State Government Customer Relationships

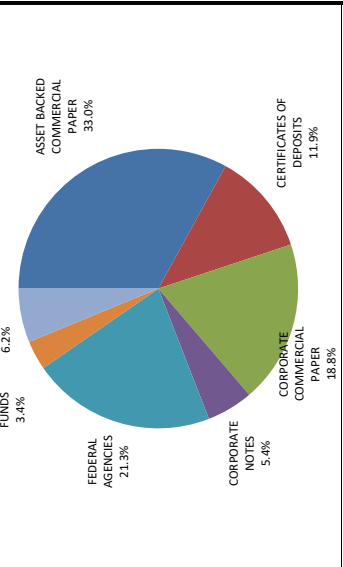
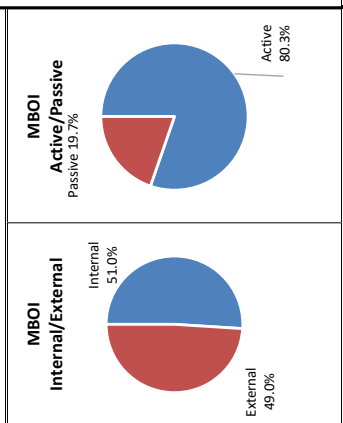
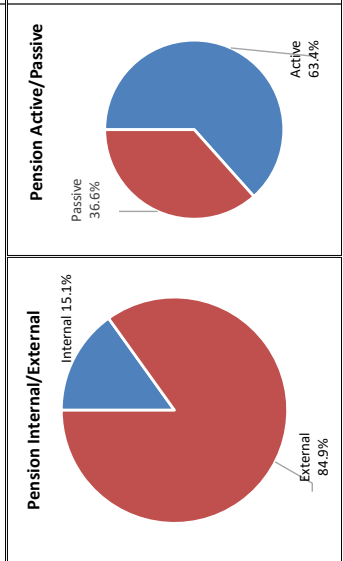
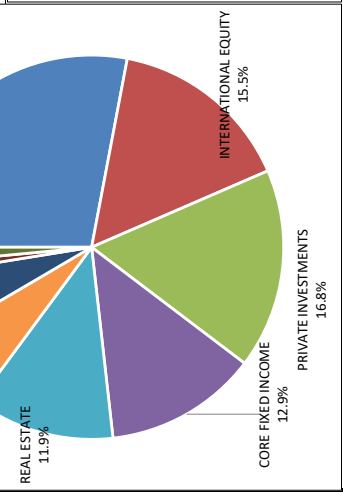
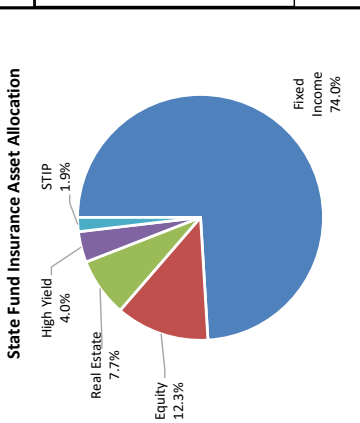
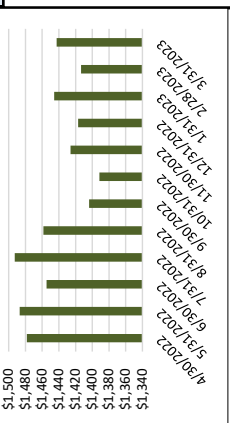
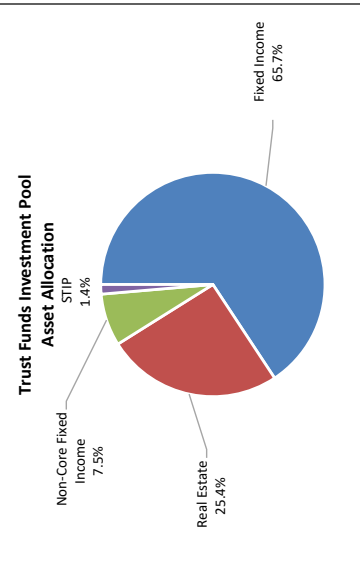
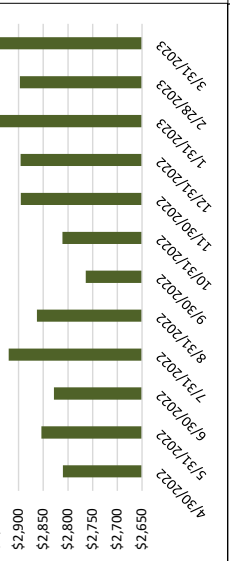
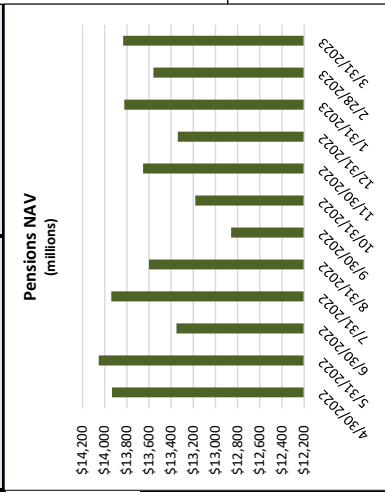
Attached to this memo are two letters we sent to pool participants which were discussed in the Audit Committee. The first is the annual STIP confirmation and the second is a new Separately Managed Account letter. These will be sent early each calendar year to update contacts, staff, investment direction, etc. It will also, now, help us regularly connect with the professional staff who manage each separate account to gain a better understanding of their cash flows. All participant contacts are also attached.

We are in contact with our largest customers, MPERA and TRS, at least weekly if not daily. We maintain daily contact with the Department of Administration to meet state cash movement requirements (*NOTE: BOI pays for a full FTE at the State Treasurers Office to help coordinate this task*). BOI and MSF have established a quarterly call to ensure full transparent communications.



MBOI Snapshot
Asset Management View
3/31/2023 Unaudited
Assets Under Management \$26,433,902,179

Pensions		TFIP		NAV		State Fund		Other Fixed Income & Pending	
	%		%		%		%		%
DOMESTIC EQUITY	27.98%	Fixed Income	65.72%	\$ 1,946,878,163	74.04%	NAV	NAV	\$ (111,941,143)	
INTERNATIONAL EQUITY	15.51%	Real Estate	25.37%	\$ 751,541,997	12.31%	Fixed Income	Equity	\$ 2,740,648,059	32.99%
PRIVATE INVESTMENTS	16.84%	Non-Core Fixed Income	7.54%	\$ 223,470,002	7.74%	Equity	Real Estate	\$ 988,147,199	11.90%
CORE FIXED INCOME	12.89%	STIP	1.37%	\$ 40,649,130	4.05%	High Yield	STIP	\$ 1,564,909,219	18.84%
REAL ESTATE	11.90%	Total	100.00%	\$ 2,962,539,292	100.00%	STIP	STIP	\$ 516,699,784	6.22%
NON-CORE FIXED INCOME	6.44%							\$ 8,306,689,524	100.00%
REAL ASSETS PAC	5.89%								
SHORT TERM INVESTMENT POOL	1.05%								
CASH EQUIVALENTS	1.50%								
Pensions Total	100.00%								



Definition of NAV: Net Asset Value is the total value of the account including assets held, adjusted for payables, receivables and liabilities

(1) Other Holdings column on page two represents the value of securities, receivables, payables and liabilities that comprise the Net Asset Value for the asset owner.

*Difference of \$260,030,319 is attributable the portion of STIP held within CAPP (\$206,095,039) and TFIP (\$40,513,713) as a cash investment and distributions held over month end (\$13,421,567). Such value is represented in the NAV for the CAPP and STIP columns.

MBOI Snapshot
Asset Ownership View
3/31/2023 Unaudited



	CAPP Holdings	CAPP %	STIP Holdings*	STIP %	TFIP Holdings	TFIP%	Other Holdings [†]	Other %	Total Net Asset Value
Total Funds \$(000)	\$13,688,436	51.78%	\$8,046,659	30.44%	\$2,962,539	11.21%	\$1,736,268	6.57%	\$26,433,902
Pensions	CAPP	%	STIP	%	TFIP	%	Other	%	Total
FIREFIGHTERS RETIREMENT	\$ 600,827	98.99%	\$ 6,130	1.01%	\$ -	-	\$ 0.00%	-	\$ 606,957
GAME WARDENS RETIREMENT	\$ 269,363	98.86%	\$ 3,114	1.14%	\$ -	-	\$ 0.00%	-	\$ 272,478
HIGHWAY PATROL RETIREMENT	\$ 179,928	98.88%	\$ 2,046	1.12%	\$ -	-	\$ 0.00%	-	\$ 181,974
JUDGES RETIREMENT	\$ 126,411	99.00%	\$ 1,280	1.00%	\$ -	-	\$ 0.00%	-	\$ 127,690
POLICE OFFICERS RETIREMENT	\$ 548,020	98.99%	\$ 5,592	1.01%	\$ -	-	\$ 0.00%	-	\$ 553,612
PUBLIC EMPLOYEES RETIREMENT	\$ 6,704,440	98.92%	\$ 72,860	1.08%	\$ -	-	\$ 0.00%	-	\$ 6,777,301
SHERIFFS RETIREMENT	\$ 475,637	98.96%	\$ 5,018	1.04%	\$ -	-	\$ 0.00%	-	\$ 480,655
TEACHERS RETIREMENT	\$ 4,737,333	98.98%	\$ 48,895	1.02%	\$ -	-	\$ 0.00%	-	\$ 4,786,227
VOL FIREFIGHTERS RETIREMENT	\$ 46,477	99.02%	\$ 462	0.98%	\$ -	-	\$ 0.00%	-	\$ 46,939
Total	\$ 13,688,436	98.95%	\$ 145,397	1.05%	\$ -	-	\$ 0.00%	-	\$ 13,833,833
Trust Funds	CAPP	%	STIP	%	TFIP	%	Other	%	Total
ABANDONED MINE RECLAMATION	\$ -	0.00%	\$ 6,847	99.62%	\$ -	0.00%	\$ 26	0.38%	\$ 6,874
BARKER HUGHESVILLE ST RESPONSE	\$ -	0.00%	\$ 1,137	12.44%	\$ 7,975	87.22%	\$ 32	0.35%	\$ 9,144
BELT WATER TREATMENT PLANT	\$ -	0.00%	\$ 3,988	14.74%	\$ 22,973	84.91%	\$ 94	0.35%	\$ 27,054
BUTTE AREA ONE REST	\$ -	0.00%	\$ 1,373	20.89%	\$ 5,175	78.76%	\$ 23	0.35%	\$ 6,571
BUTTE AREA REDEVELOP AUTHORITY	\$ -	0.00%	\$ 1,945	13.85%	\$ 12,045	85.80%	\$ 49	0.35%	\$ 14,038
CLARK FORK REST	\$ -	0.00%	\$ 6,015	21.25%	\$ 22,196	78.40%	\$ 99	0.35%	\$ 28,309
CLARK FORK SITE RESP ACTION	\$ -	0.00%	\$ 2,640	4.81%	\$ 52,003	94.84%	\$ 189	0.34%	\$ 54,832
COAL TAX PARK TRUST FUND	\$ -	0.00%	\$ 1,974	6.44%	\$ 28,561	93.21%	\$ 105	0.34%	\$ 30,640
CULTURAL TRUST FUND	\$ -	0.00%	\$ 622	3.77%	\$ 15,794	95.88%	\$ 56	0.34%	\$ 16,472
E HELENA GREENWAY TRAIL MAINT	\$ -	0.00%	\$ 303	29.88%	\$ 706	69.76%	\$ 4	0.35%	\$ 1,012
EAST HELENA COMPENSATION FUND	\$ -	0.00%	\$ 3,078	78.35%	\$ 836	21.27%	\$ 15	0.37%	\$ 3,928
ENDOWMENT FOR CHILDREN	\$ -	0.00%	\$ 85	6.00%	\$ 1,331	93.66%	\$ 9	0.34%	\$ 1,421
FLYING J CECRA FACILITIES FUND	\$ -	0.00%	\$ 339	12.77%	\$ 2,305	86.88%	\$ 5	0.35%	\$ 2,654
FWP MITIGATION TRUST	\$ -	0.00%	\$ 3,174	29.51%	\$ 7,082	65.83%	\$ 502	4.66%	\$ 10,758
HAROLD HAMM ENDOWMENT	\$ -	0.00%	\$ 6	11.29%	\$ 45	88.36%	\$ 0	0.34%	\$ 51
INVASIVE SPECIES TRUST FUND	\$ -	0.00%	\$ 374	11.10%	\$ 2,983	88.55%	\$ 12	0.34%	\$ 3,368
LIBBY ASBESTOS SITE STATE COST	\$ -	0.00%	\$ 690	14.07%	\$ 4,198	85.58%	\$ 17	0.35%	\$ 4,905
LUTTRELL PIT - OPER & MAINT	\$ -	0.00%	\$ 312	15.07%	\$ 1,754	84.59%	\$ 7	0.35%	\$ 2,074
MONTANA HISTORICAL SOCIETY	\$ -	0.00%	\$ 819	20.00%	\$ 3,262	79.65%	\$ 14	0.35%	\$ 4,096
MT POLE SUPERFUND SETTLEMENT	\$ -	0.00%	\$ 4,145	20.80%	\$ 15,712	78.85%	\$ 70	0.35%	\$ 19,927
NOXIOUS WEED MGMT TRUST FUND	\$ -	0.00%	\$ -	0.00%	\$ 10,612	99.66%	\$ 36	0.34%	\$ 10,648
OLDER MONTANANS TRUST FUND	\$ -	0.00%	\$ 16	5.08%	\$ 305	94.58%	\$ 1	0.34%	\$ 323
POTTER TRUST FUND	\$ -	0.00%	\$ 28	11.08%	\$ 221	88.58%	\$ 1	0.34%	\$ 250
PUBLIC SCHOOL TRUST	\$ -	0.00%	\$ 15,490	1.78%	\$ 850,270	97.88%	\$ 2,954	0.34%	\$ 868,714
REAL PROPERTY TRUST FUND	\$ -	0.00%	\$ 442	6.00%	\$ 6,893	93.65%	\$ 25	0.34%	\$ 7,361
RESOURCE INDEMNITY TRUST FUND	\$ -	0.00%	\$ 23	0.02%	\$ 108,930	99.64%	\$ 372	0.34%	\$ 109,325
SMELTER HILL UPLANDS REST FUND	\$ -	0.00%	\$ 1,568	17.30%	\$ 7,465	82.35%	\$ 31	0.35%	\$ 9,064
STREAMSIDE TAILINGS OU FUND	\$ -	0.00%	\$ 2,015	11.87%	\$ 14,908	87.79%	\$ 59	0.35%	\$ 16,982
TOBACCO TRUST FUND	\$ -	0.00%	\$ 1,873	0.64%	\$ 289,816	99.02%	\$ 996	0.34%	\$ 292,685
UPPER BLACKFT RESP ACT & REST	\$ -	0.00%	\$ 1,036	91.95%	\$ 86	7.67%	\$ 4	0.38%	\$ 1,127
UPPER CLRK FK RIVER BASIN RES	\$ -	0.00%	\$ 325	1.48%	\$ 21,566	98.18%	\$ 75	0.34%	\$ 21,966
UPPER CLRK FK RIVER BASIN REST	\$ -	0.00%	\$ 4,070	5.64%	\$ 67,834	94.02%	\$ 247	0.34%	\$ 72,152
WILDLIFE HABITAT TRUST FUND	\$ -	0.00%	\$ 1,101	6.84%	\$ 14,929	92.81%	\$ 55	0.34%	\$ 16,085
YELLOWSTONE PIPELINE CLEANUPFD	\$ -	0.00%	\$ 2,274	35.01%	\$ 4,198	64.63%	\$ 23	0.36%	\$ 6,495
ZORTMAN/LANDUSKY LT WATER	\$ -	0.00%	\$ 16,017	99.62%	\$ -	0.00%	\$ 62	0.38%	\$ 16,079
ZORTMANLANDUSKY LT WATER TRUST	\$ -	0.00%	\$ 20,831	99.62%	\$ -	0.00%	\$ 80	0.38%	\$ 20,911
Total	\$ -	0.00%	\$ 106,975	6.23%	\$ 1,604,969	93.40%	\$ 6,348	0.37%	\$ 1,718,292
Coal Severance	CAPP	%	STIP	%	TFIP	%	Other	%	Total
BIG SKY ECONOMIC DEV FUND	\$ -	0.00%	\$ 5,082	3.70%	\$ 131,782	95.96%	\$ 469	0.34%	\$ 137,333
COAL SEVERANCE TAX PERM FUND	\$ -	0.00%	\$ 12,247	2.17%	\$ 361,442	64.10%	\$ 190,193	33.73%	\$ 563,881
MONTANA COAL ENDOWMENT FUND	\$ -	0.00%	\$ 3,069	1.10%	\$ 275,449	98.56%	\$ 952	0.34%	\$ 279,470
SCHOOL FACILITIES FUND	\$ -	0.00%	\$ 10,470	9.02%	\$ 105,229	90.64%	\$ 399	0.34%	\$ 116,099
MT COAL ENDOWMENT REGIONAL WAT	\$ -	0.00%	\$ 1,192	1.23%	\$ 95,335	98.43%	\$ 330	0.34%	\$ 96,856
Total	\$ -	0.00%	\$ 32,061	2.69%	\$ 969,236	81.20%	\$ 192,343	16.11%	\$ 1,193,640
Operating Funds	CAPP	%	STIP	%	TFIP	%	Other	%	Total
FWP GENERAL LICENSE ACCOUNT	\$ -	0.00%	\$ 56,167	62.28%	\$ 30,691	34.03%	\$ 3,328	3.69%	\$ 90,186
MONTANA LOCAL GOVERNMENTS	\$ -	0.00%	\$ 1,715,401	99.61%	\$ -	0.00%	\$ 6,761	0.39%	\$ 1,722,162
MONTANA STATE AGENCIES	\$ -	0.00%	\$ 1,645,235	99.62%	\$ -	0.00%	\$ 6,303	0.38%	\$ 1,651,539
MONTANA STATE UNIVERSITY	\$ -	0.00%	\$ 259,370	81.22%	\$ 58,729	18.39%	\$ 1,241	0.39%	\$ 319,340
MONTANA TECH	\$ -	0.00%	\$ 8,045	94.20%	\$ 463	5.42%	\$ 33	0.38%	\$ 8,541
STATE TREASURER'S FUND	\$ -	0.00%	\$ 3,778,556	92.69%	\$ 211,825	5.20%	\$ 86,220	2.11%	\$ 4,076,601
UNIVERSITY OF MONTANA	\$ -	0.00%	\$ 89,183	71.78%	\$ 29,897	24.06%	\$ 5,167	4.16%	\$ 124,247
Total	\$ -	0.00%	\$ 7,551,957	94.49%	\$ 331,605	4.15%	\$ 109,052	1.36%	\$ 7,992,615
Insurance Reserves	CAPP	%	STIP	%	TFIP	%	Other	%	Total
HAIL INSURANCE INVESTMENTS	\$ -	0.00%	\$ 5,587	73.29%	\$ 2,008	26.34%	\$ 28	0.37%	\$ 7,623
MONTANA STATE FUND	\$ -	0.00%	\$ 26,788	1.86%	\$ -	0.00%	\$ 1,415,993	98.14%	\$ 1,442,781
MUS GROUP INSURANCE	\$ -	0.00%	\$ 77,392	83.63%	\$ 12,978	14.02%	\$ 2,169	2.34%	\$ 92,539
MUS WORKERS COMPENSATION	\$ -	0.00%	\$ 10,325	71.48%	\$ 4,064	28.14%	\$ 54	0.38%	\$ 14,444
PERS-DCRP LT DISABILITY PLAN	\$ -	0.00%	\$ 569	7.03%	\$ -	0.00%	\$ 7,520	92.97%	\$ 8,089
STATE EMPLOYEE GROUP BENEFITS	\$ -	0.00%	\$ 89,073	68.78%	\$ 37,678	29.09%	\$ 2,755	2.13%	\$ 129,506
SUBSEQUENT INJURY TRUST FUND	\$ -	0.00%	\$ 536	99.16%	\$ -	0.00%	\$ 5	0.84%	\$ 541
Total	\$ -	0.00%	\$ 210,269	12.40%	\$ 56,728	3.35%	\$ 1,428,525	84.25%	\$ 1,695,523

Short Term Investment Pool

Account	# Accounts	Total Market Value	%
Total State	353	6,586,612,198	79.3%
Total Local	185	1,720,077,326	20.7%
Total STIP	538	\$ 8,306,689,524	100.0%
STIP Reserve		\$ 64,943,203	
Prior month average STIP Yield		4.5370%	

Intercap Statistics

Loans Outstanding	\$	69,341,910
Bonds Outstanding	\$	68,706,869
Number of Borrowers		136
Loan Rate		5.75%

MONTANA

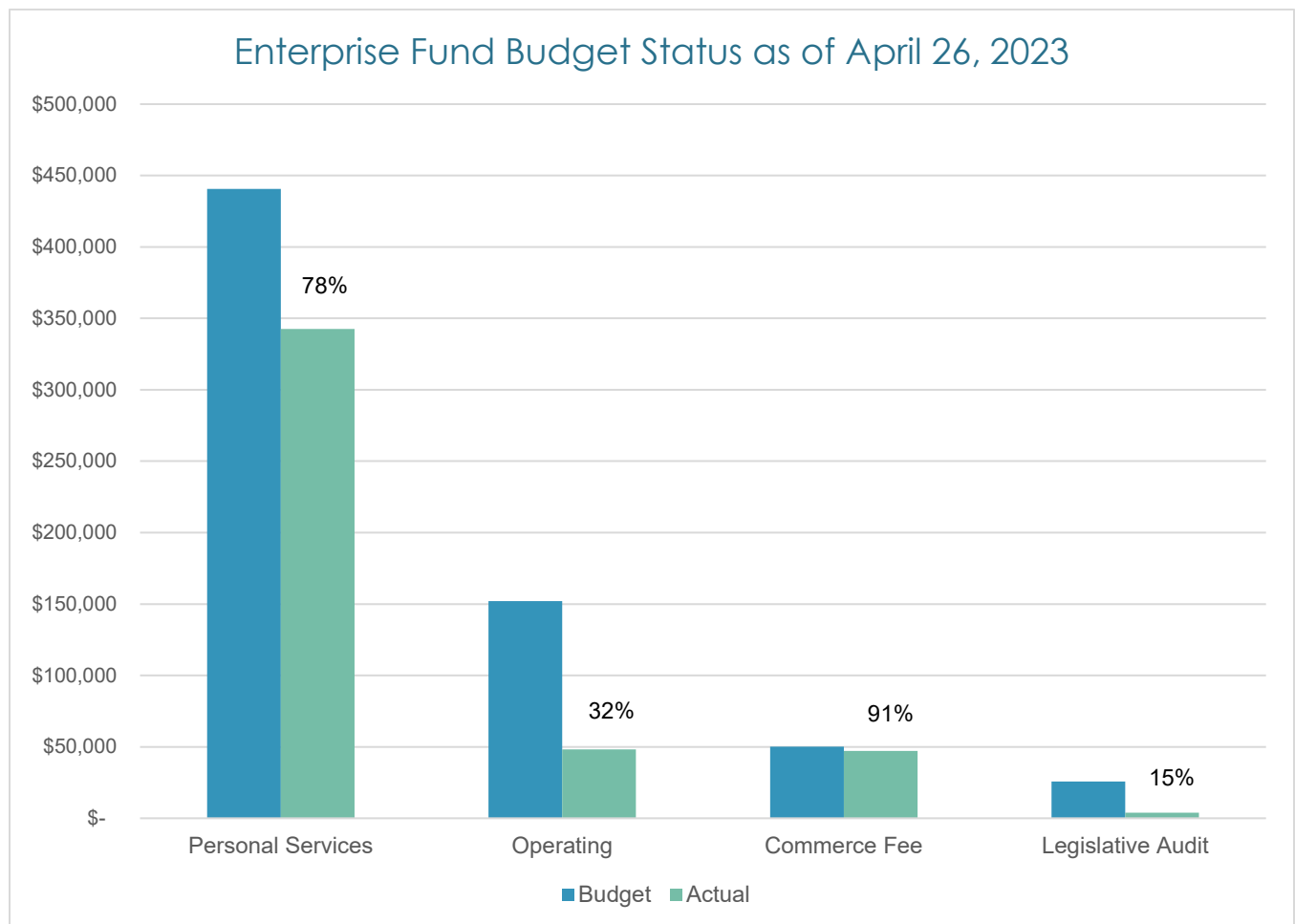
BOARD OF INVESTMENTS

TO: Dan Villa, Executive Director
FROM: Peggy MacEwen, Deputy Director
DATE: April 27, 2023
RE: Budget Status Report, Fiscal Year to Date

The budget status reports for the Enterprise and Proprietary Funds are below. Both reports include actual year to date information in SABHRS as of April 26, 2023.

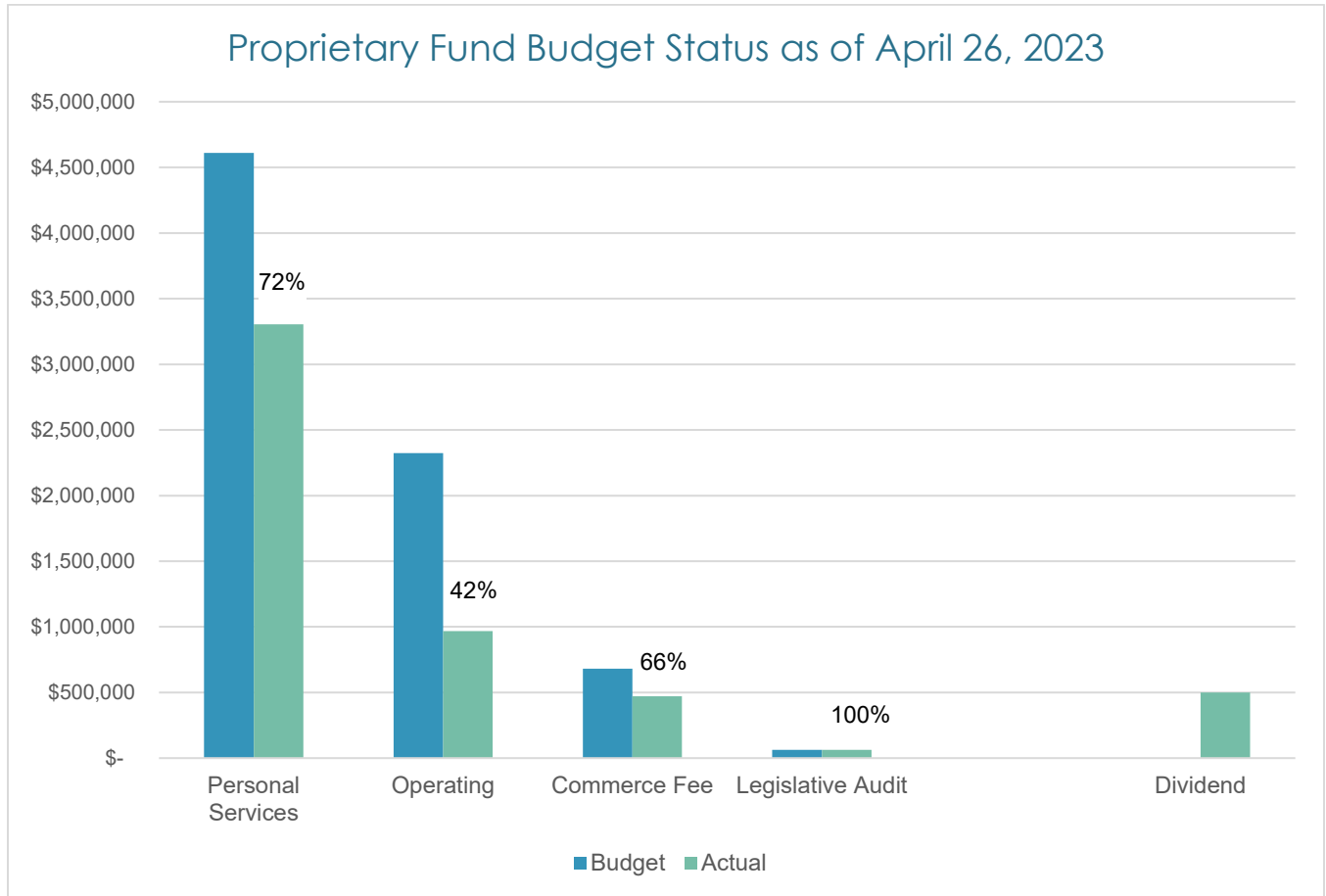
Enterprise Fund

The Enterprise Fund is 66% spent while we are approximately 83% through the year. Percent numbers on the chart represent the percent of the budget spent.



Proprietary Fund

The Proprietary Fund is 63% spent while we are approximately 83% through the year. Percent numbers on the chart represent the percent of the budget spent. A \$500,000 dividend to participants was processed in April.



MONTANA

BOARD OF INVESTMENTS

TO: <<State Agency Director>>
<<State Agency Name>>
FROM: Montana Board of Investments
DATE: March 16, 2023
RE: State Agency Short Term Investment Pool (STIP) Annual Confirmation

SABHRS Responsible Business Unit: _____ <<Business Unit>>
STIP Investment Fund Number: _____ <<SABHRS Fund Account>>
STIP Investment Fund Name: _____ <<SABHRS Fund Name>>

The Montana Board of Investments has the following information on record regarding the above referenced STIP account. If the information provided below is correct, *no action is required*. If any of the information is incorrect, please submit a new State Agency STIP Participation Agreement. The agreement can be found on the Board's website at: <https://investmentmt.com/STIP/STIP-Participation-Agreements>.

The following individual(s) have the authority to purchase and sale shares in the STIP account.

<<Authorized Personnel>>

<<Authorized Personnel>>

<<Authorized Personnel>>

<<Authorized Personnel>>

<<Authorized Personnel>>

<<Authorized Personnel>>

Per the agreement on file, this fund is legally allowed to retain interest earnings and is legally entitled to participate in STIP.

STIP Earnings Reinvested/Distributed: _____ <<Reinvested y/n>>
SABHRS fund for earnings: _____ <<Earnings Fund Number>>

Please direct any questions to the STIP email at boi_stip@mt.gov or by calling (406) 444-0003.

MONTANA

BOARD OF INVESTMENTS

TO: Members of the Board
FROM: Jon Putnam, Chief Investment Officer
DATE: May 24, 2023
RE: Proposed Changes to Investment Policy Statements

A summary of the proposed changes to each of the Investment Policy Statements is below. Redline changes of the affected sections are included behind this memo.

Consolidated Asset Pension Pool (CAPP)

Proposed changes

- Update the actuarial target rate of return to 7.30% per change adopted by PERS and TRS.
- Standardize Roles and Responsibilities across all investment policy statements.
- Update the Evaluation of Investment Managers to reflect continual process improvement and eliminate policy outside the governance manual.
- Update the Securities Lending collateral requirements to reflect the current custodial contract.
- Update Proxy Voting consistent with the implementation of the Institutional Shareholder Services (ISS) contract.
- Other changes for consistency across investment policy statements or clean-ups as needed.

Real Assets

- Increase the range for Infrastructure Related strategies from 0 – 50% to 25% - 75%. Infrastructure was a new area of investment when originally adopted and it has been growing. This is the same range as Commodities.

Trust Funds Investment Pool (TFIP)

Proposed changes

- Add the benchmark for Real Assets for performance measurement.
- Standardize Roles and Responsibilities across all investment policy statements.
- Update the Evaluation of Investment Managers to reflect continual process improvement and eliminate policy outside the governance manual.
- Update the Securities Lending collateral requirements to reflect the current custodial contract.
- Other changes for consistency across investment policy statements or clean-ups as needed.

Short Term Investment Pool (STIP)

Proposed changes

- Standardize Roles and Responsibilities across all investment policy statements.

- Update the Evaluation of Investment Managers to reflect continual process improvement and eliminate policy outside the governance manual.
- Update the Securities Lending collateral requirements to reflect the current custodial contract.
- Add the section regarding Exercise of Shareholder Rights consistent with other investment policy statements.
- Reduce the maximum amount of STIP that can be held in a demand deposit account at an individual Montana domiciled bank from 5% to 3%.
- Limit the demand deposit account at the custodial bank to 5% of STIP.
- Other changes for consistency across investment policy statements or clean-ups as needed.

Montana State Fund (SFIP)

Proposed changes

- Standardize Roles and Responsibilities across all investment policy statements.
- Update the Evaluation of Investment Managers to reflect continual process improvement and eliminate policy outside the governance manual.
- Update the Securities Lending collateral requirements to reflect the current custodial contract.
- Other changes for consistency across investment policy statements or clean-ups as needed.

Coal Severance Tax Trust Fund

Proposed changes

- Standardize Roles and Responsibilities across all investment policy statements.
- Update the Securities Lending collateral requirements to reflect the current custodial contract.
- Other changes for consistency across investment policy statements or clean-ups as needed.

Separately Managed Accounts

Proposed changes

- Standardize Roles and Responsibilities across all investment policy statements.
- Update the Securities Lending collateral requirements to reflect the current custodial contract.
- Other changes for consistency across investment policy statements or clean-ups as needed.

MONTANA

BOARD OF INVESTMENTS

BOARD ADOPTED POLICY

POLICY NUMBER: 40.200

EFFECTIVE DATE: ~~November 30, 2021~~TBD

TITLE: Consolidated Asset Pension Pool
Investment Policy Statement

SUPERSEDES: November 19, 2020

BOARD ADOPTION: November 30, 2021

REVIEWED: May 24, 2023

I. Introduction

- A. Montana Public Retirement Plan assets are commingled for investment purposes into a Consolidated Asset Pension Pool (CAPP) created by the Board.
- B. The use of a commingled pool allows for simplified investing and accounting, broader diversification and thus less risk than would otherwise be available for the smaller Plans and provides additional opportunities for fee savings.
- C. CAPP invests directly in the underlying Asset Classes.
 1. Each Asset Class has an underlying set of investment objectives and investment guidelines.
 2. Each of the nine Plans, CAPP, and each of the Asset Classes are separately identified for accounting and record keeping purposes.
- D. This policy is effective upon adoption and supersedes all previous Investment Policy Statement (IPS) related to the investment management of the Montana Public Retirement Plans.

II. Purpose

- A. The purpose of this policy statement is to provide a broad strategic framework for the Montana Public Retirement Plans' investments under the guidance of the Montana Board of Investments.

III. Legal and Constitutional Authority

- A. Article VIII, Section 13, of the Montana Constitution requires that the Legislature provide for a Unified Investment Program for public funds.
 1. Section 17-6-201, MCA:
 - a) Established the Unified Investment Program.
 - b) Created the Board.
 - c) Gave the Board sole authority to invest state funds, including the public retirement plans (Plans) in accordance with state law and the state constitution.
- B. Section 17-6-201(1), MCA, requires the Board to operate under the "prudent expert principle," defined as:
 1. Discharging its duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character with like aims.
 2. Diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return, unless under the circumstances it is clearly prudent not to do so.

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

3. Discharging its duties solely in the interest of and for the beneficiaries of the funds managed.
- C. Section 17-6-201 (2) (a), MCA, states “Retirement funds may be invested in common stocks of any corporation.”
- D. Section 17-6-201 (3) (b), MCA, states “The Board is urged under the prudent expert principle to invest up to three percent (3%) of retirement funds in Venture Capital companies. Whenever possible, preferences should be given to investments in those Venture Capital companies which demonstrate an interest in making investments in Montana.”
- E. Section 17-6-201 (3) (c), MCA, states “In discharging its duties, the board shall consider the preservation of purchasing power of capital during periods of high monetary inflation.”
- F. The Board, as the investment fiduciary of the Plans, is responsible for establishing the investment parameters for the Plans.
 1. The Board has the authority to allocate portfolios to any previously board-approved asset class in the proportions it considers prudent, under the prudent expert rule.
 2. There are currently no statutory or constitutional restrictions on the investment of the Plans.
 3. Asset allocation decisions made by the Board must be made in a public meeting.

IV. Strategic Investment Objectives

- A. The Board’s overall objective is to achieve the highest level of investment performance that is compatible with its risk tolerance and prudent investment practices.
- B. Because of the long-term nature of the state’s various pension liabilities, the Board maintains a long-term perspective in formulating and implementing its investment policies, and in evaluating its investment performance.

V. Time Horizon

- A. The Board expects to meet or exceed these objectives over a long-term investment horizon.
- B. Over shorter periods, the anticipated market volatility, and specific actions, including risk mitigation efforts of the Board, may lead to unfavorable but expected deviation from these objectives.

VI. Performance Measurement

- A. Investment performance is measured by three integrated long-term return objectives:
 1. Actuarial Target Rate of Return
 - a) The actuarial target rate of return is the key actuarial assumption affecting future funding rates and liabilities.
 - b) Investment performance that exceeds or underperforms the target rate may materially impact future funding rates and liabilities.
 - c) The Board seeks to generate long-term investment performance that will exceed the maximum actuarial annual target rate of return of seven and ~~thirtysixty-five~~ hundredths’ percent (7.~~3065~~%), as determined by:
 - (1) The governing boards of the public retirement systems.
 - (2) Net of all investment and administrative expenses.
 - d) There may be years, or a period of years, when the Plans do not achieve this goal followed by years when the goal is exceeded.
 - e) Over a long period, the Board seeks to achieve an average net rate of return of seven and ~~thirtysixty-five~~ hundredths’ percent (7.~~3065~~%), as determined by the governing boards of the public retirement systems, at risk levels (measured by expected volatility) broadly consistent with other public fund peers.

2. Investment Policy Benchmark

- a) For the Retirement Plans is calculated by applying the investment performance of the benchmarks to any of the underlying asset classes to the Plans' actual allocation to these investments during the measurement period.
- b) The investment policy benchmark represents the return that would be achieved if the Plan implemented a passively managed portfolio.
- c) Deviations from the policy benchmark measure the contribution of active management, rebalancing policy and its execution, and investment implementation generally.

3. Public Plan Sponsor Universes

- a) The Board also compares each Plan's total performance, before all fees, to appropriate public plan sponsor universes.
- b) This process permits the Board to compare its total performance to other public pension plans.
- c) While the Board seeks to rank consistently in the top half of comparable public pension plans, the Board recognizes that other plans may have investment objectives and risk tolerances that differ substantially from the Board's.

VII. Roles and Responsibilities

A. Board of Investments

1. The Board is responsible for approving the IPS for the Montana Public Retirement Plans and has the authority to allocate portfolios to any asset class in the proportions it considers prudent, subject to such limitations as contained in law and the Constitution.
2. The Board reviews this document periodically and as needed, approves any changes to the policy.
3. As described in the Board of Investments Governance Manual, the Board delegates authority to the Executive Director, Chief Investment Officer (CIO), and other Staff to execute the day-to-day duties required to carry out the Board's mission.

B. Executive Director

1. The Executive Director is empowered by the Board to sign all documents required to conduct Board business.
 - a) Unless there are specific written policies or instructions from the Board to the contrary.
2. The Executive Director and the CIO are authorized jointly to contract for investment manager services and if deemed appropriate, terminate them.
3. The Executive Director is responsible for establishing the financial reporting procedures as well as collection and reporting of all income.

C. Chief Investment Officer

1. The CIO is empowered by the Board to serve as the principal staff person responsible for overseeing the investment activities under the Board's jurisdiction in compliance with the Board's policies.
2. The CIO, with the support of other staff, is responsible for recommending IPS changes for Board approval.

D. Staff

1. The staff is responsible for:

- a) Managing day-to-day operations and delegating work to external resources as appropriate.
- b) Monitoring allocations and overseeing all investment manager due diligence activities and recommending changes to the CIO.
- c) Monitoring and reporting to the Board the performance of each asset class and the individual managers' performance.
- d) Informing the Board of any new managers or terminations.
- e) Reporting any deviations from the IPS Policy to the Board.

E. Investment Consultant

1. The investment consultant assists the CIO and staff with policy recommendations and provides advice to the Board.
2. The investment consultant also assists staff in monitoring all external managers and reports to the Board independently.

F. External Managers

1. Managers are responsible for all aspects of portfolio management as set forth in the contract specific to each manager.
2. Managers must communicate with staff as needed, regarding investment strategies and results.
3. Managers must also cooperate fully with staff regarding administrative, accounting, and reconciliation issues as well as any requests from the investment consultant and the master custodian.

VIII. Strategic Asset Allocation

A. The Board finds that it is in the best interest of the state's nine retirement Plans to set out investment policies for the Plans in one comprehensive document.

1. Nine Public Retirement Plans

- a) Public Employees Retirement System.
- b) Teachers Retirement System.
- c) Police Officers Retirement.
- d) Firefighters Retirement.
- e) Sheriffs Retirement.
- f) Highway Patrol Retirement.
- g) Game Wardens Retirement.
- h) Judges Retirement.
- i) Volunteer Firefighters Retirement.

2. The current asset allocation ranges for the Plans are in Policy 40.201 of the Governance Manual.

- a) The asset allocation ranges are subject to change as modifications are adopted by the Board, at which time Policy 40.201 of the Governance Manual will be revised to reflect these changes.

- b) The Board will formally affirm or revise the asset allocation ranges for the Plans at least annually.

IX. Rebalancing

- A. The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance.
- B. Material deviations from the asset allocation ranges can alter the expected return and risk of the Plans.
- C. Rebalancing the Plans' assets to remain within the Board-approved allocation ranges is delegated to the CIO, in consultation with the Executive Director.
- D. Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions.
- E. In addition to maintaining actual allocations within the ranges, the CIO will also consider:
 - 1. Contractual investment commitments to private investments.
 - 2. Liquidity necessary to meet benefit payments and administrative costs for the Plans.
 - 3. Current market conditions.
- F. This may prompt asset rebalancing when asset allocations fall within the established ranges.
- G. The CIO shall inform the Board of rebalancing activity at the Board's next regularly scheduled quarterly meeting.

X. Risk Management

A. Evaluation of Investment Managers.

- 1. ~~The Investment Manager Evaluation Policy is a distinct policy that is regularly reviewed and updated separate from the Retirement Plans Investment Policy because staff utilizes the Investment Manager Evaluation Policy to oversee and manage other assets in addition to the retirement plan assets. Board staff have detailed processes for investing in new managers and overseeing existing manager relationships in each asset class. These processes shall include, but are not limited to, an ongoing examination of manager investment strategy, philosophy & process, team/staffing, operations & compliance, risk management & legal functions. These processes will be regularly evaluated to comport with industry best practices.~~

B. Liquidity

- 1. Based on the percentage of total plan assets necessary for ongoing benefit payments and other plan expenses, the liquidity needs for the Retirement Plans are generally low and participant capital is not expected to change dramatically on short notice.
- 2. Illiquidity risk still needs to be monitored and managed by staff on a regular basis to ensure that assets are not required to be sold too quickly, or at an unfavorable time, and potentially at a discount to fair value to meet the cash needs of the Retirement Plans.
 - a) A significant percentage of the investments in the Real Estate, Real Assets and Private Investments Asset Classes are considered illiquid. Due to the limited liquidity of these assets, it will typically be impractical to fund plan cash needs or correct deviations from policy ranges through the purchase or sale of these assets.
- 3. The investments held in the Domestic Equity, International Equity, Core Fixed Income, and Non-Core Fixed Income Asset Classes are categorized as publicly traded securities.
 - a) In "normal market" conditions many of the underlying assets from these Asset Classes can be liquidated in a relatively short period to accommodate both expected and unexpected withdrawals as well as any repositioning of the asset allocation to stay within approved ranges.

4. To improve liquidity and manage both the expected and unexpected Retirement Plans need for cash, this IPS specifies a strategic allocation to the Cash Asset Class, which invests in approved investments including the Short-Term Investment Pool (STIP).

C. Monitoring/Reporting - Transparency

1. Managers shall submit periodic reports to facilitate Staff's monitoring of the Managers' conformance to investment restrictions and performance objectives.
2. Staff shall provide regular reporting to the Board regarding the asset allocation and performance of the pension plans as well as the characteristics and performance of the Asset Classes to confirm these items are known and adhere to all IPS requirements and expectations.
3. Staff will discuss and communicate any key information discovered due to the ongoing Manager monitoring process that might assist the Board in understanding the underlying investment manager structure or risks embedded in the investment characteristics of the Retirement Plan asset allocations.

D. Leverage

1. Leverage is a significant risk factor.
 - a) Investment managers may utilize leverage only when permitted in the manager's investment guidelines approved by Staff.
 - b) Staff shall monitor the use of leverage and its impact on risk and return.
2. The use of derivative securities can generate additional leverage even if the derivative is being used to reduce the risk in other investments.
 - a) Investment managers may only use derivatives when permitted in the manager's investment guidelines approved by Staff.

E. Cash Investments

1. Cash investments held at the Retirement Plan, CAPP level, or any managed account within it, entail an element of credit risk.
2. Only approved cash investment vehicles are permitted. These include:
 - a) Any cash vehicle at the Custodial Bank.
 - b) Short-term Investment Pool (STIP).
 - c) Any SEC-registered money market funds approved by the CIO for internally managed funds or employed by an external asset manager which specifically address credit risk in their respective investment guidelines.

XI. Securities Lending

A. Section 17-1-113, MCA, authorizes the Board to lend securities held by the state.

1. The Board may lend its publicly traded securities through an agent, to other market participants in return for compensation.
2. Currently, through an explicit contract, the state's Custodial Bank manages the state's securities lending program.
 - a) The Board seeks to assess counterparty and reinvestment risk, associated with each aspect of its securities lending program.
 - b) The Board requires borrowers to maintain acceptable and adequate collateral at one-hundred and two percent (102%) for domestic securities and one hundred and five percent (105%) for international securities per the terms of the securities lending authorization agreement.

- c) To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the collateral falls below the agreed-upon ratio of over-collateralization.
- d) In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor.
- e) Staff or the investment manager may restrict a security from the loan program upon notification to the Custodial Bank.
- f) Staff will monitor the securities lending program and will periodically report to the Board on the status of the program.
- g) The Board's participation in securities lending may change over time given Plan activity, market conditions, and the agent agreement.

XII. Exercise of Shareholders Rights

A. The Board recognizes that publicly traded securities and other assets of the Plans include certain ancillary rights, such as the right to vote on shareholder resolutions at companies' annual shareholders' meetings, and the right to assert claims in securities class action lawsuits or other litigation.

1. The Board will prudently manage these assets of the Plans for the exclusive purpose of enhancing the value of the Plans for its participating systems' members and beneficiaries through such means as:

- a) Adopting and implementing a proxy voting policy.
- b) Undertaking productive, cost-effective action to exercise its rights as shareholders or claimants in litigation.

B. Proxy Voting

1. Active voting of proxies is an important part of the Board's investment program.

2. The Board will designate an agent to vote proxies held in the assigned account in the interest of CAPP and its beneficiaries.

3. Records of proxy votes shall be maintained by the Board's agent and submitted to Staff annually.

4. Staff will monitor the proxy voting practices of the Board's agent.

~~a) Under the contractual arrangements between the Board and its investment managers, the responsibility for voting proxies on the investments is delegated to the managers.~~

~~(1) Managers are contractually required to establish a proxy voting program in coordination with Board Staff and are required to vote proxies, excluding shares on loan under the Board's securities lending program, in the interest of the Plans' beneficiaries.~~

~~(2) Records of proxy votes shall be maintained by the Managers, and/or its third-party designee, and submitted to Staff and/or an external service provider annually.~~

~~(3) Staff will monitor the proxy voting practices of the Board's external investment managers.~~

~~a) External service providers may be retained by either the Board or the Managers to assist in monitoring efforts.~~

~~b) This monitoring will be coordinated with each manager to reasonably assure the Staff that Managers are fulfilling their fiduciary responsibilities with respect~~

~~to proxy voting.~~

C. Class Action Litigation

1. Claims under state and federal securities laws arising out of losses on securities under the Board's management are assets subject to the Board's fiduciary duty of prudent management.
 - a) The Board shall take reasonable, cost-effective steps to identify, pursue, and collect upon claims under securities laws for losses suffered by the Board on its investment.
 - b) Accordingly, the Board maintains a detailed litigation policy, including process steps, outlined in Policy 10.250 of the Governance Manual.

XIII. Investment Policy Statement Review

- A. Per the Board's Governance Policy, "the Board shall create, maintain, and revise as necessary Investment Policy Statements (IPS) for each separate account it manages. The IPS shall cite the law establishing the account if such law exists, cite the permissible investments authorized by law, and establish an investment range for each of the permissible investments. The Board shall review such policies at least annually or more frequently at the request of Board staff. IPS may only be revised in a public meeting. All IPS shall be posted on the Board's website for review by the public. The authority to approve IPS may not be delegated to staff."

Authority: Montana Constitution, Article VIII, Section 13
 Section 2-15-1808, MCA
 Section 17-1-113, MCA
 Section 17-2-102, MCA
 Sections 17-6-201 through 17-6-203, MCA
 Sections 19-2-503 through 19-2-505, MCA
 Section 19-3-2122, MCA
 Section 19-17-106, MCA
 Sections 19-17-201 and -202, MCA
 Section 19-17-302, MCA
 Section 19-18-403, MCA
 Section 19-19-203, MCA
 Sections 19-20-215, -409, and -501, MC

Adopted: November 30, 2021

Revised IBD

Reviewed May 24, 2023

MONTANA

BOARD OF INVESTMENTS

BOARD ADOPTED POLICY

POLICY NUMBER: 40.205

EFFECTIVE DATE: ~~May 26, 2022~~TBD

TITLE: Investment Objectives and Guidelines
Real Assets Asset Class

SUPERSEDES: November 30, 2021

BOARD ADOPTION: November 30, 2021

REVIEWED: ~~May 26, 2022~~May 24, 2023

I. Appendix II: Investment Objectives and Guidelines

A. Schedule II-D: Investment Objectives and Guidelines Real Assets Asset Class.

~~B. Approved Date of Schedule: November 19, 2020.~~

~~C.B.~~ This Schedule is effective upon adoption by the Board and supersedes all previous Investment Objectives and Guidelines for Real Assets.

II. Statement of Purpose

A. The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Real Assets Asset Class.
2. Provide diversified exposure to the Real Assets markets in a prudent and cost-effective manner.

III. Investment Objective

A. Strategic

1. The objective of the Real Assets Asset Class is to attain the highest possible return within the parameters of the Investment Guidelines set forth below.

B. Performance

1. There is no generally accepted performance comparisons benchmark index for private partnership investments in Real Assets. Characteristically, private partnership investments are impacted by the “j-curve” effect, in which fees and transaction costs create negative returns during the initial investment years before distributions are realized. Private partnership investments usually require a long-time horizon to realize the value provided by the creation or enhancement of private companies.
2. The long-term performance objective for the Real Assets Asset Class is the achievement of net returns (after management fees and general partner’s carried interest) above a benchmark reflecting public equity Real Assets market returns.
3. Success in achieving this objective will be measured by comparing the long-term net return of the Real Assets Asset Class to 1/3 MSCI ACWI Commodity Producers Index, 1/3 US TIPS Index, 1/3 MSCI ACWI Infrastructure Index (the Benchmark) on an annualized basis. Performance results will be monitored quarterly. However, the success in achieving the objective will be measured on a five (5) year and ten (10) year annualized basis.

Adopted: November 30, 2021

Revised: ~~May 26, 2022~~TBD

Reviewed: ~~May 26, 2022~~May 24, 2023

C. Investment Guidelines

1. Staff will have full discretion to manage the Real Assets Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board at the next scheduled quarterly Board meeting.
2. Most of the Real Assets Asset Class investments will be managed by external investment managers via private investment partnerships in which the Board will have a limited partnership interest; however, the Real Assets Asset Class may also utilize public long-only and long/short strategies.

D. Permitted Investments

1. The Real Assets Asset Class (for the purpose of these guidelines, “Real Assets” includes investments in inflation linked bonds, infrastructure, timber, energy, agriculture, and other commodities) may invest only in the following:
 - a) Private investment partnership interests in Real Assets. These private investment partnerships may be direct limited partnerships, limited liability companies, or vehicles that primarily invest in partnerships, including fund-of-funds and secondary funds.
 - b) The Real Assets Asset Class may co-invest with private investment managers in transactions that are suitable for inclusion into a Real Assets private investment partnership.
 - c) Individual public or private securities received as distributions from funds.
 - d) Separately managed accounts, open-ended funds, closed-ended funds, or exchange-traded funds (ETFs), managing publicly traded Real Assets related investments, where the investments are approved by the CIO and purchased and monitored by Staff.
 - e) Inflation Linked Bonds.
 - f) Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the custodian, or an SEC registered money market fund that is considered a “US Treasury” or “US Government” money market fund per the SEC regulations.

E. Other Restrictions

1. The Montana Public Retirement Plan assets as a percentage of Net Asset Value invested in a single investment within Real Assets Asset Class shall be no greater than two percent (2%).
2. No more than forty percent (40%) of the aggregate of the Real Assets Asset Class Net Asset Value should be considered “Non-U.S.” exposure based on the primary objective of the fund, partnership, separately managed account, or index.
3. No more than ten percent (10%) of the aggregate of the Real Assets Asset Class Net Asset Value shall be invested in direct co-investments.
4. Individual public securities received as distributions will be liquidated over a reasonable time-period dependent on market conditions.

F. The following table provides a guideline range with respect to the Real Assets Asset Class strategy diversification. These ranges reference the Real Assets Asset Class Net Asset Value.

<u>Strategy</u>	<u>Policy Range</u>
Commodities Related	25% - 75%
Infrastructure Related	25% - 75% 0% - 50%
Inflation Linked Bonds	0% - 50%

1. For funds with exposure across categories, the fund will be classified in the category that is most reflective of the underlying investments in the funds.

G. Timber Fund Leverage

1. Leverage is a significant risk factor. On an individual fund basis, the leverage level can range up to thirty percent (30%). Individual fund leverage may occasionally exceed thirty percent (30%) and will be monitored by staff to determine the cause and whether it is a temporary or persistent issue. Leverage shall be monitored on an individual fund level and new investments shall be made with the intention that the total timber fund investment leverage shall not exceed thirty percent (30%).

Strategy

Timber

Leverage Policy Range

0% - 30%

- H. If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases when the Real Assets allocations were outside of the limits and either inform the Board of the actions that were taken to return the Real Assets Asset Class back within guidelines or a plan to do so.

