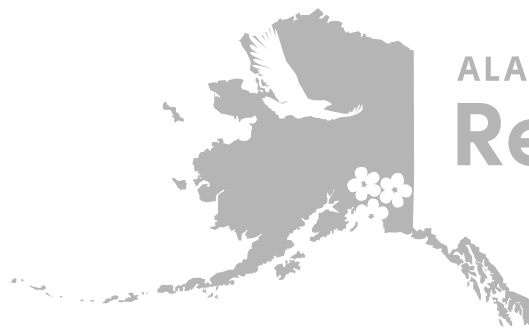




INVESTMENT SECTION



ALASKA DIVISION OF
**Retirement
and Benefits**

Callan

Callan Associates Inc.
1900 16th Street
Suite 1175
Denver, CO 80202



Main 303.861.1900
Fax 303.832.8230

www.callan.com

September 28, 2021

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, 2021.

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 market 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.

Investment Section

2021 Fiscal Year Market Overview

Fueled by rapid progress in vaccinations and re-opening economies, pent-up demand, and continued monetary and fiscal stimulus, consumer sentiment climbed and the U.S. equity markets finished fiscal year 2021 with a gain for the fifth consecutive fiscal year. The Russell 3000 Index, a measure of broad U.S. equity, returned 8.24% for the quarter and 44.16% for the one-year period ended June 30, 2021. Overseas markets were lifted by signs of recovery as vaccine rollouts broadened to more countries with most developed markets making slower but steady economic progress. The MSCI ACWI ex-U.S. IMI (Net) index, a broad benchmark reflecting developed and emerging markets but excluding U.S. equities rose 5.60% for the quarter and 37.18% for the fiscal year. A broad measure of the total global equity market (including the U.S.), the MSCI All Country World Index (Net), rose 7.39% for the quarter and 39.26% for the fiscal year.

Inflation expectations were driven by robust consumer demand spurred by stimulus payments. These two economic forces combined with supply constraints and labor shortages to drive interest rates higher. The result? Headwinds for bonds. Although markets were seemingly undisturbed by the ongoing debate as to whether recent increases in inflation will be short-lived or not, most of Wall Street is in the Fed’s “transitory” camp. Investors were also unperturbed by the Fed’s move to a more “hawkish” stance coming out of its June 2021 meeting. The Bloomberg U.S. Aggregate Bond Index, a widely-used gauge of the investment grade domestic U.S. bond market, climbed 1.83% for the quarter but remains down 0.33% for the fiscal year.

Private real estate, as measured by the NCREIF Property Index, was positive for the tenth fiscal year in a row. In fiscal year 2021, the NCREIF Property Index returned 7.37% led by industrial property and aided by the return of retail and hotel sectors posting positive returns for the third quarter as the economy regained a sense of normalcy. Publicly traded real estate, as measured by the FTSE NAREIT All Equity Index, meaningfully led the private markets, returning 32.80% for the fiscal year 2021.

ARMB’s actual asset groupings delivered the following one-year returns through June 30, 2021¹:

Domestic Stocks:	42.69%
Global ex-U.S. Stocks:	38.54%
Opportunistic:	23.86%
Fixed Income:	2.20%
Real Assets:	9.86%
Private Equity:	50.67%

For the fiscal year ended June 30, 2021, the Public Employees Retirement System (PERS) had a time-weighted total return of 27.62%. The Teachers Retirement System (TRS) had a time-weighted total return of 27.65%. Both systems’ gross return exceeded their strategic policy target return of 24.95% and the median return for Callan’s Public Fund Sponsor database of 25.78%.

Over longer trailing periods, PERS and TRS have outperformed their target index returns. PERS’s 5-year annualized return was 11.86%. TRS returned 11.87% over this same period. The 5-year annualized benchmark return for both Plans was 11.09%. The seven-year annualized return was 8.78% for PERS and 8.79% for TRS. Both were above the 7-year target return of 8.18%. Over 29.75 years – the longest period of available data – PERS and TRS achieved annualized total returns of 8.22% and 8.26%, respectively. Both exceeded the corresponding policy benchmark return of 8.04%.

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

Investment Section

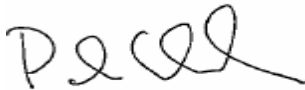
The 2021 fiscal-year returns of the PERS and TRS pension (“DB”) and health care (“HC”) programs are listed in the table below.

	PERS DB	PERS HC	TRS DB	TRS HC
FY 2021	27.62%	27.71%	27.65%	27.70%

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 2021 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 higher returns than the average public fund, both ranking in the 27th percentile within the Public Fund Sponsor peer group for the one-year period ended June 30, 2021.

