

**State of Alaska**  
**Department of Revenue**  
STATE INVESTMENT REVIEW MEETING  
**August 18, 2021 – 8:00 a.m.**

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Microsoft Teams Meeting Info:

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Call-In: 1-907-202-7104

Code: 109 212 438#

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- I. Introduction**  
*Lucinda Mahoney, Commissioner of Revenue*
  
- II. State Investments**  
*Zachary Hanna, Chief Investment Officer*
  - A. June 30, 2021 Performance – Commissioner’s Report**
  - B. Non-Routine Investments**
  - C. Asset Allocation Process & 2021 Capital Market Assumptions**
  
- III. IAC Comments**  
*Investment Advisory Council Members*
  
- IV. Future Agenda Items & Calendar Review**  
*Zachary Hanna, Chief Investment Officer*  
*Alysia Jones, ARMB Liaison*
  
- V. Other Matters for Discussion**
  
- VI. Adjournment**

# State Investment Review Meeting



THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

## State Investments and Fiscal Year 2022 Asset Allocation

**August 2021**

**Zachary Hanna, CFA**  
**Chief Investment Officer**  
**State of Alaska, Department of Revenue**

# **Investment Performance**

**June 30, 2021**

# Capital Market Update

| 2012                           | 2013                             | 2014                           | 2015                           | 2016                           | 2017                           | 2018                            | 2019                           | 2020                           | 12/19-6/21                     | Q3 2020                        | Q4 2020                        | Q1 2021                          | Q2 2021                        | FY 2021                          |
|--------------------------------|----------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|
| REITs<br>19.7%                 | Broad U.S. Equity<br>33.6%       | REITs<br>28.0%                 | REITs<br>2.8%                  | High Yield<br>17.1%            | International Equity<br>27.2%  | Cash Equivalents<br>1.9%        | Broad U.S. Equity<br>31.0%     | Broad U.S. Equity<br>20.9%     | Broad U.S. Equity<br>24.6%     | Broad U.S. Equity<br>9.2%      | International Equity<br>17.0%  | REITs<br>8.3%                    | REITs<br>12.0%                 | Broad U.S. Equity<br>44.2%       |
| International Equity<br>16.8%  | International Equity<br>15.3%    | Broad U.S. Equity<br>12.6%     | Core U.S. Fixed Income<br>0.5% | Broad U.S. Equity<br>12.7%     | Broad U.S. Equity<br>21.1%     | Core U.S. Fixed Income<br>0.0%  | REITs<br>28.7%                 | TIPS<br>11.0%                  | International Equity<br>13.4%  | International Equity<br>6.3%   | Broad U.S. Equity<br>14.7%     | Broad U.S. Equity<br>6.3%        | Broad U.S. Equity<br>8.2%      | International Equity<br>35.7%    |
| Broad U.S. Equity<br>16.4%     | High Yield<br>7.4%               | Core U.S. Fixed Income<br>6.0% | Broad U.S. Equity<br>0.5%      | REITs<br>8.6%                  | REITs<br>8.7%                  | TIPS<br>(1.3%)                  | International Equity<br>21.5%  | International Equity<br>10.7%  | REITs<br>9.9%                  | High Yield<br>4.6%             | REITs<br>8.1%                  | International Equity<br>3.5%     | International Equity<br>5.5%   | REITs<br>32.8%                   |
| High Yield<br>15.8%            | REITs<br>2.9%                    | TIPS<br>3.6%                   | Cash Equivalents<br>0.1%       | TIPS<br>4.7%                   | High Yield<br>7.5%             | High Yield<br>(2.1%)            | High Yield<br>14.3%            | Core U.S. Fixed Income<br>7.5% | TIPS<br>8.4%                   | TIPS<br>3.0%                   | High Yield<br>6.5%             | High Yield<br>0.8%               | TIPS<br>3.2%                   | High Yield<br>15.4%              |
| TIPS<br>7.0%                   | Cash Equivalents<br>0.1%         | High Yield<br>2.5%             | TIPS<br>(1.4%)                 | International Equity<br>4.5%   | Core U.S. Fixed Income<br>3.5% | REITs<br>(4.0%)                 | Core U.S. Fixed Income<br>8.7% | High Yield<br>7.1%             | High Yield<br>7.2%             | REITs<br>1.2%                  | TIPS<br>1.6%                   | Cash Equivalents<br>0.0%         | High Yield<br>2.7%             | TIPS<br>6.5%                     |
| Core U.S. Fixed Income<br>4.2% | Core U.S. Fixed Income<br>(2.0%) | Cash Equivalents<br>0.0%       | High Yield<br>(4.5%)           | Core U.S. Fixed Income<br>2.6% | TIPS<br>3.0%                   | Broad U.S. Equity<br>(5.2%)     | TIPS<br>8.4%                   | Cash Equivalents<br>0.7%       | Core U.S. Fixed Income<br>3.8% | Core U.S. Fixed Income<br>0.6% | Core U.S. Fixed Income<br>0.7% | TIPS<br>(1.5%)                   | Core U.S. Fixed Income<br>1.8% | Cash Equivalents<br>0.1%         |
| Cash Equivalents<br>0.1%       | TIPS<br>(8.6%)                   | International Equity<br>(3.9%) | International Equity<br>(5.7%) | Cash Equivalents<br>0.3%       | Cash Equivalents<br>0.9%       | International Equity<br>(14.2%) | Cash Equivalents<br>2.3%       | REITs<br>(5.1%)                | Cash Equivalents<br>0.5%       | Cash Equivalents<br>0.0%       | Cash Equivalents<br>0.0%       | Core U.S. Fixed Income<br>(3.4%) | Cash Equivalents<br>0.0%       | Core U.S. Fixed Income<br>(0.3%) |

# Current Interest Rates

- Rates remain low – below inflation expectations.
- Shorter rates have decreased, but longer rates have increased materially along with the market recovery and the longest tenors are back closer to pre-pandemic levels.



