

State of Alaska  
Department of Revenue

State Investment Review Meeting

February 10, 2021 – 10:00 a.m.  
TELECONFERENCED MEETING ONLY

Call-In: 1-907-202-7104

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10:00am

- I. **Introduction**  
*Lucinda Mahoney, Commissioner of Revenue*
- II. **57 Years of Investing: Some Observations**  
*Dr. Jerrold Mitchell, Investment Advisory Council Member*
- III. **State Investments**  
*Zachary Hanna, Chief Investment Officer*
  - A. **December 31, 2020 Performance – Commissioner’s Report**
  - B. **Non-Routine Investments**
  - C. **2021 Capital Market Assumptions**
- IV. **IAC Comments**  
*Investment Advisory Council Members*
- V. **Future Agenda Items & Calendar Review**  
*Zachary Hanna, Chief Investment Officer*  
*Alysia Jones, ARMB Liaison*
- VI. **Other Matters for Discussion**
- VII. **Adjournment**

# State Investment Review Meeting



THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

## State Investments and 2021 Capital Market Assumptions

February 2021

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

**December 31, 2020**

**Investment Performance**

# December 2020 Capital Market Update

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Q1 2020	Q2 2020	Q3 2020	Q4 2020
TIPS	REITs	Broad U.S. Equity	REITs	REITs	High Yield	International Equity	Cash Equivalents	Broad U.S. Equity	Broad U.S. Equity	Core U.S. Fixed Income	Broad U.S. Equity	Broad U.S. Equity	International Equity
13.6%	19.7%	33.6%	28.0%	2.8%	17.1%	27.2%	1.9%	31.0%	20.9%	3.1%	22.0%	9.2%	17.0%
REITs	International Equity	60/40 Portfolio	Broad U.S. Equity	60/40 Portfolio	Broad U.S. Equity	Broad U.S. Equity	Core U.S. Fixed Income	REITs	60/40 Portfolio	TIPS	International Equity	International Equity	Broad U.S. Equity
8.3%	16.8%	18.2%	12.6%	0.7%	12.7%	21.1%	0.0%	28.7%	16.3%	1.7%	16.1%	6.3%	14.7%
Core U.S. Fixed Income	Broad U.S. Equity	International Equity	60/40 Portfolio	Core U.S. Fixed Income	60/40 Portfolio	60/40 Portfolio	TIPS	60/40 Portfolio	TIPS	Cash Equivalents	60/40 Portfolio	60/40 Portfolio	60/40 Portfolio
7.8%	16.4%	15.3%	10.0%	0.5%	8.8%	13.8%	(1.3%)	21.9%	11.0%	0.6%	14.2%	5.8%	9.0%
High Yield	High Yield	High Yield	Core U.S. Fixed Income	Broad U.S. Equity	REITs	REITs	High Yield	International Equity	International Equity	60/40 Portfolio	REITs	High Yield	REITs
5.0%	15.8%	7.4%	6.0%	0.5%	8.6%	8.7%	(2.1%)	21.5%	10.7%	(11.7%)	13.2%	4.6%	8.1%
60/40 Portfolio	60/40 Portfolio	REITs	TIPS	Cash Equivalents	TIPS	High Yield	60/40 Portfolio	High Yield	Core U.S. Fixed Income	High Yield	High Yield	TIPS	High Yield
4.1%	11.6%	2.9%	3.6%	0.1%	4.7%	7.5%	(2.9%)	14.3%	7.5%	(12.7%)	10.2%	3.0%	6.5%
Broad U.S. Equity	TIPS	Cash Equivalents	High Yield	TIPS	International Equity	Core U.S. Fixed Income	REITs	Core U.S. Fixed Income	High Yield	Broad U.S. Equity	TIPS	REITs	TIPS
1.0%	7.0%	0.1%	2.5%	(1.4%)	4.5%	3.5%	(4.0%)	8.7%	7.1%	(20.9%)	4.2%	1.2%	1.6%
Cash Equivalents	Core U.S. Fixed Income	Core U.S. Fixed Income	Cash Equivalents	High Yield	Core U.S. Fixed Income	TIPS	Broad U.S. Equity	TIPS	Cash Equivalents	International Equity	Core U.S. Fixed Income	Core U.S. Fixed Income	Core U.S. Fixed Income
0.1%	4.2%	(2.0%)	0.0%	(4.5%)	2.6%	3.0%	(5.2%)	8.4%	0.7%	(23.4%)	2.9%	0.6%	0.7%
International Equity	Cash Equivalents	TIPS	International Equity	International Equity	Cash Equivalents	Cash Equivalents	International Equity	Cash Equivalents	REITs	REITs	Cash Equivalents	Cash Equivalents	Cash Equivalents
(13.7%)	0.1%	(8.6%)	(3.9%)	(5.7%)	0.3%	0.9%	(14.2%)	2.3%	(5.1%)	(23.4%)	0.0%	0.0%	0.0%

