



INVESTMENT SECTION



ALASKA DIVISION OF
**Retirement
and Benefits**



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September 17, 2017

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 the Alaska Retirement Management Board (ARMB) for the fiscal year ended June 30, 2017.

Callan LLC (Callan) calculates time-weighted performance statistics based on underlying custodial data provided by the Board's custodian, State Street Bank and Trust Company. The performance calculations were made using a time-weighted return methodology based upon current market values. ARMB's real estate consultant, the Townsend Group, calculates returns for the real estate segment of the portfolio and Callan incorporated Townsend data into the ARMB's Total Fund returns.

Callan serves as the ARMB 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 that assets under supervision be sufficient to pay promised benefits to members and beneficiaries. In pursuit of these objectives, 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.

Market Overview

Equity markets posted strong returns across the globe in fiscal year 2017. The Russell 3000 Index, a measure of broad U.S. equity, returned 18.51% in the period. Non-U.S. stocks outperformed their U.S. counterparts, aided by a declining dollar. International stocks, as measured by the MSCI ACWI ex-U.S. Index, gained 21.00% for the fiscal year. A broad measure of the total global equity market (MSCI All Country World Index) rose 19.42%.

Investment Section

Rising rates weighed on fixed income performance over the last 12 months. The Bloomberg Barclays U.S. Aggregate Bond Index, a widely used gauge of the investment grade domestic bond market, fell -0.31%. Absolute return hedge fund-of-fund strategies trailed the equity markets despite notching positive returns for the fiscal year. The Callan Absolute Return Hedge Fund-of-Funds Style median return was 6.50% (net-of-fees). Private real estate investments, as measured by the NCREIF Property Index, continued an impressive run of positive returns for every fiscal year going back to 2011. In fiscal year 2017, the NCREIF Property Index returned 6.97%. Publicly traded real estate, as measured by the NAREIT All Equity Index, lagged the private markets, gaining only 0.22%.

ARMB's various asset groups performed as follows:

Domestic Stocks:	17.74%
Int'l Stocks:	20.48%
Alternative Equity:	11.27%
Fixed Income:	2.89%
Real Assets:	5.98%
Private Equity:	17.04%
Absolute Return:	8.47%

For the fiscal year ended 30 June 2017, the Public Employees Retirement System (PERS) had a time-weighted total return of 13.35%. The Teachers Retirement System (TRS) had a time-weighted total return of 13.36%. Both systems' gross return exceeded their strategic policy target return of 13.26% and the median return for Callan's Public Fund Sponsor database of 12.42%.

Over longer periods, PERS and TRS have closely tracked their target index returns. For example, PERS' 7-year annualized return was 9.55% while TRS's return was slightly higher at 9.60%. These returns were in line with but slightly above their target return of 9.44%. Over 25.75 years (the longest period for which Callan has detailed data), PERS and TRS achieved annualized total returns of 7.72% and 7.77%, respectively; the policy benchmark return for both Plans over this period was 7.69%.

Both systems are well diversified and currently have asset allocation policies that, in Callan's opinion, are consistent with achieving a long-term "real" (above inflation) return of 4.5%.

In summary, fiscal 2017 was a year in which the ARMB's asset class returns were positive across the board. The PERS and TRS portfolios are well-diversified. They produced returns well above the average public fund, ranking in the 29th percentile within the Public Fund Sponsor peer group.

Sincerely,



Paul Erlendson
Senior Vice President

Department of Revenue Treasury Division Staff As of June 30, 2017

Commissioner Randall Hoffbeck	Chief Investment Officer Bob G. Mitchell	Investment Officers Zachary Hanna Stephen R. Sikes Victor Djajalie Steve Verschoor Shane Carson Ross Alexander Nicolas Orr Sean Howard	Casey Colton Emily Howard Mackenzie Willems Kevin Lui Kevin Buckland Mike Barnhill
Deputy Commissioner Jerry Burnett	Comptroller Scott Jones, CPA		
Director Pamela Leary, CPA	Cash Management Michelle M. Prebula, MBA, CPA, CCM ARMB Liaison Officer Stephanie Alexander		

External Money Managers and Consultants

Domestic Equity Large Capitalization

Allianz Global Investors
San Francisco, CA
Barrow, Hanley, Mewhinney & Strauss
Dallas, TX
McKinley Capital Management, Inc.
Anchorage, AK
Quantitative Management Associates
Newark, NJ
State Street Global Advisors
San Francisco, CA

Domestic Equity Small Capitalization

Barrow, Hanley, Mewhinney & Strauss
Dallas, TX
BMO Global Asset Management
Chicago, IL
Fidelity Investments
Smithfield, RI
Frontier Capital Management
Boston, MA
Jennison Associates LLC
New York, NY
Lord Abbett & Co.
Jersey City, NJ
Luther King Capital Management
Fort Worth, TX
State Street Global Advisors
San Francisco, CA
Sycamore Capital Management
Cincinnati, OH

Domestic Equity Micro Capitalization

DePrince, Race & Zollo, Inc.
Winter Park, FL
Lord Abbett & Co.
Jersey City, NJ
Zebra Capital Management
Mitford, 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 Equity – EAFE, Emerging Markets Non U.S., and Global Equity

Allianz Global Investors
San Francisco, CA
Arrowstreet Capital, LP
Boston, MA
BlackRock
San Francisco, CA
Baillie Gifford Overseas Ltd.
Edinburgh, Scotland
Brandes Investment Partners, L.P.
San Diego, CA
Capital Guardian Trust Co.
Los Angeles, CA
Lazard Asset Management
New York, NY
McKinley Capital Management, Inc.
Anchorage, AK
Parametric Clifton
Seattle, WA
State Street Global Advisors
San Francisco, CA

International Fixed Income

Mondrian Investment Partners
London, England
Lazard Asset Management
New York, NY
Schroders Investment Management NA
New York, NY

High Yield/Convertible Bond/Tactical Bond

Advent Capital Management
New York, NY
Columbia Threadneedle Investment Management
Minneapolis, MN
Eaton Vance Trust Company
Boston, MA
Fidelity Investment Asset Management
Smithfield, RI
MacKay Shields LLC
New York, NY

Alternative Equity

Analytic Investors
Los Angeles, CA
State Street Global Advisors
San Francisco, CA
Quantitative Management Associates
Newark, NJ

External Money Managers and Consultants (cont.)