# Commissioner's Report

# COMMISSIONER'S REPORT

As of June 30, 2021

## DOR Commissioner's Report: Market Values for Month Ending 6/30/2021

### Market Value

| Plan Name   | Cash Equivalents | Domestic Equity | Fixed Income  | Int'l Equity  | Market Value    |
|---|------------------|-----------------|---------------|---------------|-----------------|
| 2008 Transportation Project Government Bonds (AY2Q)       | \$760,444        |                 |               |               | \$760,444       |
| 2010 Education Tax Exempt Bonds (AY3V)                    | \$2,641          |                 |               |               | \$2,641         |
| 2013B Tax Exempt Education (AY3Z)                         | \$240,751        |                 |               |               | \$240,751       |
| 2016A - 2012 Transportation Bond Act (AY3Y)               | \$1,915,438      |                 |               |               | \$1,915,438     |
| 2016B - 2012 Transportation Bond Act (AY3Q)               | \$83,596,279     |                 |               |               | \$83,596,279    |
| Alaska Higher Education Investment (AY3L)                 | \$3,553,177      | \$177,330,342   | \$120,741,335 | \$114,786,541 | \$416,411,394   |
| Alaska Mental Health Trust Reserve (AY2L)                 | \$15,996         | \$20,579,642    | \$26,924,313  | \$13,927,395  | \$61,447,347    |
| Constitutional Budget Reserve Fund (AY19)                 | \$1,076,066,827  |                 |               |               | \$1,076,066,827 |
| Education Endowment Fund (AY3G)                           | \$5,112          | \$255,330       | \$173,942     | \$165,303     | \$599,686       |
| EVOS Habitat Investment (AY2H)                            | \$69,982         | \$27,444,800    | \$46,619,128  | \$19,186,261  | \$93,320,171    |
| EVOS Research Investment (AY02)                           | \$83,629         | \$35,632,178    | \$47,266,182  | \$24,580,435  | \$107,562,424   |
| GeFONSI I (AY01)  | \$2,092,551,716  |                 | \$441,652,871 |               | \$2,534,204,588 |
| GeFONSI II (AY3F)   | \$707,587,637    | \$39,366,176    | \$174,674,204 | \$28,725,934  | \$950,353,951   |
| Illinois Creek Mine Reclamation (AY9J)                    | \$12,591         | \$627,441       | \$427,215     | \$406,184     | \$1,473,432     |
| International Airports 2006 Non-AMT (AY9X)                | \$2,062,642      |                 |               |               | \$2,062,642     |
| International Airports 2009 Variable (AY9Y)               | \$2,207,535      |                 |               |               | \$2,207,535     |
| International Airports 2010-A (AY3A)                      | \$959            |                 |               |               | \$959           |
| International Airports 2010-B (AY3B)                      | \$346,388        |                 |               |               | \$346,388       |
| International Airports Repair & Replacement Fund (AY05)   | \$500,957        |                 |               |               | \$500,957       |
| International Airports Revenue Fund (AY04)                | \$152,485,551    |                 | \$42,478,512  |               | \$194,964,063   |
| International Airports Series 2002 Reserve Account (AY2E) | \$16,400,749     |                 |               |               | \$16,400,749    |
| International Airports Series 2003 Reserve (AY2U)         | \$10,511,685     |                 |               |               | \$10,511,685    |
| Investment Loss Trust Fund (AY28)                         | \$3,749,258      |                 |               |               | \$3,749,258     |
| PCE Endowment Fund (AY13)                                 | \$9,851,806      | \$280,130,185   | \$689,140,673 | \$170,042,784 | \$1,149,165,449 |
| Permanent Fund Dividend Holding Account (AY2G)            | \$27,538,478     |                 |               |               | \$27,538,478    |
| Public School - Income (AY09)                             | \$176            |                 |               |               | \$176           |
| Public School Trust Fund (AY08)                           | \$7,303,920      | \$359,696,677   | \$244,911,655 | \$232,832,942 | \$844,745,193   |
| RHIF LTC Insurance (AY11)                                 | \$6,197,371      | \$207,375,675   | \$408,228,854 | \$134,256,133 | \$756,058,033   |
| RHIF Major Medical (AY03)                                 | \$18,961,987     |                 |               |               | \$18,961,987    |



## DOR Commissioner's Report: Market Values for Month Ending 6/30/2021

### Relative Allocation

| Plan Name   | Cash Equivalents | Domestic Equity | Fixed Income | Int'l Equity |
|---|------------------|-----------------|--------------|--------------|
| 2008 Transportation Project Government Bonds (AY2Q)       | 0.00% ●          |                 |              |              |
| 2010 Education Tax Exempt Bonds (AY3V)                    | 0.00% ●          |                 |              |              |
| 2013B Tax Exempt Education (AY3Z)                         | 0.00% ●          |                 |              |              |
| 2016A - 2012 Transportation Bond Act (AY3Y)               | 0.00% ●          |                 |              |              |
| 2016B - 2012 Transportation Bond Act (AY3Q)               | 0.00% ●          |                 |              |              |
| Alaska Higher Education Investment (AY3L)                 | -0.15% ●         | 0.59% ◆         | 0.00% ●      | -0.43% ▲     |
| Alaska Mental Health Trust Reserve (AY2L)                 | 0.03% ●          | 0.49% ▲         | -0.18% ●     | -0.33% ▲     |
| Constitutional Budget Reserve Fund (AY19)                 | 0.00% ●          |                 |              |              |
| Education Endowment Fund (AY3G)                           | -0.15% ●         | 0.58% ◆         | 0.01% ●      | -0.44% ▲     |
| EVOS Habitat Investment (AY2H)                            | 0.07% ●          | 0.51% ◆         | -0.34% ▲     | -0.24% ●     |
| EVOS Research Investment (AY02)                           | 0.08% ●          | 1.73% ✖         | -2.36% ✖     | 0.55% ◆      |
| GeFONSI I (AY01)  | 5.57% ✖          |                 | -5.57% ✖     |              |
| GeFONSI II (AY3F)   | -0.54% ◆         | 0.14% ●         | 0.38% ▲      | 0.02% ●      |
| Illinois Creek Mine Reclamation (AY9J)                    | -0.15% ●         | 0.58% ◆         | -0.01% ●     | -0.43% ▲     |
| International Airports 2006 Non-AMT (AY9X)                | 0.00% ●          |                 |              |              |
| International Airports 2009 Variable (AY9Y)               | 0.00% ●          |                 |              |              |
| International Airports 2010-A (AY3A)                      | 0.00% ●          |                 |              |              |
| International Airports 2010-B (AY3B)                      | 0.00% ●          |                 |              |              |
| International Airports Repair & Replacement Fund (AY05)   | 0.00% ●          |                 |              |              |
| International Airports Revenue Fund (AY04)                | 1.21% ✖          |                 | -1.21% ✖     |              |
| International Airports Series 2002 Reserve Account (AY2E) | 0.00% ●          |                 |              |              |
| International Airports Series 2003 Reserve (AY2U)         | 0.00% ●          |                 |              |              |
| Investment Loss Trust Fund (AY28)                         | 0.00% ●          |                 |              |              |
| PCE Endowment Fund (AY13)                                 | -0.14% ●         | 0.38% ▲         | -0.03% ●     | -0.20% ●     |
| Permanent Fund Dividend Holding Account (AY2G)            | 0.00% ●          |                 |              |              |
| Public School - Income (AY09)                             | 0.00% ●          |                 |              |              |
| Public School Trust Fund (AY08)                           | -0.14% ●         | 0.58% ◆         | -0.01% ●     | -0.44% ▲     |
| RHIF LTC Insurance (AY11)                                 | -0.18% ●         | 0.43% ▲         | -0.01% ●     | -0.24% ●     |
| RHIF Major Medical (AY03)                                 | 0.00% ●          |                 |              |              |