Sincerely,



Paul Erlendson
Senior Vice President

c: Zach Hanna
Steven Center

Investment Section

Department of Revenue Treasury Division Staff As of June 30, 2021			
<p>Commissioner Lucinda Mahoney</p> <p>Deputy Commissioner Mike Barnhill</p> <p>Treasury Division Director Pamela Leary, CPA</p>	<p>Chief Investment Officer Zachary Hanna</p> <p>Comptroller Kayla Wisner, CPA</p> <p>Cash Management Jesse Blackwell</p> <p>ARMB Liaison Officer Alysia Jones</p>	<p>Investment Officers</p> <p>Casey Colton Emily Howard Josh McLin Kevin Elliot Kevin Liu Mark Moon Michelle Prebula</p>	<p>Nicholas Orr Sean Howard Shane Carson Stephanie Pham Stephen Sikes Victor Djajalie</p>
External Money Managers and Consultants			
<p>Alternate Fixed Income Crestline Investors, Inc <i>Fort Worth, TX</i> Prisma Capital <i>New York, NY</i></p> <p>Opportunistic Fixed Income Fidelity Investment Asset Management <i>Merrimack, NH</i> MacKay Shields LLC <i>New York, NY</i></p> <p>Global Equities – Large Cap Arrowstreet Capital, LP <i>Boston, MA</i> Baille Gifford Overseas Ltd. <i>Edinburgh, Scotland</i> Brandes Investment Partners, L.P. <i>San Diego, CA</i> Capital Group Trust Co. <i>Los Angeles, CA</i> Legal and General Investment Management America <i>Chicago, IL</i></p> <p>Emerging Market Income Legal and General Investment Management America <i>Chicago, IL</i> State Street Global Advisors <i>Boston, MA</i></p> <p>Alternative Equity McKinley Capital Management LLC <i>Anchorage, AK</i></p> <p>Alternate Beta Man Group <i>London, UK</i></p> <p>Other Opportunities Schroders Investment Management North America <i>New York, NY</i> Timberland Investment Resources <i>Atlanta, GA</i></p> <p>Tactical Asset Allocation PineBridge Investments <i>New York, NY</i> Fidelity Investment Asset Management <i>Smithfield, RI</i></p>	<p>Private Equity Abbott Capital Management, L.P. <i>New York, NY</i> Advent International, <i>Boston, MA</i> Angelo, Gordon & Co. <i>New York, NY</i> Clearlake Capital <i>Santa Monica, CA</i> Dyal Capital Partners <i>New York, NY</i> Glendon Capital <i>Santa Monica, CA</i> Genstar Capital <i>San Francisco, CA</i> Insight Partners <i>New York, NY</i> KKR Lending Partners <i>New York, NY</i> Lexington Partners <i>New York, NY</i> Merit Capital Partners <i>Chicago, IL</i> Neuberger Berman <i>New York, NY</i> New Mountain Partners <i>New York, NY</i> NGP <i>Irving, TX</i> Onex <i>New York, NY</i> Pathway Capital Management, LLC <i>Irvine, CA</i> Summit Partners <i>Boston, MA</i> The Jordan Company <i>New York, NY</i> Warburg Pincus <i>New York, NY</i></p>		

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, DC

Real Assets – Infrastructure

IFM
New York, NY
 JP Morgan Asset Management
New York, NY

Real Assets – Real Estate Core Separate Accounts

Sentinel Real Estate Corporation
New York, NY
 UBS Realty Investors, LLC
Hartford, CT

Real Estate – Commingled Real Estate Funds

Almanac Realty Investors
New York, NY
 BlackRock Realty
New York, NY
 Clarion Partners
New York, NY
 Colony NorthStar Capital
Los Angeles, CA
 Coventry Real Estate Fund II, LLC
New York, NY
 J.P. Morgan Investment Management Inc.
New York, NY
 KKR & Co.
New York, NY
 Silverpeak Real Estate Partners
New York, NY
 Tishman Speyer Properties
New York, NY
 UBS Realty Investors, LLC
Hartford, CT

Supplemental Benefits System, Deferred Compensation Plan, and Defined Contribution Plan

Baillie Gifford Overseas Ltd
Edinburgh, Scotland
 BlackRock
San Francisco, CA
 Brandes Investment Partners
San Diego, CA
 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

William Jennings
Colorado Springs, CO
 Jerrold Mitchell
Johns Island, SC
 Ruth Ryerson
Monument, CO

Independent Auditors

KPMG, LLP
Anchorage, AK

Actuaries

Buck Global, LLC
Denver, CO
 Gabriel Roeder Smith
Denver, CO

Global Master Custodian

State Street Bank & Trust Co.
Boston, MA

Investment Section

Teachers' Retirement System Investment Report

INVESTMENTS

The investment goals of the State of Alaska Teachers' Retirement System (TRS) 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 Equities, Global Equities Ex-U.S., Fixed Income, Opportunistic, 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 Index
Global Equities Ex-U.S.	MSCI All Country World Ex-U.S. IMI Net Index
Fixed Income	95% Bloomberg Barclays U.S. Aggregate Index 5% 3-Month Treasury Bill
Opportunistic	60% Russell 1000 Index 40% Bloomberg Barclays U.S. Aggregate Index
Real Assets	37.5% NFI-ODCE Index 10% FTSE-NAREIT 25% NCREIF Farmland Index 10% NCREIF Timberland Index 17.5% CPI+4%
Private Equity	1/3 S&P 500 Index 1/3 Russell 2000 Index 1/3 MSCI EAFE Index

The target asset allocation is determined by the ARMB, utilizing capital market assumptions provided by its independent general investment consultant, Callan LLC. During the 2021 fiscal year, the ARMB's target asset allocation was 26% Broad Domestic Equity, 18% Global Equities Ex-U.S., 24% Fixed Income, 8% Opportunistic, 13% Real Assets, and 11% Private Equity. Over the next 20 years, the target asset allocation is expected to generate a return of 6.88% with a standard deviation of 13.89%.

