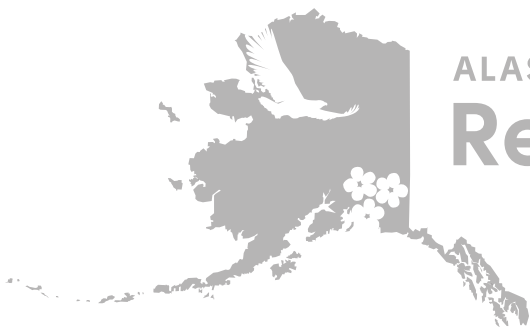




INVESTMENT SECTION



ALASKA DIVISION OF
**Retirement
and Benefits**



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



Main 303.861.1900
Fax 303.832.8230

www.callan.com

October 23, 2020

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, 2020.

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 the ARM Board's (Board) 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, the 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, the Board selects a strategic investment policy that balances long-term growth potential and acceptable risk. A policy benchmark is constructed that mirrors the Board'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 the ARMB's investment policy.

Investment Section

2020 Fiscal Year Market Overview

Despite a steep drop in the U.S. equity market during the first quarter of calendar year 2020 due to the COVID-19 pandemic, the U.S. equity markets finished fiscal year 2020 with a gain for the eleventh consecutive fiscal year. The Russell 3000 Index, a measure of broad U.S. equity, returned 6.53% in the period ended June 30, 2020. Non-U.S. stocks trailed their U.S. counterparts as major economies outside of the U.S. struggle to find growth while battling a global pandemic. The MSCI ACWI ex-U.S. IMI (Net) index, a broad benchmark reflecting developed and emerging markets but excluding U.S. equities dropped -4.74%. A broad measure of the total global equity market (including the U.S.), the MSCI All Country World Index (Net), rose 2.11%.

The Federal Reserve acted quickly to backstop the U.S. economy in the face of COVID-19, slashing interest rates and flattening the yield curve across all maturities. The Bloomberg U.S. Aggregate Bond Index, a widely-used gauge of the investment grade domestic U.S. bond market, climbed 8.74%. Prospective returns appear bleak given this low rate environment. Private real estate, as measured by the NCREIF Property Index, was positive for the ninth fiscal year in a row. In fiscal year 2020, the NCREIF Property Index returned 2.69% as the retail and hotel sectors faced increased pressure from the COVID-induced economic slowdown. Publicly traded real estate, as measured by the FTSE NAREIT All Equity Index, meaningfully lagged the private markets, dipping -6.47%.

ARMB's actual asset groupings delivered the following one-year returns through June 30, 2020¹:

Domestic Stocks:	2.62%
Global ex-U.S. Stocks:	(3.59%)
Opportunistic:	0.52%
Fixed Income:	7.31%
Real Assets:	2.06%
Private Equity:	10.47%

For the fiscal year ended 30 June 2020, the Public Employees Retirement System (PERS) had a time-weighted total return of 3.83%. The Teachers Retirement System (TRS) had a time-weighted total return of 3.83%. Both systems' gross return trailed their strategic policy target return of 4.64% but exceeded the median return for Callan's Public Fund Sponsor database of 3.26%.

Over longer trailing periods, PERS and TRS have outperformed their target index returns. PERS's 5-year annualized return was 6.46%. TRS also returned 6.46% over this same period. The 5-year annualized benchmark return for both Plans was 6.24%. The seven-year annualized return was 7.64% for PERS and 7.65% for TRS. Both were above the 7-year target return of 7.18%. Over 28.75 years – the longest period of available data – PERS and TRS achieved annualized total returns of 7.60% and 7.65%, respectively. Both exceeded the corresponding policy benchmark return of 7.49%.

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

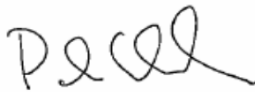
The 2020 fiscal-year returns of the PERS and TRS pension (“DB”) and health care (“HC”) programs are listed in the table below.

	PERS DB	PERS HC	TRS DB	TRS HC
FY 2020	3.83%	3.90%	3.82%	3.90%

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 2020 was a year in which the ARMB’s Total Fund returns were positive, as were those of most broad asset class returns. Only international stocks posted a loss in fiscal 2020. PERS and TRS produced higher returns than the average public fund, both ranking in the 41st percentile within the Public Fund Sponsor peer group for the one-year period ended June 30, 2020.

Sincerely,



Paul Erlendson
Senior Vice President

c: Zach Hanna
Steven Center

Investment Section

Department of Revenue Treasury Division Staff As of June 30, 2020

Commissioner

Lucinda Mahoney

Deputy Commissioner

Mike Barnhill

Treasury Division Director

Pamela Leary, CPA

Chief Investment Officer

Bob G. Mitchell

Comptroller

Kayla Wisner, CPA

Cash Management

Jesse Blackwell

ARMB Liaison Officer

Stephanie Alexander

Investment Officers

Casey Colton

Emily Howard

Josh McLin

Kevin Elliot

Kevin Liu

Mark Moon

Michelle Prebula

Nicholas Orr

Sean Howard

Shane Carson

Stephanie Pham

Stephen Sikes

Victor Djajalie

Zachary Hanna

External Money Managers and Consultants

Domestic Equity Small Capitalization

ArrowMark Partners

Denver, CO

BMO Global Asset Management

Chicago, IL

Frontier Capital Management

Boston, MA

Jennison Associates LLC

New York, NY

Sycamore Capital Management

Cincinnati, OH

T. Rowe Price Investment Services

Baltimore, MD

Domestic Equity Micro Capitalization

DePrince, Race & Zollo, Inc.