## DOR Commissioner's Report: Market Values for Month Ending 6/30/2021

### Actual Allocation

| Plan Name   | Cash Equivalents | Domestic Equity | Fixed Income | Int'l Equity |
|---|------------------|-----------------|--------------|--------------|
| 2008 Transportation Project Government Bonds (AY2Q)       | 100.00%          |                 |              |              |
| 2010 Education Tax Exempt Bonds (AY3V)                    | 100.00%          |                 |              |              |
| 2013B Tax Exempt Education (AY3Z)                         | 100.00%          |                 |              |              |
| 2016A - 2012 Transportation Bond Act (AY3Y)               | 100.00%          |                 |              |              |
| 2016B - 2012 Transportation Bond Act (AY3Q)               | 100.00%          |                 |              |              |
| Alaska Higher Education Investment (AY3L)                 | 0.85%            | 42.59%          | 29.00%       | 27.57%       |
| Alaska Mental Health Trust Reserve (AY2L)                 | 0.03%            | 33.49%          | 43.82%       | 22.67%       |
| Constitutional Budget Reserve Fund (AY19)                 | 100.00%          |                 |              |              |
| Education Endowment Fund (AY3G)                           | 0.85%            | 42.58%          | 29.01%       | 27.56%       |
| EVOS Habitat Investment (AY2H)                            | 0.07%            | 29.41%          | 49.96%       | 20.56%       |
| EVOS Research Investment (AY02)                           | 0.08%            | 33.13%          | 43.94%       | 22.85%       |
| GeFONSI I (AY01)  | 82.57%           |                 | 17.43%       |              |
| GeFONSI II (AY3F)   | 74.46%           | 4.14%           | 18.38%       | 3.02%        |
| Illinois Creek Mine Reclamation (AY9J)                    | 0.85%            | 42.58%          | 28.99%       | 27.57%       |
| International Airports 2006 Non-AMT (AY9X)                | 100.00%          |                 |              |              |
| International Airports 2009 Variable (AY9Y)               | 100.00%          |                 |              |              |
| International Airports 2010-A (AY3A)                      | 100.00%          |                 |              |              |
| International Airports 2010-B (AY3B)                      | 100.00%          |                 |              |              |
| International Airports Repair & Replacement Fund (AY05)   | 100.00%          |                 |              |              |
| International Airports Revenue Fund (AY04)                | 78.21%           |                 | 21.79%       |              |
| International Airports Series 2002 Reserve Account (AY2E) | 100.00%          |                 |              |              |
| International Airports Series 2003 Reserve (AY2U)         | 100.00%          |                 |              |              |
| Investment Loss Trust Fund (AY28)                         | 100.00%          |                 |              |              |
| PCE Endowment Fund (AY13)                                 | 0.86%            | 24.38%          | 59.97%       | 14.80%       |
| Permanent Fund Dividend Holding Account (AY2G)            | 100.00%          |                 |              |              |
| Public School - Income (AY09)                             | 100.00%          |                 |              |              |
| Public School Trust Fund (AY08)                           | 0.86%            | 42.58%          | 28.99%       | 27.56%       |
| RHIF LTC Insurance (AY11)                                 | 0.82%            | 27.43%          | 53.99%       | 17.76%       |
| RHIF Major Medical (AY03)                                 | 100.00%          |                 |              |              |

## DOR Commissioner's Report: Market Values for Month Ending 6/30/2021

### Target Allocation

| Plan Name   | Cash Equivalents | Domestic Equity | Fixed Income | Int'l Equity |
|---|------------------|-----------------|--------------|--------------|
| 2008 Transportation Project Government Bonds (AY2Q)       | 100.00%          |                 |              |              |
| 2010 Education Tax Exempt Bonds (AY3V)                    | 100.00%          |                 |              |              |
| 2013B Tax Exempt Education (AY3Z)                         | 100.00%          |                 |              |              |
| 2016A - 2012 Transportation Bond Act (AY3Y)               | 100.00%          |                 |              |              |
| 2016B - 2012 Transportation Bond Act (AY3Q)               | 100.00%          |                 |              |              |
| Alaska Higher Education Investment (AY3L)                 | 1.00%            | 42.00%          | 29.00%       | 28.00%       |
| Alaska Mental Health Trust Reserve (AY2L)                 | 0.00%            | 33.00%          | 44.00%       | 23.00%       |
| Constitutional Budget Reserve Fund (AY19)                 | 100.00%          |                 |              |              |
| Education Endowment Fund (AY3G)                           | 1.00%            | 42.00%          | 29.00%       | 28.00%       |
| EVOS Habitat Investment (AY2H)                            | 0.00%            | 28.90%          | 50.30%       | 20.80%       |
| EVOS Research Investment (AY02)                           | 0.00%            | 31.40%          | 46.30%       | 22.30%       |
| GeFONSI I (AY01)  | 77.00%           |                 | 23.00%       |              |
| GeFONSI II (AY3F)   | 75.00%           | 4.00%           | 18.00%       | 3.00%        |
| Illinois Creek Mine Reclamation (AY9J)                    | 1.00%            | 42.00%          | 29.00%       | 28.00%       |
| International Airports 2006 Non-AMT (AY9X)                | 100.00%          |                 |              |              |
| International Airports 2009 Variable (AY9Y)               | 100.00%          |                 |              |              |
| International Airports 2010-A (AY3A)                      | 100.00%          |                 |              |              |
| International Airports 2010-B (AY3B)                      | 100.00%          |                 |              |              |
| International Airports Repair & Replacement Fund (AY05)   | 100.00%          |                 |              |              |
| International Airports Revenue Fund (AY04)                | 77.00%           |                 | 23.00%       |              |
| International Airports Series 2002 Reserve Account (AY2E) | 100.00%          |                 |              |              |
| International Airports Series 2003 Reserve (AY2U)         | 100.00%          |                 |              |              |
| Investment Loss Trust Fund (AY28)                         | 100.00%          |                 |              |              |
| PCE Endowment Fund (AY13)                                 | 1.00%            | 24.00%          | 60.00%       | 15.00%       |
| Permanent Fund Dividend Holding Account (AY2G)            | 100.00%          |                 |              |              |
| Public School - Income (AY09)                             | 100.00%          |                 |              |              |
| Public School Trust Fund (AY08)                           | 1.00%            | 42.00%          | 29.00%       | 28.00%       |
| RHIF LTC Insurance (AY11)                                 | 1.00%            | 27.00%          | 54.00%       | 18.00%       |
| RHIF Major Medical (AY03)                                 | 100.00%          |                 |              |              |

## DOR Commissioner's Report: Net Pool Performance for Month Ending 6/30/2021

| <b>Relative Performance (Net of Fee)</b> | <b>1 Month</b> | <b>3 Month</b> | <b>FYTD</b> | <b>1 Year</b> | <b>3 Year</b> | <b>5 Year</b> | <b>6 Year</b> | <b>10 Year</b> |
|--|----------------|----------------|-------------|---------------|---------------|---------------|---------------|----------------|
| Broad Market Fixed Income                | 0.15%          | 0.09%          | 0.11%       | 0.11%         | 0.28%         | 0.19%         | 0.21%         | 0.18%          |
| Domestic Equity*                         | -0.02%         | 0.00%          | -0.11%      | -0.11%        | -0.10%        | -0.15%        |               |                |
| International Equity*                    | 0.12%          | 0.04%          | 0.15%       | 0.15%         | 0.04%         | -0.30%        |               |                |
| Short-term Fixed Income Pool             | 0.00%          | 0.03%          | 0.10%       | 0.10%         | 0.14%         | 0.19%         | 0.22%         | 0.23%          |
| <b>Pool Performance (Net of Fee)</b>     | <b>1 Month</b> | <b>3 Month</b> | <b>FYTD</b> | <b>1 Year</b> | <b>3 Year</b> | <b>5 Year</b> | <b>6 Year</b> | <b>10 Year</b> |
| Broad Market Fixed Income                | 0.85%          | 1.92%          | -0.22%      | -0.22%        | 5.63%         | 3.21%         | 3.73%         | 3.57%          |
| Domestic Equity*                         | 2.45%          | 8.23%          | 44.05%      | 44.05%        | 18.63%        | 17.73%        |               |                |
| International Equity*                    | -0.53%         | 5.52%          | 35.87%      | 35.87%        | 9.42%         | 10.80%        |               |                |
| Short-term Fixed Income Pool             | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| <b>Benchmark Performance</b>             | <b>1 Month</b> | <b>3 Month</b> | <b>FYTD</b> | <b>1 Year</b> | <b>3 Year</b> | <b>5 Year</b> | <b>6 Year</b> | <b>10 Year</b> |
| Broad Market Fixed Income                | 0.70%          | 1.83%          | -0.33%      | -0.33%        | 5.34%         | 3.03%         | 3.52%         | 3.39%          |
| Domestic Equity*                         | 2.47%          | 8.24%          | 44.16%      | 44.16%        | 18.73%        | 17.89%        |               |                |
| International Equity*                    | -0.65%         | 5.48%          | 35.72%      | 35.72%        | 9.38%         | 11.10%        |               |                |
| Short-term Fixed Income Pool             | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.18%         | 1.01%         | 0.63%          |

\*Equity performance reflects data as of July 1, 2016 due to accounting structure change.

