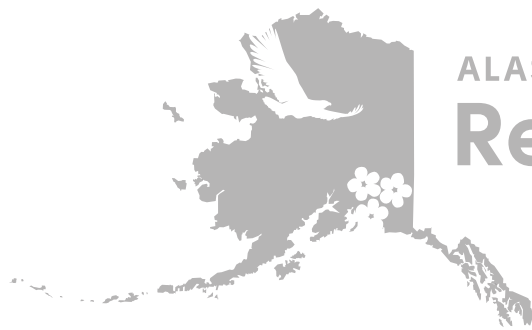




INVESTMENT SECTION



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

September 29, 2022

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, 2022.

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.

2022 Fiscal Year Market Overview

There was no shortage of challenges facing the world as we closed out the 2022 fiscal year: the relentless and tragic war in Ukraine, persistent and widespread inflation, startling rate hikes to the Fed Funds rate, a stubborn virus, and escalating concerns over a slowing global economy. Global bond and stock markets sank, with the S&P 500 Index officially in a bear market. Headline CPI was 8.6% year-over-year (YOY), the highest in four decades. Food and energy prices have risen sharply, and supply chain issues have not been resolved, adding further pressure to prices in some sectors. Central bank rate hikes are expected around the globe (with China

Investment Section

and Japan being exceptions) as inflation is widespread. The economic effects of the Russian invasion of Ukraine have been especially painful in Europe, which has relied heavily on Russia for its energy needs.

In contrast to this gloomy news, the labor market remained strong, with 10.7 million job openings on the last business day of June, according to the U.S. Bureau of Labor Statistics. Job gains have averaged more than 400,000 per month in 2022, and unemployment remains low (3.5% as of June). Housing is another bright spot, unless you are a first-time buyer. Home prices remain sky-high; the S&P CoreLogic Case-Shiller U.S. National Home Price Index jumped 20.5% YOY as of May 2022 while housing inventory remained low.

U.S. equity markets finished the fiscal year 2022 in the red for the first time in five years. The Russell 3000 Index, a measure of broad U.S. equity, was up 9.17% at the end of the 2021 calendar year before falling 5.28% in 1Q and 16.70% in 2Q on concerns over rising rates and a slowing economy; the Index is down 13.87% for the one-year period ended June 30, 2022. Overseas markets were also broadly negative for the fiscal year hurt by elevated energy prices, COVID lockdowns in China, and U.S. dollar strength. The MSCI ACWI ex-U.S. IMI (Net) Index, a broad benchmark reflecting developed and emerging markets, but excluding U.S. equities, declined 14.28% for the quarter and 19.86% for the fiscal year. The MSCI All Country World Index (Net), a broad measure of the total global equity market (including the U.S.), fell 15.66% in for the quarter and 15.75% for the fiscal year.

As expected, the Fed raised rates at its March and May meetings by 25 bps and 50 bps, respectively. May's CPI print wreaked havoc on the markets and spurred the Fed to raise rates by 75 bps in June, the largest hike since 1994, to a 1.50% - 1.75% target with another 75-bps hike expected in July. The Bloomberg U.S. Aggregate Bond Index, a widely used gauge of the investment grade domestic U.S. bond market, had its worst two consecutive quarters in history dropping 5.93% in 1Q and 4.69% in 2Q bringing its fiscal year loss to 10.29%. The 10-year U.S. Treasury hit an intra-quarter high of 3.49% in June, the highest since 2011, before closing the fiscal year at 2.98%.

Commodities were a rare bright spot given their inflation-protection properties as well as war-induced supply concerns. Not surprisingly, Energy (40%) was the best-performing sector given a 33% spike in WTI crude oil prices, followed by utilities (14%).

Private real estate, as measured by the NCREIF Property Index, was positive for the eleventh fiscal year in a row. In fiscal year 2022, the NCREIF Property Index returned 21.45% led by industrial and aided by apartment property. Publicly traded real estate, as measured by the FTSE NAREIT All Equity Index, meaningfully lagged the private markets, returning -6.27% for the fiscal year 2022.

ARMB's actual asset groupings delivered the following one-year returns through June 30, 2022¹:

Domestic Stocks:	-11.74%
Global ex-U.S. Stocks:	-20.96%
Opportunistic:	-10.58%
Fixed Income:	-6.96%
Real Assets:	14.29%
Private Equity:	26.25%

For the fiscal year ended June 30, 2022, the Public Employees Retirement System (PERS) had a time-weighted total return of -4.08%. The Teachers Retirement System (TRS) had a time-weighted total return of -4.10%. Both systems' gross return exceeded their strategic policy target return of -7.86% and the median return for Callan's Public Fund Sponsor database of -9.35%.

Investment Section

Over longer trailing periods, PERS and TRS have outperformed their target index returns. The 5-year annualized return for both PERS and TRS was 8.19% compared to the benchmark return of 6.67% for both Plans. The ten-year annualized return was 8.72% for PERS and 8.73% for TRS. Both were above the 10-year target return of 7.71%. Over 30.75 years – the longest period of available data – PERS and TRS achieved annualized total returns of 7.80% and 7.84%, respectively. Both exceeded the corresponding policy benchmark return of 7.44%.