Winter Park, FL

Lord Abbett & Co.

Jersey City, NJ

Zebra Capital Management

Stanford, CT

International Small Capitalization

Mondrian Investment Partners

London, England

Schroders Investment Management NA

London, England

Emerging Market Income

Lazard Asset Management

New York, NY

International Fixed Income

Mondrian Investment Partners

London, England

Schroder Investment Management NA

New York, NY

High Yield/Convertible Bond/Tactical Bond

Fidelity Investment Asset Management

Smithfield, RI

MacKay Shields LLC

New York, NY

Tactical Asset Allocation

PineBridge Investments

New York, NY

McKinley Capital Management, Inc.

Anchorage, AK

Fidelity Investment Asset Management

Smithfield, RI

International Equity – MSCI ACWI Ex-U.S. IMI (Net), Emerging Markets, Non U.S., and Global Equity

Arrowstreet Capital, LP

Boston, MA

BlackRock

San Francisco, CA

Baillie Gifford Overseas Ltd.

Edinburgh, Scotland

Brandes Investment Partners, L.P.

San Diego, CA

Capital Group Trust Co.

Los Angeles, CA

DePrince, Race & Zollo, Inc

Winter Park, FL

Lazard Asset Management

New York, NY

Legal and General Investment Management America

Chicago, IL

Parametric Clifton

Seattle, WA

State Street Global Advisors

San Francisco, CA

Alternate Beta

J.P. Morgan Asset Management

New York, NY

Man Group

London, UK

Zebra Capital Management

Stanford, CT

Alternate Fixed Income

Crestline Investors, Inc

Fort Worth, TX

Prisma Capital

New York, NY

Alternative Equity

Analytic Investors

Los Angeles, CA

State Street Global Advisors

San Francisco, CA

Tactical Fixed Income

Fidelity Investment Asset Management

Merrimack, NH

Taxable Municipal Bonds

Western Asset Management Company

Pasadena, CA

External Money Managers and Consultants

Private Equity

Abbott Capital Management, L.P.
New York, NY
 Angelo, Gordon & Co.
New York, NY
 Advent International,
Boston, MA
 Clearlake Capital
Santa Monica, CA
 Dyal Capital Partners
New York, NY
 Glendon Capital
Santa Monica, CA
 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
Irvine, TX
 Onex
New York, NY
 Pathway Capital Management, LLC
Irvine, CA
 Summit Partners
Boston, MA
 The Jordan Company
New York, NY
 Warburg Pincus
New York, NY

Supplemental Benefits System, Deferred Compensation Plan and Defined Contribution Plan

BlackRock
San Francisco, CA
 Baillie Gifford Overseas Ltd
Edinburgh, Scotland
 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
 The Townsend Group
San Francisco, CA

Investment Advisory Council

Jerrold Mitchell
Wayland, MA
 Ruth Ryerson
Colorado Springs, CO
 William Jennings
Colorado Springs, CO

Independent Auditors

KPMG, LLP
Anchorage, AK

Actuaries

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

Master Limited Partnerships

Advisory Research
St. Louis, MO
 Tortoise Capital Advisors LLC
Leawood, KS

Global Master Custodian

State Street Bank & Trust Co.
Boston, MA

Real Assets – Real Estate Core Separate Accounts

LaSalle Investment Management
Chicago, IL
 Sentinel Real Estate Corporation
New York, NY
 UBS Realty Investors, LLC
Hartford, CT

Real Assets – Energy

EIG Global Energy Partners
Washington, DC

Real Assets – Infrastructure

Brookfield Investment Management
New York, NY
 IFM
New York, NY
 JP Morgan Asset Management
New York, NY
 Lazard Asset Management
New York, NY

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

Real Assets – Farmland and Timber

Hancock Agricultural Investment Group
Boston, MA
 Hancock Timber Resource Group
Boston, MA
 Timberland Investment Resources LLC
Atlanta, GA
 UBS Farmland Investors, LLC
Hartford, CT