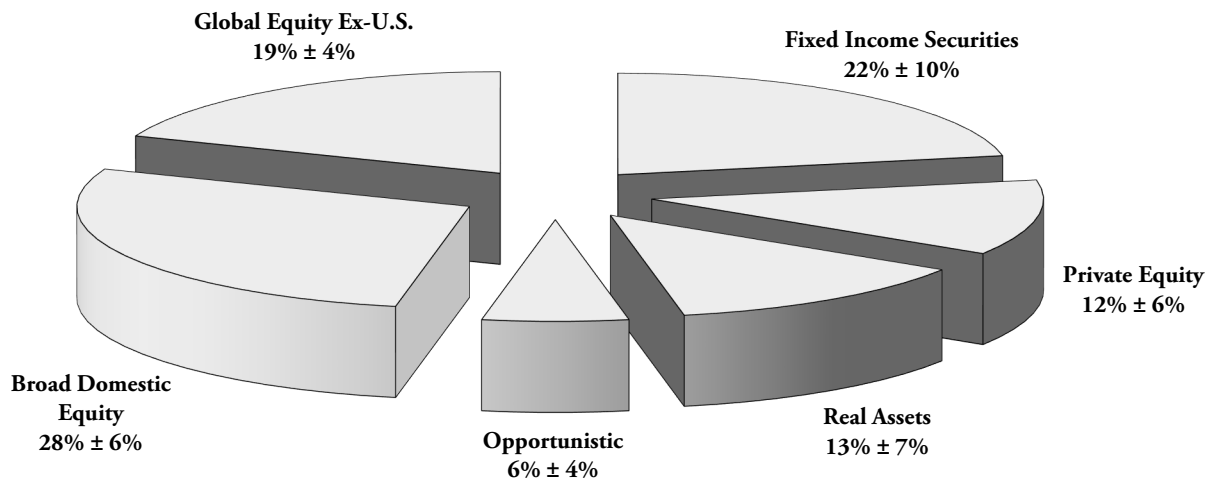
Investment Section

Teachers' Retirement System Schedule of Investment Results Fiscal Years Ended June 30							
	2017	2018	2019	2020	2021	Annualized	
						3 Year	5 Year
Total Fund							
TRS	13.36%	9.62%	6.39%	3.83%	27.65%	12.13%	11.87%
<i>Custom Composite Index</i>	-	-	5.65	4.64	24.95	11.37	11.09
<i>Actuarial Earnings Rate</i>	8.00	8.00	7.38	7.38	7.38	7.38	7.38
Broad Domestic Equity							
TRS	18.55	15.22	8.40	2.62	42.68	16.65	16.74
<i>Custom Composite Index</i>	18.51	14.78	8.98	6.53	44.16	18.73	17.89
Fixed Income							
TRS	2.91	(0.71)	6.34	7.31	2.20	5.27	3.58
<i>Custom Composite Index</i>	0.02	(0.76)	6.19	7.67	(0.31)	4.46	2.50
Opportunistic							
TRS	-	5.63	7.21	0.52	23.86	10.10	-
<i>Custom Composite Index</i>	-	8.39	9.72	9.32	23.20	13.90	-
Real Assets							
TRS	5.98	7.53	6.09	2.06	9.86	5.96	6.28
<i>Custom Composite Index</i>	5.66	4.29	7.23	1.19	4.62	4.32	4.58
Global Equity Ex-US							
TRS	20.42	7.95	(0.08)	(3.59)	38.53	10.09	11.65
<i>MSCI ACWI ex-US</i>	21.00	7.75	0.26	(4.74)	37.18	9.43	11.20
Private Equity							
TRS	17.04	26.65	17.66	10.47	50.67	25.11	23.75
<i>Custom Composite Index</i>	21.04	12.92	2.71	(1.35)	36.80	11.50	13.63
Absolute Return							
TRS	8.47	4.78	4.08	-	-	-	-
<i>3-month Treasury Bill +5%</i>	5.49	5.18	1.15	-	-	-	-
Alternative Equity							
TRS	11.38	-	-	-	-	-	-
<i>Custom Composite Index</i>	15.07	-	-	-	-	-	-
Cash Equivalents							
TRS	0.80	1.53	2.50	-	-	-	-
<i>3-month Treasury Bill</i>	0.49	1.36	2.31	-	-	-	-
<p>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.</p>							