Authority: Montana Constitution, Article VIII, Section 13
 Section 2-15-1808, MCA
 Section 17-6-201, MCA
 Sections 17-6-204 and -205, MCA
 Section 19-2-504, MCA

MONTANA

BOARD OF INVESTMENTS

BOARD ADOPTED POLICY

POLICY NUMBER: 40.500
~~2021~~TBD

EFFECTIVE DATE: ~~November 30,~~

TITLE: Trust Funds Investment Pool
Investment Policy Statement

SUPERSEDES: November 30, 2021

BOARD ADOPTION: November 30, 2021

REVIEWED: May 24, 2023

I. Introduction

- A. The Trust Funds Investment Pool (TFIP) was created by the Board on October 1, 1995.
1. The pool is designed to provide participants exposure to a portfolio of income-producing assets.
 2. The use of a commingled pool allows for simplified investing and accounting, broader diversification and thus less risk than would otherwise be available for individual participants.
 3. The TFIP invests directly in the underlying Asset Classes.
 4. Each Asset Class has an underlying set of investment objectives and investment guidelines. Each account participating in the TFIP is separately identified for accounting and record keeping purposes.
- B. This policy is effective upon adoption and supersedes all previous Investment Policy Statement (IPS) related to the investment management of the TFIP.

II. Purpose

- A. The purpose of this policy statement is to provide a broad strategic framework for the TFIP investments under the guidance of the Board.

III. Legal and Constitutional Authority

- A. Article VIII, Section 13, of the Montana Constitution requires that the Legislature provide for a Unified Investment Program for public funds.
1. Section 17-6-201, MCA
 - a) Established the Unified Investment Program.
 - b) Created the Board and gave the Board sole authority to invest state funds, in accordance with state law and the state constitution.
- B. ~~2.~~ Section 17-6-201(1), MCA, requires the Board to operate under the “prudent expert principle,” defined as:
1. ~~a)~~—Discharging its duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character with like aims.
 2. ~~b)~~—Diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return, unless under the circumstances it is clearly prudent not to do so.
 3. ~~e)~~—Discharging its duties solely in the interest of and for the beneficiaries of the funds managed.

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

C. 3. The Board, as the investment fiduciary, is responsible for establishing the investment parameters for the TFIP.

1. The Board has the authority to allocate to any previously Board-approved asset class in the proportions it considers prudent, under the prudent expert rule.

4.2. Asset allocation decisions made by the Board must be made in a public meeting.

IV. Strategic Investment Objectives

- A. The Board's primary objective is to provide investment income to participants.
- B. The Board's secondary objective is to achieve the highest level of investment performance.
- C. Both objectives must be compatible with the Board's risk tolerance and prudent investment practices.
- D. The Board seeks to maintain a long-term perspective in formulating and implementing investment policies and evaluating investment performance.

V. Time Horizon

- A. The Board expects to meet or exceed these objectives over a long-term investment horizon.
- B. Over shorter periods, the anticipated market volatility, and specific actions, including risk mitigation efforts of the Board, may lead to unfavorable but expected deviation from the objectives.

VI. Performance Measurement

- A. Success in achieving these objectives will be measured by comparing the risk and return of the account to the:
 1. Bloomberg/Barclays U.S. Aggregate Bond Index (IG fixed income).
 2. NCREIF ODCE Index (real estate).
 3. Bloomberg Barclays US High Yield – two percent (2%) Issuer Cap Index (Non-Core fixed income).
 4. Fifty percent (50%) MSCI ACWI Commodity Producers Index / fifty percent (50%) MSCI ACWI Infrastructure Index (real assets).
- B. Each weighted proportionately to the portfolio's holdings.
- C. Performance results will be monitored and evaluated quarterly.
- D. Success in achieving the objective will be measured on a three (3) year, five (5) year, and ten (10) year annualized basis.

VII. Roles and Responsibilities

A. Board of Investments

1. The Board is responsible for approving the IPS for the TFIP and has the authority to manage the TFIP as it considers prudent, subject to such limitations as contained in law and the Constitution.
~~a) Subject to such limitations as contained in law and the Constitution.~~
 2. The Board reviews this document periodically and approves any changes to the policy as needed.
- B3. As described in the Board of Investments Governance Manual, the Board delegates authority to the Executive Director, Chief Investment Officer (CIO), and other Staff to execute the day-to-day duties required to carry out the Board's mission.~~to execute the day-to-day duties required to carry out the Board's mission, the Board delegates authority to the:~~
- ~~1. Executive Director.~~

~~2. Chief Investment Officer (CIO).~~~~3. Other Staff.~~~~GB.~~ Executive Director

1. The Executive Director is empowered by the Board to sign any and all documents required to conduct Board business
 - a) Unless there are specific written policies or instructions from the Board to the contrary.
2. The Executive Director and the CIO are authorized jointly to contract for investment manager services and if deemed appropriate, terminate them. is responsible for the:
3. The Executive Director is responsible for establishing the financial reporting procedures as well as collection and reporting of all income.
 - ~~a) Oversight of the TFIP.~~
 - ~~b) Establishment of the financial reporting procedures.~~
 - ~~c) Collection and reporting of all income.~~

~~DC.~~ Chief Investment Officer

1. The CIO is empowered by the Board to serve as the principal staff person responsible for overseeing the investment activities under the Board's jurisdiction in compliance with the Board's policies.
2. The CIO, with the support of other staff, is responsible for recommending investment policy changes for Board approval.

~~ED.~~ Staff

1. The staff is responsible for:
 - a) Managing day-to-day operations and delegating work to external resources as appropriate.
 - b) Monitoring allocations and overseeing all investment manager due diligence activities and recommending changes to the CIO.
 - c) Monitoring and reporting to the Board the performance of each asset class and the individual managers' performance.
 - d) Informing the Board of any new managers or terminations.
 - e) Reporting any deviations from the IPS to the Board.

~~FE.~~ Investment Consultant

1. The investment consultant assists the CIO and Staff with policy recommendations and provides advice to the Board.
2. The investment consultant shall provide assistance to staff as requested in conjunction with the management of all separate accounts the TFIP.

~~GF.~~ External Managers

1. Managers are responsible for all aspects of portfolio management as set forth in the contract specific to each manager.
2. Managers must communicate with staff as needed, regarding investment strategies and results.
3. Managers must also cooperate fully with staff regarding administrative, accounting, and reconciliation issues as well as any requests from the investment consultant and the master custodian.:
 - ~~a) Staff regarding administrative, accounting, and reconciliation issues.~~

~~b) Any requests from the investment consultant and the master custodian.~~

VIII. Strategic Asset Allocation

A. The current asset allocation ranges for the TFIP are in Policy 40.501 of the Governance Manual.

~~1. B.~~ The asset allocation ranges are subject to change as modifications are adopted by the Board, at which time Policy 40.501 of the Governance Manual will be revised to reflect these changes.

4.2. The Board will formally affirm or revise the asset allocation ranges for the TFIP at least annually.

IX. Rebalancing

A. The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance.

B. Material deviations from the asset allocation ranges can alter the expected return and risk of the ~~separate accounts~~ TFIP.

C. Rebalancing to remain within the Board-approved allocation ranges is delegated to ~~staff in consultation with~~ the CIO and in consultation with the Executive Director.

D. Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions.

E. The CIO shall inform the board of rebalancing activity at the Board's next regularly scheduled quarterly meeting only if rebalancing causes deviations from the Board approved ranges.

X. Risk Management

A. Evaluation of Investment Managers

~~1. The Investment Manager Evaluation Policy is a distinct policy that is regularly reviewed and updated separate from the IPS because staff utilizes the Investment Manager Evaluation Policy to oversee and manage other assets in addition to the TFIP assets. Board staff have detailed processes for investing in new managers and overseeing existing manager relationships in each asset class. These processes shall include, but are not limited to, an ongoing examination of manager investment strategy, philosophy & process, team/staffing, operations & compliance, risk management & legal functions. These processes will be regularly evaluated to comport with industry best practices.~~

B. Liquidity

1. Many participants in the TFIP spend the income generated from their holdings.

2. The total liquidity needs for the TFIP are generally low and participant capital is not expected to change dramatically on short notice.

3. Illiquidity risk still needs to be monitored and managed by staff on a regular basis to ensure that:

a) Assets are not required to be sold too quickly, or at an unfavorable time, and potentially at a discount to fair value to meet the cash needs of pool participants.

(1) A significant percentage of the investment in Core Real Estate is considered illiquid.

(2) Due to the limited liquidity of these assets, it will typically be impractical to fund participant cash needs or correct deviations from policy ranges through the purchase or sale of these assets.

4. The investments held in Investment Grade and High Yield Fixed Income are categorized as publicly traded securities.

a) In "normal market" conditions many of the underlying assets can be liquidated in a relatively

short period to accommodate both expected and unexpected withdrawals as well as any repositioning of the asset allocation to stay within approved ranges.

C. Monitoring/Reporting - Transparency

1. Managers shall submit periodic reports to facilitate Staff's monitoring of the Managers' conformance to investment restrictions and performance objectives.
2. Staff shall provide regular reporting to the Board regarding the asset allocation and performance of the TFIP to confirm these items are known and adhere to all IPS requirements and expectations.
3. Staff will discuss and communicate any key information discovered due to the ongoing Manager monitoring process that might assist the Board in understanding the underlying investment manager structure or risks embedded in the investment characteristics of the TFIP asset allocation.

D. Leverage

1. Leverage is a significant risk factor.
 - a) ~~2-~~Investment managers may utilize leverage only when permitted in the manager's investment guidelines approved by Staff.
 - b) ~~3-~~Staff shall monitor the use of leverage and its impact on risk and return.
- 4~~2~~. The use of derivative securities can generate additional leverage even if the derivative is being used to reduce the risk in other investments.
 - a) ~~5-~~Investment managers may only use derivatives when permitted in the manager's investment guidelines approved by Staff.

E. Cash Investments

1. Cash investments held within the TFIP entail an element of credit risk.
2. Only approved cash investment vehicles are permitted. These include:
 - a) Any cash vehicle at the Custodial Bank.
 - b) Short-term Investment Pool (STIP).
 - c) Any SEC-registered money market funds approved by the CIO for internally managed funds or employed by an external asset manager which specifically address credit risk in their respective investment guidelines.

XI. Securities Lending

A. Section 17-1-113, MCA, authorizes the Board to lend securities held by the state.

1. ~~B-~~The Board may lend its publicly traded securities through an agent, to other market participants in return for compensation.
2. ~~C-~~Currently, through an explicit contract, the state's Custodial Bank, manages the state's securities lending program.
 - a) ~~D-~~The Board seeks to assess counterparty and reinvestment risk, associated with each aspect of its securities lending program.
 - b) ~~E-~~The Board requires borrowers to maintain acceptable and adequate collateral ~~at one-hundred two percent (102%) for domestic securities and one hundred five percent (105%) for international securities. per the terms of the securities lending authorization agreement.~~
 - c) ~~4-~~To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the collateral falls below the agreed-upon ratio of over-collateralization.

- d) ~~2-~~In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor.
- e) ~~F-~~Staff or the investment manager may restrict a security from the loan program upon notification to the Custodial Bank.
- f) ~~G-~~Staff will monitor the securities lending program and will periodically report to the Board on the status of the program.
- g) ~~H-~~The Board's participation in securities lending may change over time given account activity, market conditions and the agent agreement.

XII. Exercise of Shareholder Rights

A. Proxy Voting

1. Article VIII, Section 13 of the Montana Constitution requires that "no public funds shall be invested in private corporate capital stock" with the exception of public retirement system and state compensation insurance fund assets. Therefore, the TFIP does not participate in proxy voting.

B. Class Action Litigation

1. Claims under state and federal securities laws arising out of losses on securities under the Board's management are assets subject to the Board's fiduciary duty of prudent management.
 - a) ~~-~~The Board shall take reasonable, cost-effective steps to identify, pursue and collect upon claims under securities laws for losses suffered by the Board on its investment.
 - a)b) Accordingly, the Board maintains a detailed litigation policy, including process steps, outlined in Policy 10.250 of the Governance Manual.

XIII. Investment Policy Statement Review

- A. Per the Board's Governance Policy, "the Board shall create, maintain, and revise as necessary the Investment Policy Statements (IPS) for each separate account it manages. The IPS shall cite the law establishing the account if such law exists, the permissible investments authorized by law, and establish an investment range for each of the permissible investments. The Board shall review such policies at least annually or more frequently at the request of Board staff. IPS may only be revised in a public meeting. All IPS shall be posted on the Board's website for review by the public. The authority to approve IPS may not be delegated to staff".

Authority: Montana Constitution, Article VIII, Section 13
 Section 2-15-1808, MCA
 Section 17-1-113, MCA
 Section 17-6-201, MCA
 Sections 17-6-204 and -205, MCA
 Section 19-2-504, MCA

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

MONTANA

BOARD OF INVESTMENTS

BOARD ADOPTED POLICY

POLICY NUMBER: 40.600
~~2021~~TBD

EFFECTIVE DATE: ~~November 30,~~

TITLE: Short-Term Investment Pool
Investment Policy Statement

SUPERSEDES: November 30, 2021

BOARD ADOPTION: November 30, 2021

REVIEWED: May 24, 2023

I. Introduction

- A. This policy is effective upon adoption and supersedes all previous Investment Policies related to the investment management of the Short-Term Investment Pool (STIP).
- B. STIP is an investment program managed and administered under the direction of the Board as authorized by the Unified Investment Program.
- C. STIP invests the operating funds of the State of Montana, participating local government entity funds, and the liquidity requirements of the various pension and trust funds managed by the Board.
- D. STIP is a commingled pool for investment purposes.
 1. The use of a commingled pool allows for simplified investing and accounting, as well as broader investment diversification, and it provides opportunities for fee savings.

II. Purpose

- A. The purpose of this policy statement is to provide a strategic framework for STIP investments under the guidance of the Board.

III. Legal and Constitutional Authority

- A. The Montana Constitution, Article VIII, Section 13, requires that the Legislature provide for a Unified Investment Program for public funds.
- B. Section 17-6-201, MCA, in accordance with state law and the state constitution:
 1. Established the Unified Investment Program.
 2. Created the Board.
 3. Gave the Board sole authority to invest state funds, including STIP.
- C. The Unified Investment program for public funds must be administered by the Board in accordance with the “prudent expert principle,” defined as:
 1. Discharging its duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character with like aims.
 2. Diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return, unless under the circumstances it is clearly prudent not to do so.
 3. Discharging its duties solely in the interest of and for the beneficiaries of the funds managed.

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

- D. The Board created STIP to allow qualifying funds, per sections 17- 6-201, 202, and 204, MCA to participate in a diversified pool.
 - 1. State agencies with accounts that retain their interest earnings are legally required to invest in STIP.
 - 2. Local governments may voluntarily participate in the STIP.
- E. The Board, as the investment fiduciary, is responsible for establishing the investment parameters for the STIP.
- F. STIP is not registered with the SEC as an investment company and therefore is not required to abide by the SEC's rule 2a7 of the Investment Company Act of 1940.
- G. STIP has a defined set of investment objectives and investment guidelines, including permitted investments, which are detailed in this policy statement.

IV. Financial Reporting

- A. The STIP financial statements are included in the Board's Consolidated Unified Investment Program financial statements, which are audited by the Montana Legislative Auditor.
- B. On October 6, 2015, the Board approved that for financial reporting purposes the STIP portfolio will be reported on a Net Asset Value basis versus amortized cost.

V. Strategic Investment Objectives

- A. The Board's objective for STIP is to achieve a high level of investment income that is compatible with the preservation of principal, providing STIP participants with liquidity with one (1) day notification, and the prudent investment practices of the Board.
- B. No Guaranteed Return
 - 1. There is no minimum or maximum amount of interest rate or any guaranteed rate of return on STIP shares, or funds invested in STIP shares.
- C. No Warranty
 - 1. The Board makes no warranty that funds will be immediately available in the event of any failure of a third party or that STIP participants will not suffer losses due to acts of God, or other calamities, or other market dislocations or interruptions.
- D. STIP Not Insured Against Loss
 - 1. STIP is NOT FDIC insured or otherwise insured or guaranteed by the federal government, the State of Montana, the Board, or any other entity against investment losses.
- E. Reserve Fund
 - 1. This Policy requires maintenance of a reserve fund to offset possible losses.
 - a) STIP interest earnings may be used to fund this reserve before the net earnings are distributed to the STIP Participants.
 - b) The reserves may not be adequate to cover investment losses.

VI. Reserve

- A. The STIP will maintain a reserve account.
- B. The reserve will be available to offset realized gains or losses.
- C. Additionally, the reserve will be available to offset unrealized gains or losses, or to limit fluctuations in the net asset value (NAV), to the extent deemed prudent by Staff.

D. A deduction from earnings will occur while the amount of the reserve is below one and fifteen hundredths' percent (1.15%) of the NAV.

1. The level of deduction will be calculated based on the deemed best balance between participants' need for current earnings and the increase in safety from building the reserve.
 - a) When the reserve is between one-half percent (0.50%) and one and fifteen hundredths' percent (1.15%) of the NAV the deduction from earnings will be an amount, including recoveries, sufficient to reach the target within three (3) years.
 - b) Should the reserve fall below one-half percent (0.50%) of the NAV, staff will evaluate the amount of deduction appropriate to return the reserve to one-half percent (0.50%) and make recommendations to that effect to the Board.

E. Any use of the reserve will be reported to the Board.

VII. Time Horizon

- A. The STIP investment portfolio shall be managed with the goal of attaining its objectives throughout market and economic cycles, after giving prudent consideration to the investment risk constraints (described as part of the Investment Guidelines in Policy 40.601 of Governance Manual) and the liquidity needs of the participants.
- B. The Board expects to meet or exceed these objectives over a long-term investment horizon. Over shorter periods, the anticipated market volatility, and specific actions, including risk mitigation efforts of the Board, may lead to unfavorable but expected deviation from these objectives.

VIII. Performance Measurement

A. Investment performance is measured by two (2) integrated long-term return objectives:

1. The investment policy benchmark.
 - a) The investment policy benchmark represents the return that would be achieved if the Pool implemented a passively managed portfolio. Deviations from the policy benchmark measure the contribution of active investment management throughout the fund and investment implementation generally.
2. STIP's total performance, before all fees, to appropriate peer universes.
 - a) While the Board seeks to rank favorably compared to peers, the Board recognizes that other short-term investment funds may have investment objectives and risk tolerances that differ substantially from STIP.

IX. Roles and Responsibilities

A. Board of Investments

1. The Board is responsible for approving the IPS and has the authority to manage the Short-Term Investment Pool (STIP) as it considers prudent, subject to such limitations as contained in law and the Constitution.
 - ~~a) Is responsible for approving the STIP Investment Policy Statement.~~
 - ~~b) Has the authority to manage STIP as it considers prudent, subject to such limitations as contained in law and the Constitution.~~
2. The Board reviews this document periodically and as needed, approves any changes to the policy.
3. As described in the Board of Investments Governance Manual, the Board delegates authority to the Executive Director, Chief Investment Officer (CIO), and other Staff to execute the day-to-day duties required to carry out the Board's mission.

B. Executive Director

1. The Executive Director is empowered by the Board to sign any and all documents required to conduct Board business.

a) Unless there are specific written policies or instructions from the Board to the contrary.

~~2. The Executive Director and the CIO are authorized jointly to contract for investment manager services and if deemed appropriate, terminate them. is responsible for:~~

~~2.3. The Executive Director is responsible for establishing the financial reporting procedures as well as collection and reporting of all income.~~

~~a) Oversight of the STIP investment program.~~

~~b) Establishment of the STIP financial reporting procedures.~~

~~c) The collection and reporting of all income.~~

C. Chief Investment Officer

1. The CIO is empowered by the Board to serve as the principal staff person responsible for overseeing the investment activities under the Board's jurisdiction in compliance with the Board's policies.

2. The CIO, with the support of other staff, is responsible for recommending investment policy changes for Board approval.

D. ~~Investment~~ Staff

1. The investment staff is responsible for, but not limited to, the following:

a) Managing day-to-day STIP investment operations.

b) Investing STIP assets and monitoring compliance in accordance with this Policy.

c) Reporting to the Board the STIP investment results and investment characteristics at the Quarterly Board meetings.

~~d) Reporting any deviations from this Investment Policy to the Board.~~

~~e) Reporting any deviations from the IPS Policy to the Board.~~

E. Investment Consultant

1. The investment consultant assists the CIO and Staff with policy recommendations and provides advice to the Board.

2. The investment consultant shall provide assistance to Staff as requested in conjunction with the management of the STIP.

X. Risk Management

A. Short-term investments held within STIP are exposed to a number of risks.

B. The objective will be to mitigate the inherent risks associated with these securities, primarily liquidity risk, credit risk, and interest rate risk.

C. Liquidity Risk

1. Based on the percentage of STIP Units Value usually necessary to meet the daily distribution requests of STIP participants, the liquidity needs for the STIP are generally low.

2. Illiquidity risk still needs to be monitored and managed by staff on a regular basis to ensure that assets are not required to be sold too quickly, or at an unfavorable time, and potentially at a discount to fair value to meet the cash needs of STIP participants.

3. In order to improve liquidity and manage both the expected and unexpected STIP participants' need for cash, the STIP Investment Objectives and Guidelines (Policy 40.601) require certain percentages of the STIP Units Value to either be invested in cash, direct obligations of the

U.S. government, or in securities that will have an effective maturity for specifically defined short periods or time (daily and weekly).

D. Credit Risk

1. Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation in making full and timely principal and interest payments.
2. The STIP will utilize credit ratings, issued by at least two of the nationally recognized statistical rating organizations (NRSRO), to assist in the monitoring and management of credit risk.
3. Securities of federal agencies without their own NRSRO rating will use the ratings of the United States government.
 - a) Approved List
 - (1) Purchases of securities other than U.S. government or U.S. Agency obligations are restricted to those which are pre-approved.
 - (2) The approved list shall be maintained by Staff with issuers added or removed from time to time depending on an analysis of their risk characteristics and suitability for use in the portfolio.
 - (a) At least two (2) investment staff must approve names on the list.
 - (3) One (1) of the investment staff should be part of the internally managed fixed income team and the other person from the Risk Management team.
 - (4) Issuers on the list shall be reviewed at least semi-annually for continued inclusion on the approved list.
 - (5) STIP will minimize credit risk by means of the following:
 - (a) Limiting Permissible investments to securities on the "Approved List".
 - (b) Pre-qualifying the financial institutions, broker/dealers, intermediaries, and advisers with whom STIP will conduct business.
 - (c) Diversifying the investment portfolio so that potential losses on individual securities will be minimized.
 - (d) STIP will maintain a reserve account.

E. Interest Rate Risk

1. The STIP portfolio will minimize the risk that the market value of the securities will deviate significantly from cost due to changes in the general level of interest rate by means of the following:
 - a) Structuring the investment portfolio so that securities mature to meet cash requirements for ongoing operations thereby normally avoiding the need to sell securities on the open market prior to maturity.
 - b) Maintaining a dollar-weighted average portfolio maturity of one-hundred twenty (120) days or less.
 - (1) For this purpose, the date to the next coupon reset date will be used for all floating or variable rate securities.
 - c) STIP will maintain a reserve account.

XI. Securities Lending

A. Section 17-1-113, MCA, authorizes the Board to lend securities held by the state.

1. The Board may lend its publicly traded securities held in the investment pools, through an agent, to other market participants in return for compensation.

2. Currently, through an explicit contract, State Street Bank and Trust, the state's custodial bank, manages the state's securities lending program.
 - a) The Board seeks to assess counterparty and reinvestment risk, associated with each aspect of its securities lending program.
 - b) The Board requires borrowers to maintain acceptable and adequate collateral at one-hundred and two percent (102%) for domestic securities and one-hundred and five percent (105%) for international securities per the terms of the securities lending authorization agreement.
 - c) To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the collateral falls below the agreed-upon ratio of over-collateralization.
 - d) In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor.
 - e) Staff or the investment manager may restrict a security from the loan program upon notification to State Street Bank.
 - f) Staff will monitor the securities lending program, and the CIO will periodically report to the Board on the status of the program.
 - g) The Board's participation in securities lending may change over time given Plan activity, market conditions and the agent agreement.
 - h) STIP assets are currently not available for securities lending.

XII. Exercise of Shareholder Rights

A. Proxy Voting.

1. Per the Montana Constitution, Article VIII, Section 13 "no public funds shall be invested in private corporate capital stock" with the exception of public retirement system and state compensation insurance fund assets.
2. The Short-Term Investment Pool (STIP) does not participate in proxy voting.

B. Class Action Litigation

1. Claims under state and federal securities laws arising out of losses on securities under the Board's management are assets subject to the Board's fiduciary duty of prudent management.
 - a) The Board shall take reasonable, cost-effective steps to identify, pursue, and collect upon claims under securities laws for losses suffered by the Board on its investment.
 - b) Accordingly, the Board maintains a detailed litigation policy, including process steps, outlined in Policy 10.250 of the Governance Manual.

~~XII.~~XIII. Investment Policy Review

~~A. The Board intends to keep this Policy updated as it modifies or amends the underlying contents.~~

~~B.A. As stated in the Governance Policy, "the Board shall create, maintain, and revise as necessary Investment Policy Statements (IPS) for each separate account it manages. The IPS shall cite the law establishing the account if such law exists, cite the permissible investments authorized by law, and establish an investment range for each of the permissible investments. The Board shall review such policies at least annually or more frequently at the request of Board staff. IPS may only be revised in a public meeting. All IPS shall be posted on the Board's website for review by the public. The authority to approve IPS may not be delegated to staff." "the Board shall review this Investment Policy at least annually or more frequently at the request of Board staff. Statements may only be revised in a public meeting. All Statements shall be posted on the Board's website for review by the public."~~

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

Authority: Montana Constitution, Article VIII, Section 13
Section 2-15-1808, MCA
Section 17-1-113, MCA
Sections 17-6-201 through 17-6-204 MCA

Adopted: November 30, 2021

Revised [TBD](#)

Reviewed [May 24, 2023](#)

MONTANA

BOARD OF INVESTMENTS

BOARD ADOPTED POLICY

POLICY NUMBER: 40.601

EFFECTIVE DATE: ~~May 26, 2022~~TBD

TITLE: Investment Objectives and Guidelines
Short Term Investment Pool (STIP)

SUPERSEDES: ~~May 26, 2022~~-TBD

BOARD ADOPTION: November 30, 2021
~~2023~~

REVIEWED: ~~May 26, 2022~~ May 24,

I. Appendix I: Investment Objectives and Guidelines

A. Schedule I-A: Investment Objectives and Guidelines Short Term Investment Pool (STIP).

~~Effective Date of Schedule: May 26, 2023~~ June 1, 2021.

B. This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for the STIP.

II. Statement of Purpose

A. The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Pool.
2. Provide diversified exposure to Cash Equivalent and Short-Term Fixed Income Investments in a prudent and cost-effective manner.

III. Investment Objective

A. Strategic

1. The objective of the STIP is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

B. Performance

1. Success in achieving this objective will be measured by comparing the risk and the net of expenses return of the STIP to the Federal Reserve US Treasury Constant Maturity 1 Month Index (the Benchmark). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three (3) year, five (5) year, and ten (10) year annualized basis.

IV. Investment Guidelines

A. Board Staff will have full discretion to manage the STIP consistent with the Investment Guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board at the next scheduled quarterly Board meeting.

V. Permitted Investments

A. Purchases of securities other than U.S. government or U.S. Agency obligations are restricted to those which are pre-approved and part of an "Approved List." The STIP may invest only in the following securities and investment vehicles:

1. U.S. Treasury or U.S. dollar denominated securities fully guaranteed by the U.S. Government.
2. U.S. Government Agency securities denominated in U.S. dollars.

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Reviewed: ~~May 26, 2022~~ May 24, 2023

3. Publicly traded U.S. dollar denominated corporate bonds, notes, and medium-term notes (MTNs).
4. U.S. dollar denominated Commercial Paper (CP).
5. U.S. dollar denominated Bankers' Acceptance (BA).
6. U.S. dollar denominated Certificates of Deposits (CD).
7. U.S. dollar denominated Asset-Backed Commercial Paper (ABCP).
8. Repurchase or Reverse Repurchase Agreements with an approved primary dealer or the custodial bank, and under the terms of a written master repurchase agreement.
9. Investments required to implement the bond credit enhancement authorized by Resolution 219.
10. SEC registered 2a-7 Institutional Money Market Funds that are considered "U.S. Treasury" or "U.S. Government" money market mutual funds according to the SEC regulations.
11. Short-term investment vehicle available through the custodial bank.
12. Variable rate securities based on an index that is approved by the CIO and purchased and monitored by Staff.
13. FDIC insured deposit accounts.
14. Fixed Income Investments in the State's INTERCAP program.
15. Fully collateralized, daily liquidity investment in an interest-bearing Demand Deposit Account with Montana domiciled Banks.

VI. Restrictions

A. Concentration restrictions (Concentration restrictions are at the time of purchase)

1. A maximum of forty percent (40%) of the STIP Units Value shall be held ABCP.
2. A maximum of ten percent (10%) of the STIP Units Value shall be held in Repurchase Agreements.
3. A maximum of fifteen percent (15%) of the STIP Units Value shall be held in permitted SEC registered 2a-7 Institutional Money Market Funds.
4. A maximum of ten percent (10%) of the STIP Units Value shall be pledged to secure Reverse Repurchase Agreements. Transactions will be used only to secure borrowings for temporary or emergency purposes.
5. A maximum of twenty-five percent (25%) of the STIP Units Value in the aggregate shall be held in all non- Government Variable Rate securities with maturities greater than three hundred ninety-seven (397) days.

B. Issuer Restrictions (Issuer restrictions are at the time of purchase)

1. A maximum of thirty percent (30%) of the STIP Units Value shall be held in any single issuer of U.S. Agency securities.
2. A maximum of three percent (3%) of the STIP Units Value shall be invested in any one issuer with the exception of U.S. Treasury and U.S. Agency securities as well as any Repurchase Agreements with a financial institution.
3. A maximum of ten percent (10%) of the STIP Units Value in the aggregate shall be held in any one financial sponsor of ABCP as well as any direct obligations associated with the sponsor. Repurchase agreement obligations of a financial institution shall not be considered in this limit.
4. A maximum of five percent (5%) of the STIP Units Value shall be held in any single SEC registered 2a-7 Institutional Money Market Funds or as FDIC insured deposits.
5. A maximum of five percent (5%) of the STIP Units Value shall be held in Repurchase Agreements

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with any single primary dealer or financial institution.

6. A maximum of ~~five-three~~ percent (53%) of the STIP Units Value shall be held in a fully collateralized, demand deposit accounts at a Montana domiciled Banks.

6-7. A maximum of five percent (5%) of the STIP Units Value shall be held in the interest-bearing demand deposit account at the custodial bank.

C. Rating Restrictions

1. ABCP, CP, BA or CD shall not have a Tier 2 or lower rating at any NRSRO at the time of purchase.
2. Corporate bonds, notes, or MTNs shall be rated a minimum of the sixth highest rating at any NRSRO at the time of purchase.
3. All securities, with the exception of Fixed Income Investments in the State INTERCAP program, securities fully guaranteed by the U.S. Government, approved Institutional Money Market Funds, and fully collateralized Demand Deposit Accounts at Montana domiciled Banks must be rated by at least two Nationally Recognized Statistical Rating Organizations (NRSROs) at the time of purchase.
4. A maximum of ten percent (10%) of the STIP Units Value shall be held in ABCP, CP, BA or CD rated with a Tier 2 or lower rating at any Nationally Recognized Statistical Rating Organization (NRSRO) at any time.

D. Liquidity Restrictions

1. A minimum of ten percent (10%) of the STIP Units Value shall qualify as “daily liquid assets.” For this guideline is it assumed that “daily liquid assets” is defined as cash, direct obligations of the U.S. government, securities that will mature or are subject to a demand feature that is exercisable and payable within one (1) business day, and a permitted SEC registered 2a-7 Institutional Money Market Fund.
2. A minimum of fifteen percent (15%) of the STIP Units Value shall qualify as “weekly liquid assets.” For the purpose of this guideline, it is assumed that “weekly liquid assets” is defined as “daily liquid assets” (as defined above), government agency discount notes with remaining maturities of sixty (60) days or less, securities that will mature or are subject to a demand feature that is exercisable and payable within five (5) business days, and a permitted SEC registered 2a-7 Institutional Money Market Fund.
3. A maximum of ten percent (10%) of the STIP Units Value shall be invested in Permitted Investments that are considered “illiquid.” For the purpose of this guideline, “illiquid” shall be defined as “a security that cannot be sold or disposed of in the ordinary course of business within seven (7) calendar days at approximately the value ascribed to it by STIP.”
4. STIP shall maintain a dollar-weighted average portfolio maturity of one hundred twenty (120) days or less (for this purpose, the date to the next coupon reset date will be used for all floating or variable rate securities).
5. ABCP purchases shall be limited to maturities of ninety (90) days or less.
6. The maximum term of any Repurchase Agreement will be thirty (30) days.
7. The maximum term of any Reverse Repurchase Agreement will be ninety (90) days and must be matched to anticipated cash flows adequate to liquidate the transaction.
8. The maximum final maturity of any Permitted Investment shall not exceed three hundred ninety-seven (397) days (not including securities used as collateral in Repurchase Agreements or Permitted Investments considered “Variable Rate” securities, which on any reset date can reasonably be expected to have a market value that approximates its amortized cost).
9. A Variable Rate security shall have a maximum maturity of two (2) years.

E. Other Restrictions

1. Risk assets will/may be purchased only when the estimated aggregate effect of a worst-case scenario spread widening event does not exceed the amount of the STIP Reserve. Risk assets are assets other than Treasuries, Agencies and Government money markets. The estimated worst-case scenario is a calculation equal to the days to maturity divided by three hundred sixty-five (365) multiplied by two percent (2.0%) for securities maturing in less than one (1) year and three and a half percent (3.5%) for securities maturing in greater than one (1) year.
2. Acceptable forms of collateral under Repurchase Agreements will consist of U.S. Treasury Securities which will be required to be maintained at a market value of one hundred two percent (102%) of the value of the Repurchase Agreement.
3. If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while taking into account current market conditions and the associated costs. At the Board's next regularly scheduled quarterly meeting, the CIO or Staff shall inform the Board of any cases that the Pool allocations were outside of the limits and either inform the Board of the actions that were taken to return the Pool back within guidelines or a plan to do so.

Authority: Montana Constitution, Article VIII, Section 13
Section 2-15-1808, MCA
Section 17-1-113, MCA
Sections 17-6-201 through 17-6-204, MCA

Adopted: November 30, 2021

Revised: ~~May 26, 2022~~ TBD

Reviewed: ~~May 26, 2022~~ May 24, 2023

MONTANA

BOARD OF INVESTMENTS

BOARD ADOPTED POLICY

POLICY NUMBER: 40.700

EFFECTIVE DATE: ~~February 22, 2023~~TBD

TITLE: Montana State Fund
~~2021~~February 22, 2023
 Investment Policy Statement

SUPERSEDES: ~~November 30,~~

BOARD ADOPTION: November 30, 2021
~~2023~~

REVIEWED: ~~February 22, 2023~~May 24,
~~2023~~

I. Introduction

- A. Montana State Fund (MSF or State Fund) provides Montana employers with an option for workers' compensation and occupational disease insurance coverage and guarantees available coverage for all employers in Montana.
- B. The State Fund Investment Pool (SFIP) seeks to attain investment returns that assist State Fund in meeting liabilities as well as maintaining stable, cost-effective rates for workers' compensation insurance.
 1. Workers' compensation benefit payments typically require immediate medical payments and then ongoing medical and indemnity benefits that can span four decades.
 2. It is important to have a well-diversified, high-quality portfolio that is positioned for the long term.
 3. The SFIP invests directly in the underlying Asset Classes. Each Asset Class has an underlying set of investment objectives and investment guidelines.
 4. This policy is effective upon adoption and supersedes all previous Investment Policy Statement (IPS) related to the investment management of SFIP.

II. Purpose

- A. The purpose of this policy statement is to provide a broad strategic framework for the SFIP investments under the guidance of the Board.

III. Legal and Constitutional Authority

- A. Article VIII, Section 13, of the Montana Constitution requires that the Legislature provide for a Unified Investment Program for public funds and State Fund assets.
 1. Section 17-6-201, MCA:
 - a) Established the Unified Investment Program.
 - b) Created the Board.
 - c) Gave the Board sole authority to invest state funds, in accordance with state law and the state constitution.
- B. Section 17-6-201(1), MCA, requires the Board to operate under the "prudent expert principle," defined as:
 1. Discharging its duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character with like aims.

Adopted: November 30, 2021

Revised: ~~February 22, 2023~~TBD

Reviewed: ~~February 22, 2023~~May 24, 2023

2. Diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return, unless under the circumstances it is clearly prudent not to do so.
3. Discharging its duties solely in the interest of and for the beneficiaries of the funds managed.”

C. Article VIII, Section 13 (4), of the Montana Constitution requires:

“Investment of state compensation insurance fund assets shall be managed in a fiduciary capacity in the same manner that a prudent expert acting in a fiduciary capacity and familiar with the circumstances would use in the conduct of a private insurance organization. State compensation insurance fund assets may be invested in private corporate capital stock. However, the stock investments shall not exceed twenty-five percent (25%) of the book value of the state compensation insurance fund's total invested assets.”

D. State Fund investments are subject to Title 33, Chapter 12 of the MCA. The purpose of Chapter 12 (Insurer Investments) “is to protect the interests of insureds by promoting insurer solvency and financial strength.”

E. The Board, as the investment fiduciary, is responsible for establishing the investment parameters for the SFIP.

1. The Board has the authority to allocate to any previously Board-approved asset class in the proportions it considers prudent, under the prudent expert rule.

2. Asset allocation decisions made by the Board must be made in a public meeting.

IV. Strategic Investment Objectives

- A. The Board’s primary objective is to provide investment income that assists the State Fund in meeting claim benefit liabilities as well as maintaining stable, cost-effective rates for workers’ compensation insurance.
- B. The Board’s secondary objective is to achieve long term capital appreciation in excess of inflation.
- C. Both objectives must be compatible with the Board’s risk tolerance and prudent investment practices.
- D. The Board seeks to maintain a long-term perspective in formulating and implementing investment policies and evaluating investment performance.

V. Time Horizon

- A. The Board expects to meet or exceed these objectives over a long-term investment horizon.
- B. Over shorter periods, the anticipated market volatility, and specific actions, including risk mitigation efforts of the Board, may lead to unfavorable but expected deviation from the objectives.

VI. Performance Measurement

- A. Success in achieving these objectives will be measured by comparing the risk and return of the SFIP account to the return on the:
 1. Bloomberg U.S. Aggregate Bond Index (fixed income).
 2. S&P 500 index (domestic equity).
 3. MSCI ACWI Ex U.S. Index (international equity).
 4. NCREIF ODCE Index (real estate).
 5. Fifty percent (50%) MSCI ACWI Commodity Producers Index / fifty percent (50%) MSCI ACWI Infrastructure Index (real assets).
- B. Each weighted proportionately to the portfolio’s holdings.
- C. Performance results will be monitored and evaluated quarterly.
- D. Success in achieving the objective will be measured on a three (3) year, five (5) year, and ten (10)

year annualized basis.

VII. Roles and Responsibilities

A. Board of Investments

1. The Board is responsible for approving the IPS and has the authority to manage the SFIP as it considers prudent, subject to such limitations as contained in the Policy, the law, and the state Constitution.
2. The Board reviews this document periodically and approves any changes to the policy as needed.
- ~~3. As described in the Board's Governance Manual, to execute the day-to-day duties required to carry out the Board's mission, the Board delegates authority to the Executive Director, Chief Investment Officer (CIO), and other Staff to execute the day-to-day duties required to carry out the Board's mission.:~~
- ~~3. Executive Director.~~
- ~~4. Chief Investment Officer (CIO).~~
- ~~5. Other Staff.~~

B. Executive Director

1. The Executive Director is empowered by the Board to sign any and all documents required to conduct Board business.
 - a) Unless there are specific written policies or instructions from the Board to the contrary.
- ~~2. The Executive Director and the CIO are authorized jointly to contract for investment manager services and if deemed appropriate, terminate them. is responsible for the:~~
3. The Executive Director is responsible for establishing the financial reporting procedures as well as collection and reporting of all income.
 - ~~a) Oversight of the SFIP.~~
 - ~~b) Establishment of financial reporting procedures.~~
 - ~~c) Collection and reporting of all income.~~

C. Chief Investment Officer

1. The CIO is empowered by the Board to serve as the principal staff person responsible for overseeing the investment activities under the Board's jurisdiction in compliance with the Board's policies.
2. The CIO, with the support of other staff, is responsible for recommending investment policy changes for Board approval.

D. Staff

1. The staff is responsible for:
 - a) Managing day-to-day operations and delegating work to external resources as appropriate.
 - b) Monitoring allocations and overseeing all investment manager due diligence activities and recommending changes to the CIO.
 - c) Monitoring and reporting to the Board the performance of each asset class and the individual managers' performance.
 - d) Informing the Board of any new managers or terminations.
 - e) Reporting any deviations from the IPS to the Board.
 - f) Coordinating with the State Fund to provide financial data necessary for their quarterly reporting

and calendar year closing cycle.

E. Investment Consultant

1. The investment consultant assists the CIO and Staff with policy recommendations and provides advice to the Board.
2. The investment consultant shall provide assistance to staff as requested in conjunction with the management of the SFIP.

F. External Managers

1. Managers are responsible for all aspects of portfolio management as set forth in the contract specific to each manager.
2. Managers must communicate with staff as needed, regarding investment strategies and results.
3. Managers must also cooperate fully with staff regarding administrative, accounting, and reconciliation issues as well as any requests from the investment consultant and the master custodian.

VIII. Strategic Asset Allocation

A. The current asset allocation ranges for the SFIP are in Policy 40.701.

1. The asset allocation ranges are subject to change as modifications are adopted by the Board, at which time Policy 40.701 of the Governance Manual will be revised to reflect these changes.
2. The Board will formally affirm or revise the asset allocation ranges for the SFIP at least annually.

IX. Rebalancing

- A. The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance.
- B. Material deviations from the asset allocation ranges can alter the expected return and risk of the ~~separate accounts~~ SFIP.
- C. Rebalancing to remain within the Board-approved allocation ranges is delegated to ~~staff in consultation with~~ the CIO and in consultation with the Executive Director.
- ~~D.~~ Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions.
- E. The CIO shall inform the Board of rebalancing activity at the Board's next regularly scheduled quarterly meeting only if rebalancing causes deviations from the Board approved ranges.

X. Risk Management

A. Evaluation of Investment Managers

1. ~~The Investment Manager Evaluation Policy is a distinct policy that is regularly reviewed and updated separate from the IPS because staff utilizes the Investment Manager Evaluation Policy to oversee and manage other assets in addition to the SFIP assets. Board staff have detailed processes for investing in new managers and overseeing existing manager relationships in each asset class. These processes shall include, but are not limited to, an ongoing examination of manager investment strategy, philosophy & process, team/staffing, operations & compliance, risk management & legal functions. These processes will be regularly evaluated to comport with industry best practices.~~

B. Liquidity

1. The total liquidity needs for the SFIP are generally low and participant capital is not expected to change dramatically on short notice.
2. Illiquidity risk still needs to be monitored and managed by staff on a regular basis to ensure that

assets are not required to be sold too quickly, or at an unfavorable time, and potentially at a discount to fair value to meet the cash needs of State Fund.

- a) A significant percentage of the investment in Core Real Estate, Non-Core Fixed Income and Real Assets are considered illiquid.
 - b) Due to the limited liquidity of these assets, it will typically be impractical to fund participant cash needs or correct deviations from policy ranges through the purchase or sale of these assets.
3. The investments held in Equities and Investment Grade Asset Classes are categorized as publicly traded securities.
- a) In “normal market” conditions many of the underlying assets can be liquidated in a relatively short period to accommodate both expected and unexpected withdrawals as well as any repositioning of the asset allocation to stay within approved ranges.

C. Monitoring/Reporting - Transparency

1. Managers shall submit periodic reports to facilitate Staff’s monitoring of the Managers’ conformance to investment restrictions and performance objectives.
2. Staff shall provide regular reporting to the Board regarding the asset allocation and performance of the SFIP to confirm these items are known and adhere to all IPS requirements and expectations.
3. Staff will discuss and communicate any key information discovered due to the ongoing Manager monitoring process that might assist the Board in understanding the underlying investment manager structure or risks embedded in the investment characteristics of the SFIP asset allocation.

D. Leverage

1. Leverage is a significant risk factor.
 - a) Investment managers may utilize leverage only when permitted in the manager’s investment guidelines approved by Staff.
 - b) Staff shall monitor the use of leverage and its impact on risk and return.
2. The use of derivative securities can generate additional leverage even if the derivative is being used to reduce the risk in other investments.
 - a) Investment managers may only use derivatives when permitted in the manager’s investment guidelines approved by Staff.

E. Cash Investments

1. Cash investments held within the SFIP entail an element of credit risk.
2. Only approved cash investment vehicles are permitted. These include:
 - a) STIP
 - b) Any cash vehicle at the Custodial Bank
 - c) Any SEC-registered money market fund employed by an external asset manager which specifically address credit risk in their respective investment guidelines.

XI. Securities Lending

A. Section 17-1-113, MCA authorizes the Board to lend securities held by the state.

1. The Board may lend its publicly traded securities through an agent, to other market participants in return for compensation.
2. Currently, through an explicit contract, the state's Custodial Bank, manages the state's securities lending program.
 - a) The Board seeks to assess counterparty and reinvestment risk, associated with each aspect

of its securities lending program.

- b) The Board requires borrowers to maintain acceptable and adequate collateral at one hundred two percent (102%) for domestic securities and one hundred five percent (105%) for international securities per the terms of the securities lending authorization agreement.
- c) To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the collateral falls below the agreed-upon ratio of over-collateralization.
- d) In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor.
- e) Staff may restrict a security or borrowing counterparty from the lending program upon notification to the Custodial Bank.
- f) Staff will monitor the securities lending program and will periodically report to the Board on the status of the program.
- g) The Board's participation in securities lending may change over time given account activity, market conditions and the agent agreement.

XII. Exercise of Shareholder Rights

A. The Board recognizes that publicly traded securities and other assets of the SFIP include certain ancillary rights such as the right to vote on shareholder resolutions at companies' annual shareholder meetings, and the right to assert claims in securities class action lawsuits or other litigation.:

1. The Board will prudently manage these assets for the exclusive purpose of enhancing the value of the SFIP through such means as:
 - a) Adopting and implementing a proxy voting policy.
 - b) Undertaking productive, cost-effective action to exercise its rights as shareholders or claimants in litigation.

B. Proxy Voting

1. Active voting of proxies is an important part of the Board's investment program.
2. The Board will designate an agent to vote proxies held in the assigned account in the interest of MSF and its policy holders.
3. Records of proxy votes shall be maintained by the Board's agent and submitted to Staff annually.
4. Staff will monitor the proxy voting practices of the Board's agent.

C. Class Action Litigation

1. Claims under state and federal securities laws arising out of losses on securities under the Board's management are assets subject to the Board's fiduciary duty of prudent management.
 - a) The Board shall take reasonable, cost-effective steps to identify, pursue and collect upon claims under securities laws for losses suffered by the Board on its investment.
 - b) Accordingly, the Board maintains a detailed litigation policy, including process steps, outlined in Policy 10.250 of the Governance Manual.

XIII. Investment Policy Statement Review

A. Per the Board's Governance Policy, "the Board shall create, maintain, and revise as necessary Investment Policy Statements (IPS) for each separate account it manages. The IPS shall cite the law establishing the account if such law exists, cite the permissible investments authorized by law, and establish an investment range for each of the permissible investments. The Board shall review such policies at least annually or more frequently at the request of Board staff. IPS may only be revised in a public meeting. All IPS shall be posted on the Board's website for review by the public. The authority to approve IPS may not be delegated to staff."

Authority: Montana Constitution, Article VIII, Section 13
Section 2-15-1808, MCA
Section 17-1-113, MCA
Sections 17-6-201 and -202, MCA
Section 33-1-115, MCA
Section 39-71-2320, MCA

MONTANA

BOARD OF INVESTMENTS

BOARD ADOPTED POLICY

POLICY NUMBER: 40.800

EFFECTIVE DATE: ~~November 30, 2021~~TBD

TITLE: Coal Severance Tax
2021
Investment Policy Statement

SUPERSEDES: ~~June 1, 2021~~November 30,

BOARD ADOPTION: November 30, 2021

REVIEWED: May 24, 2023

I. Introduction

- A. This policy is effective upon adoption and supersedes all previous Investment Policies related to the investment management of the Coal Severance Tax Trust Fund.
- B. The purpose of the investment objectives and guidelines is to provide a framework for the Coal Severance Tax Trust Fund under the guidance of the Board.
- C. The Coal Severance Tax Trust Fund was established under Article IX, Section 5 of the state Constitution which requires that at least fifty percent (50%) of the coal severance tax be deposited in a trust fund in which the principal "shall forever remain inviolate unless appropriated by vote of three-fourths (3/4) of the members of each house of the legislature."
- D. The legislature has partitioned the Trust into several sub-funds per Section 17-5-703, MCA:
 1. Coal severance tax bond fund into which the constitutionally dedicated receipts from the coal severance tax must be deposited.
 2. Montana Coal endowment fund.
 3. Montana Coal endowment regional water system fund.
 4. Coal severance tax permanent fund.
 5. Big Sky economic development fund.
 6. School facilities fund.
- E. The goal of the Coal Severance Tax Trust Fund is to support various legislative programs "to develop a stable, strong, and diversified economy" in Montana.
- F. Subject to the provisions of Section 17-6-201, MCA, the Board shall endeavor to invest 25% of the permanent coal tax trust fund in the Montana economy, with special emphasis on investments in new or expanding locally owned enterprises per Section 17-6-305, MCA.
- G. The current allocation of coal severance tax trust receipts is shown in Policy 40.801 of the Governance Manual. The legislative history of the allocation of the coal severance tax trust within the various sub-funds is available by reviewing the MCA.

II. Purpose

- A. The purpose of this policy statement is to provide a broad strategic framework for the permanent Coal Severance Tax Trust Fund and its sub-funds under the guidance of Board.

III. Legal and Constitutional Authority

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

- A. The Montana Constitution, Article VIII, Section 13, requires that the Legislature provide for a Unified Investment Program for public funds.
- B. Section 17-6-201, MCA:
 - 1. Established the Unified Investment Program.
 - 2. Created the Board.
 - 3. Gave the Board sole authority to invest state funds, in accordance with state law and the state constitution.
- C. The Unified Investment program for public funds must be administered by the Board in accordance with the “prudent expert principle,” defined as:
 - 1. Discharging its duties with the care, skill, prudence, and diligence, under the same circumstances then prevailing that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character with like aims.
 - 2. Diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return, unless under the circumstances it is clearly prudent not to do so.
 - 3. Discharging its duties solely in the interest of and for the beneficiaries of the funds managed.
- D. The Board, as the investment fiduciary of the accounts, is responsible for establishing the __ Investment parameters for all accounts.

IV. Strategic Investment Objectives

- A. The strategic investment objective is unique for each sub-fund and will be addressed in the guidelines and objectives throughout this policy series.
- B. The Board’s overall objective is to achieve the highest level of investment performance compatible with each sub-fund’s risk tolerance and prudent investment practices.
- C. The Board seeks to maintain a long-term perspective in formulating and implementing investment policies and evaluating investment performance subject to the specific objectives and constraints of each sub-fund.

V. Time Horizon

- A. The time horizon for the Coal Severance Tax Trust Fund and all sub-funds is perpetual.
- B. The Board expects over a long-term investment horizon to meet or exceed all objectives.
- C. Over shorter periods, the anticipated market volatility and specific actions, including risk mitigation efforts of the Board may lead to unfavorable but expected deviation from these objectives.

VI. Performance Measurement

- A. The investment policy benchmark is unique for each sub-fund.
- B. The investment policy benchmark for each sub-fund will be addressed in the guidelines and objectives throughout this policy series.
- C. The investment policy benchmark approximates the return that would be achieved if the account implemented a passively managed portfolio.
- D. Deviations from the policy benchmark measure the contribution of active investment management in the account, rebalancing policy and its execution, fees, and investment implementation generally.

VII. Roles and Responsibilities

- A. Board of Investments

1. The Board is responsible for approving the IPS and has the authority to manage the State Fund Investment Pool (SFIP) Coal Severance Tax Trust Fund as it considers prudent, subject to such limitations as contained in the Policy, the law and the state Constitution.

2. The Board reviews this document periodically and approves any changes to the policy as needed.

~~B. 3.~~ As described in the Board's Governance Manual, the Board delegates authority to the Executive Director, Chief Investment Officer (CIO), and other Staff to execute the day-to-day duties required to carry out the Board's mission.~~to execute the day-to-day duties required to carry out the Board's mission, the Board delegates authority to the:~~

- ~~1. Executive Director.~~
- ~~2. Chief Investment Officer (CIO).~~
- ~~3. Other Staff.~~

~~G.B.~~ Executive Director

1. The Executive Director is empowered by the Board to sign any and all documents required to conduct Board business.

a) Unless there are specific written policies or instructions from the Board to the contrary.

2. The Executive Director and the CIO are authorized jointly to contract for investment manager services and if deemed appropriate, terminate them.~~is responsible for the;~~

3. The Executive Director is responsible for establishing the financial reporting procedures as well as collection and reporting of all income.

- ~~b) Oversight of all separate accounts.~~
- ~~c) Establishment of financial reporting procedures.~~
- ~~d) Collection and reporting of all income.~~

~~D.C.~~ Chief Investment Officer

1. The CIO is empowered by the Board to serve as the principal staff person responsible for overseeing the investment activities under the Board's jurisdiction in compliance with the Board's policies.

2. The CIO, with the support of other staff, is responsible for recommending investment policy changes for Board approval.

~~E.D.~~ Investment Staff

1. The investment staff is responsible for, but not limited to, the following:

- a) Managing day-to-day investment operations.
- b) Investing assets and monitoring compliance in accordance with this Policy.
- c) Reporting results and investment characteristics to the Board at least annually.

d) Reporting any deviations from Investment Policy to the Board.

e) Reporting any deviations from the IPS Policy to the Board

~~F.E.~~ Investment Consultant

1. The investment consultant assists the CIO and Staff with policy recommendations and provides advice to the Board.

2. The investment consultant shall provide assistance to staff as requested in conjunction with the management of ~~all accounts~~ the Coal Severance Tax Trust Fund.