**December 2020**

**Commissioner's Report**

## DOR Commissioner's Report: Market Values for Month Ending 12/31/2020

### Market Value

Plan Name	Cash Equivalents	Domestic Equity	Fixed Income	Int'l Equity	Market Value
2008 Transportation Project Government Bonds (AY2Q)	\$759,932				<b>\$759,932</b>
2010 Education Tax Exempt Bonds (AY3V)	\$2,640				<b>\$2,640</b>
2013B Tax Exempt Education (AY3Z)	\$240,589				<b>\$240,589</b>
2016A - 2012 Transportation Bond Act (AY3Y)	\$1,914,119				<b>\$1,914,119</b>
2016B - 2012 Transportation Bond Act (AY3Q)	\$90,821,457				<b>\$90,821,457</b>
Alaska Higher Education Investment (AY3L)	\$2,471,192	\$164,832,183	\$113,832,228	\$109,906,989	<b>\$391,042,592</b>
Alaska Mental Health Trust Reserve (AY2L)	\$1,544	\$20,077,838	\$26,664,464	\$13,869,965	<b>\$60,613,811</b>
Constitutional Budget Reserve Fund (AY19)	\$1,070,921,720				<b>\$1,070,921,720</b>
Education Endowment Fund (AY3G)	\$3,538	\$233,526	\$161,327	\$155,705	<b>\$554,095</b>
EVOS Habitat Investment (AY2H)	\$25,244	\$26,946,681	\$46,956,322	\$18,708,457	<b>\$92,636,704</b>
EVOS Research Investment (AY02)	\$19,338	\$35,103,765	\$51,096,252	\$23,190,926	<b>\$109,410,282</b>
GeFONSI I (AY01)	\$1,039,709,070		\$312,870,232		<b>\$1,352,579,303</b>
GeFONSI II (AY3F)	\$877,675,538	\$47,238,957	\$213,251,004	\$38,099,630	<b>\$1,176,265,130</b>
Illinois Creek Mine Reclamation (AY9J)	\$8,556	\$573,888	\$396,320	\$382,635	<b>\$1,361,399</b>
International Airports 2006 Non-AMT (AY9X)	\$2,135,330				<b>\$2,135,330</b>
International Airports 2009 Variable (AY9Y)	\$2,890,853				<b>\$2,890,853</b>
International Airports 2010-A (AY3A)	\$485,700				<b>\$485,700</b>
International Airports 2010-B (AY3B)	\$353,499				<b>\$353,499</b>
International Airports Repair & Replacement Fund (AY05)	\$500,620				<b>\$500,620</b>
International Airports Revenue Fund (AY04)	\$113,108,943		\$34,040,490		<b>\$147,149,433</b>
International Airports Series 2002 Reserve Account (AY2E)	\$16,389,711				<b>\$16,389,711</b>
International Airports Series 2003 Reserve (AY2U)	\$10,504,611				<b>\$10,504,611</b>
Investment Loss Trust Fund (AY28)	\$3,746,734				<b>\$3,746,734</b>
PCE Endowment Fund (AY13)	\$7,219,294	\$275,142,847	\$686,577,990	\$173,335,616	<b>\$1,142,275,747</b>
Permanent Fund Dividend Holding Account (AY2G)	\$53,365,231				<b>\$53,365,231</b>
Public School - Income (AY09)	\$176				<b>\$176</b>
Public School Trust Fund (AY08)	\$4,915,895	\$327,889,987	\$226,439,174	\$218,630,884	<b>\$777,875,940</b>
RHIF LTC Insurance (AY11)	\$4,504,269	\$193,121,388	\$385,603,699	\$129,414,243	<b>\$712,643,599</b>
RHIF Major Medical (AY03)	\$18,996,374				<b>\$18,996,374</b>

## DOR Commissioner's Report: Market Values for Month Ending 12/31/2020

### 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)	-0.37% ▲	0.15% ●	0.11% ●	0.11% ●
Alaska Mental Health Trust Reserve (AY2L)	0.00% ●	0.12% ●	-0.01% ●	-0.12% ●
Constitutional Budget Reserve Fund (AY19)	0.00% ●			
Education Endowment Fund (AY3G)	-0.36% ▲	0.15% ●	0.12% ●	0.10% ●
EVOS Habitat Investment (AY2H)	0.03% ●	0.09% ●	-0.31% ▲	0.20% ●
EVOS Research Investment (AY02)	0.02% ●	0.08% ●	-0.30% ▲	0.20% ●
GeFONSI I (AY01)	-0.13% ●		0.13% ●	
GeFONSI II (AY3F)	-0.38% ▲	0.02% ●	0.13% ●	0.24% ●
Illinois Creek Mine Reclamation (AY9J)	-0.37% ▲	0.15% ●	0.11% ●	0.11% ●
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)	-0.13% ●		0.13% ●	
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)	-0.37% ▲	0.09% ●	0.11% ●	0.17% ●
Permanent Fund Dividend Holding Account (AY2G)	0.00% ●			
Public School - Income (AY09)	0.00% ●			
Public School Trust Fund (AY08)	-0.37% ▲	0.15% ●	0.11% ●	0.11% ●
RHIF LTC Insurance (AY11)	-0.37% ▲	0.10% ●	0.11% ●	0.16% ●
RHIF Major Medical (AY03)	0.00% ●			