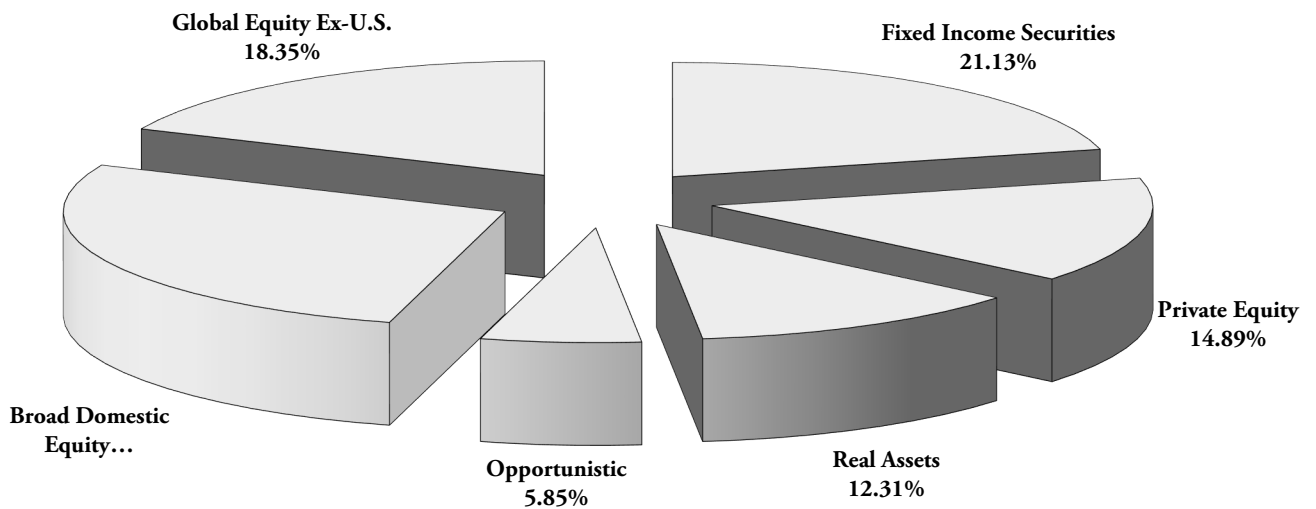
Investment Section

Teachers' Retirement System Asset Allocation June 30, 2021

Policy

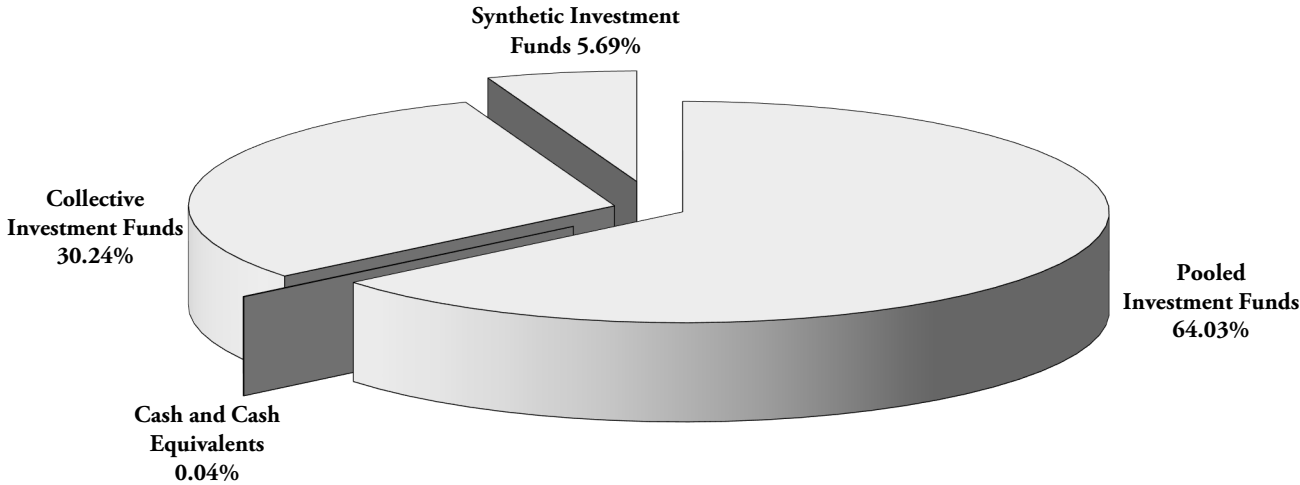


Actual — Defined Benefit Pension

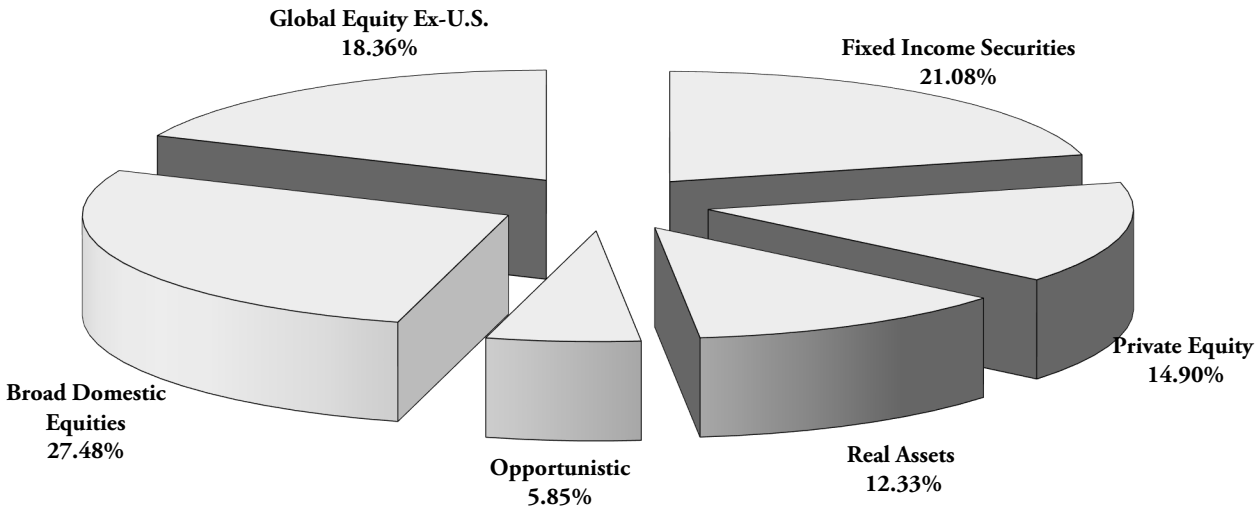


