

ALASKA RETIREMENT MANAGEMENT BOARD

Invested Assets

June 30, 2016

(With Independent Auditors' Report Thereon)

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Invested Assets

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Independent Auditors' Report

Alaska Retirement Management Board and State of Alaska Department of Revenue Treasury Division:

We have audited the accompanying schedules of the State of Alaska Retirement and Benefit Plans Invested Assets (the Plans) as of June 30, 2016, and of investment income (loss) and changes in investment assets of the Plans for the year then ended, and the related notes to the schedules (collectively referred to as "the Schedules").

Management's Responsibility for the Schedules

Management is responsible for the preparation and fair presentation of the Schedules in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the Schedules that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the Schedules based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Schedules are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Schedules. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the Schedule, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the Schedules in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the Schedules.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the Schedules referred to above present fairly, in all material respects, the invested assets of the Plans as of June 30, 2016, and the results of their investment income (loss) and changes in invested assets for the year then ended, in accordance with U.S. generally accepted accounting principles.

Emphasis of Matter

We draw attention to note 1 to the Schedules, which describes that the accompanying Schedules were prepared to present the invested assets of the Plans and changes therein. The presentation of the Schedules is not intended to be a complete presentation of the financial status of the Plans.



December 12, 2016

ALASKA RETIREMENT MANAGEMENT BOARD SCHEDULE OF INVESTED ASSETS June 30, 2016

	Pooled Investments	Participant Directed Investments	Total Invested Assets
Investments (at Fair Value)			
Cash and Cash Equivalents	\$ 186,877,315	-	186,877,315
Fixed Income Securities	2,839,199,729	-	2,839,199,729
Broad Domestic Equity	6,013,622,035	-	6,013,622,035
Global Equity Ex-U.S.	5,558,328,057	-	5,558,328,057
Alternative Equity Strategies	979,852,345	-	979,852,345
Private Equity	1,836,485,563	-	1,836,485,563
Absolute Return	1,515,517,243	-	1,515,517,243
Real Assets	4,138,402,685	-	4,138,402,685
Pooled Investment Funds	-	559,562,817	559,562,817
Collective Investment Funds	 	394,072,615	394,072,615
Total Invested Assets	\$ 23,068,284,972	953,635,432	24,021,920,404

ALASKA RETIREMENT MANAGEMENT BOARD SCHEDULE OF INVESTMENT INCOME (LOSS) AND CHANGES IN INVESTED ASSETS For the year ended June 30, 2016

	•	Pooled Investments	Participant Directed Investments	Total Invested Assets
Investment Income (Loss)				
Cash and Cash Equivalents	\$	2,026,516	-	2,026,516
Fixed Income Securities		142,354,620	-	142,354,620
Broad Domestic Equity		23,521,045	-	23,521,045
Global Equity Ex-U.S.		(530,133,698)	-	(530,133,698)
Alternative Equity Strategies		31,692,337	-	31,692,337
Private Equity		84,349,277	-	84,349,277
Absolute Return		(40,698,621)	-	(40,698,621)
Real Assets		203,813,641	-	203,813,641
Pooled Investment Funds		-	5,619,056	5,619,056
Collective Investment Funds		-	(3,469,496)	(3,469,496)
Total Investment Income (Loss)	-	(83,074,883)	2,149,560	(80,925,323)
Total Invested Assets, Beginning of Year		23,989,926,928	832,454,934	24,822,381,862
Total Contributions		958,513,731	166,720,978	1,125,234,709
Total (Withdrawals)	_	(1,797,080,804)	(47,690,040)	(1,844,770,844)
Total Invested Assets, End of Year	\$	23,068,284,972	953,635,432	24,021,920,404

(1) THE ACCOUNTING ENTITY

The Alaska Retirement Management Board (Board) is the investment oversight authority for the State of Alaska's Retirement and Benefits Plans (Plans). These Plans are made up of four systems: the Public Employees' Retirement System (PERS), Teachers Retirement System (TRS), Judicial Retirement System (JRS), and National Guard and Naval Militia Retirement Systems (MRS). The systems comprise a mix of individual Defined Benefit and Defined Contribution Retirement Plans. These schedules of invested assets and of investment income (loss) and changes in invested assets (the Schedules) are those of the four systems' invested assets and not the systems as a whole. Fiduciary responsibility for the Board's Invested Assets is pursuant to Alaska Statutes 37.10.210-390.

Alaska Statute 37.10.071 provides that investments shall be made with the judgment and care under circumstances then prevailing that an institutional investor of ordinary professional prudence, discretion and intelligence exercises in managing large investment portfolios.