## DOR Commissioner's Report: Market Values for Month Ending 12/31/2020

### 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)	0.63%	42.15%	29.11%	28.11%
Alaska Mental Health Trust Reserve (AY2L)	0.00%	33.12%	43.99%	22.88%
Constitutional Budget Reserve Fund (AY19)	100.00%			
Education Endowment Fund (AY3G)	0.64%	42.15%	29.12%	28.10%
EVOS Habitat Investment (AY2H)	0.03%	29.09%	50.69%	20.20%
EVOS Research Investment (AY02)	0.02%	32.08%	46.70%	21.20%
GeFONSI I (AY01)	76.87%		23.13%	
GeFONSI II (AY3F)	74.62%	4.02%	18.13%	3.24%
Illinois Creek Mine Reclamation (AY9J)	0.63%	42.15%	29.11%	28.11%
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)	76.87%		23.13%	
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)	0.63%	24.09%	60.11%	15.17%
Permanent Fund Dividend Holding Account (AY2G)	100.00%			
Public School - Income (AY09)	100.00%			
Public School Trust Fund (AY08)	0.63%	42.15%	29.11%	28.11%
RHIF LTC Insurance (AY11)	0.63%	27.10%	54.11%	18.16%
RHIF Major Medical (AY03)	100.00%			



## DOR Commissioner's Report: Market Values for Month Ending 12/31/2020

### 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%	29.00%	51.00%	20.00%
EVOS Research Investment (AY02)	0.00%	32.00%	47.00%	21.00%
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 12/31/2020

<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	0.01% ●	0.12% ●	0.14% ●	0.70% ●	0.26% ●	0.24% ●	0.24% ●	0.18% ●
Domestic Equity	-0.02% ▲	-0.04% ▲	-0.05% ◆	-0.23% ◆	-0.08% ◆			
International Equity	0.01% ●	0.11% ●	0.10% ●	-0.09% ◆	0.19% ●			
Short-term Fixed Income Pool	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
<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	0.15%	0.78%	1.44%	8.20%	5.60%	4.68%	4.02%	4.02%
Domestic Equity	4.48%	14.64%	25.19%	20.66%	14.41%			
International Equity	5.41%	17.13%	24.43%	10.56%	5.07%			
Short-term Fixed Income Pool	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
<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	0.14%	0.67%	1.29%	7.51%	5.34%	4.44%	3.78%	3.84%
Domestic Equity	4.50%	14.68%	25.24%	20.89%	14.49%			
International Equity	5.41%	17.01%	24.33%	10.65%	4.88%			
Short-term Fixed Income Pool	0.01%	0.03%	0.07%	0.67%	1.61%	1.20%	1.01%	0.64%

## DOR Commissioner's Report: Net Plan Performance for Month Ending 12/31/2020

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)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
2010 Education Tax Exempt Bonds (AY3V)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
2013B Tax Exempt Education (AY3Z)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	
2016A - 2012 Transportation Bond Act (AY3Y)	0.01% ●	0.02% ●	0.05% ●	0.07% ●	0.14% ●	0.23% ●	0.24% ●	
2016B - 2012 Transportation Bond Act (AY3Q)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●			
Alaska Higher Education Investment (AY3L)	0.00% ●	0.00% ▲	0.01% ●	0.02% ●	0.01% ●	0.01% ●	0.10% ●	
Alaska Mental Health Trust Reserve (AY2L)	0.01% ●	-0.03% ▲	0.11% ●	0.60% ●	0.19% ●	0.17% ●	0.27% ●	0.50% ●
Constitutional Budget Reserve Fund (AY19)	0.01% ●	0.02% ●	0.05% ●	0.25% ●	0.14% ●	0.24% ●	0.23% ●	0.20% ●
Education Endowment Fund (AY3G)	0.00% ▲	-0.01% ▲	0.01% ●	-0.01% ▲				
EVOS Habitat Investment (AY2H)	0.01% ●	0.01% ●	0.15% ●	0.39% ●	0.06% ●	0.10% ●	0.25% ●	0.51% ●
EVOS Research Investment (AY02)	0.01% ●	0.03% ●	0.18% ●	0.38% ●	0.06% ●	0.05% ●	0.21% ●	0.49% ●
GeFONSI I (AY01)	0.01% ●	0.04% ●	0.07% ●	0.14% ●	0.15% ●	0.21% ●	0.21% ●	0.22% ●
GeFONSI II (AY3F)	0.01% ●	-0.02% ▲	0.02% ●	0.11% ●				
Illinois Creek Mine Reclamation (AY9J)	0.00% ▲	-0.01% ▲	0.01% ●	0.01% ●	-0.03% ▲	-0.03% ▲	0.04% ●	0.13% ●
International Airports 2006 Non-AMT (AY9X)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
International Airports 2009 Variable (AY9Y)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
International Airports 2010-A (AY3A)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
International Airports 2010-B (AY3B)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
International Airports Repair & Replacement Fund (AY05)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
International Airports Revenue Fund (AY04)	0.01% ●	0.04% ●	0.07% ●	0.20% ●	0.14% ●	0.25% ●	0.25% ●	0.24% ●
International Airports Series 2002 Reserve Account (AY2E)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
International Airports Series 2003 Reserve (AY2U)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
Investment Loss Trust Fund (AY28)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●
PCE Endowment Fund (AY13)	0.00% ●	0.02% ●	0.06% ●	-0.03% ▲	-0.02% ▲	0.01% ●	0.14% ●	0.27% ●
Permanent Fund Dividend Holding Account (AY2G)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.21% ●	0.37% ●	0.35% ●	0.30% ●
Public School - Income (AY09)	0.01% ●	0.02% ●	0.05% ●	0.04% ●	0.13% ●	0.22% ●	0.24% ●	0.23% ●
Public School Trust Fund (AY08)	0.00% ▲	-0.01% ▲	0.01% ●	0.02% ●	-0.02% ▲	0.01% ●	0.08% ●	0.03% ●
RHIF LTC Insurance (AY11)	0.00% ●	0.01% ●	0.04% ●	0.29% ●	0.07% ●	0.12% ●	0.19% ●	0.08% ●
RHIF Major Medical (AY03)	0.01% ●	0.02% ●	0.05% ●	0.13% ●	0.16% ●	0.24% ●	0.25% ●	0.24% ●

