# ALASKA RETIREMENT MANAGEMENT BOARD FINANCIAL REPORT 

As of September 28, 2018

# ALASKA RETIREMENT MANAGEMENT BOARD <br> Schedule of Investment Income and Changes in Invested Assets by Fund <br> Fiscal Year-to-Date through September 28, 2018 

|  | Beginning InvestedAssets |  | Investment Income ${ }^{(1)}$ |  | Net Contributions (Withdrawals) |  |  | Ending Invested Assets | \% Change in Invested Assets | \% Change du to Investment Income ${ }^{(2)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Public Employees' Retirement System (PERS) |  |  |  |  |  |  |  |  |  |  |
| Defined Benefit Plans: |  |  |  |  |  |  |  |  |  |  |
| Retirement Trust | \$ | 9,279,978,252 | \$ | 282,465,707 | \$ | 12,303,279 \$ | \$ | 9,574,747,238 | 3.18\% | 3.04\% |
| Retirement Health Care Trust |  | 7,653,992,293 |  | 230,180,517 |  | $(81,740,980)$ |  | 7,802,431,830 | 1.94\% | 3.02\% |
| Total Defined Benefit Plans |  | 16,933,970,545 |  | 512,646,224 |  | (69,437,701) |  | 17,377,179,068 | 2.62\% | 3.03\% |
| Defined Contribution Plans: |  |  |  |  |  |  |  |  |  |  |
| Participant Directed Retirement |  | 1,041,422,342 |  | 40,640,802 |  | 21,139,648 |  | 1,103,202,792 | 5.93\% | 3.86\% |
| Health Reimbursement Arrangement |  | 356,026,985 |  | 10,827,851 |  | 9,278,268 |  | 376,133,104 | 5.65\% | 3.00\% |
| Retiree Medical Plan |  | 99,169,627 |  | 3,017,536 |  | 2,714,981 |  | 104,902,144 | 5.78\% | 3.00\% |
| Defined Benefit Occupational Death and Disability: |  |  |  |  |  |  |  |  |  |  |
| Public Employees |  | 20,872,152 |  | 634,323 |  | 527,634 |  | 22,034,109 | 5.57\% | 3.00\% |
| Police and Firefighters |  | 9,776,610 |  | 296,883 |  | 222,507 |  | 10,296,000 | 5.31\% | 3.00\% |
| Total Defined Contribution Plans |  | 1,527,267,716 |  | 55,417,395 |  | 33,883,038 |  | 1,616,568,149 | 5.85\% | 3.59\% |
| Total PERS |  | 18,461,238,261 |  | 568,063,619 |  | (35,554,663) |  | 18,993,747,217 | 2.88\% | 3.08\% |
| Teachers' Retirement System (TRS) |  |  |  |  |  |  |  |  |  |  |
| Defined Benefit Plans: |  |  |  |  |  |  |  |  |  |  |
| Retirement Trust |  | 5,466,056,988 |  | 167,047,055 |  | 18,581,512 |  | 5,651,685,555 | 3.40\% | 3.05\% |
| Retirement Health Care Trust |  | 2,883,838,182 |  | 86,716,656 |  | $(32,537,311)$ |  | 2,938,017,527 | 1.88\% | 3.02\% |
| Total Defined Benefit Plans |  | 8,349,895,170 |  | 253,763,711 |  | (13,955,799) |  | 8,589,703,082 | 2.87\% | 3.04\% |
| Defined Contribution Plans: |  |  |  |  |  |  |  |  |  |  |
| Participant Directed Retirement |  | 442,323,051 |  | 17,474,760 |  | 1,421,252 |  | 461,219,063 | 4.27\% | 3.94\% |
| Health Reimbursement Arrangement |  | 105,665,716 |  | 3,203,596 |  | 1,408,232 |  | 110,277,544 | 4.36\% | 3.01\% |
| Retiree Medical Plan |  | 36,357,065 |  | 1,101,656 |  | 397,241 |  | 37,855,962 | 4.12\% | 3.01\% |
| Defined Benefit Occupational Death and Disability |  | 3,797,783 |  | 114,557 |  | 5,262 |  | 3,917,602 | 3.15\% | 3.01\% |
| Total Defined Contribution Plans |  | 588,143,615 |  | 21,894,569 |  | 3,231,987 |  | 613,270,171 | 4.27\% | 3.71\% |
| Total TRS |  | 8,938,038,785 |  | 275,658,280 |  | (10,723,812) |  | 9,202,973,253 | 2.96\% | 3.09\% |
| Judicial Retirement System (JRS) |  |  |  |  |  |  |  |  |  |  |
| Defined Benefit Plan Retirement Trust |  | 176,358,294 |  | 5,418,194 |  | 3,107,392 |  | 184,883,880 | 4.83\% | 3.05\% |
| Defined Benefit Retirement Health Care Trust |  | 31,621,813 |  | 953,351 |  | $(70,442)$ |  | 32,504,722 | 2.79\% | 3.02\% |
| Total JRS |  | 207,980,107 |  | 6,371,545 |  | 3,036,950 |  | 217,388,602 | 4.52\% | 3.04\% |
| National Guard/Naval Militia Retirement System (MRS) |  |  |  |  |  |  |  |  |  |  |
| Defined Benefit Plan Retirement Trust |  | 39,449,053 |  | 852,020 |  | 470,376 |  | 40,771,449 | 3.35\% | 2.15\% |
| Other Participant Directed Plans |  |  |  |  |  |  |  |  |  |  |
| Supplemental Annuity Plan |  | 3,905,659,481 |  | 121,300,171 |  | $(12,876,372)$ |  | 4,014,083,280 | 2.78\% | 3.11\% |
| Deferred Compensation Plan |  | 938,806,799 |  | 35,305,221 |  | (4,270,740) |  | 969,841,280 | 3.31\% | 3.77\% |
| Total All Funds |  | 32,491,172,486 |  | 1,007,550,856 |  | $(59,918,261)$ |  | 33,438,805,081 |  |  |
| Total Non-Participant Directed |  | 26,162,960,813 |  | 792,829,902 |  | (65,332,049) |  | 26,890,458,666 | 2.78\% | 3.03\% |
| Total Participant Directed |  | 6,328,211,673 |  | 214,720,954 |  | 5,413,788 |  | 6,548,346,415 | 3.48\% | 3.39\% |
| Total All Funds | \$ | 32,491,172,486 | \$ | 1,007,550,856 | \$ | (59,918,261) $\$$ |  | 33,438,805,081 | 2.92\% | 3.10\% |

Notes:
(1) Includes interest, dividends, securities lending, expenses, realized and unrealized gains/losses
(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates and can be found at: http://www.revenue.state.ak.us/treasury/programs/programs/other/armb/investmentresults.aspx

## ALASKA RETIREMENT MANAGEMENT BOARD

Schedule of Investment Income and Changes in Invested Assets by Fund
For the Month Ended September 28, 2018

Public Employees' Retirement System (PERS)
Defined Benefit Plans:
Retirement Trust
Retirement Health Care Trust
Total Defined Benefit Plans
Defined Contribution Plans:
Participant Directed Retirement
Health Reimbursement Arrangement
Retiree Medical Plan
Defined Benefit Occupational Death and Disability: Public Employees
Police and Firefighters
Total Defined Contribution Plans

## Total PERS

Teachers' Retirement System (TRS)
Defined Benefit Plans:
Retirement Trust
Retirement Health Care Trust
Total Defined Benefit Plans
Defined Contribution Plans:
Participant Directed Retirement
Health Reimbursement Arrangement
Retiree Medical Plan
Defined Benefit Occupational Death and Disability
Total Defined Contribution Plans

## Total TRS

Judicial Retirement System (JRS)
Defined Benefit Plan Retirement Trust
Defined Benefit Retirement Health Care Trust

## Total JRS

National Guard/Naval Militia Retirement System (MRS
Defined Benefit Plan Retirement Trust