Taxable Municipal Bonds

Guggenheim Partners LLC
Santa Monica, CA
 Western Asset Management Company
Pasadena, CA

Master Limited Partnerships

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

Absolute Return

Allianz Global Investors
New York, NY
 Crestline Investors, Inc.
Fort Worth, TX
 Global Assets Management Inc.
New York, NY
 Prisma Capital
New York, NY
 Zebra Capital Management
Milford, CT

Private Equity

Abbott Capital Management, L.P.
New York, NY
 Angelo, Gordon & Co.
New York, NY
 Advent International,
Boston, MA
 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

Real Assets – Infrastructure

Brookfield Investment Management
New York, NY
 Industry Funds Management
New York, NY
 JP Morgan Asset Management
New York, NY
 Lazard Asset Management
New York, NY

Real Assets – Farmland and Timber

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

Supplemental Benefits System, Deferred Compensation Plan and Defined Contribution Plan

Allianz Global Investors
San Francisco, CA
 BlackRock
San Francisco, CA
 Brandes Investment Partners
San Diego, CA
 State Street Global Advisors
Boston, MA
 T. Rowe Price Investment Services
Baltimore, MD

Tactical Fixed Income

Fidelity Investment Asset Management *Merrimack, NH*

Global Master Custodian

State Street Bank & Trust Co.
Boston, MA

Investment Consultants

Callan Associates, Inc.
Denver, CO
 The Townsend Group
San Francisco, CA

Investment Advisory Council

William Jennings
Colorado Springs, CO
 Jerrold Mitchell
Wayland, MA
 Robert Shaw
San Francisco, CA

Independent Auditors

KPMG, LLP
Anchorage, AK

Actuaries

Conduent HR Consulting, LLC
Denver, CO
 Gabriel Roeder Smith
Denver, CO

External Money Managers and Consultants (cont.)

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 – Commingled Real Estate Funds

Almanac Realty Investors
New York, NY
 BlackRock Realty
New York, NY
 Baring Real Estate Advisors
Hartford, CT
 Colony NorthStar Capital
Los Angeles, CA
 Coventry Real Estate Fund II, LLC
New York, NY
 Clarion Partners
New York, NY
 KKR & Co.
New York, NY
 J.P. Morgan Investment Management Inc.
New York, NY
 LaSalle Investment Management
Chicago, IL
 Lowe Hospitality Investment Partners, LLC
Los Angeles, CA
 Sentinel Real Estate Corporation
New York, NY
 Silverpeake Real Estate Partners
New York, NY
 Tishman Speyer Properties
New York, NY
 UBS Realty Investors, LLC
Hartford, CT

Real Assets – Energy

EIG Global Energy Partners
Washington, DC

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 eight asset classes: domestic equities, global equities ex-U.S., alternative equity strategies, private equity, real assets, fixed income, absolute return and cash equivalents. 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
Domestic Equity	Russell 3000 Index
Global Equities Ex-U.S.	MSCI All Country World Ex-U.S. Index
Alternative Equities Strategies	50% S&P 500 Index 30% CBOE Buy Write Index 20% Bank of America Yield Alternative Index
Private Equity	1/3 S&P 500 Index 1/3 Russell 2000 Index 1/3 MSCI EAFE Index
Real Assets	50% NCREIF Property Index 15% Barclays TIPS Index 10% NCREIF Farmland Index 10% NCREIF Timberland Index 5% FTSE NAREIT All Equity REIT Index 10% S&P Global Infrastructure
Fixed Income	80% Barclays Intermediate Treasury Index 10% Bank of America Merrill Lynch US High Yield Master II Constrained Index 7% Citigroup World Gov. Bond Ex-U.S. Index 3% JP Morgan Global Bond Index - Emerging Markets Global Diversified Index
Absolute Return	91 Day Treasury Bill + 5%
Cash Equivalents	91 Day Treasury Bill

The target asset allocation is determined by the ARMB, utilizing capital market assumptions provided by its independent general investment consultant, Callan Associates. During the 2017 fiscal year, the ARMB's target asset allocation was 26% domestic equities, 22% global equities ex-U.S., 5% alternative equity strategies, 9% private equity, 17% real assets, 12% fixed income, 7% absolute return, and 1% cash equivalents. The target asset allocation is expected to generate a return of 7.1% with a standard deviation of 15.0%.

