TRS
TEACHERS' RETIREMENT SYSTEM
ALASKA DIVISION OF
Retirement
and Benefits

INVESTMENT SECTION

ALASKA DIVISION OF
Retirement
and Benefits

Callan

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August 28, 2023

Alaska Retirement Management Board
State of Alaska, Department of Revenue
Treasury Division
333 Willoughby Avenue, 11th Floor
Juneau, Alaska 99801

Dear Board Members:

This letter reviews the investment performance of assets under the purview of the Alaska Retirement Management Board (ARMB) for the fiscal year ended June 30, 2023.

Callan LLC (Callan) calculates time-weighted performance statistics based primarily on underlying custodial data provided by the Board's custodian, State Street Bank and Trust Company. Additional manager-level data is obtained directly from the Department of Revenue. The performance calculations were made using a time-weighted return methodology based upon fair values reported by these sources.

Callan serves as ARMB's independent general investment consultant and evaluates ARMB's performance in relation to market benchmarks, appropriate manager peer groups and other public pension systems. The performance calculations are made using a methodology broadly similar to the Global Investment Performance Standards.

ARMB purposely seeks to invest assets prudently, expertly, and according to governing law and industry practices. The objective of this approach is to responsibly invest Plan assets that, in combination with contributions, will be sufficient to pay promised benefits to members and beneficiaries. In pursuit of this objective, ARMB periodically evaluates liabilities, expected contributions and potential earnings. This analysis considers a wide range of potentially viable investment strategies. With thoughtful consideration of multiple factors, ARMB selects a strategic investment policy that balances long-term growth potential and acceptable risk. A policy benchmark is constructed that mirrors ARMB's strategic decision regarding asset allocation policy. The custom policy benchmark comprises equity, fixed income, real estate, and other market indices weighted in proportions corresponding to ARMB's investment policy.

2023 Fiscal Year Market Overview

A recession in the U.S. does not appear imminent, despite the most aggressive rate hikes since the 1980s over the past 15 months. The labor market remains strong, expectations for 2Q23 GDP growth are positive, consumer spending has exceeded expectations, and even housing has shown signs of life. Further good news comes from inflation, which has moderated, though largely due to falling energy prices. We have also successfully weathered a couple of storms this year; regional bank worries have abated after the collapse of Signature Bank, Silicon Valley Bank, and First Republic, and the debt ceiling saga is behind us.

On the good news front: 1Q23 GDP was a robust 2% (raised sharply from the most recent estimate of 1.3%). Consumer spending rose 4.2% in 1Q, the strongest growth seen in nearly two years. In June, the Conference Board reported a sharp 7% monthly jump in its Consumer Confidence Index, bringing it to its highest level since January 2022. New home sales surged more than 12% in May (+20% yea-rover- year (YOY)) with gains broad-based geographically, according to data from the Census Bureau. Housing prices have risen in 2023 and are now just 2.4% off the June peak, according to the S&P Case-Shiller National Home Price Index. The labor market remained resilient. The Bureau of Labor Statistics reported April job openings, according to the Job Openings and Labor Turnover Survey (JOLTS), remained at just over 10 million with about 6 million unemployed. Unemployment remained low at 3.7% in May and average hourly earnings ($33.44) were up 4.3% over the past year, a bit higher than core inflation.

But is this all too good to be true? The Fed has not abandoned its rate hike path and goal of 2% inflation and has suggested that further hikes are coming. Higher interest rates have a lagged effect, but the impact can already be seen in some areas. In April, nearly 50% of U.S. banks reported tightening lending standards for loans to small businesses. Rising payments for credit card debt, auto loans, commercial mortgage payments, and corporate debt all have the potential to put the brakes on economic growth. While the default rate for corporations has not ticked up materially, a June report from S&P Global was a bit ominous: "…the tally of companies that have gone bankrupt so far in 2023 is higher than the first four months of any year since 2010." Commercial real estate woes, especially office and retail, are also on the radar of the more pessimistic crowd. The resumption of student loan payments in August could also temper growth later this year. Americans owe roughly $1.8 trillion in federal and private student loan debt.

And there is mixed news: Headline CPI was up 4.0% over the past 12 months (as of May), the lowest since March 2021, with Core up 5.3% (down from a 6.6% cycle high in September). Headline CPI has benefited from falling energy prices (-12% YOY) while Core has not moderated as much and has the Fed's attention. Within Core, shelter costs (+8% YOY) have been particularly sticky and comprise around 40% of the measure. The Fed's favored inflation metric, the Personal Consumption Expenditures Index, showed progress with a +3.8% gain in May (YOY), down from 5.4% in January. As with CPI, the Core measure remains more stubborn and was up 4.6% in May (YOY), down only slightly from January's 4.7%.

U.S. equity markets finished the fiscal year 2023 in the positive territory after a tumultuous 2022. The Russell 3000 Index, a measure of broad U.S. equity, was down 4.46% at the start of the fiscal year before rising 7.18% in 4Q22, 7.18% in 1Q23, and 8.39% in 2Q23 as investor sentiment improved. Domestic stocks soared over the exuberance for any company associated with AI. Overseas markets also rebounded throughout the fiscal year aided by currency appreciation vs. the U.S. dollar. The MSCI ACWI ex-U.S. IMI (Net) Index, a broad benchmark reflecting developed and emerging markets, but excluding U.S. equities, climbed 2.38% for the quarter and 12.47% for the fiscal year. The MSCI All Country World Index (Net), a broad measure of the total global equity market (including the U.S.), increased 6.18% in the most recent quarter and 16.53% for the fiscal year.