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The Schedules are prepared using the accrual basis of accounting for investment income. Assets are reported at fair value. Investment purchases and sales are recorded on a trade-date basis. Investment income (loss) includes realized and unrealized gains and losses and interest income on investments. This income is recorded when earned. Contributions represent contributions from employees and employees. Withdrawals represent benefits paid to plan participants and administrative and investment management expenses. Contributions, benefits paid and all expenses are recorded on a cash basis.

Investments and Related Policies

Carrying value of investments

Securities are valued each business day using prices obtained from a pricing service when such prices are available; otherwise, such securities are valued at the most current sale price or based on a valuation provided by investment managers. Fair values of investments that have no readily determinable fair value are generally reported by using the net asset value per share (or its equivalent) of the investment. Pooled participant directed accounts and the collective investment funds, held in trust, are valued based on a unit value determined by the Trustees multiplied by the total units held by the Plan. The unit value is determined by the Trustees based on the fair value of the underlying assets.

Newly Adopted Accounting Pronouncements

The Governmental Accounting Standards Board issued Statement No. 72, *Fair Value Measurement and Application* which the State implemented as of July 1, 2015. The statement requires that all investments be recorded at fair value on the schedule of invested assets and inputs used for these values be disclosed in the footnotes to the financial statements. Investments are classified as Level 1, 2 or 3, with Level 1 valuations being the most readily available on the open market.

(3) FAIR VALUE MEASUREMENTS

Various inputs are used in valuing the investments held by the Board. U.S. generally accepted accounting principles (GAAP) establishes a hierarchy of inputs used to value investment emphasizing observable inputs and minimizing unobservable inputs. These inputs are summarized as follows:

Level 1 - Quoted prices for identical assets in an active market

Level 2 - Inputs, other than quoted prices, that are observable for the asset, either directly or indirectly

Level 3 – Unobservable inputs. Unobservable inputs should only be used to the extent that observable inputs are not available for a particular asset.

(3) FAIR VALUE MEASUREMENTS (Cont.)

The Board categorizes fair value measurements within the fair value hierarchy established by GAAP. The Board has the following recurring fair value measurements at June 30, 2016:

Investment by fair value level		Totals	Level 1	Level 2	Level 3
Cash Equivalents					
Deposits	\$	95,152,396	95,152,396	-	-
Money Market		14,575,628	-	14,575,628	-
Repurchase Agreement		90,321,579	-	90,321,579	-
Short-term Investment Fund	_	96,154,844	-	96,154,844	-
Total Cash Equivalents		296,204,447	95,152,396	201,052,051	-
Debt Securities					
Bank Loans		9,073,960	-	9,073,960	-
Convertible Bonds		177,524,879	-	175,655,466	1,869,413
Corporate Bonds		636,101,601	-	634,806,524	1,295,077
Foreign Government Bonds		355,516,973	-	355,516,973	-
Mortgage Backed		70,811,469	-	70,811,362	107
Municipal Bonds		243,871,795	-	243,871,795	-
Commingled Debt Funds		1,332,450,035	1,023,435,515	309,014,520	-
Other Asset Backed		112,562,022	-	112,562,022	-
U.S. Government Agency		53,524,812	-	53,524,812	-
U.S. Treasury Bills, Notes, Bonds, and TIPS		1,153,990,391	-	1,153,990,391	-
Yankee Corporate		98,099,252	-	98,099,252	-
Yankee Government		8,758,411	-	8,758,411	-
Total Debt Securities		4,252,285,600	1,023,435,515	3,225,685,488	3,164,597
Equity	_		· · · · _	· · · · · ·	
Commingled Equity Fund		1,285,042,064	1,116,430,689	168,611,375	-
Common Stock		9,781,294,876	9,769,684,607	10,480,104	1,130,165
Depository Receipts		327,839,723	327,839,723	-	-
Futures		811,395	811,395	-	-
Master Limited Partnership		456,568,748	456,568,748	_	_
Options		18,996,096	(5,479,862)	24,475,958	
Preferred Stock		46,404,623	43,916,751	2,487,872	
Real Estate Inv Trust		587,386,628	587,318,961	2,107,072	67,667
Rights		77,304	77,304		-
Warrants		13,152	13,152	_	_
Total Equities		12,504,434,609	12,297,181,468	206,055,309	1,197,832
Other		12,504,454,007	12,277,101,400	200,055,507	1,177,032
Balanced Funds		49,756,543		49,756,543	
			-	49,750,545	-
Target Date Funds Total Other		486,442,154 536,198,697		536,198,697	-
	¢		-		4,362,429
Total investments by fair value level	\$_	17,589,123,353	13,415,769,379	4,168,991,545	4,302,429
Investment measured at NAV					
Absolute Return		1,515,517,243			
Energy		71,536,545			
Farmland		807,376,661			
Infrastructure		317,833,434			
Private Equity		1,834,258,839			
Real Estate		1,462,661,070			
Timber		376,555,515			
Total investments measured at NAV	\$	6,385,739,307			
Total investments measured at fair value	\$	23,974,862,660			
Net Receivables / (Payables)		47,057,744			

(3) FAIR VALUE MEASUREMENTS (Cont.)