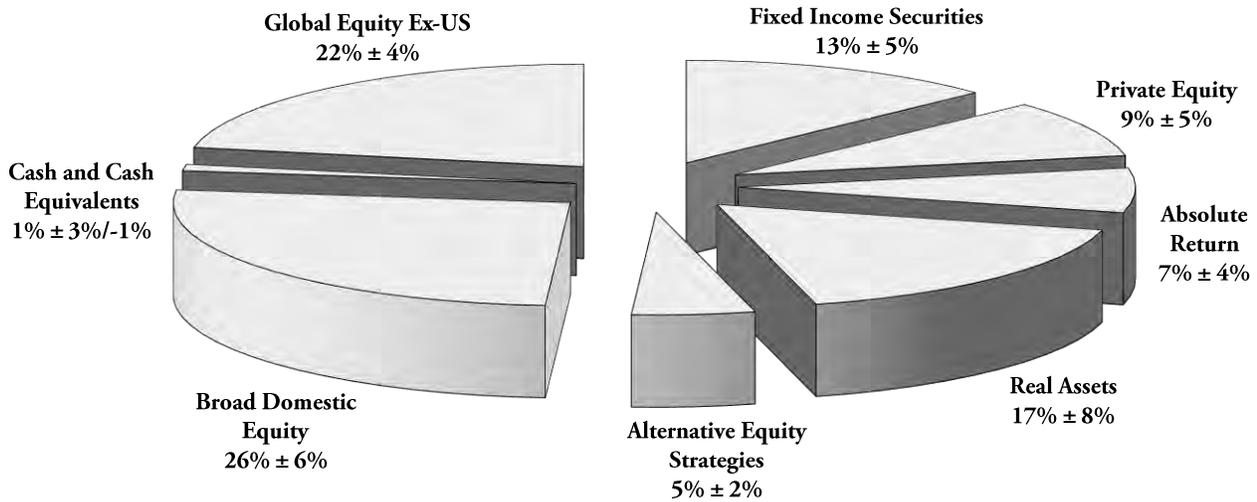
Investment Section

Public Employees' Retirement System Schedule of Investment Results Fiscal Years Ended June 30							
	2013	2014	2015	2016	2017	Annualized	
						3 Year	5 Year
Total Fund							
PERS	12.50%	18.56%	3.29%	(0.36%)	13.35%	5.27%	9.24%
<i>Actuarial Earnings Rate</i>	8.00	8.00	8.00	8.00	8.00	8.00	8.00
U.S. Common Stock Returns							
PERS Domestic Equities	21.23	25.81	7.84	0.58	18.55	8.74	14.42
<i>Custom Composite Index</i>	21.46	25.22	7.29	2.14	18.51	9.10	14.58
Fixed Income							
PERS	0.57	5.14	(0.74)	5.15	2.91	2.41	2.58
<i>Custom Composite Index</i>	(0.04)	3.31	0.41	4.79	0.02	1.44	1.48
Real Assets							
PERS	10.47	13.28	3.70	4.76	5.98	4.81	7.58
<i>Custom Composite Index</i>	8.35	10.98	7.99	8.87	5.66	7.50	8.36
International Stock Returns							
PERS International Equities	15.01	23.43	(3.32)	(9.15)	20.41	1.89	8.47
<i>MSCI ACWI ex-US</i>	14.14	22.27	(4.85)	(9.80)	21.00	1.27	7.70
Private Equity							
PERS	11.61	24.19	13.77	4.71	17.04	11.72	14.09
<i>Custom Composite Index</i>	21.24	24.01	3.33	(4.41)	21.04	6.13	12.44
Absolute Return							
PERS	8.41	6.51	9.24	(3.09)	8.47	4.72	5.80
<i>3-month Treasury Bill +5%</i>	5.11	5.05	5.02	5.19	5.49	5.23	5.17
Alternative Equity							
PERS	—	22.36	(0.89)	3.41	11.38	4.51	6.91
<i>Custom Composite Index</i>	—	18.70	4.26	2.09	15.07	6.99	7.77
Cash Equivalents							
PERS	0.25	0.27	0.28	0.55	0.79	0.54	0.43
<i>3-month Treasury Bill</i>	0.11	0.05	0.02	0.19	0.49	0.23	0.17
<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>							