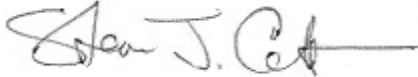
The 2022 fiscal-year returns of the PERS and TRS pension (“DB”) and health care (“HC”) programs are listed in the table below.

	PERS DB	PERS HC	TRS DB	TRS HC
FY 2022	-4.08%	-4.08%	-4.10%	-4.08%

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 2022 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 10th percentile within the Public Fund Sponsor peer group for the one-year period ended June 30, 2022.

Sincerely,



Steve Center
Senior Vice President
c: Zach Hanna
Ivan Cliff

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

Investment Section

**Department of Revenue
Treasury Division Staff
As of June 30, 2022**

Commissioner Lucinda Mahoney	Chief Investment Officer Zachary Hanna	Investment Officers Shane Carson Casey Colton Victor Djajalie Kevin Elliot Benjamin Garrett Emily Howard Sean Howard	Kevin Liu Mark Moon Nicholas Orr Stephanie Pham Michelle Prebula Steve Sikes
Deputy Commissioner Brian Fechter	Acting Comptroller Ryan Kauzlarich		
Treasury Division Director Pamela Leary, CPA	Cash Management Jesse Blackwell ARMB Liaison Officer Alysia Jones		

External Money Managers and Consultants

Alternate Fixed Income

Crestline Investors, Inc.
Fort Worth, TX
Prisma Capital
New York, NY

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
Legal and General Investment Management America
Chicago, IL

Emerging Market Income

Legal and General Investment Management America, Inc.
Chicago, IL
State Street Global Advisors
Boston, MA

Alternative Equity

McKinley Capital Management LLC
Anchorage, AK

Alternate Beta

Man Group
London, UK

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
Angelo, Gordon & Co.
New York, NY
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
Summit Partners
Boston, MA
The Jordan Company
New York, NY
The Riverside Company
New York, NY
Warburg Pincus
New York, NY

Investment Section

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 Separate Accounts

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

Real Assets – Commingled Real Estate Funds

Almanac Realty Investors
New York, NY
BlackRock Realty
New York, NY
Clarion Partners
New York, NY
DigitalBridge Group, Inc (formerly Colony Capital, Inc.)
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
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 Ryerson
Monument, CO
William Jennings
Colorado Springs, CO

Independent Auditors

KPMG, LLP
Anchorage, AK

Actuaries

Buck Global, LLC
Denver, CO
Gabriel, Roeder, Smith & Co.
Denver, CO

Global Master Custodian

State Street Bank & Trust Co.
Boston, MA

Investment Section

Public Employees' Retirement System Investment Report

INVESTMENTS

The investment goals of the State of Alaska Public Employees' 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 Equities, Global Equities Ex-U.S., Fixed Income, Multi-Asset, Real Estate, 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 ACWI Ex-U.S. IMI Net
Fixed Income	95% Bloomberg Barclays U.S. Aggregate 5% 3-Month Treasury Bill
Opportunistic	60% MSCI ACWI 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., 21% Fixed Income, 6% Opportunistic, 14% Real Assets, and 14% 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