## DOR Commissioner's Report: Net Plan Performance for Month Ending 6/30/2021

| Relative Performance (Net of Fee)                         | 1 Month | 3 Month | FYTD     | 1 Year   | 3 Year   | 5 Year   | 6 Year  | 10 Year |
|---|---------|---------|----------|----------|----------|----------|---------|---------|
| 2008 Transportation Project Government Bonds (AY2Q)       | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| 2010 Education Tax Exempt Bonds (AY3V)                    | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| 2013B Tax Exempt Education (AY3Z)                         | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● |         |
| 2016A - 2012 Transportation Bond Act (AY3Y)               | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.12% ●  | 0.18% ●  | 0.21% ● |         |
| 2016B - 2012 Transportation Bond Act (AY3Q)               | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  |         |         |
| Alaska Higher Education Investment (AY3L)                 | 0.07% ● | 0.04% ● | -0.06% ◆ | -0.06% ◆ | -0.04% ▲ | -0.01% ▲ | 0.09% ● |         |
| Alaska Mental Health Trust Reserve (AY2L)                 | 0.09% ● | 0.04% ● | 0.09% ●  | 0.09% ●  | 0.11% ●  | 0.07% ●  | 0.18% ● | 0.42% ● |
| Constitutional Budget Reserve Fund (AY19)                 | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.16% ●  | 0.20% ●  | 0.22% ● | 0.20% ● |
| Education Endowment Fund (AY3G)                           | 0.07% ● | 0.04% ● | -0.06% ◆ | -0.06% ◆ |          |          |         |         |
| EVOS Habitat Investment (AY2H)                            | 0.09% ● | 0.05% ● | -0.08% ◆ | -0.08% ◆ | -0.04% ▲ | -0.09% ◆ | 0.11% ● | 0.45% ● |
| EVOS Research Investment (AY02)                           | 0.08% ● | 0.04% ● | 0.05% ●  | 0.05% ●  | 0.01% ●  | -0.08% ◆ | 0.09% ● | 0.44% ● |
| GeFONSI I (AY01)  | 0.02% ● | 0.02% ● | 0.08% ●  | 0.08% ●  | 0.13% ●  | 0.16% ●  | 0.19% ● | 0.20% ● |
| GeFONSI II (AY3F)   | 0.03% ● | 0.04% ● | 0.00% ▲  | 0.00% ▲  | 0.07% ●  |          |         |         |
| Illinois Creek Mine Reclamation (AY9J)                    | 0.07% ● | 0.04% ● | -0.07% ◆ | -0.07% ◆ | -0.08% ◆ | -0.04% ▲ | 0.00% ▲ | 0.11% ● |
| International Airports 2006 Non-AMT (AY9X)                | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| International Airports 2009 Variable (AY9Y)               | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| International Airports 2010-A (AY3A)                      | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| International Airports 2010-B (AY3B)                      | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| International Airports Repair & Replacement Fund (AY05)   | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| International Airports Revenue Fund (AY04)                | 0.03% ● | 0.03% ● | 0.09% ●  | 0.09% ●  | 0.11% ●  | 0.21% ●  | 0.24% ● | 0.23% ● |
| International Airports Series 2002 Reserve Account (AY2E) | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| International Airports Series 2003 Reserve (AY2U)         | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| Investment Loss Trust Fund (AY28)                         | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |
| PCE Endowment Fund (AY13)                                 | 0.11% ● | 0.07% ● | -0.01% ▲ | -0.01% ▲ | -0.06% ◆ | -0.04% ▲ | 0.08% ● | 0.24% ● |
| Permanent Fund Dividend Holding Account (AY2G)            | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.19% ●  | 0.32% ●  | 0.32% ● | 0.28% ● |
| Public School - Income (AY09)                             | 0.02% ● | 0.05% ● | 0.10% ●  | 0.10% ●  | 0.11% ●  | 0.18% ●  | 0.21% ● | 0.22% ● |
| Public School Trust Fund (AY08)                           | 0.07% ● | 0.04% ● | -0.07% ◆ | -0.07% ◆ | -0.06% ◆ | -0.01% ▲ | 0.07% ● | 0.02% ● |
| RHIF LTC Insurance (AY11)                                 | 0.10% ● | 0.06% ● | -0.03% ▲ | -0.03% ▲ | 0.04% ●  | 0.08% ●  | 0.16% ● | 0.22% ● |
| RHIF Major Medical (AY03)                                 | 0.00% ● | 0.03% ● | 0.10% ●  | 0.10% ●  | 0.14% ●  | 0.20% ●  | 0.23% ● | 0.23% ● |

**DOR Commissioner's Report: Net Plan Performance for Month Ending 6/30/2021**

| <b>Plan Performance (Net of Fee)</b>                      | <b>1 Month</b> | <b>3 Month</b> | <b>FYTD</b> | <b>1 Year</b> | <b>3 Year</b> | <b>5 Year</b> | <b>6 Year</b> | <b>10 Year</b> |
|---|----------------|----------------|-------------|---------------|---------------|---------------|---------------|----------------|
| 2008 Transportation Project Government Bonds (AY2Q)       | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| 2010 Education Tax Exempt Bonds (AY3V)                    | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| 2013B Tax Exempt Education (AY3Z)                         | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.23%         |                |
| 2016A - 2012 Transportation Bond Act (AY3Y)               | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.46%         | 1.36%         | 1.22%         |                |
| 2016B - 2012 Transportation Bond Act (AY3Q)               | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         |               |                |
| Alaska Higher Education Investment (AY3L)                 | 1.13%          | 5.56%          | 27.21%      | 27.21%        | 12.66%        | 11.54%        | 9.69%         |                |
| Alaska Mental Health Trust Reserve (AY2L)                 | 1.06%          | 4.82%          | 21.36%      | 21.36%        | 11.17%        | 10.45%        | 8.87%         | 8.73%          |
| Constitutional Budget Reserve Fund (AY19)                 | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 2.53%         | 2.18%         | 2.11%         | 1.83%          |
| Education Endowment Fund (AY3G)                           | 1.13%          | 5.56%          | 27.21%      | 27.21%        |               |               |               |                |
| EVOS Habitat Investment (AY2H)                            | 1.03%          | 4.48%          | 18.39%      | 18.39%        | 10.48%        | 10.47%        | 8.94%         | 9.28%          |
| EVOS Research Investment (AY02)                           | 1.04%          | 4.69%          | 20.18%      | 20.18%        | 10.91%        | 10.71%        | 9.10%         | 9.39%          |
| GeFONSI I (AY01)  | 0.18%          | 0.44%          | 0.09%       | 0.09%         | 1.77%         | 1.38%         | 1.28%         | 1.05%          |
| GeFONSI II (AY3F)   | 0.23%          | 0.86%          | 2.52%       | 2.52%         | 3.49%         |               |               |                |
| Illinois Creek Mine Reclamation (AY9J)                    | 1.13%          | 5.56%          | 27.21%      | 27.21%        | 12.61%        | 11.51%        | 9.60%         | 6.72%          |
| International Airports 2006 Non-AMT (AY9X)                | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.23%         | 0.86%          |
| International Airports 2009 Variable (AY9Y)               | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| International Airports 2010-A (AY3A)                      | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| International Airports 2010-B (AY3B)                      | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| International Airports Repair & Replacement Fund (AY05)   | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| International Airports Revenue Fund (AY04)                | 0.19%          | 0.45%          | 0.10%       | 0.10%         | 2.55%         | 2.24%         | 2.16%         | 1.68%          |
| International Airports Series 2002 Reserve Account (AY2E) | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| International Airports Series 2003 Reserve (AY2U)         | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| Investment Loss Trust Fund (AY28)                         | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |
| PCE Endowment Fund (AY13)                                 | 1.02%          | 3.96%          | 14.43%      | 14.43%        | 8.71%         | 9.16%         | 7.75%         | 8.63%          |
| Permanent Fund Dividend Holding Account (AY2G)            | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.53%         | 1.50%         | 1.33%         | 0.91%          |
| Public School - Income (AY09)                             | 0.01%          | 0.05%          | 0.20%       | 0.20%         | 1.45%         | 1.35%         | 1.22%         | 0.85%          |
| Public School Trust Fund (AY08)                           | 1.13%          | 5.56%          | 27.21%      | 27.21%        | 12.71%        | 10.85%        | 9.34%         | 8.51%          |
| RHIF LTC Insurance (AY11)                                 | 1.03%          | 4.25%          | 16.78%      | 16.78%        | 10.52%        | 8.55%         | 7.71%         | 7.05%          |
| RHIF Major Medical (AY03)                                 | 0.00%          | 0.03%          | 0.19%       | 0.19%         | 1.48%         | 1.37%         | 1.24%         | 0.86%          |