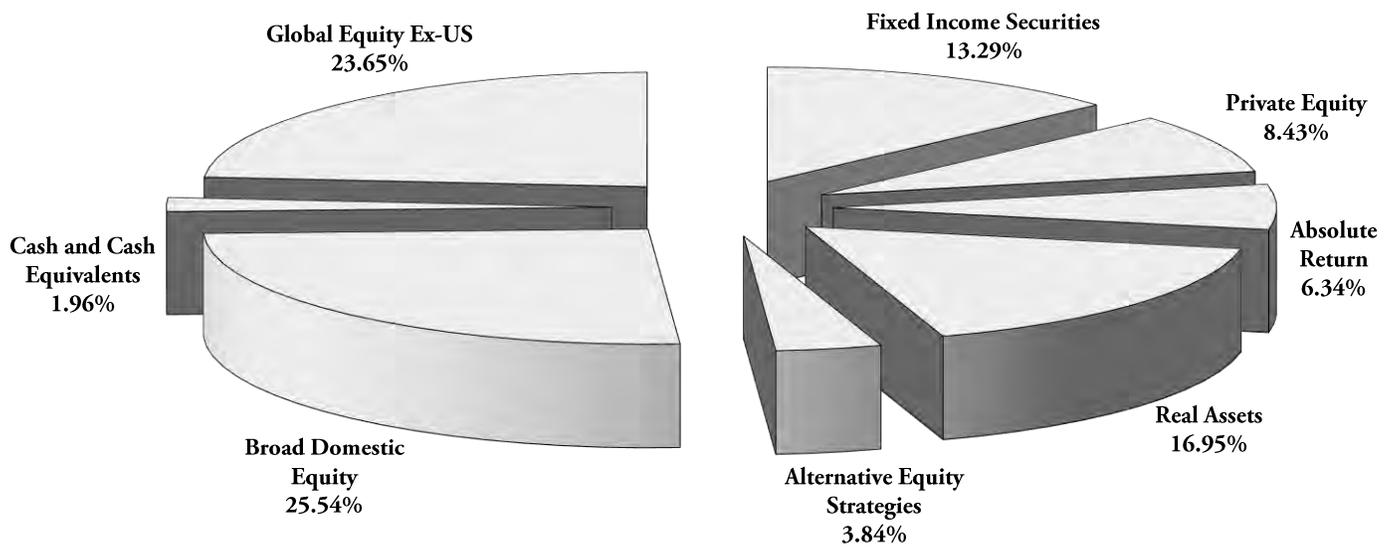
Investment Section

Public Employees' Retirement System Asset Allocation June 30, 2017

Policy

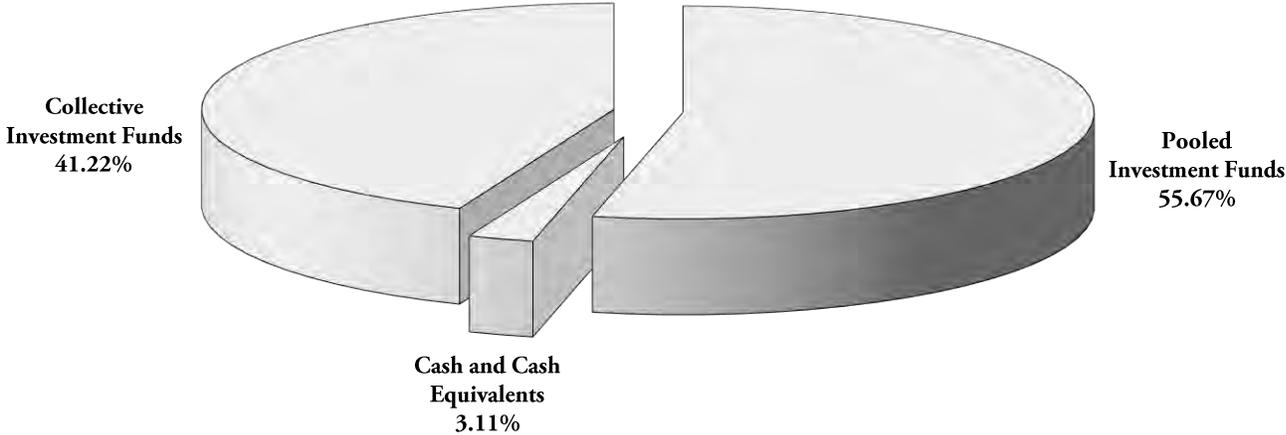


Actual – Defined Benefit Pension

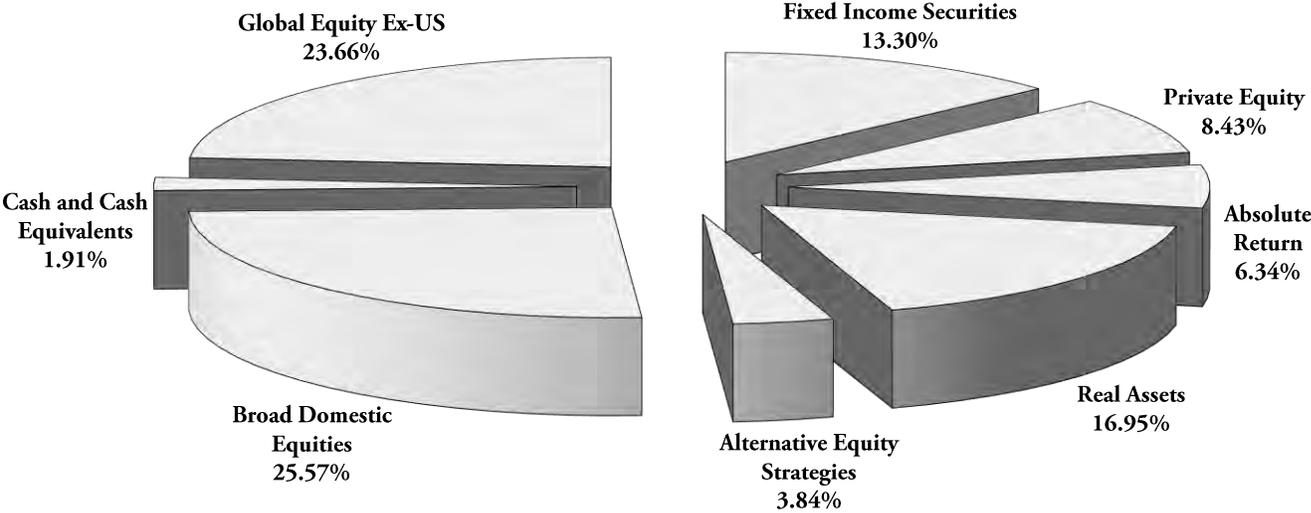


**Public Employees' Retirement System
Asset Allocation
June 30, 2017**

Actual – Defined Contribution Participant Directed



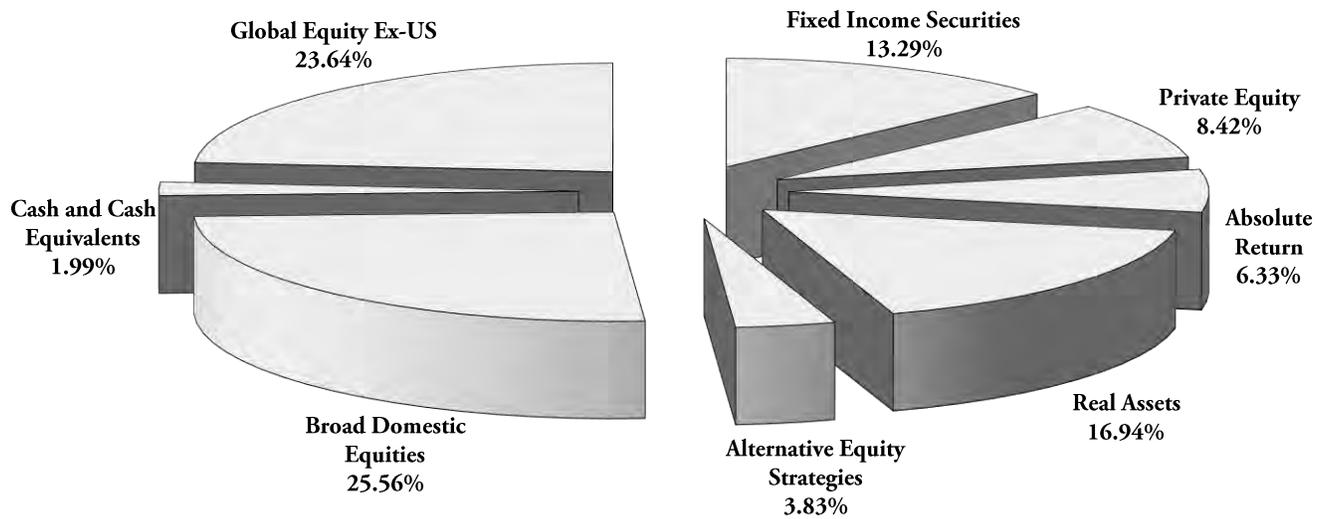
Actual – Defined Benefit Alaska Retiree Healthcare Trust