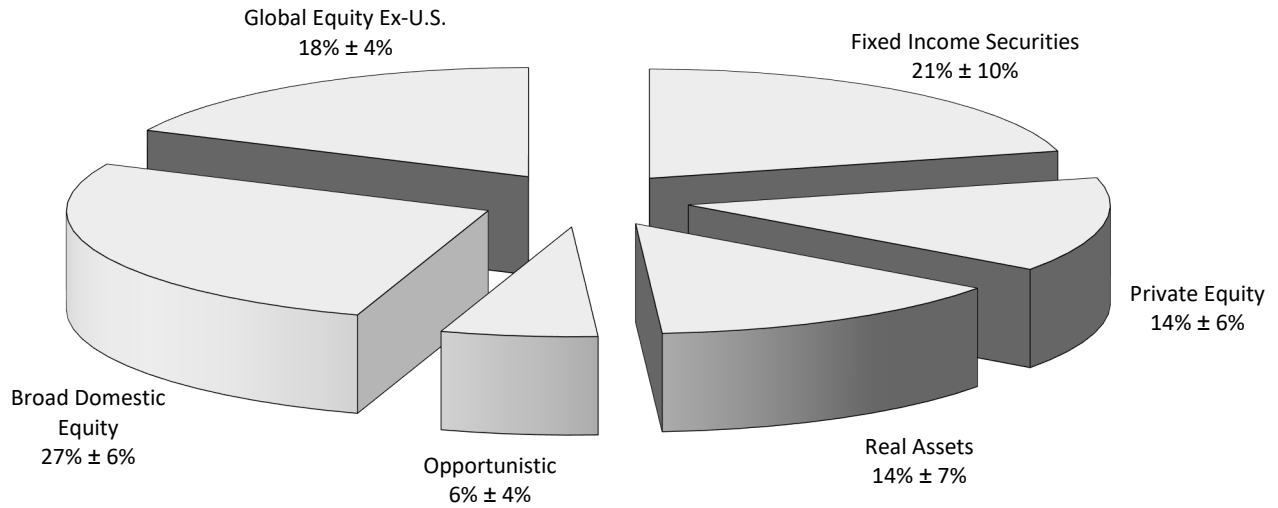
Public Employees' Retirement System Schedule of Investment Results Fiscal Years Ended June 30							
	2018	2019	2020	2021	2022	Annualized	
						3 Year	5 Year
Total Fund							
PERS	9.61%	6.40%	3.83%	27.62%	(4.08%)	8.32%	8.19%
<i>Custom Composite Index</i>	-	5.65	4.64	24.95	(7.86)	6.48	6.67
<i>Actuarial Earnings Rate</i>	8.00	7.38	7.38	7.38	7.38	7.38	7.38
Broad Domestic Equity							
PERS	15.21	8.41	2.62	42.69	(11.74)	8.93	10.05
<i>Custom Composite Index</i>	14.78	8.98	6.53	44.16	(13.87)	9.77	10.60
Fixed Income							
PERS	(0.71)	6.34	7.31	2.20	(6.96)	0.67	1.50
<i>Custom Composite Index</i>	(0.76)	6.19	7.67	(0.31)	(9.78)	(1.07)	0.41
Opportunistic							
PERS	5.64	7.21	0.52	23.86	(10.58)	3.64	4.74
<i>Custom Composite Index</i>	8.39	9.72	9.32	23.20	(13.89)	5.06	6.64
Real Assets							
PERS	7.53	6.08	2.06	9.86	14.29	8.62	7.89
<i>Custom Composite Index</i>	4.29	7.23	1.19	4.62	14.80	7.36	6.71
Global Equity Ex-U.S.							
PERS	7.97	(0.08)	(3.59)	38.54	(20.96)	1.83	2.64
<i>MSCI ACWI ex-U.S.</i>	7.75	0.26	(4.74)	37.18	(19.86)	1.55	2.50
Private Equity							
PERS	26.65	17.66	10.47	50.67	26.25	28.08	25.65
<i>Custom Composite Index</i>	12.92	2.71	(1.35)	36.80	3.42	11.75	10.11
Absolute Return							
PERS	4.78	4.08	-	-	-	-	-
<i>3-month Treasury Bill +5%</i>	5.18	1.15	-	-	-	-	-
Cash Equivalent							
PERS	1.51	2.50	-	-	-	-	-
<i>3-month Treasury Bill</i>	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.