## DOR Commissioner's Report: Net Plan Performance for Month Ending 12/31/2020

Plan 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)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
2010 Education Tax Exempt Bonds (AY3V)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
2013B Tax Exempt Education (AY3Z)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	
2016A - 2012 Transportation Bond Act (AY3Y)	0.02%	0.05%	0.12%	0.73%	1.74%	1.43%	1.25%	
2016B - 2012 Transportation Bond Act (AY3Q)	0.02%	0.05%	0.12%	0.80%	1.76%			
Alaska Higher Education Investment (AY3L)	3.45%	11.07%	17.54%	15.00%	9.73%	10.29%	8.67%	
Alaska Mental Health Trust Reserve (AY2L)	2.80%	8.96%	14.30%	14.02%	9.10%	9.70%	8.23%	8.63%
Constitutional Budget Reserve Fund (AY19)	0.02%	0.05%	0.12%	1.51%	2.57%	2.50%	2.15%	1.99%
Education Endowment Fund (AY3G)	3.44%	11.06%	17.54%	14.97%				
EVOS Habitat Investment (AY2H)	2.47%	7.94%	12.68%	12.94%	8.81%	10.05%	8.54%	9.31%
EVOS Research Investment (AY02)	2.65%	8.55%	13.66%	13.49%	8.98%	10.10%	8.59%	9.35%
GeFONSI I (AY01)	0.05%	0.22%	0.42%	1.49%	2.08%	1.60%	1.40%	1.19%
GeFONSI II (AY3F)	0.38%	1.20%	1.96%	3.51%				
Illinois Creek Mine Reclamation (AY9J)	3.44%	11.06%	17.54%	14.99%	9.69%	10.25%	8.29%	6.02%
International Airports 2006 Non-AMT (AY9X)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
International Airports 2009 Variable (AY9Y)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
International Airports 2010-A (AY3A)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
International Airports 2010-B (AY3B)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
International Airports Repair & Replacement Fund (AY05)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
International Airports Revenue Fund (AY04)	0.05%	0.22%	0.43%	2.05%	2.77%	2.63%	2.27%	1.85%
International Airports Series 2002 Reserve Account (AY2E)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
International Airports Series 2003 Reserve (AY2U)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
Investment Loss Trust Fund (AY28)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%
PCE Endowment Fund (AY13)	1.98%	6.44%	10.24%	7.76%	7.36%	8.87%	7.53%	8.76%
Permanent Fund Dividend Holding Account (AY2G)	0.02%	0.05%	0.12%	0.80%	1.82%	1.57%	1.36%	0.93%
Public School - Income (AY09)	0.02%	0.05%	0.12%	0.71%	1.73%	1.42%	1.24%	0.87%
Public School Trust Fund (AY08)	3.44%	11.06%	17.54%	15.00%	9.69%	9.75%	8.20%	8.12%
RHIF LTC Insurance (AY11)	2.26%	7.34%	11.62%	14.70%	8.68%	8.39%	7.14%	6.99%
RHIF Major Medical (AY03)	0.02%	0.05%	0.12%	0.80%	1.76%	1.44%	1.26%	0.88%

## DOR Commissioner's Report: Net Plan Performance for Month Ending 12/31/2020

<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)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
2010 Education Tax Exempt Bonds (AY3V)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
2013B Tax Exempt Education (AY3Z)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	
2016A - 2012 Transportation Bond Act (AY3Y)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	
2016B - 2012 Transportation Bond Act (AY3Q)	0.01%	0.03%	0.07%	0.67%	1.60%			
Alaska Higher Education Investment (AY3L)	3.44%	11.07%	17.53%	14.98%	9.71%	10.27%	8.57%	
Alaska Mental Health Trust Reserve (AY2L)	2.79%	8.99%	14.19%	13.42%	8.91%	9.53%	7.96%	8.13%
Constitutional Budget Reserve Fund (AY19)	0.01%	0.03%	0.07%	1.26%	2.43%	2.26%	1.92%	1.79%
Education Endowment Fund (AY3G)	3.44%	11.07%	17.53%	14.98%				
EVOS Habitat Investment (AY2H)	2.46%	7.94%	12.53%	12.55%	8.75%	9.94%	8.30%	8.81%
EVOS Research Investment (AY02)	2.64%	8.52%	13.49%	13.11%	8.93%	10.05%	8.38%	8.86%
GeFONSI I (AY01)	0.04%	0.18%	0.35%	1.36%	1.93%	1.39%	1.19%	0.98%
GeFONSI II (AY3F)	0.38%	1.23%	1.94%	3.40%				
Illinois Creek Mine Reclamation (AY9J)	3.44%	11.07%	17.53%	14.98%	9.71%	10.27%	8.25%	5.89%
International Airports 2006 Non-AMT (AY9X)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
International Airports 2009 Variable (AY9Y)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
International Airports 2010-A (AY3A)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
International Airports 2010-B (AY3B)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
International Airports Repair & Replacement Fund (AY05)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
International Airports Revenue Fund (AY04)	0.04%	0.18%	0.35%	1.85%	2.63%	2.38%	2.02%	1.61%
International Airports Series 2002 Reserve Account (AY2E)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
International Airports Series 2003 Reserve (AY2U)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
Investment Loss Trust Fund (AY28)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
PCE Endowment Fund (AY13)	1.97%	6.42%	10.19%	7.79%	7.38%	8.86%	7.38%	8.50%
Permanent Fund Dividend Holding Account (AY2G)	0.01%	0.03%	0.07%	0.67%	1.61%	1.20%	1.01%	0.64%
Public School - Income (AY09)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%
Public School Trust Fund (AY08)	3.44%	11.07%	17.53%	14.98%	9.71%	9.75%	8.12%	8.09%
RHIF LTC Insurance (AY11)	2.26%	7.32%	11.58%	14.41%	8.60%	8.27%	6.95%	6.91%
RHIF Major Medical (AY03)	0.01%	0.03%	0.07%	0.67%	1.60%	1.20%	1.01%	0.63%