The Fed took a pause at its June meeting, leaving the Fed Funds target at 5.00% – 5.25%. The Fed's median prediction is 4.6% for the end of 2024, but the distribution reflects a wide range of views that range from 3.6% to 5.9%. The Bloomberg U.S. Aggregate Bond Index, a widely-used gauge of the investment grade domestic U.S. bond market, fell modestly for the quarter (-0.84%) and for the fiscal year (-0.94%) as interest rates rose. The 10-year U.S. Treasury yield was 3.81% as of fiscal yearend, up from 3.48% as of 3/31. The yield curve was sharply inverted at quarter-end with the 2-year U.S. Treasury yielding 4.87%.

Private real estate, as measured by the NCREIF Property Index, was negative for the first time since fiscal year 2010. In fiscal year 2023, the NCREIF Property Index returned -6.60% hurt by office property. Publicly traded real estate, as measured by the FTSE NAREIT All Equity Index, outperformed private markets on the downside, returning -4.39% for the fiscal year 2023.

ARMB's actual asset groupings delivered the following one-year returns through June 30, 2023[1]:

Domestic Stocks:	17.77%
Global ex-U.S. Stocks:	15.14%
Multi-Asset:	4.09%
Fixed Income:	0.48%
Real Assets:	2.37%
Private Equity:	-3.29%

For the fiscal year ended June 30, 2023, the Public Employees Retirement System (PERS) had a time-weighted total return of 7.03%. The Teachers Retirement System (TRS) had a time-weighted total return of 7.02%. Both systems' gross return trailed their strategic policy target return of 7.53% and the median return for Callan's Public Fund Sponsor database of 11.97%.

Over longer trailing periods, PERS and TRS have outperformed their target index returns. The 5-year annualized return was 7.68% for PERS and 7.67% for TRS, compared to the benchmark return of 6.52% for both Plans. The ten-year annualized return was 8.17% for PERS and 8.18% for TRS. Both were above the 10–year target return of 7.26%. Over 31.75 years – the longest period of available data – PERS and TRS achieved annualized total returns of 7.77% and 7.81%, respectively. Both exceeded the corresponding policy benchmark return of 7.49%.

The 2023 fiscal year returns of the PERS and TRS pension ("DB") and health care ("HC") programs are listed in the table below.

	PERS DB	PERS HC	TRS DB	TRS HC
FY 2023	7.03%	7.11%	7.02%	7.11%

The pension and health care systems are well diversified and currently have asset allocation policies that, in our opinion, are consistent with achieving a long-term "real" (above inflation) return of 4.5%.

In summary, fiscal year 2023 was a year in which ARMB's Total Fund returns were positive, as were those of most broad asset class returns. PERS and TRS produced lower returns than the average public fund, both ranking in the 84th percentile within the Public Fund Sponsor peer group for the one-year period ended June 30, 2023. Lower peer group rankings were a result of the Funds' relative underweight to equities and relative overweight to alternatives vs peers.

Sincerely,

Steve Center
Senior Vice President

c: Zach Hanna
Ivan Cliff

[1]Note PERS asset class returns are used to represent the asset class performance of all plans.

Department of Revenue
Treasury Division Staff
As of June 30, 2023

Commissioner
Adam Crum

Deputy Commissioner
Fadil Limani

Treasury Division Director
Pamela Leary, CPA

Chief Investment Officer
Zachary Hanna

Comptroller
Vacant

Cash Management
Jesse Blackwell

ARMB Liaison Officer
Alysia Jones

Investment Officers
Shane Carson
James Cheng
Casey Colton
Victor Djajalie
Kevin Elliot
Benjamin Garrett
Emily Howard
Sean Howard
Kevin Liu
Robyn Mesdag
Mark Moon
Cahal Morehouse
Nicholas Orr
Stephanie Pham
Steve Sikes

External Money Managers and Consultants

Opportunistic Fixed Income
Fidelity Investment Asset Management
Merrimack, NH
MacKay Shields LLC
New York, NY

Global Equities – Large Cap
Arrowstreet Capital, LP
Boston, MA
Baille Gifford Overseas Ltd.
Edinburgh, Scotland
Brandes Investment Partners, L.P.
San Diego, CA
Capital Guardian Trust Co.
Los Angeles, CA
State Street Global Advisors
Boston, MA
Legal and General Investment Management America
Chicago, IL
First Eagle Investments
New York, NY
Acadian Asset Management
Boston, MA

Emerging Markets
Legal and General Investment Management America, Inc.
Chicago, IL

Alternative Equity
McKinley Capital Management LLC
Anchorage, AK

Alternate Beta
Man Group
London, UK

Alternate Fixed Income
Ares Management
Los Angeles, CA
Crestline Investors, Inc.
Fort Worth, TX
Prisma Capital
New York, NY

Other Opportunities
Schroders Investment Management North America
New York, NY

Tactical Asset Allocation
Fidelity Investment Asset Management
Smithfield, RI
PineBridge Investments
New York, NY

Private Equity
Abbott Capital Management, L.P.
New York, NY
Advent International
Boston, MA
Battery Ventures
Boston, MA
Clearlake Capital
Santa Monica, CA
Dyal Capital Partners
New York, NY
Genstar Capital
San Francisco, CA
Glendon Capital
Santa Monica, CA
Insight Partners
New York, NY
KKR Lending Partners
New York, NY
Lexington Partners
New York, NY
Merit Capital Partners
Chicago, IL
Neuberger Berman
New York, NY
New Mountain Partners
New York, NY
NGP
Irving, TX
Onex Partners
New York, NY
Pathway Capital Management, LLC
Irvine, CA
Sentinel Capital Partners
New York, NY
Summit Partners
Boston, MA
The Jordan Company
New York, NY
The Riverside Company
New York, NY
Warburg Pincus
New York, NY

External Money Managers and Consultants (cont.)

Real Assets – Farmland and Timber
Timberland Investment Resources LLC
Atlanta, GA
UBS Farmland Investors, LLC
Hartford, CT

Real Assets – Energy
EIG Global Energy Partners
Washington, D.C.