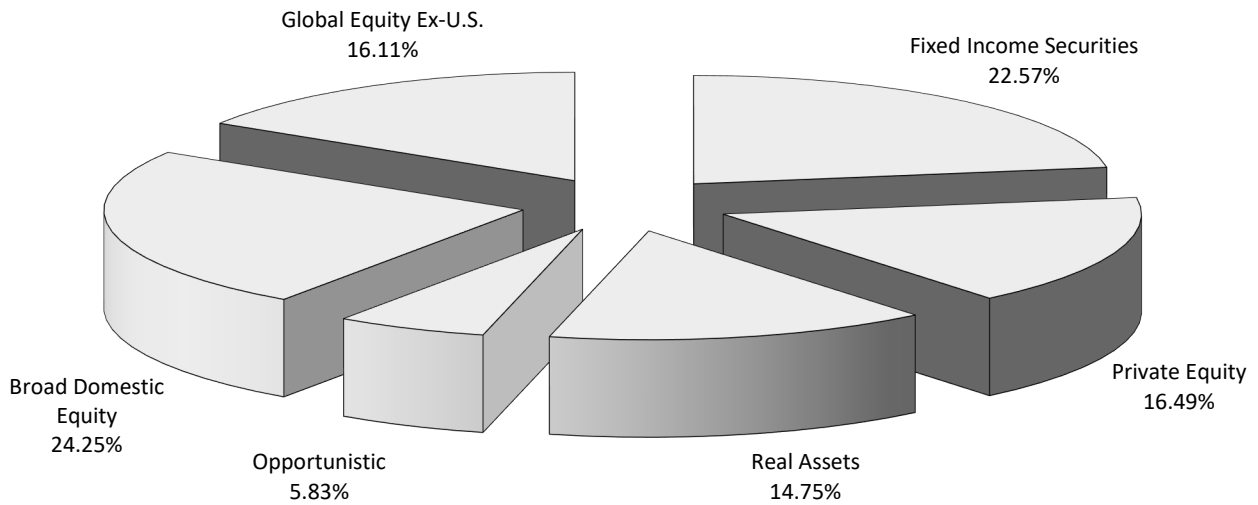
Investment Section

Public Employees' Retirement System Asset Allocation June 30, 2022

Policy



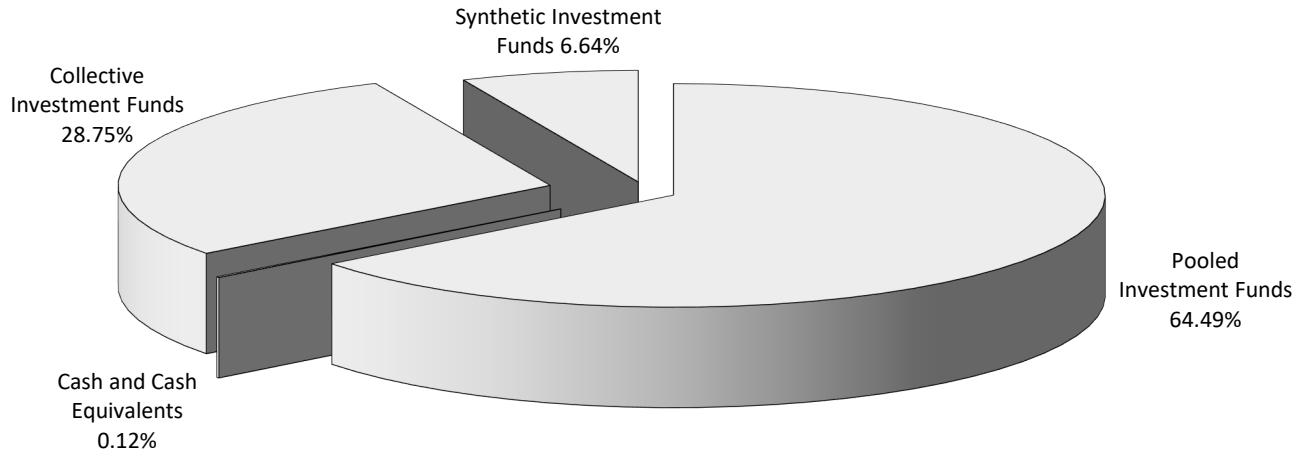
Actual – Defined Benefit Pension



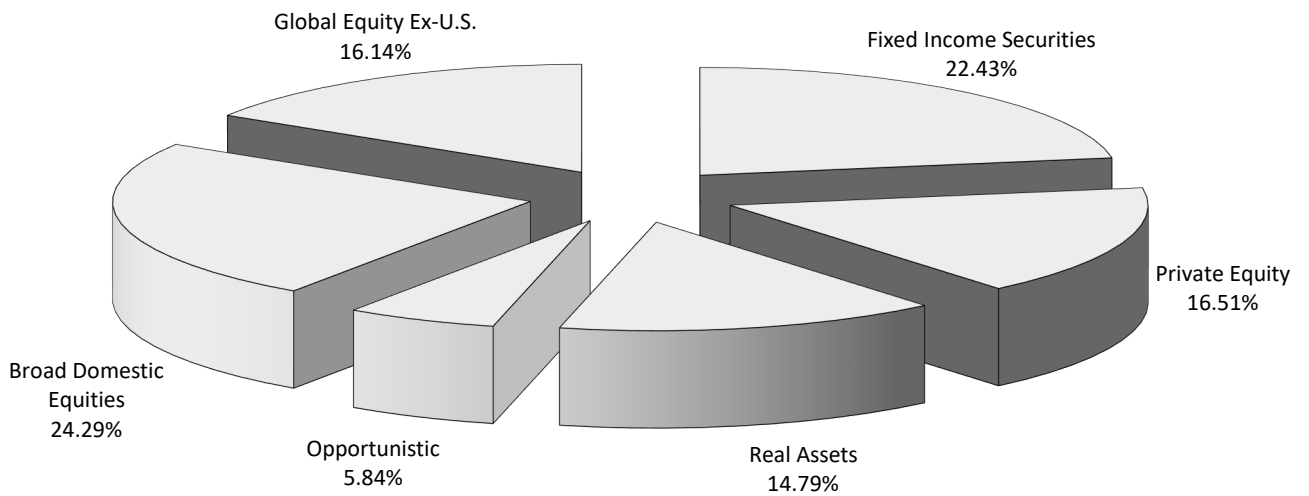
Investment Section

Public Employees' Retirement System Asset Allocation June 30, 2022

Actual – Defined Contribution Participant Directed



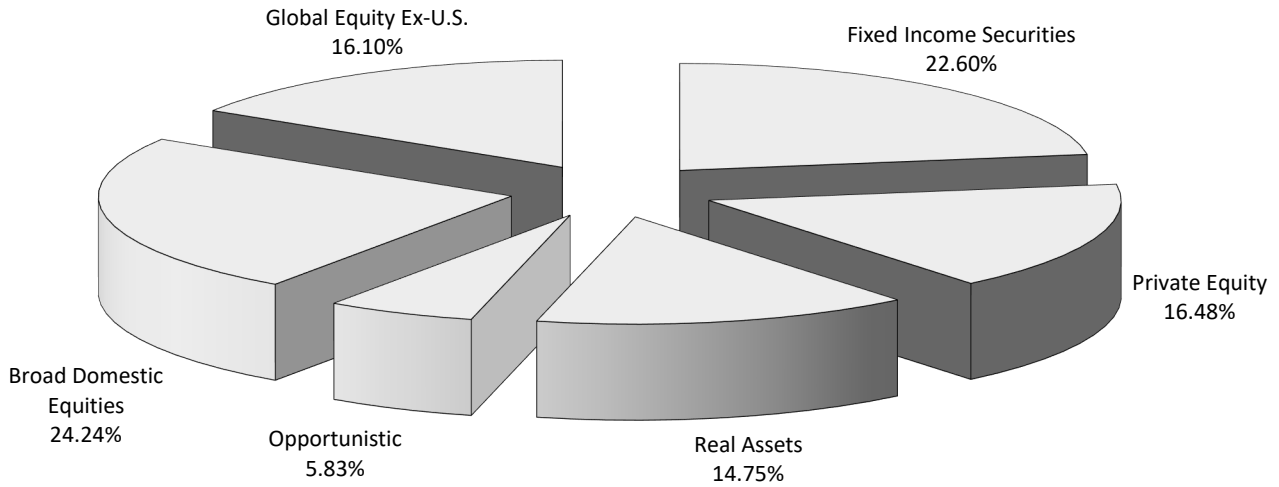
Actual – Defined Benefit Alaska Retiree Healthcare Trust