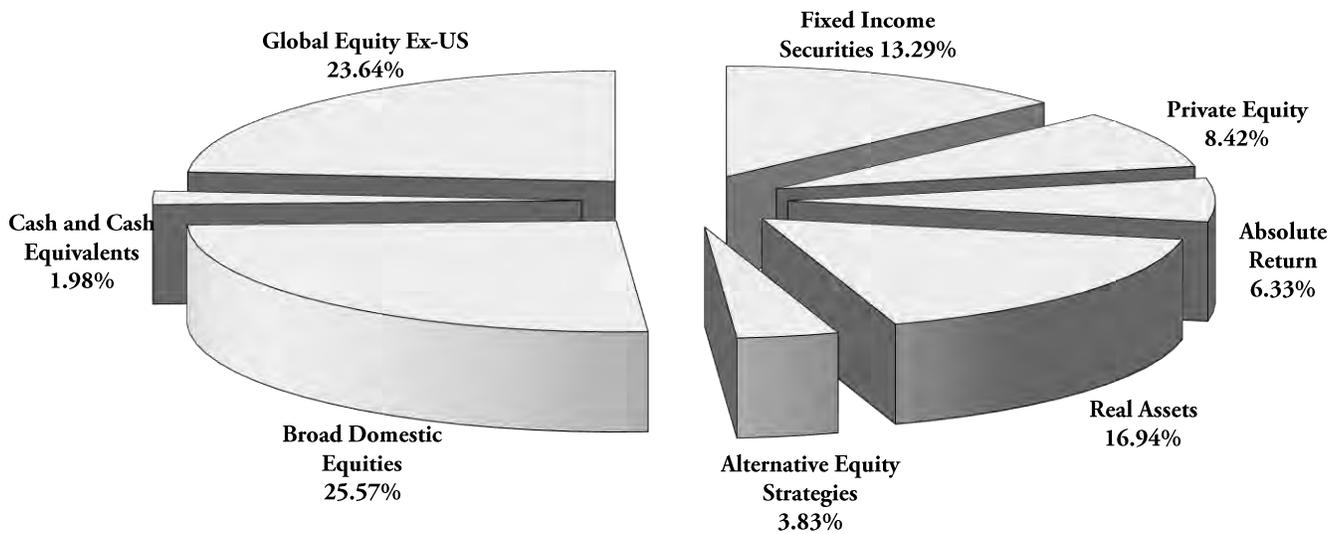
Investment Section

Public Employees' Retirement System Asset Allocation June 30, 2017

Actual — Health Reimbursement Arrangement

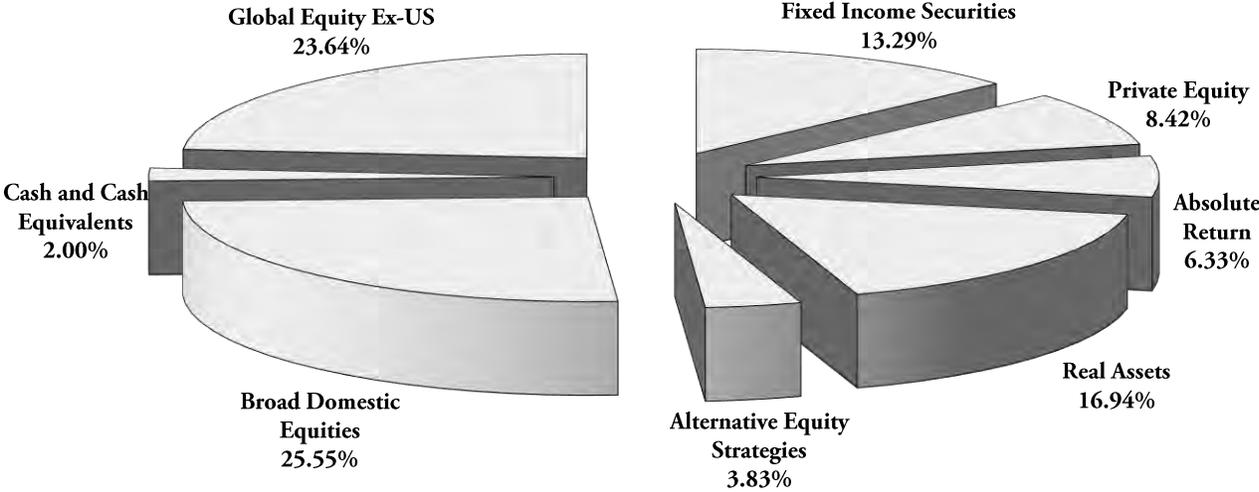


Actual — Occupational Death & Disability



**Public Employees' Retirement System
Asset Allocation
June 30, 2017**

Actual — Retiree Medical Plan



Investment Section

Alaska Retirement Management Board Top Ten Holdings by Asset Type June 30, 2017

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	US Treasury 2.125% 1/31/2021	\$139,250,723	\$137,140,001
2	US Treasury 1.375% 8/31/2020	89,366,989	89,999,777
3	US Treasury 2.125% 5/15/2025	58,042,353	58,409,692
4	US Treasury 2.625% 11/15/2020	52,283,066	50,656,535
5	US Treasury 2.000% 8/15/2025	49,669,072	50,527,638
6	US Treasury 1.125% 6/30/2021	48,936,411	50,140,947
7	US Treasury 2.375% 8/15/2024	47,894,999	47,176,315
8	US Treasury 1.375% 7/31/2018	39,669,886	39,635,838
9	US Treasury 0.750% 7/31/2018	36,200,066	36,413,412
10	US Treasury 2.250% 11/15/2024	32,158,089	31,981,932

Equities

<u>Rank</u>	<u>Largest Equity Holdings</u>	<u>Market Value</u>	<u>Par Value</u>
1	Apple Inc.	\$102,335,738	\$710,566
2	Microsoft Corp.	79,896,205	1,159,092
3	Johnson & Johnson	61,277,346	463,205
4	Exxon Mobil Corp.	52,449,780	649,694
5	Facebook Inc.	48,355,523	320,278
6	Amazon.com Inc.	48,134,665	49,726
7	Pfizer Inc.	46,015,063	1,369,904
8	Alphabet, Inc.	42,487,118	45,701
9	JP Morgan & Chase	41,682,962	456,050
10	Procter & Gamble Co./The	37,981,448	435,817

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

Public Employees' Retirement System Schedule of Investment Management Fees Year Ended June 30, 2017

	Total Fair Value	Fees
Fixed Income		
** Columbia Threadneedle	\$ 103,020,026	\$ 511,818
** Eaton Vance High Yield	84,376,971	506,930
** Fidelity Institute Asset Management	89,996,066	306,306
** Fidelity Institute Asset Management High Yield	140,364,320	944,357
** Guggenheim Partners	67,977,926	165,790
** Lazard Emerging Income	110,142,297	576,108
** MacKay Shields	99,778,238	595,316
** Mondrian Investment Partners	121,828,968	822,737
** Schroders Insurance Linked Securities	58,245,657	284,648
** Western Asset Management Company	71,407,269	181,141
Total Fixed Income	<u>947,137,738</u>	<u>4,895,151</u>
Broad Domestic Equity		
** Allianz Global Investors Large Cap	152,194,073	567,834
** Barrow, Hanley, Mewhinney & Strauss Large Cap	145,636,576	736,671
** Barrow, Hanley, Mewhinney & Strauss Small Cap	19,621,656	367,158
** BMO DSCC Small Cap	50,236,975	156,637
** DePrince, Race & Zollo	67,043,309	619,334
** Fidelity Institutional Asset Management Small Cap	91,766,040	1,003,425
** Frontier Capital Management Small Cap	50,440,611	803,374
** Jennison Associates Small Cap	67,275,737	497,542
** Lazard Freres Asset Management	278,196,982	553,192
** Lord Abbett Large Cap	66,968,739	560,483
** Lord Abbett Small Cap	35,944,463	388,903
** McKinley Capital	146,042,297	671,524
** Portable Alpha	319,109,285	236,572
** Quantitative Management Associates	163,844,838	519,542
** SSgA Futures Large Cap	1,491,639	5,228
** SSgA Futures Small Cap	1,623,016	4,211
** SSgA Managed Volatility- Russell 1000	63,563,867	47,822
** SSgA Managed Volatility- Russell 2000	61,911,433	52,952
** SSgA Russell 1000 Growth	777,615,320	81,523
** SSgA Russell 1000 Value	699,002,588	75,166
** SSgA Russell 200	420,315,811	58,669
** SSgA Russell 2000 Growth	7,136	5,873
** SSgA Russell 2000 Value	151,432	10,693
** Victory Capital Management Small Cap	94,151,970	780,275
** Zebra Capital Management	62,889,226	327,402
Total Broad Domestic Equities	<u>3,837,045,019</u>	<u>9,132,005</u>
Global Equity Ex-U.S.		
** Allianz Global Investors International	189,468,672	676,768
** Arrowstreet Capital	232,886,521	990,447
** Baillie Gifford Overseas	291,925,162	1,121,753
** BlackRock ACWI Ex-US IMI	380,460,101	218,735
** Brandes Investment Partners	452,802,410	1,790,656
** Capital Guardian Trust	383,429,423	1,655,800
** Eaton Vance Management Emerging Markets	181,596,700	2,072,340
** Lazard Asset Management Emerging Markets	338,135,351	2,536,015
** Lazard Asset Management	256,112,295	253,393
** McKinley Capital International	388,624,171	1,652,259
** Mondrian Investment Partners	113,291,505	746,048
** Schroders Investment Management	125,861,955	859,305
** State Street Global Advisors International	613,958,621	332,670
Total International Equities	<u>3,948,552,887</u>	<u>14,906,189</u>
Alternative Equity Strategies		
** Advent Capital Convertible Bond	126,583,057	811,741
** Analytic Buy Write Account	5,612,301	257,183
** Analytic SSgA Account	186,092,695	22,883
** Quantitative Management Associates	110,926,521	337,478
Total Alternative Equity Strategies	<u>429,214,574</u>	<u>1,429,285</u>