## Other Participant Directed Plans

Supplemental Annuity Plan
Deferred Compensation Plan

## Total All Funds

Total Non-Participant Directed
Total Participant Directed
Total All Funds



Ending Invested Assets

\% Change due to Investment Income ${ }^{(2)}$

| \$$9,606,579,309$ <br> $7,818,353,683$ |
| ---: |
| $17,424,932,992$ |

$7,409,371$

$5,279,509$ | $\$$ |
| ---: |
| $12,688,880$ |


| $(39,241,442)$ |
| :--- | ---: |
| $(21,201,362)$ |
| $(60,442,804)$ |


| $-0.33 \%$ | $0.08 \%$ |
| :---: | :---: |
| $-0.20 \%$ | $0.07 \%$ |
| $-0.27 \%$ | $0.07 \%$ |
|  |  |
| $0.89 \%$ | $-0.03 \%$ |
| $0.98 \%$ | $0.07 \%$ |
| $0.99 \%$ | $0.07 \%$ |
|  |  |
| $1.05 \%$ | $0.08 \%$ |
| $1.06 \%$ | $0.08 \%$ |
| $0.92 \%$ | $0.00 \%$ |
| $-0.17 \%$ | $0.07 \%$ |

Notes:
(1) Includes interest, dividends, securities lending, expenses, realized and unrealized gains/losses
(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates and can be found at: http://www.revenue.state.ak.us/treasury/programs/programs/other/armb/investmentresults.aspx


5-year Annualized Returns as of Fiscal Year End


Income by Fiscal Year



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Public Employees' Retirement Pension Trust Fund

## Fiscal Year-to-Date through September 28, 2018



Total Assets History


Year-to-date Income by Month
$\_$Prior Year


Actual Asset Allocation vs Target Allocation

- Actual •Policy


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## Public Employees' Retirement Health Care Trust Fund

## Fiscal Year-to-Date through September 28, 2018






Teachers' Retirement Pension Trust Fund




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Teachers' Retirement Health Care Trust Fund
Fiscal Year-to-Date through September 28, 2018


Total Assets History




Judicial Retirement Pension Trust Fund
Fiscal Year-to-Date through September 28, 2018


Total Assets History



Actual Asset Allocation vs Target Allocation

- Actual •Policy


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Judicial Retirement Health Care Trust Fund
Fiscal Year-to-Date through September 28, 2018


Total Assets History



Actual Asset Allocation vs Target Allocation - Actual •Policy


Military Retirement Trust Fund
Fiscal Year-to-Date through September 28, 2018


Total Assets History




# ALASKA RETIREMENT MANAGEMENT BOARD 

Reporting of Funds by Manager

All Non-Participant Directed Plans

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager

## Schedule of Investment Income and Changes in Invested Assets

For the Month Ended September 28, 2018

## Cash

Short-Term Fixed Income Pool
Securities Lending Income Pool Total Cash

Fixed Income
ARMB US Treasury Fixed Income

## Domestic Equities

Small Cap
Passively Managed
ARMB S\&P 600
SSgA Russell 2000 Growth
SSgA Russell 2000 Value
Total Passive
Actively Managed
ARMB Futures Small Cap
Arrowmark
BMO Global Asset Management
DePrince, Race \& Zollo Inc.- Micro Cap
Fidelity (FIAM) Small Company
Frontier Capital Mgmt. Co
Jennison Associates, LLC
Lord Abbett \& Co.- Micro Cap
T. Rowe Small Cap Growth

Transition Account
Victory Capital Management
Zebra Capital Management
Total Active
Total Small Cap

|  | Beginning Invested Assets | Investment Income |  | Net Contributions and (Withdrawals) |  | Ending Invested Assets |  | $\begin{gathered} \% \\ \text { increase } \\ \text { (decrease) } \end{gathered}$ | \% Change due to Investment Income |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | 394,681,729 | \$ | 788,586 | \$ | $(44,818,039)$ | \$ | 350,652,276 | -11.16\% | 0.21\% |
|  | 129,621 |  | 201,631 |  | $(211,385)$ |  | 119,867 | -7.53\% | 842.64\% |
|  | 394,811,350 |  | 990,217 |  | $(45,029,424)$ |  | 350,772,143 | -11.15\% | 0.27\% |


| 175,593,882 | $(5,546,348)$ | - | 170,047,534 | -3.16\% | -3.16\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8,859 | 8,809 | - | 17,668 | 99.44\% | 99.44\% |
| 179,513 | 800 | - | 180,313 | 0.45\% | 0.45\% |
| 175,782,254 | (5,536,739) | - | 170,245,515 | -3.15\% | -3.15\% |
| 2,762,599 | $(345,752)$ | - | 2,416,847 | -12.52\% | -12.52\% |
| 58,315,349 | $(686,315)$ | - | 57,629,034 | -1.18\% | -1.18\% |
| 57,261,656 | $(1,232,953)$ | - | 56,028,703 | -2.15\% | -2.15\% |
| 129,179,460 | $(3,873,975)$ | - | 125,305,485 | -3.00\% | -3.00\% |
| $(9,019)$ | - | - | $(9,019)$ | - | - |
| 109,233,655 | $(3,468,929)$ | - | 105,764,726 | -3.18\% | -3.18\% |
| 77,700,012 | $(1,664,111)$ | - | 76,035,901 | -2.14\% | -2.14\% |
| 130,950,092 | $(261,268)$ | - | 130,688,824 | -0.20\% | -0.20\% |
| 51,006,988 | $(411,597)$ | 63,187 | 50,658,578 | -0.68\% | -0.81\% |
| $(1,520)$ | - | - | $(1,520)$ | - | - |
| 131,003,074 | $(2,597,699)$ | - | 128,405,375 | -1.98\% | -1.98\% |
| 119,538,371 | $(3,894,798)$ | - | 115,643,573 | -3.26\% | -3.26\% |
| 866,940,717 | $(18,437,397)$ | 63,187 | 848,566,507 | -2.12\% | -2.13\% |
| 1,042,722,971 | (23,974,136) | 63,187 | 1,018,812,022 | -2.29\% | -2.30\% |

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager

## Schedule of Investment Income and Changes in Invested Assets

For the Month Ended September 28, 2018

## Large Cap

Passively Managed
ARMB Russell 1000 Growth
ARMB Russell 1000 Value
ARMB Russell Top 200 Total Passive
Actively Managed
Allianz Global Investors
ARMB Equity Yield
ARMB Futures Large Cap
ARMB Portable Alpha
ARMB S\&P 500 Equal Weight
ARMB Scientific Beta
Barrow, Hanley, Mewhinney \& Strauss Lazard Freres
Transition Account
Total Active
Total Large Cap
Total Domestic Equity
Global Equities Ex US Small Cap
Mondrian Investment Partners
Schroder Investment Management Total Small Cap

## Large Cap

Allianz Global Investors
Arrow Street Capital
Baillie Gifford Overseas Limited
Blackrock ACWI Ex-US IMI
Brandes Investment Partners
Cap Guardian Trust Co
Lazard Freres
McKinley Capital Management
State Street Global Advisors
Total Large Cap