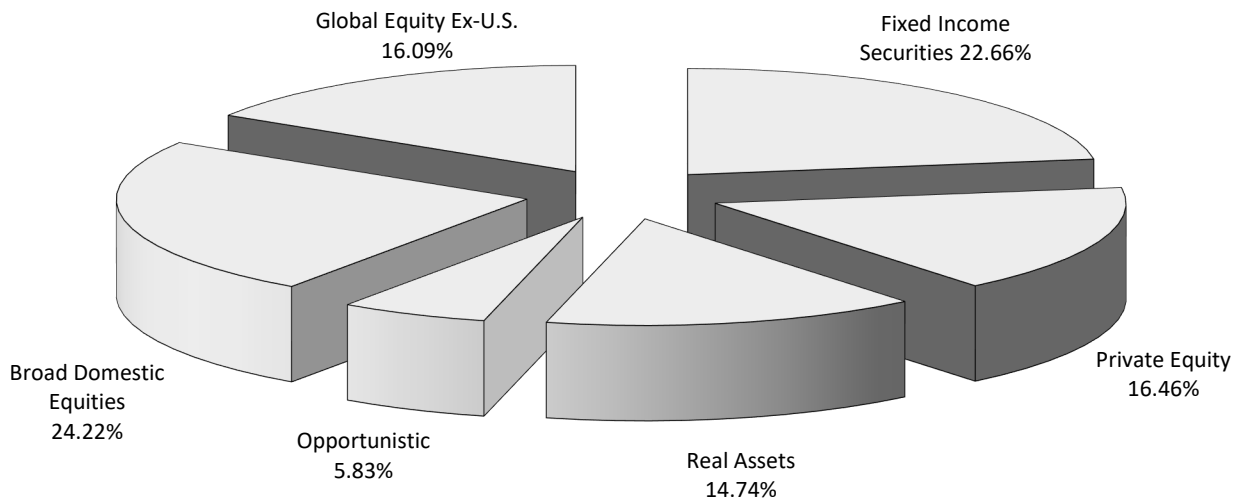
Investment Section

Public Employees' Retirement System Asset Allocation June 30, 2022

Actual — Health Reimbursement Arrangement

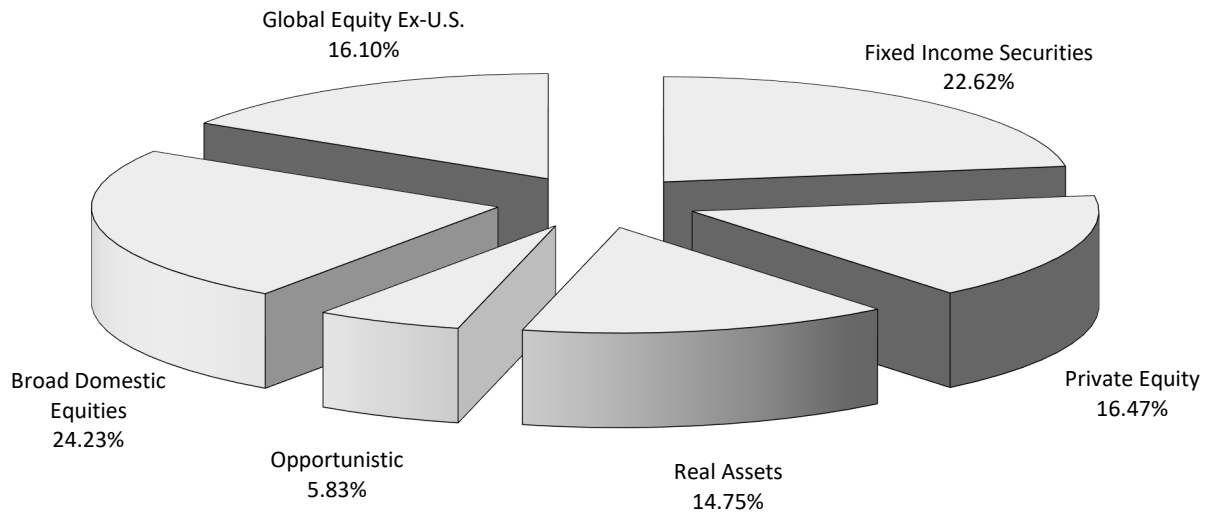


Actual — Occupational Death & Disability



**Public Employees' Retirement System
Asset Allocation
June 30, 2022**

Actual — Retiree Medical Plan



Investment Section

Alaska Retirement Management Board Top Ten Holdings by Asset Type June 30, 2022

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

Rank	Largest Fixed Income Holdings	Market Value	Par Value
1	U.S. Treasury N/B 2.875% 6/15/2025	\$90,152,476	\$90,513,115
2	FNMA Pool CB2662 3% 1/1/2052	88,579,457	94,868,258
3	U.S. Treasury N/B 1.375% 11/15/2040	79,604,551	110,531,893
4	U.S. Treasury N/B 2.25% 5/15/2041	77,240,099	92,563,737
5	FED HM LN PC Pool SD8230 4.5% 6/1/2052	71,229,707	70,874,834
6	FNMA Pool MA4644 4% 5/1/2052	65,509,229	66,353,939
7	FED HM LN PC Pool RA1568 3% 10/1/2049	55,028,260	58,726,750
8	FED HM LC PC Pool SD8217 4% 4/1/2052	54,327,736	55,000,645
9	FNMA Pool MA4565 3.5% 3/1/2052	41,944,928	43,561,685
10	FNMA Pool CB1146 3% 7/1/2051	39,298,492	42,114,257

Equities

Rank	Largest Equity Holdings	Market Value	Shares
1	Apple Inc.	\$243,427,035	1,780,479
2	Microsoft Corp.	232,713,978	906,101
3	Amazon.com Inc.	107,799,050	1,014,961
4	Alphabet Inc. CL A	79,153,915	36,321
5	Alphabet Inc. CL C	71,426,075	32,653
6	UnitedHealth Group Inc.	70,032,390	136,348
7	Berkshire Hathaway Inc. CL B	65,061,804	238,304
8	Tesla Inc.	62,213,803	92,385
9	Johnson & Johnson	54,991,126	309,792
10	Meta Platforms Inc. Class A	52,318,858	324,458

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

Investment Section

Public Employees' Retirement System Schedule of Investment Management Fees Year Ended June 30, 2022

	<u>Fair Value</u>	<u>Fees</u>
Investment Management		
Total Fixed Income	\$ 1,301,007,537	8,708,508
Total Opportunistic	1,205,564,874	5,176,238
Total Broad Domestic Equity	5,011,683,631	656,287
Total Global Equity Ex-U.S.	3,329,295,702	6,378,409