Real Assets – Infrastructure
IFM
New York, NY
J.P. Morgan Asset Management
New York, NY

Real Assets – Real Estate Core Commingled Accounts
BlackRock Realty
New York, NY
J.P. Morgan Asset Management Inc.
New York, NY
UBS Realty Investors, LLC
Hartford, CT

Real Assets – Real Estate Core Separate Accounts
Sentinel Real Estate Corporation
New York, NY
UBS Realty Investors, LLC
Hartford, CT

Real Assets – Non-Core Commingled Real Estate Funds
Almanac Realty Investors
New York, NY
Clarion Partners
New York, NY
KKR & Co.
New York, NY
Silverpeak Real Estate Partners
New York, NY

Supplemental Benefits System, Deferred Compensation Plan, and Defined Contribution Plans
Baillie Gifford Overseas Ltd.
Edinburgh, Scotland
BlackRock
San Francisco, CA
Brandes Investment Partners
San Diego, CA
J.P. Morgan Asset Management Inc.
New York, NY
Northern Trust
Chicago, IL
State Street Global Advisors
Boston, MA
T. Rowe Price Investment Services
Baltimore, MD

Investment Consultants
Callan Associates, Inc.
Denver, CO

Investment Advisory Council
Jerrold Mitchell
Johns Island, SC
Ruth Traylor
Monument, CO
William Jennings
Colorado Springs, CO

Independent Auditors
KPMG, LLP
Anchorage, AK

Actuaries
Buck, A Gallagher Company
New York, NY
Gabriel, Roeder, Smith & Company
Denver, CO

Global Master Custodian
State Street Bank & Trust Co.
Boston, MA

Teachers' Retirement System
Investment Report

INVESTMENTS

The investment goals of the State of Alaska Teachers' Retirement System are the long-term return and sustainability of the pension funds under management. Annually, the Alaska Retirement Management Board (ARMB) sets its asset allocation strategy in order to reflect changes in the marketplace while still retaining an expected optimal risk/return level within the set constraints and objectives of the ARMB.

The ARMB categorizes its investments into six asset classes: Broad Domestic Equity, Global Equity Ex-U.S., Fixed Income, Multi-Asset, Real Assets, and Private Equity. The performance of each asset class is compared with a benchmark comprised of one or more market indices. The performance for the total portfolio is compared with its policy portfolio, determined by calculating the weighted performance of the underlying asset class benchmarks at the portfolio's target asset allocation. The asset class benchmarks are illustrated below:

Asset Class	**Benchmark**
Broad Domestic Equity	Russell 3000
Global Equities Ex-U.S.	MSCI All Country World Ex-U.S. IMI Net
Fixed Income	95% Bloomberg Barclays U.S. Aggregate 5% 3-Month Treasury Bill
Multi-Asset	60% MSCI All Country World IMI Net 40% Bloomberg Barclays U.S. Aggregate
Real Assets	35% NFI-ODCE 15% FTSE-NAREIT 25% NCREIF Farmland 10% NCREIF Timberland 15% CPI+4%
Private Equity	1/3 S&P 500 1/3 Russell 2000 1/3 MSCI EAFE Net

The target asset allocation is determined by the ARMB, utilizing capital market assumptions provided by its independent general investment consultant, Callan LLC. During the fiscal year, the ARMB's target asset allocation was 27% Broad Domestic Equity, 18% Global Equities Ex-U.S., 19% Fixed Income, 8% Multi-Asset, 14% Real Assets, and 14% Private Equity. Over the next 20 years, the target asset allocation is expected to generate a return of 6.90% with a standard deviation of 13.93%.

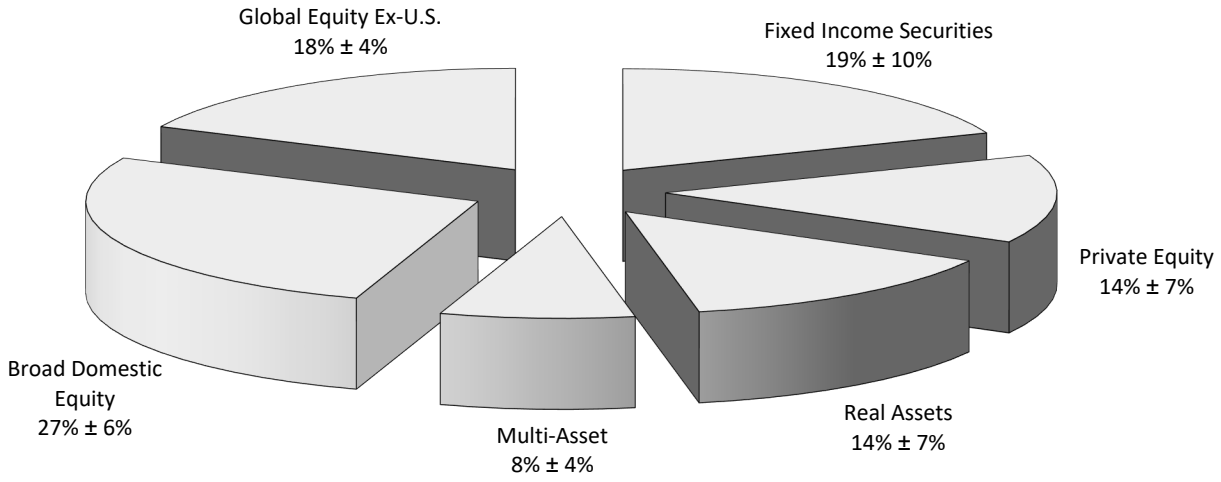
Teachers' Retirement System
Schedule of Investment Results
Fiscal Years Ended June 30