| 1,691,742,014 | 9,449,067 |  | 1,701,191,081 | 0.56\% | 0.56\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1,421,425,372 | 2,729,725 |  | 1,424,155,097 | 0.19\% | 0.19\% |
| 413,746,670 | 3,223,548 |  | 416,970,218 | 0.78\% | 0.78\% |
| 3,526,914,056 | 15,402,340 | - | 3,542,316,396 | 0.44\% | 0.44\% |
| (12) | 5,647 | - | 5,635 | -47058.33\% | -47058.33\% |
| 383,453,542 | 4,712,489 |  | 388,166,031 | 1.23\% | 1.23\% |
| 4,313,130 | 67,078 | - | 4,380,208 | 1.56\% | 1.56\% |
| 459,600,537 | 2,059,811 | 39,942 | 461,700,290 | 0.46\% | 0.45\% |
| 385,203,319 | 476,741 | - | 385,680,060 | 0.12\% | 0.12\% |
| 391,607,318 | 365,241 | - | 391,972,559 | 0.09\% | 0.09\% |
| 13,679 | - | - | 13,679 | - | - |
| 353,584,787 | 1,308,697 | - | 354,893,484 | 0.37\% | 0.37\% |
| 2 | - | - | 2 | - | - |
| 1,977,776,302 | 8,995,704 | 39,942 | 1,986,811,948 | 0.46\% | 0.45\% |
| 5,504,690,358 | 24,398,044 | 39,942 | 5,529,128,344 | 0.44\% | 0.44\% |
| 6,547,413,329 | 423,908 | 103,129 | 6,547,940,366 | 0.01\% | 0.01\% |
| 191,483,296 | 1,339,205 | - | 192,822,501 | 0.70\% | 0.70\% |
| 210,804,256 | $(1,433,477)$ | - | 209,370,779 | -0.68\% | -0.68\% |
| 402,287,552 | (94,272) | - | 402,193,280 | -0.02\% | -0.02\% |
| 1,041,222 | 847 | - | 1,042,069 | 0.08\% | 0.08\% |
| 385,393,837 | 5,036,985 | - | 390,430,822 | 1.31\% | 1.31\% |
| 385,991,962 | $(6,384,999)$ |  | 379,606,963 | -1.65\% | -1.65\% |
| 619,902,169 | 1,589,304 | - | 621,491,473 | 0.26\% | 0.26\% |
| 799,035,223 | 13,210,638 |  | 812,245,861 | 1.65\% | 1.65\% |
| 576,231,359 | $(2,751,784)$ | - | 573,479,575 | -0.48\% | -0.48\% |
| 326,892,487 | 3,843,739 |  | 330,736,226 | 1.18\% | 1.18\% |
| 363,484,194 | $(2,947,349)$ | - | 360,536,845 | -0.81\% | -0.81\% |
| 999,155,923 | 2,362,298 | - | 1,001,518,221 | 0.24\% | 0.24\% |
| 4,457,128,376 | 13,959,679 | - | 4,471,088,055 | 0.31\% | 0.31\% |

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager

## Schedule of Investment Income and Changes in Invested Assets

For the Month Ended September 28, 2018

| Emerging Markets Equity |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DePrince, Race, and Zollo Emerging Markets | 278,184,921 | 4,231,898 | - | 282,416,819 | 1.52\% | 1.52\% |
| Lazard Asset Management | 388,645,372 | 3,399,231 | - | 392,044,603 | 0.87\% | 0.87\% |
| Total Emerging Markets | 666,830,293 | 7,631,129 | - | 674,461,422 | 1.14\% | 1.14\% |
| Total Global Equities | 5,526,246,221 | 21,496,536 | - | 5,547,742,757 | 0.39\% | 0.39\% |
| Opportunistic |  |  |  |  |  |  |
| Alternative Equity Strategy |  |  |  |  |  |  |
| Analytic Buy Write Account | 757,090,674 | 2,773,453 | - | 759,864,127 | 0.37\% | 0.37\% |
| ARMB STOXX Min Var | 635,610,186 | 4,347,937 | - | 639,958,123 | 0.68\% | 0.68\% |
| Quantitative Management Associates MPS | $(350,556)$ | $(324,655)$ | - | $(675,211)$ | 92.61\% | 92.61\% |
| Total Alternative Equity Strategy | 1,392,350,304 | 6,796,735 | - | 1,399,147,039 | 0.49\% | 0.49\% |
| Opportunistic Fixed Income |  |  |  |  |  |  |
| Fidelity Inst. Asset Mgmt. High Yield CMBS | 103,745,497 | 345,878 | - | 104,091,375 | 0.33\% | 0.33\% |
| Fidelity Institutional Asset Management. | 204,680,286 | 272,170 | - | 204,952,456 | 0.13\% | 0.13\% |
| Lazard Emerging Income | 87,032,985 | $(556,286)$ | - | 86,476,699 | -0.64\% | -0.64\% |
| MacKay Shields, LLC | 159,303,332 | 628,351 | 155,463 | 160,087,146 | 0.49\% | 0.39\% |
| Mondrian Investment Partners | 95,514,202 | 846,126 | 107,488 | 96,467,816 | 1.00\% | 0.89\% |
| Western Asset Management | 57,203,816 | $(725,826)$ | - | 56,477,990 | -1.27\% | -1.27\% |
| Total Opportunistic Fixed Income | 707,480,118 | 810,413 | 262,951 | 708,553,482 | 0.15\% | 0.11\% |
| Other Opportunities |  |  |  |  |  |  |
| Project Pearl | 10,049,468 | - | - | 10,049,468 | - | - |
| Schroders Insurance Linked Securities | 340,629,517 | 1,248,357 | - | 341,877,874 | 0.37\% | 0.37\% |
| Total Other Opportunities | 350,678,985 | 1,248,357 | - | 351,927,342 | 0.36\% | 0.36\% |
| Tactical Allocation Strategies |  |  |  |  |  |  |
| Columbia Threadneedle | 4,095 | - | - | 4,095 | - | - |
| Eaton Vance High Yield | 44,725 | - | - | 44,725 | - | - |
| Total Tactical Allocation Strategies | 48,820 | - | - | 48,820 | - | - |
| Total Opportunistic | 2,450,558,227 | 8,855,505 | 262,951 | 2,459,676,683 | 0.37\% | 0.36\% |

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager

## Schedule of Investment Income and Changes in Invested Assets

For the Month Ended September 28, 2018

## Private Equity

Abbott Capital
Advent International GPE Fund VIII-B
Angelo, Gordon \& Co.
Dyal Capital Partners III
Glendon Opportunities
Glendon Opportunities II
KKR Lending Partners II
Lexington Capital Partners VIII
Lexington Partners VII
Merit Capital Partners
NB SOF III
NB SOF IV
New Mountain Partners IV
New Mountain Partners V
NGP XI
Onex Partnership III
Pathway Capital Management LLC
Resolute Fund III
Summit Partners GE IX
Warburg Pincus X
Warburg Pincus XI
Warburg Pincus XII
Total Private Equity

| 983,590,341 | 5,620,956 | (9,266,602) | 979,944,695 | -0.37\% | 0.57\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 13,535,514 | - | 3,937,500 | 17,473,014 | 29.09\% | - |
| 64,699 | - | - | 64,699 | - | - |
| 24,926,164 | - | $(597,519)$ | 24,328,645 | -2.40\% | - |
| 37,800,497 | - | - | 37,800,497 | - | - |
| - | - | - | - | - | - |
| 58,929,884 | - | $(3,894,099)$ | 55,035,785 | -6.61\% | - |
| 29,953,885 | - | 1,262,827 | 31,216,712 | 4.22\% | - |
| 23,670,766 | - | $(782,914)$ | 22,887,852 | -3.31\% | - |
| 14,084,626 | - | 81,633 | 14,166,259 | 0.58\% | - |
| 30,940,052 | - | $(904,535)$ | 30,035,517 | -2.92\% | - |
| 5,417,377 | 854,217 | - | 6,271,594 | 15.77\% | 15.77\% |
| 23,528,357 | - | - | 23,528,357 | - | - |
| 12,514,884 | - | - | 12,514,884 | - | - |
| 52,051,628 | - | - | 52,051,628 | - | - |
| 14,074,044 | - | $(261,696)$ | 13,812,348 | -1.86\% | - |
| 1,106,469,902 | 10,820,466 | $(6,123,422)$ | 1,111,166,946 | 0.42\% | 0.98\% |
| 19,642,781 | - | - | 19,642,781 | - | - |
| 19,556,388 | 357,156 | $(1,820,000)$ | 18,093,544 | -7.48\% | 1.92\% |
| 14,737,830 | - | $(517,740)$ | 14,220,090 | -3.51\% | - |
| 26,591,858 | 1,802,453 | - | 28,394,311 | 6.78\% | 6.78\% |
| 41,379,540 | - | 5,037,500 | 46,417,040 | 12.17\% | - |
| 2,553,461,017 | 19,455,248 | $(13,849,067)$ | 2,559,067,198 | 0.22\% | 0.76\% |