Investment Section

Public Employees' Retirement System Schedule of Investment Management Fees (continued) Year Ended June 30, 2017

	Total Fair Value	Fees
Private Equity		
Abbott Capital Management	553,489,478	1,350,520
Advent International GPE Fund VIII-B	3,822,316	221,537
Angelo, Gordon & Co.	584,545	29,213
Dyal Capital Partners III	13,189,122	1,163,064
Glendon Opportunities	20,360,362	359,910
Lexington Partners VII	19,449,637	355,858
Lexington Partners VIII	8,127,219	341,554
Merit Capital Partners	11,885,485	91,266
Neuberger Berman Secondary Opportunities Fund I	19,372,898	415,218
New Mountain Partners IV	14,148,717	192,258
NGP XI	19,749,689	444,798
Onex Partners III	10,145,885	122,117
Pathway Capital Management	604,331,576	1,805,873
Resolute Fund III	5,474,851	114,948
Warburg Pincus X	10,286,595	58,132
Warburg Pincus XI	20,386,607	141,086
Warburg Pincus XII	13,228,696	607,170
Total Private Equity	<u>1,348,033,678</u>	<u>7,814,522</u>
Absolute Return		
Allianz Global Investors	240,457,074	6,848,578
Crestline (Blue Glacier)	277,284,064	2,436,779
Crestline Specialty Fund	21,541,109	252,733
Global Asset Management (Glacier Bear)	61,240,939	1,179,108
KKR Apex Equity Fund	62,870,017	787,189
Prisma Capital Partners (Polar Bear)	259,353,295	1,854,245
Zebra Global Equity Advantage Fund	47,227,378	375,852
Zebra Global Equity Fund	87,985,943	704,376
Total Absolute Return	<u>1,057,959,819</u>	<u>14,438,860</u>
Real Assets		
Almanac Realty Securities V	2,874,612	68,959
Almanac Realty Securities VII	12,224,935	419,963
** Brookfield Infrastructure	69,320,514	448,084
Colony Investors VIII	3,861,839	92,246
Coventry Advisors	571,019	9,244
EIG Energy Fund XD	148,865	7,723
EIG Energy Fund XIV-A	9,302,413	343,026
EIG Energy Fund XV	20,385,468	312,517
EIG Energy Fund XVI	31,362,690	439,221
** FAMCO MLP	152,642,666	789,442
Hancock Agriculture	176,769,707	1,469,521
Hancock Natural Resource Group	62,143,753	445,433
IFM Global Infrastructure	194,558,132	1,124,757
ING Clarion Development Ventures IV	12,730,716	43,205
JP Morgan Strategic Property Fund	152,855,350	1,311,357
JPM Infrastructure Investment	67,527,356	638,359
KKR Real Estate Partners Americas	25,091,572	456,337
LaSalle Separate Account	126,987,468	837,699
** Lazard Infrastructure	93,916,419	518,080
Lowe Hospitality Partners	118,518	103,790
Sentinel Separate Account	127,938,917	767,762
Silverpeak Real Estate Partners II	7,491,841	159,109
Silverpeak Real Estate Partners III	3,787,304	125,787
Timberland Investment Resources	170,312,872	1,434,435
Tishman Speyer VI	22,679,997	153,801
Tishman Speyer VII	3,731,832	65,857
** Tortoise MLP	180,068,526	1,118,760
UBS Agrinvest	377,032,385	2,967,269
UBS Separate Account	345,785,456	1,594,122
UBS Trumbull Property Fund	100,449,257	726,658
Total Real Assets	<u>2,554,672,399</u>	<u>18,992,523</u>
Custodian		
* State Street Bank		<u>841,976</u>
Investment Advisory		
* Callan Associates		135,790
* Investment Advisory Council		58,260
* Townsend Group		66,400
Total Investment Advisory		<u>260,450</u>
Investment Performance		
* Callan Associates		208,709
		<u>\$ 72,919,670</u>

*These fees are paid through the Integrated Resource Information System (IRIS)

**These fees are deducted from earnings by the fund manager and are not directly recorded in IRIS

Public Employees' Retirement System Investment Summary Schedule June 30, 2017

<u>Investments (at Fair Value)</u>	Defined Benefit - Pension			<u>% of Total Assets</u>
	Asset Allocation		Fair Value	
	Policy	Range		
Cash and Cash Equivalents				
Short-term Fixed Income Pool			\$ 174,361,394	
Securities Lending Income			112,298	
Total Cash and Cash Equivalents	1.00%	± 3% / - 1%	174,473,692	1.96%
Fixed Income Securities				
U.S. Treasury Fixed Income Pool			680,014,083	
Taxable Municipal Bond Pool			74,485,295	
Tactical Fixed Income			79,218,087	
High Yield Pool			228,470,535	
International Fixed Income Pool			65,103,519	
Emerging Debt Pool			58,858,342	
Total Fixed Income Securities	13.00%	± 5%	1,186,149,861	13.29%
Broad Domestic Equity				
Large Cap Pool			1,892,224,384	
Small Cap Pool			387,776,605	
Total Broad Domestic Equity	26.00%	± 6%	2,280,000,989	25.54%
Global Equity Ex-U.S.				
International Equity Pool			1,704,508,980	
International Equity Small Cap Pool			127,799,915	
Emerging Markets Equity Pool			277,736,781	
Total Global Equity Ex-U.S.	22.00%	± 4%	2,110,045,676	23.65%
Alternative Equity Strategies				
Alternative Equity Strategies			274,590,086	
Convertible Bond Pool			67,644,030	
Total Alternative Equities	5.00%	± 2%	342,234,116	3.84%
Private Equity				
Private Equity Pool			751,777,645	
Total Private Equity	9.00%	± 5%	751,777,645	8.43%
Absolute Return				
Absolute Return Pool			565,357,387	
Total Absolute Return	7.00%	± 4%	565,357,387	6.34%
Real Assets				
Real Estate Pool			509,898,848	
Real Estate Investment Trust Pool			124,940,767	
Infrastructure Private Pool			140,054,437	
Infrastructure Public Pool			87,231,296	
Master Limited Partnership Pool			177,795,722	
Energy Pool			32,704,033	
Farmland Pool			295,943,284	
Timber Pool			124,221,230	
Treasury Inflation Protected Securities Pool			19,632,862	
Total Real Assets	17.00%	± 8%	1,512,422,479	16.95%
Total Invested Assets	100.00%		\$ 8,922,461,845	100.00%