	2019	2020	2021	2022	2023	Annualized 3 Year	Annualized 5 Year
Total Fund							
TRS	6.39%	3.83%	27.65%	(4.10%)	7.02%	9.42%	7.67%
Custom Composite Index	5.65	4.64	24.95	(7.86)	7.53	7.44	6.52
Actuarial Earnings Rate	7.38	7.38	7.38	7.38	7.25	7.25	7.25
Broad Domestic Equity							
TRS	8.40	2.62	42.68	(11.73)	17.76	14.04	10.53
Custom Composite Index	8.98	6.53	44.16	(13.87)	18.95	13.89	11.39
Fixed Income							
TRS	6.34	7.31	2.20	(6.99)	0.43	(1.54)	1.73
Custom Composite Index	6.19	7.67	(0.31)	(9.78)	(0.71)	(3.70)	0.42
Multi-Asset							
TRS	7.21	0.52	23.86	(10.58)	4.09	4.86	4.43
Custom Composite Index	9.72	9.32	23.20	(13.89)	9.14	5.01	6.79
Real Assets							
TRS	6.09	2.06	9.86	14.29	2.37	8.73	6.84
Custom Composite Index	7.23	1.19	4.62	14.80	3.41	8.01	6.53
Global Equity Ex-U.S.							
TRS	(0.08)	(3.59)	38.53	(20.96)	15.14	8.03	3.96
MSCI ACWI ex-U.S.	0.26	(4.74)	37.18	(19.86)	12.47	7.33	3.38
Private Equity							
TRS	17.66	10.47	50.67	26.25	(3.29)	22.53	19.04
Custom Composite Index	2.71	(1.35)	36.80	3.42	(6.83)	9.65	5.96
Absolute Return							
TRS	4.08	-	-	-	-	-	-
3-month Treasury Bill +5%	1.15	-	-	-	-	-	-
Cash Equivalent							
TRS	2.50	-	-	-	-	-	-
3-month Treasury Bill	2.31	-	-	-	-	-	-

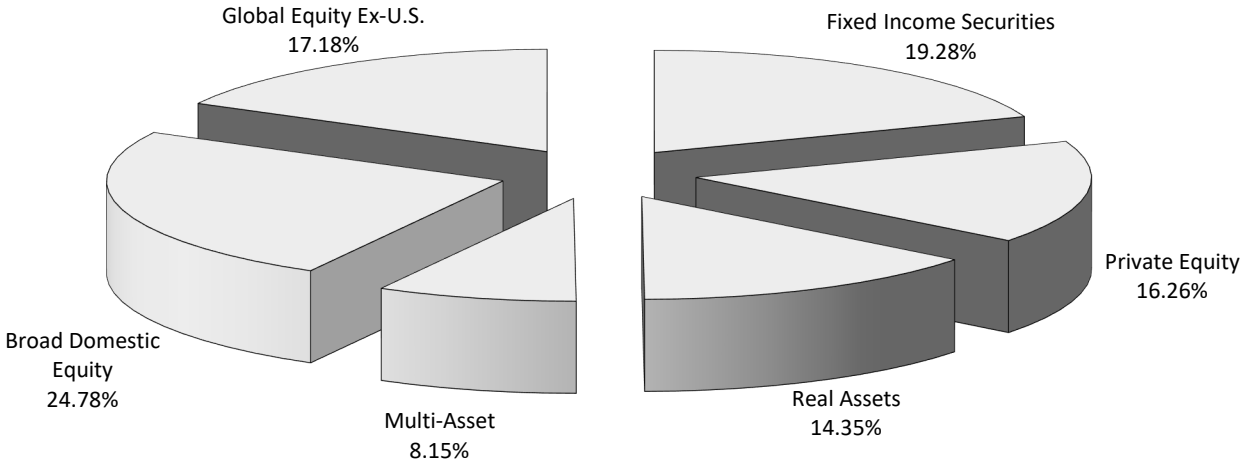
MSCI ACWI = Morgan Stanley Capital International All Country World Index
Returns for periods longer than one year are reported on an annualized basis.
Basis of calculation: Time-Weighed rate of return based on the market rate of return.