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager

## Schedule of Investment Income and Changes in Invested Assets

For the Month Ended September 28, 2018

| Absolute Return |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Allianz Global Investors | 344,777,367 | 4,531,476 | - | 349,308,843 | 1.31\% | 1.31\% |
| Crestline Investors, Inc. | 464,927,339 | 5,698,243 | $(7,892,100)$ | 462,733,482 | -0.47\% | 1.24\% |
| Crestline Specialty Fund | 37,440,945 | - | - | 37,440,945 | - | - |
| Crestline Specialty Lending Fund II | 11,022,133 | - | 3,365,280 | 14,387,413 | 30.53\% |  |
| JPM Systemic Alpha | 178,434,997 | $(1,210,633)$ |  | 177,224,364 | -0.68\% | -0.68\% |
| KKR Apex Equity Fund | 83,786,793 | $(3,032,860)$ | - | 80,753,933 | -3.62\% | -3.62\% |
| Man Group Alternative Risk Premia | 213,043,514 | $(834,027)$ | - | 212,209,487 | -0.39\% | -0.39\% |
| Prisma Capital Partners | 419,421,362 | 3,399,726 | 6,469,189 | 429,290,277 | 2.35\% | 0.80\% |
| Zebra Global Equity Advantage Fund | 38,422,659 | $(730,914)$ | - | 37,691,745 | -1.90\% | -1.90\% |
| Zebra Global Equity Fund | 76,689,291 | $(564,943)$ | - | 76,124,348 | -0.74\% | -0.74\% |
| Total Absolute Return Investments | 1,867,966,400 | 7,256,068 | 1,942,369 | 1,877,164,837 | 0.49\% | 0.39\% |
| Real Assets |  |  |  |  |  |  |
| Farmland |  |  |  |  |  |  |
| Hancock Agricultural Investment Group | 265,260,913 | 2,029,350 |  | 267,290,263 | 0.77\% | 0.77\% |
| UBS Agrivest, LLC | 581,462,559 | - | $(960,532)$ | 580,502,027 | -0.17\% | - |
| Total Farmland | 846,723,472 | 2,029,350 | $(960,532)$ | 847,792,290 | 0.13\% | 0.24\% |
| Timber |  |  |  |  |  |  |
| Hancock Natural Resource Group | 96,628,172 | 655,482 | $(750,000)$ | 96,533,654 | -0.10\% | 0.68\% |
| Timberland Invt Resource LLC | 263,618,531 | - | - | 263,618,531 | - | - |
| Total Timber | 360,246,703 | 655,482 | $(750,000)$ | 360,152,185 | -0.03\% | 0.18\% |
| Energy |  |  |  |  |  |  |
| EIG Energy Fund XIV-A | 14,744,262 | $(5,792)$ | $(603,319)$ | 14,135,151 | -4.13\% | -0.04\% |
| EIG Energy Fund XV | 27,437,455 | 394,759 | $(1,375,479)$ | 26,456,735 | -3.57\% | 1.48\% |
| EIG Energy Fund XVI | 61,130,968 | (1,317,514) |  | 59,813,454 | -2.16\% | -2.16\% |
| Total Energy | 103,312,685 | $(928,547)$ | (1,978,798) | 100,405,340 | -2.81\% | -0.91\% |
| REIT |  |  |  |  |  |  |
| REIT Transition Account | - | - | - | - | - | - |
| ARMB REIT | 208,668,146 | (5,102,735) | - | 203,565,411 | -2.45\% | -2.45\% |
| Total REIT | 208,668,146 | $(5,102,735)$ | - | 203,565,411 | -2.45\% | -2.45\% |
| TIPS |  |  |  |  |  |  |
| ARMB Treasury Inflation Protected Securities | 56,649,321 | $(597,505)$ | $(56,024,618)$ | 27,198 | -99.95\% | -2.09\% |
| Master Limited Partnerships |  |  |  |  |  |  |
| Advisory Research MLP | 440,149,526 | $(7,785,000)$ | (75,000,000) | 357,364,526 | -18.81\% | -1.93\% |
| Tortoise Capital Advisors | 554,913,926 | $(13,668,037)$ | - | 541,245,889 | -2.46\% | -2.46\% |
| Total Master Limited Partnerships | 995,063,452 | $(21,453,037)$ | (75,000,000) | 898,610,415 | -9.69\% | -2.24\% |

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager

## Schedule of Investment Income and Changes in Invested Assets

For the Month Ended September 28, 2018

| Infrastructure Private |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IFM Global Infrastructure Fund-Private |  | 417,992,004 |  | $(168,133)$ |  | - |  | 417,823,871 | -0.04\% | -0.04\% |
| JP Morgan Infrastructure Fund-Private |  | 115,395,118 |  | - |  | - |  | 115,395,118 | - | - |
| Total Infrastructure Private |  | 533,387,122 |  | $(168,133)$ |  | - |  | 533,218,989 | -0.03\% | -0.03\% |
| Infrastructure Public |  |  |  |  |  |  |  |  |  |  |
| Brookfield Investment Mgmt.-Public |  | 106,672,302 |  | $(1,179,394)$ |  | - |  | 105,492,908 | -1.11\% | -1.11\% |
| Lazard Asset Mgmt.-Public |  | 149,433,441 |  | $(382,291)$ |  | - |  | 149,051,150 | -0.26\% | -0.26\% |
| Total Infrastructure Public |  | 256,105,743 |  | $(1,561,685)$ |  | - |  | 254,544,058 | -0.61\% | -0.61\% |
| Real Estate |  |  |  |  |  |  |  |  |  |  |
| Core Commingled Accounts |  |  |  |  |  |  |  |  |  |  |
| JP Morgan |  | 256,262,917 |  | 1,211,261 |  | - |  | 257,474,178 | 0.47\% | 0.47\% |
| UBS Trumbull Property Fund |  | 126,664,120 |  | - |  | - |  | 126,664,120 | - | - |
| Total Core Commingled |  | 382,927,037 |  | 1,211,261 |  | - |  | 384,138,298 | 0.32\% | 0.32\% |
| Core Separate Accounts |  |  |  |  |  |  |  |  | - |  |
| LaSalle Investment Management |  | 200,678,271 |  | - |  | $(411,221)$ |  | 200,267,050 | -0.20\% | - |
| Sentinel Separate Account |  | 204,832,605 |  | - |  | 37,295,598 |  | 242,128,203 | 18.21\% | - |
| UBS Realty |  | 510,752,373 |  | - |  | $(409,311)$ |  | 510,343,062 | -0.08\% | - |
| Total Core Separate |  | 916,263,249 |  | - |  | 36,475,066 |  | 952,738,315 | 3.98\% | - |
| Non-Core Commingled Accounts |  |  |  |  |  |  |  |  | - |  |
| Almanac Realty Securities V |  | 2,020,878 |  | - |  | - |  | 2,020,878 | - | - |
| Almanac Realty Securities VII |  | 32,213,977 |  | - |  | 1,539,068 |  | 33,753,045 | 4.78\% | - |
| BlackRock Diamond Property Fund |  | 69,377 |  | - |  | - |  | 69,377 | - | - |
| BlackRock US Core Property Fund |  | 201,418,071 |  | - |  | - |  | 201,418,071 | - | - |
| Clarion Ventures 4 |  | 23,108,222 |  | - |  | - |  | 23,108,222 | - | - |
| Colony Investors VIII, L.P. |  | 1,637,059 |  | - |  | - |  | 1,637,059 | - | - |
| Coventry |  | 265,083 |  | - |  | - |  | 265,083 | - | - |
| ING Clarion Development Ventures III |  | 2,482,226 |  | - |  | - |  | 2,482,226 | - | - |
| KKR Real Estate Partners Americas II |  | 4,823,956 |  | - |  | - |  | 4,823,956 | - | - |
| KKR Real Estate Partners Americas LP. |  | 22,628,370 |  | - |  | - |  | 22,628,370 | - | - |
| Silverpeak Legacy Pension Partners II, L.P. |  | 6,091,339 |  | - |  | - |  | 6,091,339 | - | - |
| Silverpeak Legacy Pension Partners III, L.P. |  | 4,487,072 |  | - |  | - |  | 4,487,072 | - | - |
| Tishman Speyer Real Estate Venture VI |  | 22,157,920 |  | - |  | - |  | 22,157,920 | - | - |
| Tishman Speyer Real Estate Venture VII |  | 1,242,369 |  | - |  | $(242,785)$ |  | 999,584 | -19.54\% | - |
| Total Non-Core Commingled |  | 324,645,919 |  | - |  | 1,296,283 |  | 325,942,202 | 0.40\% | - |
| Total Real Estate |  | 1,623,836,205 |  | 1,211,261 |  | 37,771,349 |  | 1,662,818,815 | 2.40\% | 0.07\% |
| Total Real Assets |  | 4,983,992,849 |  | $(25,915,549)$ |  | $(96,942,599)$ |  | 4,861,134,701 | -2.47\% | -0.53\% |
| Total Assets | \$ | 26,974,497,487 | \$ | 19,548,820 | \$ | (103,587,641) | \$ | 26,890,458,666 | -0.31\% | 0.07\% |