VIII. Strategic Asset Allocation

- A. The strategic asset allocation is unique for each sub-fund.
- B. The strategic asset allocation for each sub-fund will be addressed in the guidelines and objectives throughout this policy series.

IX. Rebalancing

- A. The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance.
- B. Material deviations from the asset allocation ranges can alter the expected return and risk of the accounts.
- C. Rebalancing account to remain within the Board-approved allocation ranges is delegated to ~~staff in consultation with~~ the CIO and in consultation with the Executive Director.
- D. Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions.

X. Risk Management

A. Liquidity

1. The liquidity requirements are unique for each sub-fund.
2. The liquidity requirements are addressed by the permitted investments and corresponding restrictions within the Investment Guidelines for each separate account or within the existing investment policy statement.

B. Monitoring/Reporting - Transparency

1. Staff shall provide annual reporting to the Board regarding the asset allocation and performance of the accounts to confirm these items are known and adhere to all Investment Policy requirements and expectations.

C. Leverage

1. Leverage is a significant risk factor.
2. Assets in accounts managed directly by MBOI staff are not allowed to employ leverage.
3. The Short-Term Investment Pool (STIP) is not allowed to employ leverage or use derivatives.
4. The use of leverage and derivatives within the Trust Fund Investment Pool (TFIP) is addressed within the TFIP Investment Policy.

D. Cash Investments

1. Cash investments held in any separate account, within the TFIP or any managed account within it entail an element of credit risk.
2. Only approved cash investment vehicles are permitted. These include:
 - a) Short-Term Investment Pool (STIP).
 - b) ~~The custodian's STIF vehicle.~~ Any cash vehicle at the Custodial Bank
 - c) Any SEC registered money market funds approved by the CIO for internally managed funds or employed by an external asset manager which specifically address credit risk in their respective investment guidelines.
~~All of which specifically address credit risk in their respective investment guidelines.~~

XI. Investment Pools

- A. Trust Fund Investment Pool.

1. TFIP will provide accounts with exposure to a broad and diverse spectrum of investment grade and non-investment grade fixed income as well as real estate assets.
2. Investment grade fixed income will be primarily managed internally.
3. Non-investment grade fixed income will be primarily managed by external asset managers.
4. Real estate will be managed by external asset managers.
5. The specific strategic objectives, performance criteria, and investment guidelines for TFIP are detailed in the TFIP Investment Policy.

B. Short-Term Investment Pool

1. STIP will provide accounts with exposure to Cash related investments.
2. STIP will be managed internally utilizing an active investment strategy.
3. The specific strategic objectives, performance criteria, and investment guidelines for STIP are detailed in the STIP Investment Policy.

XII. Securities Lending

A. Section 17-1-113, MCA, authorizes the Board to lend securities held by the state.

1. The Board may lend its publicly traded securities through an agent, to other market participants in return for compensation.
2. Currently, through an explicit contract, the state's Custodial Bank, manages the state's securities lending program.
 - a) The Board seeks to assess the risks, such as counterparty and reinvestment risk, associated with each aspect of its securities lending program.
 - b) The Board requires borrowers to maintain acceptable and adequate collateral at one-hundred two percent (102%) for domestic securities and one hundred five percent (105%) for international securities-per the terms of the securities lending authorization agreement.
 - c) To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the securities on loan increases.
 - d) In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor.
 - e) Staff or the investment manager may restrict a security from the loan program upon notification to State Street Bank.
 - f) Staff will monitor the securities lending program, and the CIO will periodically report to the Board on the status of the program.
 - g) The Board's participation in securities lending may change over time given Plan activity, market conditions, and the agent agreement.

XIII. Exercise of Investor-Shareholder Rights

A. Proxy Voting.

1. Per the Montana Constitution, Article VIII, Section 13 "no public funds shall be invested in private corporate capital stock" with the exception of public retirement system and state compensation insurance fund assets.
2. The Permanent Coal Severance Tax Trust Fund and its sub-funds do not participate in proxy voting.

B. Class Action Litigation

1. Claims under state and federal securities laws arising out of losses on securities under the Board's management are assets subject to the Board's fiduciary duty of prudent management.
 - a) The Board shall take reasonable, cost-effective steps to identify, pursue and collect upon claims under securities laws for losses suffered by the Board on its investment.
 - b) Accordingly, the Board maintains a litigation policy, including steps outlined in Policy 10.250 of the Governance Manual.

XIV. Investment Policy Review

- A. As required by the Board Governance Policy, “the Board shall create, maintain, and revise as necessary Investment Policy Statements (IPS) for each separate account it manages. The IPS shall cite the law establishing the account if such law exists, cite the permissible investments authorized by law, and establish an investment range for each of the permissible investments. The Board shall review such policies at least annually or more frequently at the request of Board staff. IPS may only be revised in a public meeting. All IPS shall be posted on the Board’s website for review by the public. The authority to approve IPS may not be delegated to staff.”~~“the Board shall review this Investment Policy at least annually or more frequently at the request of Board staff. Statements may only be revised in a public meeting. All Statements shall be posted on the Board’s web site for review by the public.”~~

Authority: Montana Constitution, Article VIII, Section 13
Montana Constitution, Article IX, Section 5
Section 2-15-1808, MCA
Section 17-1-113, MCA
Section 17-5-703, MCA
Section 17-5-704, MCA
Sections 17-6-201 through 17-6-205, MCA
Section 17-6-305, MCA
Section 17-6-308, MCA

MONTANA

BOARD OF INVESTMENTS

BOARD ADOPTED POLICY

POLICY NUMBER: 40.900

EFFECTIVE DATE: ~~November 30, 2021~~ TBD

TITLE: Separately Managed Accounts
30, 2021

SUPERSEDES: ~~April 20, 2021~~ November

Investment Policy Statement

BOARD ADOPTION: November 30, 2021

REVIEWED: May 24, 2023

I. Introduction

- A. This policy is effective upon adoption and supersedes all previous Investment Policy Statement (IPS) related to the investment management of the separately managed accounts that contain guidelines and objectives in the Appendices.
- B. Montana has more than forty (40) separately managed accounts. These separately managed accounts consist of trust, insurance and operating accounts which have been created by the state Constitution, statutorily by the legislature or as part of settlements between the state and outside entities.
- C. Each separately managed account has unique investment needs. Each separately managed account has a defined set of guidelines and objectives that are detailed in the Appendices or within the separately managed account's existing IPS.
- D. Many separately managed accounts participate in the Short-term Investment Pool (STIP) and the Trust Funds Investment Pool (TFIP). The pools are commingled funds which operate similar to mutual funds. STIP and TFIP each have their own IPS.

II. Purpose

- A. The purpose of this policy statement is to provide a broad strategic framework for separately managed accounts under the guidance of the Board.

III. Legal and Constitutional Authority

- A. Article VIII Section 13 of the Montana Constitution requires that the Legislature provide for a Unified Investment Program for public funds.
 1. Section 17-6-201, MCA:
 - a) Established the Unified Investment Program.
 - b) Created the Board.
 - c) Gave the Board sole authority to invest state funds, in accordance with state law and the state constitution.
- B. Section 17-6-201(1), MCA, requires the Board to operate under the "prudent expert principle," defined as:
 1. Discharging its duties with the care, skill, prudence, and diligence, under the same circumstances then prevailing that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character with like aims.
 2. Diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return,

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

unless under the circumstances it is clearly prudent not to do so.

3. Discharging its duties solely in the interest of and for the beneficiaries of the funds managed.

C. The Board, as the investment fiduciary of the separately managed accounts, is responsible for establishing the investment parameters for all separately managed accounts.

IV. Strategic Investment Objectives

A. The strategic investment objective is unique for each separately managed account. The strategic investment objective for each separately managed account will be addressed in the guidelines and objectives in the Appendices.

B. However, the Board's overall objective is to achieve the highest level of investment performance compatible with each separately managed account's risk tolerance and prudent investment practices. The Board seeks to maintain a long-term perspective in formulating and implementing investment policies and evaluating investment performance subject to the specific objectives and constraints of each separately managed account.

V. Time Horizon

A. The time horizon is unique for each separately managed account. The time horizon for each separately managed account will be addressed in the guidelines and objectives in the Appendices.

VI. Performance Measurement

A. The IPS benchmark is unique for each separately managed account. The IPS benchmark for each separately managed account will be addressed in the guidelines and objectives in the Appendices.

B. The IPS benchmark approximates the return that would be achieved if the separately managed account implemented a passively managed portfolio. Deviations from the policy benchmark measure the contribution of active investment management in the separately managed account, rebalancing policy and its execution, fees, and investment implementation generally.

VII. Roles and Responsibilities

A. Board of Investments

1. The Board is responsible for approving the IPS for any separately managed account and has the authority to manage all separately managed accounts as it considers prudent, subject to such limitations as contained in law and the Constitution.

2. The Board reviews this document periodically and approves any changes to the policy as needed.

3. As described in the Board of Investments Governance Manual, the Board delegates authority to the Executive Director, Chief Investment Officer (CIO), and other Staff to execute the day-to-day duties required to carry out the Board's mission.

~~B. As described in the Board Governance Manual, to execute the day-to-day duties required to carry out the Board's mission, the Board delegates authority to the:~~

~~1. Executive Director.~~

~~2. Chief Investment Officer (CIO).~~

~~3. Other Staff.~~

~~C.B.~~ Executive Director

1. The Executive Director is empowered by the Board to sign any and all documents required to conduct Board business.

a) Unless there are specific written policies or instructions from the Board to the contrary.

~~D-2.~~ The Executive Director and the CIO are authorized jointly to contract for investment manager services and if deemed appropriate, terminate them. ~~is responsible for the:~~

3. The Executive Director is responsible for establishing the financial reporting procedures as well as collection and reporting of all income.

1. Oversight of all separately managed accounts.

2. Establishment of financial reporting procedures.

3. Collection and reporting of all income.

E.C. Chief Investment Officer

1. The CIO is empowered by the Board to serve as the principal staff person responsible for overseeing the investment activities under the Board's jurisdiction in compliance with the Board's policies.
2. The CIO, with the support of other staff, is responsible for recommending investment policy changes for Board approval.

F.D. Investment Staff

1. The investment staff is responsible for, but not limited to, the following:
 - a) Managing day-to-day investment operations.
 - b) Investing separately managed account assets and monitoring compliance in accordance with this IPS.
 - c) Reporting to the Board the separately managed account results and investment characteristics at least annually.
 - d) Reporting any deviations from the IPS to the Board.

G.E. Investment Consultant

1. The investment consultant assists the CIO and Staff with policy recommendations and provides advice to the Board.
2. The investment consultant shall provide assistance to staff as requested in conjunction with the management of all separately managed accounts.

VIII. Strategic Asset Allocation

- A. The strategic asset allocation is unique for each separately managed account.
- B. The strategic asset allocation for each separately managed account will be addressed in the guidelines and objectives in the Appendices.

IX. Rebalancing

- A. The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance.
- B. Material deviations from the asset allocation ranges can alter the expected return and risk of the accounts.
- C. Rebalancing separately managed account assets to remain within the Board-approved allocation ranges is delegated to staff in consultation with the CIO and the Executive Director.
- D. Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions.

X. Risk Management

A. Liquidity

1. The liquidity requirements are unique for each separately managed account.
2. Staff works closely with the representatives for each account to determine their needs.

3. The liquidity requirements are addressed by the permitted investments and corresponding restrictions within the Investment Guidelines for each separately managed account.

B. Monitoring/Reporting - Transparency

1. Staff shall provide annual reporting to the Board regarding the asset allocation and performance of the separately managed accounts to confirm these items are known and adhere to all IPS requirements and expectations.

C. Leverage

1. Leverage is a significant risk factor.
2. Assets in separately managed accounts managed directly by Board staff are not allowed to employ leverage.
3. The use of derivative securities can generate additional leverage even if the derivative is being used to reduce the risk in other investments.
4. Individual assets in separately managed accounts managed directly by Board staff are not allowed to use derivatives.
5. STIP is not allowed to employ leverage or use derivatives.
6. The use of leverage and derivatives within TFIP is addressed within the TFIP IPS.

D. Cash Investments

1. Cash investments held in any separately managed account, in the TFIP or any managed account within it, entail an element of credit risk.
2. Only approved cash investment vehicles are permitted. These include:
 - a) Short-Term Investment Pool (STIP).
 - b) Any cash vehicle at the Custodial Bank.
 - c) Any SEC registered money market funds approved by the CIO for internally managed funds or employed by an external asset manager which specifically address credit risk in their respective investment guidelines.
 - ~~d) All of which specifically address credit risk in their respective investment guidelines.~~

XI. Investment Pools

A. Trust Fund Investment Pool

1. TFIP will provide accounts with exposure to a broad and diverse spectrum of investment grade and non-investment grade fixed income as well as real estate assets.
2. Investment grade fixed income will be primarily managed internally.
3. Non-investment grade fixed income will be primarily managed by external asset managers.
4. Real estate will be managed by external asset managers.
5. The specific strategic objectives, performance criteria, and investment guidelines for TFIP are detailed in the TFIP IPS.

B. Short-Term Investment Pool

1. STIP will provide managed accounts with exposure to Cash related investments.
2. STIP will be managed internally utilizing an active investment strategy.
3. The specific strategic objectives, performance criteria, and investment guidelines for STIP are detailed in the STIP IPS.

XII. Securities Lending

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

A. Section 17-1-113, MCA, authorizes the Board to lend securities held by the state.

1. The Board may lend its publicly traded securities through an agent, to other market participants in return for compensation.
2. Currently, through an explicit contract, the state's Custodial Bank, manages the state's securities lending program.
 - a) The Board seeks to assess the risks, such as counterparty and reinvestment risk, associated with each aspect of its securities lending program.
 - b) The Board requires borrowers to maintain acceptable and adequate collateral at one-hundred two percent (102%) for domestic securities and one hundred five percent (105%) for international securities per the terms of the securities lending authorization agreement.
 - c) To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the securities on loan increases.
 - d) In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor.
 - e) Staff or the investment manager may restrict a security from the loan program upon notification to the Custodial Bank.
 - f) Staff will monitor the securities lending program and will periodically report to the Board on the status of the program.
 - f)g) The Board's participation in securities lending may change over time given account activity, market conditions, and the agent agreement.

XIII. Exercise of Investor-Shareholder Rights

A. Proxy Voting

1. Per the Montana Constitution, Article VIII, Section 13 "no public funds shall be invested in private corporate capital stock" with the exception of public retirement system and state compensation insurance fund assets.
2. Separately managed accounts do not participate in proxy voting.

B. Class Action Litigation

1. Claims under state and federal securities laws arising out of losses on securities under the Board's management are assets subject to the Board's fiduciary duty of prudent management.
 - a) The Board shall take reasonable, cost-effective steps to identify, pursue and collect upon claims under securities laws for losses suffered by the Board on its investment.
 - b) Accordingly, the Board maintains a litigation policy, including steps outlined in Policy 10.250 of the Governance Manual.

XIV. Investment Policy Statement Review

- A. Per the Board Governance Policy, "the Board shall create, maintain, and revise as necessary IPS for each separate account it manages. The IPS shall cite the law establishing the account if such law exists, cite the permissible investments authorized by law, and establish an investment range for each of the permissible investments. The Board shall review such policies at least annually or more frequently at the request of Board staff. IPS may only be revised in a public meeting. All IPS shall be posted on the Board's web site for review by the public. The authority to approve IPS may not be delegated to staff"

XV. List of Trust Fund Accounts in this policy series

A. Department of Agriculture

1. ~~Schedule I-A~~ Policy 40.901: Noxious Weed Management Trust Fund

Adopted: November 30, 2021

Revised TBD

Reviewed May 24, 2023

[2. Policy 40.947: Hail Insurance Fund](#)

B. Department of Environmental Quality

1. [Schedule I-B Policy 40.902](#): Belt Water Treatment Plant Fund
2. [Schedule I-C Policy 40.903](#): Abandoned Mine Land Reclamation Trust
3. [Schedule I-D Policy 40.904](#): Clark Fork Site Response Action Fund
4. [Schedule I-E Policy 40.905](#): Montana Pole Superfund Site Settlement Fund
5. [Schedule I-F Policy 40.906](#): Streamside Tailings Operable Settlement Fund
6. [Schedule I-G Policy 40.907](#): Upper Blackfoot Response Action and Restoration Fund
7. [Schedule I-H Policy 40.908](#): Zortman/Landusky Long Term Water [Fund](#)
8. [Schedule I-I Policy 40.909](#): Zortman/Landusky Long Term Water Trust

C. Department of Fish, Wildlife and Parks

1. [Schedule I-J Policy 40.910](#): Coal Tax Park Trust Fund
2. [Schedule I-K Policy 40.911](#): Fish, Wildlife & Parks Mitigation Trust Fund
3. [Schedule I-L Policy 40.912](#): Real Property Trust Fund
4. [Schedule I-M Policy 40.913](#): Wildlife Habitat Trust Fund
5. [Policy 40.944: Fish, Wildlife & Parks General License Account](#)

D. Department of Health and Human Services

1. [Schedule I-N Policy 40.914](#): Endowment for Children
2. [Schedule I-O Policy 40.915](#): Older Montanans Trust Fund
3. [Schedule I-P Policy 40.916](#): Tobacco Trust Fund

E. Department of Justice

1. [Schedule I-Q Policy 40.917](#): Butte Area One Restoration Fund
2. [Schedule I-R Policy 40.918](#): Clark Fork Restoration Fund
3. [Schedule I-S Policy 40.919](#): East Helena Compensation Fund
4. [Schedule I-T Policy 40.920](#): Smelter Hill Uplands Restoration Fund
5. [Schedule I-U Policy 40.921](#): Upper Clark Fork River Basin Reserve Fund
6. [Schedule I-V Policy 40.922](#): Upper Clark Fork River Basin Restoration Fund
7. [Schedule I-A Policy 40.935](#): Greenway Project Trail Maintenance Fund
8. [Schedule I-AJ Policy 40.936](#): 2011 Yellowstone Exxon Settlement Fund

F. Department of Natural Resources and Conservation

1. [Schedule I-W Policy 40.923](#): Public School Trust
2. [Schedule I-AH Policy 40.934](#): Invasive Species Trust Fund

G. Department of Revenue

1. [Schedule I-X Policy 40.924](#): Resource Indemnity Trust Fund

H. Montana Arts Council

1. [Schedule I-Y Policy 40.925](#): Cultural Trust Fund

I. Montana Historical Society

Adopted: November 30, 2021

Revised [TBD](#)

Reviewed [May 24, 2023](#)

1. ~~Schedule I-Z~~ [Policy 40.926: Montana Historical Society Trust Funds](#)

J. University System

1. [Policy 40.937: Montana University System Group Insurance](#)
2. [Policy 40.938: Montana University System Workers Compensation](#)
3. [Policy 40.940: Montana State University – Bozeman](#)
4. [Policy 40.941: Montana Tech](#)
5. [Policy 40.942: University of Montana – Missoula](#)
6. [Policy 40.945: Lubrecht Experimental Forest](#)
7. [Policy 40.946: Kyiyo Pow Wow](#)

J.K. University Endowments

1. ~~Schedule I-AA~~ [Policy 40.927: Harold Hamm Endowment](#)
2. ~~Schedule I-AB~~ [Policy 40.928: Potter Trust Fund](#)

K.L. City and County of Butte-Silver Bow

1. ~~Schedule I-AC~~ [Policy 40.929: Butte Area Redevelopment Trust Authority](#)

L.M. Department of Environmental Quality (Additional DEQ)

1. ~~Schedule I-AD~~ [Policy 40.930: Barker Hughesville St Response](#)
2. ~~Schedule I-AE~~ [Policy 40.931: Flying J CECRA Facilities Fund](#)
3. ~~Schedule I-AF~~ [Policy 40.932: Libby Asbestos Site State Cost](#)
4. ~~Schedule I-AG~~ [Policy 40.933: Luttrill Pit – Oper & Maint](#)

N. Department of Administration

1. [Policy 40.939: State Employee Group Benefits](#)
- ~~2.~~ [Policy 40.943: State Treasurer's Fund](#)

Authority: Montana Constitution, Article VIII, Section 13
Section 2-15-1808, MCA
Section 17-1-113, MCA
Sections 17-6-201 through 17-6-205, MCA

REAL ASSETS ASSET CLASS REVIEW

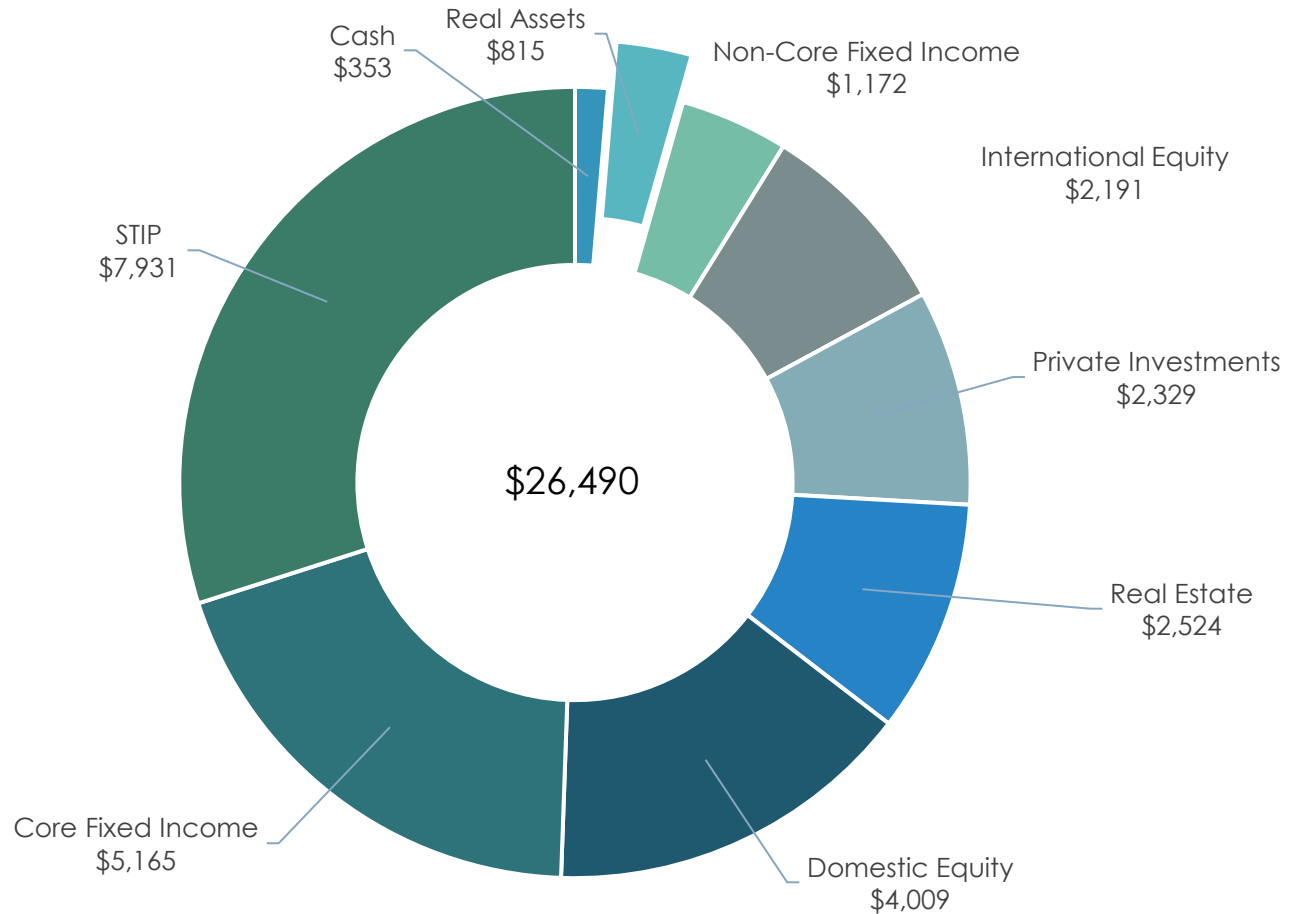
Presented by:

Ethan Hurley – Director of Real Estate/Real Assets

Rob Samson – Investment Analyst

Date: *May 24, 2023*

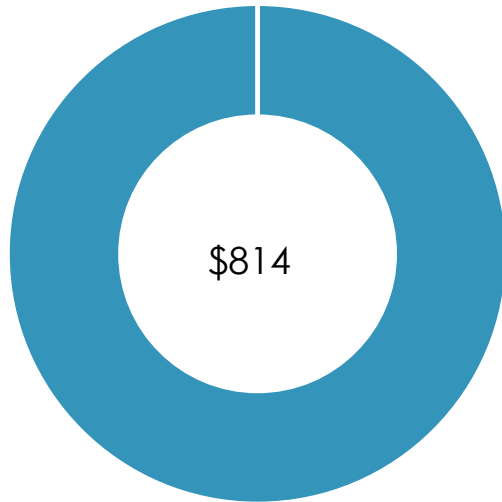
AUM by Asset Class



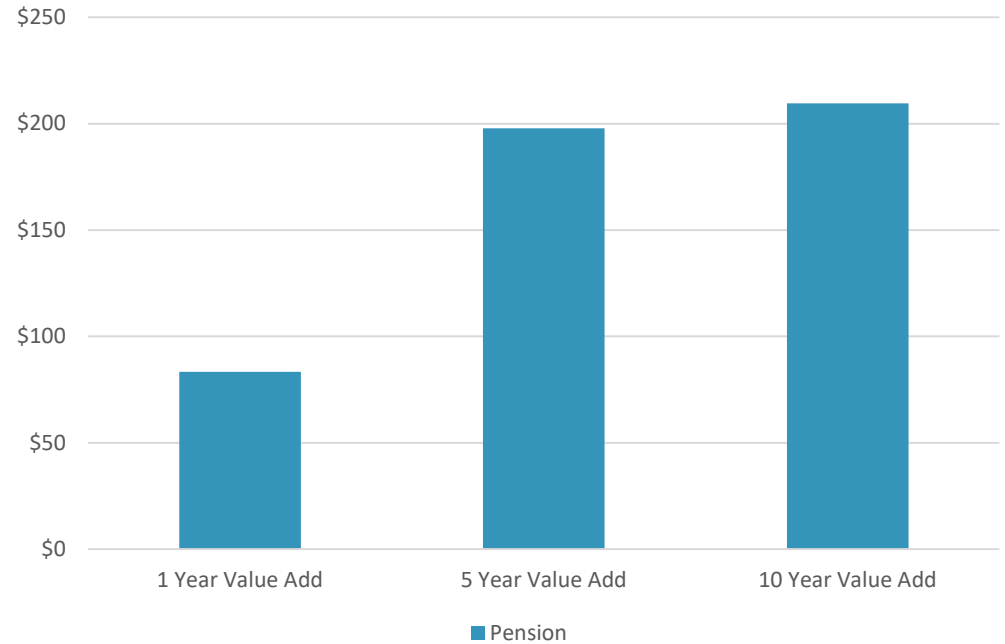
* Dollar values are in \$1,000,000

March 31, 2023

Ownership & Performance



■ Pension



■ Pension

Performance	1 Year	1 Year Benchmark	5 Year	5 Year Benchmark	10 Year	10 Year Benchmark
Pension	12.06%	-3.62%	5.24%	0.97%	NA	NA

* Dollar values are in \$1,000,000

March 31, 2023

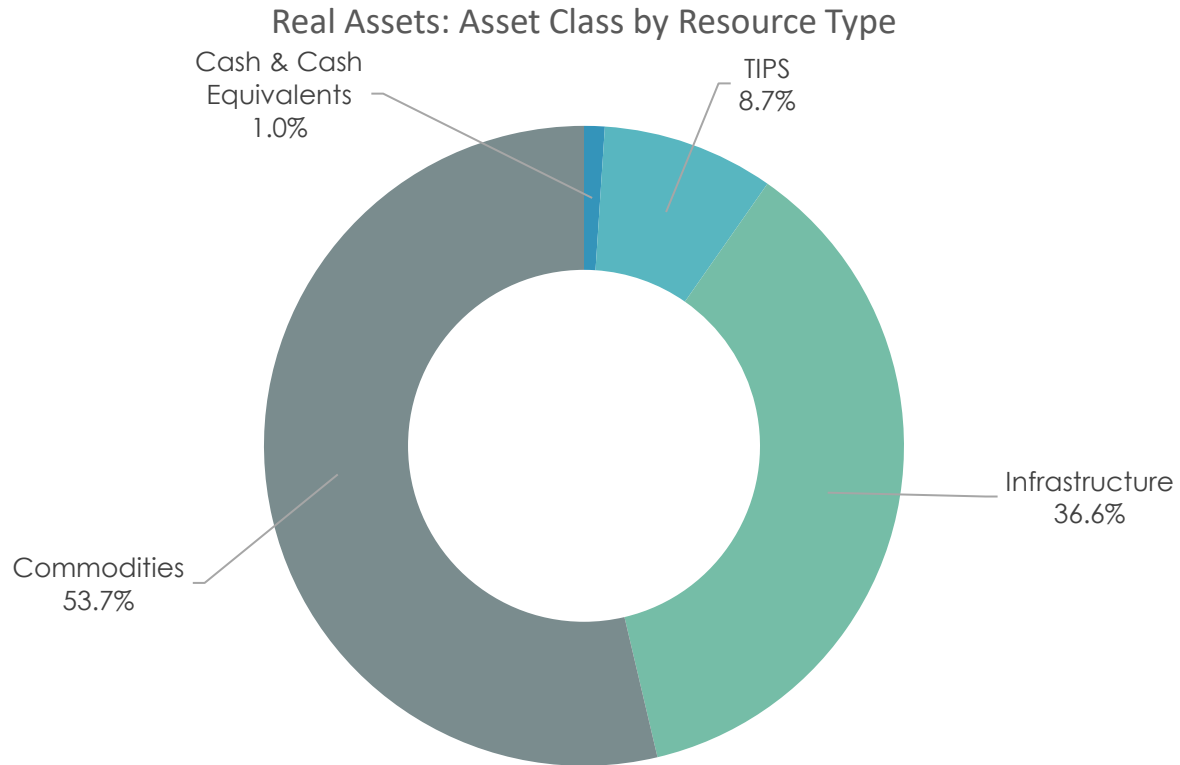
Real Assets Asset Class – Role, Allocation and Constraints

- Provide the Consolidated Asset Pension Plan (CAPP) with exposure to diversified real assets opportunities while achieving the highest possible return.
- Diversify across types of real assets investment strategies, vintage years and geographies for long-term capital gains and current income.
- Inception – 4/1/2017
- Benchmark
 - 33.33% MSCI ACWI Commodity Producers Index, 33.33% MSCI ACWI Infrastructure Index, 33.34% Bloomberg Barclays US TIPS Index (Since 1/1/2021)

Real Assets Asset Class – Role, Allocation and Constraints (cont'd)

- Approved Allocation Range - 2% to 8% of CAPP
- Investment Policy Statement Constraints
 - No more than 2% of CAPP in any single real asset investment
 - No more than 30% of the asset class in Non-US
 - No more than 10% of the asset class in direct co-investments
 - Strategic Constraints
 - Commodities-related – 25% - 75%
 - Infrastructure-related – 0% - 50%
 - Inflation-Linked Bonds – 0% - 50%
 - Timber Leverage – 0% - 30%

Structure/Strategic Constraints



Types of Real Assets Equity/Debt Investing

Commodities Related

- Oil and gas, timber, aggregates (sand & gravel), mitigation banking credits, water rights, livestock, agriculture, grain

Infrastructure Related

- Midstream oil & gas storage and transportation, renewable power generation, rail cars, shipping, digital communications

Inflation Linked Bonds

- Treasury Inflation Protected Bonds

Real Assets Returns – Sources and Drivers

Sources

Appreciation/Depreciation

- Increases or decreases in the market value of an asset/project/portfolio company/commodity

Income

- Received from contractual obligations

Drivers

- Commodity prices
- Operational improvements
- Expense reductions
- Market share growth
- EBITDA multiple expansion/compression
- Cap rate compression/expansion
- Revenue growth
- Supply/demand
- Interest rates
- Capital expenditures
- Market comparable sales
- Capital markets liquidity

Real Assets - Benefits



- ✓ Return enhancement
- ✓ Diversification
- ✓ Hard asset downside protection
- ✓ Inflation hedge
- ✓ Contractual income
- ✓ Ability to influence performance

Real Assets - Risks

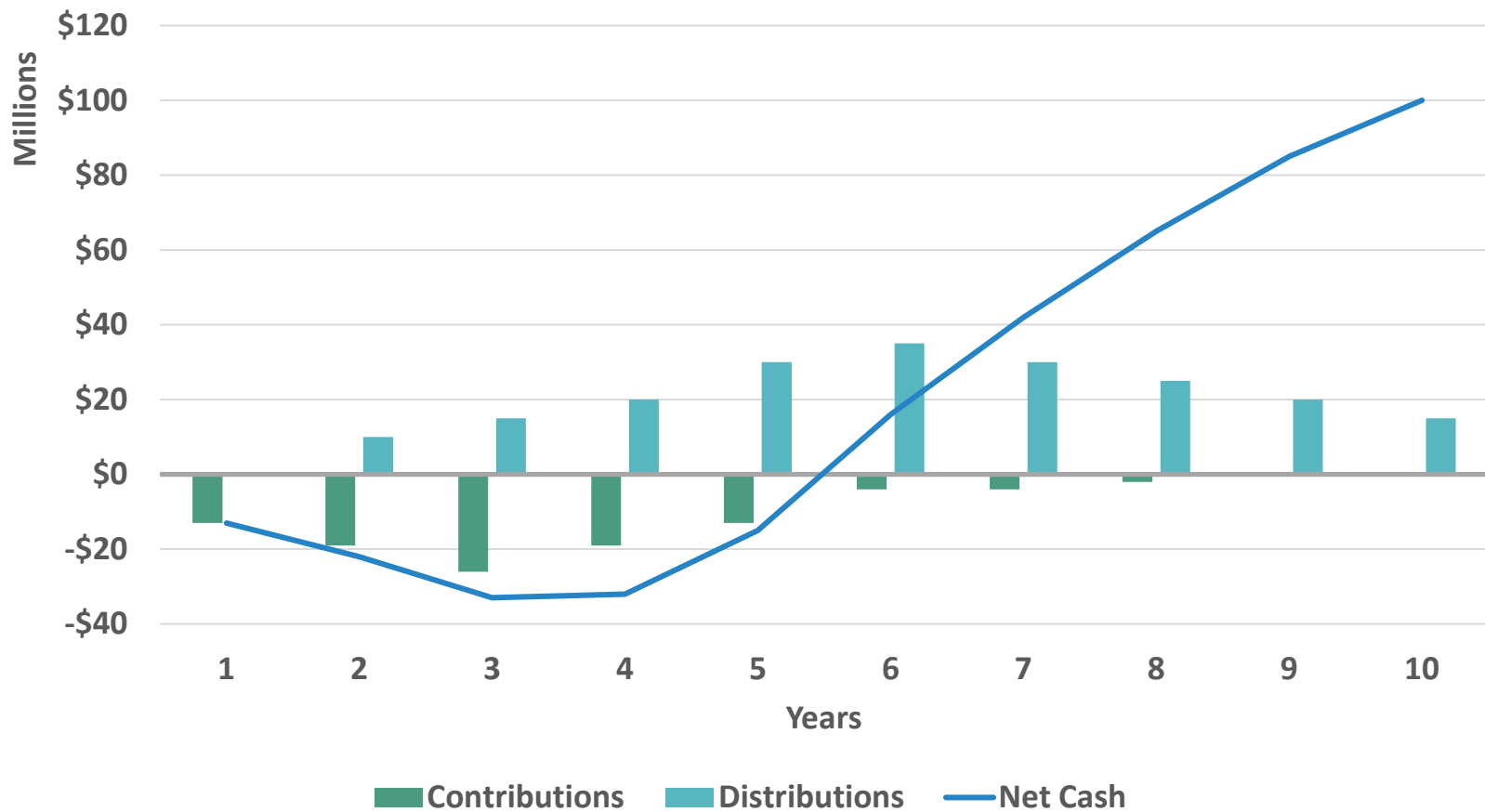


- ✓ Business risk
- ✓ Financial risk
- ✓ Liquidity risk
- ✓ Inflation risk
- ✓ Operational risk
- ✓ Legal risk
- ✓ Counterparty risk

Pacing

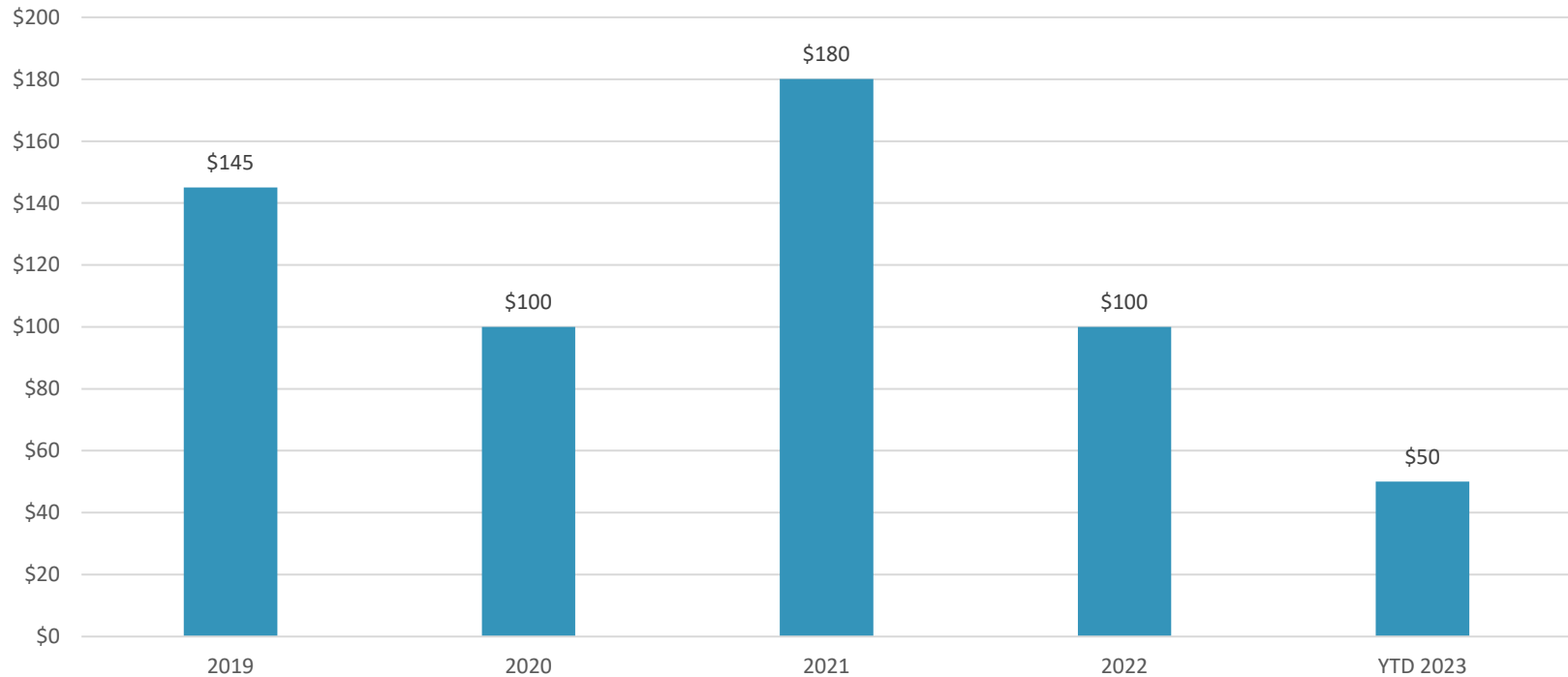
- Evaluates current real assets exposure and commitment plan relative to total plan assets
- Considers the following factors:
 - Paid in Capital (Contributed Funds/Cash In)
 - Distributed Capital (Distributed Funds/Cash Out)
 - Valuations
 - Allocation within the range
- Considers the annualized growth rate for the total plan assets
- Provides flexibility to explore various scenarios
- Expected long-term average annual allocation of ~\$150 - \$250M.

Life Cycle of a Private Equity Fund

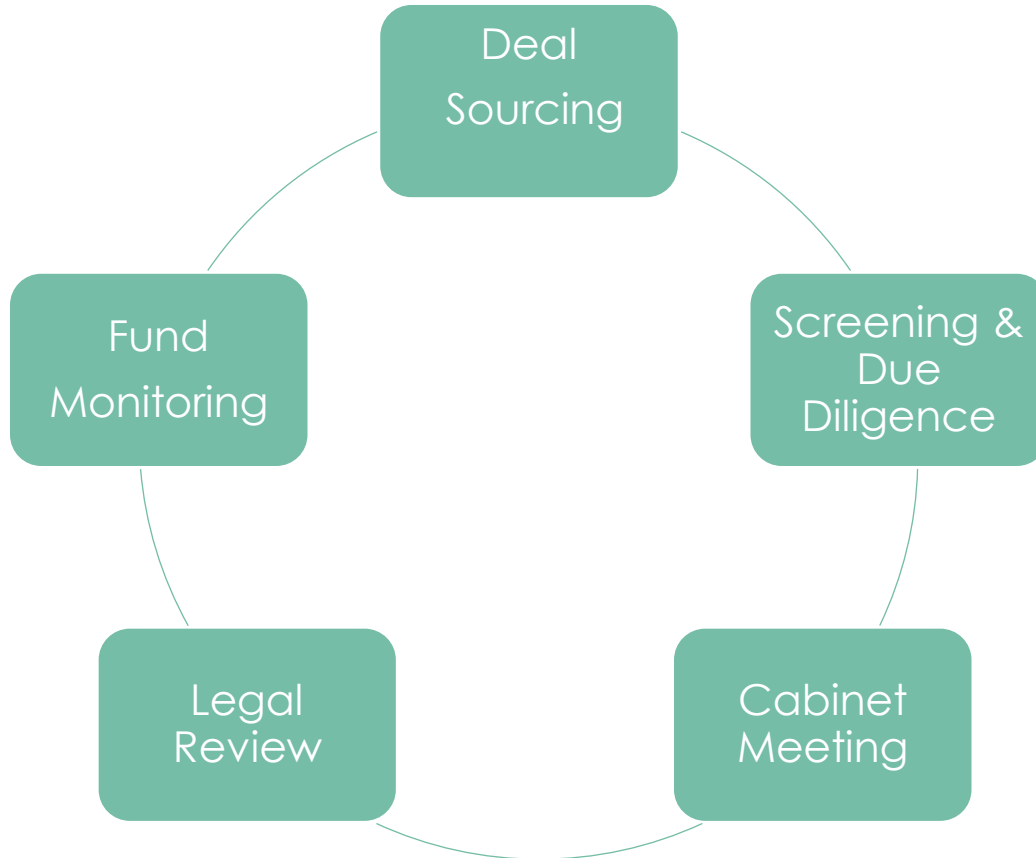


Actual Pacing – Commitments Past 5 Years

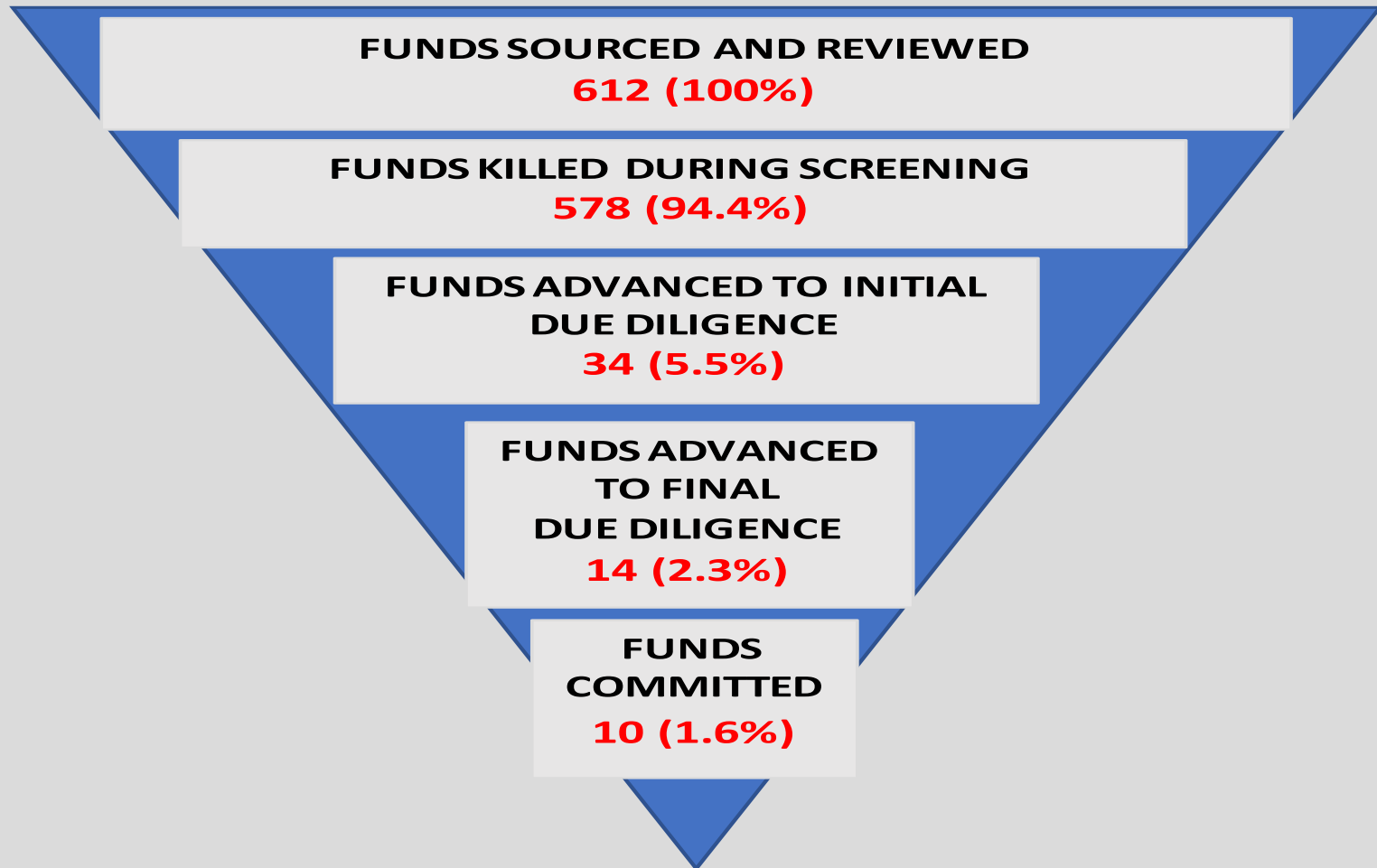
Real Assets Private Fund Commitments



Real Assets Investment Process



Real Assets Deal Flow (2018 - YTD 2023)



As of 4/18 /23

Deal Sourcing/Screening & Due Diligence

- Deal Sourcing
 - Network of Contacts, Periodicals, Preqin
- Screening & Due Diligence
 - Initial Review
 - Determine portfolio fit
 - Submit shortform DDQ to assess critical due diligence points/deal killers
 - Invite GP to Helena for onsite with staff and CIO
 - Decision point to proceed to further diligence
 - Continuing Diligence
 - Submit more comprehensive DDQ, other deliverables
 - Review historical performance record
 - Background checks and reference calls
 - Onsite due diligence meeting at GP offices/asset tours

Cabinet Meeting/Legal Review/Fund Monitoring

- Cabinet Meeting
 - ED, CIO, all Directors (Investment, Operations & Risk)
 - Final Decision – Yes/No, how much, IPS considerations
 - CIO in consultation with the ED gives final approval
- Legal Review
 - Staff conducts initial review and communicates pre-negotiated terms
 - External counsel reviews documents and provides comments
 - Staff and external counsel collaborate and negotiate final terms
- Fund Monitoring
 - Set up internal accounting in collaboration with State Street
 - Review Quarterly/Annual Reports & Financials
 - Staff attends Annual General Meetings, Advisory Board meetings, onsite meetings in Helena attended by GPs
 - Visit fund investments as travel plans allow

Real Assets Current Strategy and Rationale

What

- Exploring other real assets strategies to further diversify the portfolio and gain new exposures
- Exploring real assets-related debt strategies
- Continuing focus on existing high conviction GPs



Why

- Diversification, less correlated, current income, longer duration
- Diversify away from equity exposure, greater downside protection, current income
- Good portfolio fit, known quantities, partnership orientation, more depth less breadth

MONTANA

BOARD OF INVESTMENTS

TO: Members of the Board
FROM: Doug Hill, Director of In-State Loan Programs
DATE: May 24, 2023
RE: Commercial and Residential Loan Portfolios

The Participation Loan Program reflected an outstanding balance, as of March 31, 2023, of \$93,816,096 and represents 42 loans with a yield of 2.55%. There are currently six loan reservations that total \$18,757,931 and one loan committed for 10,800,000. There are no past due loans.

The Infrastructure Loan Program reflected an outstanding balance, as of March 31, 2023, of \$10,192,067 and represents 8 loans with a yield of 4.07%. There is one loan reservation for \$2,733,224. There are no past due loans.

The Intermediary Relending Program reflected an outstanding balance, as of March 31, 2023, of \$5,219,866 and represents 38 loans with a yield of 2.00%. There are two loans committed that total \$487,630. There are no past due loans.

The Science and Tech portfolio reflected an outstanding balance, as of March 31, 2023, of \$7,778,061 and represents 3 loans with a yield of 2.75%. There are no past due loans.

The Montana Facility Finance Authority portfolio reflected an outstanding balance, as of March 31, 2023, of \$11,746,271 and represents 16 loans with a yield of 2.61%. There are no past due loans.

The Veterans Home Loan Mortgage portfolio reflected an outstanding balance, as of April 23, 2023, of \$48,920,523 and represents 278 loans with a yield of 1.85%. There are two reservations totaling \$541,581 with a projected net yield of 4.11%. There is one loan over 90 days past due totaling \$142,592, or 0.29% of the portfolio.

The Multifamily Coal Trust Homes Program reflected an outstanding balance, as of April 23, 2023, of \$10,595,506 and represents six loans with a yield of 2.33%. There are two reservations totaling \$3,527,184. There are no past due loans.

The Residential loan portfolio reflected an outstanding balance, as of April 23, 2023, of \$1,449,163 and represents 41 loans with a yield of 6.32%. There are no outstanding reservations. There are two loans over 90 days past due totaling \$82,140 or 5.66% of the portfolio. Both loans have FHA guarantees.

The Montana Down Payment Assistance Program reflected an outstanding balance, as of May 3, 2023, of \$26,084,751 and represents 49 loans. There are forty-eight loans committed that total \$26,245,524.

MONTANA

BOARD OF INVESTMENTS

INTERCAP

Q3

Activity Summary

Bond Series 2022:

Outstanding	68,706,869
Available for Drawdown	51,293,131

Loans:

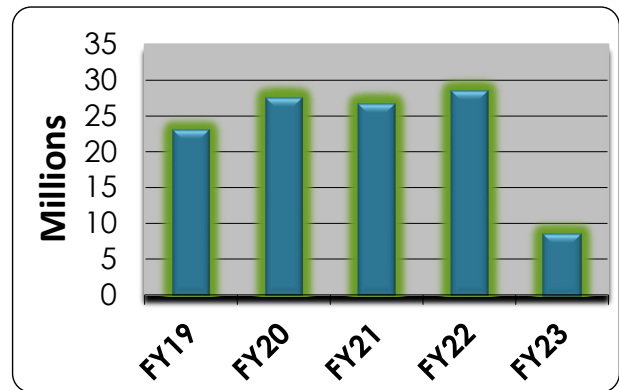
Outstanding	69,341,910
Pending Commitments	26,906,554

Total Committed 694,800,235
Total Funded 667,893,684

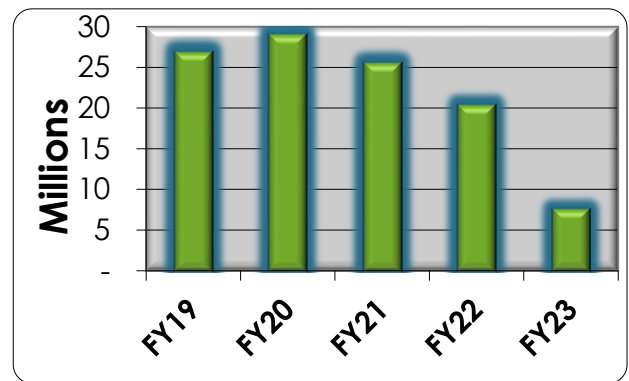
FY2022

Month	Commitments	Fundings
July-22	800,000	646,447
August	2,938,536	131,707
September	22,085	1,448,082
October	4,260,000	2,190,158
November	190,586	1,749,320
December	570,898	1,486,808
January	500,000	1,462,606
February	2,421,841	1,413,404
March	1,146,290	1,437,572
April		
May		
June-23		
To Date	12,850,236	11,966,103

Commitments FY19-FY23



Fundings FY19-FY23



Note: Commitments include withdrawn and expired loans.

Variable Loan Rate History February 16, 2015 - February 15, 2023

February 16, 2016 - February 15, 2017	1.55%	February 16, 2020 - February 15, 2021	2.50%*
February 16, 2017 - February 15, 2018	2.50%	February 16, 2021 - February 15, 2022	1.65%
February 16, 2018 - February 15, 2019	3.15%	February 16, 2022 - February 15, 2023	1.55%**
February 16, 2019 - February 15, 2020	3.37%	February 16, 2023 - February 15, 2024	6.00%***

*BOI decreased interest rates for INTERCAP loans to 1.00% until August 15, 2020 in response to the COVID-19 pandemic.