Teachers' Retirement System
Asset Allocation
June 20, 2023

Policy

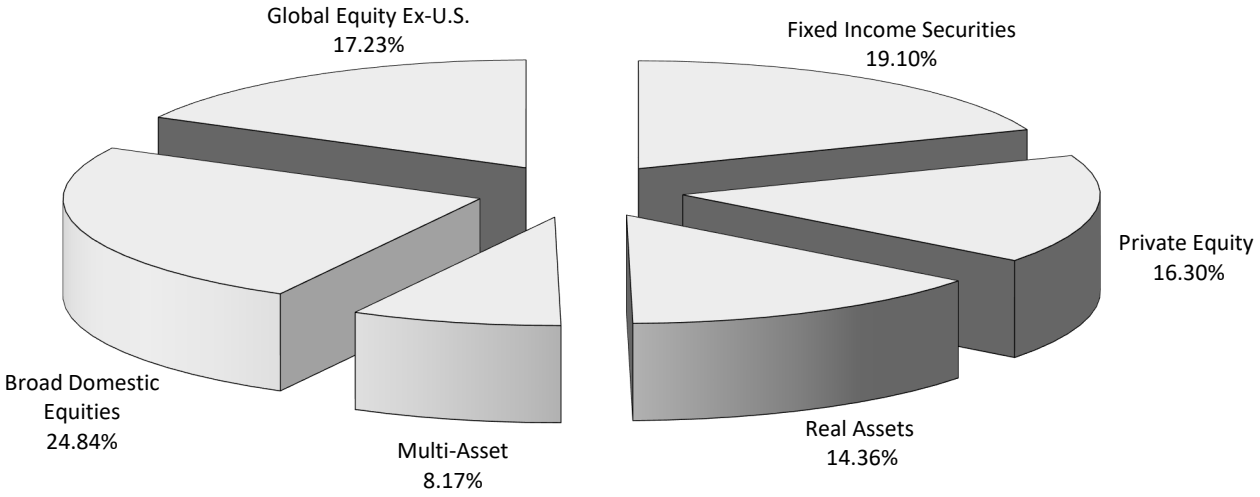


Actual — Defined Benefit Pension

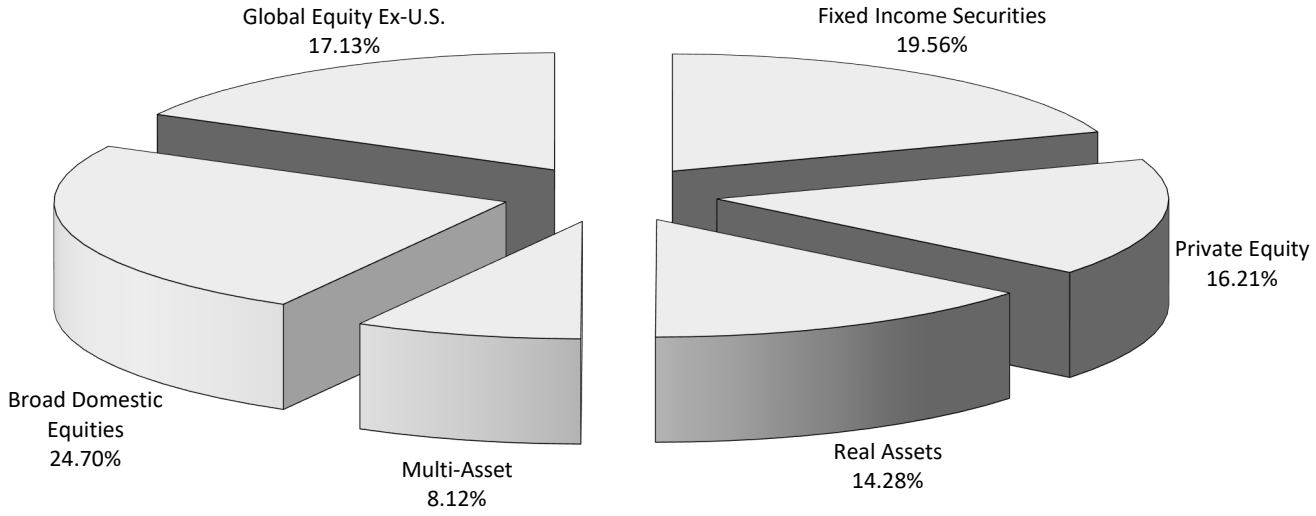


Teachers' Retirement System
Asset Allocation
June 20, 2023

Actual — Defined Benefit Alaska Retiree Healthcare Trust

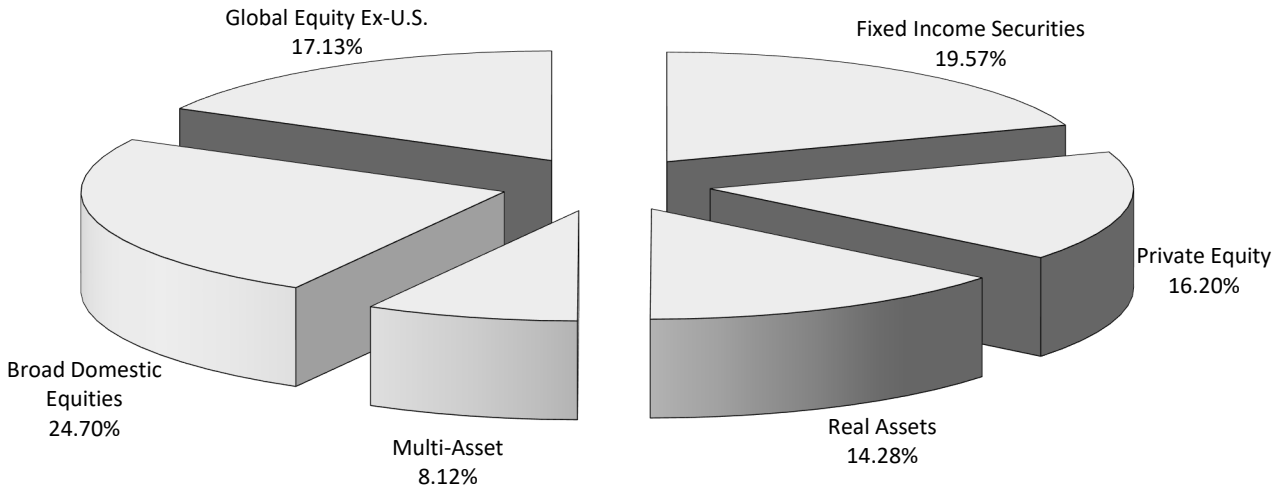


Actual — Occupational Death & Disability

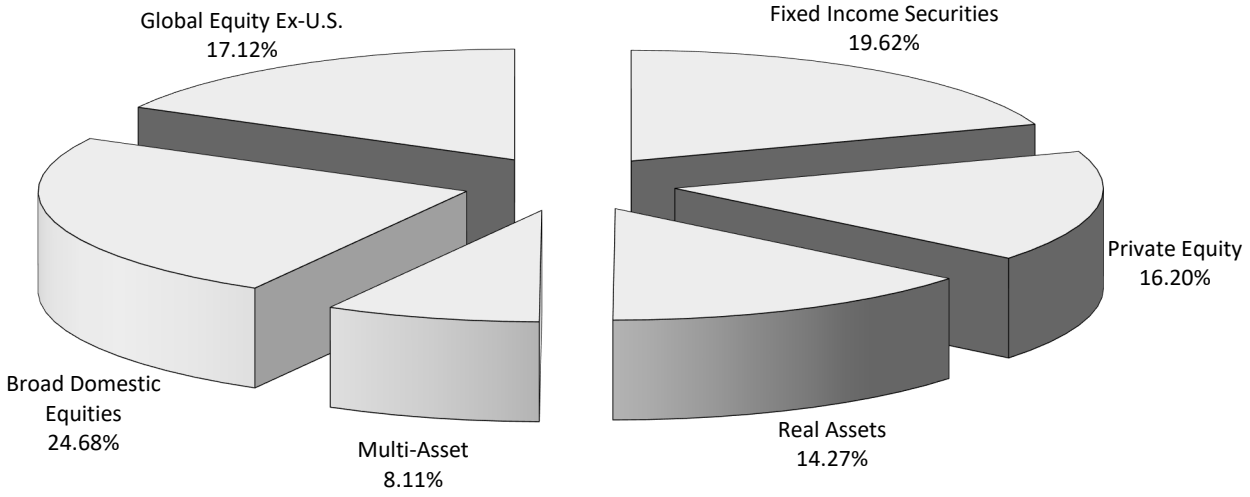


Teachers' Retirement System
Asset Allocation
June 20, 2023

Actual — Retiree Medical Plan



Actual — Health Reimbursement Arrangement



Alaska Retirement Management Board
Top Ten Holdings by Asset Type
June 30, 2023

Invested assets under the fiduciary responsibility of the ARMB have been commingled in various investment pools to manage the overall cost of the program. Using investment pools increases investment efficiency in three ways. First, combining individual funds' cash inflows and outflows to offset each other reduces the amount of cash on hand needed to support daily operations. Second, pooling investments significantly reduces accounting, budgeting, and administrative costs. Finally, the ARMB can achieve economies of scale by making available investment options that could not otherwise be practically provided for smaller retirement funds. Below are the ten largest fixed income and equity holdings.

Fixed Income

Rank	Largest Fixed Income Holdings	Fair Value	Par Value
1	U.S. Treasury N/B 3.875% 5/15/2043	$ 55,666,547	$57,048,182
2	U.S. Treasury N/B 4.125% 6/15/2026	45,380,224	45,842,228
3	U.S. Treasury N/B 4.0% 6/30/2028	40,813,904	41,038,332
4	U.S. Treasury N/B 3.75% 6/30/2030	38,707,829	39,228,837
5	U.S. Treasury N/B 3.625% 2/15/2053	37,908,915	39,501,311
6	U.S. Treasury N/B 1.375% 11/15/2040	34,488,552	51,547,579
7	FNMA Pool CB2662 3.0% 1/1/2052	30,801,223	34,838,607
8	FED HM LN PC Pool SD8230 4.5% 6/1/2052	29,679,569	30,863,604
9	FNMA Pool MA4644 4.0% 5/1/2052	27,156,713	28,921,378
10	U.S. Treasury N/B 3.625% 3/31/2028	26,888,437	27,529,355

Equities

Rank	Largest Equity Holdings	Fair Value	Shares
1	Apple Inc.	$ 138,979,838	716,502
2	Microsoft Corp.	136,152,756	399,814
3	Amazon.com Inc.	55,252,770	423,848
4	Nvidia Corp.	48,344,079	114,283
5	Meta Platforms Inc. Class A	37,759,633	131,576
6	Alphabet Inc. Class A	37,356,895	312,088
7	Berkshire Hathaway Inc. Class B	35,194,808	103,211
8	Alphabet Inc. Class C	31,877,293	263,514
9	Tesla inc.	31,290,817	119,536
10	UnitedHealth Group Inc.	26,448,471	54,028