**Teachers' Retirement System
Asset Allocation
June 30, 2021**

Actual — Defined Contribution Participant Directed



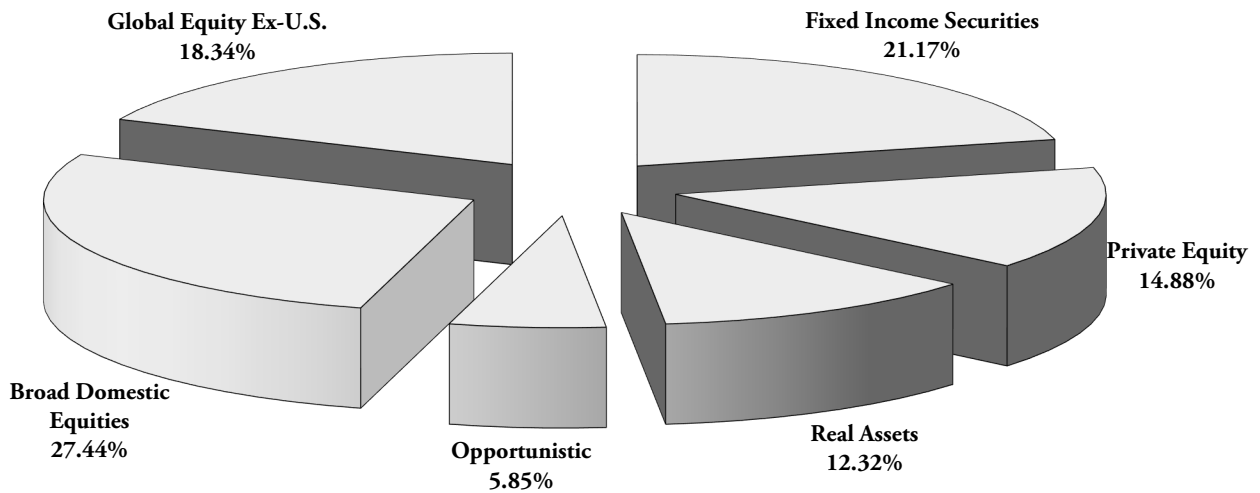
Actual — Defined Benefit Alaska Retiree Healthcare Trust