# ALASKA RETIREMENT MANAGEMENT BOARD 

Reporting of Funds by Manager

Participant Directed Plans

Supplemental Annuity Plan
Schedule of Investment Income and Changes in Invested Assets

## for the Month Ended <br> September 28, 2018

## Participant Options

T. Rowe Price

Stable Value Fund
Small Cap Stock Fund
Alaska Balanced Trust
Long Term Balanced Fund AK Target Date 2010 Trus
AK Target Date 2015 Trust AK Target Date 2020 Trust AK Target Date 2025 Trus AK Target Date 2030 Trus AK Target Date 2035 Trust AK Target Date 2040 Trus AK Target Date 2045 Trust AK Target Date 2050 Trus
AK Target Date 2055 Trust
AK Target Date 2060 Trust
Total Investments with T. Rowe Price
State Street Global Advisors
State Street Treasury Money Market Fund - Inst. S\&P 500 Stock Index Fund Series A
Russell 3000 Index
US Real Estate Investment Trust Index
World Equity Ex-US Index
US Treasury Inflation Protected Securities Index
Total Investments with SSGA
BlackRock
Passive U.S. Bond Index Fund
Brandes/Baillie Gifford
AK International Equity Fund
Northern Trust
Environmental, Social, and Governance Fund

## Total All Funds

Beginning Invested Assets

Investment Income

Ending Invested Assets
\% Change in Invested Assets
\% Change due to Investment Income (1)

| $363,878,535$ | $\$$ | 723,159 | $\$$ | $(1,530,464)$ | $\$$ |
| ---: | ---: | ---: | ---: | ---: | ---: |
| $192,894,732$ | $(3,319,454)$ | $(249,320)$ | $4,472,667$ | $\$$ | $369,543,897$ |
| $1,155,053,905$ | $(1,907,415)$ | $(4,347,337)$ | $(3,879,296)$ | $1,149,729,455$ |  |
| $693,991,508$ | 137,341 | 950,300 | $(4,676,628)$ | $690,402,557$ |  |
| $10,331,555$ | $(3,989)$ | 2,897 | 146,400 | $10,476,863$ |  |
| $85,912,518$ | 4,920 | $(215,002)$ | $(20,367)$ | $85,682,069$ |  |
| $97,261,419$ | 42,929 | $(94,900)$ | 453,328 | $97,662,776$ |  |
| $79,809,769$ | 73,756 | 381,777 | $(1,120,742)$ | $79,144,560$ |  |
| $60,191,011$ | 77,103 | 331,475 | $(327,901)$ | $60,271,688$ |  |
| $56,122,675$ | 91,024 | 310,822 | $(334,520)$ | $56,190,001$ |  |
| $56,321,243$ | 116,069 | 483,734 | $(371,996)$ | $56,549,050$ |  |
| $63,775,398$ | 145,217 | 638,263 | 76,648 | $64,635,526$ |  |
| $72,734,404$ | 166,839 | 917,274 | $(407,023)$ | $73,411,494$ |  |
| $60,532,399$ | 142,777 | $1,168,255$ | $(52,169)$ | $61,791,262$ |  |
| $4,068,665$ | 8,748 | 13,823 | 29,672 | $4,120,908$ |  |
| $3,052,879,736$ | $(3,500,976)$ | $(1,238,403)$ |  | $(3,608,430)$ | $3,044,531,927$ |


| $1.56 \%$ | $0.20 \%$ |
| :---: | :---: |
| $-1.64 \%$ | $-1.72 \%$ |
| $-0.88 \%$ | $-0.17 \%$ |
| $-0.52 \%$ | $0.02 \%$ |
| $1.41 \%$ | $-0.04 \%$ |
| $-0.27 \%$ | $0.01 \%$ |
| $0.41 \%$ | $0.04 \%$ |
| $-0.83 \%$ | $0.09 \%$ |
| $0.13 \%$ | $0.13 \%$ |
| $0.12 \%$ | $0.16 \%$ |
| $0.40 \%$ | $0.21 \%$ |
| $1.35 \%$ | $0.23 \%$ |
| $0.93 \%$ | $0.23 \%$ |
| $2.08 \%$ | $0.23 \%$ |
| $1.28 \%$ | $0.21 \%$ |


| $43,079,529$ | $5.46 \%$ | $0.16 \%$ |
| ---: | :---: | :---: |
| $488,706,455$ | $0.94 \%$ | $0.56 \%$ |
| $77,680,729$ | $-0.77 \%$ | $0.16 \%$ |
| $35,137,862$ | $-3.31 \%$ | $-2.69 \%$ |
| $58,201,987$ | $4.56 \%$ | $0.55 \%$ |
| $38,180,164$ | $5.42 \%$ | $-1.04 \%$ |
| $740,986,726$ |  |  |
| $107,002,719$ | $-4.10 \%$ | $-0.64 \%$ |

Notes: Source data provided by the record keeper, Empower Retirement.
(1) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates.
(2) This investment is comprised of two funds, Brandes International Equity Fund and Baillie Gifford International Equity Fund.

# Supplemental Annuity Plan <br> Schedule of Invested Assets with <br> Schedule of Investment Income and Changes in Invested Assets <br> By Month Through the Month Ended <br> September 28, 2018 <br> \$ (Thousands) 

Invested Assets (at fair value)
Investments with T. Rowe Price
Stable Value Fund
Small Cap Stock Fund
Alaska Balanced Trust
Long Term Balanced Fund
AK Target Date 2010 Trust
AK Target Date 2015 Trust
AK Target Date 2020 Trust
AK Target Date 2025 Trust
AK Target Date 2030 Trust
AK Target Date 2035 Trust
AK Target Date 2040 Trust
AK Target Date 2045 Trust
AK Target Date 2050 Trust
AK Target Date 2055 Trust
AK Target Date 2060 Trust

State Street Global Advisors

## State Street Treasury Money Market Fund - Inst.

S\&P 500 Stock Index Fund Series A
Russell 3000 Index
US Real Estate Investment Trust Index
World Equity Ex-US Index
Long US Treasury Bond Index
US Treasury Inflation Protected Securities Index
World Government Bond Ex-US Index
nvestments with BlackRock
Passive U.S. Bond Index Fund
Government/Credit Bond Fund
Intermediate Bond Fund
Investments with Brandes/Baillie Gifford
AK International Equity Fund
Investments with Northern Trust
Environmental, Social, and Governance Fund Total Invested Assets


Change in Invested Assets
Beginning Assets
Investment Earnings
Net Contributions (Withdrawals)
Ending Invested Assets
$\qquad$ August September

69,890
68,052
68,018
\$ $\quad 355,917$ \$ $\quad 363,879 \quad \$ \quad 369,544$ $\begin{array}{lll}181,818 & 192,895 & 189,729\end{array}$ 1,149,694 1,155,054 1,144,920 690,744 693,992 690,403

| 10,224 | 10,332 | 10,477 |
| ---: | ---: | ---: |

85,669 85,913 85,682
95,933 97,261 97,663
$77,962 \quad 79,810 \quad 79,145$
58,998 60,191 60,272
54,648 56,123 56,190

| 54,939 | 56,321 | 56,549 |
| :--- | :--- | :--- |
| 62,116 | 63,775 | 64,636 |


| 71,313 | 72,734 | 73,411 |
| :--- | :--- | :--- |


| 71,693 | 60,532 | 61,791 |
| ---: | ---: | ---: |

3,459 4,069 4,121

| 42,005 | 40,850 | 43,080 |
| ---: | ---: | ---: |
| 469,954 | 484,173 | 488,706 |
| 76,432 | 78,281 | 77,681 |
| 35,067 | 36,342 | 35,138 |
| 55,690 | 55,661 | 58,202 |
| 12,732 | - | - |
| 33,228 | 36,218 | 38,180 |
| 12,569 | - | - |
|  |  |  |
|  | 111,572 | 107,003 |
| 49,922 | - | - |
| 41,183 | - | - |


| \$ | 3,905,659 | \$ | 3,965,512 | \$ | 4,017,465 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 64,770 |  | 58,603 |  | $(2,073)$ |
|  | $(4,918)$ |  | $(6,650)$ |  | $(1,309)$ |
| \$ | 3,965,512 | \$ | 4,017,465 | \$ | 4,014,083 |

Deferred Compensation Plan
Schedule of Invested Assets and Changes in Invested Assets for the Month Ended September 28, 2018


Notes: Source data provided by the record keeper, Empower Retirement.
(1) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates.
(2) This investment is comprised of two funds, Brandes International Equity Fund and Baillie Gifford International Equity Fund.