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

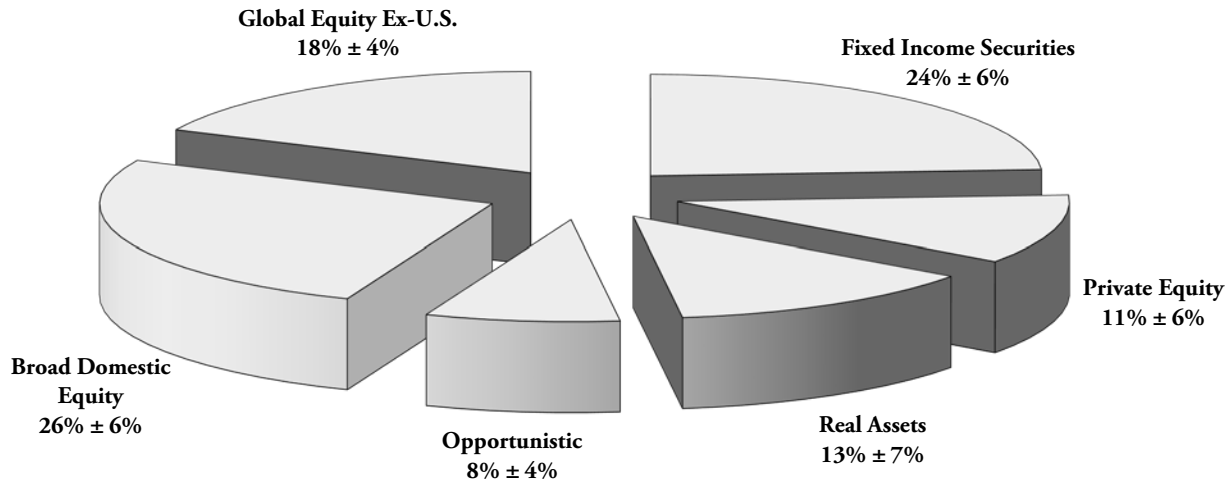
The target asset allocation is determined by the ARMB, utilizing capital market assumptions provided by its independent general investment consultant, Callan LLC. During the 2020 fiscal year, the ARMB's target asset allocation was 26% Broad Domestic Equity, 18% Global Equities Ex-U.S., 24% Fixed Income, 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 7.13% with a standard deviation of 13.8%.

Teachers' Retirement System Schedule of Investment Results Fiscal Years Ended June 30							
	2016	2017	2018	2019	2020	Annualized	
						3 Year	5 Year
Total Fund							
TRS	(0.36%)	13.36%	9.62%	6.39%	3.83%	6.59%	6.46%
<i>Custom Composite Index</i>	-	-	-	5.65	4.64	6.17	6.24
<i>Actuarial Earnings Rate</i>	8.00	8.00	8.00	7.38	7.38	7.38	7.38
Broad Domestic Equity							
TRS	0.58	18.55	15.22	8.40	2.62	8.62	8.85
<i>Custom Composite Index</i>	2.14	18.51	14.78	8.98	6.53	10.04	10.03
Fixed Income							
TRS	5.15	2.91	(0.71)	6.34	7.31	4.25	4.16
<i>Custom Composite Index</i>	4.79	0.02	(0.76)	6.19	7.67	4.30	3.47
Opportunistic							
TRS	-	-	5.63	7.21	0.52	4.42	-
<i>Custom Composite Index</i>	-	-	8.39	9.72	9.32	9.14	-
Real Assets							
TRS	4.76	5.98	7.53	6.09	2.06	5.20	5.27
<i>Custom Composite Index</i>	8.87	5.66	4.29	7.23	1.19	4.21	5.41
Global Equity Ex-US							
TRS	(9.15)	20.42	7.95	(0.08)	(3.59)	1.32	2.62
<i>MSCI ACWI ex-US</i>	(9.80)	21.00	7.75	0.26	(4.74)	0.96	2.16
Private Equity							
TRS	4.71	17.04	26.65	17.66	10.47	18.08	15.07
<i>Custom Composite Index</i>	(4.41)	21.04	12.92	2.71	(1.35)	4.59	5.77
Absolute Return							
TRS	(3.09)	8.47	4.78	4.08	-	-	-
<i>3-month Treasury Bill +5%</i>	5.19	5.49	5.18	1.15	-	-	-
Alternative Equity							
TRS	3.41	11.38	-	-	-	-	-
<i>Custom Composite Index</i>	2.09	15.07	-	-	-	-	-
Cash Equivalents							
TRS	0.55	0.80	1.53	2.50	-	-	-
<i>3-month Treasury Bill</i>	0.19	0.49	1.36	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.							