**1.50% for borrowers set up with Autopay.

***5.75% for borrowers set up with Autopay.

MONTANA

BOARD OF INVESTMENTS

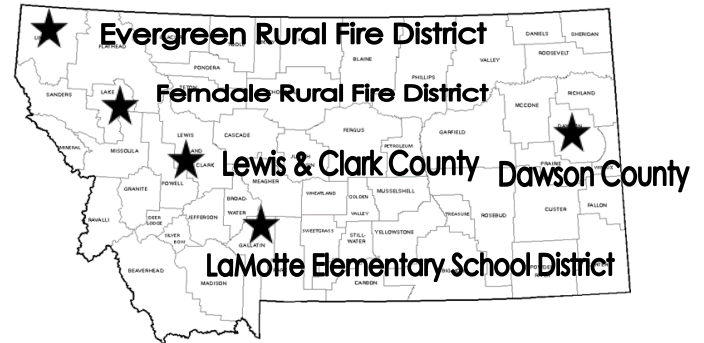
I N T E R C A P

TO: Members of the Board

FROM: Louise Welsh,
Sr. Bond Program Officer

DATE: May 24, 2023

RE: INTERCAP Staff Approved Loans Committed – Staff approved the following loans from January 1, 2023, to March 31, 2023.



Borrower:	Evergreen Rural Fire District (Kalispell)
Purpose:	Purchase an ambulance and engines
Staff Approval Date:	January 17, 2023
Board Loan Amount:	\$ 500,000
Other Funding Sources:	\$ 100,000
Total Project Cost:	\$ 600,000
Term:	5 years

Borrower:	LaMotte Elementary School District (Bozeman)
Purpose:	Facility rehabilitation/improvements
Staff Approval Date:	February 23, 2023
Board Loan Amount:	\$ 150,000
Other Funding Sources:	\$1,998,641
Total Project Cost:	\$2,148,641
Term:	15 years

Borrower:	Lewis and Clark County
Purpose:	Hahn RID road improvements
Staff Approval Date:	March 23, 2023
Board Loan Amount:	\$ 26,290
Other Funding Sources:	\$ 0
Total Project Cost:	\$ 26,290
Term:	15 years

Borrower:	Ferndale Rural Fire District (Bigfork)
Purpose:	Self-contained breathing apparatus equipment
Staff Approval Date:	March 24, 2023
Board Loan Amount:	\$ 120,000
Other Funding Sources:	\$ 20,000
Total Project Cost:	\$ 140,000
Term:	10 years

Borrower:	Dawson County
Purpose:	Dry Creek Road, Glendive, surface rehabilitation
Staff Approval Date:	March 28, 2023
Board Loan Amount:	\$1,000,000
Other Funding Sources:	\$1,390,000
Total Project Cost:	\$2,390,000
Term:	15 years



Quarterly Investment Performance Analysis

Montana Board of Investments

Period Ended: March 31, 2023



Montana Board of Investments
Comparative Performance
Retirement Plans

As of March 31, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Public Employees' Retirement - Net	3.69	5.26	-2.18	12.06	7.25	8.13	7.95	7.79	-8.48	17.61	11.94	16.77	-2.63	7.67	07/01/1994
Public Employees' Benchmark	3.88	6.99	-4.30	12.99	6.36	7.45	7.76	N/A	-10.81	13.79	12.22	20.26	-5.47	N/A	
Difference	-0.19	-1.73	2.12	-0.93	0.89	0.68	0.19	N/A	2.33	3.82	-0.28	-3.49	2.84	N/A	
Public Employees' Retirement - Gross	3.85	5.75	-1.55	12.72	7.89	8.74	8.53	8.28	-7.89	18.32	12.53	17.44	-2.03	8.01	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	25	20	19	18	23	3	35	35	32	41	42	44	42	
Teachers' Retirement - Net	3.69	5.23	-2.21	12.04	7.24	8.12	7.95	7.79	-8.52	17.61	11.93	16.78	-2.64	7.68	07/01/1994
Teachers' Benchmark	3.88	6.94	-4.34	12.97	6.35	7.44	7.75	N/A	-10.86	13.78	12.21	20.27	-5.47	N/A	
Difference	-0.19	-1.71	2.13	-0.93	0.89	0.68	0.20	N/A	2.34	3.83	-0.28	-3.49	2.83	N/A	
Teachers' Retirement - Gross	3.84	5.72	-1.59	12.70	7.88	8.73	8.52	8.28	-7.93	18.32	12.52	17.45	-2.03	8.02	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	25	20	20	18	28	4	34	35	32	41	42	44	41	
Police Retirement - Net	3.69	5.27	-2.17	12.05	7.25	8.13	7.95	7.74	-8.48	17.58	11.95	16.80	-2.63	7.55	07/01/1994
Police Benchmark	3.88	7.02	-4.28	12.99	6.37	7.45	7.75	N/A	-10.80	13.73	12.23	20.30	-5.46	N/A	
Difference	-0.19	-1.75	2.11	-0.94	0.88	0.68	0.20	N/A	2.32	3.85	-0.28	-3.50	2.83	N/A	
Police Retirement - Gross	3.85	5.75	-1.55	12.71	7.89	8.74	8.53	8.23	-7.89	18.28	12.54	17.47	-2.02	7.89	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	24	20	20	18	25	3	39	35	32	41	42	44	51	

Net performance shown is net of all manager fees and expenses (Net-All). All Public Plans > \$5B 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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Firefighters' Retirement - Net	3.69	5.27	-2.17	12.05	7.25	8.13	7.96	7.76	-8.47	17.58	11.95	16.79	-2.62	7.54	07/01/1994
Firefighters' Benchmark	3.88	7.02	-4.28	12.99	6.36	7.45	7.76	N/A	-10.80	13.73	12.23	20.29	-5.46	N/A	
Difference	-0.19	-1.75	2.11	-0.94	0.89	0.68	0.20	N/A	2.33	3.85	-0.28	-3.50	2.84	N/A	
Firefighters' Retirement - Gross	3.85	5.76	-1.55	12.71	7.89	8.74	8.53	8.25	-7.88	18.28	12.53	17.46	-2.01	7.89	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	24	20	20	18	24	3	38	35	32	41	42	44	51	
Sheriffs' Retirement - Net	3.69	5.26	-2.17	12.06	7.25	8.14	7.95	7.77	-8.47	17.61	11.94	16.75	-2.62	7.57	07/01/1994
Sheriffs' Benchmark	3.87	6.99	-4.30	12.99	6.36	7.45	7.75	N/A	-10.81	13.79	12.22	20.23	-5.45	N/A	
Difference	-0.18	-1.73	2.13	-0.93	0.89	0.69	0.20	N/A	2.34	3.82	-0.28	-3.48	2.83	N/A	
Sheriffs' Retirement - Gross	3.84	5.75	-1.55	12.73	7.89	8.74	8.53	8.27	-7.87	18.32	12.53	17.42	-2.02	7.92	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	25	20	19	18	22	4	36	35	32	41	42	44	49	
Highway Patrol Retirement - Net	3.69	5.26	-2.17	12.06	7.26	8.14	7.96	7.79	-8.46	17.62	11.94	16.78	-2.62	7.57	07/01/1994
Highway Patrol Benchmark	3.87	6.99	-4.29	13.00	6.37	7.46	7.76	N/A	-10.79	13.80	12.24	20.26	-5.45	N/A	
Difference	-0.18	-1.73	2.12	-0.94	0.89	0.68	0.20	N/A	2.33	3.82	-0.30	-3.48	2.83	N/A	
Highway Patrol Retirement - Gross	3.84	5.75	-1.55	12.72	7.89	8.74	8.53	8.29	-7.87	18.33	12.53	17.45	-2.01	7.92	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	25	20	19	18	21	3	32	35	32	41	42	44	50	

Net performance shown is net of all manager fees and expenses (Net-All). All Public Plans > \$5B 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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	20 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Game Wardens' Retirement - Net	3.69	5.26	-2.17	12.05	7.25	8.13	7.95	7.74	-8.48	17.62	11.91	16.77	-2.62	7.58	07/01/1994
Game Wardens' Benchmark	3.88	6.99	-4.30	12.98	6.35	7.45	7.75	N/A	-10.82	13.79	12.18	20.25	-5.46	N/A	
Difference	-0.19	-1.73	2.13	-0.93	0.90	0.68	0.20	N/A	2.34	3.83	-0.27	-3.48	2.84	N/A	
Game Wardens' Retirement - Gross	3.85	5.75	-1.55	12.72	7.88	8.74	8.52	8.23	-7.88	18.32	12.50	17.44	-2.01	7.93	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	25	20	20	18	23	4	39	35	32	42	42	44	49	
Judges' Retirement - Net	3.69	5.25	-2.19	12.06	7.25	8.14	7.95	7.78	-8.50	17.63	11.94	16.78	-2.64	7.58	07/01/1994
Judges' Benchmark	3.88	6.98	-4.32	12.99	6.36	7.45	7.76	N/A	-10.84	13.80	12.22	20.27	-5.48	N/A	
Difference	-0.19	-1.73	2.13	-0.93	0.89	0.69	0.19	N/A	2.34	3.83	-0.28	-3.49	2.84	N/A	
Judges' Retirement - Gross	3.85	5.74	-1.57	12.72	7.89	8.74	8.53	8.28	-7.91	18.34	12.53	17.45	-2.03	7.92	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	25	20	19	18	21	3	35	35	32	41	42	44	49	
Volunteer Firefighters' Retirement - Net	3.69	5.23	-2.19	12.05	7.25	8.11	7.95	7.76	-8.50	17.61	11.94	16.79	-2.64	7.40	07/01/1994
Volunteer Firefighters' Benchmark	3.88	6.96	-4.35	12.99	6.36	7.45	7.76	N/A	-10.86	13.85	12.18	20.31	-5.50	N/A	
Difference	-0.19	-1.73	2.16	-0.94	0.89	0.66	0.19	N/A	2.36	3.76	-0.24	-3.52	2.86	N/A	
Volunteer Firefighters' Retirement - Gross	3.84	5.72	-1.58	12.71	7.88	8.71	8.52	8.25	-7.91	18.31	12.53	17.46	-2.04	7.74	07/01/1994
All Public Plans (>\$5B) Total Fund Median	3.91	4.78	-3.86	11.79	6.99	8.23	7.54	8.14	-10.24	16.85	12.12	17.23	-2.52	7.90	
Rank	58	25	20	20	18	29	4	38	35	32	41	42	45	62	

Net performance shown is net of all manager fees and expenses (Net-All). All Public Plans > \$5B 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.

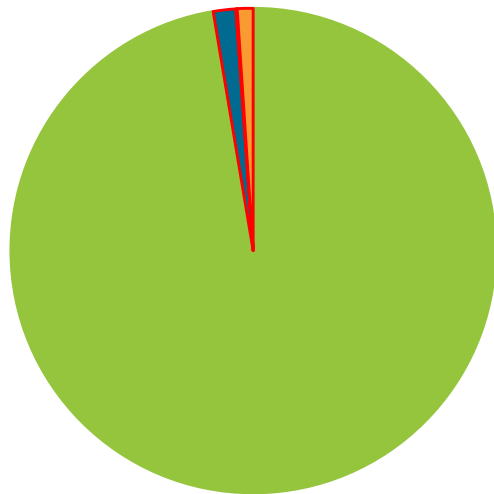


Montana Board of Investments
 Asset Allocation by Segment
 Retirement Plans

As of March 31, 2023

	Consolidated Asset Pension Pool (CAPP)		Short Term Investment Pool (STIP)		Total Fund	
	(\$)	%	(\$)	%	(\$)	%
Public Employees' Retirement	6,704,440,172	48.98	72,860,465	50.11	6,777,300,638	48.99
Teachers' Retirement	4,737,332,622	34.61	48,894,687	33.63	4,786,227,309	34.60
Firefighters' Retirement	600,827,170	4.39	6,129,648	4.22	606,956,818	4.39
Police Retirement	548,019,546	4.00	5,592,189	3.85	553,611,735	4.00
Sheriffs' Retirement	475,637,265	3.47	5,017,876	3.45	480,655,141	3.47
Game Wardens' Retirement	269,363,332	1.97	3,114,448	2.14	272,477,780	1.97
Highway Patrol Retirement	179,928,201	1.31	2,045,826	1.41	181,974,027	1.32
Judges' Retirement	126,410,552	0.92	1,279,922	0.88	127,690,474	0.92
Volunteer Firefighters' Retirement	46,476,953	0.34	462,248	0.32	46,939,200	0.34
Retirement Plans Total Fund Composite	13,688,435,813	98.95	145,397,310	1.05	13,833,833,123	100.00

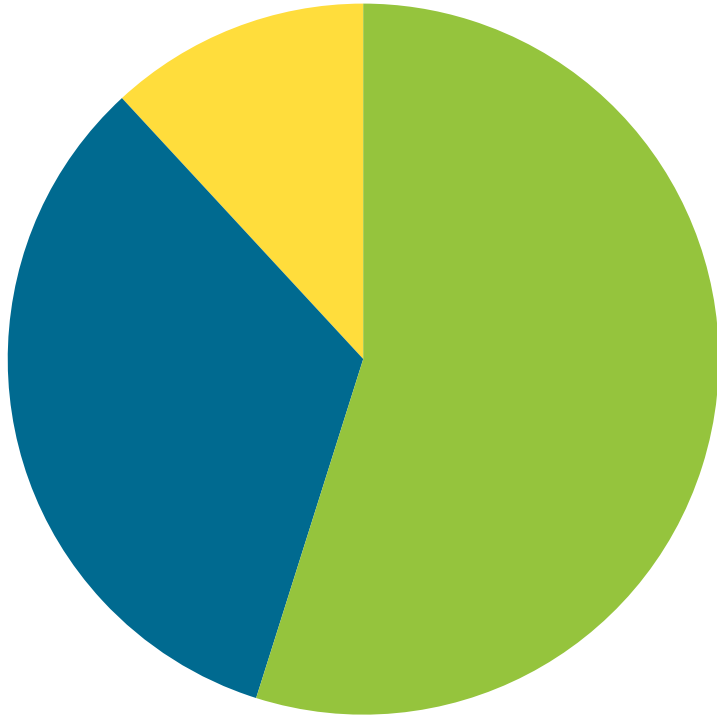
March 31, 2023 : \$13,833,833,123



Segments	Market Value (\$)	Allocation (%)
CAPP Ex Cash	13,469,635,313	97.37
CAPP Cash Pension	207,578,292	1.50
CAPP Asset Class Cash	11,222,208	0.08
Short Term Investment Pool (STIP)	145,397,310	1.05
Total Cash	364,197,810	2.63

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, 2023 : \$24,944,597,634



	Market Value (\$)	Allocation (%)
Consolidated Asset Pension Pool (CAPP)	13,688,435,876	54.88
Short Term Investment Pool	8,293,623,007	33.25
Trust Funds Investment Pool	2,962,538,751	11.88

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, 2023

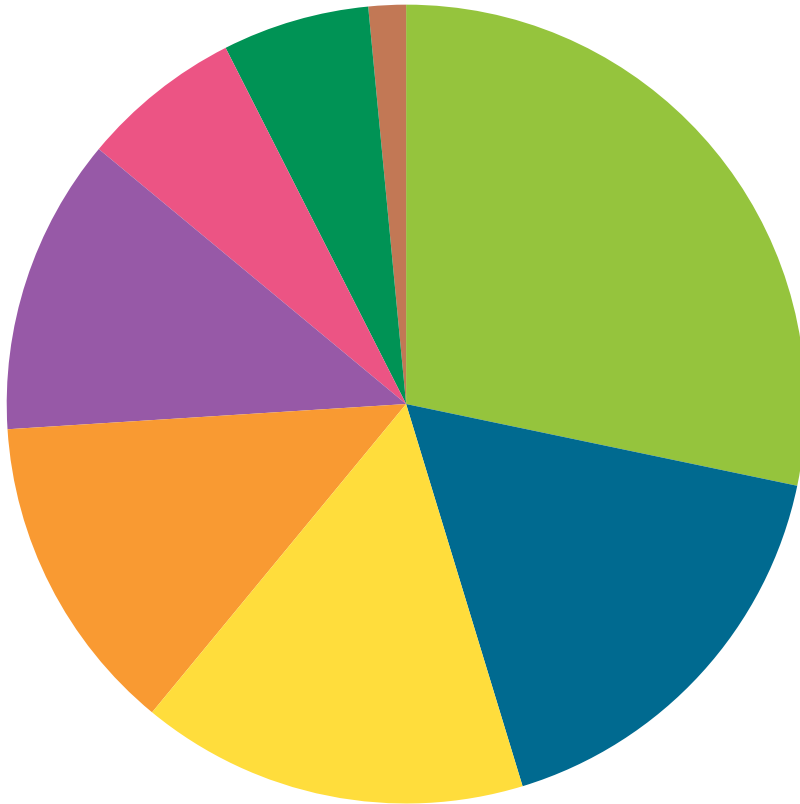
	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Consolidated Asset Pension Pool (CAPP)	3.72	5.28	-2.25	12.19	7.34	N/A	N/A	-8.60	17.83	12.10	17.12	-2.74	7.88	04/01/2017
CAPP Custom Benchmark	3.91	7.00	-4.41	13.12	6.43	N/A	N/A	-10.99	13.95	12.38	20.70	-5.64	6.92	
Difference	-0.19	-1.72	2.16	-0.93	0.91	N/A	N/A	2.39	3.88	-0.28	-3.58	2.90	0.96	
Trust Funds Investment Pool	1.34	-0.58	-2.45	0.54	2.74	2.47	2.86	-6.26	1.49	7.23	8.98	0.45	5.49	10/01/1995
Trust Fund Custom Benchmark	0.82	0.32	-1.70	0.16	2.72	2.17	2.27	-5.05	0.71	7.51	8.72	0.01	4.70	
Difference	0.52	-0.90	-0.75	0.38	0.02	0.30	0.59	-1.21	0.78	-0.28	0.26	0.44	0.79	
Short Term Investment Pool	1.09	2.51	2.73	1.07	1.49	1.35	1.00	1.67	0.11	0.73	2.28	1.98	2.29	04/01/1997
Short Term Custom Index	1.13	2.65	2.81	0.98	1.37	1.27	0.95	1.69	0.04	0.36	2.14	1.95	2.21	
Difference	-0.04	-0.14	-0.08	0.09	0.12	0.08	0.05	-0.02	0.07	0.37	0.14	0.03	0.08	
iMoney.net Money Fund (Gross) Median	1.16	2.76	2.98	1.17	1.61	1.45	1.08	1.83	0.15	0.73	2.45	2.15	2.29	
Difference	-0.07	-0.25	-0.25	-0.10	-0.12	-0.10	-0.08	-0.16	-0.04	0.00	-0.17	-0.17	0.00	

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, 2023

March 31, 2023 : \$13,688,436,024



	Market Value (\$)	Allocation (%)
Domestic Equity	3,870,955,737	28.28
Private Investments	2,329,264,187	17.02
International Equity	2,145,888,919	15.68
Core Fixed Income	1,782,917,490	13.02
Real Estate	1,646,734,385	12.03
Non-Core Fixed Income	890,540,722	6.51
Real Assets*	814,556,293	5.95
Cash Pension	207,578,292	1.52

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Domestic Equity	7.11	9.91	-8.44	18.91	10.08	11.58	11.46	-18.98	27.17	20.09	30.75	-7.09	9.39	05/01/2003
Domestic Equity Custom Index	7.35	9.97	-8.45	18.77	10.62	12.05	11.91	-19.22	26.12	21.10	31.14	-5.20	10.05	
Difference	-0.24	-0.06	0.01	0.14	-0.54	-0.47	-0.45	0.24	1.05	-1.01	-0.39	-1.89	-0.66	
International Equity	6.98	10.04	-5.44	12.24	2.50	6.00	4.57	-17.62	7.83	13.35	22.86	-14.99	4.59	04/01/1997
International Equity Custom Index	6.56	9.85	-5.84	12.20	2.35	5.83	4.26	-16.58	8.53	11.12	21.63	-14.76	4.83	
Difference	0.42	0.19	0.40	0.04	0.15	0.17	0.31	-1.04	-0.70	2.23	1.23	-0.23	-0.24	
Core Fixed Income	2.89	-0.14	-4.26	-2.16	1.01	0.91	1.48	-11.91	-1.54	8.25	6.90	0.95	5.13	04/01/1995
Core Fixed Income Custom Index	2.96	-0.09	-4.78	-2.77	0.50	0.53	1.12	-13.01	-1.54	7.51	6.39	0.68	4.48	
Difference	-0.07	-0.05	0.52	0.61	0.51	0.38	0.36	1.10	0.00	0.74	0.51	0.27	0.65	
Non-Core Fixed Income	2.33	5.91	-4.40	4.11	2.34	3.61	3.42	-11.25	3.21	6.40	13.98	-2.27	6.30	06/01/2009
Bloomberg US HY 2% Issuer Cap Index	3.57	7.19	-3.35	5.88	3.19	5.07	4.09	-11.18	5.26	7.05	14.32	-2.08	7.39	
Difference	-1.24	-1.28	-1.05	-1.77	-0.85	-1.46	-0.67	-0.07	-2.05	-0.65	-0.34	-0.19	-1.09	
Real Assets	2.39	8.66	12.06	14.17	5.24	N/A	N/A	15.88	21.24	-13.43	-2.18	5.55	5.31	04/01/2017
Real Assets Custom Index	1.46	5.17	-3.62	18.64	0.97	5.09	0.24	1.36	13.32	-12.32	13.06	-11.75	2.76	
Difference	0.93	3.49	15.68	-4.47	4.27	N/A	N/A	14.52	7.92	-1.11	-15.24	17.30	2.55	
Real Estate	-2.33	-0.14	6.50	10.35	8.41	8.45	9.70	12.00	20.00	-0.35	6.97	9.19	4.99	06/01/2006
Real Estate Custom Index	-5.17	-0.55	6.55	12.78	6.47	5.03	7.30	20.96	13.64	-19.66	25.84	-4.57	5.39	
Difference	2.84	0.41	-0.05	-2.43	1.94	3.42	2.40	-8.96	6.36	19.31	-18.87	13.76	-0.40	
Cash Pension	1.06	2.71	3.12	1.18	1.57	N/A	N/A	2.06	0.13	0.84	2.28	2.00	1.53	05/01/2017
Short Term Custom Index	1.13	2.65	2.81	0.98	1.37	1.27	0.95	1.69	0.04	0.36	2.14	1.95	1.38	
Difference	-0.07	0.06	0.31	0.20	0.20	N/A	N/A	0.37	0.09	0.48	0.14	0.05	0.15	
Private Investments*	1.15	0.19	5.31	18.18	15.15	14.43	13.62	5.94	39.81	10.91	12.95	11.55	12.97	05/01/2002
Private Investments Custom Index	3.75	9.64	-6.16	21.68	7.37	9.69	12.55	-13.86	16.54	18.90	27.38	-9.99	10.60	
Difference	-2.60	-9.45	11.47	-3.50	7.78	4.74	1.07	19.80	23.27	-7.99	-14.43	21.54	2.37	

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Domestic Equity	7.12	9.94	-8.41	19.09	10.31	11.85	11.74	-18.95	27.47	20.37	31.13	-6.78	9.66	05/01/2003
All Public Plans-US Equity Segment Median	7.02	9.38	-8.03	18.40	9.33	11.39	10.98	-18.06	24.57	18.92	30.04	-5.83	9.52	
Rank	42	34	63	22	25	29	23	63	30	32	28	74	40	
Population	56	53	53	47	46	43	35	65	70	67	65	66	10	
International Equity	7.01	10.11	-5.29	12.53	2.79	6.32	4.89	-17.46	8.18	13.71	23.28	-14.72	5.00	04/01/1997
All Public Plans-Intl. Equity Segment Median	7.63	11.54	-4.56	13.49	3.81	7.03	5.61	-16.99	9.51	12.76	23.71	-13.63	N/A	
Rank	66	67	68	74	71	77	80	56	74	45	62	78	N/A	
Population	54	54	54	49	48	48	38	65	69	68	65	68	N/A	
Core Fixed Income	2.90	-0.11	-4.22	-2.11	1.05	0.95	1.52	-11.87	-1.48	8.31	6.94	1.00	5.25	04/01/1995
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.16	0.23	-4.67	-1.82	1.34	1.39	1.78	-12.96	-1.23	8.51	9.18	0.06	4.97	
Rank	85	84	19	69	80	83	79	13	64	54	98	7	19	
Population	130	130	130	130	127	125	122	140	147	155	157	164	60	
Non-Core Fixed Income	2.35	5.99	-4.23	4.46	2.77	4.09	3.90	-11.05	3.64	6.91	14.60	-1.71	6.82	06/01/2009
IM U.S. High Yield Bonds (SA+CF) Median	3.39	7.10	-2.41	5.99	3.46	4.96	4.26	-9.58	5.31	6.55	14.23	-1.64	7.33	
Rank	91	85	81	89	89	84	70	82	91	43	41	53	79	
Population	138	138	138	136	131	123	111	154	161	175	188	198	88	
Trust Funds Investment Pool	1.39	-0.42	-2.21	0.69	2.87	2.58	2.97	-6.02	1.59	7.30	9.06	0.53	5.56	10/01/1995
All Public Plans-US Fixed Income Segment Median	2.98	0.34	-4.39	-0.88	1.60	1.80	2.01	-11.83	-0.11	8.59	9.25	-0.25	N/A	
Rank	96	78	20	20	1	16	7	14	12	78	53	22	N/A	
Population	59	59	59	52	50	49	43	70	73	74	68	72	N/A	
Real Estate	-2.07	0.47	7.57	11.54	9.83	9.98	11.17	13.02	21.37	1.11	8.65	11.12	6.41	06/01/2006
All Public Plans-Real Estate Segment Median	-1.73	-0.10	7.15	10.99	9.34	9.73	11.34	13.79	20.84	1.66	7.65	9.04	N/A	
Rank	55	47	44	35	46	47	55	56	47	72	39	15	N/A	
Population	40	38	38	29	24	21	14	42	41	38	35	27	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. The All Public Plans US Equity, Intl Equity, US Fixed Income, and Real Estate segments currently do not have enough members to calculate trailing period returns.

Montana Board of Investments
Comparative Performance
Equity Composites

As of March 31, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Domestic Large Cap Equity - Net	7.75	10.09	-8.34	19.00	11.26	12.46	12.31	-19.30	28.39	21.44	31.06	-4.71	8.87	12/01/2006
S&P 500 Index (Cap Wtd)	7.50	9.98	-7.73	18.60	11.19	12.42	12.24	-18.11	28.71	18.40	31.49	-4.38	8.99	
Difference	0.25	0.11	-0.61	0.40	0.07	0.04	0.07	-1.19	-0.32	3.04	-0.43	-0.33	-0.12	
Domestic Large Cap Equity - Gross	7.75	10.10	-8.33	19.13	11.42	12.61	12.47	-19.29	28.61	21.66	31.29	-4.52	9.08	12/01/2006
IM U.S. Large Cap Equity (SA+CF) Median	6.49	9.77	-7.58	18.48	10.41	12.10	11.99	-17.14	27.35	18.36	30.42	-4.86	9.06	
Rank	33	39	64	32	29	35	34	67	37	34	42	46	49	
Domestic Mid Cap Equity - Net	3.82	12.19	-5.09	22.19	7.97	9.90	9.28	-13.07	25.15	13.53	28.03	-10.75	8.51	01/01/2005
Russell Mid Cap Index	4.06	9.70	-8.78	19.20	8.05	9.88	10.05	-17.32	22.58	17.10	30.54	-9.06	8.99	
Difference	-0.24	2.49	3.69	2.99	-0.08	0.02	-0.77	4.25	2.57	-3.57	-2.51	-1.69	-0.48	
Domestic Mid Cap Equity - Gross	3.82	12.19	-5.09	22.19	8.07	10.16	9.65	-13.07	25.15	13.53	28.11	-10.28	8.92	01/01/2005
IM U.S. Mid Cap Equity (SA+CF) Median	4.67	10.87	-6.82	20.08	8.45	10.64	10.67	-13.99	24.72	14.37	30.28	-9.67	9.54	
Rank	60	35	34	29	57	58	77	43	44	59	66	55	79	
Domestic Small Cap Equity - Net	3.73	10.30	-8.06	21.73	7.01	9.97	9.65	-16.81	27.56	13.07	25.76	-10.51	10.95	03/01/2003
Russell 2000 Index	2.74	6.75	-11.61	17.51	4.71	8.55	8.04	-20.44	14.82	19.96	25.53	-11.01	9.79	
Difference	0.99	3.55	3.55	4.22	2.30	1.42	1.61	3.63	12.74	-6.89	0.23	0.50	1.16	
Domestic Small Cap Equity - Gross	3.74	10.32	-8.04	22.00	7.33	10.39	10.15	-16.79	28.00	13.50	26.25	-10.09	11.45	03/01/2003
IM U.S. Small Cap Equity (SA+CF) Median	3.89	9.60	-7.74	21.55	7.31	10.30	10.03	-16.45	23.78	17.40	25.79	-10.34	11.80	
Rank	53	44	53	45	50	50	47	53	33	58	47	49	58	

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
International Large Cap Passive - Net	7.21	9.93	-4.71	11.87	2.55	6.03	4.41	-16.10	7.76	10.81	21.59	-14.04	5.83	06/01/2009
MSCI ACW Ex US Index (USD) (Net)	6.87	10.03	-5.07	11.80	2.47	5.86	4.17	-16.00	7.82	10.65	21.51	-14.20	5.64	
Difference	0.34	-0.10	0.36	0.07	0.08	0.17	0.24	-0.10	-0.06	0.16	0.08	0.16	0.19	
International Large Cap Passive - Gross	7.22	9.96	-4.66	11.94	2.61	6.10	4.49	-16.06	7.82	10.88	21.66	-13.98	5.90	06/01/2009
International Equity Active - Net	7.10	10.21	-6.14	12.79	2.67	6.19	5.29	-19.26	7.77	15.91	25.83	-16.18	3.67	04/01/1997
MSCI ACW Ex US Index (USD) (Net)	6.87	10.03	-5.07	11.80	2.47	5.86	4.17	-16.00	7.82	10.65	21.51	-14.20	4.91	
Difference	0.23	0.18	-1.07	0.99	0.20	0.33	1.12	-3.26	-0.05	5.26	4.32	-1.98	-1.24	
International Equity Active - Gross	7.25	10.68	-5.61	13.37	3.21	6.75	5.83	-18.82	8.30	16.50	26.48	-15.73	4.19	04/01/1997
IM International Large Cap Core Equity (SA+CF) Median	8.11	13.56	-2.78	13.39	3.84	6.69	5.91	-15.89	12.13	11.69	23.58	-14.32	6.77	
Rank	72	79	80	52	70	48	54	74	79	29	31	70	100	
International Value - Net	6.14	9.33	-5.49	13.61	2.74	6.65	5.15	-13.14	9.32	9.31	20.76	-13.97	2.65	11/01/2006
MSCI ACW Ex US Val Index (USD) (Net)	5.16	8.97	-4.00	13.82	1.26	5.00	3.06	-8.59	10.46	-0.77	15.72	-13.97	2.18	
Difference	0.98	0.36	-1.49	-0.21	1.48	1.65	2.09	-4.55	-1.14	10.08	5.04	0.00	0.47	
International Value - Gross	6.27	9.73	-5.04	14.16	3.25	7.19	5.70	-12.73	9.85	9.87	21.37	-13.52	3.22	11/01/2006
IM International Large Cap Value Equity (SA+CF) Median	8.75	14.78	0.49	15.62	3.48	6.55	5.51	-9.35	11.77	4.65	21.15	-14.75	4.24	
Rank	83	88	88	60	56	34	46	67	64	27	46	39	86	
International Growth - Net	9.90	14.07	-3.43	10.65	3.56	5.89	5.04	-23.99	3.79	23.08	31.39	-16.09	3.40	11/01/2006
MSCI ACW Ex US Grth Index (USD) (Net)	8.59	11.10	-6.35	9.49	3.36	6.47	5.08	-23.05	5.09	22.20	27.34	-14.43	4.03	
Difference	1.31	2.97	2.92	1.16	0.20	-0.58	-0.04	-0.94	-1.30	0.88	4.05	-1.66	-0.63	
International Growth - Gross	10.04	14.53	-2.91	11.24	4.12	6.48	5.60	-23.58	4.33	23.74	32.10	-15.61	3.95	11/01/2006
IM International Large Cap Growth Equity (SA+CF) Median	9.83	14.90	-4.95	12.55	5.23	7.94	6.81	-23.82	10.96	23.56	29.67	-13.61	5.43	
Rank	48	55	31	69	74	85	96	50	83	50	25	67	94	
International Small Cap - Net	4.13	5.84	-11.41	13.82	0.77	5.30	5.34	-21.69	11.57	14.63	23.91	-18.90	4.13	09/01/2006
MSCI ACWI Ex US Sm Cap Index IMI (USD) (Net)	4.70	8.70	-10.37	15.04	1.67	5.66	5.06	-19.97	12.93	14.24	22.42	-18.20	4.78	
Difference	-0.57	-2.86	-1.04	-1.22	-0.90	-0.36	0.28	-1.72	-1.36	0.39	1.49	-0.70	-0.65	

Gross of fees performance is not available (N/A) for the International Small Cap composite which currently consists of Acadian Ex US Small Cap (SA) and BlackRock MSCI ACW Ex-US Sm Cap Index (CF).

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Domestic Large Cap Equity														
BlackRock MSCI US Equity Index (SA) - Net	7.72	9.97	-8.47	18.48	N/A	N/A	N/A	-19.46	26.95	21.33	N/A	N/A	11.47	04/01/2019
MSCI US Index (USD) (Gross)	7.73	9.98	-8.47	18.50	11.09	12.39	12.15	-19.46	26.97	21.37	31.64	-4.50	11.49	
Difference	-0.01	-0.01	0.00	-0.02	N/A	N/A	N/A	0.00	-0.02	-0.04	N/A	N/A	-0.02	
BlackRock MSCI US Equity Index (SA) - Gross	7.73	9.98	-8.46	18.49	N/A	N/A	N/A	-19.45	26.96	21.34	N/A	N/A	11.48	04/01/2019
IM U.S. Large Cap Core Equity (SA+CF) Median	6.36	9.46	-7.07	18.28	10.34	12.10	12.06	-16.49	27.71	17.54	30.03	-5.07	10.91	
Rank	20	37	77	46	N/A	N/A	N/A	77	55	29	N/A	N/A	33	
Northern Trust MSCI US Index (SA) - Net	7.72	9.96	-8.47	18.49	N/A	N/A	N/A	-19.46	26.97	21.34	31.70	N/A	11.74	11/01/2018
MSCI US Index (USD) (Gross)	7.73	9.98	-8.47	18.50	11.09	12.39	12.15	-19.46	26.97	21.37	31.64	-4.50	11.74	
Difference	-0.01	-0.02	0.00	-0.01	N/A	N/A	N/A	0.00	0.00	-0.03	0.06	N/A	0.00	
Northern Trust MSCI US Index (SA) - Gross	7.73	9.97	-8.47	18.50	N/A	N/A	N/A	-19.45	26.98	21.36	31.71	N/A	11.75	11/01/2018
IM U.S. Large Cap Core Equity (SA+CF) Median	6.36	9.46	-7.07	18.28	10.34	12.10	12.06	-16.49	27.71	17.54	30.03	-5.07	11.21	
Rank	20	37	77	46	N/A	N/A	N/A	77	55	29	31	N/A	39	
iShares:Core S&P Tot USM (ITOT) - Net	7.49	9.83	-8.54	N/A	N/A	N/A	N/A	-19.46	N/A	N/A	N/A	N/A	-7.71	12/01/2021
S&P Tot Mkt Index	7.24	9.70	-8.77	18.34	10.32	11.89	11.64	-19.53	25.66	20.79	30.90	-5.30	-7.92	
Difference	0.25	0.13	0.23	N/A	N/A	N/A	N/A	0.07	N/A	N/A	N/A	N/A	0.21	
iShares:Core S&P 500 (IVV) - Net	7.43	9.94	-7.81	N/A	N/A	N/A	N/A	-17.03	N/A	N/A	N/A	N/A	-5.14	12/01/2021
S&P 500 Index (Cap Wtd)	7.50	9.98	-7.73	18.60	11.19	12.42	12.24	-18.11	28.71	18.40	31.49	-4.38	-6.08	
Difference	-0.07	-0.04	-0.08	N/A	N/A	N/A	N/A	1.08	N/A	N/A	N/A	N/A	0.94	
Domestic Mid Cap Equity														
iShares:Core S&P Md-Cp (IJH) - Net	3.82	12.20	-5.08	22.19	7.61	N/A	N/A	-13.07	25.15	13.53	26.24	-13.95	7.66	07/01/2017
S&P Mid Cap 400 Index (Cap Wtd)	3.81	12.17	-5.12	22.10	7.67	9.95	9.80	-13.06	24.76	13.66	26.20	-11.08	8.22	
Difference	0.01	0.03	0.04	0.09	-0.06	N/A	N/A	-0.01	0.39	-0.13	0.04	-2.87	-0.56	

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Domestic Small Cap Equity														
BlackRock MSCI USA Small Cap Index (SA) - Net	3.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/01/2022
MSCI US Sm Cap Index (USD) (Net)	3.78	9.22	-8.97	20.66	6.61	9.53	9.09	-17.55	19.11	18.32	26.74	-10.40	-1.29	
Difference	0.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
BlackRock MSCI USA Small Cap Index (SA) - Gross	3.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/01/2022
MSCI US Sm Cap Index (USD) (Gross)	3.90	9.63	-8.53	21.19	7.11	10.04	9.60	-17.17	19.56	18.90	27.38	-9.99	-0.95	
Difference	0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
iShares Core S&P Small Cap ETF (IJR) - Net	2.53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.47	11/01/2022
S&P Sm Cap 600 Index (Cap Wtd)	2.57	6.17	-8.82	21.71	6.30	9.64	9.87	-16.10	26.82	11.29	22.78	-8.48	-0.33	
Difference	-0.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.14	

Gross of fees performance is not available (N/A) for the following funds: iShares:Core S&P Tot USM (ITOT), iShares:Core S&P 500 (IVV), iShares:Core S&P Md-Cp (IJH), and iShares:Core S&P Small Cap ETF (IJR).

The current annual expense ratios for the iShares:Core S&P Tot USM (ITOT), iShares:Core S&P 500 (IVV), iShares:Core S&P Md-Cp (IJH), and iShares:Core S&P Small Cap ETF (IJR) are 0.03%, 0.03%, 0.05%, and 0.06%, 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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
International Developed Large Cap Equity														
Acadian Asset Non-US Equity (SA) - Net	3.00	6.11	-9.40	15.12	3.14	8.54	6.25	-13.02	16.67	8.89	19.38	-13.44	3.64	11/01/2006
MSCI ACW Ex US Val Index (USD) (Net)	5.16	8.97	-4.00	13.82	1.26	5.00	3.06	-8.59	10.46	-0.77	15.72	-13.97	2.18	
Difference	-2.16	-2.86	-5.40	1.30	1.88	3.54	3.19	-4.43	6.21	9.66	3.66	0.53	1.46	
Acadian Asset Non-US Equity (SA) - Gross	3.12	6.48	-8.98	15.67	3.65	9.08	6.79	-12.61	17.23	9.45	19.98	-12.99	4.20	11/01/2006
IM ACWI Ex US Value (SA+CF) Median	9.28	15.14	-1.01	14.88	3.48	6.55	5.43	-11.10	11.05	6.52	21.34	-14.78	4.24	
Rank	99	98	98	46	44	12	16	64	7	43	57	26	52	
Lazard Asset Management (SA) - Net	9.80	13.09	-0.81	12.92	2.63	5.22	N/A	-13.28	4.11	9.59	21.70	-14.32	3.54	06/01/2015
Lazard Custom Index	6.87	10.03	-5.07	11.80	2.21	5.70	3.54	-16.00	7.82	10.65	21.51	-15.55	2.88	
Difference	2.93	3.06	4.26	1.12	0.42	-0.48	N/A	2.72	-3.71	-1.06	0.19	1.23	0.66	
Lazard Asset Management (SA) - Gross	9.94	13.51	-0.31	13.47	3.15	5.75	N/A	-12.84	4.62	10.14	22.31	-13.88	4.07	06/01/2015
IM ACWI Ex US Value (SA+CF) Median	9.28	15.14	-1.01	14.88	3.48	6.55	5.43	-11.10	11.05	6.52	21.34	-14.78	4.41	
Rank	25	57	48	60	62	73	N/A	65	94	39	42	35	62	
BlackRock ACW Ex US SuperFund A (CF) - Net	6.95	10.17	-4.78	12.03	2.72	6.09	4.39	-15.77	8.00	10.80	21.77	-13.99	5.85	06/01/2009
MSCI ACW Ex US Index (USD) (Net)	6.87	10.03	-5.07	11.80	2.47	5.86	4.17	-16.00	7.82	10.65	21.51	-14.20	5.64	
Difference	0.08	0.14	0.29	0.23	0.25	0.23	0.22	0.23	0.18	0.15	0.26	0.21	0.21	
BlackRock ACW Ex US SuperFund A (CF) - Gross	6.96	10.20	-4.73	12.09	2.79	6.17	4.46	-15.72	8.07	10.88	21.85	-13.93	5.93	06/01/2009
IM All ACWI Ex US (SA+CF) Median	8.71	13.35	-3.18	12.96	3.87	6.85	5.99	-17.08	9.37	14.71	24.92	-14.61	7.49	
Rank	80	85	69	74	77	70	89	44	62	60	67	43	91	
iShares:Core MSCI EAFE ETF (IEFA) - Net	8.81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.02	11/01/2022
MSCI EAFE IM Index (USD) (Net)	7.95	14.51	-2.66	12.83	3.12	6.06	5.10	-15.53	11.08	8.47	22.44	-14.40	20.17	
Difference	0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.85	
Baillie Gifford (SA) - Net	10.15	13.09	-7.35	8.79	2.90	6.09	N/A	-31.43	1.69	34.22	34.34	-17.35	4.51	06/01/2015
MSCI ACW Ex US Grth Index (USD) (Net)	8.59	11.10	-6.35	9.49	3.36	6.47	5.08	-23.05	5.09	22.20	27.34	-14.43	4.49	
Difference	1.56	1.99	-1.00	-0.70	-0.46	-0.38	N/A	-8.38	-3.40	12.02	7.00	-2.92	0.02	
Baillie Gifford (SA) - Gross	10.28	13.49	-6.91	9.30	3.40	6.61	N/A	-31.11	2.16	34.86	34.99	-16.93	5.03	06/01/2015
IM ACWI Ex US Growth (SA+CF) Median	9.86	14.81	-4.39	12.47	4.55	7.74	6.42	-23.43	8.81	22.06	29.53	-13.90	5.52	
Rank	33	68	70	87	79	73	N/A	92	91	14	7	85	73	

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Invesco (SA) - Net	9.72	14.76	-0.50	12.03	4.03	5.67	N/A	-17.80	5.60	14.84	29.29	-15.17	4.17	06/01/2015
MSCI ACW Ex US Grth Index (USD) (Net)	8.59	11.10	-6.35	9.49	3.36	6.47	5.08	-23.05	5.09	22.20	27.34	-14.43	4.49	
Difference	1.13	3.66	5.85	2.54	0.67	-0.80	N/A	5.25	0.51	-7.36	1.95	-0.74	-0.32	
Invesco (SA) - Gross	9.88	15.26	0.08	12.67	4.64	6.31	N/A	-17.32	6.20	15.51	30.05	-14.64	4.80	06/01/2015
IM ACWI Ex US Growth (SA+CF) Median	9.86	14.81	-4.39	12.47	4.55	7.74	6.42	-23.43	8.81	22.06	29.53	-13.90	5.52	
Rank	50	44	14	36	44	81	N/A	21	77	83	43	55	75	
International Developed Small Cap Equity														
BlackRock MSCI ACW Ex US Sm Cap Index (CF) - Net	4.53	8.65	-10.21	15.10	1.90	5.89	5.29	-19.65	12.84	14.45	22.68	-17.85	6.13	02/01/2012
MSCI ACWI Ex US Sm Cap Index IMI (USD) (Net)	4.70	8.70	-10.37	15.04	1.67	5.66	5.06	-19.97	12.93	14.24	22.42	-18.20	5.92	
Difference	-0.17	-0.05	0.16	0.06	0.23	0.23	0.23	0.32	-0.09	0.21	0.26	0.35	0.21	
BlackRock MSCI ACW Ex US Sm Cap Index (CF) - Gross	4.54	8.70	-10.14	15.22	2.01	6.02	5.43	-19.57	12.98	14.50	22.90	-17.74	6.28	02/01/2012
IM International Small Cap Equity (SA+CF) Median	6.51	11.44	-7.35	14.21	2.57	6.67	7.03	-21.48	13.78	13.73	24.78	-17.85	8.40	
Rank	78	75	74	38	59	61	89	40	57	48	62	49	92	
Acadian Ex US Small Cap (SA) - Net	3.96	5.43	-11.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-7.90	03/01/2022
MSCI ACW Ex US Sm Cap Index (USD) (Net)	4.70	8.70	-10.37	15.04	1.67	5.66	5.06	-19.97	12.93	14.24	22.42	-18.20	-8.77	
Difference	-0.74	-3.27	-0.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.87	
Acadian Ex US Small Cap (SA) - Gross	4.13	5.94	-10.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-7.28	03/01/2022
IM All ACWI Ex US (SA+CF) Median	8.71	13.35	-3.18	12.96	3.87	6.85	5.99	-17.08	9.37	14.71	24.92	-14.61	-3.17	
Rank	99	98	99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	87	
International Emerging Equity														
BlackRock MSCI Emg Mkts Index NL (CF) - Net	3.97	0.70	-10.71	7.55	-1.10	4.68	1.78	-20.22	-2.82	17.92	18.12	-14.69	1.95	02/01/2012
MSCI Emg Mkts Index (USD) (Net)	3.96	0.84	-10.70	7.83	-0.91	4.91	2.00	-20.09	-2.54	18.31	18.42	-14.57	2.19	
Difference	0.01	-0.14	-0.01	-0.28	-0.19	-0.23	-0.22	-0.13	-0.28	-0.39	-0.30	-0.12	-0.24	
BlackRock MSCI Emg Mkts Index NL (CF) - Gross	3.98	0.74	-10.66	7.65	-1.00	4.80	1.92	-20.16	-2.71	18.04	18.25	-14.60	2.09	02/01/2012
IM Emerging Markets Equity (SA+CF) Median	4.94	3.75	-8.78	10.01	0.69	6.07	3.30	-19.72	0.75	18.93	20.64	-15.23	3.92	
Rank	70	79	72	78	81	83	93	55	65	55	65	43	97	
iShares:Core MSCI EmMkts (IEMG)	4.62	1.00	-9.73	N/A	N/A	N/A	N/A	-21.88	N/A	N/A	N/A	N/A	-14.90	01/01/2022
MSCI Emg Mkts IM Index (USD) (Net)	3.94	1.55	-10.74	9.18	-0.58	5.01	2.13	-19.83	-0.28	18.39	17.65	-15.05	-13.58	
Difference	0.68	-0.55	1.01	N/A	N/A	N/A	N/A	-2.05	N/A	N/A	N/A	N/A	-1.32	

Gross of fees performance is not available (N/A) for the following funds: iShares:Core MSCI EAFE ETF (IEFA), International Equity Pool STIF, and iShares:Core MSCI Em Mkts (IEMG). The current annual expense ratios for the iShares:Core MSCI EAFE ETF (IEFA), and iShares:Core MSCI Em Mkts (IEMG): are 0.07%, 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. See the Addendum for custom index specification.