## DOR Commissioner's Report: External Management Fees as of Month Ending 12/31/2020

### 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)	0.0127%
Alaska Mental Health Trust Reserve (AY2L)	0.0102%
Constitutional Budget Reserve Fund (AY19)	0.0004%
Education Endowment Fund (AY3G)	0.0126%
EVOS Habitat Investment (AY2H)	0.0089%
EVOS Research Investment (AY02)	0.0095%
GeFONSI I (AY01)	0.0000%
GeFONSI II (AY3F)	0.0012%
Illinois Creek Mine Reclamation (AY9J)	0.0127%
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)	0.0005%
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)	0.0100%
Permanent Fund Dividend Holding Account (AY2G)	0.0000%
Public School - Income (AY09)	0.0000%
Public School Trust Fund (AY08)	0.0126%
RHIF LTC Insurance (AY11)	0.0064%
RHIF Major Medical (AY03)	0.0000%

**Commissioner's Report: Top GeFONSI Accounts for Month Ending: 12/31/2020**

<b>Program</b>	<b>Account Name</b>	<b>End Balance</b>
GeFONSI1	General Fund	\$727,843,645.16
	Alaska Clean Water Fund	\$115,988,123.51
	Alaska Drinking Water Fund	\$71,561,544.47
	Oil & Hazardous Substance Release Response Account	\$43,413,610.77
	Public Advocacy Trust	\$37,739,412.71
GeFONSI2	Public Education Fund	\$183,138,357.38
	Highway Equipment Working Capital Fund For Operating Appropriations	\$88,722,480.37
	School Construction Fund	\$78,374,789.10
	Community Revenue Sharing Fund	\$75,015,605.65
	Regional Ed Attendance Area School Fund	\$70,592,321.11
<b>Sum of 5 Largest GeFONSI I and II Funds</b>		<b>\$1,492,389,890.23</b>

**Questions?**



# Non-Routine Investments

- The Department of Revenue is presented with periodic 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**

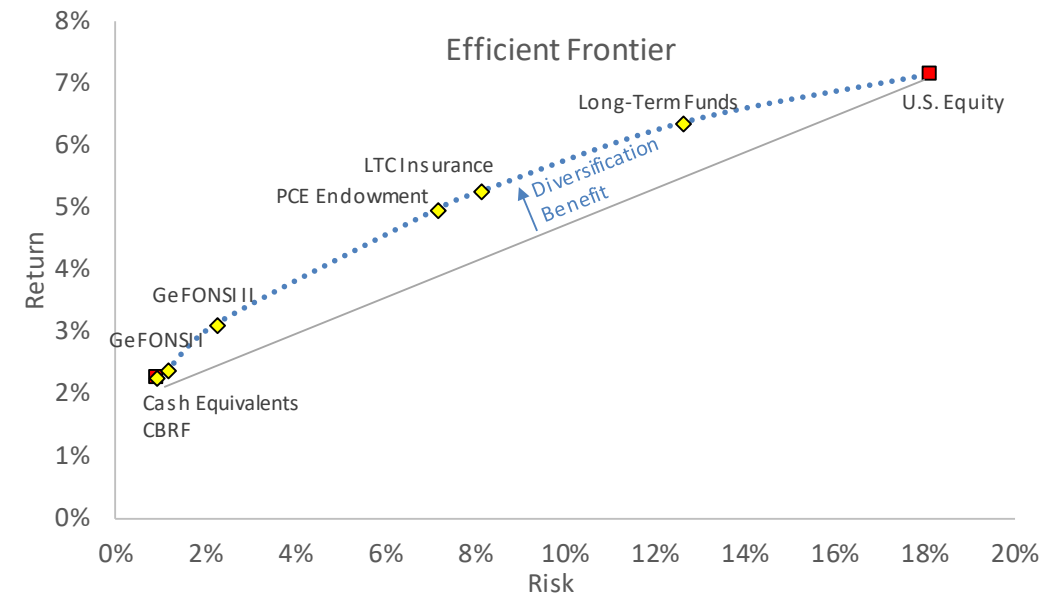
**and**

**2021 Capital Market Assumptions**

# State Asset Allocation Process

- The Commissioner of Revenue is the fiduciary for \$7 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