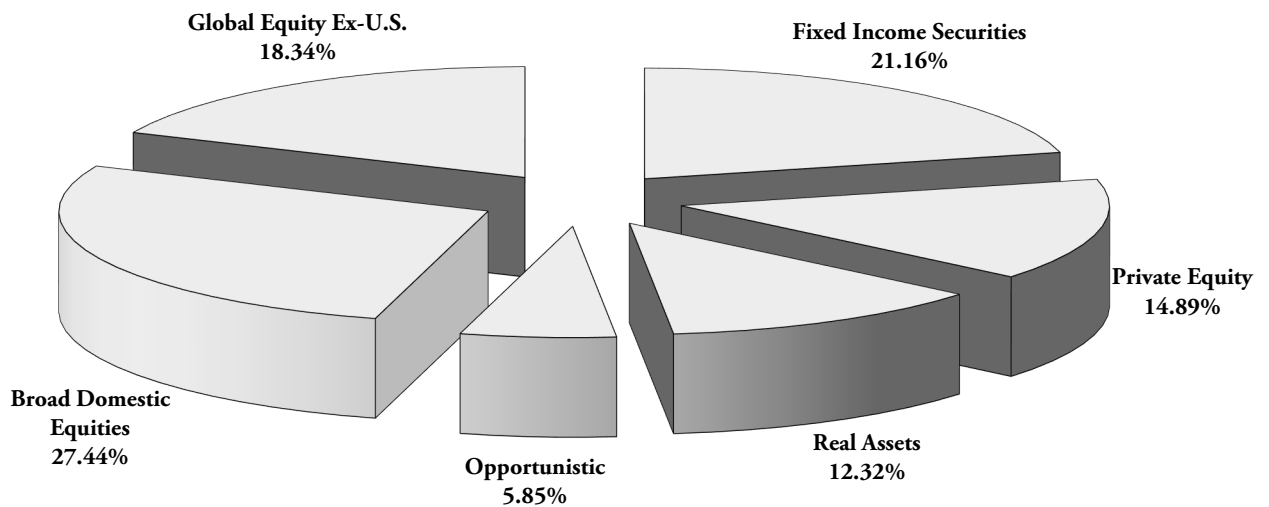
Investment Section

Teachers' Retirement System Asset Allocation June 30, 2021

Actual — Health Reimbursement Arrangement

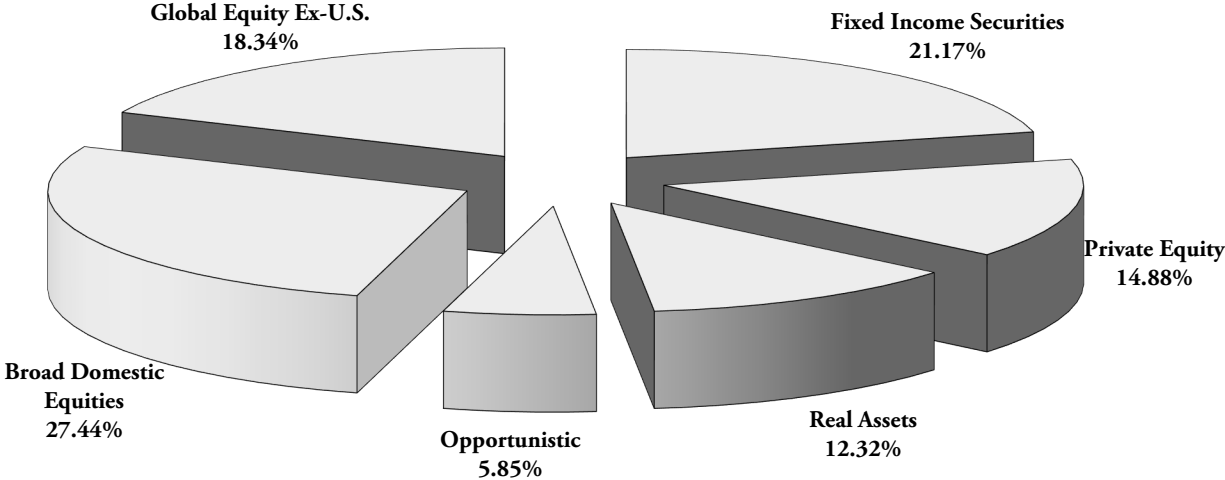


Actual — Occupational Death & Disability



**Teachers' Retirement System
Asset Allocation
June 30, 2021**

Actual — Retiree Medical Plan



Investment Section

Alaska Retirement Management Board Top Ten Holdings by Asset Type June 30, 2021

Invested assets under the fiduciary responsibility of the Alaska Retirement Management Board (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

<u>Rank</u>	<u>Largest Fixed Income Holdings</u>	<u>Market Value</u>	<u>Par Value</u>
1	U.S. Treasury N/B 0.5% 5/31/2027	\$95,370,600	\$98,510,626
2	FED HM LN Pool RA1568 3% 10/01/2049	42,638,159	40,432,660
3	U.S. Treasury N/B 0.5% 6/30/20271	28,952,293	29,934,519
4	FNMA Pool MA3305 3.5% 3/01/2048	27,553,805	26,060,425
5	U.S. Treasury N/B 1.875% 2/15/2041	25,728,858	26,283,271
6	FNMA Pool MA4281 2% 3/01/2051	21,465,448	21,245,009
7	FNMA Pool MA4182 2% 11/01/2050	20,972,492	20,757,307
8	U.S. Treasury N/B 2.875% 5/15/2028	16,727,480	15,058,144
9	FNMA Pool MA4255 2% 2/01/2051	16,628,687	16,457,920
10	U.S. Treasury N/B 1.125% 2/15/2031	16,356,203	16,848,495

Equities

<u>Rank</u>	<u>Largest Equity Holdings</u>	<u>Market Value</u>	<u>Par Value</u>
1	Apple Inc.	\$119,771,235	\$878,539
2	Microsoft Corp	116,645,779	429,793
3	Amazon.com Inc.	87,921,881	25,498
4	Facebook Inc. Class A	59,315,776	168,563
5	Alphabet Inc. CL A	48,650,652	19,894
6	Alphabet Inc. CL C	39,532,182	15,685
7	Berkshire Hathaway Inc. CL B	32,110,822	116,255
8	Tesla Inc.	28,218,981	41,452
9	JPMorgan Chase + Co	27,919,593	181,131
10	UnitedHealth Group Inc.	27,647,861	69,450

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, 2021**

	Fair Value	Fees
Investment Management		
Total Fixed Income	\$ 646,763,564	3,993,435
Total Opportunistic	628,060,024	2,188,039
Total Broad Domestic Equity	2,948,816,516	338,468
Total Global Equity Ex-U.S.	1,970,384,385	2,731,045
Total Private Equity	1,599,145,995	4,946,975
Total Real Assets	1,322,484,710	7,314,397
 Custodian		
State Street Bank		482,520
 Investment Advisory and Performance		
Callan Associates		183,562
Investment Advisory Council		21,399
Total Investment Advisory and Performance		204,961
 Participant Directed		
Custodian - State Street Bank		149,907
Investment Management		872,576
Synthetic Investment Contract Wrap Fees		93,699
Total Participant Directed		1,116,182
	\$ 9,115,655,194	23,316,022