Montana Board of Investments
 Comparative Performance
 Core Fixed Income Managers

As of March 31, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
US Fixed Income Aggregate - Net	2.88	-0.19	-4.24	-2.38	N/A	N/A	N/A	-11.87	-1.52	7.65	N/A	N/A	-1.20	12/01/2019
Bloomberg US Agg Bond Index	2.96	-0.09	-4.78	-2.77	0.90	0.88	1.36	-13.01	-1.55	7.51	8.72	0.01	-1.61	
Difference	-0.08	-0.10	0.54	0.39	N/A	N/A	N/A	1.14	0.03	0.14	N/A	N/A	0.41	

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Neuberger Berman High Yield (SA) - Net	3.21	7.32	-3.99	5.08	2.80	4.17	3.53	-11.34	4.76	6.30	13.75	-1.99	5.52	01/01/2010
Bloomberg US HY 2% Issuer Cap Index	3.57	7.19	-3.35	5.88	3.19	5.07	4.09	-11.18	5.26	7.05	14.32	-2.08	5.93	
Difference	-0.36	0.13	-0.64	-0.80	-0.39	-0.90	-0.56	-0.16	-0.50	-0.75	-0.57	0.09	-0.41	
Neuberger Berman High Yield (SA) - Gross	3.26	7.48	-3.80	5.35	3.14	4.55	3.93	-11.16	4.96	6.75	14.26	-1.56	5.95	01/01/2010
IM U.S. High Yield Bonds (SA+CF) Median	3.39	7.10	-2.41	5.99	3.46	4.96	4.26	-9.58	5.31	6.55	14.23	-1.64	6.08	
Rank	58	38	75	69	71	74	70	83	60	45	50	49	63	
Oaktree US High Yield (SA) (CAPP) - Net	3.07	7.40	-3.19	5.69	3.21	N/A	N/A	-9.92	4.91	6.56	15.44	-3.99	2.71	01/01/2018
Bloomberg US HY 2% Issuer Cap Index	3.57	7.19	-3.35	5.88	3.19	5.07	4.09	-11.18	5.26	7.05	14.32	-2.08	2.87	
Difference	-0.50	0.21	0.16	-0.19	0.02	N/A	N/A	1.26	-0.35	-0.49	1.12	-1.91	-0.16	
Oaktree US High Yield (SA) (CAPP) - Gross	3.17	7.70	-2.83	6.11	3.66	N/A	N/A	-9.60	5.34	7.07	16.02	-3.47	3.17	01/01/2018
IM U.S. High Yield Bonds (SA+CF) Median	3.39	7.10	-2.41	5.99	3.46	4.96	4.26	-9.58	5.31	6.55	14.23	-1.64	3.17	
Rank	64	30	58	46	36	N/A	N/A	51	49	41	17	92	51	
Shenkman High Yield Fixed Income (SA) (CAPP) - Net	3.51	7.19	-2.08	5.49	3.29	N/A	N/A	-8.87	4.24	6.32	13.65	-1.96	2.83	12/01/2017
Bloomberg US HY 2% Issuer Cap Index	3.57	7.19	-3.35	5.88	3.19	5.07	4.09	-11.18	5.26	7.05	14.32	-2.08	2.88	
Difference	-0.06	0.00	1.27	-0.39	0.10	N/A	N/A	2.31	-1.02	-0.73	-0.67	0.12	-0.05	
Shenkman High Yield Fixed Income (SA) (CAPP) - Gross	3.61	7.51	-1.70	5.93	3.75	N/A	N/A	-8.52	4.68	6.82	14.18	-1.46	3.29	12/01/2017
IM U.S. High Yield Bonds (SA+CF) Median	3.39	7.10	-2.41	5.99	3.46	4.96	4.26	-9.58	5.31	6.55	14.23	-1.64	3.16	
Rank	35	37	32	51	32	N/A	N/A	35	71	44	51	46	46	
Cohen & Steers Preferred Securities (SA) - Net	-2.45	-1.74	-8.81	N/A	N/A	N/A	N/A	-11.53	3.70	N/A	N/A	N/A	-2.69	11/01/2020
Cohen & Steers Preferred Securities Custom Benchmark	-0.38	0.55	-7.04	N/A	N/A	N/A	N/A	-12.02	2.72	N/A	N/A	N/A	-2.66	
Difference	-2.07	-2.29	-1.77	N/A	N/A	N/A	N/A	0.49	0.98	N/A	N/A	N/A	-0.03	
Cohen & Steers Preferred Securities (SA) - Gross	-2.37	-1.49	-8.50	N/A	N/A	N/A	N/A	-11.23	4.06	N/A	N/A	N/A	-2.35	11/01/2020
Payden & Rygel EMD (SA) - Net	2.74	7.48	-5.95	N/A	N/A	N/A	N/A	-15.45	-3.49	N/A	N/A	N/A	-7.54	01/01/2021
Payden & Rygel EMD Custom Benchmark	2.85	6.18	-5.07	N/A	N/A	N/A	N/A	-15.97	-3.92	N/A	N/A	N/A	-7.93	
Difference	-0.11	1.30	-0.88	N/A	N/A	N/A	N/A	0.52	0.43	N/A	N/A	N/A	0.39	
Payden & Rygel EMD (SA) - Gross	2.83	7.76	-5.63	N/A	N/A	N/A	N/A	-15.15	-3.14	N/A	N/A	N/A	-7.21	01/01/2021
IM Emerging Markets Debt (SA+CF) Median	2.35	6.54	-3.46	2.66	-0.11	2.40	1.70	-12.28	-2.12	6.72	14.30	-5.23	-6.24	
Rank	42	34	71	N/A	N/A	N/A	N/A	69	58	N/A	N/A	N/A	71	

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Trust Funds Investment Pool Fixed Income	3.25	1.14	-3.39	-1.02	1.94	1.74	2.18	-11.24	-0.47	8.84	9.12	0.25	5.22	10/01/1995
Bloomberg US Agg Bond Index	2.96	-0.09	-4.78	-2.77	0.90	0.88	1.36	-13.01	-1.55	7.51	8.72	0.01	4.36	
Difference	0.29	1.23	1.39	1.75	1.04	0.86	0.82	1.77	1.08	1.33	0.40	0.24	0.86	
Trust Funds Investment Pool Fixed Income	3.25	1.14	-3.39	-1.02	1.94	1.74	2.18	-11.24	-0.47	8.84	9.12	0.25	5.22	10/01/1995
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.16	0.23	-4.67	-1.82	1.34	1.39	1.78	-12.96	-1.23	8.51	9.18	0.06	4.77	
Rank	36	6	6	20	10	14	15	8	21	37	55	29	6	
Shenkman High Yield Fixed Income (SA) (TFIP) - Net	3.49	7.17	-2.20	5.41	N/A	N/A	N/A	-9.04	4.31	6.05	N/A	N/A	2.14	07/01/2019
Bloomberg US HY 2% Issuer Cap Index	3.57	7.19	-3.35	5.88	3.19	5.07	4.09	-11.18	5.26	7.05	14.32	-2.08	2.02	
Difference	-0.08	-0.02	1.15	-0.47	N/A	N/A	N/A	2.14	-0.95	-1.00	N/A	N/A	0.12	
Shenkman High Yield Fixed Income (SA) (TFIP) - Gross	3.60	7.48	-1.82	5.84	N/A	N/A	N/A	-8.68	4.74	6.54	N/A	N/A	2.58	07/01/2019
IM U.S. High Yield Bonds (SA+CF) Median	3.39	7.10	-2.41	5.99	3.46	4.96	4.26	-9.58	5.31	6.55	14.23	-1.64	2.50	
Rank	36	37	33	53	N/A	N/A	N/A	36	68	51	N/A	N/A	45	
Oaktree US High Yield (SA) (TFIP) - Net	3.08	7.56	-2.88	5.92	N/A	N/A	N/A	-9.51	4.93	6.72	N/A	N/A	2.33	08/01/2019
Bloomberg US HY 2% Issuer Cap Index	3.57	7.19	-3.35	5.88	3.19	5.07	4.09	-11.18	5.26	7.05	14.32	-2.08	1.91	
Difference	-0.49	0.37	0.47	0.04	N/A	N/A	N/A	1.67	-0.33	-0.33	N/A	N/A	0.42	
Oaktree US High Yield (SA) (TFIP) - Gross	3.18	7.86	-2.52	6.35	N/A	N/A	N/A	-9.20	5.36	7.25	N/A	N/A	2.76	08/01/2019
IM U.S. High Yield Bonds (SA+CF) Median	3.39	7.10	-2.41	5.99	3.46	4.96	4.26	-9.58	5.31	6.55	14.23	-1.64	2.38	
Rank	64	25	53	37	N/A	N/A	N/A	46	49	37	N/A	N/A	30	
Neuberger Berman High Yield (SA) (TFIP) - Net	3.17	7.00	-4.18	4.67	N/A	N/A	N/A	-11.43	4.62	N/A	N/A	N/A	4.67	04/01/2020
Bloomberg US HY 2% Issuer Cap Index	3.57	7.19	-3.35	5.88	3.19	5.07	4.09	-11.18	5.26	7.05	14.32	-2.08	5.88	
Difference	-0.40	-0.19	-0.83	-1.21	N/A	N/A	N/A	-0.25	-0.64	N/A	N/A	N/A	-1.21	
Neuberger Berman High Yield (SA) (TFIP) - Gross	3.22	7.16	-3.99	4.93	N/A	N/A	N/A	-11.25	4.81	N/A	N/A	N/A	4.93	04/01/2020
IM U.S. High Yield Bonds (SA+CF) Median	3.39	7.10	-2.41	5.99	3.46	4.96	4.26	-9.58	5.31	6.55	14.23	-1.64	5.99	
Rank	60	46	77	80	N/A	N/A	N/A	83	64	N/A	N/A	N/A	80	

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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Abandoned Mine Trust	1.08	2.51	2.72	1.07	1.54	1.33	1.27	1.68	0.13	0.73	2.41	1.85	3.67	12/01/1993
Barker Hughesville St Response	1.31	1.10	-0.23	N/A	N/A	N/A	N/A	-3.87	1.36	N/A	N/A	N/A	0.38	05/01/2020
Belt Water Treatment Plant Fund	1.30	1.16	-0.13	1.27	3.14	N/A	N/A	-3.71	1.34	6.80	8.56	N/A	3.13	03/01/2018
Big Sky Economic Development Fund	1.31	1.00	-0.47	1.19	3.08	2.71	3.01	-4.27	1.45	7.12	8.67	0.48	4.35	07/01/2005
Butte Area One Restoration	1.28	1.24	0.09	1.21	2.74	2.37	2.30	-3.26	1.26	6.07	6.76	1.24	2.98	11/01/2008
Clark Fork River Restoration	1.28	1.24	0.14	1.12	2.66	2.30	2.34	-3.17	1.19	5.65	7.04	0.96	3.22	11/01/2008
Coal Tax Cultural Trust Fund	1.32	1.00	-0.43	1.19	3.06	2.70	3.00	-4.20	1.43	6.99	8.64	0.47	5.55	12/01/1993
Coal Tax Park Acquisition	1.32	1.08	-0.29	1.20	3.06	2.69	2.98	-4.02	1.37	6.86	8.63	0.48	5.53	12/01/1993
East Helena Compensation Fund	1.14	2.16	2.09	1.16	2.35	2.08	1.96	0.48	0.42	2.65	5.52	1.20	1.93	01/01/2013
East Helena Greenway Trail Maintenance	1.26	1.38	0.35	N/A	N/A	N/A	N/A	-2.81	N/A	N/A	N/A	N/A	0.50	03/01/2021
Endowment for Children	1.32	0.92	-0.46	1.19	3.04	2.66	2.93	-4.18	1.41	7.01	8.54	0.46	4.30	08/01/2007
Flying J CECRA Facilities Fund	1.31	1.10	-0.22	N/A	N/A	N/A	N/A	-3.85	1.36	N/A	N/A	N/A	0.41	05/01/2020
FWP License Account	1.11	1.71	1.09	0.46	1.36	1.18	1.01	-1.41	0.46	1.85	3.33	1.50	2.68	11/01/1997
FWP Mitigation Trust Fund	1.26	1.33	0.37	0.73	2.04	1.56	1.40	-2.79	0.98	3.84	5.46	1.14	3.59	12/01/1993
FWP Real Property Trust	1.31	1.03	-0.38	1.14	3.03	2.65	2.92	-4.13	1.38	6.83	8.62	0.51	4.98	12/01/1993
Group Benefits	1.18	1.98	1.67	0.92	1.82	1.49	1.36	-0.33	0.63	2.05	4.01	1.37	3.60	12/01/1993
Hail Insurance Investments	1.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11/01/2022
Harold Hamm Endowment	1.31	1.08	-0.27	1.20	3.03	N/A	N/A	-3.94	1.43	6.71	8.45	0.57	2.30	07/01/2016
Invasive Species Trust Fund	1.31	1.36	-0.07	N/A	N/A	N/A	N/A	-3.88	1.19	N/A	N/A	N/A	-0.29	10/01/2020
Libby Asbestos Site State Cost	1.29	1.17	-0.09	N/A	N/A	N/A	N/A	-3.60	1.25	N/A	N/A	N/A	0.45	05/01/2020
Luttrell Pit - Operational & Maintenance	1.29	1.38	0.37	N/A	N/A	N/A	N/A	-3.27	1.36	N/A	N/A	N/A	0.57	05/01/2020
Montana Pole	1.29	1.53	0.39	1.14	2.78	2.44	2.61	-2.92	1.14	5.61	7.48	0.74	4.70	09/01/1996
Montana State University	1.19	2.29	2.19	0.96	1.57	1.43	1.17	0.58	0.30	1.30	2.87	1.87	1.88	08/01/2004
Montana Tech-UM Agency Funds	1.10	2.42	2.55	1.07	1.56	1.41	1.08	1.36	0.20	1.01	2.56	1.91	1.73	03/01/2003
MT BOI - Clark Fork Site	1.28	1.12	-0.27	1.18	2.92	2.57	2.74	-3.95	1.44	6.65	8.00	0.67	3.74	11/01/2008
MT BOI UOFM Other	1.13	1.95	1.71	1.40	2.26	2.00	1.89	-0.16	0.73	3.47	4.54	1.42	2.78	08/01/2002
MUS Group Insurance	1.14	2.22	2.16	1.01	1.73	1.51	1.39	0.57	0.26	1.70	3.39	1.96	1.38	10/01/2011
MUS Workers Compensation	1.16	2.13	1.92	1.16	2.06	1.76	N/A	0.10	0.46	2.55	4.43	1.62	1.76	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, 2023

	QTD/ CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2022	2021	2020	2019	2018	Since Incep.	Inception Date
Older Montanans Trust	1.33	0.96	-0.45	1.17	3.08	2.70	2.96	-4.23	1.41	7.19	8.62	0.49	4.17	08/01/2007
Permanent Coal Trust Excl Crp	1.08	1.18	0.55	1.65	2.97	2.72	3.03	-2.02	1.82	5.57	6.81	1.28	5.32	12/01/1993
PERS Defined Cont Disability	5.74	7.02	-5.86	10.47	5.95	6.63	N/A	-15.55	13.16	14.06	20.77	-4.88	6.13	09/01/2015
Potter Trust Fund	1.31	1.08	-0.28	1.21	3.03	N/A	N/A	-3.96	1.41	6.78	8.47	0.51	2.64	06/01/2016
Resource Indemnity Trust	1.34	0.93	-0.55	1.18	3.12	2.74	3.05	-4.44	1.48	7.23	8.88	0.44	5.62	12/01/1993
School Facilities Fund	1.28	1.09	-0.41	1.13	2.78	N/A	N/A	-4.24	1.39	6.97	7.88	-0.13	2.41	01/01/2018
Smelter Hill Up Restorative	1.29	1.18	-0.06	1.05	2.35	2.00	1.85	-3.54	1.29	5.62	5.64	1.57	2.11	11/01/2008
State Fund Insurance	2.42	1.93	-1.96	2.22	3.09	2.97	3.18	-7.68	3.04	7.62	9.65	0.38	5.15	12/01/1993
Streamside Tailings Operable Unit	1.31	1.12	-0.15	1.17	2.88	2.55	2.80	-3.70	1.27	6.47	7.92	0.57	4.85	02/01/1999
Subsequent Injury Fund	1.51	2.94	3.14	1.21	1.58	1.41	1.04	1.66	0.13	0.73	2.28	1.98	2.87	12/01/1993
Tobacco Trust Fund	1.35	0.98	-0.52	1.18	3.07	2.69	3.01	-4.40	1.51	7.10	8.67	0.46	5.05	01/01/2001
Treasurers	1.09	2.40	2.53	0.92	1.40	1.28	0.98	1.34	0.10	0.63	2.28	1.97	2.69	12/01/1993
Treasure State Endowment	1.34	0.95	-0.52	1.15	3.10	2.72	3.03	-4.37	1.47	7.15	8.81	0.46	5.50	12/01/1993
Treasure State Reg. Water System	1.34	0.95	-0.51	1.18	3.10	2.72	3.02	-4.37	1.47	7.15	8.80	0.45	5.20	06/01/2000
Trust and Legacy Account	1.34	1.00	-0.49	1.20	3.11	2.73	3.04	-4.37	1.47	7.19	8.84	0.43	6.19	07/01/1991
UCFRB Assess/Litig Cost Rec	1.33	0.93	-0.55	1.08	2.96	2.60	2.87	-4.37	1.53	6.68	8.50	0.49	5.14	07/01/1999
UCFRB Restoration Fund	1.32	0.99	-0.43	1.12	3.02	2.63	2.87	-4.22	1.36	6.90	8.52	0.67	5.07	06/01/1999
Upper Blackfoot Response	1.11	2.40	2.49	1.15	2.00	1.76	1.59	1.22	0.32	1.55	4.24	1.49	1.59	09/01/2010
Weed Control Trust	1.34	0.93	-0.55	1.18	3.12	2.74	3.05	-4.44	1.48	7.23	8.88	0.44	4.86	12/01/1993
Wildlife Habitat Trust	1.33	1.05	-0.35	1.15	3.01	2.64	2.91	-4.10	1.38	6.75	8.54	0.51	4.98	12/01/1993
Yellowstone Pipeline Cleanup Fund	0.98	1.48	0.85	N/A	N/A	N/A	N/A	-1.42	N/A	N/A	N/A	N/A	0.52	04/01/2021
Zortman/Landusky LT H2O	1.08	2.51	2.72	1.07	1.50	1.35	1.20	1.68	0.13	0.73	2.28	1.98	5.80	09/01/1999
Z/L Long Term H2O Trust Fund	1.08	2.51	2.72	1.07	1.50	1.36	1.20	1.68	0.13	0.73	2.28	1.98	3.78	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), iShares:MSCI EAFE ETF (EFA), and International Equity Pool STIF. 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 (AWA) (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.
- The Core Fixed Income Custom Index consists of 100% Bloomberg US Agg Bond Index through 03/31/2017, the portfolio weighted average of Broad Fixed Income - PAC Custom Blend, Bloomberg US Corp Inv Grade Index, Bloomberg US MBS Index, Bloomberg US Int TIPS Index, Bloomberg US Trsy Int Trm Index through 11/30/2019, and 100% Bloomberg US Agg Bond Index thereafter.
- The plan sponsor peer group was updated from All Public Plans >\$3B Total Fund Median to All Public Plans >\$5B Total Fund Median.
- As of 07/01/2021, the Trust Fund Custom Index Benchmark is the portfolio weighted averaged of the primary benchmark, consisting of NCREIF ODCE Index (1Q lag), Bloomberg US High Yield - 2% Issuer Cap Index, and Bloomberg US Aggregate Bond Index.

Trust Accounts Comments

- Hail Insurance Investments was added in 11/2022.
- The Yellowstone Pipeline Cleanup Fund was added in 04/2021.
- The East Helena Greenway Trail Maintenance Fund was added in 03/2021.
- The Invasive Species Trust Fund was added in 10/2020.
- 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.

Manager Transition Comments

- American Century Investment Mgmt (SA) was terminated in 03/2023.
- Templeton Investment Counsel (SA) was terminated in 03/2023.

Manager Transition Comments (cont.)

- Reams Asset Core Plus (SA) was terminated in 03/2023.
- iShares:Russ 2000 ETF (IWM) and iShares:MSCI EAFE ETF (EFA) were liquidated in Q4 2022 to fund iShares:Core S&P Small Cap ETF (IJR) and iShares:Core MSCI EAFE ETF (IEFA), respectively.
- BlackRock MSCI USA Small Cap Index was transitioned from a commingled fund to a separate account structure during Q3 2022 to obtain a lower fee structure.
- Acadian Ex US Small Cap (SA) was funded in 02/2022.
- DFA Emg Mkts Sm Cap;I (DEMSX) was liquidated in 02/2022.
- DFA Intl Sm Co;I (DFISX) was liquidated in 02/2022.
- iShares:MSCI Em Mkts (EEM) was liquidated in 01/2022.
- iShares:Core MSCI EmMkts (IEMG) was funded in 12/2021.
- SPDR S&P 500 ETF (SPY) was liquidated in 12/2021.
- iShares:Core S&P 500 (IVV) was funded in 11/2021.
- DFA US Sm Cap Tr (CF) was liquidated in 11/2021.
- Jacobs Levy 130/30 Large Cap (SA) was liquidated in 11/2021.
- J.P. Morgan 130/30 (SA) was liquidated in 11/2021.
- T. Rowe U.S. Structured Research (SA) was liquidated in 11/2021.
- Vaughan Nelson Management (SA) was liquidated in 11/2021.
- iShares:Core S&P Tot USM (ITOT) was funded in 11/2021.
- Payden & Rygel EMD (SA) was funded in 12/2020.
- Cohen & Steers Preferred Securities (SA) was funded in 10/2020.
- 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.
- 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.
- 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.
- INTECH Enhanced Plus was liquidated in 06/2017.
- 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.
- BlackRock Equity Index Fund A (CF) and BlackRock Mid Cap Equity Index A (CF) were liquidated in 05/2017.
- Nicholas Investment Partners was liquidated in 07/2016. Residual assets from liquidation were distributed in 03/2017.
- 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.
- 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.
- 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.
- 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, Preferred Securities 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.

**Montana Board of Investments
Fee Schedule**

As of March 31, 2023

	Fee Schedule	Market Value As of 03/31/2023 (\$)
iShares:Core S&P Tot USM (ITOT)	0.03 % of Assets	129,368,151
iShares:Core S&P 500 (IVV)	0.03 % of Assets	133,251,582
iShares:Core S&P Md-Cp (IJH)	0.05 % of Assets	18,175,375
iShares:Core S&P Small Cap ETF (IJR)	0.06 % of Assets	76,505,559
iShares:Core MSCI EAFE ETF (IEFA)	0.07 % of Assets	106,697,012
iShares:Core MSCI EmMkts (IEMG)	0.09 % of Assets	58,413,486

ETF fees are sourced from Morningstar and/or the investment manager.

PORTLAND

BOISE

CHICAGO

NEW YORK

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Investment Update

Board Meeting: May 24-25, 2023

Information as of: March 31, 2023

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CIO Update

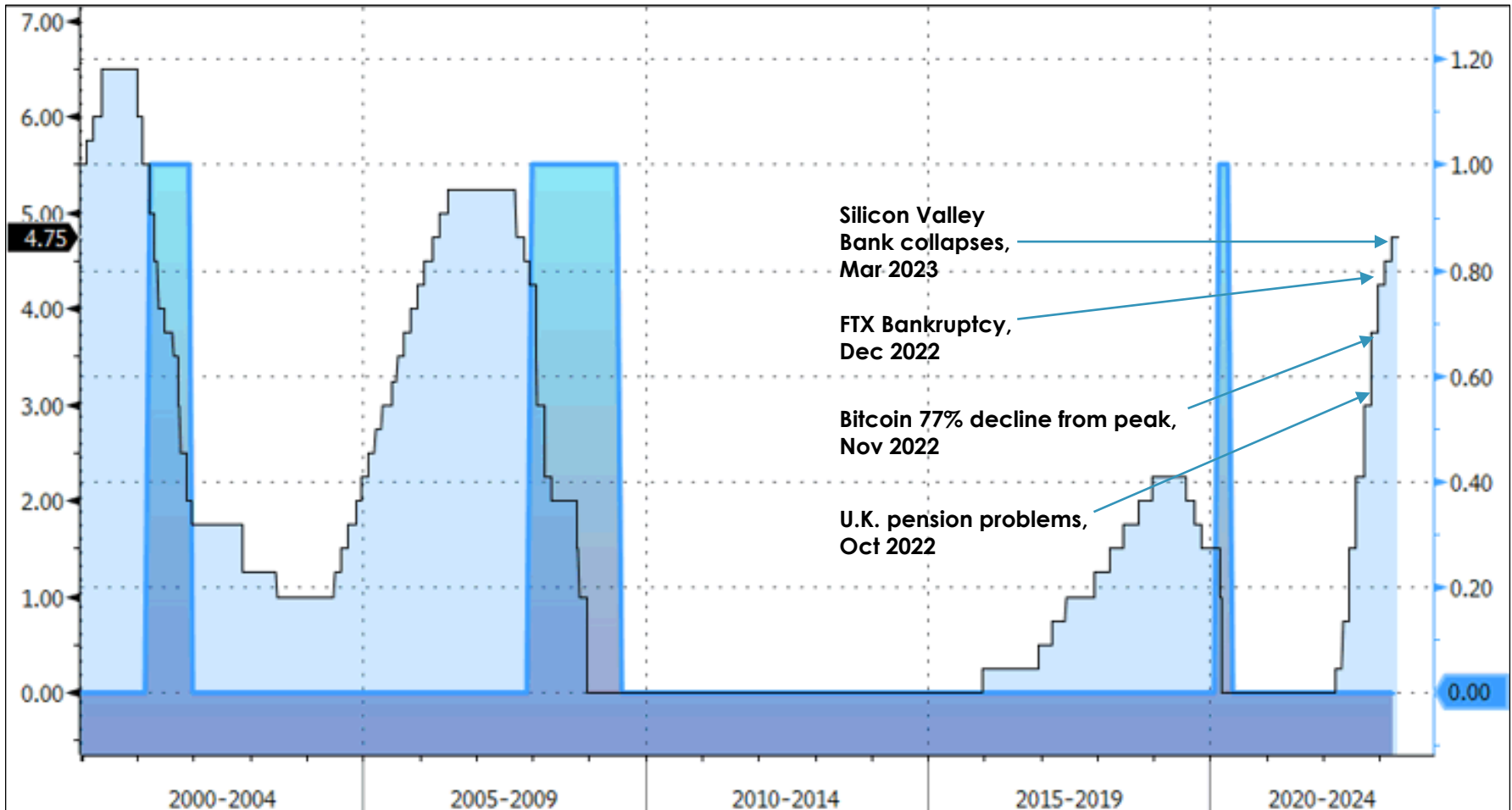
Economic Environment

- **Leading Economic Index** – Steady decline over the last 12 months. Global earnings estimates are declining.
- **Job Growth** – Non-Farm Payrolls increased 315K on average over the last 6 months. Job growth was 236K in March.
- **Retail Sales** – Retail sales ex. auto declined slightly in recent months with a month to month decline of -0.4% in March.
- **Inflation** – CPI ex. Food and Energy is up 5.6% year over year. Inflation has been slowing but remains sticky in many areas.
- **Housing** – Existing home sales and housing starts have fallen sharply as mortgage rates jumped over 350 bps in the last 18 months.
- **Currency** – The U.S. Dollar remains relatively strong versus major world currencies. However, the trend has been weaker over the last 6 months.

CIO Update

Economic Environment

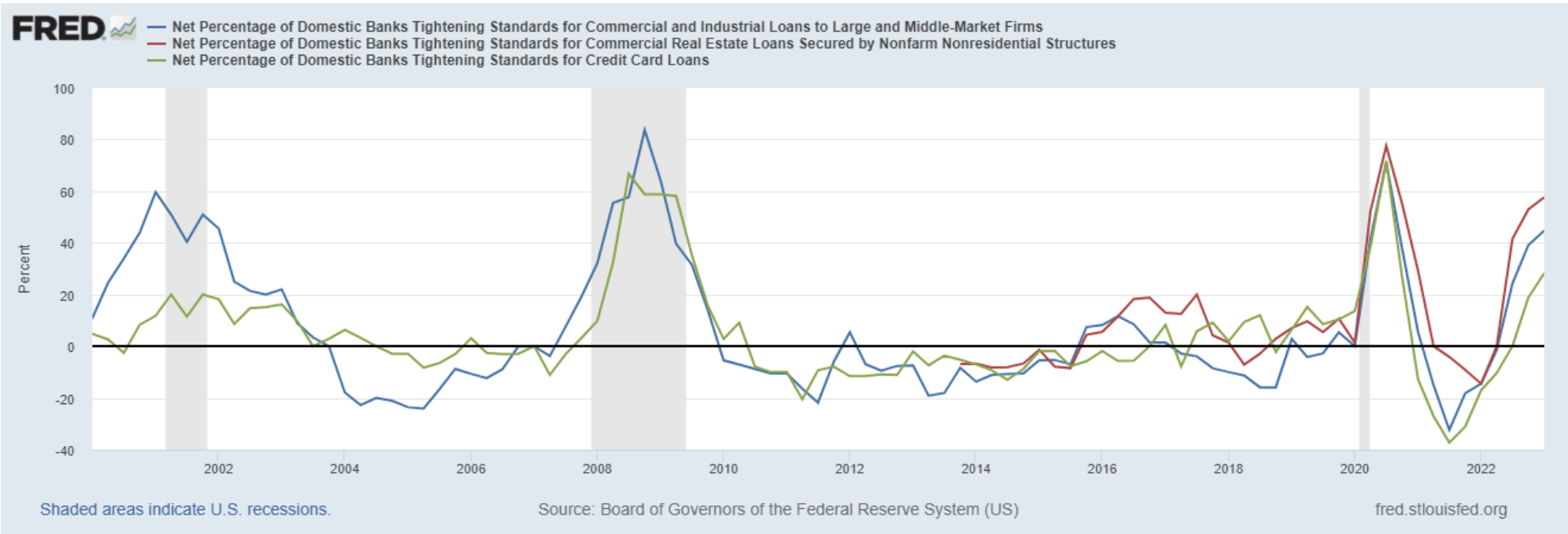
Federal Reserve has sharply increased the Funds Rate.



CIO Update

Economic Environment

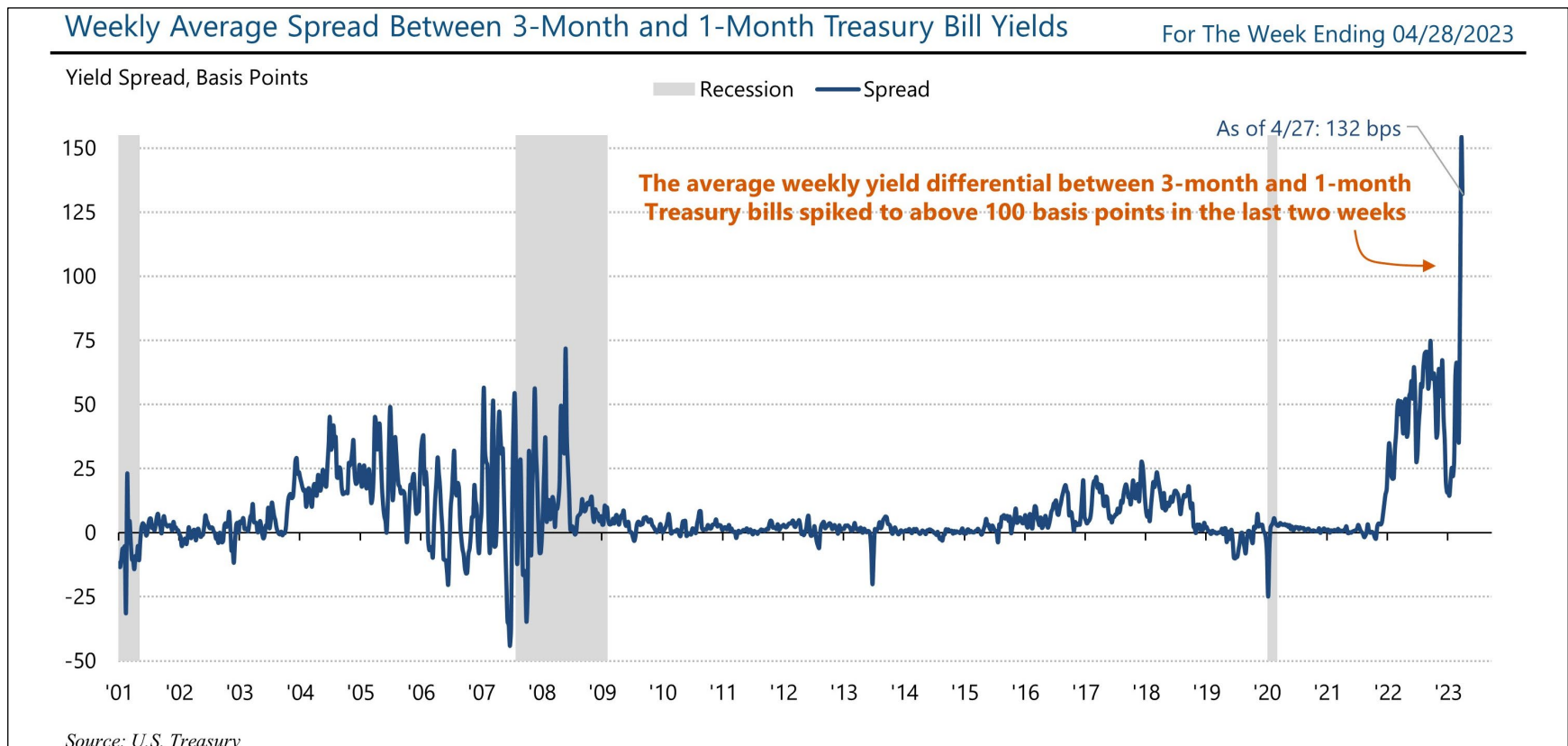
Tighter bank credit standards will also slow economic activity.



CIO Update

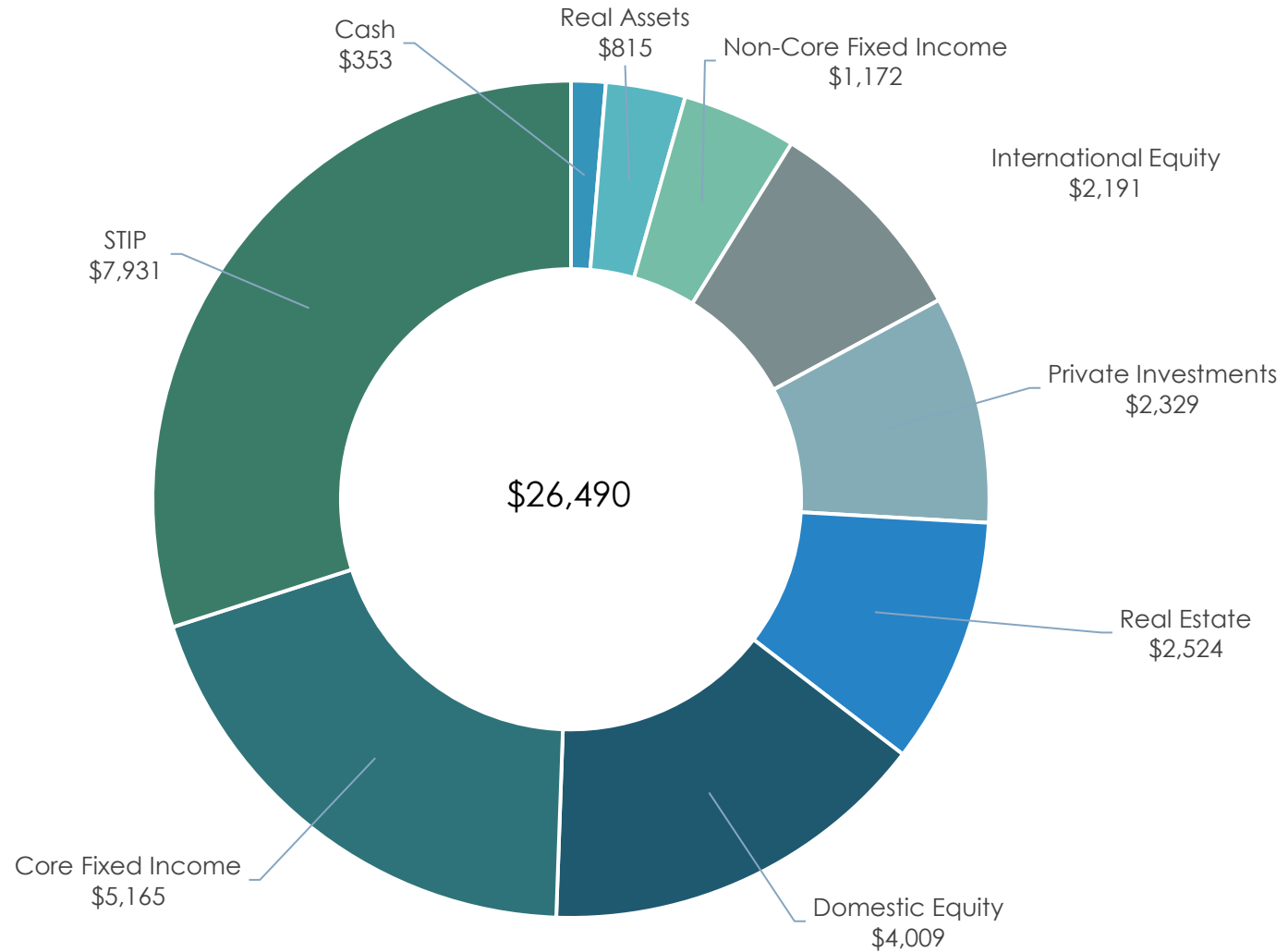
Economic Environment

The market is becoming concerned about the debt ceiling.



CIO Update

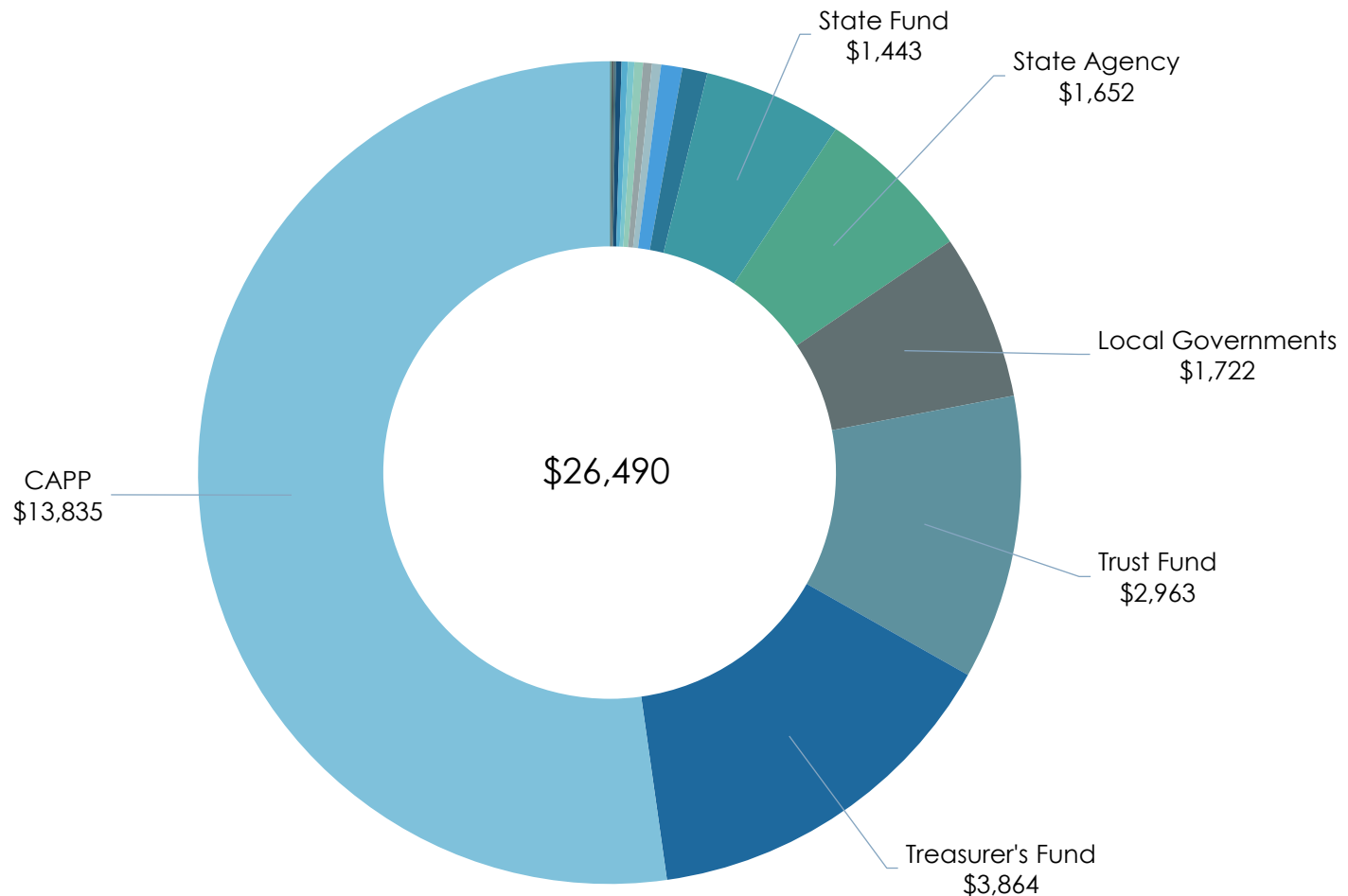
AUM by Asset Class



* Dollar values are in \$1,000,000
March 31, 2023

CIO Update

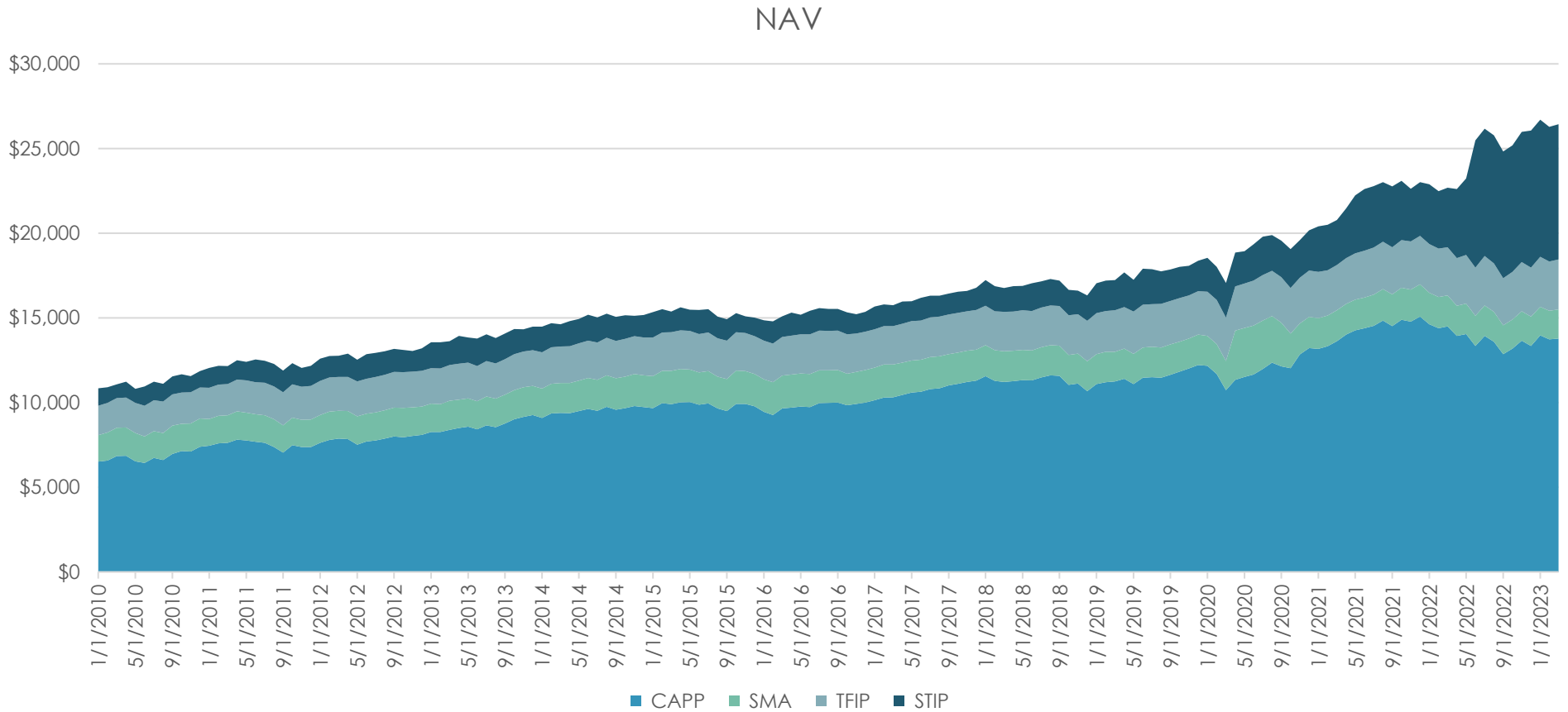
AUM by Participant Type



* Dollar values are in \$1,000,000
March 31, 2023

CIO Update

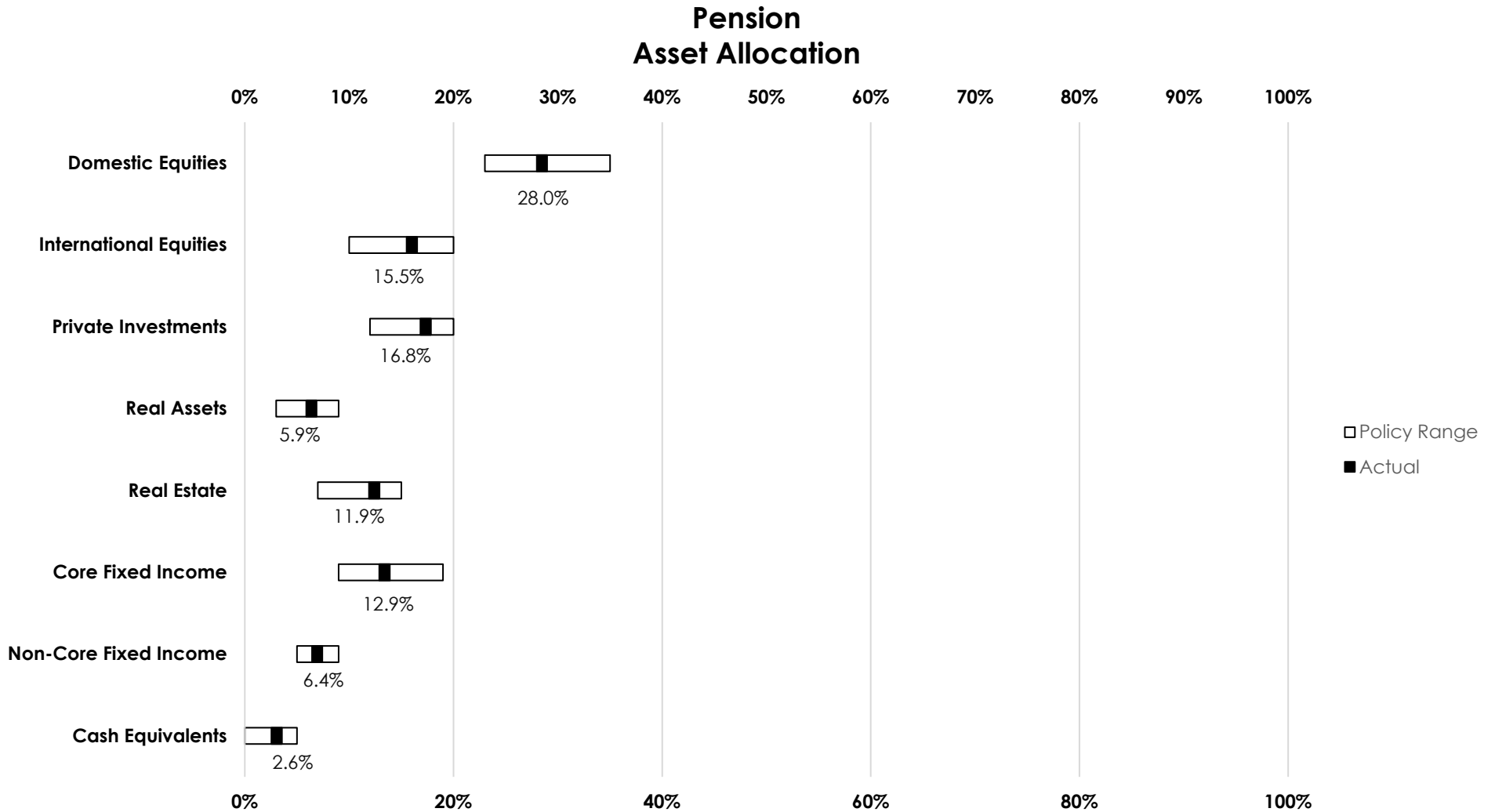
AUM by Pool



* Dollar values are in \$1,000,000
 March 31, 2023

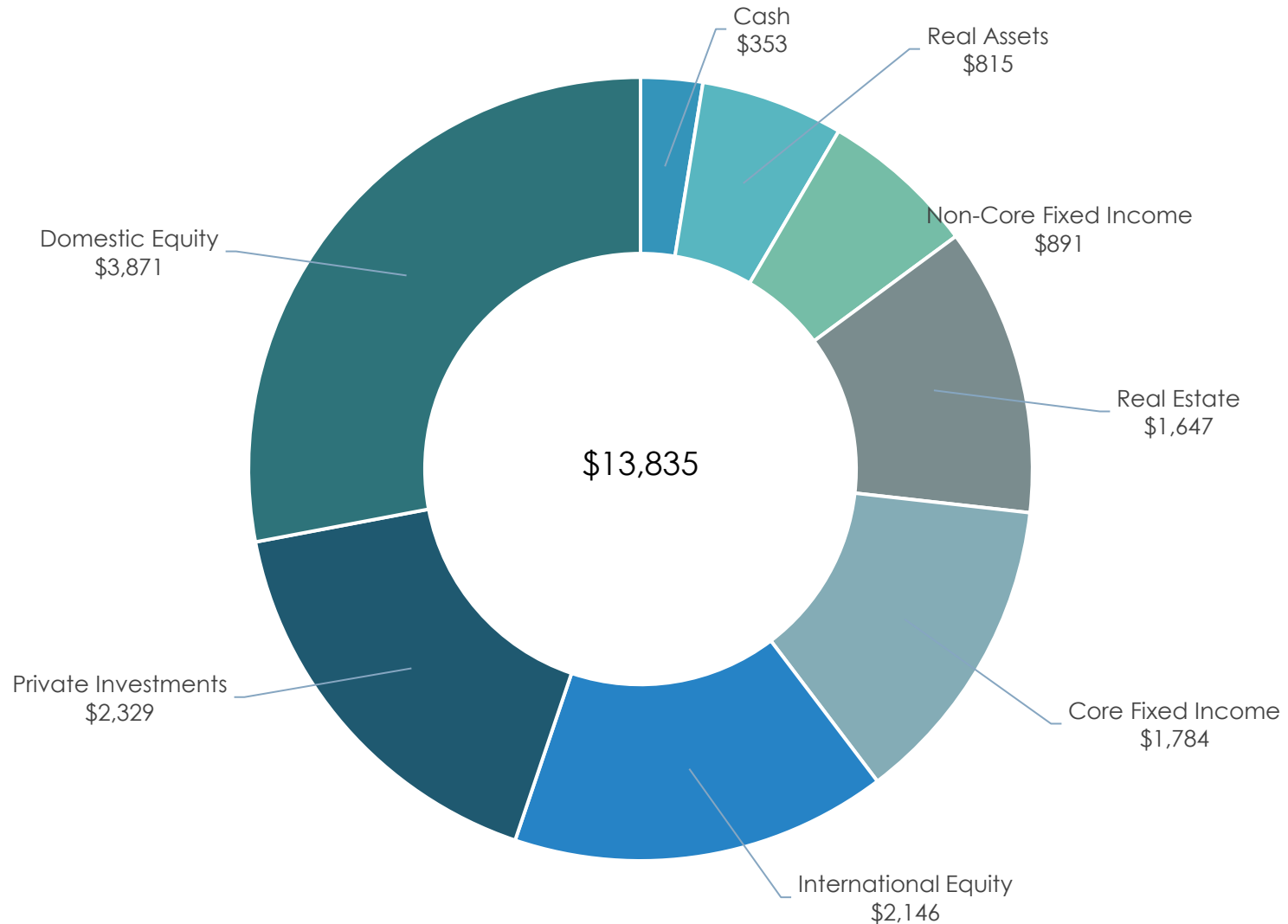
CIO Update

Pension Asset Allocation



CIO Update

Pension Asset Allocation

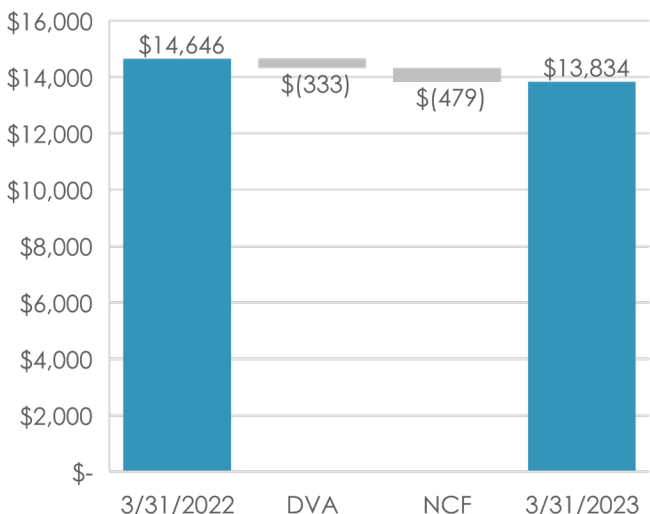


* Dollar values are in \$1,000,000
March 31, 2023

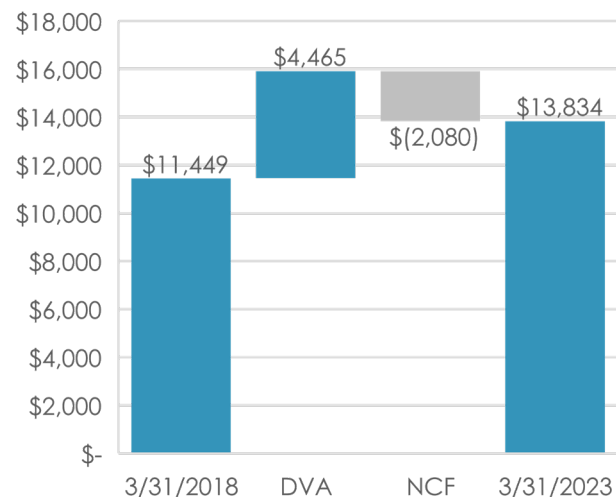
CIO Update

Pension Net Performance

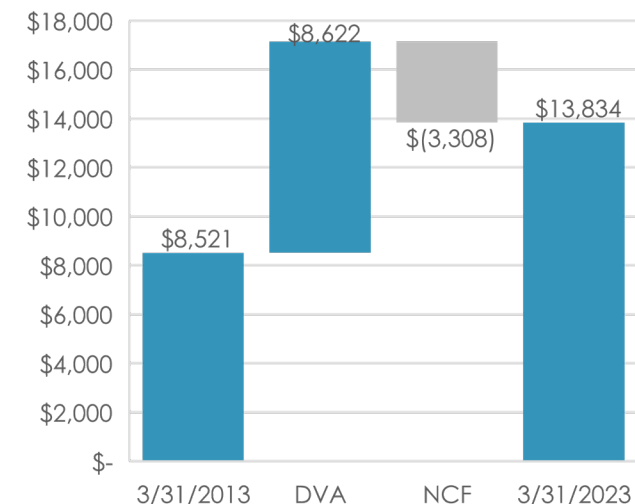
Asset Changes
1 Year



Asset Changes
5 Year



Asset Changes
10 Year



- Dollar Value Added – The total dollar return of the portfolio including income and capital gains.
- Net Cash Flow - The total dollar amount distributed from portfolio assets to meet the deficit of contributions minus distributions.
 - A grey bar indicates an aggregate net outflow by all plans even though some plans may have experienced net inflows.
 - Though aggregates are shown, each plan is independent and not able to rely on other plans to meet their respective liabilities.

* Dollar values are in \$1,000,000

March 31, 2023

CIO Update

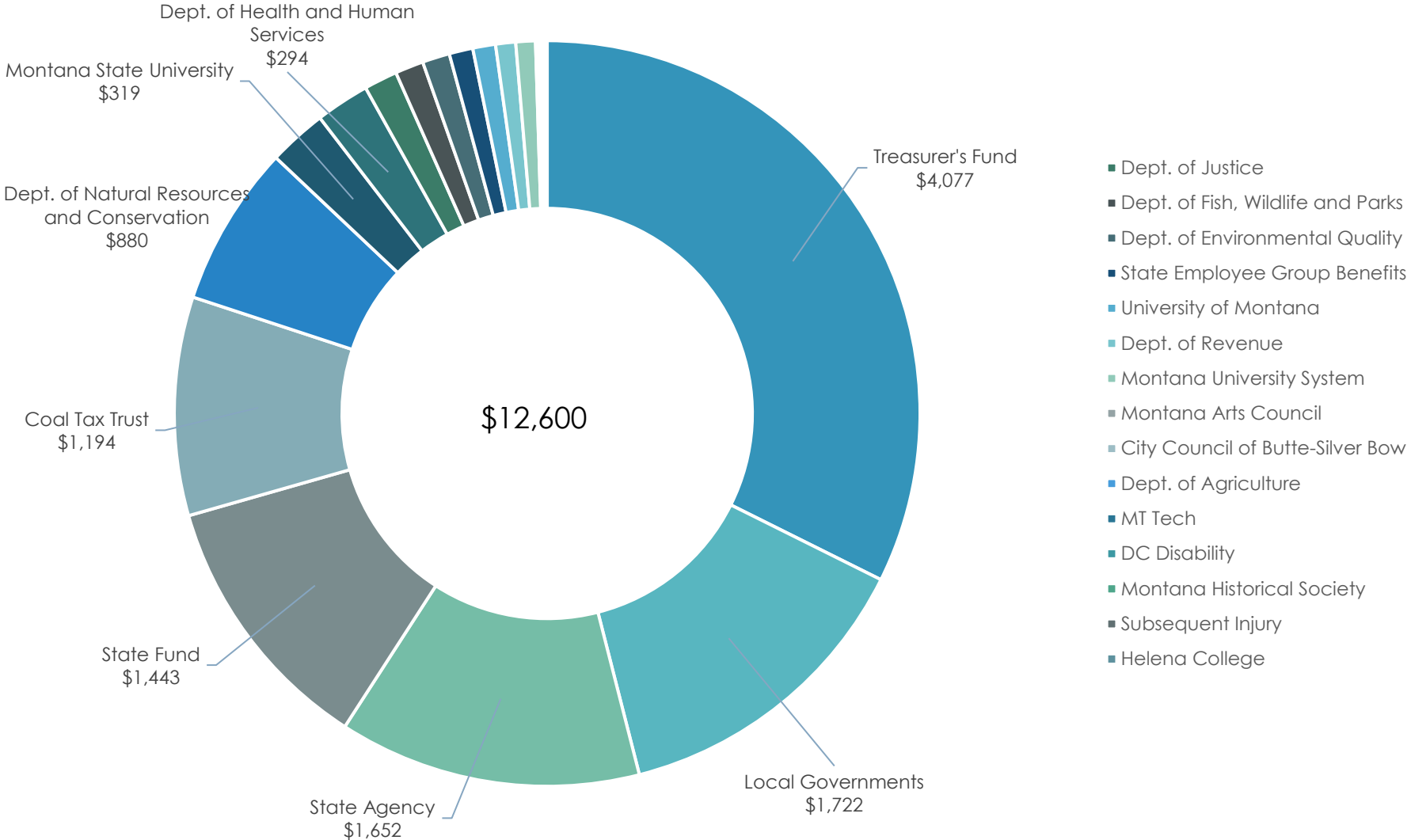
Pension Net Performance

Performance	1 Year	3 Year	5 Year	10 Year	20 Year	Since Inception
Public Employees' Retirement	-2.18%	12.06%	7.25%	7.95%	7.79%	7.67%
Police Officers' Retirement	-2.17%	12.05%	7.25%	7.96%	7.74%	7.55%
Game Wardens' Retirement	-2.17%	12.06%	7.25%	7.95%	7.74%	7.58%
Sheriffs' Retirement	-2.17%	12.06%	7.25%	7.95%	7.77%	7.57%
Judges' Retirement	-2.19%	12.06%	7.25%	7.95%	7.78%	7.58%
Highway Patrol Retirement	-2.17%	12.06%	7.26%	7.96%	7.79%	7.57%
Teachers' Retirement	-2.21%	12.04%	7.24%	7.95%	7.79%	7.68%
Vol Firefighters' Retirement	-2.19%	12.06%	7.25%	7.95%	7.76%	7.40%
Firefighters' Retirement	-2.17%	12.05%	7.25%	7.96%	7.76%	7.54%

Inception 7/1/1994

CIO Update

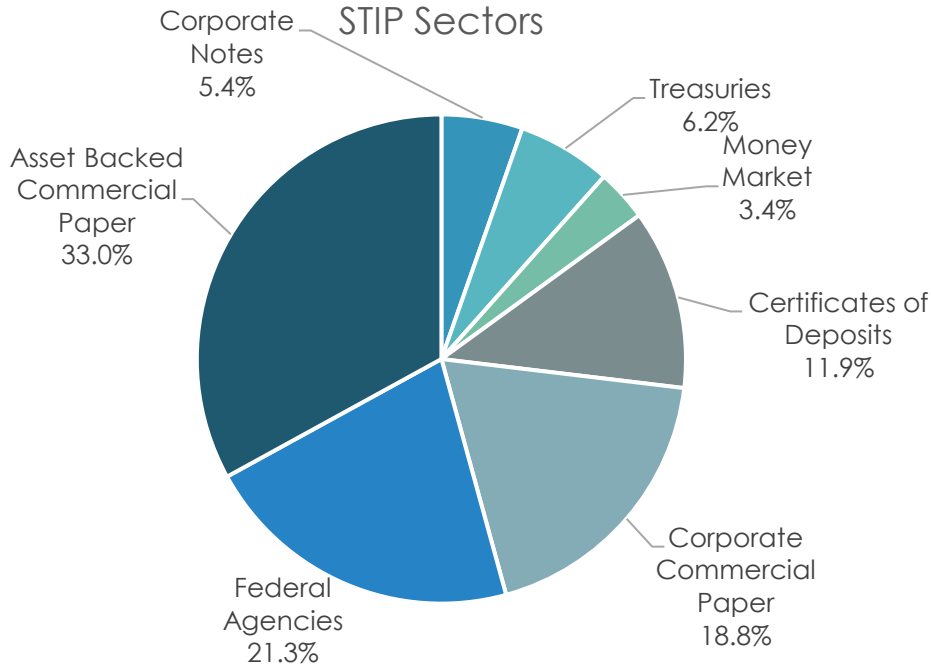
AUM ex. CAPP



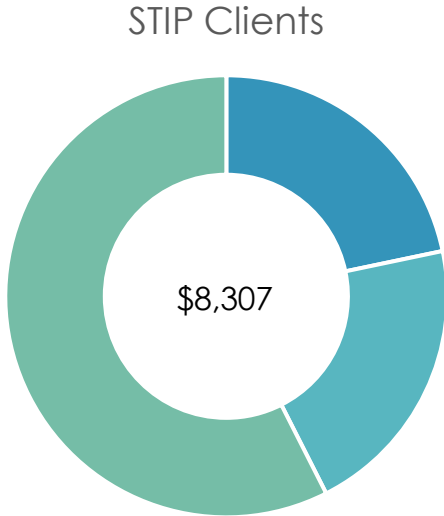
* Dollar values are in \$1,000,000
 March 31, 2023

CIO Update

Short Term Investment Pool



- The weighted average maturity of the portfolio was 62 days at quarter end.
- The STIP Reserve was \$64.9M at quarter end.