**DOR Commissioner's Report: Net Plan Performance for Month Ending 6/30/2021**

| <b>Benchmark Performance</b>                              | <b>1 Month</b> | <b>3 Month</b> | <b>FYTD</b> | <b>1 Year</b> | <b>3 Year</b> | <b>5 Year</b> | <b>6 Year</b> | <b>10 Year</b> |
|---|----------------|----------------|-------------|---------------|---------------|---------------|---------------|----------------|
| 2008 Transportation Project Government Bonds (AY2Q)       | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| 2010 Education Tax Exempt Bonds (AY3V)                    | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| 2013B Tax Exempt Education (AY3Z)                         | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         |                |
| 2016A - 2012 Transportation Bond Act (AY3Y)               | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         |                |
| 2016B - 2012 Transportation Bond Act (AY3Q)               | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         |               |                |
| Alaska Higher Education Investment (AY3L)                 | 1.06%          | 5.52%          | 27.28%      | 27.28%        | 12.70%        | 11.55%        | 9.60%         |                |
| Alaska Mental Health Trust Reserve (AY2L)                 | 0.97%          | 4.78%          | 21.28%      | 21.28%        | 11.06%        | 10.38%        | 8.69%         | 8.31%          |
| Constitutional Budget Reserve Fund (AY19)                 | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 2.37%         | 1.98%         | 1.89%         | 1.63%          |
| Education Endowment Fund (AY3G)                           | 1.06%          | 5.52%          | 27.28%      | 27.28%        |               |               |               |                |
| EVOS Habitat Investment (AY2H)                            | 0.93%          | 4.43%          | 18.47%      | 18.47%        | 10.52%        | 10.56%        | 8.83%         | 8.84%          |
| EVOS Research Investment (AY02)                           | 0.96%          | 4.65%          | 20.13%      | 20.13%        | 10.90%        | 10.79%        | 9.02%         | 8.95%          |
| GeFONSI I (AY01)  | 0.16%          | 0.42%          | 0.00%       | 0.00%         | 1.63%         | 1.22%         | 1.10%         | 0.86%          |
| GeFONSI II (AY3F)   | 0.20%          | 0.82%          | 2.52%       | 2.52%         | 3.42%         |               |               |                |
| Illinois Creek Mine Reclamation (AY9J)                    | 1.06%          | 5.52%          | 27.28%      | 27.28%        | 12.70%        | 11.55%        | 9.60%         | 6.61%          |
| International Airports 2006 Non-AMT (AY9X)                | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| International Airports 2009 Variable (AY9Y)               | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| International Airports 2010-A (AY3A)                      | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| International Airports 2010-B (AY3B)                      | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| International Airports Repair & Replacement Fund (AY05)   | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| International Airports Revenue Fund (AY04)                | 0.16%          | 0.42%          | 0.00%       | 0.00%         | 2.45%         | 2.02%         | 1.93%         | 1.45%          |
| International Airports Series 2002 Reserve Account (AY2E) | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| International Airports Series 2003 Reserve (AY2U)         | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| Investment Loss Trust Fund (AY28)                         | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| PCE Endowment Fund (AY13)                                 | 0.92%          | 3.89%          | 14.44%      | 14.44%        | 8.77%         | 9.20%         | 7.68%         | 8.39%          |
| Permanent Fund Dividend Holding Account (AY2G)            | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.18%         | 1.01%         | 0.63%          |
| Public School - Income (AY09)                             | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |
| Public School Trust Fund (AY08)                           | 1.06%          | 5.52%          | 27.28%      | 27.28%        | 12.77%        | 10.86%        | 9.28%         | 8.49%          |
| RHIF LTC Insurance (AY11)                                 | 0.93%          | 4.19%          | 16.81%      | 16.81%        | 10.48%        | 8.47%         | 7.55%         | 6.82%          |
| RHIF Major Medical (AY03)                                 | 0.00%          | 0.00%          | 0.09%       | 0.09%         | 1.34%         | 1.17%         | 1.01%         | 0.63%          |

## DOR Commissioner's Report: External Management Fees as of Month Ending 6/30/2021

### Plan Fees for the Last Year

| Plan  | Fee as a % |
|---|------------|
| 2008 Transportation Project Government Bonds (AY2Q)       | 0.0000%    |
| 2010 Education Tax Exempt Bonds (AY3V)                    | 0.0000%    |
| 2013B Tax Exempt Education (AY3Z)                         | 0.0000%    |
| 2016A - 2012 Transportation Bond Act (AY3Y)               | 0.0000%    |
| 2016B - 2012 Transportation Bond Act (AY3Q)               | 0.0000%    |
| Alaska Higher Education Investment (AY3L)                 | 0.0081%    |
| Alaska Mental Health Trust Reserve (AY2L)                 | 0.0064%    |
| Constitutional Budget Reserve Fund (AY19)                 | 0.0000%    |
| Education Endowment Fund (AY3G)                           | 0.0082%    |
| EVOS Habitat Investment (AY2H)                            | 0.0056%    |
| EVOS Research Investment (AY02)                           | 0.0060%    |
| GeFONSI I (AY01)  | 0.0000%    |
| GeFONSI II (AY3F)   | 0.0008%    |
| Illinois Creek Mine Reclamation (AY9J)                    | 0.0081%    |
| International Airports 2006 Non-AMT (AY9X)                | 0.0000%    |
| International Airports 2009 Variable (AY9Y)               | 0.0000%    |
| International Airports 2010-A (AY3A)                      | 0.0000%    |
| International Airports 2010-B (AY3B)                      | 0.0000%    |
| International Airports Repair & Replacement Fund (AY05)   | 0.0000%    |
| International Airports Revenue Fund (AY04)                | 0.0000%    |
| International Airports Series 2002 Reserve Account (AY2E) | 0.0000%    |
| International Airports Series 2003 Reserve (AY2U)         | 0.0000%    |
| Investment Loss Trust Fund (AY28)                         | 0.0000%    |
| PCE Endowment Fund (AY13)                                 | 0.0043%    |
| Permanent Fund Dividend Holding Account (AY2G)            | 0.0000%    |
| Public School - Income (AY09)                             | 0.0000%    |
| Public School Trust Fund (AY08)                           | 0.0081%    |
| RHIF LTC Insurance (AY11)                                 | 0.0050%    |
| RHIF Major Medical (AY03)                                 | 0.0000%    |