Additional investment information may be obtained from the Alaska Department of Revenue, Treasury Division, P.O. Box 110405, Juneau, Alaska 99811-0405.

Teachers' Retirement System
Schedule of Investment Management Fees
Year Ended June 30, 2023

	Fair Value	Fees
Investment Management		
Total Fixed Income	$ 356,707,255	1,130,987
Total Multi-Asset	809,048,822	4,708,190
Total Broad Domestic Equity	2,461,095,719	223,784
Total Global Equity Ex-U.S.	1,706,891,115	2,887,181
Total Private Equity	1,614,796,579	6,552,940
Total Real Assets	1,424,429,377	7,780,845
Total Investment Management		23,283,927
Custodian		
State Street Bank		450,234
Investment Advisory and Performance		
Callan Associates		221,156
Investment Advisory Council		24,637
Total Investment Advisory and Performance		245,793
Participant Directed		
Custodian - State Street Bank		104,675
Investment Management		800,006
Synthentic Investment Contract Wrap Fees		71,381
Total Participant Directed		976,062
	$ 8,372,968,867	24,956,016

Teachers' Retirement System
Investment Summary Schedule
June 30, 2023

	Defined Benefit - Pension			
	Asset Allocation			
Investments (at Fair Value)	Policy	Range	Fair Value	% of Total Assets
Fixed Income Securities				
Short-term Fixed Income Pool			$ 64,597,994	
Securities Lending Cash Pool			28,817	
Opportunistic Fixed Income			218,749,436	
ARMB U.S. Aggregate Fixed Income			814,107,031	
Transition Pool			77,084,993	
Total Fixed Income Securities	19.00%	±10%	1,174,568,271	19.28%
Multi-Asset				
Alternative Equity Strategies Pool			61,505,370	
Tactical Allocation Strategies Pool			210,486,689	
Other Opportunistic Pool			(21)	
Alternative Beta Pool			57,255,659	
Alternative Fixed Income			166,898,536	
Total Multi-Asset	8.00%	±4%	496,146,233	8.15%
Broad Domestic Equity				
Large Cap Pool			1,384,546,875	
Small Cap Pool			124,711,409	
Total Broad Domestic Equity	27.00%	±6%	1,509,258,284	24.78%
Global Equity Ex-U.S.				
International Equity Pool			858,878,496	
Emerging Markets Equity Pool			187,866,318	
Total Global Equity Ex-U.S.	18.00%	±4%	1,046,744,814	17.18%
Private Equity				
Private Equity Pool			990,268,245	
Total Private Equity	14.00%	±7%	990,268,245	16.26%
Real Assets				
Real Estate Pool			321,441,719	
Real Estate Investment Trust Pool			93,131,760	
Infrastructure Private Pool			166,980,412	
Energy Pool			10,413,238	
Farmland Pool			205,154,572	
Timber Pool			77,014,836	
Total Real Assets	14.00%	±7%	874,136,537	14.35%
Total Invested Assets	**100.00%**		**$ 6,091,122,384**	**100.00%**