Equity securities classified as level 1 are valued using prices quoted in active markets for those securities. Debt securities classified as level 2 are valued using matrix pricing. Pricing is sourced from various sources. Debt securities classified as level 3 are valued using consensus pricing, equity securities classified as level 3 are valued using the last traded price or a price determined by the investment manager's valuation committee.

Investments in absolute return, energy, farmland, infrastructure, private equity, real estate, and timber are measured at net asset value (NAV) with additional information listed in the following table.

			Redemption	
		Unfunded	Frequency (if	Redemption
	 Fair Value	Commitments	currently available)	Notice Period
Absolute Return	\$ 1,515,517,243	98,595,428	Quarterly	2-90 days
Energy	71,536,545	59,507,718	No redemptions	No redemptions
Farmland	807,376,661	-	n/a	n/a
Infrastructure	317,833,434	50,000,000	Quarterly	30-90 days
Private Equity	1,834,258,839	1,361,505,655	No redemptions	No redemptions
Real Estate	1,462,661,070	145,894,595	Varied	Varied
Timber	 376,555,515	-	n/a	n/a
Total investments measured at the NAV	\$ 6,385,739,307			

Absolute Return: This type includes investments in eight hedge fund of funds. Investment strategies include pooled investment vehicles and securities in a variety of markets including structured notes and swaps. The fair values of the investments in this type have been determined using the NAV per share of the investments (or its equivalent) of the capital account balance nearest to the balance sheet date, adjusted for subsequent contributions and distributions. Absolute return investments undergo annual independent financial statement audits.

Energy: This type includes investments in four energy funds using debt and equity investments. The fair values of the investments in this type have been determined using the NAV per share of the investments (or its equivalent) of the capital account balance nearest to the balance sheet date, adjusted for subsequent contributions and distributions. Energy fund investments undergo annual independent financial statement audits. These investments can never be redeemed with the funds. The nature of the investments are expected to be held through the fiscal year 2023.

Farmland: This type includes investments in two wholly owned agriculture funds. These two funds are for the purpose of owning and managing real estate property devoted to agricultural use. Investment properties include row crops, permanent crops and vegetable crops. The fair values of the investments in this type have been determined using the NAV per share of the investments (or its equivalent) of the capital account balance nearest to the balance sheet date, adjusted for subsequent contributions and distributions. These investments are funds of one, therefore they can be liquidated at any time. Farmland investments undergo annual independent financial statement audits.

Infrastructure (Private): This type includes investments in two infrastructure funds. Investments include electricity generation, transmission, and distribution including renewable energy, gas transmission, distribution, processing and storage, toll roads, pipelines, bridges, water and waste water, telecommunications infrastructure, and other infrastructure-related assets. The fair values of the investments in this type have been determined using the NAV per share of the investments (or its equivalent) of the capital account balance nearest to the balance sheet date, adjusted for subsequent contributions and distributions. Infrastructure investments undergo annual independent financial statement audits. Funds can be redeemed on a quarterly basis with proper notice.

(3) FAIR VALUE MEASUREMENTS (Cont.)

Private Equity: This type includes investments in 14 private equity funds including two gatekeeper managers who invest on behalf of the Alaska Retirement Management Board. These funds are diversified in various sectors including venture capital, acquisitions, mezzanine, distressed, restructuring, secondaries, and special situations. The fair values of the investments in this type have been determined using the NAV per share of the investments (or its equivalent) of the capital account balance nearest to the balance sheet date, adjusted for subsequent contributions and distributions. Private equity funds undergo annual independent financial statement audits. These investments can never be redeemed with the funds. The nature of the investments are expected to be held through the fiscal year 2026

Real Estate: This type includes investments in 22 real estate funds that invest in primarily in U.S. commercial real estate including value-added, opportunistic and core investments. The fair values of the investments in this type have been determined using the NAV per share of the investments (or its equivalent) of the capital account balance nearest to the balance sheet date, adjusted for subsequent contributions and distributions. Real estate investments undergo annual independent financial statement audits. Three of these funds are wholly owned by the ARMB, therefore can be liquidated at any time. For the remaining 19 funds, distributions from each fund will be received as the underlying investments of the funds are liquidated. These investments are expected to be funded until the year 2025.