# Deferred Compensation Plan <br> Schedule of Invested Assets with <br> Schedule of Investment Income and Changes in Invested Assets 

By Month Through the Month Ended
September 28, 2018
\$ (Thousands)

| Invested Assets (at fair value) | July |  | August |  | September |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Investments with T. Rowe Price |  |  |  |  |  |  |
| Interest Income Fund | \$ | 175,629 | \$ | - | \$ | - |
| Stable Value Fund |  | - |  | 179,111 |  | 178,901 |
| Small Cap Stock Fund |  | 114,946 |  | 121,797 |  | 119,170 |
| Alaska Balanced Trust |  | 29,501 |  | 30,253 |  | 30,453 |
| Long Term Balanced Fund |  | 91,224 |  | 91,105 |  | 90,275 |
| AK Target Date 2010 Trust |  | 4,051 |  | 4,078 |  | 4,033 |
| AK Target Date 2015 Trust |  | 9,541 |  | 9,477 |  | 9,462 |
| AK Target Date 2020 Trust |  | 26,229 |  | 26,594 |  | 26,248 |
| AK Target Date 2025 Trust |  | 17,470 |  | 18,025 |  | 18,796 |
| AK Target Date 2030 Trust |  | 11,744 |  | 12,182 |  | 12,394 |
| AK Target Date 2035 Trust |  | 6,910 |  | 7,082 |  | 7,175 |
| AK Target Date 2040 Trust |  | 7,998 |  | 8,245 |  | 8,258 |
| AK Target Date 2045 Trust |  | 5,688 |  | 5,882 |  | 6,020 |
| AK Target Date 2050 Trust |  | 3,958 |  | 4,104 |  | 4,123 |
| AK Target Date 2055 Trust |  | 4,248 |  | 4,300 |  | 4,309 |
| AK Target Date 2060 Trust |  | 399 |  | 873 |  | 885 |
| State Street Global Advisors |  |  |  |  |  |  |
| State Street Treasury Money Market Fund - Inst. |  | 13,653 |  | 13,538 |  | 13,947 |
| Russell 3000 Index |  | 43,890 |  | 45,212 |  | 46,616 |
| US Real Estate Investment Trust Index |  | 12,810 |  | 13,334 |  | 12,770 |
| World Equity Ex-US Index |  | 18,373 |  | 18,043 |  | 18,531 |
| Long US Treasury Bond Index |  | 5,169 |  | - |  | - |
| US Treasury Inflation Protected Securities Index |  | 13,533 |  | 14,313 |  | 15,603 |
| World Government Bond Ex-US Index |  | 4,626 |  | - |  | - |
| Investments with BlackRock |  |  |  |  |  |  |
| S\&P 500 Index Fund |  | 220,701 |  | 226,134 |  | 226,417 |
| Passive U.S. Bond Index Fund |  | - |  | 57,464 |  | 55,702 |
| Government/Credit Bond Fund |  | 27,364 |  | - |  | - |
| Intermediate Bond Fund |  | 22,131 |  | - |  | - |
| Investments with Brandes/Baillie Gifford |  |  |  |  |  |  |
| AK International Equity Fund |  | 38,417 |  | 37,121 |  | 36,340 |
| Investments with Northern Trust |  |  |  |  |  |  |
| Environmental, Social, and Governance Fund |  | 23,391 |  | 23,420 |  | 23,413 |
| Total Invested Assets | \$ | 953,592 | \$ | 971,688 | \$ | 969,841 |
| Change in Invested Assets |  |  |  |  |  |  |
| Beginning Assets | \$ | 938,807 | \$ | 953,592 | \$ | 971,688 |
| Investment Earnings |  | 17,321 |  | 18,962 |  | (977) |
| Net Contributions (Withdrawals) |  | $(2,536)$ |  | (866) |  | (869) |
| Ending Invested Assets | \$ | 953,592 | \$ | 971,688 | \$ | 969,841 |


| Defined Contribution Retirement - Participant Directed PERS Schedule of Investment Income and Changes in Invested Assets for the Month Ended September 28, 2018 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Invested Assets |  | Investment Income |  | Net Contributions (Withdrawals) |  | Transfers In (Out) |  | Ending Invested Assets |  | \% Change in Invested Assets | \% Change due to Investment Income (1) |
| Participant Options |  |  |  |  |  |  |  |  |  |  |  |  |
| T. Rowe Price |  |  |  |  |  |  |  |  |  |  |  |  |
| Stable Value Fund | \$ | 14,420,536 | \$ | 41,475 | \$ | 58,064 | \$ | 13,331,909 | \$ | 27,851,984 | 93.14\% | 0.20\% |
| Small Cap Stock Fund |  | 80,707,127 |  | (1,380,744) |  | 397,114 |  | $(1,583,947)$ |  | 78,139,550 | -3.18\% | -1.72\% |
| Alaska Balanced Trust |  | 27,398,244 |  | $(43,969)$ |  | 131,554 |  | 286,064 |  | 27,771,893 | 1.36\% | -0.16\% |
| Long Term Balanced Fund |  | 23,022,279 |  | $(1,288)$ |  | 81,293 |  | $(1,687,112)$ |  | 21,415,172 | -6.98\% | -0.01\% |
| AK Target Date 2010 Trust |  | 2,530,704 |  | (952) |  | $(43,834)$ |  | (490) |  | 2,485,428 | -1.79\% | -0.04\% |
| AK Target Date 2015 Trust |  | 12,041,042 |  | 916 |  | 71,280 |  | $(51,762)$ |  | 12,061,476 | 0.17\% | 0.01\% |
| AK Target Date 2020 Trust |  | 32,602,769 |  | 17,591 |  | 219,763 |  | 121,177 |  | 32,961,300 | 1.10\% | 0.05\% |
| AK Target Date 2025 Trust |  | 52,236,171 |  | 48,222 |  | 593,927 |  | $(238,356)$ |  | 52,639,964 | 0.77\% | 0.09\% |
| AK Target Date 2030 Trust |  | 55,604,438 |  | 72,109 |  | 561,360 |  | $(368,597)$ |  | 55,869,310 | 0.48\% | 0.13\% |
| AK Target Date 2035 Trust |  | 65,985,180 |  | 112,908 |  | 691,799 |  | $(189,794)$ |  | 66,600,093 | 0.93\% | 0.17\% |
| AK Target Date 2040 Trust |  | 78,404,625 |  | 165,147 |  | 805,618 |  | $(293,992)$ |  | 79,081,398 | 0.86\% | 0.21\% |
| AK Target Date 2045 Trust |  | 100,893,177 |  | 234,409 |  | 1,253,064 |  | 8,561 |  | 102,389,211 | 1.48\% | 0.23\% |
| AK Target Date 2050 Trust |  | 119,654,113 |  | 278,009 |  | 1,521,278 |  | $(324,992)$ |  | 121,128,408 | 1.23\% | 0.23\% |
| AK Target Date 2055 Trust |  | 98,774,070 |  | 235,594 |  | 2,008,062 |  | $(173,681)$ |  | 100,844,045 | 2.10\% | 0.24\% |
| AK Target Date 2060 Trust |  | 862,293 |  | 2,444 |  | 17,822 |  | 110,043 |  | 992,602 | 15.11\% | 0.26\% |
| Total Investments with T. Rowe Price |  | 765,136,768 |  | $(218,129)$ |  | 8,368,164 |  | 8,945,031 |  | 782,231,834 |  |  |
| State Street Global Advisors |  |  |  |  |  |  |  |  |  |  |  |  |
| Money Market |  | 10,005,441 |  | 15,661 |  | 44,449 |  | 43,857 |  | 10,109,408 | 1.04\% | 0.16\% |
| S\&P 500 Stock Index Fund Series A |  | 102,253,678 |  | 592,183 |  | 589,225 |  | 1,305,426 |  | 104,740,512 | 2.43\% | 0.57\% |
| Russell 3000 Index |  | 11,591,170 |  | 19,405 |  | 124,377 |  | $(42,162)$ |  | 11,692,790 | 0.88\% | 0.17\% |
| US Real Estate Investment Trust Index |  | 16,461,097 |  | $(445,163)$ |  | 88,799 |  | $(298,465)$ |  | 15,806,268 | -3.98\% | -2.72\% |
| World Equity Ex-US Index |  | 47,279,705 |  | 271,548 |  | 268,806 |  | 1,297,328 |  | 49,117,387 | 3.89\% | 0.56\% |
| US Treasury Inflation Protected Securities Index |  | 16,824,258 |  | $(181,301)$ |  | $(6,184)$ |  | 1,267,096 |  | 17,903,869 | 6.42\% | -1.04\% |
| Total Investments with SSGA |  | 204,415,349 |  | 272,333 |  | 1,109,472 |  | 3,573,080 |  | 209,370,234 |  |  |
| BlackRock |  |  |  |  |  |  |  |  |  |  |  |  |
| Passive U.S. Bond Index Fund |  | 68,173,943 |  | $(422,121)$ |  | 238,330 |  | (12,147,742) |  | 55,842,410 | -18.09\% | -0.68\% |
| Brandes/Baillie Gifford |  |  |  |  |  |  |  |  |  |  |  |  |
| AK International Equity Fund |  | 45,335,550 |  | $(22,987)$ |  | 275,818 |  | $(136,742)$ |  | 45,451,639 | 0.26\% | -0.05\% |
| Northern Trust |  |  |  |  |  |  |  |  |  |  |  |  |
| Environmental, Social, and Governance Fund |  | 10,404,033 |  | 56,781 |  | 79,488 |  | $(233,627)$ |  | 10,306,675 | -0.94\% | 0.55\% |
| Total All Funds | \$ | 1,093,465,643 | \$ | $(334,123)$ | \$ | 10,071,272 | \$ | - | \$ | 1,103,202,792 | 0.89\% | -0.03\% |