Total Private Equity	3,406,414,843	12,184,771
Total Real Assets	3,049,035,652	15,149,291
Custodian		
State Street Bank		986,722
Investment Advisory and Performance		
Callan Associates		397,057
Investment Advisory Council		52,210
Total Investment Advisory and Performance		<u>449,267</u>
Participant Directed		
Custodian - State Street Bank		396,935
Investment Management		2,192,430
Synthetic Investment Contract Wrap Fees		229,266
Total Participant Directed		<u>2,818,631</u>
	<u>\$ 17,303,002,239</u>	<u>52,508,124</u>

Investment Section

Public Employees' Retirement System Investment Summary Schedule June 30, 2022

Investments (at Fair Value)	Defined Benefit - Pension			% of Total Assets
	Asset Allocation		Fair Value	
	Policy	Range		
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 135,371,960	
Securities Lending Cash Pool			30,626	
Opportunistic Fixed Income Pool			386,188,309	
ARMB U.S. Aggregate Fixed Income			1,620,742,499	
Alternative Fixed Income			293,459,793	
Total Fixed Income Securities	21.00%	± 10%	2,435,793,187	22.57%
Opportunistic				
Alternative Equity Strategies Pool			111,333,053	
Tactical Allocation Strategies Pool			394,238,121	
Other Opportunities Pool			1,514,605	
Alternative Beta Pool			122,703,119	
Total Opportunistic	6.00%	± 4%	629,788,898	5.83%
Broad Domestic Equity				
Large Cap Pool			2,406,109,168	
Small Cap Pool			212,001,215	
Total Broad Domestic Equity	27.00%	± 6%	2,618,110,383	24.25%
Global Equity Ex-U.S.				
International Equity Pool			1,421,226,561	
Emerging Markets Equity Pool			318,048,923	
Total Global Equity Ex-U.S.	18.00%	± 4%	1,739,275,484	16.11%
Private Equity				
Private Equity Pool			1,779,515,933	
Total Private Equity	14.00%	± 6%	1,779,515,933	16.49%
Real Assets				
Real Estate Pool			635,511,067	
Real Estate Investment Trust Pool			177,771,185	
Infrastructure Private Pool			281,575,735	
Energy Pool			22,430,840	
Farmland Pool			339,576,797	
Timber Pool			135,314,828	
Total Real Assets	14.00%	± 7%	1,592,180,452	14.75%
Total Invested Assets	100.00%		\$ 10,794,664,337	100.00%