Teachers' Retirement System
Investment Summary Schedule
June 30, 2023

Investments (at Fair Value)	Defined Contribution - Pension Participant Directed			
	Asset Allocation Policy	Asset Allocation Range	Fair Value	% of Total Assets
Cash and Cash Equivalents				
Short-Term Fixed Income Pool	N/A	N/A	$ 407,419	
Total Cash and Cash Equivalents			407,419	0.05%
Pooled Investment Funds (1)				
T. Rowe Price				
Alaska Balanced Trust			25,408,809	
Long-Term Balanced Fund			25,299,387	
Target 2010 Trust			1,349,247	
Target 2015 Trust			3,661,841	
Target 2020 Trust			11,539,204	
Target 2025 Trust			26,807,461	
Target 2030 Trust			39,161,627	
Target 2035 Trust			55,389,373	
Target 2040 Trust			70,266,701	
Target 2045 Trust			101,234,891	
Target 2050 Trust			140,048,018	
Target 2055 Trust			98,199,052	
Target 2060 Trust			9,118,052	
Target 2065 Trust			2,479,648	
Total Pooled Investment Funds			609,963,311	69.07%
Collective Investment Funds (1)				
State Street Global Advisors				
SSgA Treasury Money Market Fund			6,187,905	
S&P Stock Index Fund			44,677,714	
Russell 3000 Index			26,881,073	
World Equity Ex-U.S. Index			28,086,914	
Passive U.S. Bond Index Fund			30,265,489	
Brandes Institutional				
Alaska International Equity Fund			24,255,597	
BlackRock Institutional Trust Company				
Strategic Completion Fund			15,535,964	
RCM				
Sustainable Core Opportunities Fund			12,263,916	
T. Rowe Price				
Small-Cap Stock Fund			35,941,092	
Total Collective Investment Funds			224,095,664	25.37%
Synthetic Investment Funds (1)				
T. Rowe Price				
Stable Value Fund			48,687,941	
Total Collective Investment Funds			48,687,941	5.51%
Total Invested Assets			**$ 883,154,335**	**100.00%**

(1) Pooled Investment Funds, Collective Investment Funds and Synthetic Investment Funds are participant directed and therefore are not subject to an asset allocation.

Teachers' Retirement System
Investment Summary Schedule
June 30, 2023

	Defined Benefit - Alaska Retiree Healthcare Trust			
	Asset Allocation			% of Total
Investments (at Fair Value)	Policy	Range	Fair Value	Assets
Fixed Income Securities				
Short-term Fixed Income Pool			$ 29,733,234	
Securities Lending Cash Pool			16,656	
Opportunistic Fixed Income Pool			126,698,594	
ARMB U.S. Aggregate Fixed Income			471,526,732	
Transition Pool			44,647,245	
Total Fixed Income Securities	19.00%	±10%	672,622,461	19.10%
Multi-Asset				
Alternative Equity Strategies Pool			35,623,629	
Tactical Allocation Strategies Pool			121,912,876	
Other Opportunistic Pool			(12)	
Alternative Beta Pool			33,162,235	
Alternative Fixed Income			96,666,836	
Total Multi-Asset	8.00%	±4%	287,365,564	8.17%
Broad Domestic Equity				
Large Cap Pool			801,922,671	
Small Cap Pool			72,232,225	
Total Broad Domestic Equity	27.00%	±6%	874,154,896	24.84%
Global Equity Ex-U.S.				
International Equity Pool			497,458,222	
Emerging Markets Equity Pool			108,811,253	
Total Global Equity Ex-U.S.	18.00%	±4%	606,269,475	17.23%
Private Equity				
Private Equity Pool			573,558,505	
Total Private Equity	14.00%	±7%	573,558,505	16.30%
Real Assets				
Real Estate Pool			185,263,433	
Real Estate Investment Trust Pool			53,941,402	
Infrastructure Private Pool			96,714,201	
Energy Pool			6,031,331	
Farmland Pool			118,824,550	
Timber Pool			44,606,590	
Total Real Assets	14.00%	±7%	505,381,507	14.36%
Total Invested Assets	**100.00%**		**$ 3,519,352,408**	**100.00%**

Teachers' Retirement System
Investment Summary Schedule
June 30, 2023

	Occupational Death and Disability			
	Asset Allocation			% of Total
Investments (at Fair Value)	**Policy**	**Range**	**Fair Value**	**Assets**
Fixed Income Securities				
Short-term Fixed Income Pool			$ 102,707	
Securities Lending Cash Pool			35	
Opportunistic Fixed Income Pool			265,179	
ARMB U.S. Aggregate Fixed Income			986,806	
Transition Pool			93,437	
Total Fixed Income Securities	19.00%	±10%	1,448,164	19.56%
Multi-Asset				
Alternative Equity Strategies Pool			74,531	
Tactical Allocation Strategies Pool			255,110	
Other Opportunities Pool			-	
Alternative Beta Pool			69,357	
Alternative Fixed Income			202,295	
Total Multi-Asset	8.00%	±4%	601,293	8.12%
Broad Domestic Equity				
Large Cap Pool			1,678,245	
Small Cap Pool			151,183	
Total Broad Domestic Equity	27.00%	±6%	1,829,428	24.70%
Global Equity Ex-U.S.				
International Equity Pool			1,041,090	
Emerging Markets Equity Pool			227,740	
Total Global Equity Ex-U.S.	18.00%	±4%	1,268,830	17.13%
Private Equity				
Private Equity Pool			1,200,299	
Total Private Equity	14.00%	±7%	1,200,299	16.21%
Real Assets				
Real Estate Pool			387,753	
Real Estate Investment Trust Pool			112,856	
Infrastructure Private Pool			202,368	
Energy Pool			12,588	
Farmland Pool			248,698	
Timber Pool			93,389	
Total Real Assets	14.00%	±7%	1,057,652	14.28%
Total Invested Assets	**100.00%**		**$ 7,405,666**	**100.00%**