[^0](2) This investment is comprised of two funds, Brandes International Equity Fund and Baillie Gifford International Equity Fund.

# Defined Contribution Retirement - Participant Directed PERS Schedule of Invested Assets with <br> <br> Schedule of Investment Income and Changes in Invested Assets <br> <br> Schedule of Investment Income and Changes in Invested Assets <br> By Month Through the Month Ended <br> September 28, 2018 

\$ (Thousands)

| Invested Assets (at fair value) | July |  | August |  | September |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Investments with T. Rowe Price |  |  |  |  |  |  |
| Alaska Money Market | \$ | 5,386 | \$ | - | \$ | - |
| Stable Value Fund |  | - |  | 14,421 |  | 27,852 |
| Small Cap Stock Fund |  | 78,194 |  | 80,707 |  | 78,140 |
| Alaska Balanced Trust |  | 27,299 |  | 27,398 |  | 27,772 |
| Long Term Balanced Fund |  | 24,785 |  | 23,022 |  | 21,415 |
| AK Target Date 2010 Trust |  | 2,508 |  | 2,531 |  | 2,485 |
| AK Target Date 2015 Trust |  | 11,859 |  | 12,041 |  | 12,061 |
| AK Target Date 2020 Trust |  | 32,186 |  | 32,603 |  | 32,961 |
| AK Target Date 2025 Trust |  | 51,239 |  | 52,236 |  | 52,640 |
| AK Target Date 2030 Trust |  | 54,629 |  | 55,604 |  | 55,869 |
| AK Target Date 2035 Trust |  | 64,604 |  | 65,985 |  | 66,600 |
| AK Target Date 2040 Trust |  | 76,369 |  | 78,405 |  | 79,081 |
| AK Target Date 2045 Trust |  | 98,208 |  | 100,893 |  | 102,389 |
| AK Target Date 2050 Trust |  | 116,864 |  | 119,654 |  | 121,128 |
| AK Target Date 2055 Trust |  | 95,705 |  | 98,774 |  | 100,844 |
| AK Target Date 2060 Trust |  | 815 |  | 862 |  | 993 |
| State Street Global Advisors |  |  |  |  |  |  |
| Money Market |  | 4,623 |  | 10,005 |  | 10,109 |
| S\&P 500 Stock Index Fund Series A |  | 98,610 |  | 102,254 |  | 104,741 |
| Russell 3000 Index |  | 10,944 |  | 11,591 |  | 11,693 |
| US Real Estate Investment Trust Index |  | 16,265 |  | 16,461 |  | 15,806 |
| World Equity Ex-US Index |  | 46,988 |  | 47,280 |  | 49,117 |
| Long US Treasury Bond Index |  | 1,210 |  | - |  | - |
| US Treasury Inflation Protected Securities Index |  | 14,922 |  | 16,824 |  | 17,904 |
| World Government Bond Ex-US Index |  | 7,351 |  | - |  | - |
| Investments with BlackRock |  |  |  |  |  |  |
| Government/Credit Bond Fund |  | 49,222 |  | - |  | - |
| Passive U.S. Bond Index Fund |  | - |  | 68,174 |  | 55,842 |
| Intermediate Bond Fund |  | 22,335 |  | - |  | - |
| Investments with Brandes/Baillie Gifford |  |  |  |  |  |  |
| AK International Equity Fund |  | 45,645 |  | 45,336 |  | 45,452 |
| Investments with Northern Trust |  |  |  |  |  |  |
| Environmental, Social, and Governance Fund |  | 10,616 |  | 10,404 |  | 10,307 |
| Total Invested Assets | \$ | 1,069,378 | \$ | 1,093,466 | \$ | 1,103,203 |
| Change in Invested Assets |  |  |  |  |  |  |
| Beginning Assets | \$ | 1,041,422 | \$ | 1,069,378 | \$ | 1,093,466 |
| Investment Earnings |  | 23,080 |  | 17,895 |  | (334) |
| Net Contributions (Withdrawals) |  | 4,876 |  | 6,192 |  | 10,071 |
| Ending Invested Assets | \$ | 1,069,378 | \$ | 1,093,466 | \$ | 1,103,203 |

## Defined Contribution Retirement - Participant Directed TRS chedule of Investment Income and Changes in Invested Assets <br> for the Month Ended <br> September 28, 2018