Investment Section

Public Employees' Retirement System Investment Summary Schedule June 30, 2017

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%	\$ 27,626,255	
Total Cash and Cash Equivalents			<u>27,626,255</u>	3.11%
Pooled Investment Funds (1)				
T. Rowe Price				
Target 2010 Trust			2,130,114	
Target 2015 Trust			10,401,385	
Target 2020 Trust			26,820,275	
Target 2025 Trust			41,344,636	
Target 2030 Trust			43,474,556	
Target 2035 Trust			51,055,326	
Target 2040 Trust			60,223,086	
Target 2045 Trust			76,159,764	
Target 2050 Trust			90,333,549	
Target 2055 Trust			66,174,286	
Target 2060 Trust			228,660	
Alaska Balanced Fund			15,044,016	
Long-Term Balanced Fund			11,267,770	
Total Pooled Investment Funds			<u>494,657,423</u>	55.67%
Collective Investment Funds (1)				
State Street Global Advisors				
Money Market Fund			4,011,545	
Alaska Money Market			5,956,743	
S&P Stock Index Fund			81,118,624	
Russell 3000 Index			14,222,396	
Real Estate Investment Trust Index			15,087,736	
World Equity Ex-U.S. Index			39,750,556	
Long U.S. Treasury Bond Index			1,146,014	
Treasury Inflation Protected Securities Index			12,539,772	
World Government Bond Ex-U.S. Index			3,546,413	
Global Balanced Fund			18,358,638	
Barclays				
Daily Government/Corporate Bond Fund			34,285,617	
Intermediate Bond Fund			22,319,488	
Brandes Institutional				
Alaska International Equity Fund			42,355,438	
RCM				
Socially Responsible Fund			3,812,925	
T. Rowe Price				
Small-Cap Fund			67,704,555	
Total Collective Investment Funds			<u>366,216,460</u>	41.22%
Total Invested Assets			<u>\$888,500,138</u>	<u>100.00%</u>

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

Public Employees' Retirement System Investment Summary Schedule June 30, 2017

Investments (at Fair Value)	Defined Benefit - Alaska Retiree Health Care Trust			
	Asset Allocation		Fair Value	% of Total Assets
Policy	Range			
Cash and Cash Equivalents				
Short-term Fixed Income Pool			\$ 140,836,328	
Securities Lending Income			92,326	
Total Cash and Cash Equivalents	1.00%	± 3% / - 1%	140,928,654	1.91%
Fixed Income Securities				
U.S. Treasury Fixed Income Pool			562,062,699	
Taxable Municipal Bond Pool			61,565,498	
Tactical Fixed Income			65,477,367	
High Yield Pool			188,841,332	
International Fixed Income Pool			53,811,032	
Emerging Debt Pool			48,649,108	
Total Fixed Income Securities	13.00%	± 5%	980,407,036	13.30%
Broad Domestic Equity				
Large Cap Pool			1,564,139,660	
Small Cap Pool			320,515,075	
Total Broad Domestic Equity	26.00%	± 6%	1,884,654,735	25.57%
Global Equity Ex-U.S.				
International Equity Pool			1,408,854,524	
International Equity Small Cap Pool			105,632,467	
Emerging Markets Equity Pool			229,562,135	
Total Global Equity Ex-U.S.	22.00%	± 4%	1,744,049,126	23.66%
Alternative Equity Strategies				
Alternative Equity Strategies			226,961,247	
Convertible Bond Pool			55,910,881	
Total Alternative Equities	5.00%	± 2%	282,872,128	3.84%
Private Equity				
Private Equity Pool			621,378,560	
Total Private Equity	9.00%	± 5%	621,378,560	8.43%
Absolute Return				
Absolute Return Pool			467,293,702	
Total Absolute Return	7.00%	± 4%	467,293,702	6.34%
Real Assets				
Real Estate Pool			421,092,483	
Real Estate Investment Trust Pool			103,269,251	
Infrastructure Private Pool			115,761,389	
Infrastructure Public Pool			72,100,650	
Master Limited Partnership Pool			146,956,285	
Energy Pool			27,031,377	
Farmland Pool			244,610,641	
Timber Pool			102,674,520	
Treasury Inflation Protected Securities Pool			16,227,457	
Total Real Assets	17.00%	± 8%	1,249,724,053	16.95%
Total Invested Assets	100.00%		\$ 7,371,307,994	100.00%

Investment Section

Public Employees' Retirement System Investment Summary Schedule June 30, 2017

<u>Investments (at Fair Value)</u>	Health Reimbursement Arrangement			<u>% of Total Assets</u>
	Asset Allocation		Fair Value	
	Policy	Range		
Cash and Cash Equivalents				
Short-term Fixed Income Pool			\$ 5,823,205	
Securities Lending Income			3,617	
Total Cash and Cash Equivalents	1.00%	± 3% / - 1%	5,826,822	1.99%
Fixed Income Securities				
U.S. Treasury Fixed Income Pool			22,271,105	
Taxable Municipal Bond Pool			2,439,464	
Tactical Fixed Income			2,594,467	
High Yield Pool			7,482,626	
International Fixed Income Pool			2,132,202	
Emerging Debt Pool			1,927,666	
Total Fixed Income Securities	13.00%	± 5%	38,847,530	13.29%
Broad Domestic Equity				
Large Cap Pool			61,982,331	
Small Cap Pool			12,700,051	
Total Broad Domestic Equity	26.00%	± 6%	74,682,382	25.56%
Global Equity Ex-U.S.				
International Equity Pool			55,824,283	
International Equity Small Cap Pool			4,185,568	
Emerging Markets Equity Pool			9,096,142	
Total Global Equity Ex-U.S.	22.00%	± 4%	69,105,993	23.64%
Alternative Equity Strategies				
Alternative Equity Strategies			8,993,085	
Convertible Bond Pool			2,215,406	
Total Alternative Equities	5.00%	± 2%	11,208,491	3.83%
Private Equity				
Private Equity Pool			24,621,430	
Total Private Equity	9.00%	± 5%	24,621,430	8.42%
Absolute Return				
Absolute Return Pool			18,515,990	
Total Absolute Return	7.00%	± 4%	18,515,990	6.33%
Real Assets				
Real Estate Pool			16,685,318	
Real Estate Investment Trust Pool			4,091,928	
Infrastructure Private Pool			4,586,915	
Infrastructure Public Pool			2,856,907	
Master Limited Partnership Pool			5,822,978	
Energy Pool			1,071,088	
Farmland Pool			9,692,423	
Timber Pool			4,068,363	
Treasury Inflation Protected Securities Pool			642,995	
Total Real Assets	17.00%	± 8%	49,518,915	16.94%
Total Invested Assets	100.00%		\$ 292,327,553	100.00%