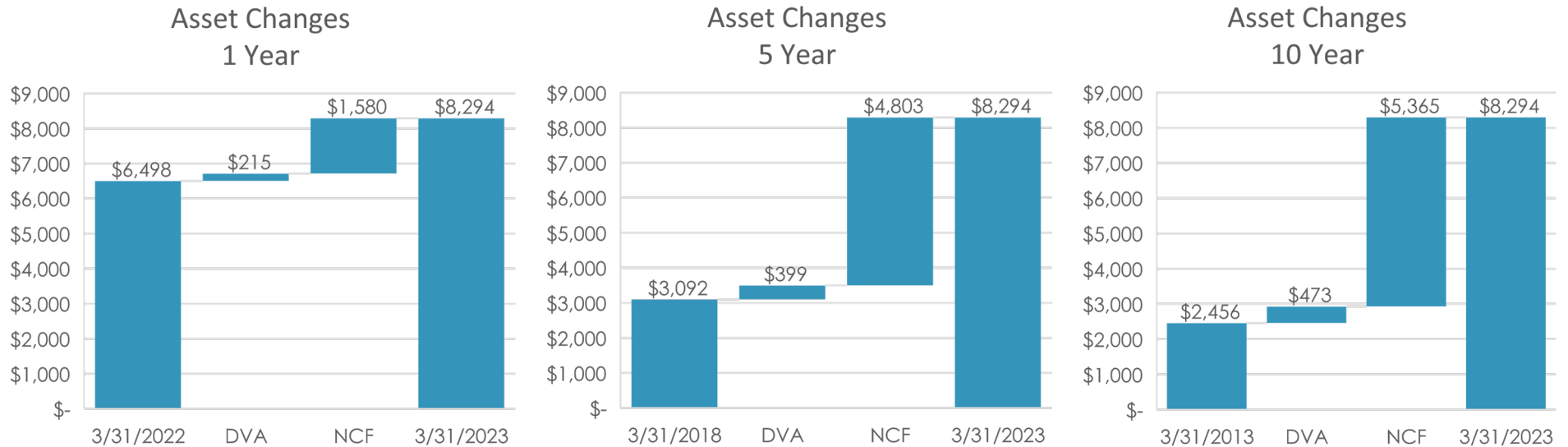
■ Treasurer's Fund ■ Local Governments ■ State

* Dollar values are in \$1,000,000
 March 31, 2023

CIO Update

Short Term Investment Pool

STIP Net Performance



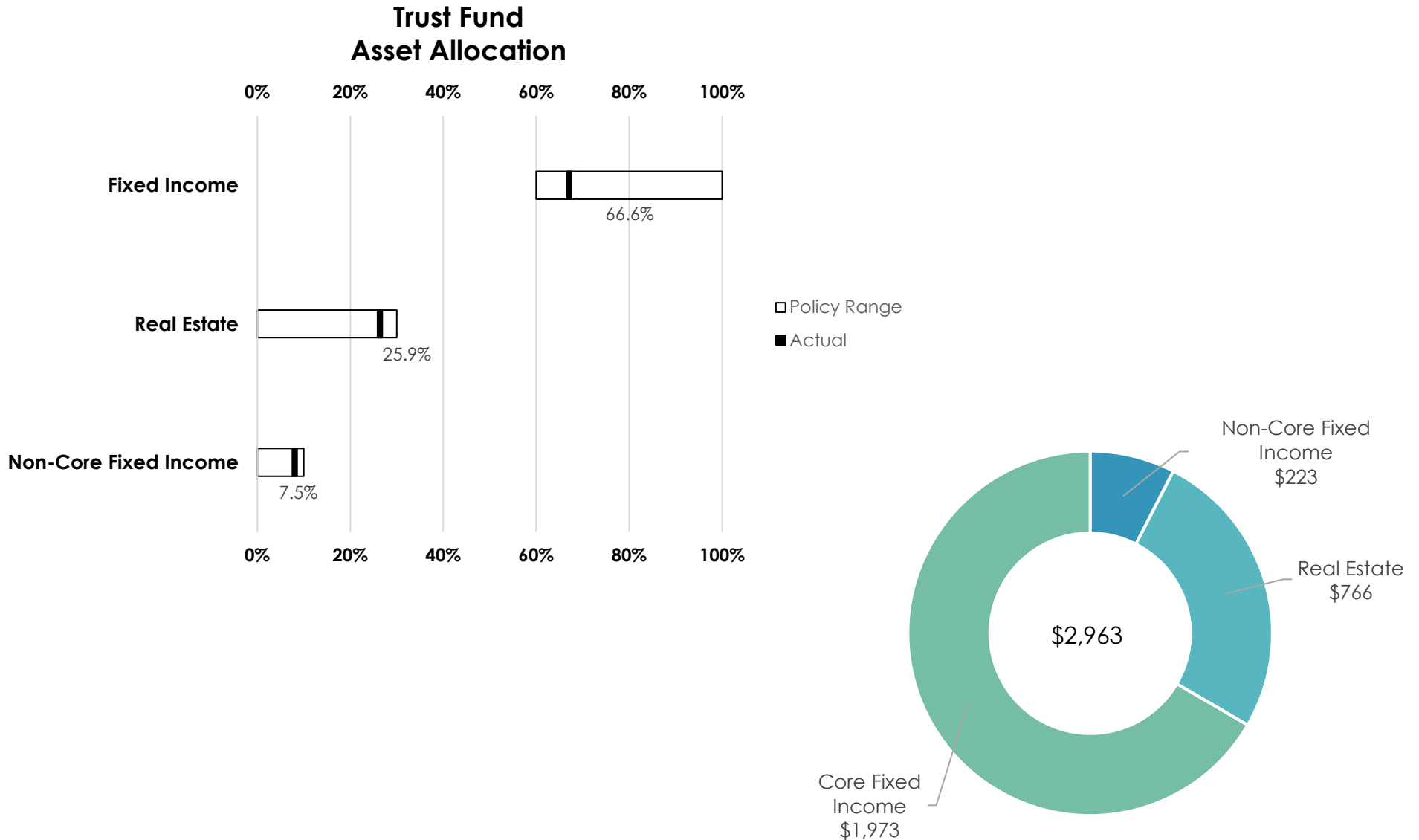
Performance	1 Year	3 Year	5 Year	10 Year	Since Inception
Short Term Investment Pool (STIP)	2.73%	1.07%	1.49%	1.00%	2.29%
Short Term Investment Pool Benchmark	2.81%	0.98%	1.37%	0.95%	2.21%

* Dollar values are in \$1,000,000

March 31, 2023

CIO Update

Trust Funds Investment Pool

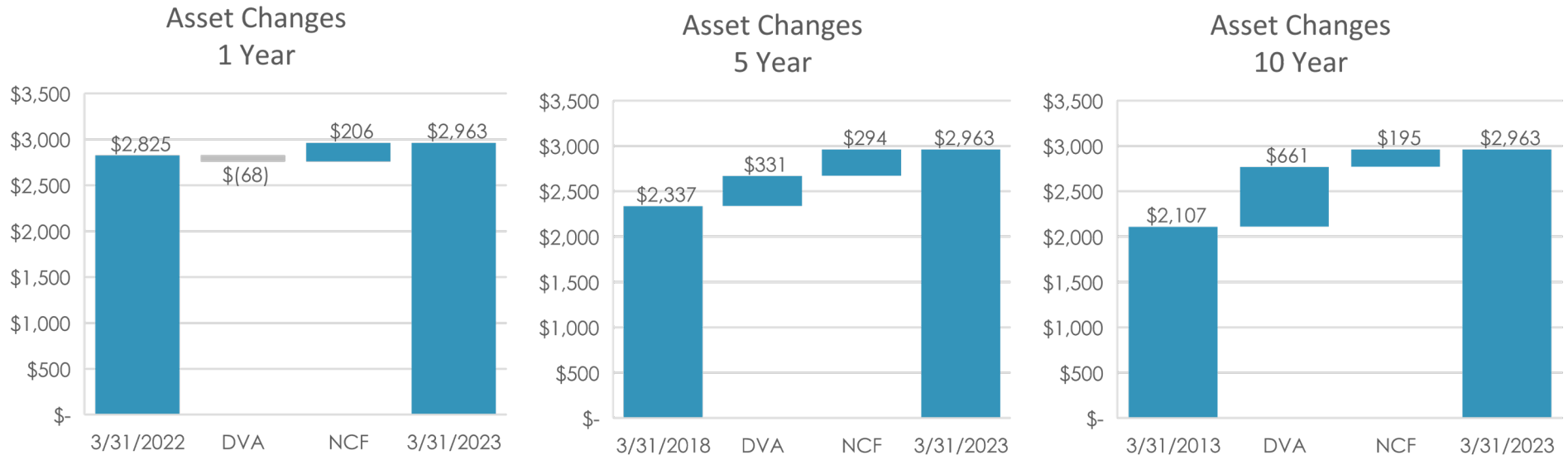


* Dollar values are in \$1,000,000
March 31, 2023

CIO Update

Trust Funds Investment Pool

TFIP Net Performance



Performance	1 Year	3 Year	5 Year	10 Year	Since Inception
Trust Funds Investment Pool (TFIP)	-2.45%	0.54%	2.74%	2.86%	5.49%
Trust Funds Investment Pool Benchmark	-1.70%	0.16%	2.72%	2.27%	4.74%

Yield	1 Year	3 Year	5 Year	10 Year
Trust Funds Investment Pool (TFIP)	3.33%	3.03%	3.12%	3.33%

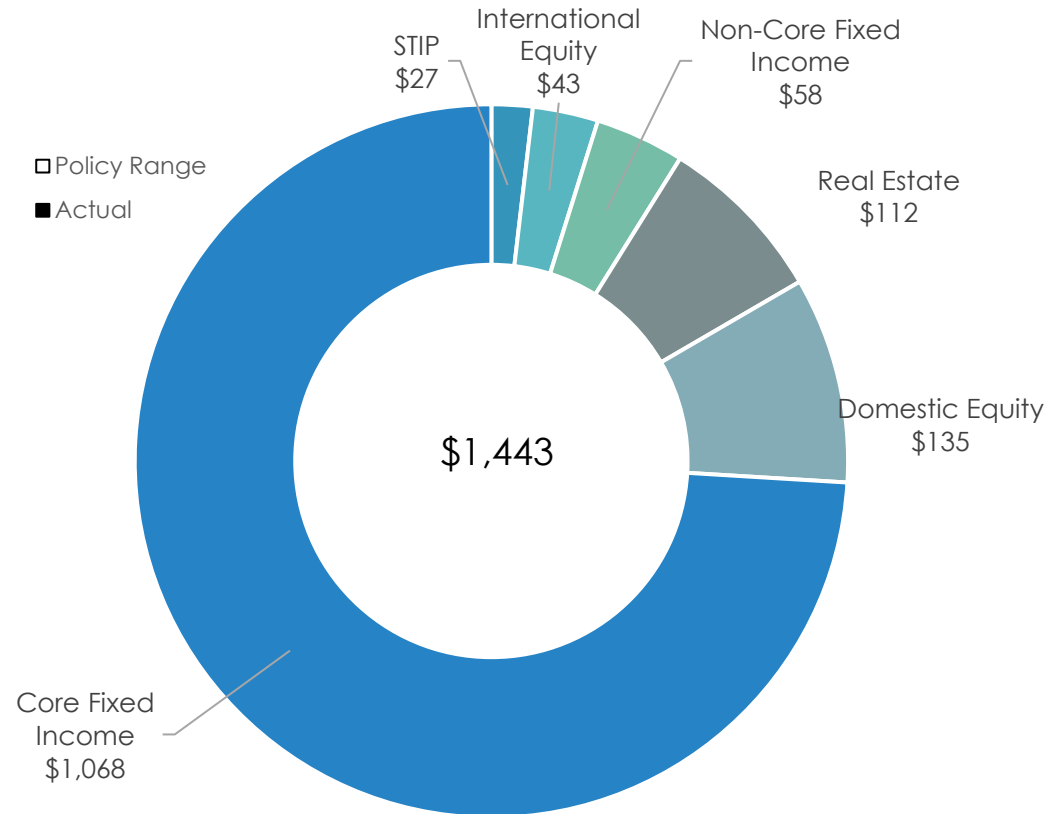
* Dollar values are in \$1,000,000

March 31, 2023

CIO Update

State Fund Investment Pool

**State Fund
Asset Allocation**

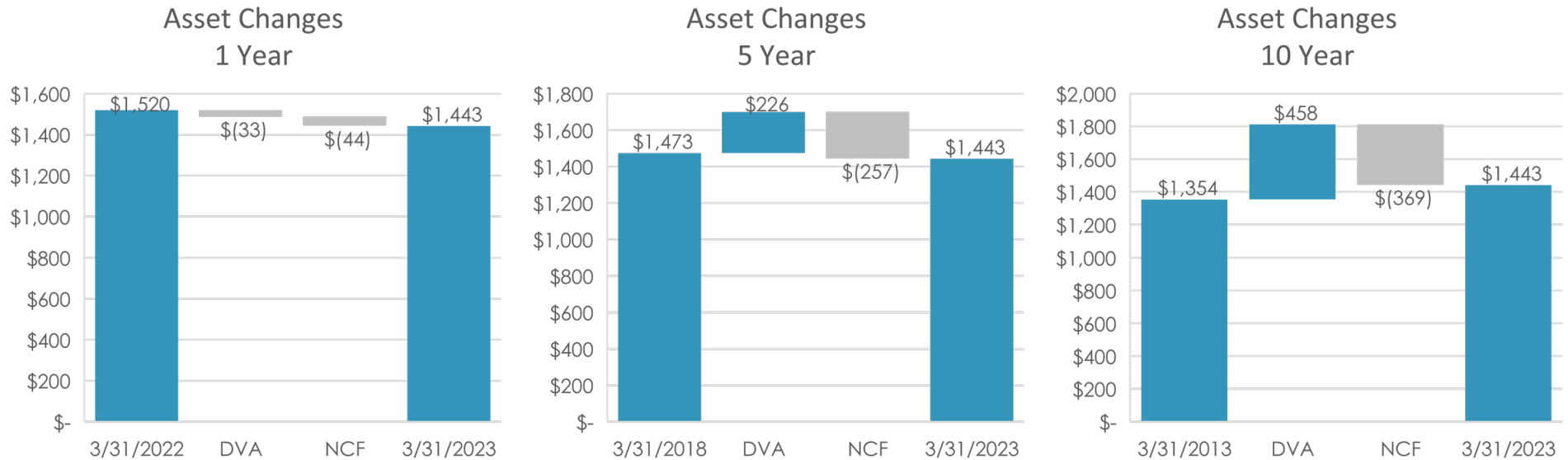


* Dollar values are in \$1,000,000
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CIO Update

State Fund Investment Pool

SFIP Net Performance



Performance	1 Year	3 Year	5 Year	10 Year	Since Inception
State Fund	-2.04%	2.15%	3.03%	3.15%	5.14%
State Fund Benchmark	-2.61%	1.23%	2.64%	2.82%	4.61%

* Dollar values are in \$1,000,000

March 31, 2023

CIO Update

- Higher interest rates, tighter credit conditions and lower earnings are weighing on the economy. The debt ceiling and geopolitical events are also generating concern.
- Cautious outlook. Not being penalized for holding slightly higher cash balances. Significant capital calls from private funds.
- Public Markets made an initial funding of \$50M to our convertible bond manager. Renegotiation of international equity fees has resulted in annual savings of more than \$2 million.
- Working on improvements to our due diligence / legal negotiation process in Private Investments, Real Estate & Real Assets.
- Additional separate accounts will be created per the 2023 Legislature. Coal Severance Tax Trust IPS will be updated in August.
- Hired William Gross as the new Fixed Income Analyst. Matt Hoffman promoted to Investment Analyst – Level II. Investment intern, Jonathan Yen, starting next week.

Macro Attribution

Key Takeaways – 1 Year

Strategic Asset Allocation - *What was the performance of our midpoint weighted benchmark portfolio?*

- The Real Estate and Cash benchmarks had positive contributions to the pension, policy-neutral, -4.4% return.

Tactical Asset Allocation - *Did the actual asset class weights add additional return over the midpoint weighted benchmark portfolio?*

- On average, we were slightly overweight International Equity, Real Estate and Private Investments, while being slightly underweight or at the midpoint weight for the remaining asset classes.
- About \$513M of equity asset classes were sold and \$35M of fixed income/cash asset classes were bought during the year to fund the pension net cash need of \$-479M.
- In aggregate, the overweighting/underweighting of the asset classes relative to their benchmarks increased the pension portfolio's return by 14 bps.

Style Selection - *Did the portfolio benchmarks add additional return over their asset class benchmarks?*

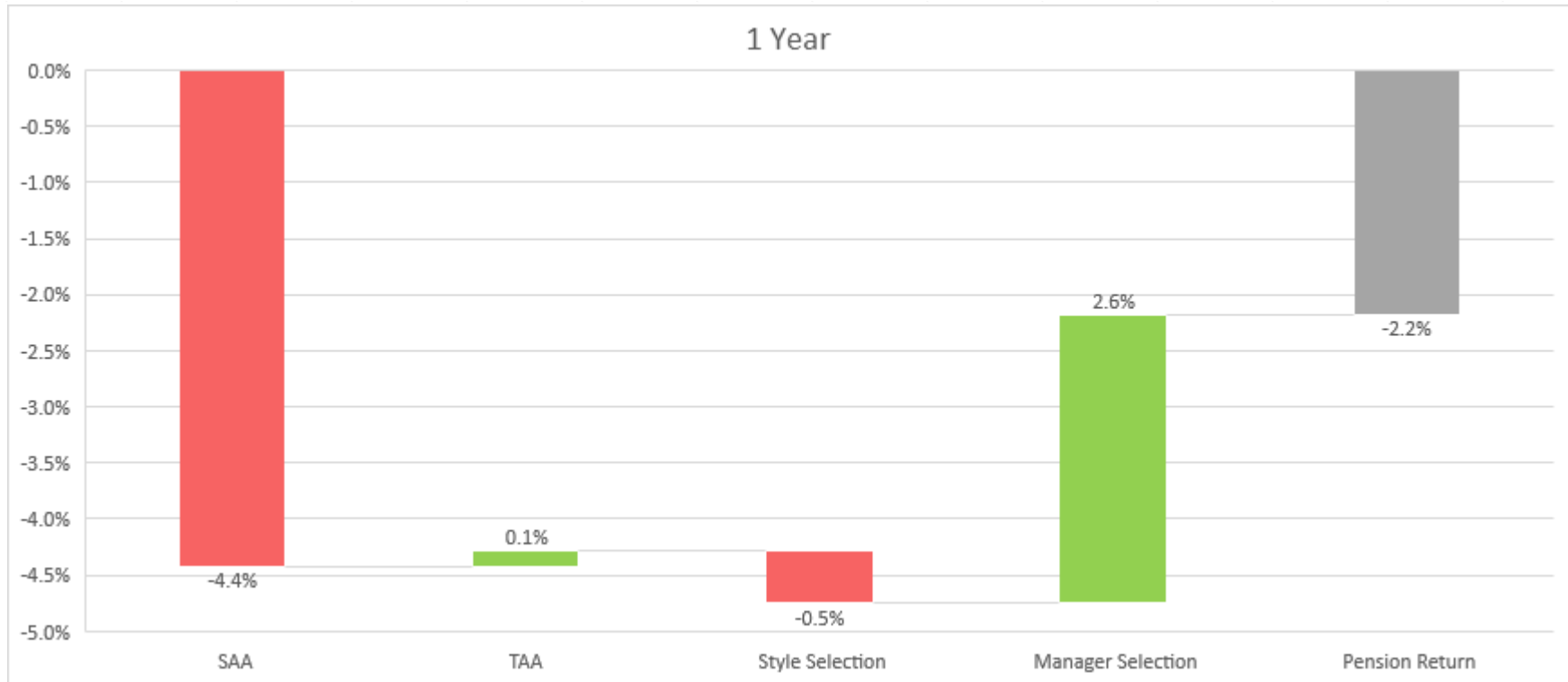
- The Real Assets portfolio has about 55% exposure to commodities versus 33% in the custom benchmark. The strong outperformance of the Commodity Producers Index relative to Infrastructure and TIPS resulted in style outperformance of about 9 bps.
- Exposure to public REIT and public CMBS indexes caused style underperformance of 50 bps as private Real Estate assets outperformed public assets.

Manager Selection - *Did the portfolio managers add additional return over their portfolio benchmarks?*

- In International Equity, there was mixed manager performance for a total underperformance of 4 bps.
- Within Core Fixed Income, our internal portfolio was an outperformer adding 7 bps.
- Private Investments was by far the main contributor to manager selection outperformance with Private Equity rather than Private Credit being the main contributor. Much of this can be attributed to the lag in pricing of private investments.
- Real Assets had manager selection effects of 61 bps, with Infrastructure and Commodities being the positive contributors and TIPS having a relatively small contribution effect.
- Our Private Real Estate Portfolio and REIT Manager both added positive Manager Selection effects totaling 48 bps.

Note: The publicly traded benchmarks for private asset classes are an imperfect proxy for actual holdings due to the pricing of private assets lagging their publicly traded benchmarks.

Macro Attribution



Strategic Asset Allocation (SAA) - The return that would have been achieved if we had invested in our asset class benchmarks at the midpoint weights

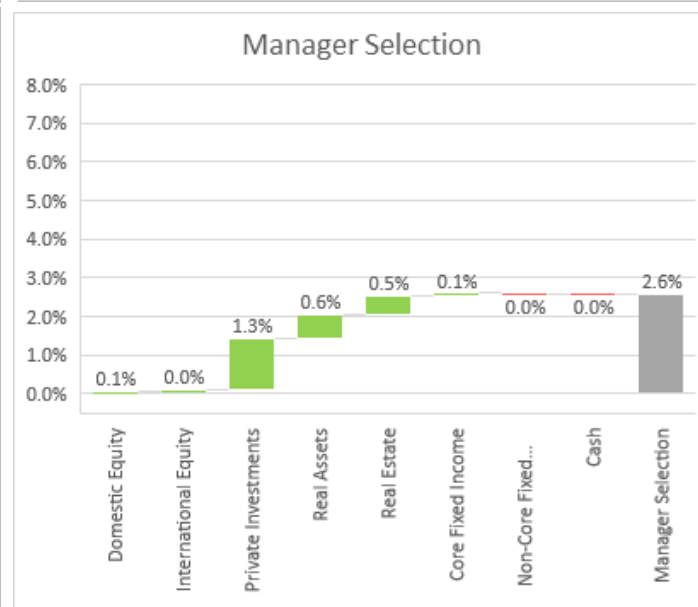
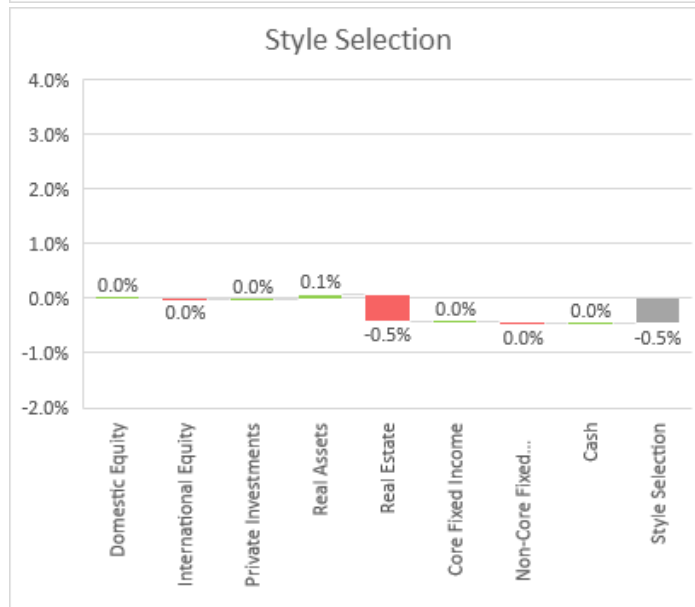
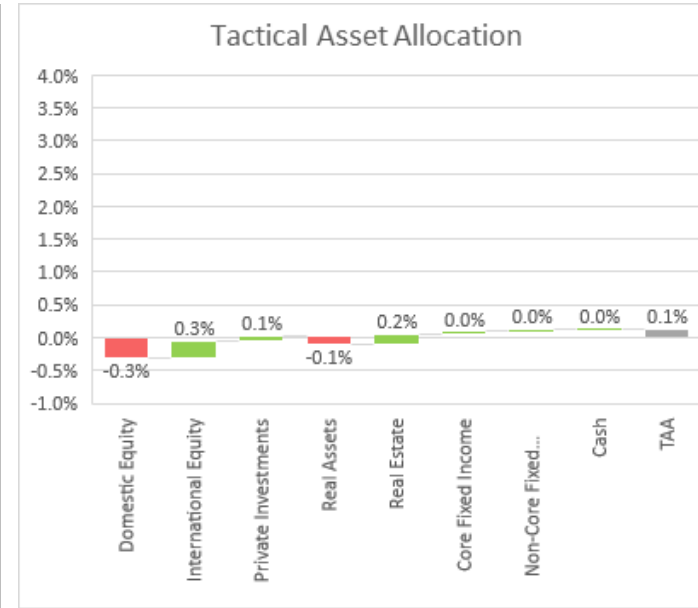
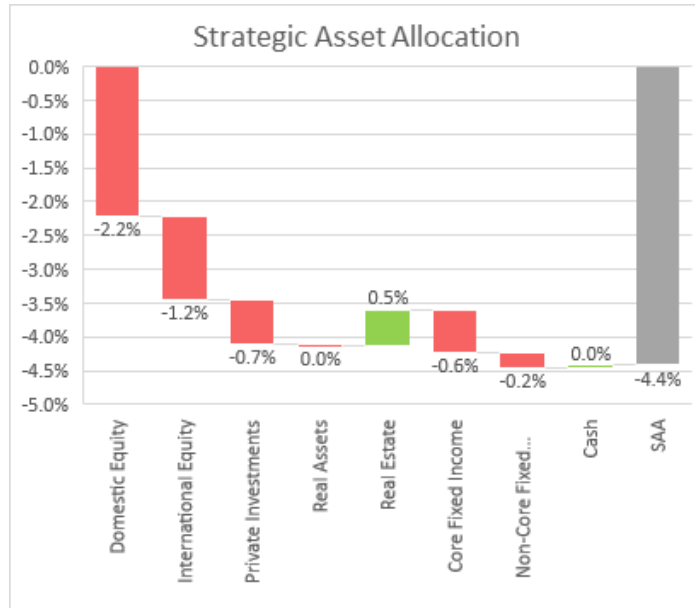
Tactical Asset Allocation (TAA) - The *additional* return earned by investing in the asset class benchmarks at our actual rather than midpoint weights.

Style Selection (SS) - The *additional* return earned by investing in the underlying manager benchmarks rather than the asset class benchmarks.

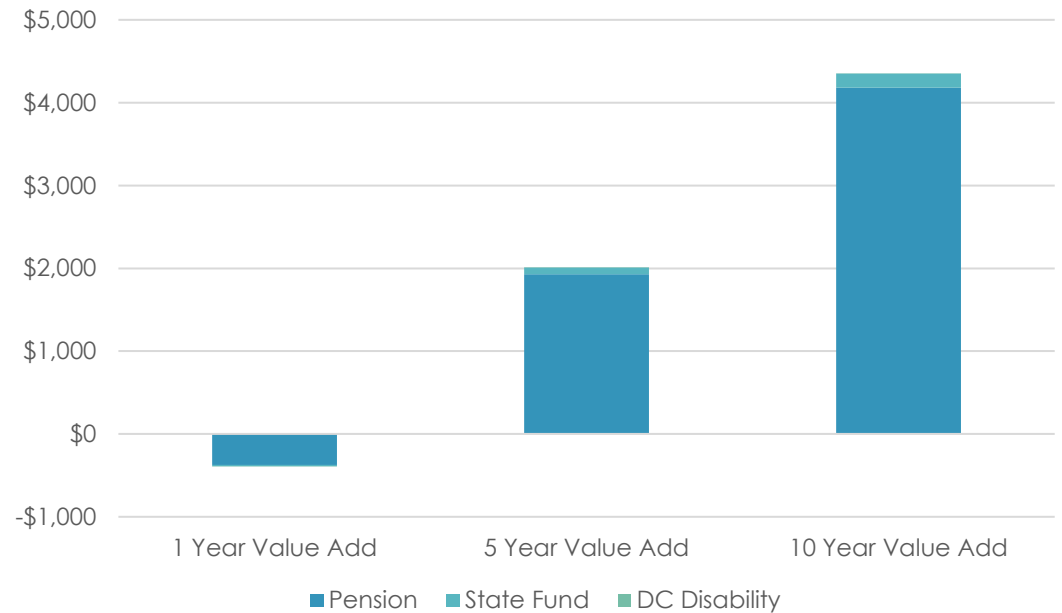
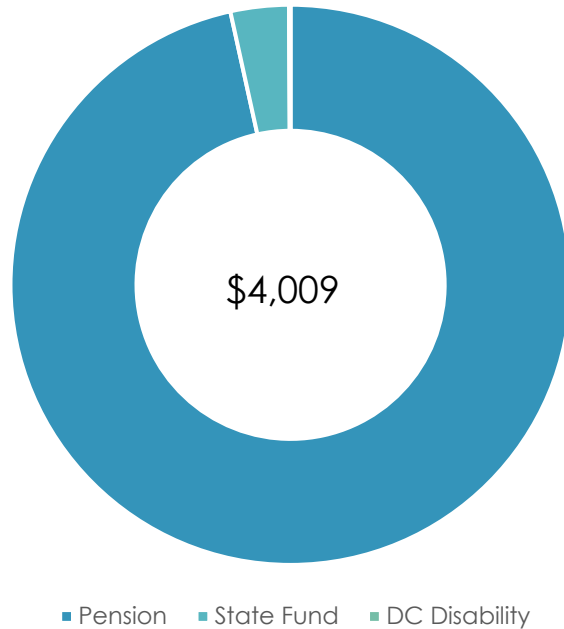
Manager Selection - The *additional* return earned by investing in the underlying managers rather than the underlying manager benchmarks.

* The valuation lag observed in Private Equity, Real Estate, and Natural Resources are likely to lead to large differences in returns between these asset classes and their benchmarks in short-mid term time periods. The manager selection component is therefore likely to be large for these asset class in the short and medium term.

Macro Attribution



Domestic Equity Ownership Breakdown



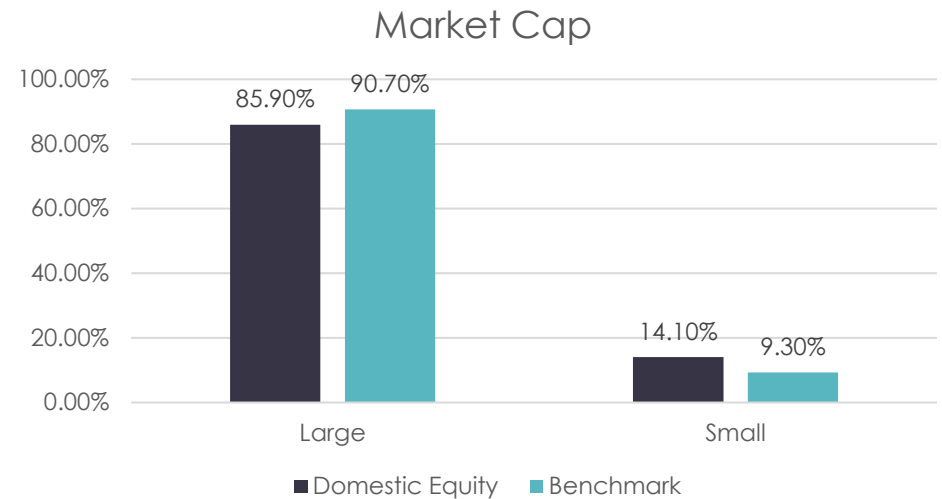
Performance	1 Year	1 Year Benchmark	5 Year	5 Year Benchmark	10 Year	10 Year Benchmark
Pension	-8.44%	-8.45%	10.08%	10.62%	11.46%	11.91%
State Fund	-7.74%	-7.73%	11.17%	11.19%	12.24%	12.24%
DC Disability	-8.73%	-8.77%	10.39%	10.32%	NA	NA

- US Equities continued to rally in 1Q23, as investors anticipate the end of the Fed's interest rate hikes. Markets recovered from the upheaval in the banking sector in March. Growth stocks outperformed Value by a wide margin in 1Q23, reversing the trend of Value outperformance in 2022. Large Caps outperformed Small Caps after having underperformed in 2022.
- Market volatility continues as investors attempt to project the path of inflation, economic growth, earnings growth, and interest rates.

* Dollar values are in \$1,000,000

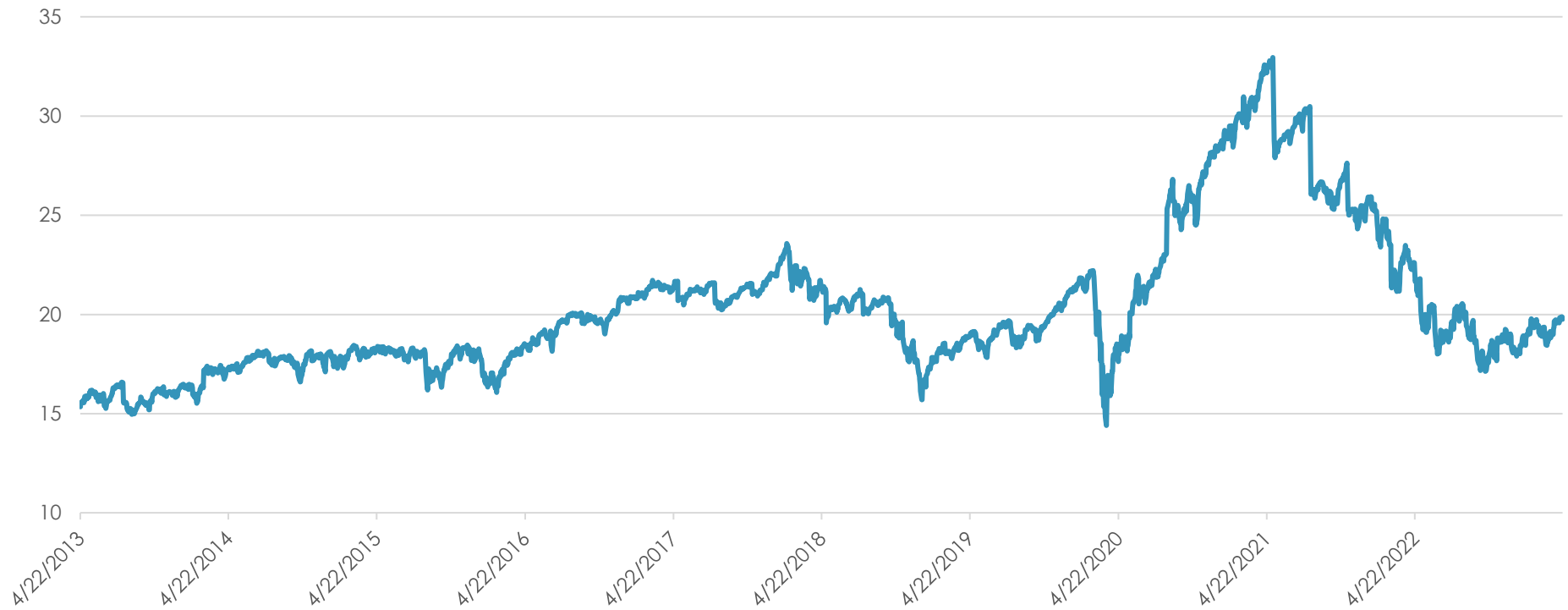
March 31, 2023

Domestic Equity Characteristics



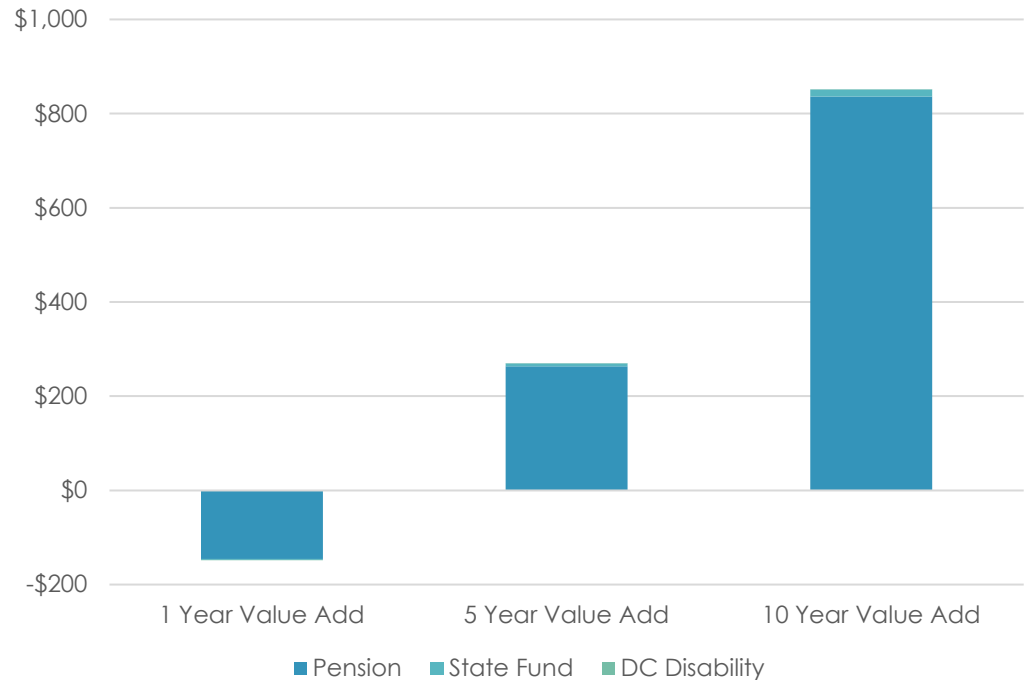
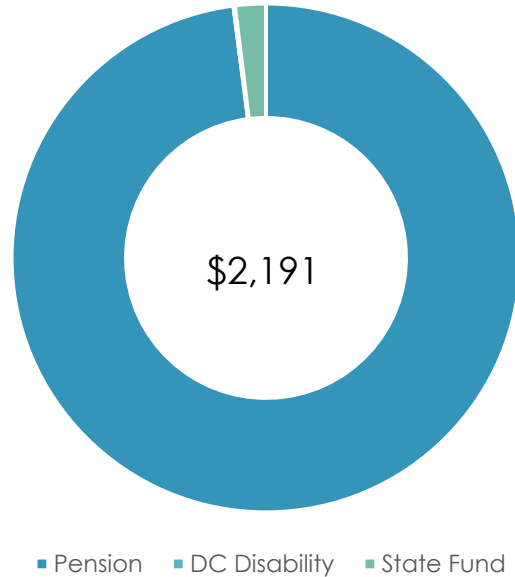
Domestic Equity Valuation

S&P 500 Index - Price/Earnings Ratio
(April 22, 2013 to April 21 2023)



- A precipitous drop in P/E multiples weighed on US stocks in 2022, but valuations have risen in 2023, with the forward P/E of the S&P 500 sitting at 17.8x as of the end of 1Q23, slightly above its 25-year average.

International Equity Ownership Breakdown



Performance	1 Year	1 Year Benchmark	5 Year	5 Year Benchmark	10 Year	10 Year Benchmark
Pension	-5.44%	-5.84%	2.50%	2.35%	4.57%	4.26%
State Fund	-5.00%	-5.07%	2.55%	2.47%	4.22%	4.17%
DC Disability	-4.72%	-5.07%	2.79%	2.47%	NA	NA

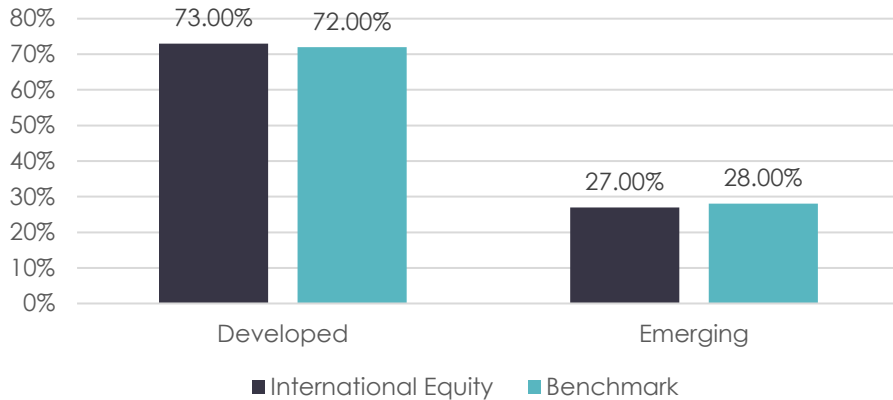
- International Equities rebounded in 1Q23 after a weak 2022. Developed Markets continued to lead the way. As in the US, Growth outperformed Value, but by a much smaller margin than in the US. Large Caps outperformed Small Caps and a slightly weaker US Dollar provided a boost to International stocks when measured in Dollar terms.
- Active management in CAPP added value in 1Q23 and over the last twelve months

* Dollar values are in \$1,000,000

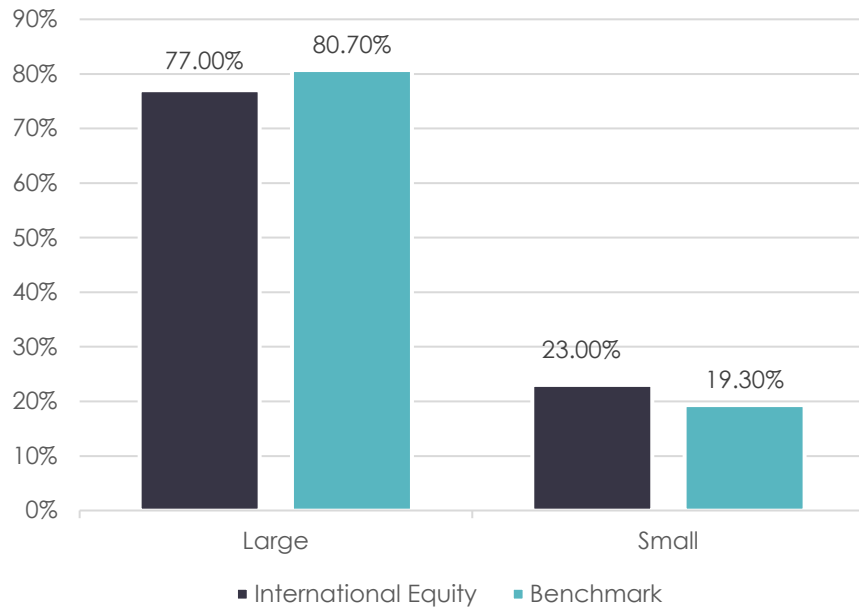
March 31, 2023

International Equity Characteristics

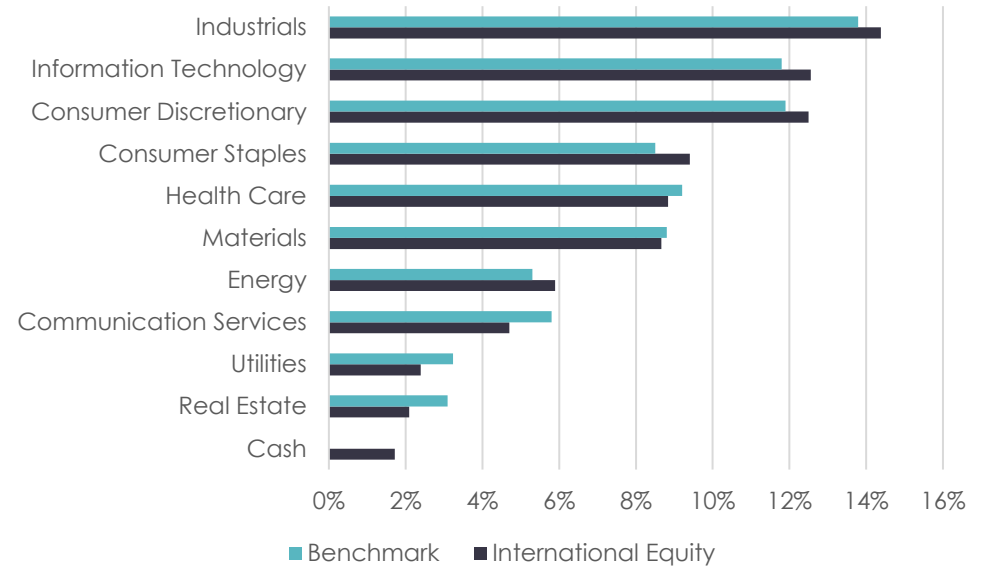
Developed vs. Emerging Markets



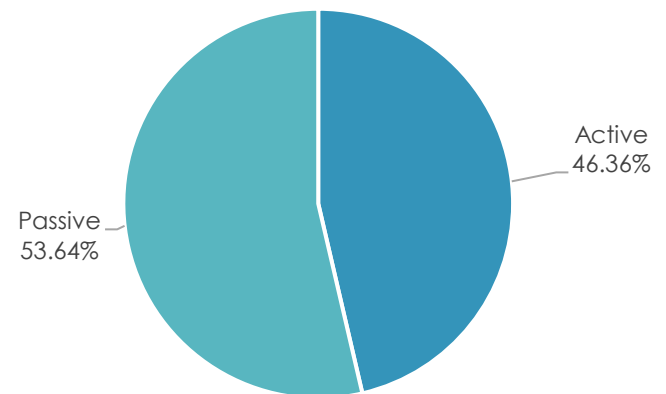
Market Cap



Sector



Active vs. Passive



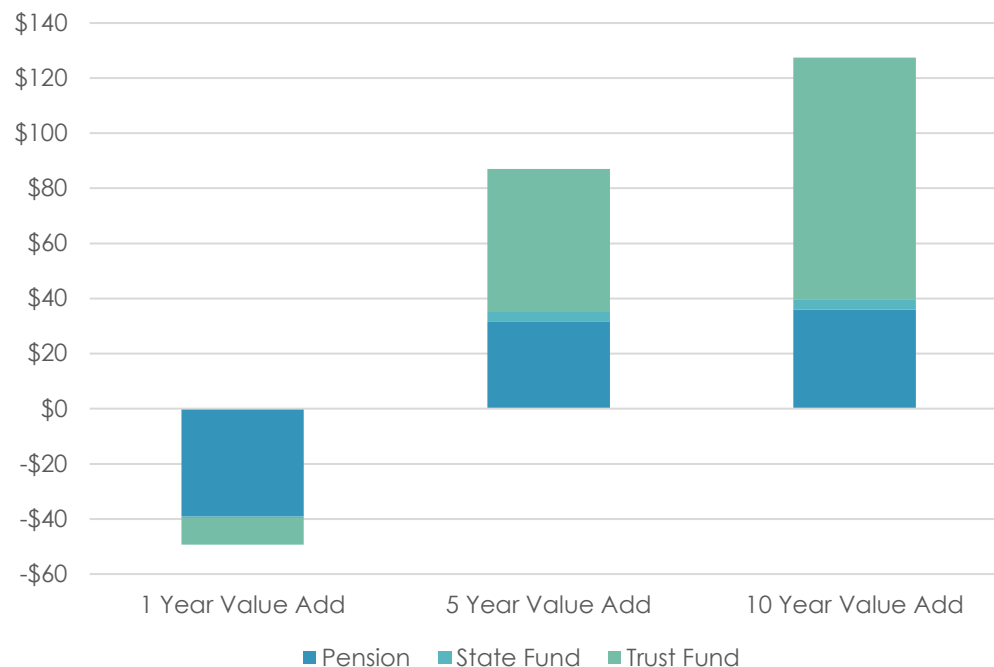
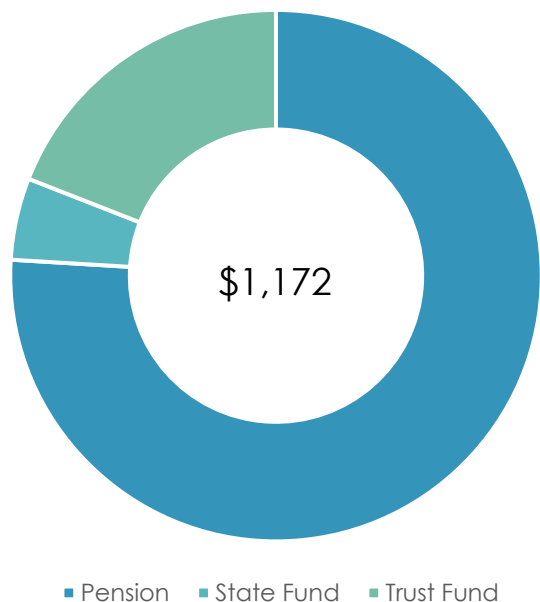
International Equity Valuation

ACWI ex. U.S. Index - Price/Earnings Ratio
(April 22, 2013 to April 21, 2023)



- International Equities P/E's have risen after having bottomed in 3Q22, but still trade at a historically high discount to US Equities.

Non-Core Fixed Income Ownership Breakdown



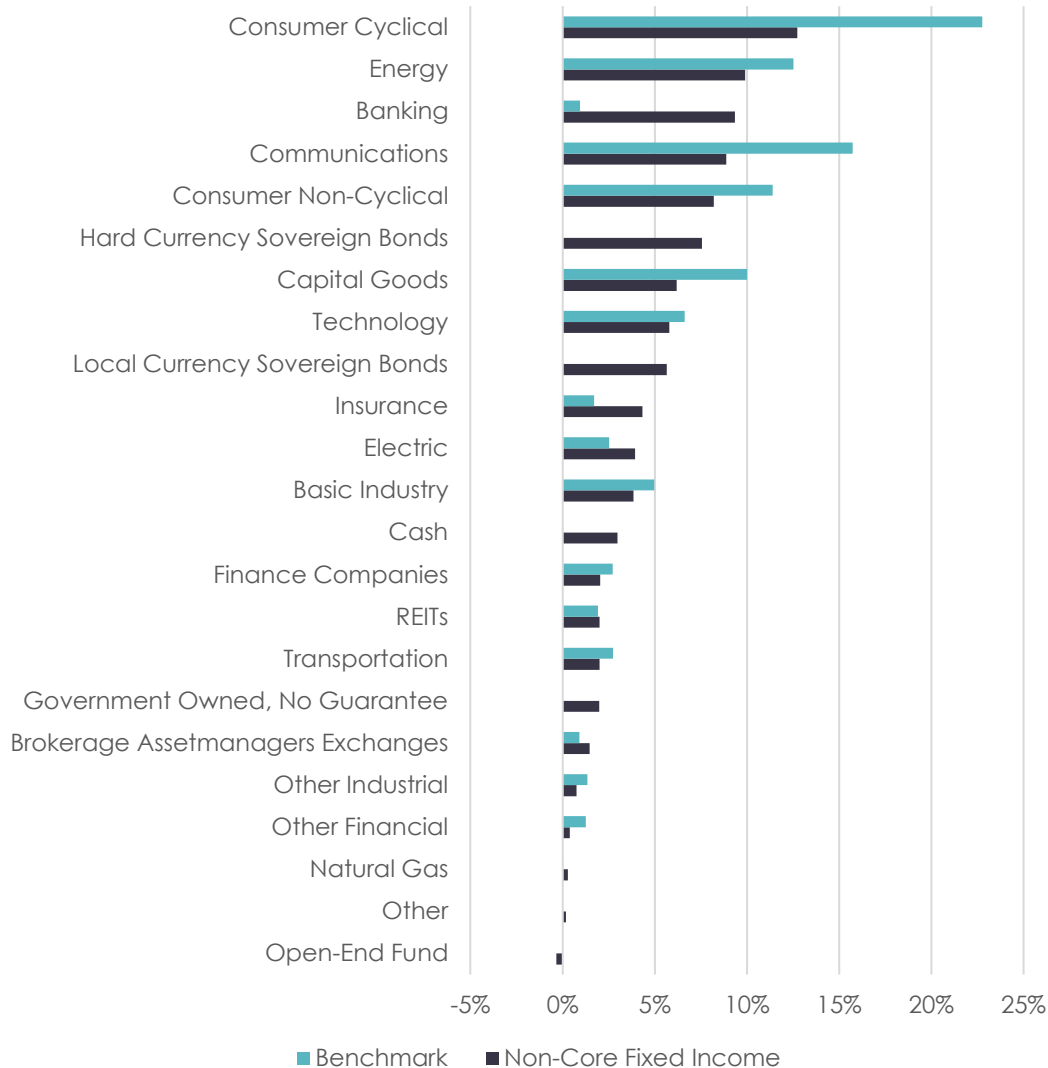
Performance	1 Year	1 Year Benchmark	5 Year	5 Year Benchmark	10 Year	10 Year Benchmark
Pension	-4.49%	-3.35%	2.32%	3.19%	3.41%	4.09%
State Fund	-4.02%	-3.35%	NA	NA	NA	NA
Trust Fund	-3.05%	-3.35%	2.19%	3.19%	3.83%	4.09%

- High Yield bonds have rebounded over the last two quarters after having sold off in early to mid-2022. Emerging Market Debt provided solid absolute returns, but lagged US High Yield. The financials-heavy Preferred Securities market suffered due to the turmoil in US Banks in 1Q23.
- BOI's High Yield managers underperformed in 1Q23 after having added value in 2022. The riskier parts of the High Yield market have tended to outperform in 2023. Exposure to Emerging Market Debt and Preferred Securities weighed on returns vs. the asset class benchmark over the past twelve months.