Investment Section

Public Employees' Retirement System Investment Summary Schedule June 30, 2022

Investments (at Fair Value)	Asset Allocation		Fair Value	% of Total Assets
	Policy	Range		
Defined Contribution - Participant Directed				
Cash and Cash Equivalents				
Short-Term Fixed Income Pool	100.00%	0%	\$ 2,156,831	
Total Cash and Cash Equivalents			<u>2,156,831</u>	0.12%
Pooled Investment Funds (1)				
T. Rowe Price				
Alaska Balanced Fund Trust			51,959,727	
Long-Term Balanced Fund			32,487,255	
Target 2010 Trust			2,870,244	
Target 2015 Trust			10,864,659	
Target 2020 Trust			39,936,665	
Target 2025 Trust			76,747,407	
Target 2030 Trust			88,782,080	
Target 2035 Trust			111,129,443	
Target 2040 Trust			131,878,500	
Target 2045 Trust			171,152,232	
Target 2050 Trust			203,126,317	
Target 2055 Trust			220,286,239	
Target 2060 Trust			12,352,943	
Target 2065 Trust			6,752,507	
JP Morgan Smart Retirement Blend			46,821	
Total Pooled Investment Funds			<u>1,160,373,039</u>	64.49%
Collective Investment Funds (1)				
State Street Global Advisors				
SSgA Treasury Money Market Fund			17,630,888	
S&P Stock Index Fund			77,149,704	
Russell 3000 Index			75,091,196	
World Equity Ex-U.S. Index			55,538,620	
Passive U.S. Bond Index Fund			59,453,692	
Brandes Institutional				
Alaska International Equity Fund			74,515,011	
BlackRock Institutional Trust Company				
Strategic Completion Fund			5,245,744	
RCM				
Sustainable Core Opportunities Fund			61,956,099	
T. Rowe Price				
Small-Cap Stock Fund			90,666,191	
Total Collective Investment Funds			<u>517,247,145</u>	28.75%
Synthetic Investment Funds (1)				
T. Rowe Price				
Stable Value Fund			119,504,550	
			<u>119,504,550</u>	6.64%
Total Invested Assets			<u>\$ 1,799,281,565</u>	<u>100.00%</u>

(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

Public Employees' Retirement System Investment Summary Schedule June 30, 2022

Investments (at Fair Value)	Defined Benefit - Alaska Retiree Healthcare Trust			% of Total Assets
	Asset Allocation		Fair Value	
	Policy	Range		
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 96,041,825	
Securities Lending Cash Pool			25,235	
Opportunistic Fixed Income Pool			318,919,698	
ARMB U.S. Aggregate Fixed Income			1,338,431,340	
Alternative Fixed Income			242,343,066	
Total Fixed Income Securities	21.00%	± 10%	1,995,761,164	22.43%
Opportunistic				
Alternative Equity Strategies Pool			91,940,341	
Tactical Allocation Strategies Pool			325,567,162	
Other Opportunities Pool			1,250,841	
Alternative Beta Pool			101,329,914	
Total Opportunistic	6.00%	± 4%	520,088,258	5.84%
Broad Domestic Equity				
Large Cap Pool			1,986,997,862	
Small Cap Pool			175,073,701	
Total Broad Domestic Equity	27.00%	± 6%	2,162,071,563	24.29%
Global Equity Ex-U.S.				
International Equity Pool			1,173,606,636	
Emerging Markets Equity Pool			262,649,242	
Total Global Equity Ex-U.S.	18.00%	± 4%	1,436,255,878	16.14%
Private Equity				
Private Equity Pool			1,469,548,558	
Total Private Equity	14.00%	± 6%	1,469,548,558	16.51%
Real Assets				
Real Estate Pool			525,920,470	
Real Estate Investment Trust Pool			146,805,912	
Infrastructure Private Pool			232,529,129	
Energy Pool			18,523,699	
Farmland Pool			280,427,275	
Timber Pool			111,744,706	
Total Real Assets	14.00%	± 7%	1,315,951,191	14.79%
Total Invested Assets	100.00%		\$ 8,899,676,612	100.00%