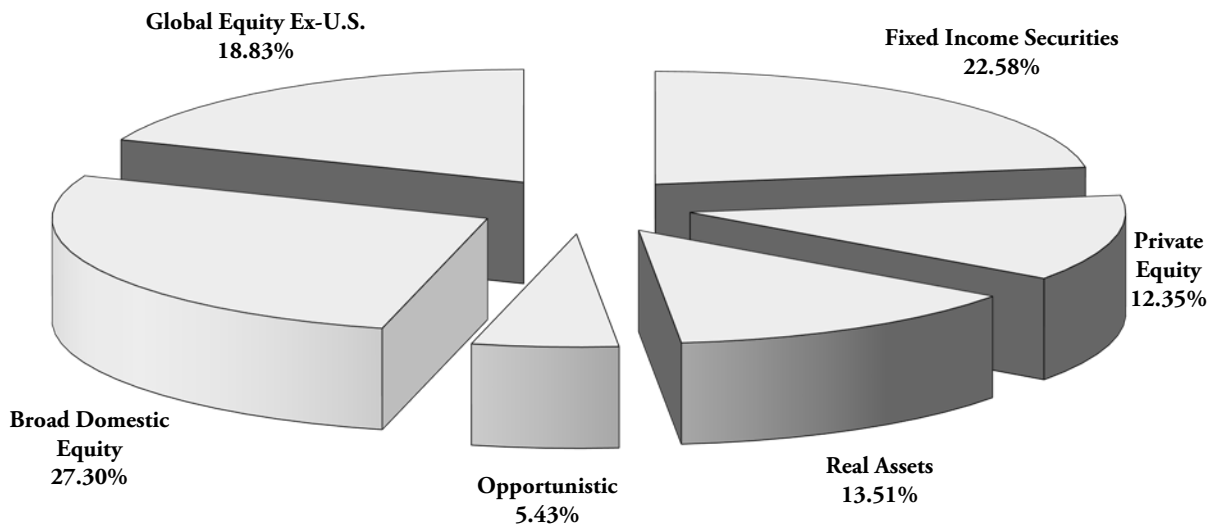
Investment Section

Teachers' Retirement System Asset Allocation June 30, 2020

Policy

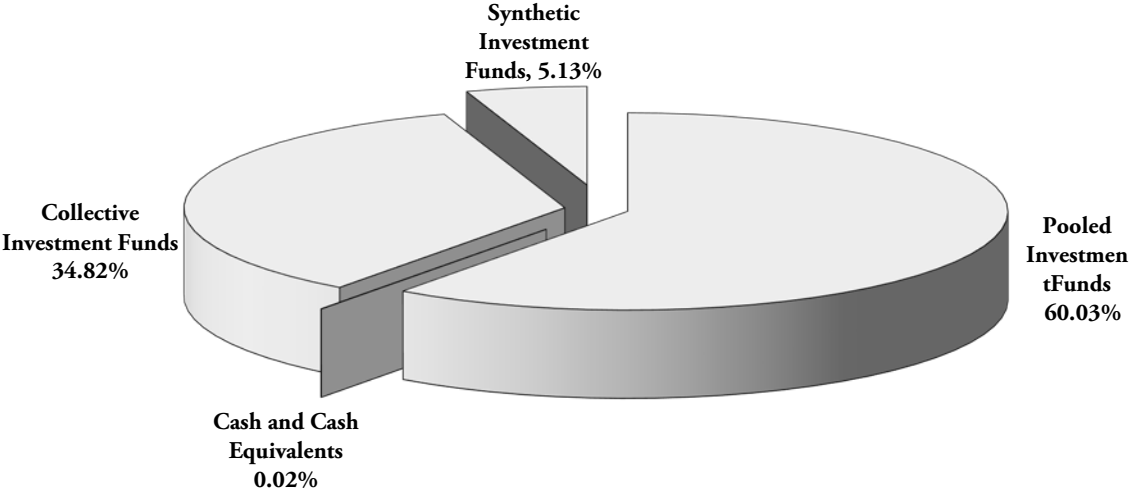


Actual — Defined Benefit Pension

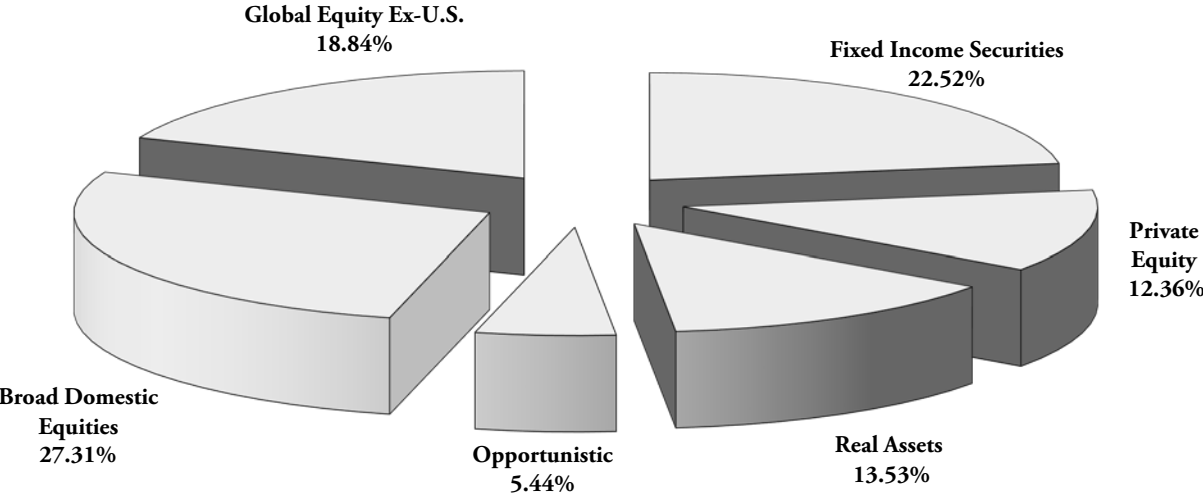


Teachers' Retirement System
Asset Allocation
June 30, 2020

Actual — Defined Contribution Participant Directed



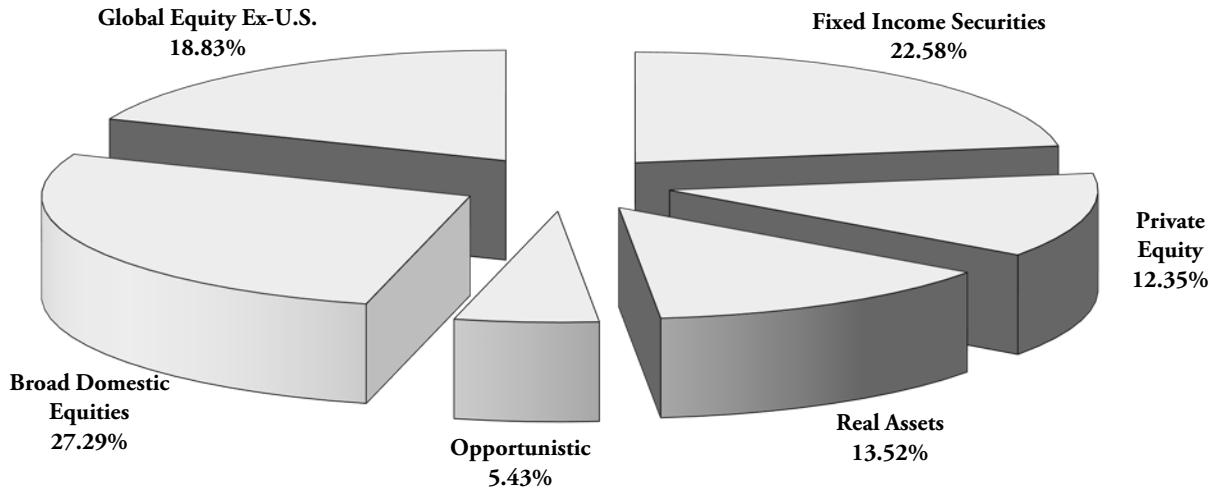
Actual — Defined Benefit Alaska Retiree Healthcare Trust