Public Employees' Retirement System Investment Summary Schedule June 30, 2017

Investments (at Fair Value)	Occupational Death and Disability			% of Total Assets
	Asset Allocation		Fair Value	
	Policy	Range		
Cash and Cash Equivalents				
Short-term Fixed Income Pool			\$ 526,213	
Securities Lending Income			331	
Total Cash and Cash Equivalents	1.00%	± 3% / - 1%	526,544	1.98%
Fixed Income Securities				
U.S. Treasury Fixed Income Pool			2,027,058	
Taxable Municipal Bond Pool			222,034	
Tactical Fixed Income			236,142	
High Yield Pool			681,049	
International Fixed Income Pool			194,067	
Emerging Debt Pool			175,451	
Total Fixed Income Securities	13.00%	± 5%	3,535,801	13.29%
Broad Domestic Equity				
Large Cap Pool			5,641,242	
Small Cap Pool			1,155,926	
Total Broad Domestic Equity	26.00%	± 6%	6,797,168	25.57%
Global Equity Ex-U.S.				
International Equity Pool			5,080,981	
International Equity Small Cap Pool			380,960	
Emerging Markets Equity Pool			827,907	
Total Global Equity Ex-U.S.	22.00%	± 4%	6,289,848	23.64%
Alternative Equity Strategies				
Alternative Equity Strategies			818,527	
Convertible Bond Pool			201,641	
Total Alternative Equities	5.00%	± 2%	1,020,168	3.83%
Private Equity				
Private Equity Pool			2,240,978	
Total Private Equity	9.00%	± 5%	2,240,978	8.42%
Absolute Return				
Absolute Return Pool			1,685,277	
Total Absolute Return	7.00%	± 4%	1,685,277	6.33%
Real Assets				
Real Estate Pool			1,518,654	
Real Estate Investment Trust Pool			372,437	
Infrastructure Private Pool			417,489	
Infrastructure Public Pool			260,028	
Master Limited Partnership Pool			529,992	
Energy Pool			97,488	
Farmland Pool			882,179	
Timber Pool			370,292	
Treasury Inflation Protected Securities Pool			58,524	
Total Real Assets	17.00%	± 8%	4,507,083	16.94%
Total Invested Assets	100.00%		\$ 26,602,867	100.00%

Investment Section

Public Employees' Retirement System Investment Summary Schedule June 30, 2017

<u>Investments (at Fair Value)</u>	Retiree Medical Plan		<u>Fair Value</u>	<u>% of Total Assets</u>
	<u>Asset Allocation</u>			
	<u>Policy</u>	<u>Range</u>		
Cash and Cash Equivalents				
Short-term Fixed Income Pool			\$ 1,614,282	
Securities Lending Income			996	
Total Cash and Cash Equivalents	1.00%	± 3% / - 1%	<u>1,615,278</u>	2.00%
Fixed Income Securities				
U.S. Treasury Fixed Income Pool			6,143,277	
Taxable Municipal Bond Pool			672,903	
Tactical Fixed Income			715,660	
High Yield Pool			2,064,013	
International Fixed Income Pool			588,148	
Emerging Debt Pool			531,729	
Total Fixed Income Securities	13.00%	± 5%	<u>10,715,730</u>	13.29%
Broad Domestic Equity				
Large Cap Pool			17,097,570	
Small Cap Pool			3,503,191	
Total Broad Domestic Equity	26.00%	± 6%	<u>20,600,761</u>	25.55%
Global Equity Ex-U.S.				
International Equity Pool			15,398,608	
International Equity Small Cap Pool			1,154,550	
Emerging Markets Equity Pool			2,509,086	
Total Global Equity Ex-U.S.	22.00%	± 4%	<u>19,062,244</u>	23.64%
Alternative Equity Strategies				
Alternative Equity Strategies			2,480,659	
Convertible Bond Pool			611,099	
Total Alternative Equities	5.00%	± 2%	<u>3,091,758</u>	3.83%
Private Equity				
Private Equity Pool			6,791,592	
Total Private Equity	9.00%	± 5%	<u>6,791,592</u>	8.42%
Absolute Return				
Absolute Return Pool			5,107,463	
Total Absolute Return	7.00%	± 4%	<u>5,107,463</u>	6.33%
Real Assets				
Real Estate Pool			4,602,489	
Real Estate Investment Trust Pool			1,128,720	
Infrastructure Private Pool			1,265,258	
Infrastructure Public Pool			788,051	
Master Limited Partnership Pool			1,606,214	
Energy Pool			295,450	
Farmland Pool			2,673,564	
Timber Pool			1,122,220	
Treasury Inflation Protected Securities Pool			177,364	
Total Real Assets	17.00%	± 8%	<u>13,659,330</u>	16.94%
Total Invested Assets	100.00%		\$ 80,644,156	100.00%

**Public Employees' Retirement System
Recaptured Commission Fees
Year Ended June 30, 2017**

Fund	Broad Domestic Equity Pool	Global Equity Ex-U.S.	Total
Defined Benefit Plan - Pension	\$60,303	\$57,939	\$118,242
Postemployment Benefit - Alaska Retiree Healthcare Trust	49,846	47,890	97,736
Postemployment Benefit - Occupational Death & Disability	1,975	1,898	3,873
Postemployment Benefit - Retiree Medical Pan	180	172	352
Postemployment Benefit - Health Reimbursement Arrangement	545	523	1,068
Total Recapture Commission Fees	\$112,849	\$108,422	\$221,271

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.



ALASKA DIVISION OF
**Retirement
and Benefits**