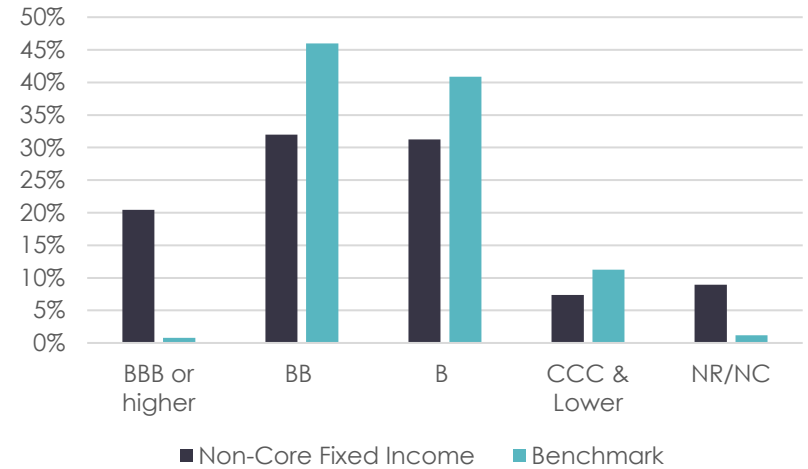
* Dollar values are in \$1,000,000

Non-Core Fixed Income Characteristics

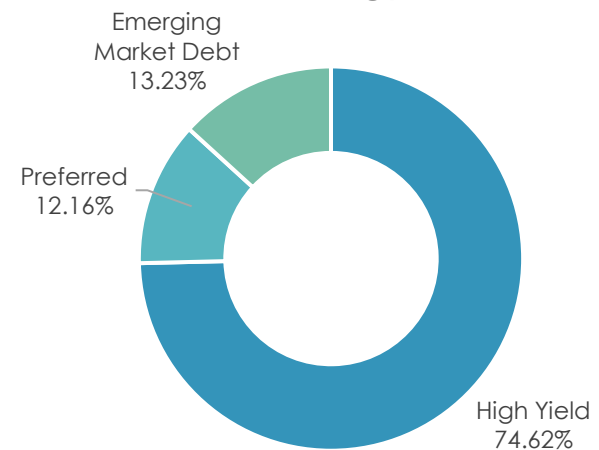
Sector



Credit Rating

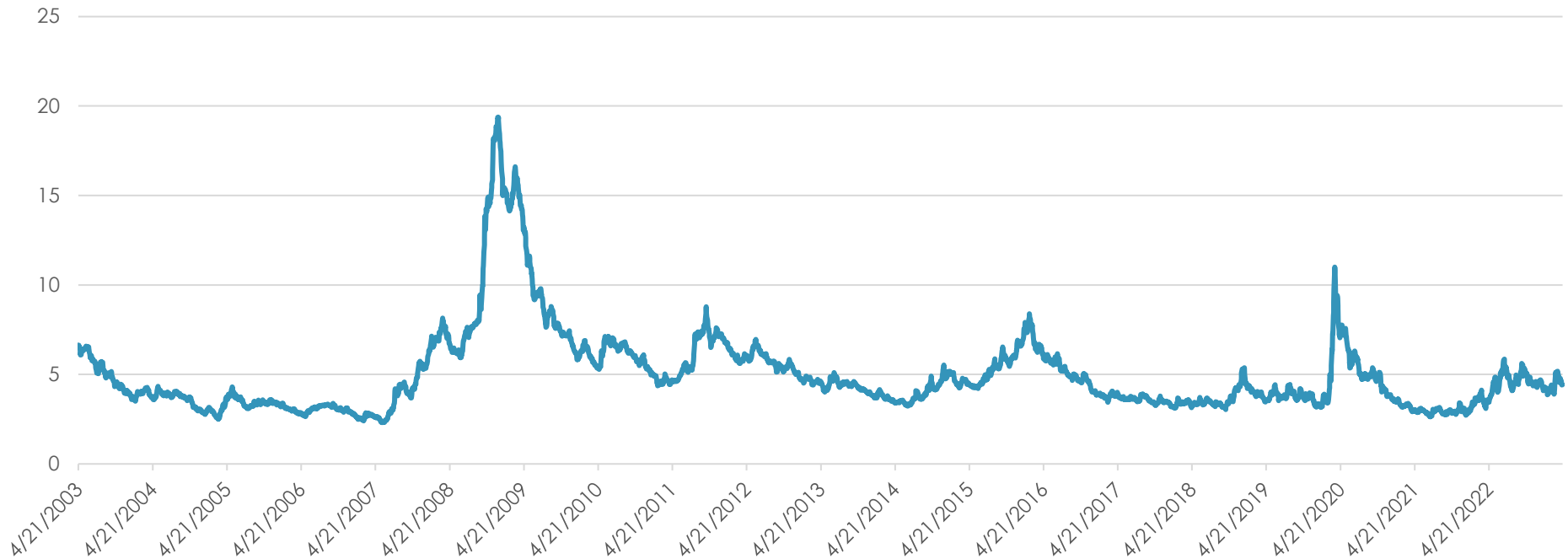


Strategy



Non-Core Fixed Income Valuation

Bloomberg High Yield Index – Option Adjusted Spread
(April 21, 2003 to April 21, 2023)

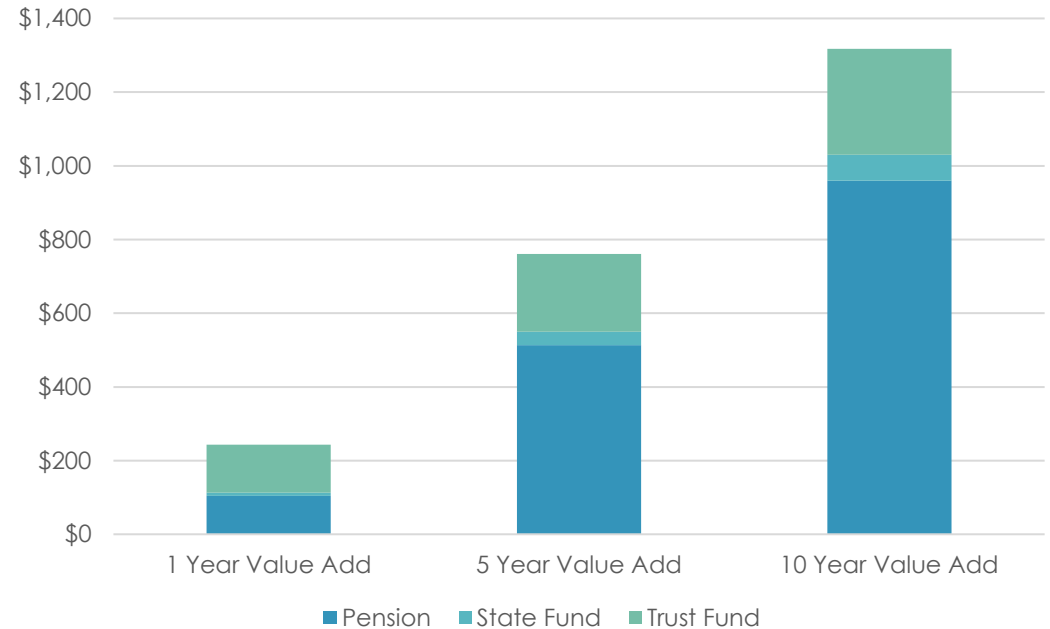
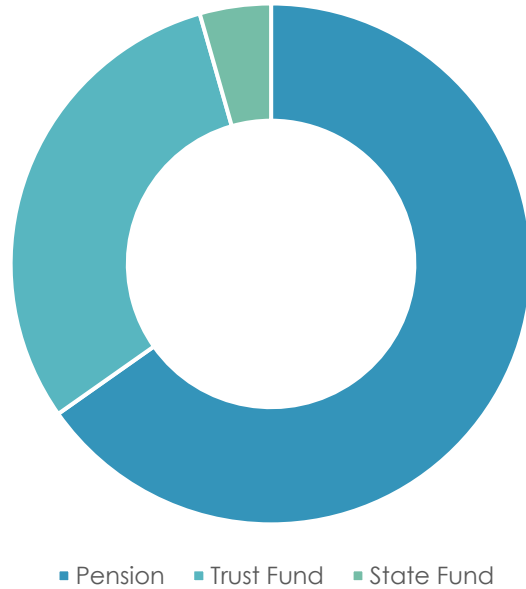


- High yield default rates have ticked up slightly, but remain at very low levels. While spread volatility has continued in 2023, spread levels are close to historic averages.

Non-Core Fixed Income New Commitments FYTD

- Zazove Associates - \$50M

Real Estate Ownership Breakdown



Performance	1 Year	1 Year Benchmark	5 Year	5 Year Benchmark	10 Year	10 Year Benchmark
Pension	6.50%	6.55%	8.41%	6.47%	9.70%	7.30%
State Fund	7.69%	6.55%	7.14%	7.72%	7.93%	9.11%
Trust Fund	9.69%	6.55%	7.46%	7.72%	8.41%	9.11%

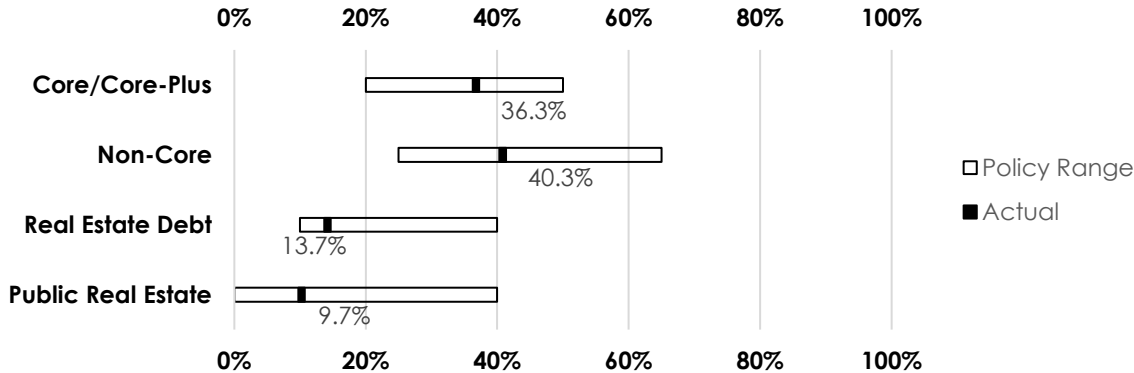
- Broad based market uncertainty, transaction volume down, tight credit conditions
- Fundamentals easing, rising cap rates
- Expect valuation write downs and declining performance within the portfolio

* Dollar values are in \$1,000,000

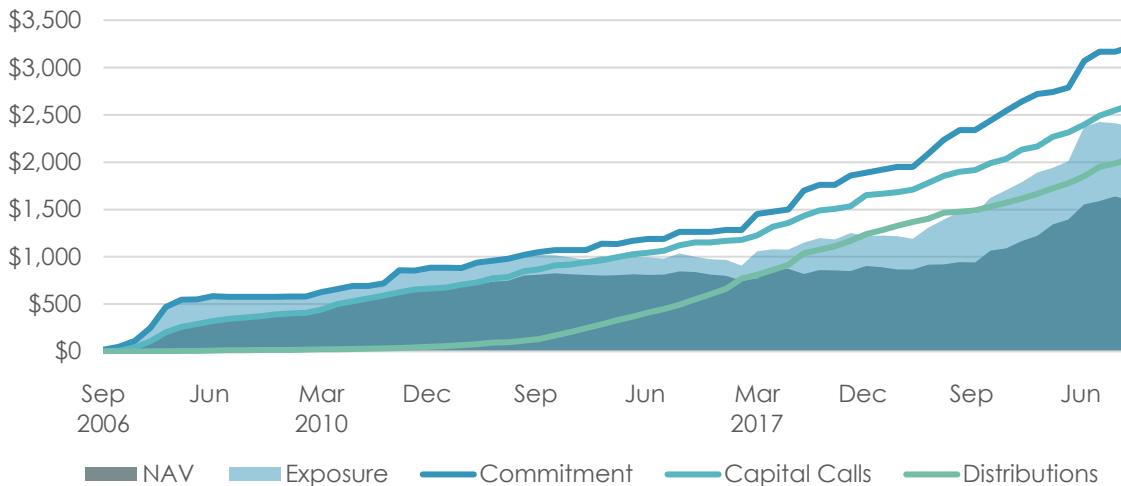
March 31, 2023

Real Estate Characteristics

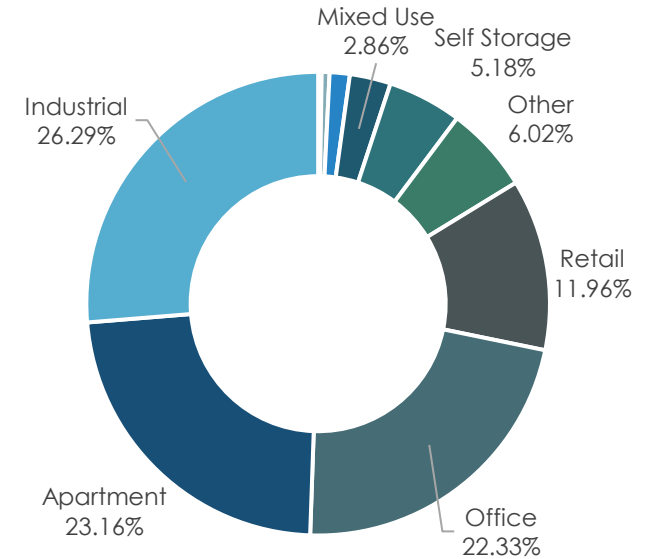
Real Estate Asset Allocation



Private Real Estate Over Time



Property Type



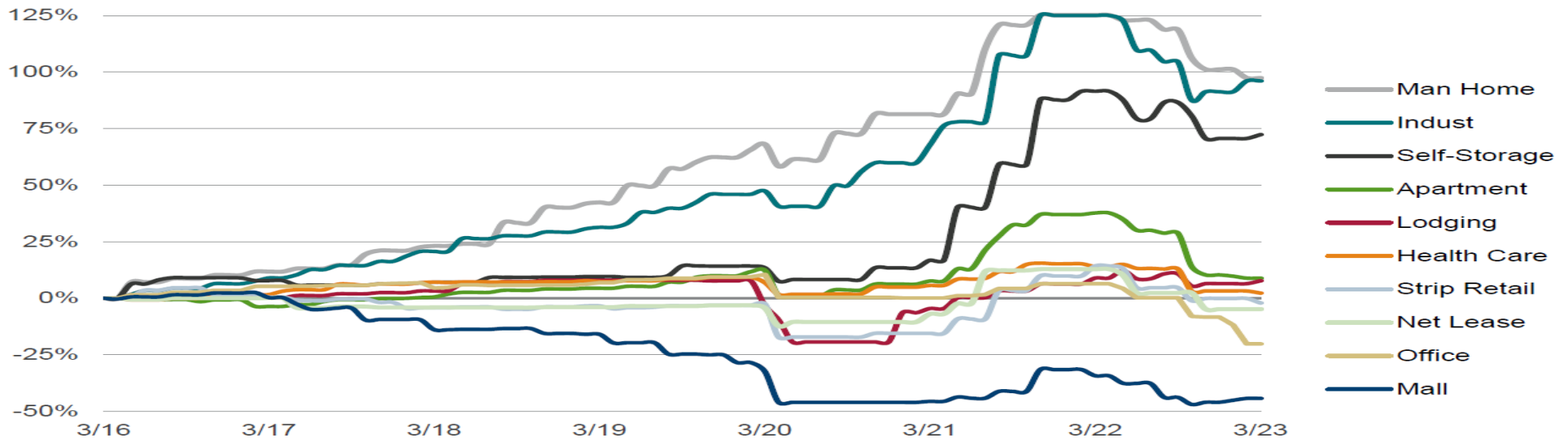
* Dollar values are in \$1,000,000

Real Estate Valuation

Green Street CPPI®: Sector-Level Indexes

	Index Value	Change in Commercial Property Values		
		Past Month	Past 12 Mos	Recent Peak
All Property	131.4	-0.2%	-15%	-15%
Core Sector	130.5	-0.2%	-18%	-18%
Apartment	150.7	0.0%	-21%	-21%
Industrial	221.2	0.0%	-13%	-13%
Mall	79.5	0.0%	-15%	-19%
Office	85.2	0.0%	-25%	-25%
Strip Retail	112.9	-2.0%	-14%	-14%
Health Care	133.6	-0.9%	-10%	-11%
Lodging	108.9	1.2%	-1%	-4%
Manufactured Home Park	283.8	0.0%	-12%	-12%
Net Lease	97.6	0.0%	-16%	-16%
Self-Storage	281.6	1.0%	-10%	-10%

Cumulative Change in CPPI®: Past Seven Years

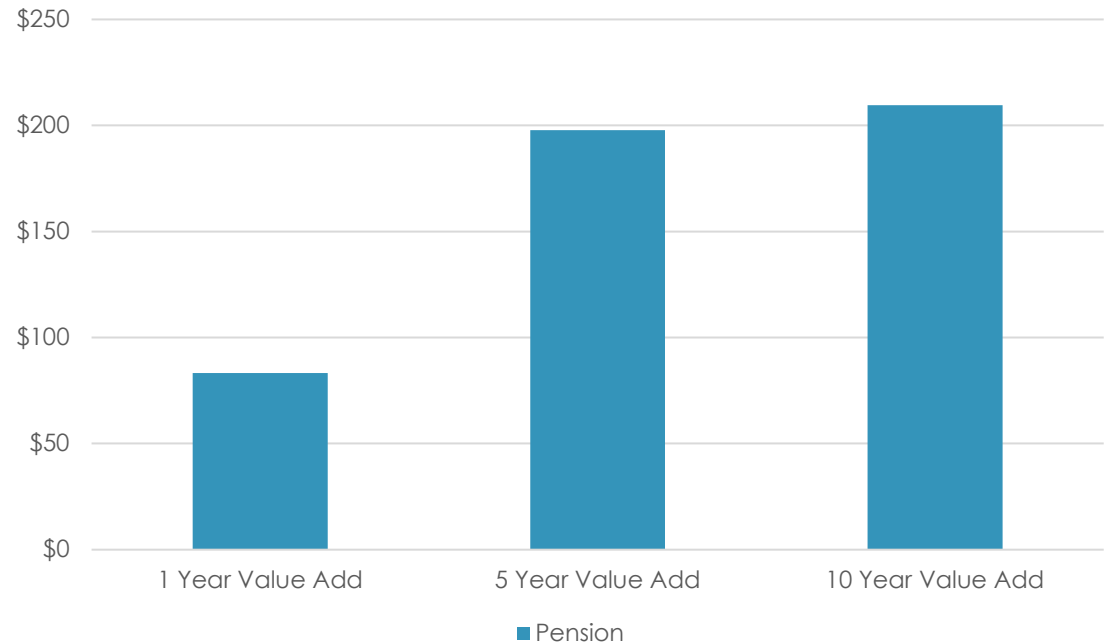
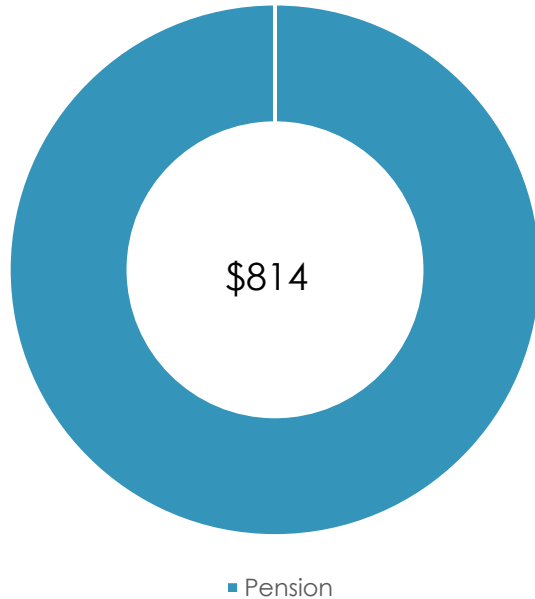


- Values continue to adjust downward in the face of increasing interest rates.

Real Estate New Commitments FYTD

- Marcus Capital Partners Fund IV, LP - \$50M (CAPP)
- AEW Cold Storage Properties Fund, LP - \$80M (CAPP) / \$50M (TFIP)
- EverWest Silver Bow Holdings, LLC - \$100M (CAPP) / \$50M (TFIP)
- Sweet Grass-Equus, LP - \$100M (CAPP) / \$50M (TFIP)
- Bell Value-Add Fund VIII, LP - \$50M (CAPP)
- **DRA Growth & Income Fund XI, LP - \$50M (CAPP)**
- **Stockbridge Value Add Fund V, LP - \$50M (CAPP)**

Real Assets Ownership Breakdown



Performance	1 Year	1 Year Benchmark	5 Year	5 Year Benchmark	10 Year	10 Year Benchmark
Pension	12.06%	-3.62%	5.24%	0.97%	NA	NA

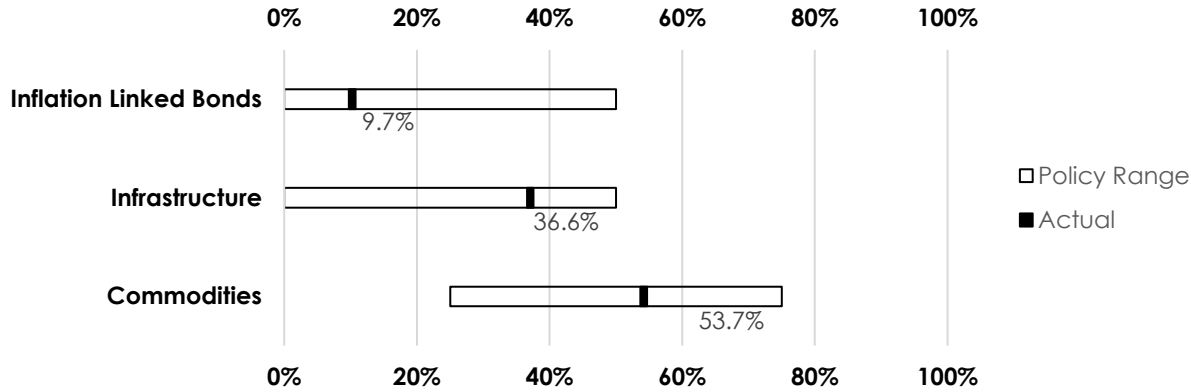
- Timber experienced strong returns over the past year
- Oil rig counts down as firms have trimmed activity in response to lower prices
- Rail car demand has continued to remain strong, exceeding supply, lease rates rising

* Dollar values are in \$1,000,000

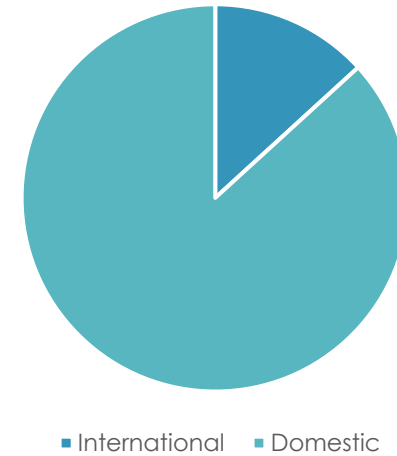
March 31, 2023

Real Assets Characteristics

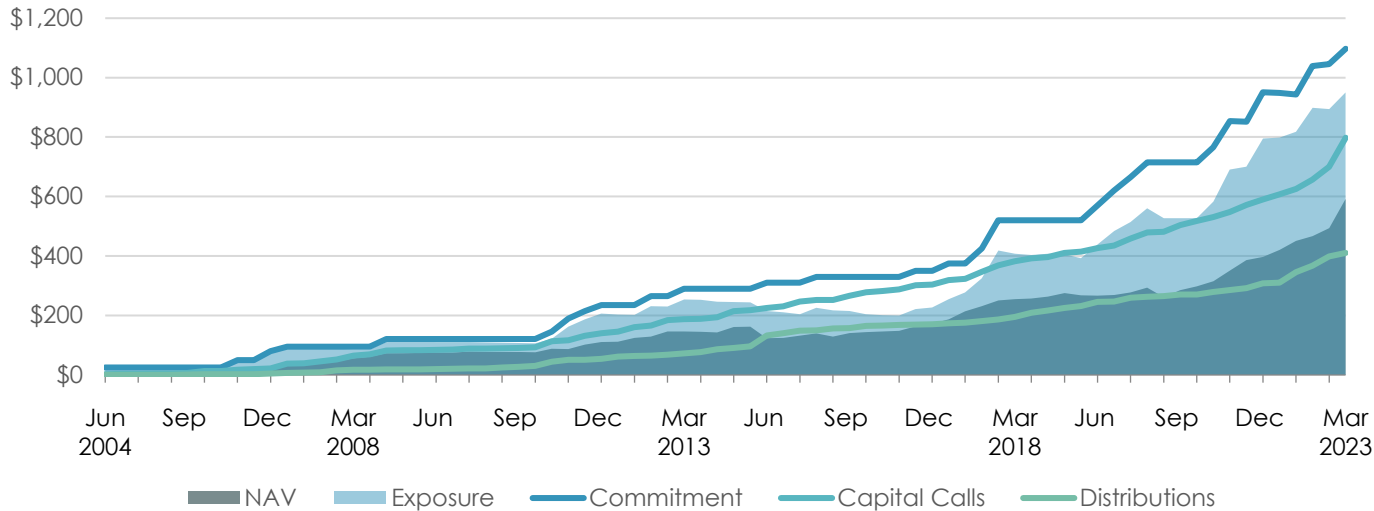
Real Assets Asset Allocation



Domestic vs. International



Private Real Assets Over Time



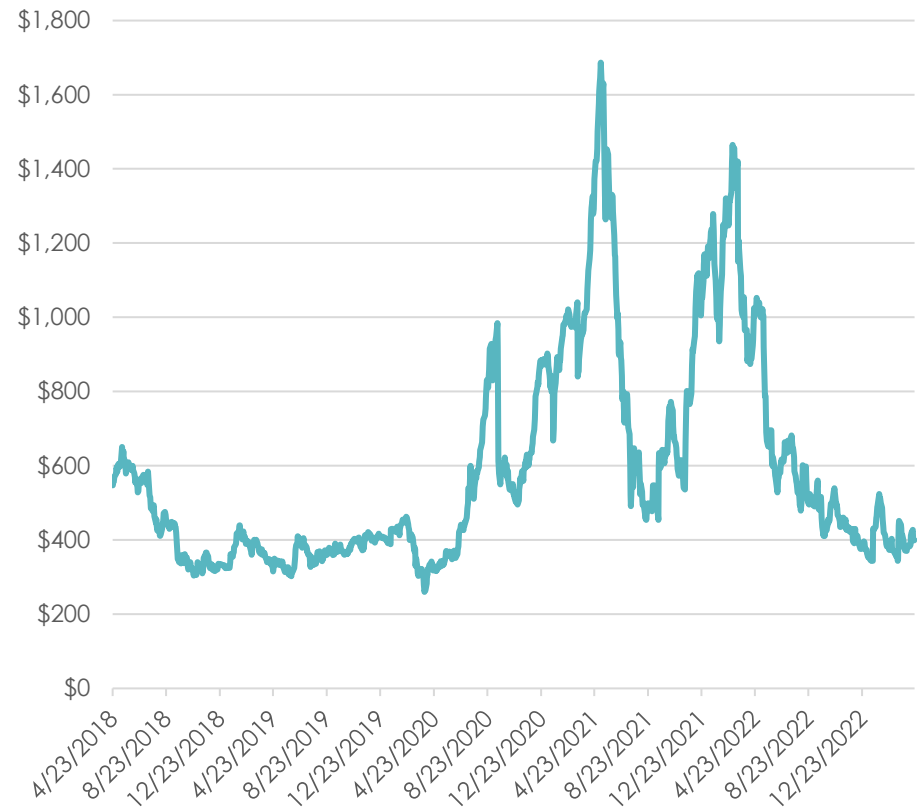
* Dollar values are in \$1,000,000

Real Assets Valuation

Crude Oil (WTI) – Price per barrel
(April 23, 2018 to April 23, 2023)



Lumber – Price per 1000 board feet
(April 23, 2018 to April 23, 2023)



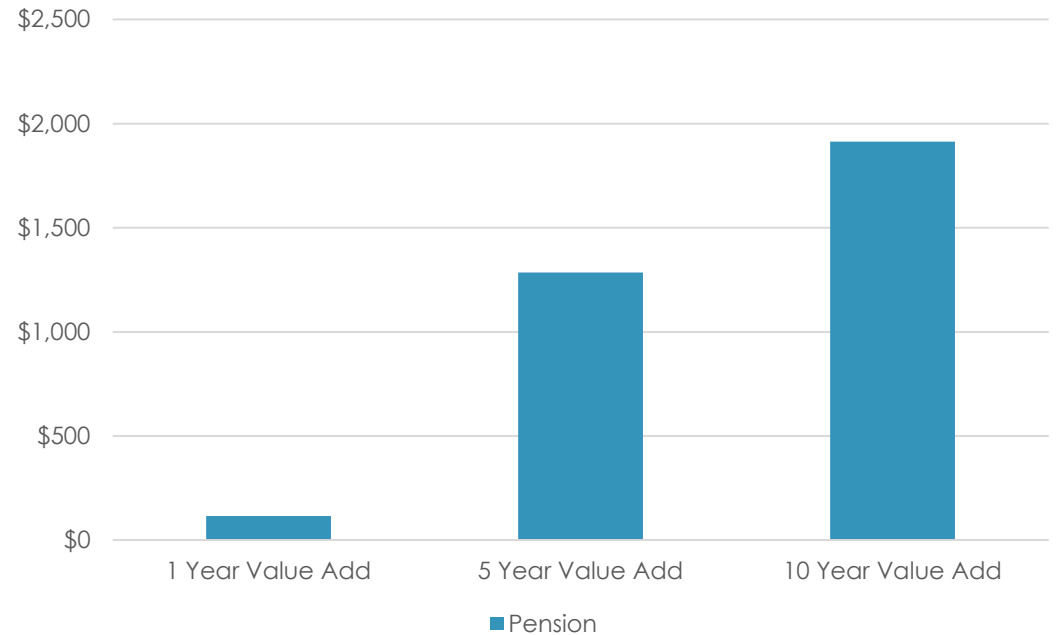
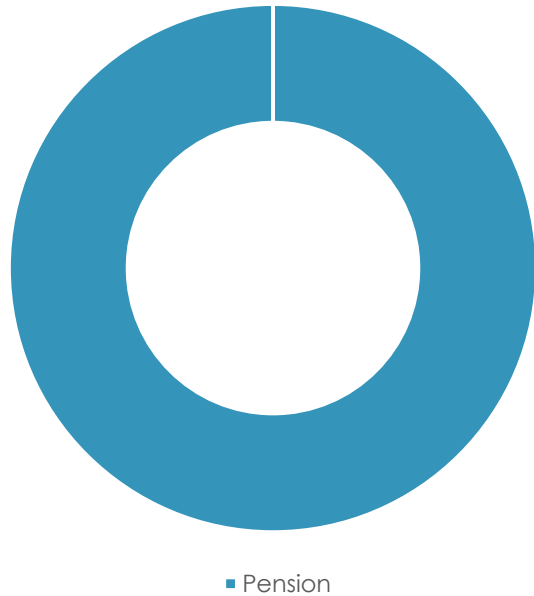
- Oil remains volatile with economic uncertainty, OPEC+ supply cuts, Russian sanctions, and China's reopening.
- Lumber prices remain at pre-pandemic levels as demand falls. Housing starts below historical levels.

Real Assets

New Commitments FYTD

- **CBRE Musselshell Infrastructure Investments, LP - \$100M (CAPP) / \$50M (TFIP)**
- **Kimmeridge Fund VI, LP - \$50M (CAPP)**

Private Investments Ownership Breakdown



Performance	1 Year	1 Year Benchmark	5 Year	5 Year Benchmark	10 Year	10 Year Benchmark
Pension	5.31%	-6.18%	15.15%	7.37%	13.62%	12.39%

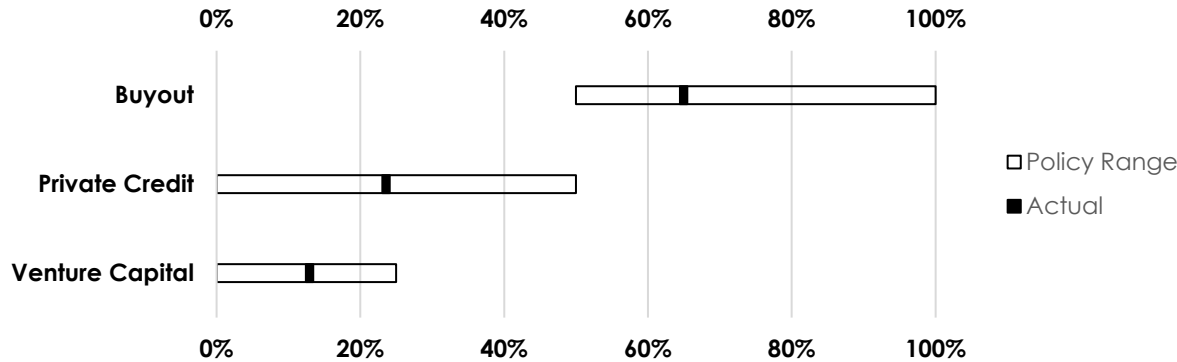
- Performance is strong in absolute and relative terms, and continues to add value to the portfolio.
- We continue to expect some modest markdowns across the portfolio, primarily driven by Venture Capital with year-end audited valuations forthcoming. However, the overall portfolio is holding up well.

* Dollar values are in \$1,000,000

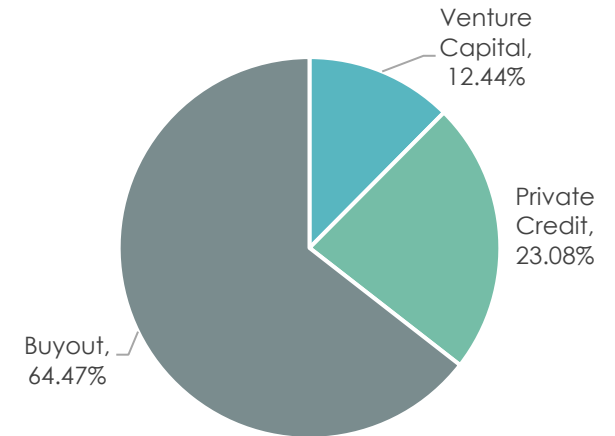
March 31, 2023

Private Investments Characteristics

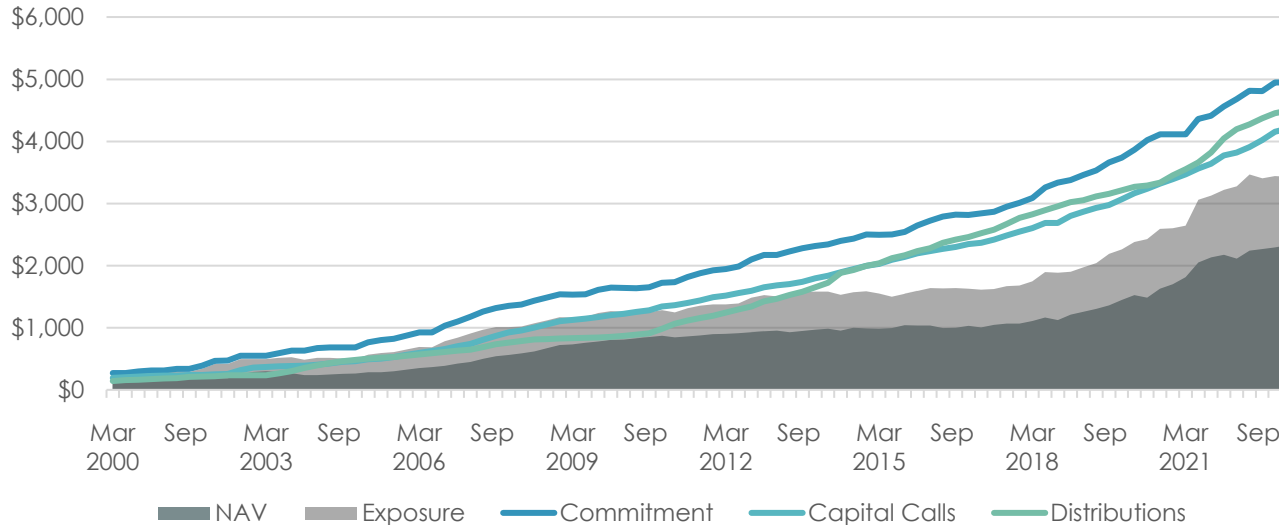
Real Assets Asset Allocation



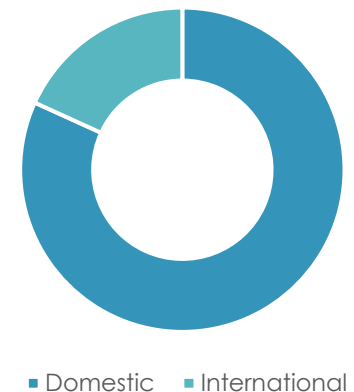
Strategy



Private Investments Over Time Jan 2000 – March 2023

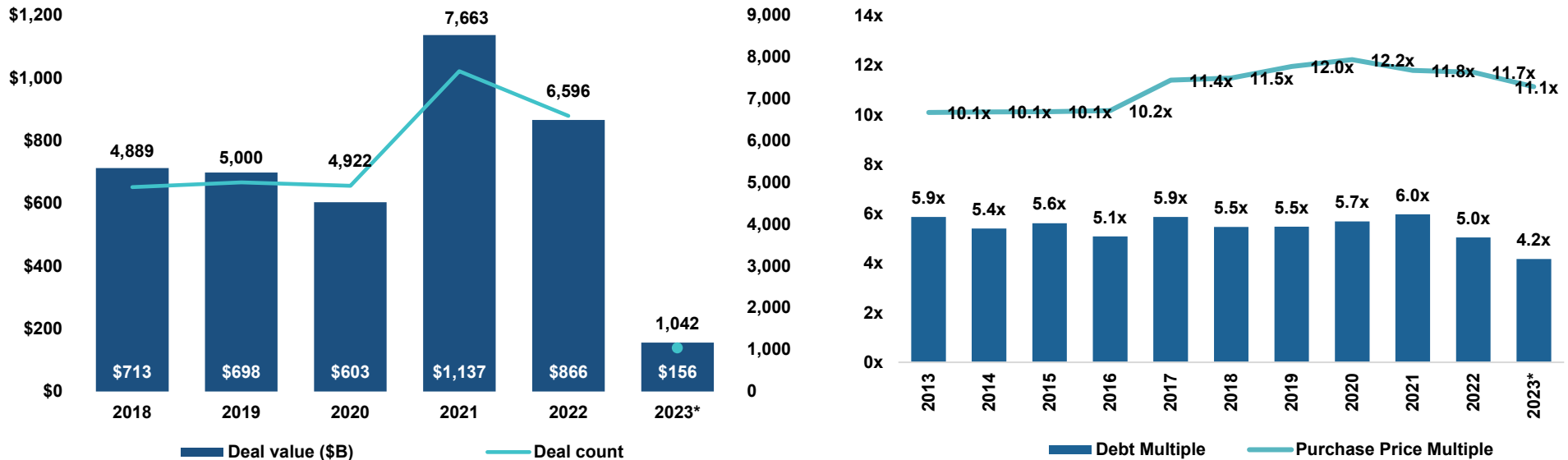


Domestic vs. International



* Dollar values are in \$1,000,000
March 31, 2023

Private Investments Valuation



- After showing some signs of stabilization in Q4 2022, US buyout dealmaking delivered a mixed verdict to start off the new year. With first quarter deal count slightly below the pre-COVID-19 averages of roughly 1,126 deals and \$162 billion in deal value, the trend is still flat to down.
- US and European Buyout median valuations remain at elevated levels compared to longer-term historical averages, but PE managers have had to adjust to make deals happen.
- Debt usage has come down below the long term average, primarily driven by a higher cost of capital for leveraged buyout deals.

Source: PitchBook. *as of 3/31/2023

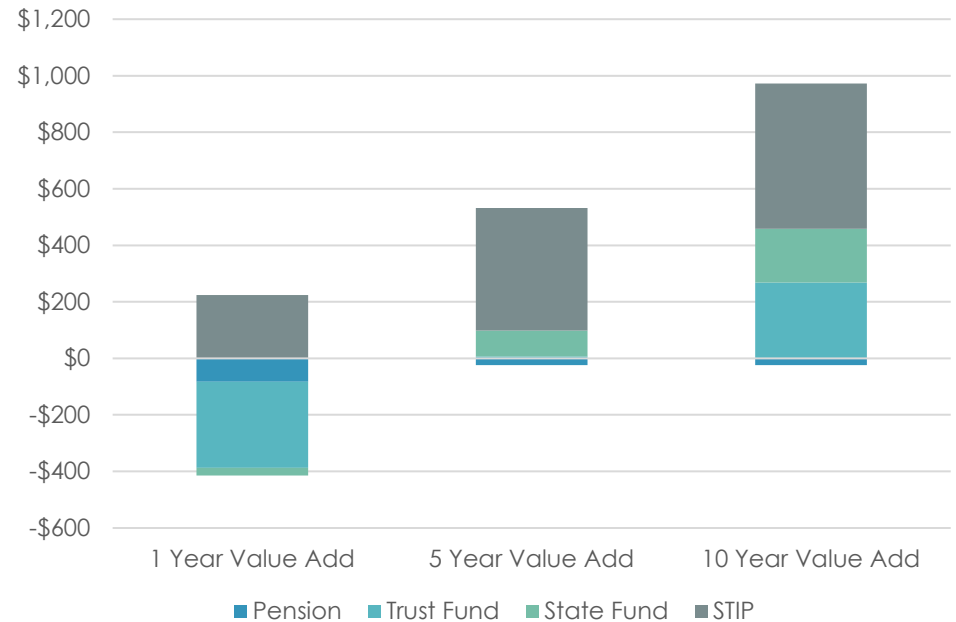
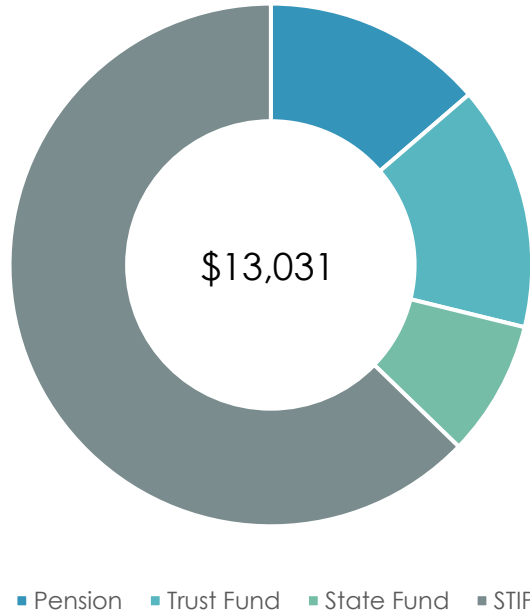
March 31, 2023

Private Investments

New Commitments FYTD

- Deerpath Capital Advantage VI - \$75M
- Audax Private Equity Fund VII - \$60M
- EQT Fund X, L.P. - \$60M
- **Axiom Asia Fund 7, L.P. - \$60M**
- **OCP Asia Fund V (US), L.P. - \$50M**
- **Foundation Capital Fund XI/Leadership Fund 4 - \$50M**
- **Accolade Partners IX/Venture I - \$50M**

Core Fixed Income Ownership Breakdown



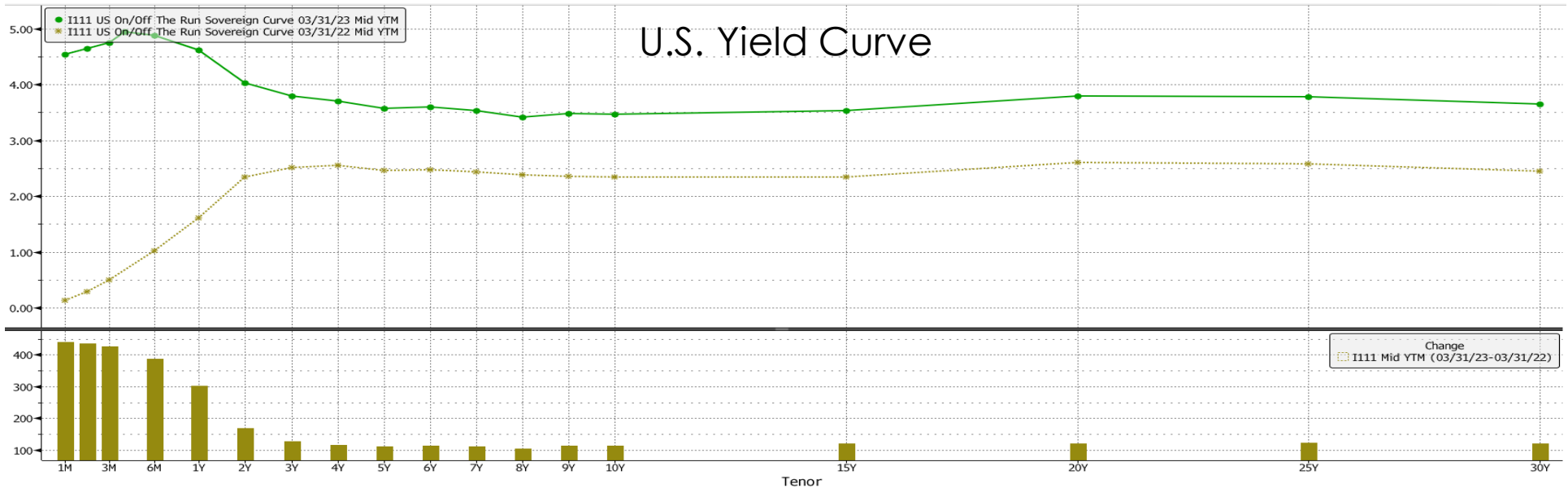
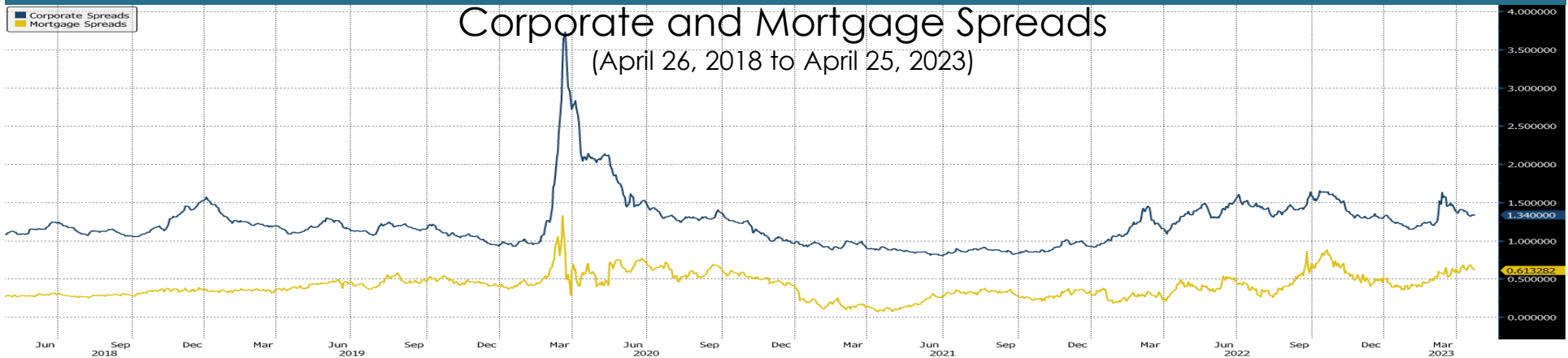
Performance	1 Year	1 Year Benchmark	5 Year	5 Year Benchmark	10 Year	10 Year Benchmark
Pension	-4.18%	-4.78%	1.02%	0.50%	1.49%	1.11%
Trust Fund	-4.20%	-4.78%	1.27%	0.91%	1.83%	1.36%
State Fund	-2.12%	-2.79%	1.47%	1.03%	1.56%	1.14%
STIP	2.73%	2.81%	1.49%	1.37%	1.00%	0.95%

- Negative returns on the year were driven by the dramatic increase in interest rates.
- The market prices in a modest decline in rates over the next year.
- Significant uncertainty exists on future rates of inflation and Federal Reserve actions.

* Dollar values are in \$1,000,000

March 31, 2023

Core Fixed Income Valuation



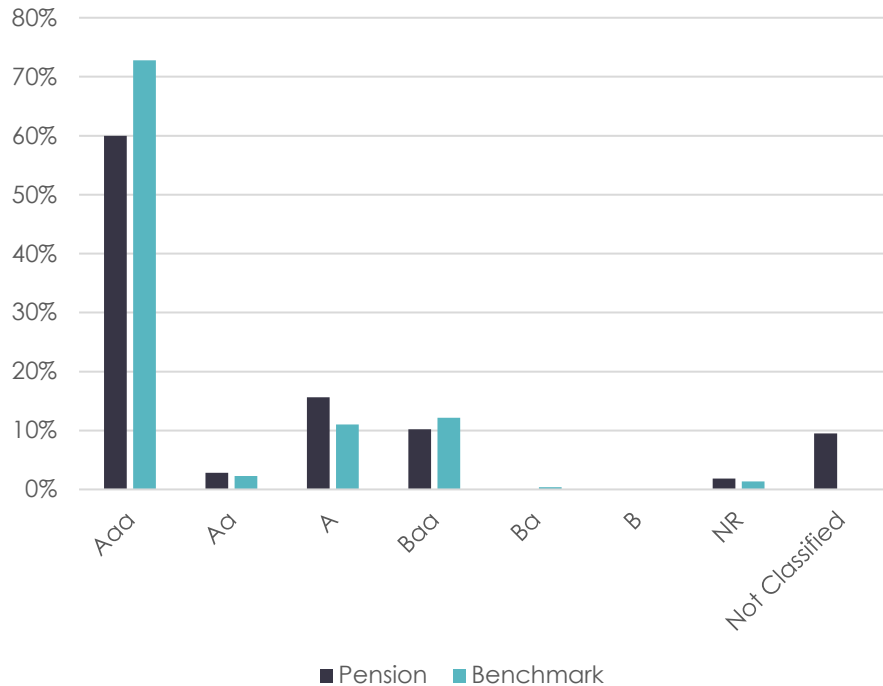
- Risk premiums have declined close to historical averages.
- The inversion of the yield curve is close to record levels.