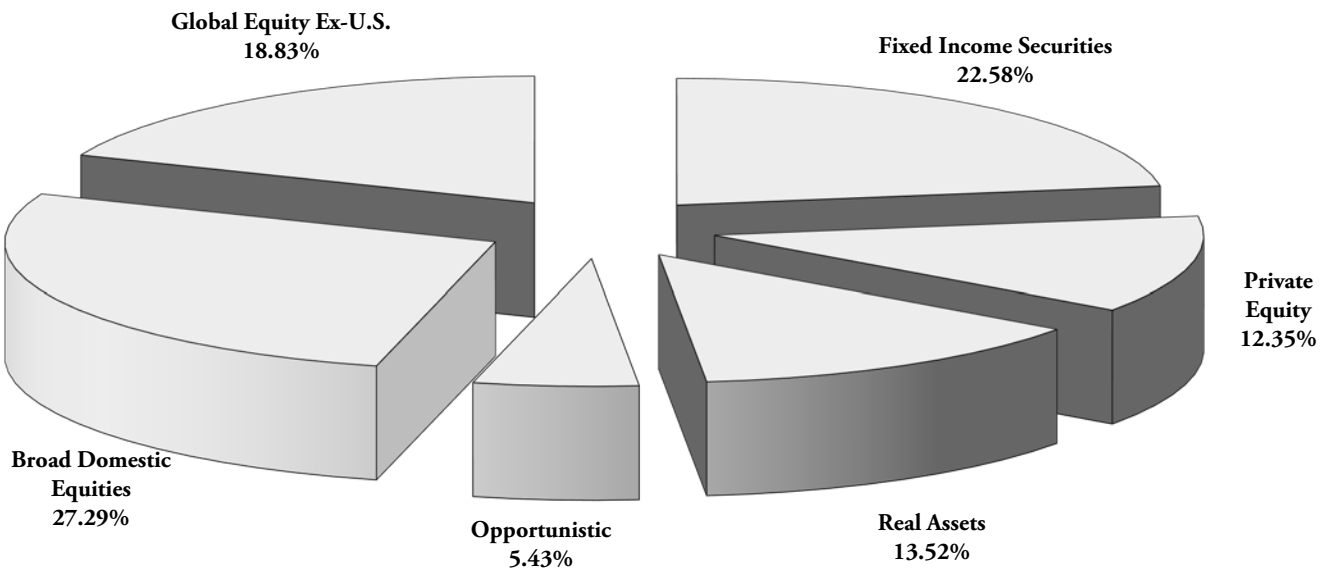
Investment Section

Teachers' Retirement System Asset Allocation June 30, 2020

Actual — Health Reimbursement Arrangement

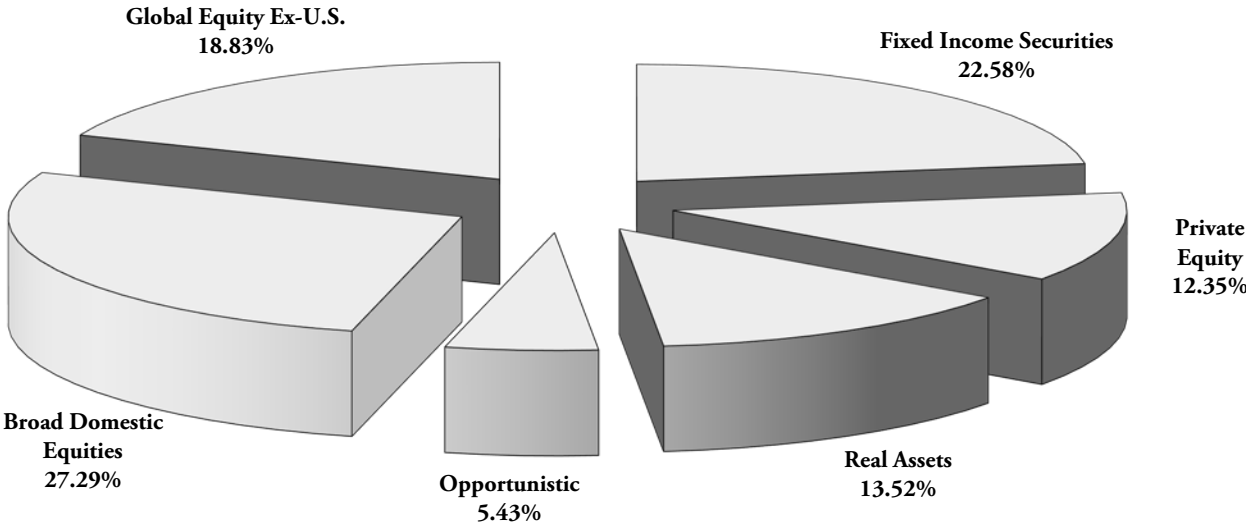


Actual — Occupational Death & Disability



Teachers' Retirement System
Asset Allocation
June 30, 2020

Actual — Retiree Medical Plan



Investment Section

Alaska Retirement Management Board Top Ten Holdings by Asset Type June 30, 2020

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	FNCL Pool RA 15683	\$64,633,483	\$60,980,094
2	FNMA Pool CA4792	34,705,672	32,929,976
3	U.S. Treasury 2.125% 8/15/2021	33,347,203	32,638,339
4	U.S. Treasury 0.250% 6/15/2023	31,266,064	31,200,251
5	U.S. Treasury 1.250% 7/31/2023	26,608,814	25,760,528
6	U.S. Treasury 3.000% 5/15/2042	21,643,562	16,256,644
7	U.S. Treasury 2.875% 5/15/2028	20,563,776	17,424,621
8	U.S. Treasury 2.250% 8/15/2049	19,635,113	16,326,985
9	U.S. Treasury 4.000% 6/1/2049	18,024,493	17,013,174
10	U.S. Treasury 3.500% 2/15/2039	15,555,516	10,995,119

Equities

<u>Rank</u>	<u>Largest Equity Holdings</u>	<u>Market Value</u>	<u>Par Value</u>
1	Microsoft Corp.	\$91,075,167	\$447,522
2	Apple Inc.	87,323,781	239,374
3	Amazon.com Inc.	69,058,710	25,032
4	Facebook Inc. Class A	34,199,519	150,612
5	Alphabet Inc. CL A	26,476,077	18,671
6	Alphabet Inc. CL C	23,029,103	16,291
7	Johnson & Johnson	22,929,928	163,051
8	Berkshire Hathaway Inc. CL B	22,925,743	128,428
9	UnitedHealth Group Inc.	21,600,515	73,234
10	JPMorgan Chase & Co.	20,299,384	215,813

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, 2020**

	Fair Value	Fees
Investment Management		
Total Fixed Income	\$ 539,727,301	\$ 3,647,439
Total Opportunistic	468,967,686	2,489,041
Total Broad Domestic Equity	2,347,421,495	374,546
Total Global Equity Ex-U.S.	1,619,524,925	3,348,990
Total Private Equity	965,409,105	4,602,826
Total Real Assets	1,161,207,138	8,022,420