Teachers' Retirement System
Investment Summary Schedule
June 30, 2023

	Retiree Medical Plan			
	Asset Allocation			% of Total
Investments (at Fair Value)	Policy	Range	Fair Value	Assets
Fixed Income Securities				
Short-term Fixed Income Pool			$ 1,075,718	
Securities Lending Cash Pool			356	
Opportunistic Fixed Income Pool			2,724,004	
ARMB U.S. Aggregate Fixed Income			10,137,700	
Transition Pool			959,899	
Total Fixed Income Securities	19.00%	±10%	14,897,677	19.57%
Multi-Asset				
Alternative Equity Strategies Pool			765,923	
Tactical Allocation Strategies Pool			2,621,131	
Other Opportunities Pool			-	
Alternative Beta Pool			713,010	
Alternative Fixed Income			2,078,278	
Total Multi-Asset	8.00%	±4%	6,178,342	8.12%
Broad Domestic Equity				
Large Cap Pool			17,241,029	
Small Cap Pool			1,552,974	
Total Broad Domestic Equity	27.00%	±6%	18,794,003	24.70%
Global Equity Ex-U.S.				
International Equity Pool			10,695,195	
Emerging Markets Equity Pool			2,339,366	
Total Global Equity Ex-U.S.	18.00%	±4%	13,034,561	17.13%
Private Equity				
Private Equity Pool			12,331,344	
Total Private Equity	14.00%	±7%	12,331,344	16.20%
Real Assets				
Real Estate Pool			3,983,057	
Real Estate Investment Trust Pool			1,159,712	
Infrastructure Private Pool			2,079,352	
Energy Pool			129,698	
Farmland Pool			2,554,706	
Timber Pool			959,064	
Total Real Assets	14.00%	±7%	10,865,589	14.28%
Total Invested Assets	**100.00%**		**$ 76,101,516**	**100.00%**

Teachers' Retirement System
Investment Summary Schedule
June 30, 2023

	Health Reimbursement Arrangement			
	Asset Allocation			% of Total
Investments (at Fair Value)	Policy	Range	Fair Value	Assets
Fixed Income Securities				
Short-term Fixed Income Pool			$ 3,384,208	
Securities Lending Cash Pool			1,081	
Opportunistic Fixed Income Pool			8,270,043	
ARMB U.S. Aggregate Fixed Income			30,778,187	
Transition Pool			2,914,282	
Total Fixed Income Securities	19.00%	±10%	45,347,801	19.62%
Multi-Asset				
Alternative Equity Strategies Pool			2,325,259	
Tactical Allocation Strategies Pool			7,957,701	
Other Opportunistic Pool			(1)	
Alternative Beta Pool			2,164,620	
Alternate Fixed Income			6,309,812	
Total Multi-Asset	8.00%	±4%	18,757,391	8.11%
Broad Domestic Equity				
Large Cap Pool			52,344,303	
Small Cap Pool			4,714,806	
Total Broad Domestic Equity	27.00%	±6%	57,059,109	24.68%
Global Equity Ex-U.S.				
International Equity Pool			32,470,904	
Emerging Markets Equity Pool			7,102,532	
Total Global Equity Ex-U.S.	18.00%	±4%	39,573,436	17.12%
Private Equity				
Private Equity Pool			37,438,187	
Total Private Equity	14.00%	±7%	37,438,187	16.20%
Real Assets				
Real Estate Pool			12,092,829	
Real Estate Investment Trust Pool			3,520,924	
Infrastructure Private Pool			6,312,876	
Energy Pool			393,677	
Farmland Pool			7,756,116	
Timber Pool			2,911,668	
Total Real Assets	14.00%	±7%	32,988,090	14.27%
Total Invested Assets	**100.00%**		**$ 231,164,014**	**100.00%**

Teachers' Retirement System
Recaptured Commission Fees
Year Ended June 30, 2023

Fund	Global Equity Ex-U.S.	Multi-Asset	Total
Defined Benefit Plan – Pension	$ 11	782	793
Postemployment Benefit – Alaska Retiree Healthcare Trust	7	445	452
Postemployment Benefit – Occupational Death and Disability	-	1	1
Postemployment Benefit – Retiree Medical Plan	-	9	9
Postemployment Benefit – Health Reimbursement Arrangement	-	28	28
Total Recapture Commission Fees	$ 18	1,265	1,283

The ARMB's Commission Recapture program has been in place since 1995, first working with various brokers then switching to the State Street program in 2005. Under a commission recapture program, a portion of the commissions and mark-ups on trades (placed through the State Street broker network) flow directly back to the fund.

The program allows managers to place trades for commission recapture purposes. The ARMB has established direction percentages for the managers to strive for, but is only requiring best efforts to meet them given their fiduciary obligation to achieve best execution of transactions.

The current rebate arrangement with State Street Global Markets (SSGM) is: 90% of the commissions received in excess of executing the brokers' execution-only rates; 100% of commissions in excess of its execution-only rates for all trading directed through SSGM.