**Commissioner's Report: Top GeFONSI Accounts for Month Ending: 6/30/2021**

| <b>Program</b>                                 | <b>Account Name</b>   | <b>End Balance</b>        |
|--|---|---------------------------|
| GeFONSI I                                      | General Fund  | \$2,019,966,066.02        |
|  | Alaska Clean Water Fund   | \$113,907,804.81          |
|  | Alaska Drinking Water Fund  | \$69,316,981.03           |
|  | Oil & Hazardous Substance Release Response Account                  | \$43,185,642.45           |
|  | Public Advocacy Trust   | \$39,404,112.80           |
| GeFONSI II                                     | Highway Equipment Working Capital Fund For Operating Appropriations | \$95,795,067.01           |
|  | School Construction Fund  | \$78,374,789.10           |
|  | Community Revenue Sharing Fund                                      | \$70,389,189.30           |
|  | Regional Ed Attendance Area School Fund                             | \$64,381,147.41           |
|  | National Petroleum Reserve Fund                                     | \$54,985,536.23           |
| <b>Sum of 5 Largest GeFONSI I and II Funds</b> |   | <b>\$2,649,706,336.16</b> |

**Questions?**

# Non-Routine Investments

- The Department of Revenue is presented periodically with non-routine investment opportunities that fall outside the scope of its existing investment opportunity set.
- The state does not currently have any non-routine investments, and none are presently contemplated by investment staff.
- Non-routine investment process summary:
  - Document the investment opportunity and determine if it merits further diligence and/or if it is more suitable for other funding sources.
  - Seek legal advice on DOR eligibility.
  - Seek guidance from external auditors.
  - Use an impartial external expert to evaluate the opportunity and to provide an opinion on the investment.
  - Seek advice from the Investment Advisory Council.
  - Notify the Office of Management and Budget.
  - Complete diligence and investment documentation.
  - Inform the Chairs of the Senate and House Finance Committees of any decision to move forward with an investment.

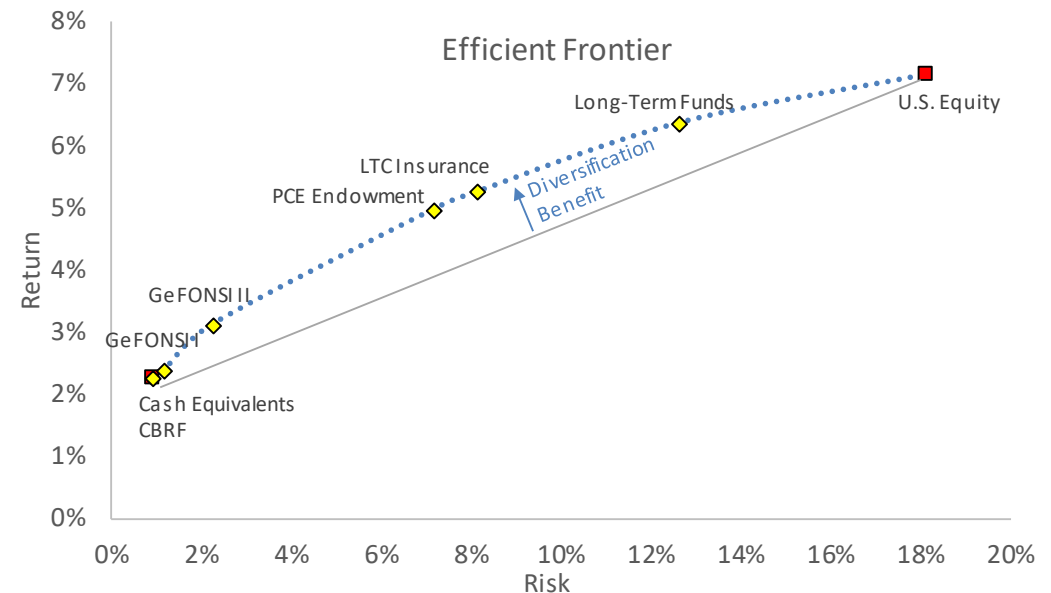
**Questions?**

**Asset Allocation Process**  
**and**  
**2021 Capital Market Assumptions**

# State Asset Allocation Process

- The Commissioner of Revenue is the fiduciary for over \$8 billion in state assets across 100+ accounts pooled into 25 funds with similar assets or mandates.
- Setting investment policies and asset allocations are key fiduciary duties for these funds.
- Staff reviews and makes recommendations on the investment policy and asset allocation of each fund at least annually.
- Each investment program is designed to balance fund investment objectives, risk tolerance, and other attributes:
  - Time horizon
  - Nominal or real return objectives
  - Cashflows, liquidity, and income needs
  - Capacity for loss or volatility over short, medium, and longer time horizons

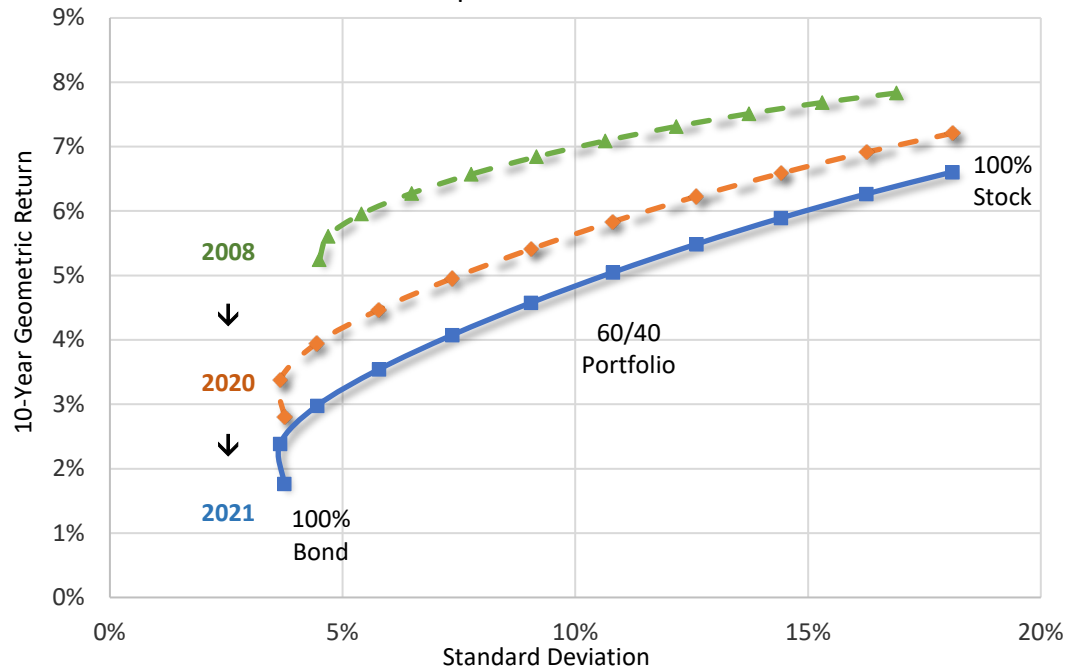
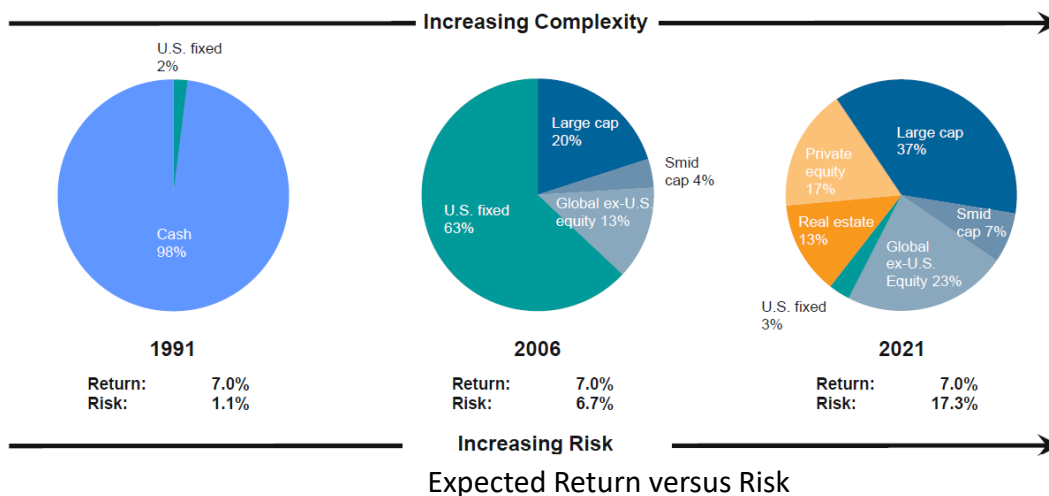
| Fund - Account                  | Assets (6/30/21)       | Risk Tolerance | Policy 1yr Risk/Loss |
|---------------------------------|------------------------|----------------|----------------------|
| Short-Term Funds                | \$168,796,191          | Low            | <1%                  |
| CBRF - AY19                     | \$1,076,066,827        | Low            | <1%                  |
| GeFONSI - AY01                  | \$2,534,204,588        | Moderate       | 1-5%                 |
| International Airport - AY04    | \$194,964,063          | Moderate       | 1-5%                 |
| GeFONSI II - AY3F               | \$950,353,951          | Moderate-High  | 5-10%                |
| PCE Endowment - AY13            | \$1,149,165,449        | High           | >10%                 |
| Retiree LTC - AY11              | \$756,058,033          | High           | >10%                 |
| Public School Trust Fund - AY08 | \$844,745,193          | High           | >10%                 |
| AK Higher Education - AY3L      | \$416,411,394          | High           | >10%                 |
| Illinois Creek Mine - AY9J      | \$1,473,432            | High           | >10%                 |
| Education Endowment - AY3G      | \$599,686              | High           | >10%                 |
| <b>Total</b>                    | <b>\$8,092,838,807</b> |                |                      |