 Custodian		
State Street Bank		405,109
 Investment Advisory and Performance		
Callan Associates		172,146
Investment Advisory Council		16,404
Total Investment Advisory and Performance		188,550
 Participant Directed		
Custodial		41,680
Investment Management		95,537
Synthetic Investment Contract Wrap Fees		43,587
Total Participant Directed		180,804
	\$ 7,102,257,650	\$ 23,259,725

Investment Section

Teachers' Retirement System Investment Summary Schedule June 30, 2020

Investments (at Fair Value)	Asset Allocation		Fair Value	Total Assets
	Policy	Range		
Defined Benefit - Pension				
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 48,789,339	
Securities Lending Cash Pool			21,124	
Opportunistic Fixed Income			177,034,795	
ARMB US Aggregate Fixed Income			834,524,079	
Alternative Fixed Income			167,244,592	
Total Fixed Income Securities	24.00%	± 6%	1,227,613,929	22.58%
Opportunistic				
Alternative Equity Strategies Pool			58,433,880	
Tactical Allocation Strategies Pool			168,177,526	
Other Opportunistic Pool			7,599,425	
Alternative Beta Pool			61,337,357	
Total Opportunistic	8.00%	± 4%	295,548,188	5.43%
Broad Domestic Equity				
Large Cap Pool			1,364,251,162	
Small Cap Pool			120,555,850	
Total Broad Domestic Equity	26.00%	± 6%	1,484,807,012	27.30%
Global Equity Ex-U.S.				
International Equity Pool			847,227,617	
Emerging Markets Equity Pool			177,165,305	
Total Global Equity Ex-U.S.	18.00%	± 4%	1,024,392,922	18.83%
Private Equity				
Private Equity Pool			671,857,952	
Total Private Equity	11.00%	± 6%	671,857,952	12.35%
Real Assets				
Real Estate Pool			273,303,757	
Real Estate Investment Trust Pool			61,122,701	
Infrastructure Private Pool			135,082,263	
Energy Pool			13,518,505	
Farmland Pool			179,174,625	
Timber Pool			72,595,983	
Total Real Assets	13.00%	± 7%	734,797,834	13.51%
Total Invested Assets	100.00%		\$ 5,439,017,837	100.00%