Investment Section

Teachers' Retirement System Investment Summary Schedule June 30, 2021

Investments (at Fair Value)	Defined Benefit - Pension			% of Total Assets
	Asset Allocation		Fair Value	
	Policy	Range		
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 55,584,275	
Securities Lending Cash Pool			10,404	
Opportunistic Fixed Income			240,442,237	
ARMB US Aggregate Fixed Income			960,305,279	
Alternative Fixed Income			164,795,025	
Total Fixed Income Securities	22.00%	± 10%	1,421,137,220	21.13%
Opportunistic				
Alternative Equity Strategies Pool			77,706,737	
Tactical Allocation Strategies Pool			249,686,277	
Other Opportunistic Pool			4,073,180	
Alternative Beta Pool			62,052,153	
Total Opportunistic	6.00%	± 4%	393,518,347	5.85%
Broad Domestic Equity				
Large Cap Pool			1,703,280,607	
Small Cap Pool			144,334,859	
Total Broad Domestic Equity	28.00%	± 6%	1,847,615,466	27.47%
Global Equity Ex-U.S.				
International Equity Pool			1,018,254,604	
Emerging Markets Equity Pool			216,312,747	
Total Global Equity Ex-U.S.	19.00%	± 4%	1,234,567,351	18.35%
Private Equity				
Private Equity Pool			1,001,963,605	
Total Private Equity	12.00%	± 6%	1,001,963,605	14.89%
Real Assets				
Real Estate Pool			306,251,399	
Real Estate Investment Trust Pool			108,031,522	
Infrastructure Private Pool			148,816,172	
Energy Pool			12,415,359	
Farmland Pool			179,629,764	
Timber Pool			73,228,043	
Total Real Assets	13.00%	± 7%	828,372,259	12.31%
Total Invested Assets	100.00%		\$ 6,727,174,248	100.00%

Investment Section

Teachers' Retirement System Investment Summary Schedule June 30, 2021

Investments (at Fair Value)	Defined Contribution - Participant Directed			% of Total Assets
	Asset Allocation		Fair Value	
	Policy	Range		
Cash and Cash Equivalents				
Short-Term Fixed Income Pool	100.00%	0%	\$ 336,150	
Total Cash and Cash Equivalents			336,150	0.04%
Pooled Investment Funds (1)				
T. Rowe Price				
Alaska Balanced Trust			18,592,674	
Long-Term Balanced Fund			4,659,876	
Target 2010 Trust			1,255,230	
Target 2015 Trust			3,978,965	
Target 2020 Trust			13,928,634	
Target 2025 Trust			27,807,268	
Target 2030 Trust			37,588,789	
Target 2035 Trust			52,170,971	
Target 2040 Trust			61,849,693	
Target 2045 Trust			89,642,327	
Target 2050 Trust			125,687,047	
Target 2055 Trust			81,147,664	
Target 2060 Trust			2,357,497	
Target 2065 Trust			345,420	
Total Pooled Investment Funds			521,012,055	64.03%
Collective Investment Funds (1)				
State Street Global Advisors				
SSgA Treasury Money Market Fund			4,314,575	
S&P Stock Index Fund			22,480,176	
Russell 3000 Index			28,431,143	
World Equity Ex-U.S. Index			19,943,664	
Passive U.S. Bond Index Fund			32,624,034	
Brandes Institutional				
Alaska International Equity Fund			47,002,046	
BlackRock Institutional Trust Company				
Strategic Completion Fund			1,549,648	
RCM				
Sustainable Core Opportunities Fund			37,978,939	
T. Rowe Price				
Small-Cap Stock Fund			51,739,917	
Total Collective Investment Funds			246,064,142	30.24%
Synthetic Investment Funds (1)				
T. Rowe Price				
Stable Value Fund			46,335,912	
Total Collective Investment Funds			46,335,912	5.69%
Total Invested Assets			\$ 813,748,259	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.

Investment Section

Teachers' Retirement System Investment Summary Schedule June 30, 2021

Investments (at Fair Value)	Defined Benefit - Alaska Retiree Health Care Trust			% of Total Assets
	Policy	Range	Fair Value	
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 28,731,389	
Securities Lending Cash Pool			5,764	
Opportunistic Fixed Income Pool			133,535,849	
ARMB US Aggregate Fixed Income			533,330,404	
Alternative Fixed Income			91,523,179	
Total Fixed Income Securities	22.00%	± 10%	787,126,585	21.08%
Opportunistic				
Alternative Equity Strategies Pool			43,156,428	
Tactical Allocation Strategies Pool			138,669,783	
Other Opportunistic Pool			2,262,119	
Alternative Beta Pool			34,462,243	
Total Opportunistic	6.00%	± 4%	218,550,573	5.85%
Broad Domestic Equity				
Large Cap Pool			945,961,009	
Small Cap Pool			80,160,127	
Total Broad Domestic Equity	28.00%	± 6%	1,026,121,136	27.48%
Global Equity Ex-U.S.				
International Equity Pool			565,514,073	
Emerging Markets Equity Pool			120,134,870	
Total Global Equity Ex-U.S.	19.00%	± 4%	685,648,943	18.36%
Private Equity				
Private Equity Pool			556,466,437	
Total Private Equity	12.00%	± 6%	556,466,437	14.90%
Real Assets				
Real Estate Pool			170,450,623	
Real Estate Investment Trust Pool			59,998,080	
Infrastructure Private Pool			82,648,983	
Energy Pool			6,895,159	
Farmland Pool			99,762,025	
Timber Pool			40,669,115	
Total Real Assets	13.00%	± 7%	460,423,985	12.33%
Total Invested Assets	100.00%		\$ 3,734,337,659	100.00%