# Asset Allocation

- Callan LLC, annually develops 10-year capital market assumptions for risk, return, and correlations using a building block approach.
- Return expectations have steadily declined over time due to lower rates, growth and inflation expectations due largely to global trade, technology, and the transition toward a service economy.
- Staff evaluates Callan's capital market assumptions, other provider's assumptions, and current market conditions to develop an asset allocation approach for each state fund.
- The goal is generally to maximize return or minimize risk consistent with investment objectives and risk tolerance using a combination of Modern Portfolio Theory and investment judgment.

## 7% Expected Returns Over Past 30+ Years



# 2021 Capital Market Assumptions

- Callan recently released their 10-year capital market assumptions (CMAs) for 2021. All earnings assumptions decreased this year due to the global pandemic. Risk and correlation assumptions were largely unchanged.
- Staff selects a subset of these asset classes for use in state funds based on risk, return, diversification, complexity, and cost.
- For FY22, staff recommends continuing with the use of Broad U.S. Equities, International Equities, Core U.S. Fixed Income, and Cash Equivalents for state funds.
- Staff is recommended adding REITs to higher risk portfolios for additional yield and inflation protection and adding an unfunded allocation to TIPS of 0-5%, both to be managed internally as they were previously.
- Staff is also recommended investing up to 20% of the fixed income allocation in a tactical bond portfolio that can opportunistically invest in high yield, TIPS, and other fixed income asset classes in a risk-managed fashion.

| Asset Classes                  | 1-Year Arithmetic Return | 10-Year Geometric Return | Return Change | Standard Deviation | Projected Yield | Correlation to Domestic Equity | Real Return  |
|--------------------------------|--------------------------|--------------------------|---------------|--------------------|-----------------|--------------------------------|--------------|
| <b>Broad U.S. Equity</b>       | <b>8.0%</b>              | <b>6.6%</b>              | <b>-0.55%</b> | <b>18.0%</b>       | <b>2.0%</b>     | <b>1.00</b>                    | <b>4.6%</b>  |
| Large Cap U.S. Equity          | 7.9%                     | 6.5%                     | -0.50%        | 17.7%              | 2.0%            | 1.00                           | 4.5%         |
| Small/Mid Cap U.S. Equity      | 8.8%                     | 6.7%                     | -0.55%        | 21.3%              | 1.8%            | 0.93                           | 4.7%         |
| <b>International Equity</b>    | <b>8.7%</b>              | <b>6.8%</b>              | <b>-0.45%</b> | <b>20.7%</b>       | <b>2.8%</b>     | <b>0.82</b>                    | <b>4.8%</b>  |
| Developed ex-U.S. Equity       | 8.3%                     | 6.5%                     | -0.50%        | 19.9%              | 3.0%            | 0.78                           | 4.5%         |
| Emerging Market Equity         | 9.8%                     | 6.9%                     | -0.35%        | 25.2%              | 2.4%            | 0.80                           | 4.9%         |
| <b>Cash Equivalents</b>        | <b>1.0%</b>              | <b>1.0%</b>              | <b>-1.25%</b> | <b>0.9%</b>        | <b>1.0%</b>     | <b>-0.06</b>                   | <b>-1.0%</b> |
| Government 1-3 year Bonds      | 1.4%                     | 1.3%                     | -1.15%        | 3.5%               | 1.6%            | -0.25                          | -0.7%        |
| <b>Core U.S. Fixed Income</b>  | <b>1.8%</b>              | <b>1.8%</b>              | <b>-1.00%</b> | <b>3.8%</b>        | <b>2.5%</b>     | <b>-0.10</b>                   | <b>-0.3%</b> |
| TIPS                           | 1.8%                     | 1.7%                     | -0.70%        | 5.1%               | 2.4%            | -0.08                          | -0.3%        |
| Emerging Market Sovereign Debt | 3.9%                     | 3.5%                     | -0.85%        | 9.5%               | 6.0%            | 0.53                           | 1.5%         |
| High Yield                     | 4.9%                     | 4.4%                     | -0.30%        | 10.8%              | 6.7%            | 0.72                           | 2.4%         |
| Core Real Estate               | 6.6%                     | 5.8%                     | -0.50%        | 14.1%              | 4.4%            | 0.71                           | 3.8%         |
| REITs                          | 8.2%                     | 6.3%                     | -0.45%        | 20.7%              | 4.7%            | 0.80                           | 4.3%         |
| Private Equity                 | 11.5%                    | 8.0%                     | -0.50%        | 27.8%              | 0.0%            | 0.80                           | 6.0%         |
| Hedge Funds                    | 4.3%                     | 4.0%                     | -1.00%        | 8.0%               | 0.0%            | 0.78                           | 2.0%         |
| <b>Inflation</b>               |                          | <b>2.0%</b>              | <b>-0.25%</b> |                    |                 |                                |              |
| <b>60/40 Portfolio</b>         |                          | <b>5.0%</b>              | <b>-0.79%</b> |                    |                 |                                |              |