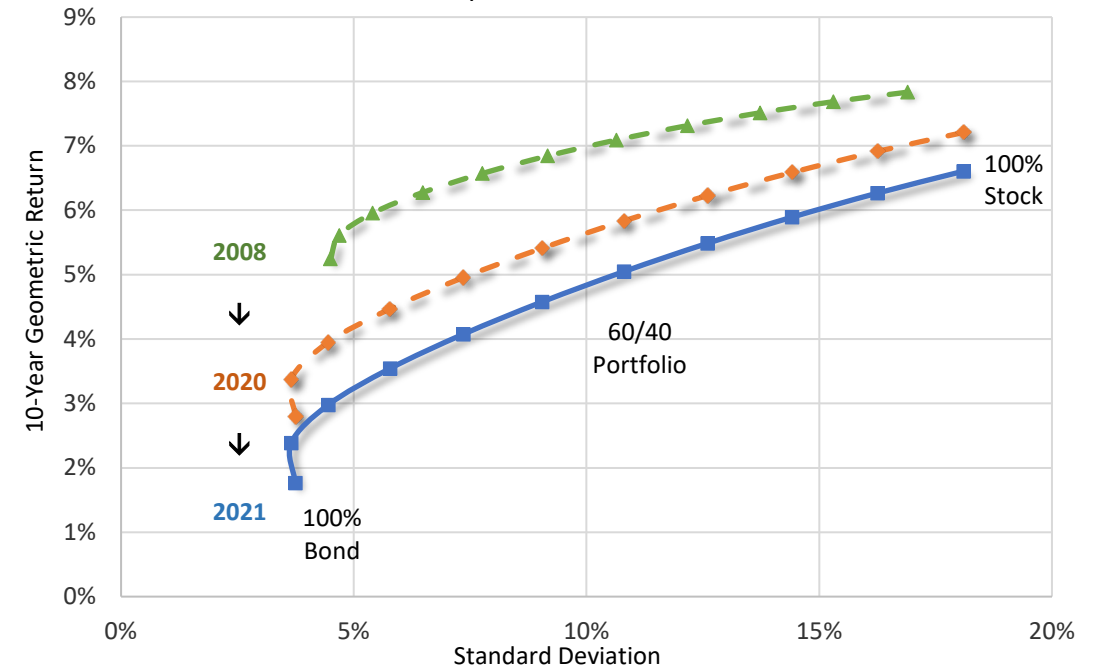
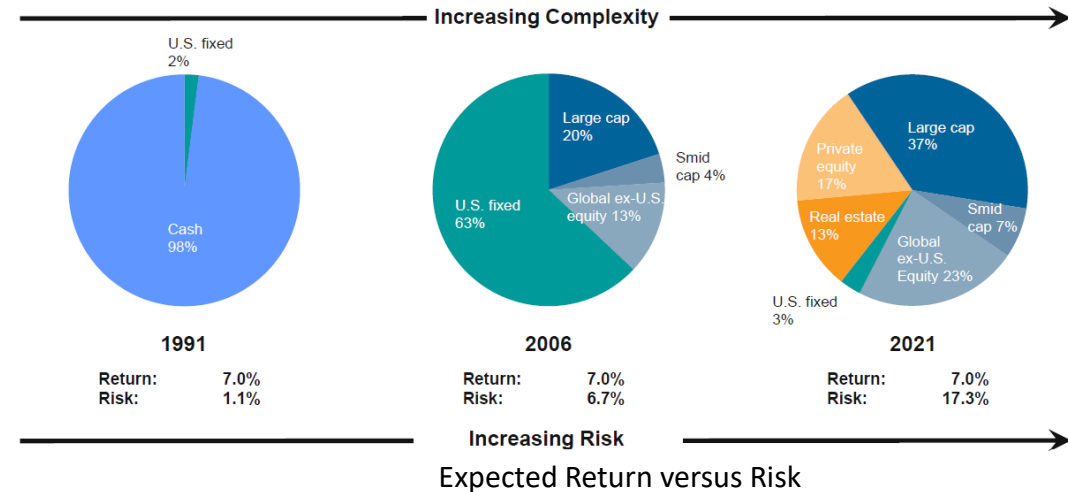
Fund - Account	Assets (12/31/20)	Risk Tolerance	Policy 1yr Risk/Loss
Short-Term Funds	\$203,107,400	Low	<1%
CBRF - AY19	\$1,070,921,720	Low	<1%
GeFONSI - AY01	\$1,352,579,303	Moderate	1-5%
International Airport - AY04	\$147,149,433	Moderate	1-5%
GeFONSI II - AY3F	\$1,176,265,130	Moderate-High	5-10%
PCE Endowment - AY13	\$1,142,275,747	High	>10%
Retiree LTC - AY11	\$712,643,599	High	>10%
Public School Trust Fund - AY08	\$777,875,940	High	>10%
AK Higher Education - AY3L	\$391,042,592	High	>10%
Illinois Creek Mine - AY9J	\$1,361,399	High	>10%
Education Endowment - AY3G	\$554,095	High	>10%



# 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 growth and inflation expectations caused by global trade, technology, and the transition toward a service economy.
- Staff evaluates Callan’s capital market 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 FY21, staff recommended using Broad U.S. Equities, International Equities, Core U.S. Fixed Income, and Cash Equivalents for State funds.
- Each year, staff considers adding additional asset classes. REITs, TIPS, and high yield bonds are all asset classes that the state has used in the past.