Investment Section

Teachers' Retirement System Investment Summary Schedule June 30, 2020

Investments (at Fair Value)	Defined Contribution - Participant Directed			% of Total Assets
	Asset Allocation Policy	Range	Fair Value	
Cash and Cash Equivalents				
Short-Term Fixed Income Pool	100.00%	0%	\$ 164,404	
Total Cash and Cash Equivalents			164,404	0.03%
Pooled Investment Funds (1)				
T. Rowe Price				
Alaska Balanced Trust			1,914,392	
Long-Term Balanced Fund			2,413,930	
Target 2010 Trust			1,005,412	
Target 2015 Trust			3,826,991	
Target 2020 Trust			11,740,941	
Target 2025 Trust			21,127,862	
Target 2030 Trust			26,640,338	
Target 2035 Trust			37,313,841	
Target 2040 Trust			42,322,518	
Target 2045 Trust			61,273,718	
Target 2050 Trust			86,513,786	
Target 2055 Trust			52,281,824	
Target 2060 Trust			595,055	
Target 2065 Trust			2,903	
Total Pooled Investment Funds			348,973,511	60.03%
Collective Investment Funds (1)				
State Street Global Advisors				
SSgA Treasury Money Market Fund			4,276,168	
S&P Stock Index Fund			18,355,089	
Russell 3000 Index			32,113,173	
World Equity Ex-U.S. Index			25,140,332	
Passive U.S. Bond Index Fund			34,624,749	
Brandes Institutional				
Alaska International Equity Fund			24,390,578	
BlackRock Institutional Trust Company				
Strategic Completion Fund			1,236,314	
RCM				
Sustainable Core Opportunities Fund			22,843,402	
T. Rowe Price				
Small-Cap Stock Fund			39,447,226	
Total Collective Investment Funds			202,427,031	34.82%
Synthetic Investment Funds (1)				
T. Rowe Price				
Stable Value Fund			29,796,986	
Total Collective Investment Funds			29,796,986	5.12%
Total Invested Assets			\$ 581,361,932	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, 2020

Investments (at Fair Value)	Defined Benefit - Alaska Retiree Health Care Trust			Total Assets
	Asset Allocation Policy	Range	Fair Value	
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 24,880,501	
Securities Lending Cash Pool			11,477	
Opportunistic Fixed Income Pool			96,491,919	
ARMB US Aggregate Fixed Income			454,812,007	
Alternative Fixed Income			91,155,819	
Total Fixed Income Securities	24.00%	± 6%	667,351,723	22.52%
Opportunistic				
Alternative Equity Strategies Pool			31,849,091	
Tactical Allocation Strategies Pool			91,664,310	
Other Opportunistic Pool			4,142,028	
Alternative Beta Pool			33,431,616	
Total Opportunistic	8.00%	± 4%	161,087,045	5.44%
Broad Domestic Equity				
Large Cap Pool			743,578,195	
Small Cap Pool			65,708,356	
Total Broad Domestic Equity	26.00%	± 6%	809,286,551	27.31%
Global Equity Ex-U.S.				
International Equity Pool			461,777,127	
Emerging Markets Equity Pool			96,563,053	
Total Global Equity Ex-U.S.	18.00%	± 4%	558,340,180	18.84%
Private Equity				
Private Equity Pool			366,192,778	
Total Private Equity	11.00%	± 6%	366,192,778	12.36%
Real Assets				
Real Estate Pool			149,336,577	
Real Estate Investment Trust Pool			33,314,619	
Infrastructure Private Pool			73,625,904	
Energy Pool			7,368,193	
Farmland Pool			97,658,223	
Timber Pool			39,568,074	
Total Real Assets	13.00%	± 7%	400,871,590	13.53%
Total Invested Assets	100.00%		\$ 2,963,129,867	100.00%

**Teachers' Retirement System
Investment Summary Schedule
June 30, 2020**

<u>Investments (at Fair Value)</u>	Health Reimbursement Arrangement			<u>Total Assets</u>
	<u>Asset Allocation</u>	<u>Policy</u>	<u>Range</u>	
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 1,315,829	
Securities Lending Cash Pool			545	
Opportunistic Fixed Income Pool			4,642,344	
ARMB US Aggregate Fixed Income			21,873,730	
Alternate Fixed Income			4,385,617	
Total Fixed Income Securities	24.00%	± 6%	32,218,065	22.58%
Opportunistic				
Alternative Equity Strategies Pool			1,532,298	
Tactical Allocation Strategies Pool			4,410,081	
Other Opportunistic Pool			199,278	
Alternative Beta Pool			1,608,436	
Total Opportunistic	8.00%	± 4%	7,750,093	5.43%
Broad Domestic Equity				
Large Cap Pool			35,774,451	
Small Cap Pool			3,161,309	
Total Broad Domestic Equity	26.00%	± 6%	38,935,760	27.29%
Global Equity Ex-U.S.				
International Equity Pool			22,216,659	
Emerging Markets Equity Pool			4,645,766	
Total Global Equity Ex-U.S.	18.00%	± 4%	26,862,425	18.83%
Private Equity				
Private Equity Pool			17,617,980	
Total Private Equity	11.00%	± 6%	17,617,980	12.35%
Real Assets				
Real Estate Pool			7,184,764	
Real Estate Investment Trust Pool			1,602,807	
Infrastructure Private Pool			3,542,232	
Energy Pool			354,493	
Farmland Pool			4,698,456	
Timber Pool			1,903,668	
Total Real Assets	13.00%	± 7%	19,286,420	13.52%
Total Invested Assets	100.00%		\$ 142,670,743	100.00%