# Risk Tolerance Assessment

## Risk and Time Horizon

| <b>Time horizon specification</b> | <b>Estimated time period before State will need funds</b> | <b>Risk categories</b> | <b>Probability of a loss over next one year period</b> | <b>Magnitude of Potential Loss</b> |
|-----------------------------------|---|------------------------|--|------------------------------------|
| Very short time horizon           | less than 6 months  | Low risk               | < 1%   | 0 – 0.4%                           |
| Short time horizon                | 6 months to 1 year  | Moderate risk          | 1 - 5%   | 0 – 1.5%                           |
| Intermediate time horizon         | 1 to 4 years  | Moderately high risk   | 5 - 10%  | 1.5 – 5%                           |
| Moderately long time horizon      | 4 to 8 years  | High risk              | >10%   | 5 – 20%                            |
| Long time horizon                 | over 8 years  |                        |  |                                    |

|                                |  | <b>Fund - Account</b>           | <b>Assets (6/30/21)</b> | <b>Risk Tolerance</b> | <b>Policy 1yr Risk/Loss</b> | <b>Loss Magnitude</b> |
|--------------------------------|--|---------------------------------|-------------------------|-----------------------|-----------------------------|-----------------------|
| Low risk tolerance             | Unwilling to risk material short-term volatility because of the immediate need for the invested funds. Minimizing exposure of principal to loss is very important. | Short-Term Funds                | \$168,796,191           | Low                   | <1%                         | 0 - 0.4%              |
| Moderate risk tolerance        | Willing to assume an average amount of market risk and volatility to achieve higher returns.   | CBRF - AY19                     | \$1,076,066,827         | Low                   | <1%                         | 0 - 0.4%              |
|                                |  | GeFONSI - AY01                  | \$2,534,204,588         | Moderate              | 1-5%                        | 0 - 1.5%              |
|                                |  | International Airport - AY04    | \$194,964,063           | Moderate              | 1-5%                        | 0 - 1.5%              |
|                                |  | GeFONSI II - AY3F               | \$950,353,951           | Moderate-High         | 5-10%                       | 1.5 - 5%              |
|                                |  | PCE Endowment - AY13            | \$1,149,165,449         | High                  | >10%                        | 5 - 20%               |
| Moderately high risk tolerance | Willing to assume an above average amount of risk, volatility and loss of principal to achieve higher returns.   | Retiree LTC - AY11              | \$756,058,033           | High                  | >10%                        | 5 - 20%               |
|                                |  | Public School Trust Fund - AY08 | \$844,745,193           | High                  | >10%                        | 5 - 20%               |
|                                |  | AK Higher Education - AY3L      | \$416,411,394           | High                  | >10%                        | 5 - 20%               |
| High risk tolerance            | Willing to assume a material amount of risk, volatility and loss of principal to take advantage of higher return opportunities.                                    | Illinois Creek Mine - AY9J      | \$1,473,432             | High                  | >10%                        | 5 - 20%               |
|                                |  | Education Endowment - AY3G      | \$599,686               | High                  | >10%                        | 5 - 20%               |
|                                |  | <b>Total</b>                    | <b>\$8,092,838,807</b>  |                       |                             |                       |

# Adopted FY22 SOA Asset Allocations

Low rates lead to both an earnings and a principal protection challenge.

## Asset Allocation Process:

- Evaluate the current attributes of each fund to identify the best balance of risk and return.
- Use Callan's capital market assumptions and Modern Portfolio Theory to arrive at asset allocations.
- Set short-term return expectations for fixed income and cash equivalents using current yields and adjust the cash risk to reflect the expectation of a near-zero bound for cash returns.
- Emphasize diversification in a particularly uncertain market.

| Asset Classes                              | Low:<br>CBR  | Moderate:<br>GF I | Moderate+:<br>GF II | High:<br>PCE  | Higher:<br>LTC | Highest:<br>Schools |
|--|--------------|-------------------|---------------------|---------------|----------------|---------------------|
| Broad U.S. Equity                          | 0%           | 0%                | 4%                  | 32%           | 33%            | 39%                 |
| Global ex-U.S. Equity                      | 0%           | 0%                | 2%                  | 20%           | 21%            | 25%                 |
| U.S. REITS                                 | 0%           | 0%                | 0%                  | 4%            | 4%             | 5%                  |
| U.S. Fixed Income                          | 0%           | 15%               | 26%                 | 43%           | 41%            | 30%                 |
| Cash Equivalents                           | 100%         | 85%               | 68%                 | 1%            | 1%             | 1%                  |
| <b>Total</b>                               | <b>100%</b>  | <b>100%</b>       | <b>100%</b>         | <b>100%</b>   | <b>100%</b>    | <b>100%</b>         |
| Optimization Results:                      |              |                   |                     |               |                |                     |
| <b>Expected Return</b>                     | <b>0.05%</b> | <b>0.27%</b>      | <b>0.91%</b>        | <b>5.00%</b>  | <b>5.10%</b>   | <b>5.62%</b>        |
| Risk - Standard Deviation                  | 0.05%        | 0.57%             | 1.37%               | 10.12%        | 10.50%         | 12.50%              |
| Sharpe Ratio                               | (0.00)       | 0.38              | 0.63                | 0.39          | 0.39           | 0.37                |
| Risk Statistics:                           |              |                   |                     |               |                |                     |
| <b>10% Probable Annual Loss (10% cVaR)</b> | <b>0.0%</b>  | <b>-0.7%</b>      | <b>-1.5%</b>        | <b>-12.9%</b> | <b>-13.5%</b>  | <b>-16.4%</b>       |
| 5% Probable Annual Loss (5% cVaR)          | -0.1%        | -0.9%             | -1.9%               | -16.0%        | -16.7%         | -20.3%              |
| Probability of Loss - 1 Year               | 15.9%        | 32.0%             | 25.3%               | 31.6%         | 31.8%          | 32.9%               |
| Prob. Return < -1%                         | 0.0%         | 1.3%              | 8.2%                | 28.1%         | 28.5%          | 30.1%               |
| Prob. Return < -2%                         | 0.0%         | 0.0%              | 1.7%                | 24.9%         | 25.3%          | 27.4%               |
| Prob. Return < -3%                         | 0.0%         | 0.0%              | 0.2%                | 21.9%         | 22.4%          | 24.8%               |
| Prob. Return < -5%                         | 0.0%         | 0.0%              | 0.0%                | 16.5%         | 17.1%          | 20.0%               |
| Prob. Return < -10%                        | 0.0%         | 0.0%              | 0.0%                | 7.1%          | 7.7%           | 10.7%               |
| Prob. Return < -20%                        | 0.0%         | 0.0%              | 0.0%                | 0.7%          | 0.9%           | 2.1%                |
| Probability of Loss - 10 Year              | 0.0%         | 0.0%              | 0.0%                | 5.9%          | 6.2%           | 7.8%                |
| Asset Time Horizon Estimate                |              | 1.1               | 2.1                 | 5.9           | 5.9            | 5.9                 |
| Return Statistics:                         |              |                   |                     |               |                |                     |
| Short-Term Expected Return                 | 0.05%        | 0.27%             | 0.91%               | 4.86%         | 4.97%          | 5.52%               |
| Long-Term Expected Return                  | 1.00%        | 1.12%             | 1.64%               | 5.00%         | 5.10%          | 5.62%               |
| Long-Term Real Return                      | -1.00%       | -0.88%            | -0.36%              | 3.00%         | 3.10%          | 3.62%               |
| Arithmetic Return                          | 0.05%        | 0.27%             | 0.92%               | 5.43%         | 5.57%          | 6.28%               |
| Dollars: (\$Millions)                      |              |                   |                     |               |                |                     |
| Assets                                     | 1,244.9      | 2,729.2           | 950.4               | 1,149.2       | 756.1          | 1,263.2             |
| Expected Annual Earnings                   | 0.6          | 7.3               | 8.6                 | 56.4          | 36.7           | 67.3                |
| 10% Probable Annual Loss (10% cVaR)        | (0.5)        | (20.0)            | (14.2)              | (145.7)       | (96.9)         | (196.5)             |

**Questions?**

**State of Alaska**  
**Department of Revenue**

State Investment Review 2021 Meeting Schedule

Remaining meetings for 2021

**October 27, 2021 – 9:30 AM (Videoconference)**

1. September 30, 2021 Performance
2. TBD

**Potential Discussion Topics:**

- Performance Analytics
- Endowment-Oriented Accounts, Asset Allocation, and Spending Policy
- Positioning for inflation
- What are reasonable investment objectives?