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

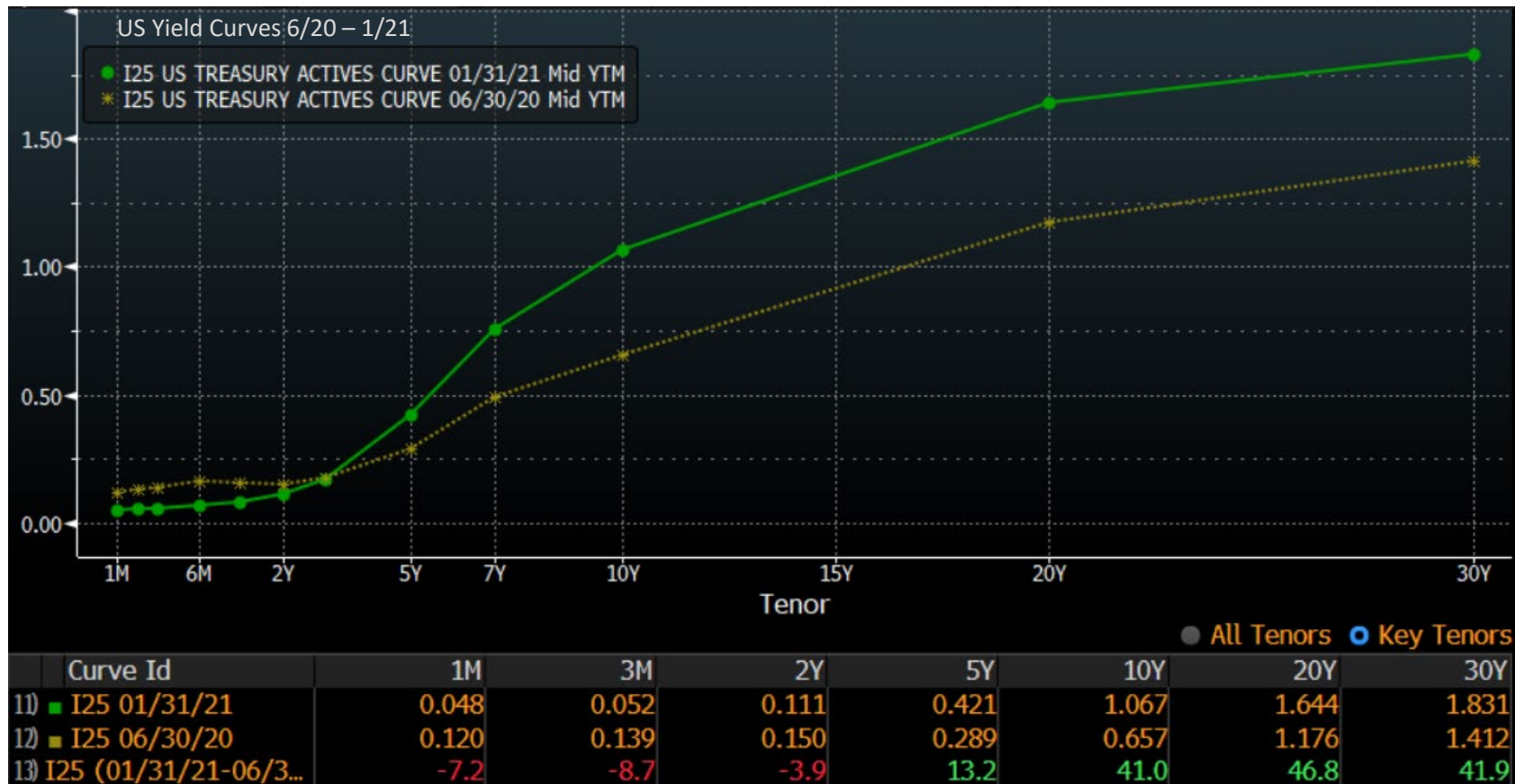
## Risk and Time Horizon

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

		Fund - Account	Assets (12/31/20)	Risk Tolerance	Policy 1yr Risk/Loss
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	\$203,107,400	Low	<1%
		CBRF - AY19	\$1,070,921,720	Low	<1%
		GeFONSI - AY01	\$1,352,579,303	Moderate	1-5%
		International Airport - AY04	\$147,149,433	Moderate	1-5%
Moderate risk tolerance	Willing to assume an average amount of market risk and volatility to achieve higher returns.	GeFONSI II - AY3F	\$1,176,265,130	Moderate-High	5-10%
		PCE Endowment - AY13	\$1,142,275,747	High	>10%
		Retiree LTC - AY11	\$712,643,599	High	>10%
		Public School Trust Fund - AY08	\$777,875,940	High	>10%
Moderately high risk tolerance	Willing to assume an above average amount of risk, volatility and loss of principal to achieve higher returns.	AK Higher Education - AY3L	\$391,042,592	High	>10%
		Illinois Creek Mine - AY9J	\$1,361,399	High	>10%
		Education Endowment - AY3G	\$554,095	High	>10%
High risk tolerance	Willing to assume a material amount of risk, volatility and loss of principal to take advantage of higher return opportunities.				