Investment Section

Teachers' Retirement System Investment Summary Schedule June 30, 2020

<u>Investments (at Fair Value)</u>	<u>Occupational Death and Disability</u>		<u>Fair Value</u>	<u>Total Assets</u>
	<u>Asset Allocation</u>			
	<u>Policy</u>	<u>Range</u>		
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 44,128	
Securities Lending Cash Pool			18	
Opportunistic Fixed Income Pool			155,839	
ARMB US Aggregate Fixed Income			734,324	
Alternative Fixed Income			147,221	
Total Fixed Income Securities	24.00%	± 6%	1,081,530	22.58%
Opportunistic				
Alternative Equity Strategies Pool			51,438	
Tactical Allocation Strategies Pool			148,042	
Other Opportunities Pool			6,690	
Alternative Beta Pool			53,994	
Total Opportunistic	8.00%	± 4%	260,164	5.43%
Broad Domestic Equity				
Large Cap Pool			1,200,916	
Small Cap Pool			106,122	
Total Broad Domestic Equity	26.00%	± 6%	1,307,038	27.29%
Global Equity Ex-U.S.				
International Equity Pool			745,793	
Emerging Markets Equity Pool			155,954	
Total Global Equity Ex-U.S.	18.00%	± 4%	901,747	18.83%
Private Equity				
Private Equity Pool			591,420	
Total Private Equity	11.00%	± 6%	591,420	12.35%
Real Assets				
Real Estate Pool			241,186	
Real Estate Investment Trust Pool			53,805	
Infrastructure Private Pool			118,910	
Energy Pool			11,900	
Farmland Pool			157,723	
Timber Pool			63,904	
Total Real Assets	13.00%	± 7%	647,428	13.52%
Total Invested Assets	100.00%		\$ 4,789,327	100.00%

Investment Section

Teachers' Retirement System Investment Summary Schedule June 30, 2020

<u>Investments (at Fair Value)</u>	<u>Retiree Medical Plan</u>			<u>Total Assets</u>
	<u>Asset Allocation Policy</u>	<u>Range</u>	<u>Fair Value</u>	
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 445,360	
Securities Lending Cash Pool			183	
Opportunistic Fixed Income Pool			1,560,152	
ARMB US Aggregate Fixed Income			7,350,761	
Alternative Fixed Income			1,473,874	
Total Fixed Income Securities	24.00%	± 6%	<u>10,830,330</u>	22.58%
Opportunistic				
Alternative Equity Strategies Pool			514,959	
Tactical Allocation Strategies Pool			1,482,095	
Other Opportunities Pool			66,971	
Alternative Beta Pool			540,547	
Total Opportunistic	8.00%	± 4%	<u>2,604,572</u>	5.43%
Broad Domestic Equity				
Large Cap Pool			12,022,713	
Small Cap Pool			1,062,420	
Total Broad Domestic Equity	26.00%	± 6%	<u>13,085,133</u>	27.29%
Global Equity Ex-U.S.				
International Equity Pool			7,466,348	
Emerging Markets Equity Pool			1,561,302	
Total Global Equity Ex-U.S.	18.00%	± 4%	<u>9,027,650</u>	18.83%
Private Equity				
Private Equity Pool			5,920,871	
Total Private Equity	11.00%	± 6%	<u>5,920,871</u>	12.35%
Real Assets				
Real Estate Pool			2,414,582	
Real Estate Investment Trust Pool			538,655	
Infrastructure Private Pool			1,190,437	
Energy Pool			119,134	
Farmland Pool			1,579,009	
Timber Pool			639,765	
Total Real Assets	13.00%	± 7%	<u>6,481,582</u>	13.52%
Total Invested Assets	100.00%		\$ <u>47,950,138</u>	100.00%

Investment Section

Teachers' Retirement System Recaptured Commission Fees Year Ended June 30, 2020

Fund	Broad Domestic Equity Pool	Global Equity Ex-U.S.	Opportunistic	Real Assets	Total
Defined Benefit Plan – Pension	\$ 1,765	60	972	29	2,826
Postemployment Benefit – Alaska Retiree Healthcare Trust	943	32	519	15	1,509
Postemployment Benefit – Health Reimbursement Arrangement	40	1	24	1	66
Postemployment Benefit – Retiree Medical Plan	13	1	8	-	22
Postemployment Benefit – Occupational Death & Disability	1	-	1	-	2
Total Recapture Commission Fees	<u>\$ 2,762</u>	<u>94</u>	<u>1,524</u>	<u>45</u>	<u>4,425</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.