**Teachers' Retirement System
Investment Summary Schedule
June 30, 2021**

Investments (at Fair Value)	Health Reimbursement Arrangement		Fair Value	% of Total Assets
	Policy	Range		
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 1,770,120	
Securities Lending Cash Pool			306	
Opportunistic Fixed Income Pool			7,145,988	
ARMB US Aggregate Fixed Income			28,540,334	
Alternate Fixed Income			4,897,705	
Total Fixed Income Securities	22.00%	± 10%	42,354,453	21.17%
Opportunistic				
Alternative Equity Strategies Pool			2,309,448	
Tactical Allocation Strategies Pool			7,420,722	
Other Opportunistic Pool			121,044	
Alternative Beta Pool			1,844,169	
Total Opportunistic	6.00%	± 4%	11,695,383	5.85%
Broad Domestic Equity				
Large Cap Pool			50,621,665	
Small Cap Pool			4,289,650	
Total Broad Domestic Equity	28.00%	± 6%	54,911,315	27.44%
Global Equity Ex-U.S.				
International Equity Pool			30,262,656	
Emerging Markets Equity Pool			6,428,890	
Total Global Equity Ex-U.S.	19.00%	± 4%	36,691,546	18.34%
Private Equity				
Private Equity Pool			29,778,512	
Total Private Equity	12.00%	± 6%	29,778,512	14.88%
Real Assets				
Real Estate Pool			9,121,403	
Real Estate Investment Trust Pool			3,210,702	
Infrastructure Private Pool			4,422,795	
Energy Pool			368,952	
Farmland Pool			5,338,595	
Timber Pool			2,176,387	
Total Real Assets	13.00%	± 7%	24,638,834	12.32%
Total Invested Assets	100.00%		\$ 200,070,043	100.00%

Investment Section

Teachers' Retirement System Investment Summary Schedule June 30, 2021

Investments (at Fair Value)	Occupational Death and Disability			% of Total Assets
	Asset Allocation		Fair Value	
	Policy	Range		
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 57,714	
Securities Lending Cash Pool			10	
Opportunistic Fixed Income Pool			235,435	
ARMB US Aggregate Fixed Income			940,255	
Alternative Fixed Income			161,335	
Total Fixed Income Securities	22.00%	± 10%	1,394,749	21.16%
Opportunistic				
Alternative Equity Strategies Pool			76,086	
Tactical Allocation Strategies Pool			244,464	
Other Opportunities Pool			3,984	
Alternative Beta Pool			60,777	
Total Opportunistic	6.00%	± 4%	385,311	5.85%
Broad Domestic Equity				
Large Cap Pool			1,667,607	
Small Cap Pool			141,338	
Total Broad Domestic Equity	28.00%	± 6%	1,808,945	27.44%
Global Equity Ex-U.S.				
International Equity Pool			996,918	
Emerging Markets Equity Pool			211,759	
Total Global Equity Ex-U.S.	19.00%	± 4%	1,208,677	18.34%
Private Equity				
Private Equity Pool			981,041	
Total Private Equity	12.00%	± 6%	981,041	14.89%
Real Assets				
Real Estate Pool			300,485	
Real Estate Investment Trust Pool			105,785	
Infrastructure Private Pool			145,747	
Energy Pool			12,148	
Farmland Pool			175,854	
Timber Pool			71,706	
Total Real Assets	13.00%	± 7%	811,725	12.32%
Total Invested Assets	100.00%		\$ 6,590,448	100.00%

**Teachers' Retirement System
Investment Summary Schedule
June 30, 2021**

Investments (at Fair Value)	Retiree Medical Plan			% of Total Assets
	Asset Allocation		Fair Value	
	Policy	Range		
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 589,279	
Securities Lending Cash Pool			102	
Opportunistic Fixed Income Pool			2,389,282	
ARMB US Aggregate Fixed Income			9,542,422	
Alternative Fixed Income			1,637,529	
Total Fixed Income Securities	22.00%	± 10%	14,158,614	21.17%
Opportunistic				
Alternative Equity Strategies Pool			772,180	
Tactical Allocation Strategies Pool			2,481,156	
Other Opportunities Pool			40,462	
Alternative Beta Pool			616,612	
Total Opportunistic	6.00%	± 4%	3,910,410	5.85%
Broad Domestic Equity				
Large Cap Pool			16,925,370	
Small Cap Pool			1,434,283	
Total Broad Domestic Equity	28.00%	± 6%	18,359,653	27.44%
Global Equity Ex-U.S.				
International Equity Pool			10,118,349	
Emerging Markets Equity Pool			2,149,518	
Total Global Equity Ex-U.S.	19.00%	± 4%	12,267,867	18.34%
Private Equity				
Private Equity Pool			9,956,400	
Total Private Equity	12.00%	± 6%	9,956,400	14.88%
Real Assets				
Real Estate Pool			3,049,725	
Real Estate Investment Trust Pool			1,073,510	
Infrastructure Private Pool			1,478,725	
Energy Pool			123,343	
Farmland Pool			1,784,971	
Timber Pool			727,634	
Total Real Assets	13.00%	± 7%	8,237,908	12.32%
Total Invested Assets	100.00%		\$ 66,890,852	100.00%

Investment Section

Teachers' Retirement System Recaptured Commission Fees Year Ended June 30, 2021

<u>Fund</u>	<u>Opportunistic</u>	<u>Total</u>
Defined Benefit Plan – Pension	\$ 2,318	2,318
Postemployment Benefit – Alaska Retiree Healthcare Trust	1,266	1,266
Postemployment Benefit – Health Reimbursement Arrangement	65	65
Postemployment Benefit – Retiree Medical Plan	22	22
Postemployment Benefit – Occupational Death & Disability	2	2
Total Recapture Commission Fees	<u>\$ 3,673</u>	<u>3,673</u>

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.