# Current Interest Rates

- Rates remain low.
- Shorter rates have decreased, but longer rates have increased along with the market recovery.
- Staff will likely use 5/31/2021 rates for final asset allocation recommendations.





# Existing SOA Asset Allocations with New CMA's

- Low rates lead to both an earnings and a principal protection challenge if returns are normally distributed.

## 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 using current yields (YTW) for cash and fixed income.
- Emphasize diversification in a particularly uncertain market.

Asset Classes	Lowest Risk CBRF	Moderate GeFONSI I	GeFONSI II	All SOA	PCE Endowment	LTC Insurance	High Risk Tolerance
Broad U.S. Equity		0%	4%	11%	24%	27%	42%
Global ex-U.S. Equity		0%	3%	7%	16%	18%	28%
Core U.S. Fixed		23%	18%	26%	60%	55%	29%
Cash Equivalents	100%	77%	75%	56%	0%	0%	1%
Total	100%	100%	100%	100%	100%	100%	100%
Arithmetic Return	1.00%	1.18%	1.66%	2.52%	4.39%	4.72%	6.33%
<b>Long Term Expected Return</b>	<b>1.00%</b>	<b>1.18%</b>	<b>1.65%</b>	<b>2.47%</b>	<b>4.17%</b>	<b>4.43%</b>	<b>5.65%</b>
<i>FY2021 difference</i>	-1.25%	-1.20%	-1.13%	-1.10%	-0.83%	-0.82%	-0.72%
Risk (Std. Dev.)	0.90%	1.18%	1.52%	3.32%	7.35%	8.20%	12.64%
Sharpe Ratio	0.00	0.15	0.42	0.44	0.43	0.42	0.37
<b>Short-Term Expected Return (YTW)</b>	<b>0.09%</b>	<b>0.34%</b>	<b>0.86%</b>	<b>1.85%</b>	<b>4.02%</b>	<b>4.38%</b>	<b>6.14%</b>
<i>FY2021 difference</i>	-0.06%	-0.10%	-0.08%	-0.17%	-0.25%	-0.28%	-0.40%
Long Term Real Return (CMA)	-1.00%	-0.82%	-0.35%	0.47%	2.17%	2.43%	3.65%
Income/Yield (CMA)	1.00%	1.35%	1.36%	1.62%	2.42%	2.41%	2.34%
Capital Gain (CMA)	0.00%	-0.17%	0.28%	0.85%	1.75%	2.03%	3.31%
Probability of Loss - 10 Year (CMA)	0.0%	0.1%	0.0%	0.9%	3.7%	4.4%	7.9%
Probability of Loss - 1 Year (CMA)	13.4%	16.0%	14.0%	22.8%	28.6%	29.4%	32.8%
<i>FY2021 difference</i>	12.8%	14.0%	11.1%	8.6%	4.2%	3.6%	2.1%
Probability of Loss - 1 Year (YTW)	46.2%	38.9%	28.8%	29.4%	30.3%	30.9%	33.3%
<i>FY2021 difference</i>	2.8%	3.5%	2.6%	2.2%	2.0%	1.8%	1.4%
95% Conditional Value at Risk (cVaR)	-1.8%	-2.1%	-2.3%	-5.0%	-11.1%	-12.5%	-19.9%

# SOA Asset Allocation Next Steps

- Reevaluate each funds investment objectives, risk tolerance, and other attributes.
- Consider additional asset classes.
- Re-assess risk-of-loss and risk categories in a low-rate environment.
- May – Discuss draft investment policies and asset allocations at the State Investment Review Meeting.
- June – Commissioner considers investment policies and asset allocations for adoption.

<b>Fund - Account</b>	<b>Assets (12/31/20)</b>	<b>Risk Tolerance</b>	<b>Policy 1yr Risk/Loss</b>
Short-Term Funds	\$203,107,400	Low	<1%
CBRF - AY19	\$1,070,921,720	Low	<1%
GeFONSI - AY01	\$1,352,579,303	Moderate	1-5%
International Airport - AY04	\$147,149,433	Moderate	1-5%
GeFONSI II - AY3F	\$1,176,265,130	Moderate-High	5-10%
PCE Endowment - AY13	\$1,142,275,747	High	>10%
Retiree LTC - AY11	\$712,643,599	High	>10%
Public School Trust Fund - AY08	\$777,875,940	High	>10%
AK Higher Education - AY3L	\$391,042,592	High	>10%
Illinois Creek Mine - AY9J	\$1,361,399	High	>10%
Education Endowment - AY3G	\$554,095	High	>10%

**Questions?**

**State of Alaska  
Department of Revenue**

**State Investment Review 2021 Meeting Schedule**

Remaining meetings for 2021

**May 12, 2021 (Teleconference)**

1. March 31, 2021 Performance
2. FY2022 State Asset Allocation Discussion
3. TBD

**August 25, 2021 (Teleconference)**

1. June 30, 2021 Performance
2. TBD

**October 27, 2021 (Teleconference)**

1. September 30, 2021 Performance
2. TBD

All meetings are scheduled for 10:00 a.m. to Noon.