Timber: This type includes investments in two wholly owned timber funds that invest, acquire, manage, and dispose of timberland property and associated timber. The fair values of the investments in this type have been determined using the NAV per share of the investments (or its equivalent) of the capital account balance nearest to the balance sheet date, adjusted for subsequent contributions and distributions. Timber investments undergo annual independent financial statement audits. These investments can be liquidated at any time.

(4) DEPOSIT AND INVESTMENT RISK

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The ARMB invests its cash in the State of Alaska, Treasury Division's (Treasury) Short-Term Fixed Income Pool. As a means of limiting its exposure to fair value losses arising from increasing interest rates, Treasury's investment policy limits individual fixed rate securities to 14 months to maturity or 14 months expected average life upon purchase. Floating rate securities are limited to three years to maturity or three years expected average life upon purchase. At June 30, 2016, the expected average life of individual fixed rate securities ranged from 1 day to 1 year and the expected average life of floating rate securities ranged from 12 days to 13.2 years.

Duration is a measure of interest rate risk. It measures a security's sensitivity to a 100-basis point change in interest rates. The duration is the average fair value weighted duration of each security taking into account all related cash flows. At June 30, 2016, the effective duration of the Board's fixed income investments by type, was as follows:

	Effective Duration (in
	years)
Corporate Bonds	4.32
Convertible Bonds	0.36
Foreign Government Bonds	6.75
Mortgage Backed	1.84
Municipal Bonds	11.47
Other Asset Backed	0.18
U.S. Government Agency	8.05
U.S. Treasury Bills, Notes, Bonds, and TIPS	4.48
Yankee Corporate	3.93
Yankee Government	3.60
Total Portfolio	5.37

4) DEPOSIT AND INVESTMENT RISK (Cont.)

Defined Contribution Pooled Investment and Collective Investment Funds

The Board contracts with an external investment manager who is given the authority to invest funds in a wholly owned pooled environment to accommodate thirteen participant directed funds. Under normal conditions, the Board will invest in cash equivalent instruments with maturities of less than one year. Additionally, under normal conditions, for government debt, corporate debt, and mortgage-backed securities, duration is limited to \pm 0.2 years of the blended benchmark of 70% Barclays U.S. Intermediate Aggregate Bond Index, 15% Barclays U.S. Floating Rate Note Index, 10% Barclays TIPS Index, and 5% Barclays Long U.S. Treasury Bond Index. Further deviations are acceptable if they do not contribute significantly to the overall risk of the portfolio. In no event at time of purchase shall effective duration exceed \pm 0.4 years relative to the index. At June 30, 2016, the duration of the government corporate debt, and mortgage-backed securities was 3.73 years and the duration of the blended Barclays Bond Index was 3.71 years. The Board does not have a policy to limit interest rate risk for its collective investment funds.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. At June 30, 2016, the Board's Invested Assets consisted of fixed income securities with credit quality ratings issued by nationally recognized statistical rating organizations as follows (using Standard & Poor's Corporation rating scale):

Rating	US Dollar	Foreign
AAA	\$ 224,754	,994 4,672,488
AA	209,585	,441 2,508,671
A	114,844	,820 64,853,363
A-1	4,370	.,113 -
BBB	96,623	,935 41,931,301
BB	299,801	,607 22,848,592
В	258,398	
CCC	51,459	-,629 -
D	1,823	- ,125
U.S. Government Agency	53,524	-,812 -
U.S. Treasury Bills, Notes, Bonds, and TIPS	1,153,990	,391 -
Not Rated	182,954	,274 221,211,229

Custodial Credit Risk – Deposits

Custodial credit risk is the risk that deposits may not be returned in the event of a bank failure. The Board does not have a policy in relation to custodial credit risk for deposits. At June 30, 2016, the Board's Invested Assets had the following uncollateralized and uninsured foreign currency deposits of \$13,209,476.

Foreign Currency Risk

Foreign Currency Risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. Through its asset allocation the Board limits total investments foreign currencies to the following:

Pension System	Fixed Income	Global Equity Ex-U.S.	Private Equity Pool
PERS	17%	29%	14%
TRS	17%	29%	14%
JRS	17%	29%	14%
MRS	58%	24%	-

3) DEPOSIT AND INVESTMENT RISK (Cont.)