Core Fixed Income Characteristics - Pension

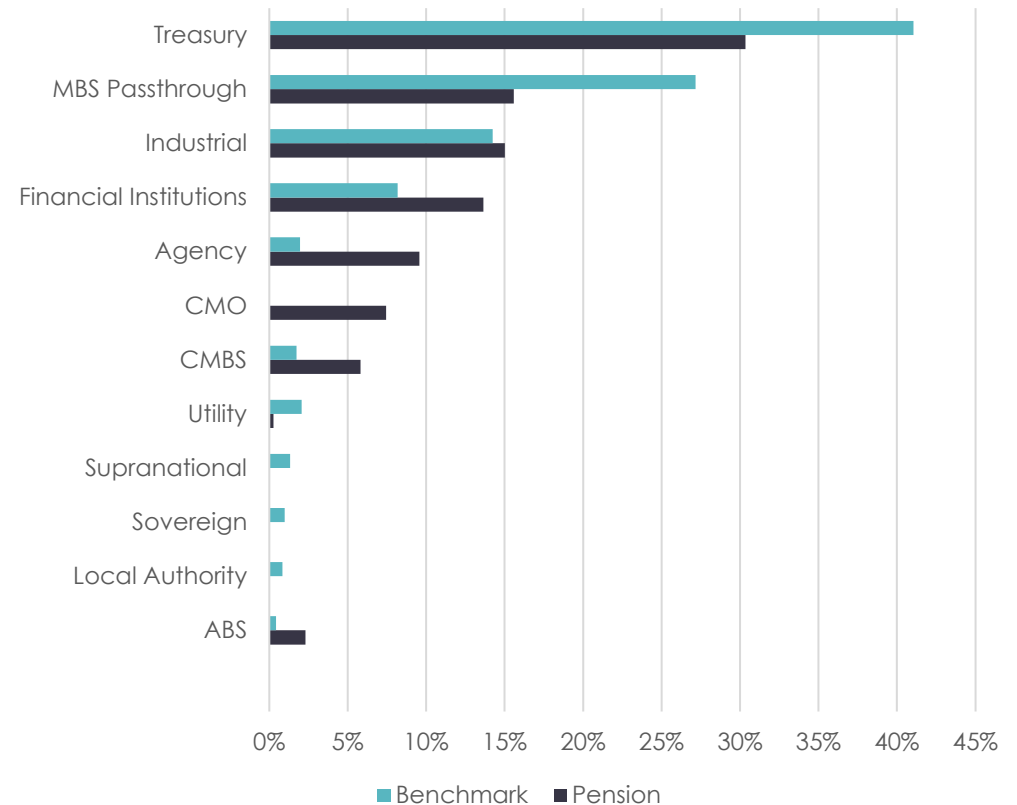
Core Fixed Income

	Portfolio	Index	Difference	% of Index
Duration	6.28	6.26	0.02	100.32%
Yield to Worst	4.58%	4.41%	0.17%	103.85%
CTD from Corporate	1.35	1.75	-0.40	77.14%

Credit Rating



Sector

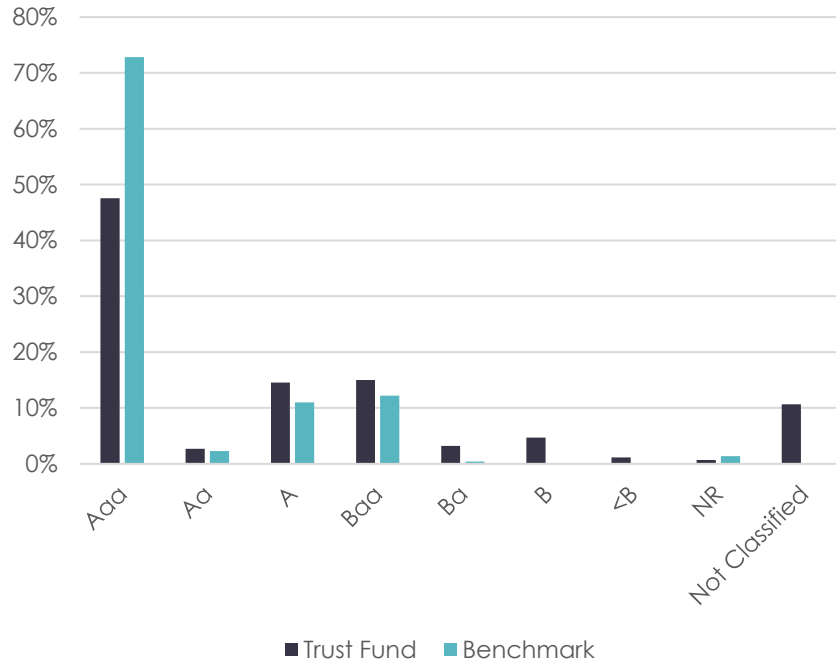


Core Fixed Income Characteristics – Trust Fund

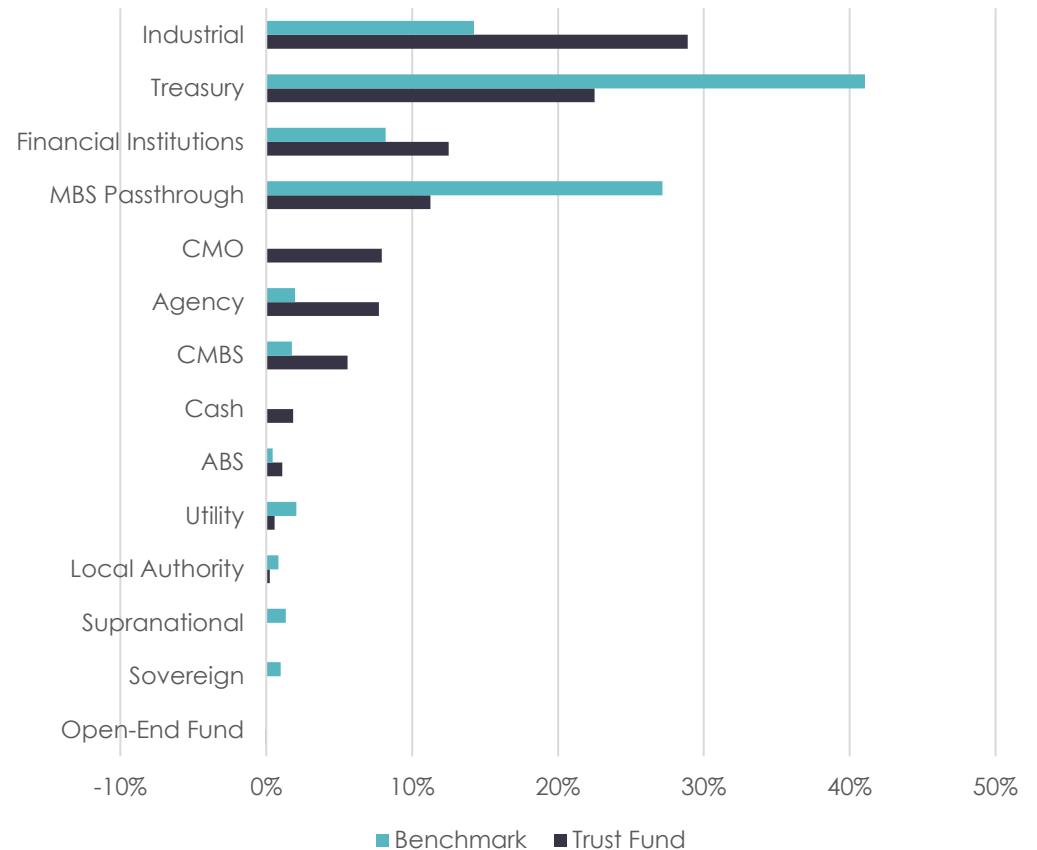
Trust Funds Investment Pool

	Portfolio	Index	Difference	% of Index
Duration	6.29	6.26	0.03	100.48%
Yield to Worst	4.72%	4.41%	0.31%	107.03%
CTD from Corporate	1.75	1.75	0.00	100.00%

Credit Rating

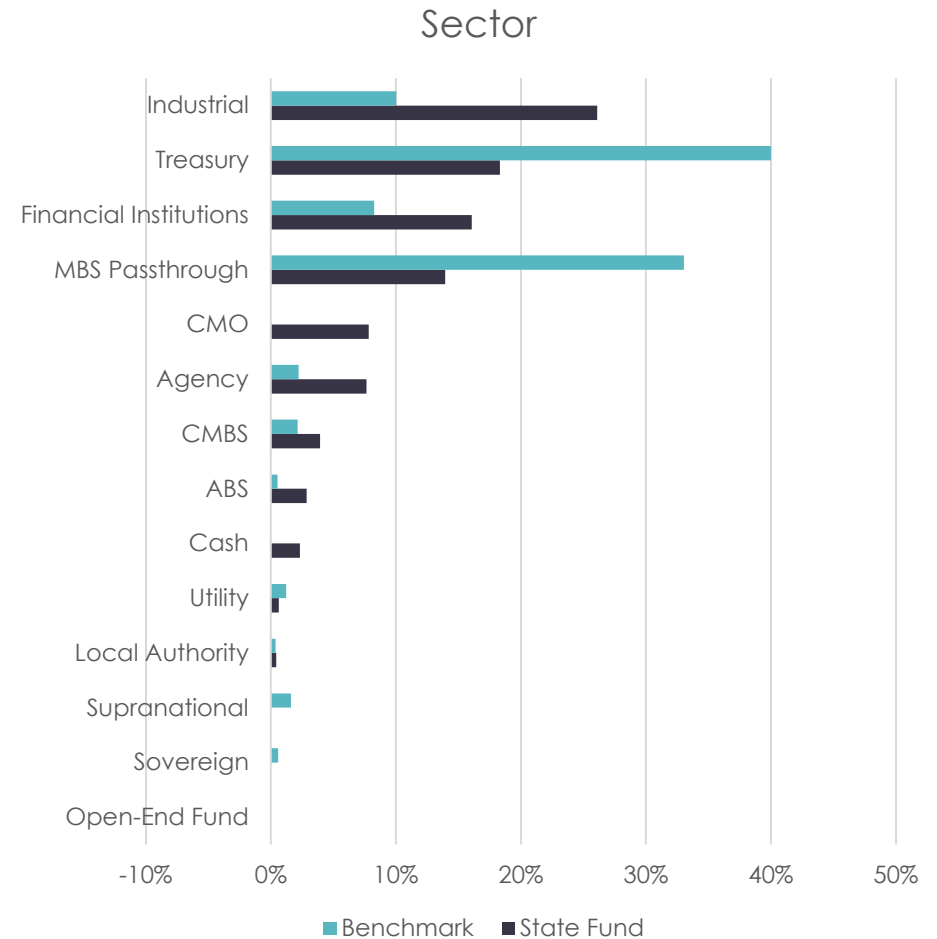
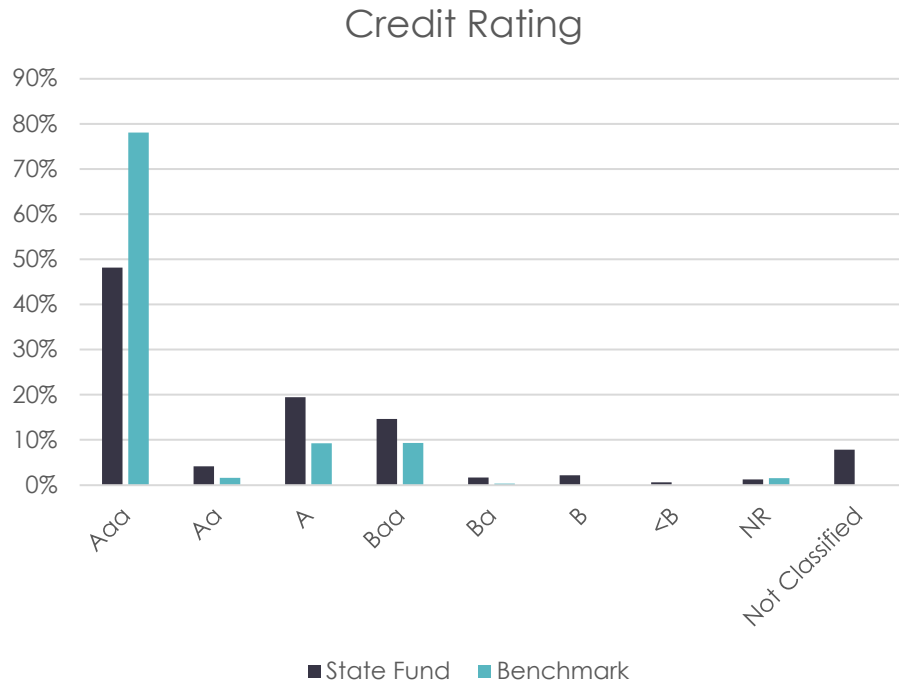


Sector



Core Fixed Income Characteristics – State Fund

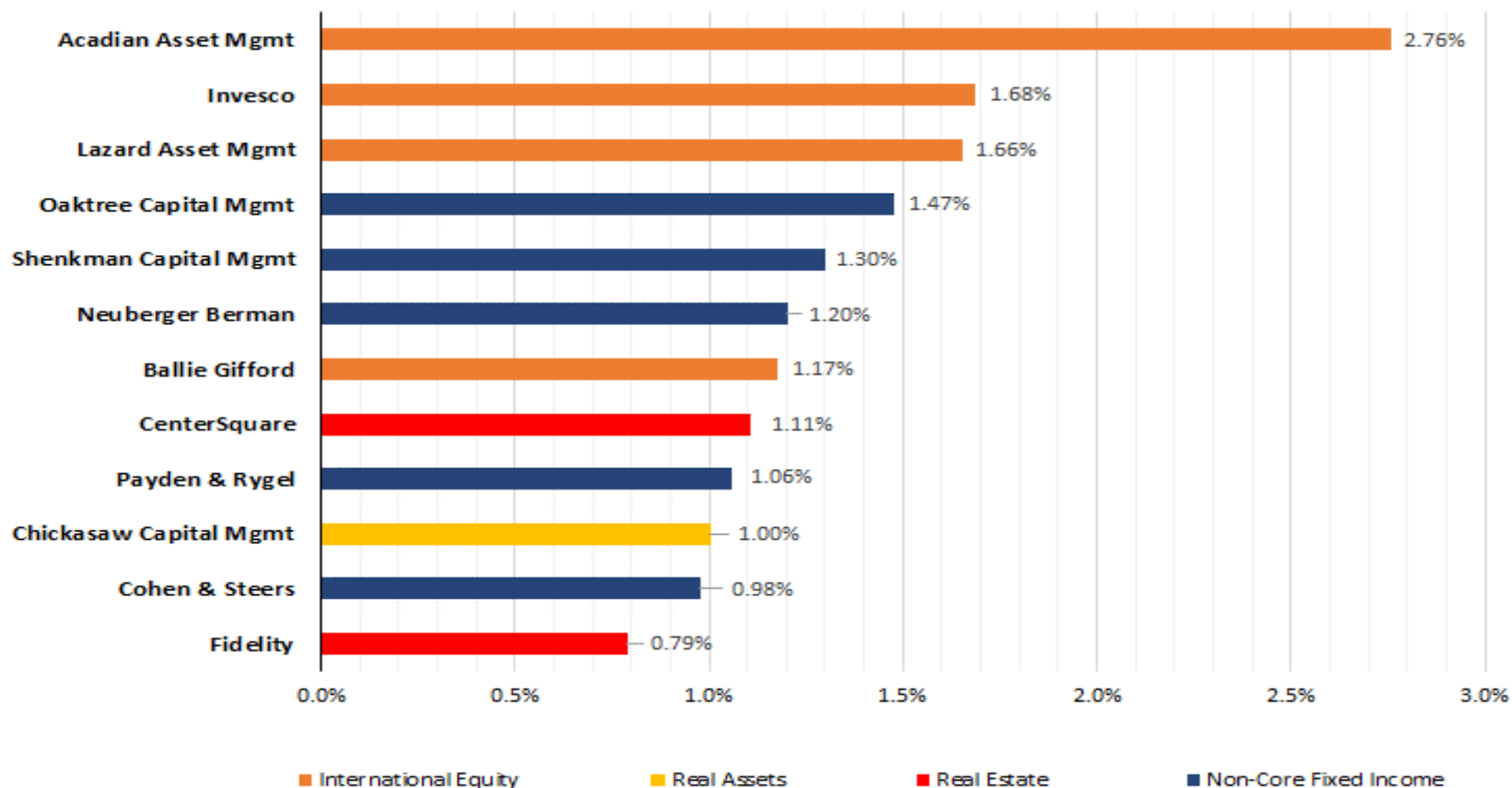
State Fund Investment Pool				
	Portfolio	Index	Difference	% of Index
Duration	4.56	4.49	0.07	101.56%
Yield to Worst	4.81%	4.37%	0.44%	110.07%
CTD from Corporate	1.45	0.79	0.66	183.54%



APPENDIX

Risk Management Pension Holdings

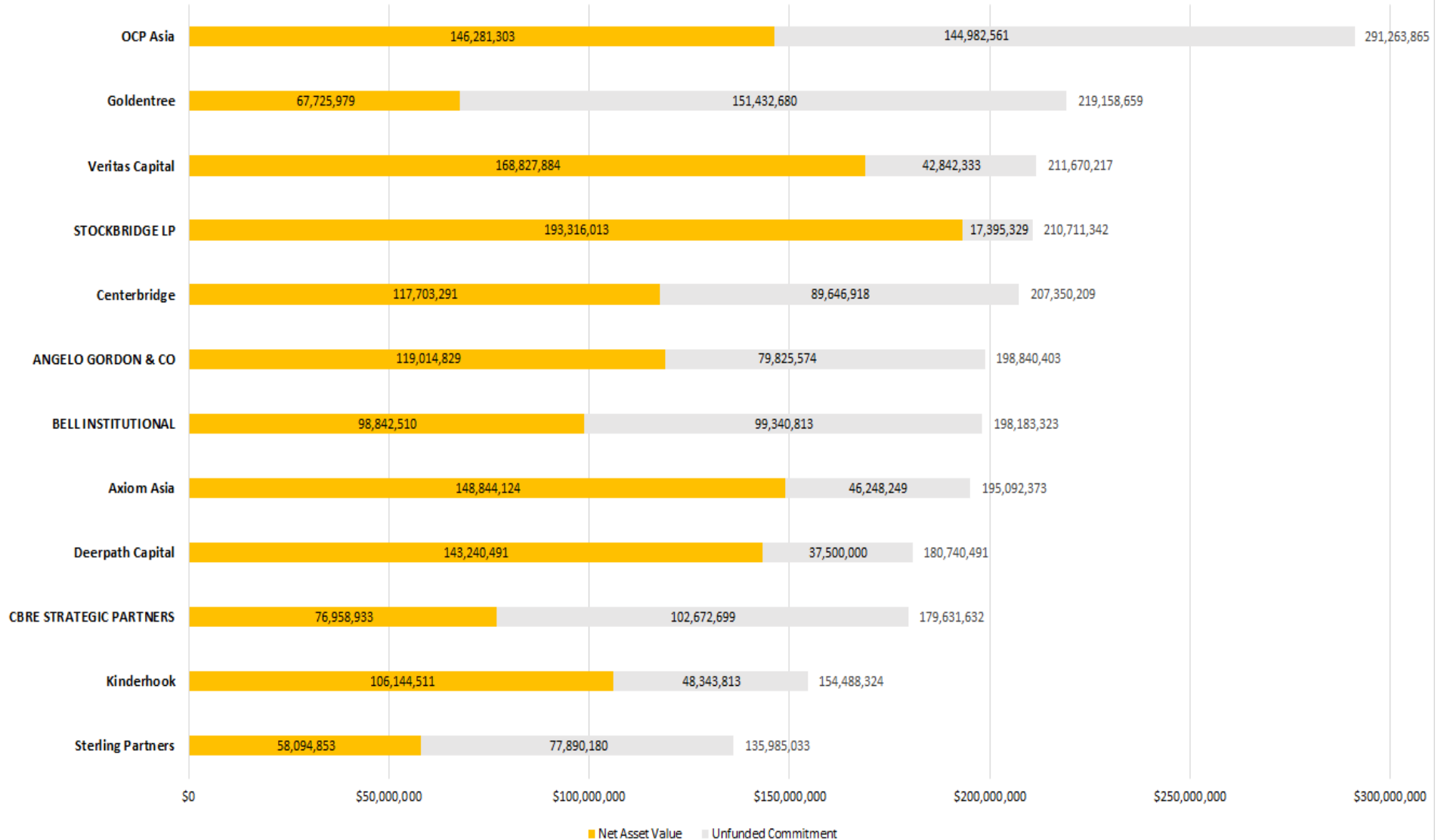
Top 12 Active Managers



*Montana Public Retirement Plans shall have no greater than 5% of its Net Asset Value managed by any one external manager using an active investment strategy

Risk Management Pension Holdings

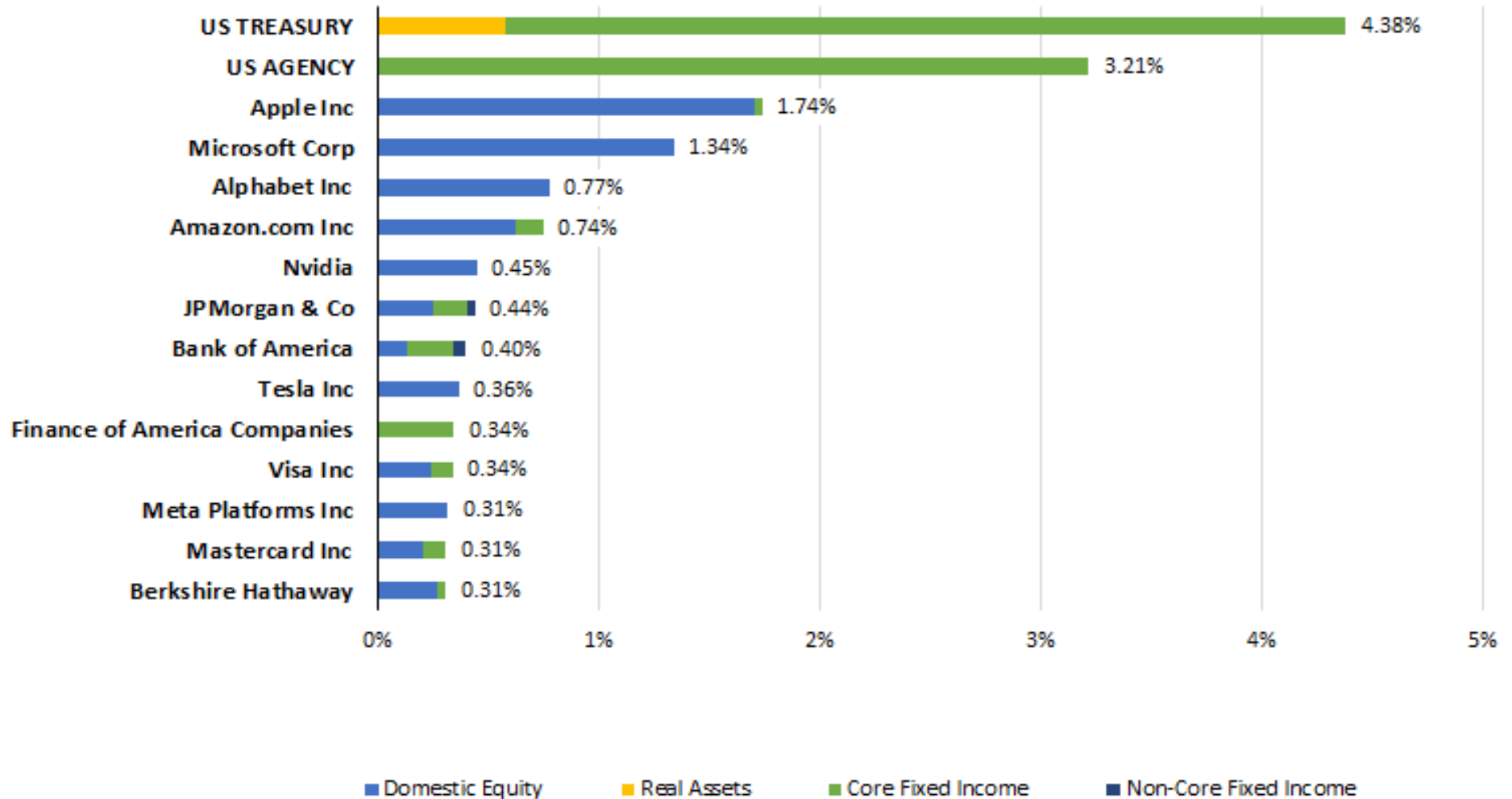
Top 12 Private Managers



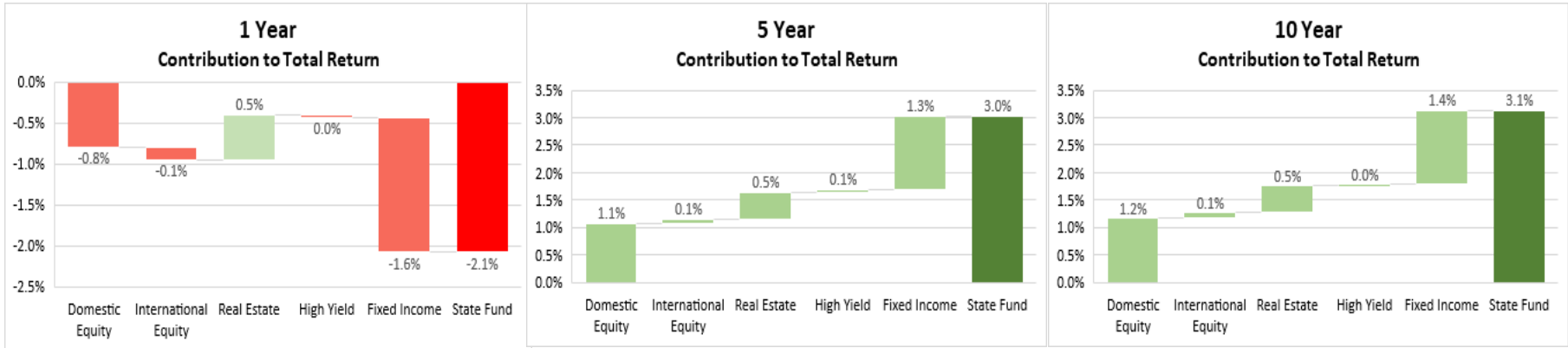
Risk Management

Pension Holdings

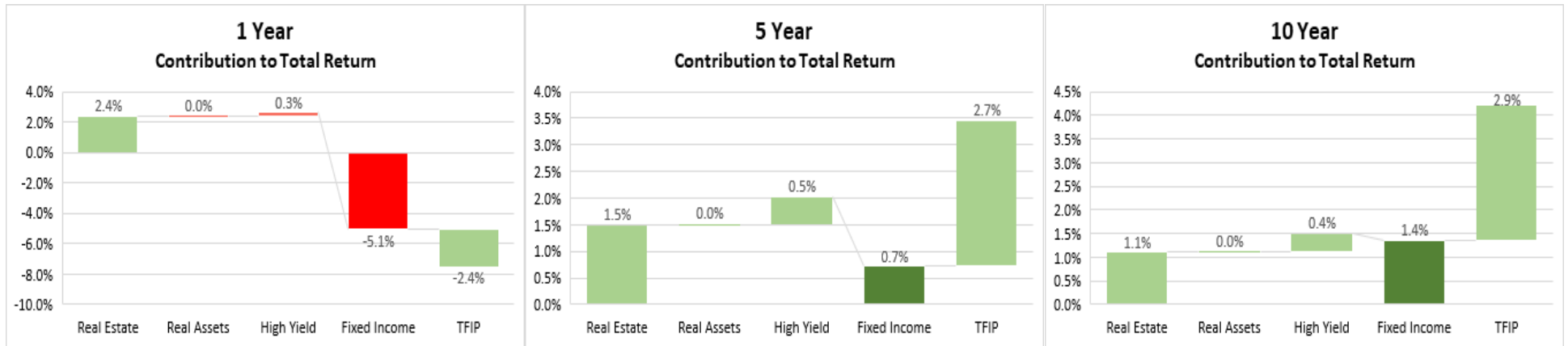
Top 15 Issuers



State Fund Performance



Trust Funds Investment Pool Performance



2023 Board of Investments Meetings

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

S	M	T	W	T	F	S
				1	2	3
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

[Board Materials Due](#)
[Board Packet Mailing](#)
[Board Meeting Dates](#)

BOI WORK AND EDUCATION PLAN

2022

2023

February 16-17

Education:

Outreach Efforts for the Board - In-State Loan and INTERCAP Programs
Short Term Investment Pool

Reports:

Ethics Policy
Disaster Recovery and Emergency Preparedness
Quarterly Reports
In-State Loan Reports
INTERCAP Reports

Committee Meetings:

Audit: Financial Audit Report

April 20

Education:

Domestic Equity Asset Class Review
RVK Annual Capital Market Assumptions

Reports:

Benchmarks Used by the Board

May 25-26

Education:

MT Buildings (Board as Landlord/Tenant Holdings)
Investment Policy Statement Review
Real Estate Asset Class Review

Reports:

Budget Status FYTD
Quarterly Reports
In-State Loan Reports
INTERCAP Reports

Committee Meetings:

Audit: Accounting Staff Review
HR: Staffing Level Review
HR: Exempt Staff Compensation Review

August 3-4

Education:

Core Fixed Income Asset Class Review
Budget Proposal for FY24-25

Reports:

Proxy Voting
Budget Status Prior FY
Quarterly Reports
In-State Loan Reports
INTERCAP Reports

Committee Meetings:

Audit: SOC I, Type 2 Report

October 26-27

Education:

Separate Accounts Investment Review
First Reading - Asset Allocation Range Recommendation

Reports:

CEM, Inc Cost Reporting Analysis

Committee Meetings:

HR: Exempt Staff Performance Review

December 6-7

Education:

2023 Legislative Session
Policy 217 - Reauthorization of Investment Vendors
Adoption - Asset Allocation Range Approval

Reports:

Quarterly Reports
In-State Loan Reports
INTERCAP Reports

Committee Meetings:

Audit: Annual Report and Financial Statements

February 22-23

Education:

Cash Management of State Monies
Custodial Banking Relationship and Continuity

Reports:

Ethics Policy
Disaster Recovery and Emergency Preparedness
Quarterly Reports
In-State Loan Reports
INTERCAP Reports

Committee Meetings:

Audit: Financial Compliance Audit Report

April 12

Education:

International Equities Asset Class Review
RVK Annual Capital Market Assumptions

Reports:

Benchmarks Used by the Board

May 24-25

Education:

State Government Customer Relationships
Investment Policy Statement Review
Real Assets Asset Class Review

Reports:

Budget Status FYTD
Quarterly Reports
In-State Loan Reports
INTERCAP Reports

Committee Meetings:

Audit: Accounting Staff Review
HR: Staffing Level Review
HR: Exempt Staff Performance and Compensation Review

August 23-24

Education:

Trust Funds Investment Review
Non-Core Fixed Income Asset Class Review

Reports:

Budget Status Prior FY
Quarterly Reports
In-State Loan Reports
INTERCAP Reports

Committee Meetings:

Audit: SOC I, Type 2 Report

October 11

Education:

Private Investments Asset Class Review
First Reading - Asset Allocation Range Recommendation

Reports:

Securities Lending

Committee Meetings:

HR: Exempt Staff Performance Review

December 13-14

Education:

MPERA and TRS Relationship
Policy 217 - Reauthorization of Investment Vendors
Adoption - Asset Allocation Range Approval

Reports:

Quarterly Reports
In-State Loan Reports
INTERCAP Reports

Committee Meetings:

Audit: Annual Report and Financial Statements

BOI TERMINOLOGY

ACTIVE MANAGEMENT (typically with respect to stocks)

Investment method which involves hiring a manager to research securities and actively make investment decisions to buy and sell securities in an effort to outperform an assigned index, rather than purchasing a portfolio of securities that would simply replicate the index holdings (*'passive'* investing).

ACTUARIAL ASSUMED RATE (pension concept)

The investment return rate used by actuaries that enables them to project the investment growth of retirement system assets into the future (typically perpetual).

ACTUARIAL FUNDING STATUS (pension concept)

A measurement made by actuaries to measure a pension system's financial soundness (ratio of actuarial liabilities to the actuarial value of the assets available to pay the liabilities).

ALPHA (investment term)

Return on an investment portfolio in excess of the market return or benchmark return; generally used in the context of *'active'* management (as passive management, by definition, does not seek excess returns, or *'alpha'*).

ALTERNATIVE INVESTMENTS

A wide range of investments, other than traditional assets such as publicly traded stocks and bonds. The most common nontraditional or alternative investments are private equity, real estate, commodities, and hedge funds.

ARBITRAGE (bond program)

A structural or systematic difference between investment types which may allow profiting from the *'difference,'* i.e., arbitrage. The most common context for the use of *'arbitrage'* at the BOI is the federal law that prevents *'arbitrage,'* i.e., the profiting of investing tax-exempt securities (e.g., INTERCAP) into taxable yields investments (such as U.S. Treasuries).

ASSET ALLOCATION AND ASSET ALLOCATION RANGE (general investment principle)

The Board's invested assets are divided or allocated into various asset classes such as stocks and bonds, each with its own characteristics, with the objective of attaining an optimal mix of risk and return. The total expected return of a portfolio is primarily determined by the mix or allocation to its underlying assets classes. Given the importance of *'asset allocation,'* the BOI Board sets the asset allocation *'range'* for each broad investment type or asset class.

ASSET-BACKED SECURITY

Bonds or notes backed by loan paper or accounts receivable originated by banks, credit card companies, or other providers of credit. Not mortgages.

AVERAGE LIFE (fixed income, particularly bonds)

The average time period the debt is expected to be outstanding. This is typically the maturity date for a traditional bond structure; however, it will be shorter for bonds having a sinking fund or amortizing payment structure.

BANKER'S ACCEPTANCE

A short-term credit investment which is created by a non-financial firm and whose payment is guaranteed by a bank. Often used in importing and exporting, and as a discount money market fund investment.

BARCLAY'S AGGREGATE INDEX (fixed income)

A composite of outstanding bond issues, including corporate, structured, and government bonds whose overall investment features such as return and investment type are tracked over many years. This is the most common benchmark used for comparing the performance of a portfolio that invests in U.S. investment grade fixed income securities. Formerly known as the Lehman Aggregate bond index.

BASIS POINTS (investment jargon)

A basis point is 1/100th of a percentage. Ten basis points is one tenth of a percent, typically written as 10 bps.

BENCHMARK (standard investment concept)

The concept of employing a particular independent or market investment return as a measurement to judge an investment portfolio's return; typically chosen investment benchmarks have the following attributes: they are investible, quantifiable, chosen in advance, easily understandable, and have a long history; common examples are the S & P 500 Index and the Barclay's Aggregate Index.

BETA (investment jargon)

A measure of the risk (or volatility) of a security or a portfolio in comparison to the market as a whole. If the stock or portfolio moves identically to that market, its beta value is 1; if its price volatility (or movement) is greater than that market's price volatility, it is said to have beta greater than 1.

CAP, AS IN LARGE 'CAP' (generally for stocks, e.g., public equities)

'Cap' is short for capitalization, as a reference to the market value of a publicly-traded company. The current stock price times the total shares outstanding of the company equals its market capitalization or market 'cap'; often used contextually such as 'large-cap,' 'mid-cap,' and 'small-cap' for different sized public companies.

CERTIFICATE OF DEPOSIT (CD):

A short-or medium-term, interest-bearing deposit obligation offered by banks and savings and loans. These may include "Yankee CDs" which are CDs issued by foreign banks or their U.S. affiliates in the U.S. which are denominated in U.S. dollars

CLAWBACK (private equity)

A clause in the agreement between the general partner and the limited partners of a private equity fund. The clawback gives limited partners the right to reclaim a portion of distributions to a general partner for profitable investments based on significant losses from later investments in a portfolio which ultimately resulted in the general partner receiving more distributions than it was legally entitled to.

COMMERCIAL PAPER

An unsecured obligation issued by a corporation or bank to finance its short-term credit needs, such as accounts receivable and inventory. Maturities typically range from two (2) to two hundred seventy (270) days. Commercial paper is available in a wide range of denominations, can be either discounted or interest-bearing, and usually a limited or nonexistent secondary market. Commercial paper is usually issued by companies with high credit ratings, meaning that the investment is almost always relatively low risk.

CORE (context varies for equity, fixed income, real estate)

In equity and fixed income, 'core' refers to investments that are generally always found in the portfolio and normally expect to hold for a very long time e.g. 'core' holdings of the largest U.S. companies, or U.S. treasuries; in real estate, 'core' generally refers to the best quality of real estate holdings such as prime commercial property in major metropolitan cities that have low leverage and low levels of vacancy.

CORPORATE NOTE

A type of unsecured debt issued by a corporation that may be longer-term than Commercial Paper, but shorter-term than a typical Corporate Bond.

CORRELATION (common statistical concept)

A measure of how two or more investment values or two asset classes move relative to each other during the same time period. A central concept in portfolio construction is to seek investments whose values do not move *together* at the same time, i.e., are uncorrelated. A correlation of 1 means that two or more investments 'move' precisely together.

CREDIT ENHANCEMENT (bond program)

At BOI, the term generally refers to credit support or a bond or loan guarantee. For example, the Board's INTERCAP bonds are 'enhanced' by the BOI's performance guarantee bringing down the yearly interest rate.

CUSTOM BENCHMARK (or sometimes custom index)

A way to measure investment performance using a tailor-made measurement versus a generic industry-standard benchmark. At the BOI, total pension performance is measured against the Board's 'custom index' or 'custom benchmark' which is a weighted blend of all the underlying asset class benchmarks used to measure the asset class returns.

DERIVATIVES (investment jargon)

Investment securities whose performance itself depends (or is 'derived') from another underlying investment return. Examples include stock options, puts/calls, and forward currency contracts whose returns are based on the underlying stock or currency.

DEVELOPED MARKETS (equity)

Countries having a long period of stable industrialization; or are the most economically developed.

DISCOUNT (fixed income, generally)

Used most often with respect to bonds, the price paid that is less than face (or 'par') value. A \$1 million face-value of a bond purchased for less than a million is bought at a 'discount.' Described as the difference between a bond's current market price and its face or redemption value.

DIVERSIFICATION (standard investment concept)

The concept of spreading risk by putting assets in several investment categories, each having different attributes with respect to type, expected return, risk, and correlation, to best protect against the risk of loss.

DURATION (bonds)

Almost exclusively used when discussing fixed income bonds, a measurement of how sensitive a bond's change in price is to a change in general market interest rates, expressed in years (specifically calculated as a weighted average term to maturity of the bond's cash flows). The greater the duration of a bond, the greater the volatility of price for changes in market interest rates.

EFFICIENCY (usually when discussing various stock markets)

Used to describe markets where it is very difficult to achieve return in excess of that of the overall market from individual stock selection. When information is widely available on a company and its securities are traded regularly the market is considered 'efficient.'

EMERGING MARKETS (most often for public equities)

Certain international securities markets that are typically small, new, have low turnover, and are located in countries where below-average income prevails and is developing in response to the spread of capitalism.

ENHANCED (pertaining to stocks)

Generally linked with 'index' as in enhanced index, an indexed investment management style that has been modified to include the portfolio manager's idea of how to outperform the index by omitting some stocks in the index and overweighting others in a limited manner designed to enhance returns but at minimal risk.

EXCESS RETURNS (standard investment concept)

Returns are 'excess' if they are more than the market or more than the benchmark they are measured against.

EXEMPT STAFF VS. CLASSIFIED STAFF (specific to Montana state government)

"Exempt" refers to the Board's eleven employees who, under state law, do not fall under the state's standard employment rules (the 'classified' staff).

FIDUCIARY (from the Latin verb, fidere, to trust)

The concept of trust and watchfulness; a fiduciary is charged with the responsibility of investing the money wisely for the beneficiary's benefit. Board members are the ultimate 'fiduciaries' for the Board's assets and are obligated to be a good agent.

FTE (state government jargon)

An acronym in state government: "full time equivalent" as in full time employee. The concept is a slot or position, not the actual individuals. The BOI is currently authorized for 32 FTE's.

FUND OF FUNDS (private equity)

A concept used in alternative investments referring to using an investment manager to invest in **other** managers or funds, as opposed to making direct investments in funds.

GAAP/GASB (accounting terminology)

GAAP...Generally Accepted Accounting Principles; Montana state law uses GAAP accounting principles unless specifically allowed otherwise. GASB...Government Accounting Standards Board, the board that sets GAAP standards for U.S. governments (FASB...Financial Accounting Standards Board, the entity for commercial and business accounting standards).

GENERAL OBLIGATION (municipal finance term)

Used to describe the promise that a government makes to bond holders, backed by taxing and further borrowing power, it is generally considered the highest level of commitment to bondholders. At the local government level, general obligation bonds typically require a vote of the residents.

GENERAL PARTNER VS. LIMITED PARTNER (private equity)

In private equity, the general partner is responsible for the operations of the partnership and makes the actual underlying investment decisions; the limited partner is the investor, and therefore has limited liability for investment decisions; the BOI is the 'limited' partner in its private equity fund investments (and real estate funds as well).

GROWTH (as to style public equities)

An investment style that more heavily invests in companies whose earnings are expected to grow at an above average rate to the market. A growth stock usually does not pay a dividend, as the company would prefer to reinvest retained earnings in capital projects to grow the company (vs. 'value,' which considers buying established companies they feel are trading at bargain prices to the fundamental analysis of the company's financial statements and internal competitive factors).

INDENTURE (bond and loan programs)

The central document describing the contract between investors and the borrower or user of the proceeds. The Board's INTERCAP program is structured around a bond indenture.

HEDGE FUND (as defined by Investopedia)

An aggressively managed portfolio of investments that uses advanced investment strategies such as *leverage*, long, short and *derivative* positions in both domestic and international markets with the goal of generating high returns (either in an absolute sense or over a specified market *benchmark*).

HURDLE RATE (private equity)

a minimum return per annum that must be generated for limited partners of a private equity fund before the general partner can begin receiving a percentage of profits from investments.

INDEX (investment concept)

Typically, a single measure of a broadly-based group of investments that can be used to judge or be compared to the return performance of an individual investment or manager.

INDEXING (investment concept)

Typically refers to investing in a portfolio to match a broad range of investments that are set within a pre-determined grouping, such as the S&P 500, so as to match its performance; such investing is generally labeled 'passive' or indexed investing; or buying shares in an Index Fund.

IN-STATE LOAN PROGRAM (Montana-specific)

Programs that are funded by the state's coal severance tax monies.

INTERNAL SERVICE VS. ENTERPRISE FUND (state accounting concept)

Within Montana state government: a program whose funding is dependent on **mandatory participation** by another state government program is labeled an 'internal' service fund; a program whose funding is dependent on voluntary participation is labeled an enterprise fund. At BOI, the investment program is an internal service fund because participation is not voluntary; the Board's bond and loan programs, because their use is voluntary, are accounted for as an enterprise.

INVESTMENT GRADE (bonds)

Bond ratings from Moody's, Standard and Poor's, and Fitch high enough to be considered secure enough for most investors (bonds rated AAA – BBB). Below investment-grade bonds (below BBB) are generally considered to have a more speculative outlook and carry more risk of default.

IRR (private equity)

A measure of investment performance, short for 'internal rate of return,' expressed as a percentage (the 'internal rate of return' number, or discount rate) that mathematically will equalize the total future cash flows of an investment to the initial cash outflow of the investment, the concept accounts for the time value of money.

LEVERAGE (investment concept)

As an investment concept, a way to increase a return on an investment through a combination of one's own money and by borrowing additional money to enhance such an investment; high 'leverage' is also associated with high risk.

LINK DEPOSIT

The Link Deposit program can provide a financial institution a long-term fixed rate funding source "linked" to a specific loan. The State of Montana provides the financial institution funding in the form of a deposit through the Montana Board of Investments using coal tax funds.

MASTER LIMITED PARTNERSHIP

An investment structure that combines the tax benefits of a limited partnership with the liquidity of a common stock. While an MLP has a partnership structure, it issues shares that trade on an exchange like common stock. MLPs are often broadly associated with energy companies operating in midstream services.

MEAN VARIANCE OPTIMIZATION MODEL ('Modern Portfolio Theory')

A theory that it is possible to construct a portfolio to maximize the return for the least amount of risk or volatility. This theory is based on various asset types and their level of expected return, risk (volatility) and their correlation with each other or how the asset values move with each other. The central idea of the model is to blend investments so that in total, they provide both the best expected return and optimal amount of diversification to minimize deep performance swings (volatility); a central tenant is that long term historical returns are indicative of future returns.

MEZZANINE FINANCE (private equity)

Subordinated debt with an equity 'kicker' or ability to share in the equity value of the company. It is typically lower quality because it is generally subordinated to debt provided by senior lenders such as banks, thus is considered higher risk.

MULTIPLE (as in "multiple" of invested capital, private equity)

The ratio of total cash returned over the life of the investment plus the investment's residual value over the total cash expended in making the investment. A multiple of 2 means, regardless of the total investment time period, that total cash returned was twice the cash invested.

130/30 STRATEGY (public equities)

Also called 'partial long short,' this strategy involves the establishment of a short position in select stocks while taking the proceeds of those shorts and buying additional long positions in stocks. The net effect is an overall market position that is 100% long, but the active decisions on individual stock selections are amplified by this ability to short. If the stock selections are successful, the strategy enables the portfolio to profit more than if a stock had simply not been owned, as with traditional long-only portfolios.

OPPORTUNISTIC (real estate)

In real estate, a euphemism for the most risky real estate investments, typically distressed, raw land, newly developed buildings or other high risk investments in the real estate sector, (versus, 'core,' which are the best quality fully leased commercial properties).

OVERWEIGHT OR UNDERWEIGHT (investment concept)

Generally, the level of holdings of a certain type of investment that is above or below either a benchmark's weight (portion of total investment), or the percentage held of a particular asset class compared to the Board's asset allocation policy weight. Also used to describe an external investment manager's decision to have more (or less) of a particular investment than the percentage or weighting found in the benchmark.

P/E RATIO (equity)

The price of a publicly traded stock divided by its estimated or actual earnings is the price/earnings or P/E ratio. This can also be calculated for a stock index or portfolio of stocks. Over the last 100 years, the S&P 500 has had an overall P/E ratio of about 15, or a total index price of about 15 times the annual earnings of its underlying companies.

PACING STUDY (private equity)

An analysis of the likely timing and amount of the drawdown of committed but yet uninvested monies and the estimated distributions or returns from the funds held in an alternative investment portfolio, generally used to judge the future size of the portfolio and its potential liquidity needs, i.e., cash funding demands.

PAR (fixed income)

The initial principal amount designated by the issuer of the bond, or face value of a bond.

PASSIVE

For investments, generally not materially participating in an investment decision, meaning an investment portfolio whose returns follows that of a broad market index, such as an investable stock index, i.e. the S & P 500.

PASSIVE MANAGEMENT OR PASSIVE INVESTMENT (most often in public equities, but not exclusively)

An investment style where a fund's portfolio mirrors a market index, such as the S&P 500, with limited selection decisions by the manager, resulting in market returns. Passive management is the opposite of active management in which a fund's manager attempts to beat the market with various investment strategies and buy/sell decisions of a portfolio of securities to enhance returns.

PASSIVE WEIGHT (generally equities)

The percentage of a stock held in a particular index portfolio, or percentage of an overall asset class that is held in passive portfolios.

POLICY PORTFOLIO

A fixed-target asset allocation, as opposed to asset allocation ranges, which theoretically allows gauging whether deviations from the target portfolio had a positive or negative impact on overall performance.

PORTABLE ALPHA (public equities)

An investment strategy which involves the active selection of securities while neutralizing overall beta or market risk. This often involves the use of derivative investments such as futures to replicate the market return, either taking a short or long position, while then selecting securities which are expected to add return in an absolute sense or in addition to the market return. As an example, this strategy can be found with certain hedge funds where a market exposure is shorted while individual securities such as specific stocks are purchased that are expected to outperform the general market. The concept of portable applies when the ability to generate positive alpha can be overlaid or ported onto a portfolio. This is not a strategy employed by any of MBOI's existing managers.

PREMIUM (fixed income)

Most often the amount paid over the stated face amount (often called 'par') of a bond, but also used in other contexts, typically paying more (the premium) than a market price (as in a take-over bid for a company).

PRIVATE ANNUAL WAGE

The private annual wage is determined annually by the Montana Department of Labor & Industry using the average annual employment divided by the total wages.

PROXY (publicly traded companies)

An agent legally authorized to act on behalf of another party. Shareholders not attending a company's annual meeting may choose to vote their shares by proxy by allowing someone else to cast votes on their behalf, but the word 'proxy' is used more frequently colloquially as a 'close approximation.'

PRUDENT EXPERT, PRUDENT PERSON (a central fiduciary concept)

These legal terms have long histories of court-determined standards of care, deriving originally under English common law. The BOI is empowered to operate under the 'prudent expert rule,' which states that the Board shall manage a portfolio:

- a) *with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims;*
- b) *diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return unless, under the circumstances, it is clearly prudent not to do so; and*
- c) *discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program.*

At an 'expert' level; there is more room for accepting risk under the prudent expert rule than the prudent person rule.

REBALANCING (general investment term)

The process of realigning the weightings of the portfolio of assets. Rebalancing involves periodically buying or selling assets in the portfolio to maintain the original desired level of asset allocation and/or to stay within predetermined asset category range; it is part of a disciplined investment approach within modern portfolio theory.

REPURCHASE AGREEMENT

A contract in which the seller of securities, such as Treasury Bills, agrees to buy them back at a specified time and price. May also be called "Repo" or "Buyback." Typically used as a short-term form of collateralized borrowing by a bank or securities dealer.

RESOLUTION (government term)

Generally, a formal and written action by a governmental (or corporate) body that has long term significance and requiring a vote of the governing body. BOI uses 'resolutions' generally only for its most significant and long term actions and/or policies.

REVERSE REPURCHASE AGREEMENT

A purchase of securities with an agreement to resell them at a higher price at a specific future date. The investor essentially borrows money and allows its securities to be held as collateral. Reverse Repurchase Agreements occur most often in government securities or other securities that are highly valued and thus considered a good form of collateral.

SECURITIES LENDING (general investment)

Investments that are temporally borrowed by other investors for a fee; the BOI allows most of its publicly traded investments to be loaned for additional marginal income.

STANDARD DEVIATION (common statistical concept)

A specific statistic that measures the dispersion of returns from the mean over a specific time period to determine the "historical volatility" of returns for a stock, or portfolio, or asset class; more specifically a single unit (i.e., one standard deviation) of dispersion that accounts for approximately 66% of all data around a mean using a 'normal' (or 'uniform' or 'bell-shaped' curve; as opposed to a skewed or asymmetrical) distribution. The standard deviation is used as a gauge for the amount of expected future volatility.

SABHRS (accounting jargon)

Montana state government's State Accounting, Budgeting and Human Resource System; the State's central information management system. BOI investment and other financial data must tie and be reported on this system, which is the official book of record and includes the state's financial statements.

STYLE DRIFT (often in reference to public equity managers, but applicable to other managers, too)

As the name implies, a divergence from an investor's professed investment bias or style or objective.

TRANCHE

A division or portion of a pool or whole; specifically: an issue of bonds derived from a pooling of like obligations (such as securitized mortgage debt) that is differentiated from other issues especially by maturity or rate of return.

TRACKING ERROR (statistical concept in investments)

A measurement of the standard deviation of a portfolio's return versus the return of the benchmark it was attempting to outperform. The concept is often used when discussing investment managers. For example, some styles are expected to have high 'tracking errors,' (e.g., deep 'value' investors who buy companies that may be dogs for years), versus passive managers, whose stock volatility is expected to be very close to their benchmark. Tracking error can either be intentional or unintentional; it can also be regarded as an accepted deviation or contrary to the management agreement. High *unexpected* tracking error is generally a serious concern to be examined and understood.

UNDERWRITER (bond program)

In investments, the agent who buys investments to be resold to the public; at BOI, the investment firms that buy the Board's bonds to be resold to the public.

UNIFIED INVESTMENT PROGRAM (Montana Constitution)

The Program in the State's constitution requiring a central investment program which the legislature has assigned to the BOI.

VALUE (as to style when discussing public equities)

An investment style that focuses on buying established companies that investors believe are undervalued and trading at bargain prices to the fundamental analysis of the company's financial statements and internal competitive factors.

VENTURE CAPITAL (private equity)

A higher-risk/high-return type of investing in startup firms and small businesses with perceived long-term growth potential. Sometimes these are already existing business ventures with limited operating history that need additional management expertise and access to capital. (For start-ups, 'seed capital,' or 'angel investor' are terms differentiating this even higher risk type of investment.)

VOLATILITY (investment jargon)

A statistical measure of the dispersion of returns for a given security or market index. Volatility is typically measured by using the standard deviation of returns from the security or market index. Commonly, the higher the volatility, the riskier the security.

YIELD (general investment, but most often within fixed income)

The amount returned to the investor above the original investment generally expressed as a percentage. Yield can be thought of as the expected return from the combination of interest and price accrual or amortization to maturity (in the case of a bond trading at a discount or premium to par).

YIELD CURVE (fixed income)

A line that plots the prevailing interest rates at a given time for bonds ranging in maturity from as short as three months out to 30 years. When plotted across these various maturities (typically 2, 5, 7, 10 and 30 years), the resultant line is shaped like a curve with generally low interest rates (the yield) for shorter maturities and gradually higher interest rates for longer maturities, because generally investors demand higher interest rates for longer term investments. The yield curve for U.S. Treasury debt is the most common when referring to the prevailing level of interest rates.

MONTANA BOARD OF INVESTMENTS ACRONYM INDEX

ACH.....	Automated Clearing House
ADV.....	Uniform Application for Investment Adviser Registration and Report by Exempt Reporting Advisor
AUM.....	Assets Under Management
ADR.....	American Depository Receipts
AOF.....	All Other Funds
ARC.....	Actuarially Required Contribution
BOI.....	Board of Investments
CAPP.....	Consolidated Asset Pension Pool
CFA.....	Chartered Financial Analyst
EM.....	Emerging Market
FOIA.....	Freedom of Information Act
FWP.....	Fish Wildlife and Parks
FX.....	Foreign Exchange
IPS.....	Investment Policy Statement
IRP.....	Intermediary Relending Program
LDI.....	Liability-Driven Investing
MBOH.....	Montana Board of Housing
MBOI.....	Montana Board of Investments
MDEP.....	Montana Domestic Equity Pool
MLP.....	Master Limited Partnership
MFFA.....	Montana Facility Finance Authority
MPEP.....	Montana Private Equity Pool
MPT.....	Modern Portfolio Theory
MSTA.....	Montana Science and Technology Alliance
MTIP.....	Montana International Pool

MTRP Montana Real Estate Pool

MTSBA Montana School Boards Association

MVO Mean-Variance Optimization

NAV Net Asset Value

PERS Public Employees' Retirement System

PFL Partnership Focus List

QZAB Qualified Zone Academy Bonds

QSCB Qualified School Construction Bonds

RFBP Retirement Funds Bond Pool

RFP Request for Proposal

SABHRS Statewide Accounting Budgeting and Human Resource System

SLQT Securities Lending Quality Trust

SOC1 Service Organization Controls 1 (Audit)

SSBCI State Small Business Credit Initiative

STIP Short Term Investment Pool

TFBP Trust Funds Bond Pool

TFIP Trust Funds Investment Pool

TIF Tax Increment Financing

TIFD Tax Increment Financing District

TRS Teachers' Retirement System

TUCS Trust Universe Comparison Service

UIP Unified Investment Program

VIX Volatility Index

ASSET CLASS ACRONYMS

DEPAC	Domestic Equity Pension Asset Class
IEPAC	International Equity Pension Asset Class
PEPAC	Private Equity Pension Asset Class
NRPAC	National Resources Pension Asset Class
REPAC	Real Estate Pension Asset Class
TIPAC	TIPS Pension Asset Class
BFPAC.....	Broad Fixed Income Pension Asset Class
USPAC	UST/AGY Pension Asset Class
IGPAC	Investment Grade Corp Pension Asset Class
MBPAC.....	MBS Pension Asset Class
HYPAC	High Yield Pension Asset Class
DSPAC	Diversified Strategies Pension Asset Class
CPAC.....	Cash Pension Asset Class