Investment Section

Public Employees' Retirement System Investment Summary Schedule June 30, 2022

Investments (at Fair Value)	Health Reimbursement Arrangement		Fair Value	% of Total Assets
	Asset Allocation Policy	Range		
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 8,942,308	
Securities Lending Cash Pool			1,931	
Opportunistic Fixed Income Pool			24,570,119	
ARMB U.S. Aggregate Fixed Income			103,114,900	
Alternative Fixed Income			18,670,505	
Total Fixed Income Securities	21.00%	± 10%	155,299,763	22.60%
Opportunistic				
Alternative Equity Strategies Pool			7,083,278	
Tactical Allocation Strategies Pool			25,082,206	
Other Opportunities Pool			96,328	
Alternative Beta Pool			7,806,618	
Total Opportunistic	6.00%	± 4%	40,068,430	5.83%
Broad Domestic Equity				
Large Cap Pool			153,081,464	
Small Cap Pool			13,487,978	
Total Broad Domestic Equity	27.00%	± 6%	166,569,442	24.24%
Global Equity Ex-U.S.				
International Equity Pool			90,401,731	
Emerging Markets Equity Pool			20,234,961	
Total Global Equity Ex-U.S.	18.00%	± 4%	110,636,692	16.10%
Private Equity				
Private Equity Pool			113,216,376	
Total Private Equity	14.00%	± 6%	113,216,376	16.48%
Real Assets				
Real Estate Pool			40,517,804	
Real Estate Investment Trust Pool			11,310,199	
Infrastructure Private Pool			17,914,442	
Energy Pool			1,427,061	
Farmland Pool			21,604,586	
Timber Pool			8,608,967	
Total Real Assets	14.00%	± 7%	101,383,059	14.75%
Total Invested Assets	100.00%		\$ 687,173,762	100.00%

Investment Section

Public Employees' Retirement System Investment Summary Schedule June 30, 2022

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			\$ 835,447	
Securities Lending Cash Pool			172	
Opportunistic Fixed Income Pool			2,185,513	
ARMB U.S. Aggregate Fixed Income			9,172,090	
Alternative Fixed Income			1,660,724	
Total Fixed Income Securities	21.00%	± 10%	13,853,946	22.66%
Opportunistic				
Alternative Equity Strategies Pool			630,012	
Tactical Allocation Strategies Pool			2,230,974	
Other Opportunities Pool			8,592	
Alternative Beta Pool			694,341	
Total Opportunistic	6.00%	± 4%	3,563,919	5.83%
Broad Domestic Equity				
Large Cap Pool			13,616,663	
Small Cap Pool			1,199,828	
Total Broad Domestic Equity	27.00%	± 6%	14,816,491	24.22%
Global Equity Ex-U.S.				
International Equity Pool			8,041,026	
Emerging Markets Equity Pool			1,799,915	
Total Global Equity Ex-U.S.	18.00%	± 4%	9,840,941	16.09%
Private Equity				
Private Equity Pool			10,070,567	
Total Private Equity	14.00%	± 6%	10,070,567	16.46%
Real Assets				
Real Estate Pool			3,603,997	
Real Estate Investment Trust Pool			1,006,019	
Infrastructure Private Pool			1,593,521	
Energy Pool			126,857	
Farmland Pool			1,921,718	
Timber Pool			765,771	
Total Real Assets	14.00%	± 7%	9,017,883	14.74%
Total Invested Assets	100.00%		\$ 61,163,747	100.00%

Investment Section

Public Employees' Retirement System Investment Summary Schedule June 30, 2022

Investments (at Fair Value)	Asset Allocation		Retiree Medical Plan	
	Policy	Range	Fair Value	% of Total Assets
Fixed Income Securities				
Short-term Fixed Income Pool			\$ 2,747,111	
Securities Lending Cash Pool			580	
Opportunistic Fixed Income Pool			7,392,409	
ARMB U.S. Aggregate Fixed Income			31,024,170	
Alternative Fixed Income			5,617,402	
Total Fixed Income Securities	21.00%	±10%	46,781,672	22.62%
Opportunistic				
Alternative Equity Strategies Pool			2,131,089	
Tactical Allocation Strategies Pool			7,546,516	
Other Opportunities Pool			29,002	
Alternative Beta Pool			2,348,763	
Total Opportunistic	6.00%	±4%	12,055,370	5.83%
Broad Domestic Equity				
Large Cap Pool			46,057,629	
Small Cap Pool			4,058,122	
Total Broad Domestic Equity	27.00%	±6%	50,115,751	24.23%
Global Equity Ex-U.S.				
International Equity Pool			27,198,609	
Emerging Markets Equity Pool			6,088,099	
Total Global Equity Ex-U.S.	18.00%	±4%	33,286,708	16.10%
Private Equity				
Private Equity Pool			34,063,409	
Total Private Equity	14.00%	±6%	34,063,409	16.47%
Real Assets				
Real Estate Pool			12,190,534	
Real Estate Investment Trust Pool			3,402,868	
Infrastructure Private Pool			5,389,936	
Energy Pool			429,408	
Farmland Pool			6,500,171	
Timber Pool			2,590,152	
Total Real Assets	14.00%	±7%	30,503,069	14.75%
Total Invested Assets	100.00%		\$ 206,805,979	100.00%

Investment Section

Public Employees' Retirement System Recaptured Commission Fees Year Ended June 30, 2022

Fund	Opportunistic	Total
Defined Benefit Plan – Pension	\$ 10,080	10,080
Postemployment Benefit – Alaska Retiree Healthcare Trust	8,268	8,268
Postemployment Benefit – Health Reimbursement Arrangement	603	603
Postemployment Benefit – Retiree Medical Plan	181	181
Postemployment Benefit – Occupational Death and Disability	53	53
Total Recapture Commission Fees	<u>\$ 19,185</u>	<u>19,185</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.