At June 30, 2016, the Board had exposure to foreign currency risk with the following deposits and investments:

		Donosita	Foreign Government Bonds	Equity	Rights & Warrants	Limited Partnerships
	ф. -	Deposits	Government Donus		Kights & warrants	· · · ·
Australian Dollar	\$	65,179	-	153,349,352	-	1,418,064
Brazilian Real		438,756	22,848,592	19,131,652	-	-
Canadian Dollar		636,882	4,672,488	139,206,500	-	-
Colombian Peso		412,621	12,703,232	-	-	-
Danish Krone		85,162	-	102,200,123	-	-
Euro Currency		1,152,449	75,526,742	957,322,795	75,880	105,452,662
Hong Kong Dollar		1,124,551	-	134,878,613	-	-
Hungarian Forint		-	-	4,643,488	-	-
Indian Rupee		-	-	493,330	-	-
Indonesian Rupiah		862,498	10,100,601	13,548,452	-	-
Japanese Yen		4,575,676	82,285,885	714,975,777	-	-
Malaysian Ringgit		(1,214,301)	17,009,962	3,892,922	-	-
Mexican Peso		1,170,601	34,942,550	8,584,527	-	-
New Israeli Sheqel		45,381	-	7,122,943	-	-
New Russian Ruble		-	-	1,838,115	-	-
New Taiwan Dollar		6	-	31,880,591	-	-
New Zealand Dollar		111,723	-	16,693,214	-	-
Norwegian Krone		245,282	-	26,086,007	-	-
Peruvian Nouveau Sol		314,856	6,250,837	-	-	-
Philippine Peso		-	-	2,485,773	-	-
Polish Zloty		1,337	23,328,731	691,698	-	-
Pound Sterling		2,028,256	27,701,565	677,898,926	-	27,823,480
Qatari Rial		5,992	-	-	-	-
Singapore Dollar		95,541	-	43,232,967	14,575	-
South African Rand		197,575	15,864,379	22,612,186	-	-
South Korean Won		4,660	-	75,149,284	-	-
Swedish Krona		547,977	11,069,763	127,595,394	-	-
Swiss Franc		51,352	-	223,613,867	-	-
Thailand Baht		88,191	3,674,856	17,808,505	-	_
Turkish Lira		-	7,536,790	3,657,776	-	-
Uae Dirham		13,237	-	627,123	-	-
Yuan Renminbi		148,036	-	146,834	-	-
	\$	13,209,476	355,516,973	3,531,368,734	90,455	134,694,206

Concentration of Credit Risk

At June 30, 2016, the Board's Invested Assets did not have exposure to any one issuer greater than 5% of total invested assets.

(5) DERIVATIVES, FOREIGN EXCHANGE, AND COUNTERPARTY CREDIT RISK

The Board is exposed to credit risk on investment derivative instruments that are in asset positions. The Board has no policy of requiring collateral or other security to support derivative instruments subject to credit risk. Additionally, the Board has no policy regarding entering into netting arrangements when it enters into derivative instrument transactions with a counterparty, nor does the Board have a policy for contingencies. On June 30, 2016, the Board had the following derivative instruments outstanding:

	Changes in Fair Value]		
	Classification	<u>Amount</u>	<u>Classification</u>	<u>Amount</u>	<u>Notional</u>
Equity Options Written	Investment Revenue	7,491,881	Options	-	-
FX Forwards	Investment Revenue	(477,927)	Long Term Instruments	(211,556)	5,500,564
Index Futures Long	Investment Revenue	985,323	Futures	-	35,480
Index Options Bought	Investment Revenue	(6,412,719)	Options	24,475,958	107,500
Index Options Written	Investment Revenue	3,881,395	Options	(5,479,862)	(146,500)
Rights	Investment Revenue	(1,189,347)	Common Stock	77,304	352,899
Warrants	Investment Revenue	(20,666)	Common Stock	13,152	17,802

The International Equity Pool includes foreign currency forward contracts to buy and sell specified amounts of foreign currencies at specified rates on specified future dates for the purpose of hedging existing security positions. The counterparties to the foreign currency forward contracts consist of a diversified group of financial institutions. Credit risk exposure exists to the extent of nonperformance by these counterparties; however, the risk of default is considered to be remote. The market risk is limited to the difference between contractual rates and forward rates at the balance sheet date. At June 30, 2016, the Board had the following Foreign Currency risk related to forward contracts:

Currency Name	Options	Net Receivables	Net Payables	Total Exposure
Canadian Dollar	-	-	(901)	(901)
Euro Currency	75,880	-	-	75,880
New Zeland Dollar	-	-	(210,655)	(210,655)
Singapore Dollar	14,575	-	-	14,575
	90,455	-	(211,556)	(121,100)

At June 30, 2016, the Board had no counterparty credit and counterparty concentration risk associated with its investment derivative positions.