|  | Beginning Invested Assets |  | Investment Income |  | Net Contributions (Withdrawals) |  | Transfers In (Out) |  | Ending Invested Assets |  | \% Change in Invested Assets | \% Change due to Investment Income (1) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Participant Options |  |  |  |  |  |  |  |  |  |  |  |  |
| T. Rowe Price |  |  |  |  |  |  |  |  |  |  |  |  |
| Stable Value Fund | \$ | 5,763,995 | \$ | 16,345 | \$ | $(20,484)$ | \$ | 5,198,716 | \$ | 10,958,572 | 90.12\% | 0.20\% |
| Small Cap Stock Fund |  | 35,326,076 |  | $(601,279)$ |  | $(15,510)$ |  | $(833,428)$ |  | 33,875,859 | -4.11\% | -1.72\% |
| Alaska Balanced Trust |  | 11,457,858 |  | $(18,831)$ |  | $(10,915)$ |  | 28,114 |  | 11,456,226 | -0.01\% | -0.16\% |
| Long Term Balanced Fund |  | 9,630,036 |  | (610) |  | $(6,663)$ |  | $(729,367)$ |  | 8,893,396 | -7.65\% | -0.01\% |
| AK Target Date 2010 Trust |  | 836,172 |  | (268) |  | 7,305 |  | - |  | 843,209 | 0.84\% | -0.03\% |
| AK Target Date 2015 Trust |  | 3,396,483 |  | 288 |  | $(42,678)$ |  | - |  | 3,354,093 | -1.25\% | 0.01\% |
| AK Target Date 2020 Trust |  | 9,942,573 |  | 4,560 |  | 45,312 |  | - |  | 9,992,445 | 0.50\% | 0.05\% |
| AK Target Date 2025 Trust |  | 17,131,308 |  | 14,930 |  | 21,644 |  | $(54,455)$ |  | 17,113,427 | -0.10\% | 0.09\% |
| AK Target Date 2030 Trust |  | 20,287,622 |  | 25,739 |  | $(80,846)$ |  | - |  | 20,232,515 | -0.27\% | 0.13\% |
| AK Target Date 2035 Trust |  | 29,990,001 |  | 49,795 |  | 152,603 |  | $(25,359)$ |  | 30,167,040 | 0.59\% | 0.17\% |
| AK Target Date 2040 Trust |  | 31,856,757 |  | 65,419 |  | 184,610 |  | 40,916 |  | 32,147,702 | 0.91\% | 0.20\% |
| AK Target Date 2045 Trust |  | 49,510,826 |  | 111,061 |  | 18,543 |  | 788 |  | 49,641,218 | 0.26\% | 0.22\% |
| AK Target Date 2050 Trust |  | 69,232,781 |  | 153,668 |  | $(100,136)$ |  | $(262,457)$ |  | 69,023,856 | -0.30\% | 0.22\% |
| AK Target Date 2055 Trust |  | 32,605,590 |  | 72,637 |  | 79,633 |  | $(6,651)$ |  | 32,751,209 | 0.45\% | 0.22\% |
| AK Target Date 2060 Trust |  | 195,492 |  | 781 |  | 1,026 |  | 53,196 |  | 250,495 | 28.14\% | 0.35\% |
| Total Investments with T. Rowe Price |  | 327,163,570 |  | $(105,765)$ |  | 233,444 |  | 3,410,013 |  | 330,701,262 |  |  |
| State Street Global Advisors |  |  |  |  |  |  |  |  |  |  |  |  |
| Money Market |  | 2,572,669 |  | 4,111 |  | 5,421 |  | 94,320 |  | 2,676,521 | 4.04\% | 0.16\% |
| S\&P 500 Stock Index Fund Series A |  | 42,491,960 |  | 243,564 |  | $(74,643)$ |  | 283,203 |  | 42,944,084 | 1.06\% | 0.57\% |
| Russell 3000 Index |  | 3,663,159 |  | 6,312 |  | 7,158 |  | 80,852 |  | 3,757,481 | 2.57\% | 0.17\% |
| US Real Estate Investment Trust Index |  | 6,695,024 |  | $(180,938)$ |  | $(3,644)$ |  | $(114,286)$ |  | 6,396,156 | -4.46\% | -2.73\% |
| World Equity Ex-US Index |  | 21,370,092 |  | 120,788 |  | $(6,109)$ |  | 584,588 |  | 22,069,359 | 3.27\% | 0.56\% |
| US Treasury Inflation Protected Securities Index |  | 6,094,301 |  | $(65,585)$ |  | $(27,203)$ |  | 484,894 |  | 6,486,407 | 6.43\% | -1.04\% |
| Total Investments with SSGA |  | 82,887,205 |  | 128,252 |  | $(99,020)$ |  | 1,413,571 |  | 84,330,008 |  |  |
| BlackRock |  |  |  |  |  |  |  |  |  |  |  |  |
| Passive U.S. Bond Index Fund |  | 26,479,862 |  | $(164,395)$ |  | $(43,716)$ |  | $(4,674,697)$ |  | 21,597,054 | -18.44\% | -0.68\% |
| Brandes/Baillie Gifford |  |  |  |  |  |  |  |  |  |  |  |  |
| AK International Equity Fund |  | 20,325,256 |  | $(10,898)$ |  | $(5,853.00)$ |  | 11,798 |  | 20,320,303 | -0.02\% | -0.05\% |
| Northern Trust |  |  |  |  |  |  |  |  |  |  |  |  |
| Environmental, Social, and Governance Fund |  | 4,397,762 |  | 23,566 |  | 9,793.00 |  | $(160,685)$ |  | 4,270,436 | -2.90\% | 0.55\% |
| Total All Funds | \$ | 461,253,655 | \$ | $(129,240)$ | \$ | 94,648 | \$ | - | \$ | 461,219,063 | -0.01\% | -0.03\% |

Notes: Source data provided by the record keeper, Empower Retirement.
(1) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates.
(2) This investment is comprised of two funds, Brandes International Equity Fund and Baillie Gifford International Equity Fund.

# efined Contribution Retirement - Participant Directed TRS 

 Schedule of Invested Assets withSchedule of Investment Income and Changes in Invested Assets
By Month Through the Month Ended
September 28, 2018
\$ (Thousands)

| Invested Assets (at fair value) | July |  | August |  | September |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Investments with T. Rowe Price |  |  |  |  |  |  |
| Alaska Money Market | \$ | 1,894 | \$ | - | \$ | - |
| Stable Value Fund |  | - |  | 5,764 |  | 10,959 |
| Small Cap Stock Fund |  | 34,424 |  | 35,326 |  | 33,876 |
| Alaska Balanced Trust |  | 11,394 |  | 11,458 |  | 11,456 |
| Long Term Balanced Fund |  | 10,335 |  | 9,630 |  | 8,893 |
| AK Target Date 2010 Trust |  | 826 |  | 836 |  | 843 |
| AK Target Date 2015 Trust |  | 3,397 |  | 3,396 |  | 3,354 |
| AK Target Date 2020 Trust |  | 9,951 |  | 9,943 |  | 9,992 |
| AK Target Date 2025 Trust |  | 16,938 |  | 17,131 |  | 17,113 |
| AK Target Date 2030 Trust |  | 20,121 |  | 20,288 |  | 20,233 |
| AK Target Date 2035 Trust |  | 29,766 |  | 29,990 |  | 30,167 |
| AK Target Date 2040 Trust |  | 31,409 |  | 31,857 |  | 32,148 |
| AK Target Date 2045 Trust |  | 48,740 |  | 49,511 |  | 49,641 |
| AK Target Date 2050 Trust |  | 68,156 |  | 69,233 |  | 69,024 |
| AK Target Date 2055 Trust |  | 32,138 |  | 32,606 |  | 32,751 |
| AK Target Date 2060 Trust |  | 179 |  | 195 |  | 250 |
| State Street Global Advisors |  |  |  |  |  |  |
| Money Market |  | 690 |  | 2,573 |  | 2,677 |
| S\&P 500 Stock Index Fund Series A |  | 41,127 |  | 42,492 |  | 42,944 |
| Russell 3000 Index |  | 3,621 |  | 3,663 |  | 3,757 |
| US Real Estate Investment Trust Index |  | 6,751 |  | 6,695 |  | 6,396 |
| World Equity Ex-US Index |  | 21,323 |  | 21,370 |  | 22,069 |
| Long US Treasury Bond Index |  | 306 |  | - |  | - |
| US Treasury Inflation Protected Securities Index |  | 5,367 |  | 6,094 |  | 6,486 |
| World Government Bond Ex-US Index |  | 2,765 |  | - |  | - |
| Investments with BlackRock |  |  |  |  |  |  |
| Government/Credit Bond Fund |  | 20,232 |  | - |  | - |
| Passive U.S. Bond Index Fund |  | - |  | 26,480 |  | 21,597 |
| Intermediate Bond Fund |  | 8,292 |  | - |  | - |
| Investments with Brandes/Baillie Gifford $\square$ |  |  |  |  |  |  |
| AK International Equity Fund |  | 20,619 |  | 20,325 |  | 20,320 |
| Investments with Northern Trust |  |  |  |  |  |  |
| Environmental, Social, and Governance Fund |  | 4,614 |  | 4,398 |  | 4,270 |
| Total Invested Assets | \$ | 455,376 | \$ | 461,254 | \$ | 461,219 |
| Change in Invested Assets |  |  |  |  |  |  |
| Beginning Assets | \$ | 442,323 | \$ | 455,376 | \$ | 461,254 |
| Investment Earnings |  | 10,017 |  | 7,587 |  | (129) |
| Net Contributions (Withdrawals) |  | 3,036 |  | $(1,709)$ |  | 95 |
| Ending Invested Assets | \$ | 455,376 | \$ | 461,254 | \$ | 461,219 |


[^0]:    Notes: Source data provided by the record keeper, Empower Retirement.
    (1) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates

