State of Alaska Department of Revenue

STATE INVESTMENT REVIEW MEETING

November 17, 2021 – 9:30 a.m.

Microsoft Teams Meeting Info:

Click here to join the meeting Call-In: 1-907-202-7104 Code: 642 163 655#

I. Introduction

Lucinda Mahoney, Commissioner of Revenue Zachary Hanna, Chief Investment Officer

II. Performance Analytics

Scott Jones, Head of Investment Operations, Performance & Analytics Hunter Romberg, Investment Data Analyst

III. State Investments

Steve Sikes, State Investment Officer

- A. September 30, 2021 Performance Commissioner's Report
- **B.** Non-Routine Investments

IV. IAC Comments

Investment Advisory Council Members

V. Future Agenda Items & 2022 Calendar Review

Zachary Hanna, Chief Investment Officer Alysia Jones, ARMB Liaison

VI. Other Matters for Discussion

VII. Adjournment

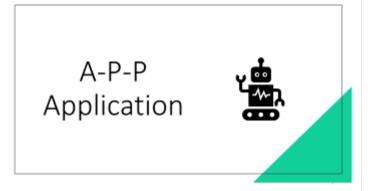
Treasury Middle Office Performance

Scott Jones, CPA | *Middle Office Manager*

Hunter Romberg | *Investment Data Analyst*

Summary





Monthly Review



Performance Methodology



Daily Performance

- Daily portfolio returns are calculated and stored each day
 - Time-weighted rates of return
 - Cashflows are adjustments to beginning balances
 - State Street Bank (SSB) valuation
 - Pricing is done daily based on an approved pricing matrix between State of Alaska Treasury Division and ARMB and SSB
 - Manual trades received by 14:00 EST will be included in the current day's valuation
 - Electronic trades received by 16:59 EST will be included in the current day's valuation
- Daily benchmark returns are calculated and stored during our month end procedures

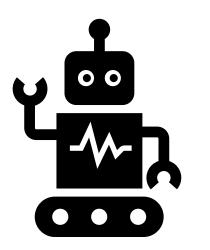
Monthly Performance

- Monthly portfolio returns and benchmark returns are calculated and stored during month end procedures
 - Geometrically linked daily time-weighted rates of return
- Months with partial performance are excluded from reporting
 - Begin and end of life is excluded
 - Ex. New investment mandate for Alaska Commission on Postsecondary Education (ACPE) plan that was funded on July 27th was excluded from July performance reporting
 - Systematically managed with plan and pool performance exclusions

Benchmark Performance

- Index data is gathered and uploaded by the 3rd business day following month end
- Plan blended benchmark returns are calculated using approved plan/asset class target allocations and are rebalanced accordingly
- Portfolio objects that are assigned benchmark returns
 - Managers
 - Pools
 - Asset Classes
 - Plans

A-P-P Application



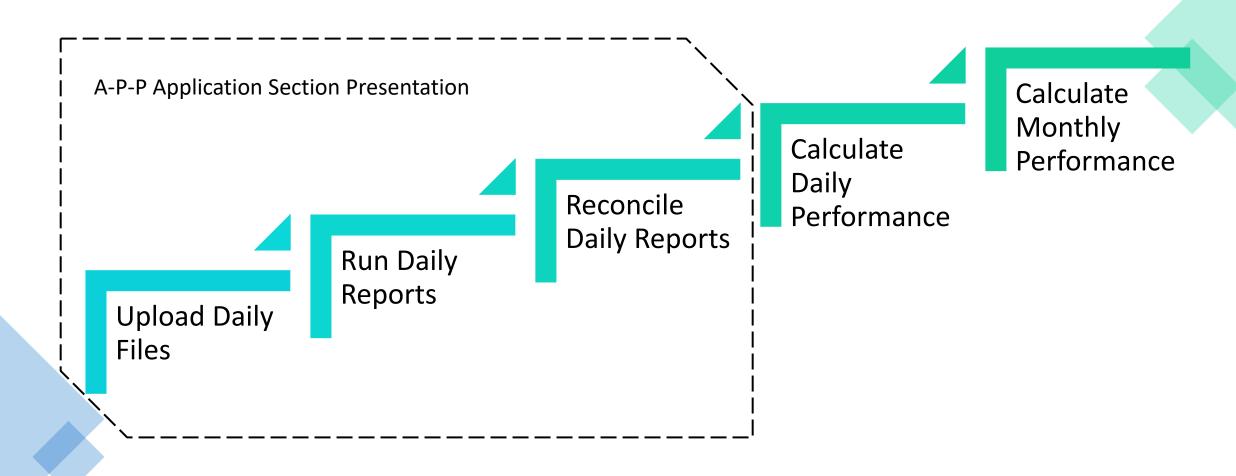
A-P-P Overview

- A-P-P Advanced Performance Processing
- Ever-expanding web-based Treasury application that includes multiple areas
- Hosted on an internally facing web server that is only available to SoA employees (on-prem or VPN)
 - Separate servers for (1) production and (2) testing/development (separate environments)
 - Restricted server access
 - Behind F5 firewall
- Utilizes integrated windows authentication (Active Directory) to manage user access groups
 - Maintained by the Middle Office
 - Reviewed and approved by the Middle Office Manager and Comptroller
- Database servers exclusively used by Treasury
 - Separate servers for (1) production, (2) testing, and (3) development
 - User permissions are periodically reviewed
 - Backups are taken and archived based on OIT's normal policy
- Automatic logging to audit database
 - Logs username, timestamp, task, and details
- Continuity of Operations (COOP) maintenance and testing
 - · Periodically conduct restorative testing

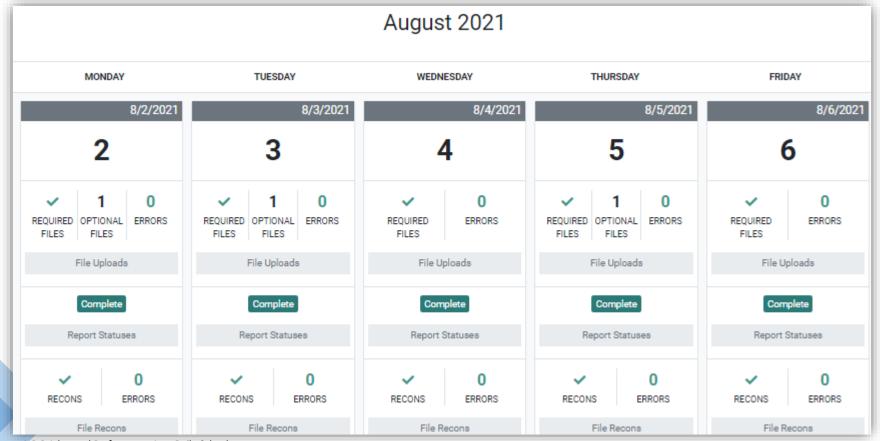
A-P-P Advanced Performance Area Information Security Management System (ISMS)



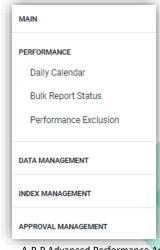
A-P-P Advanced Performance Area High Level Workflow



A-P-P Advanced Performance Area Performance



A-P-P Advanced Performance Area Daily Calendar



A-P-P Advanced Performance Area Performance Menu

A-P-P Advanced Performance Area Daily Files

- Allowed data sources
 - Uploaded CSV files
 - Treasury Data files
 - · Treasury's centralized data repository
 - Automated scripts pointing to FTP servers and shared folders
- File out of sync issues
 - A-P-P is missing Treasury Data files
 - A-P-P files do not match Treasury Data files
- Maintains history of all files
 - Downloadable files
 - Ability to reactivate old files
- Distinguishes between system retrieved files and user uploaded files
 - User uploaded files are files that were not retrieved from a standard FTP server
 - Ex. Utilized when a source reissues reporting via email
- Accepts and flags Working Trial Balance amendment files
 - SSB closes the books daily and reserves reissued reports for material amounts and/or dates
 - Ex. Dividends received after closing time made it into one set of reports and not in another
 - Creates a report warning that requires a user note to resolve

A-P-P Advanced Performance Area Daily Reports

- Requires specific file data formatting
 - Provides extra controls that protect against users opening files and causing excel to modify data types
 - Ex. SSB Daily Security Holdings CUSIP Numbers must start with an apostrophe, be between 3-9 alphanumeric characters, and cannot contain spaces
- Report validation
 - Ex. SSB Working Trial Balance
- Report dependency issues (scope limited for presentation)
 - Current day daily reports (SSB and NRS files) must be run before current day Daily Performance report
 - Prior day Daily Performance report must be run before current day Daily Performance report
 - Subordinate Daily Performance reports must be run before current month Monthly Performance report
 - All report warnings must have a user note
- Report outdated issues
 - Any daily report using an inactive file

A-P-P Advanced Performance Area Daily Reconciliations

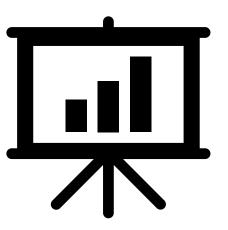
- Examines different aspects of the daily reports to ensure the data integrity
 - SSB custody bank
 - NRS TPA (Northeast Retirement Services Trust Product Administration) plan accounting
 - ALDER (IRIS) statewide accounting system reporting service (beyond scope of presentation)
- Tolerances are set for each individual reconciliation
- Reconciliation errors are investigated and resolved by Asset Accounting

A-P-P Advanced Performance Area Reconciliations Matrix*

	Source	Report Name				
	S	SB		NI	RS	
Recon	Security Holdings	Working Trial Balance (WTB)	Pool Balances	Participant Balances	Plan Totals	Plan Transactions
SSB Securities	X	X				
SSB vs NRS Transaction Mapping		X				X
SSB vs NRS Pool NAV		X	х	X		
NRS Calculated Plan NAV Plus Accruals vs Plan Market Value				X	x	

^{*}Not inclusive of all A-P-P Advanced Performance Area reconciliations, focused on a sample of reconciliations relevant to the performance calculation process.

Monthly Review



Commissioner's Report Review

- SQL Server Reporting Services
- Formal review process
 - Focused on 1-month, 3-month, and FYTD performance
 - Compare pool performance with the portfolio workbooks
 - SSGA return reconciliation
 - Relative performance greater or equal to +/-5bps is always investigated
 - Plan Asset Class Attribution (internal only)
- Middle Office review
 - Initial review conducted by Investment Data Analyst
 - Final review conducted by Middle Office Manager
- Reporting published
 - Emailed to Commissioner monthly
 - Posted to the Treasury website quarterly

Attribution Review

- Calculating plan return attribution
 - Used to identify the sources of the excess return of a plan against its benchmark in order to understand the effects of active investment decisions
 - Brinson model (Brinson-Fachler (default) and Brinson-Hood-Beebower)
 - Frongello linking algorithm used to link daily return attribution over multiple periods
 - Daily net of manager fee returns (default) and gross of manager fee returns
 - Timeframe: 1-month, 3-month, FYTD, CYTD, and 1-year
 - Reviewed: Monthly and Ad Hoc
- Calculating security return contribution
 - Used to identify daily security contributions to manager returns
 - Transaction-based returns
 - Currently only calculated for domestic equity (not applicable to Commissioner performance) and REIT managers
 - Timeframe: Daily
 - Reviewed: Ad Hoc

SSgA Return Review

- SSgA State Street Global Advisors
- Daily manager returns and benchmarks are received and reconciled to internally calculated returns each month
 - Domestic equity and international equity portfolios
- Any significant differences are reviewed and discussed with SSgA

Questions



State Investment Review Meeting



September 30, 2021

Performance

October 2021

Steve Sikes, CFA State Investment Officer

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

Investment Performance

September 30, 2021

Capital Market Update

																2006 -	- 2020
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	Ann.	Vol.
REITs	EM	Fixed	EM	REITs	REITs	REITs	Small	REITs	REITs	Small	EM	Cash	Large	Small	Comd ty.	Large	EM
35.1%	Equity 39.8%	In come 5.2%	Equity 79.0%	27.9%	8.3%	19.7%	Cap 38.8%	28.0%	2.8%	Cap 21.3%	Equity 37.8%	1.8%	Cap 31.5%	Cap 20.0%	29.1%	Cap 9.9%	Equity 23.3%
EM	00107	012 /4	High	Small	Fixed	High	Large	Large		High	DM	Fixed		EM		Small	
Equity	Comd ty.	Cash	Yield	Cap	Income	Yield	Cap	Cap	Large Cap	Y ie ld	Equity	Income	REITS	Equity	REITs	Cap	REITS
32.6%	16.2%	1.8%	59.4%	26.9%	7.8%	19.6%	32.4%	13.7%	1.4%	14.3%	25.6%	0.0%	28.7%	18.7%	21.6%	8.9%	23.1%
DM	DM	Asset	DM	EM	High	EM	DM	Fixed	Fixed	Large	Large	REITs	Small	Large	Large	High	Small
Equity	E quity 11.6%	Affoc. -25.4%	Equity	Equity	Y ie ld	Equity	Equity	Income	Income	Cap	Cap	-4.0%	Cap 25.5%	Cap 40.4%	Cap 45.0%	Yield 7.5%	Cap 22.6%
26.9%	. /		32.5%	19.2%	3.1%	18.6%	23.3%	6.0%	0.5%	12.0%	21.8%			18.4%	15.9%	7.5%	
Small Cap	Asset Alleoc.	High Yield	REITs	Comdty.	Large Cap	DM Equity	Asset All oc. ─	Asset —Al©ac.	Cash	Comd ty.	Small Cap	High Yield	DM Equity	Asset AMCc.	Small Cap	REITs	DM Equity
18.4%	₹.1%	-26.9%	28.0%	16.8%	2.1%	17.9%	14/9%	5.2%	0.0%	11.8%	14.6%	-4.1%	22.7%	10.6%	12.4%	7.1%	19.1%
Large	Fixed	Small	Small	Large	Cash	Small	High	Small	DM	EM	Asset	Large	Asset	DM	DM	EM	Comd ty.
Cap	Income	Сар	Сар	Сар		Сар	Yield	Сар	Equity	Equity	Alloc.	Сар	AUOc.	Equity	Equity	Equity	
15.8%/	7.0%	-33.8%	27.2%	15.1%	0.1%	16.3%	7.3%	4.9%	-0.4%	11.6%	14.6%	-4.4%	19.5%	8.3%	8.8%	6.9%	18.8%
Asset Alloc.	Large Cap	Comd ty.	Large Cap	High Yield	Asset A.Roc.	Large Cap	REITs	Cash	Alsset Alloc.	REITs	High Yield	Asset	EM Equity	Fixed Income	Asset Alloc.	Asset Alloc.	Large Cap
15.3%	5.5%	- 35.6%	26.5%	14.8%	-0.7%	16.0%	2.9%	0.0%	-2.0%	8.6%	10.4%	- 5.8%	18.9%	7.5%	8.7%	6.7%	16.7%
High		Large	Asset	Asset	Small	Asset		High	High	Asset	0517	Small	High	High	High	DM	High
Yield	Cash	Сар	All oc.	Allo c.	Cap	ANOC.	Cash	Yield	Yield	Allec.	REITs	Cap	Yield	Y ie ld	Yield	Equity	Yield
13.7%	4.8%	-37.0%	25.0%	13.3%	-4.2%	12.2%	0.0%	0.0%	-2.7%	8.3%	8.7%	- 11.0%	12.6%	7.0%	1.7%	5.0%	12.2%
Cash	High	REITs	Comdty.	DM	DM Fauity	Fixe d	Fixed	EM	Small	Fixe d	Fixed	Comdty.	Fixed	Cash	Cash	Fixe d	Asset
4.8%	Y ie ld 3.2%	- 37.7%	18.9%	Equity 8.2%	Equity - 11. 7 %	In come 4.2%	- 2.0%	Equity - 1.8%	Cap -4.4%	In come 2.6%	In come 3.5%	- 11.2%	Income 8.7%	0.5%	0.0%	In come 4.5%	Alloc. 11.8%
Fixed	Small	DM	Fixed	Fixed	- 11.1 70	4.2 %	EM	DM	EM	DM	3.376	DM	0.1 //	0.5%	EM		Fixed
Income	Cap	Equity	Income	Income	Comd ty.	Cash	Equity	Equity	Equity	Equity	Comd ty.	Equity	Comdty.	Comd ty.	Equity	Cash	Income
4.3%	- 1.6%	- 43.1%	5.9%	6.5%	- 13.3%	0.1%	- 2.3%	-4.5%	- 14.6%	1.5%	1.7%	- 13.4%	7.7%	- 3.1%	- 1.0%	1.2%	3.2%
Comdty.	REITs	EM	Cash	Cash	EM	Comd ty.	Comdty.	Comdty.	Comdty.	Cash	Cash	EM	Cash	REITs	Fixed	Comd ty.	Cash
-		Equity			Equity		1					Equity			Income		
2.1%	- 15.7%	-53.2%	0.1%	0.1%	- 18.2%	- 1.1%	- 9.5%	- 17.0%	-24.7%	0.3%	0.8%	- 14.2%	2.2%	- 5.1%	- 1.6%	- 4.0%	0.8%

Source: Barclays, Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management. Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Bloomberg Barclays Global HY Index, Fixed Income: Bloomberg Barclays US Aggregate, REITs: NAREIT Equity REIT Index, Cash: Bloomberg Barclays 1-3m Treasury. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Bloomberg Barclays US Aggregate, 5% in the Bloomberg Barclays 1-3m Treasury, 5% in the Bloomberg Barclays Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period from 12/31/2005 to 12/31/2020. Please see disclosure page at end for index definitions. All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. Past performance is not indicative of future returns.

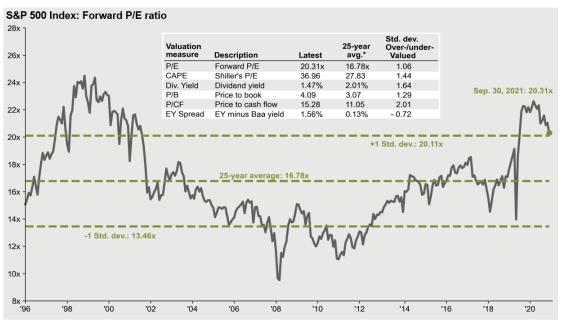
J.P.Morgan
Asset Management

2006 - 2020

Guide to the Markets – U.S. Data are as of September 30, 2021.

Equity Markets

- Equity valuations continue to look high based on historical metrics.
- Current valuations suggest future returns are likely to be on the lower end of historic range.
- International equity valuations don't look as high based on historic averages.



Source: FactSet, FRB, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management. Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since September 1996, and J.P. Morgan Asset Management for September 30, 2021. Current next 12-months consensus earnings estimates are \$214. Average P/E and standard deviations are calculated using 25 years of IBES history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as a reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-funder-valued is calculated using Asset Management Glude to the Markets – U.S. Data are as of September 30, 2021.

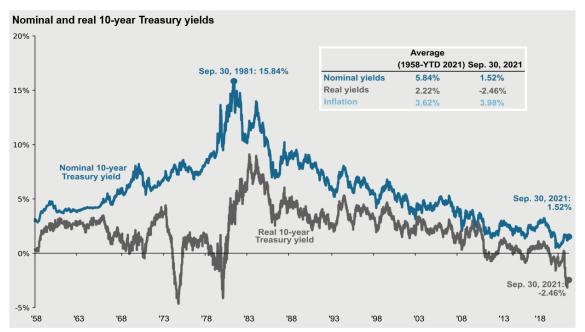


Guide to the Markets – U.S. Data are as of September 30, 2021.



Fixed Income Markets

- Similar to the equity market, fixed income also looks fully valued.
- U.S. Treasury yields are in a negative real rate condition across the curve which is unusual (but not inconsistent with global fixed income markets).
- Most spread fixed income sectors are inside 15-year median levels.

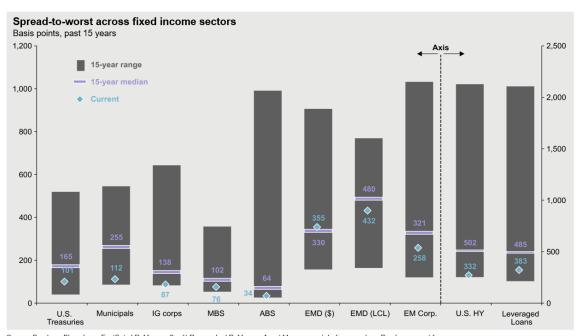


Source: BLS, FactSet, Federal Reserve, J.P. Morgan Asset Management.

Real 10-year Treasury yields are calculated as the daily Treasury yield less year-over-year core CPI inflation for that month except for September and August 2021 where real yields are calculated by subtracting out September 2021 year-over-year core inflation.

Guide to the Markets – U.S. Data are as of September 30, 2021.



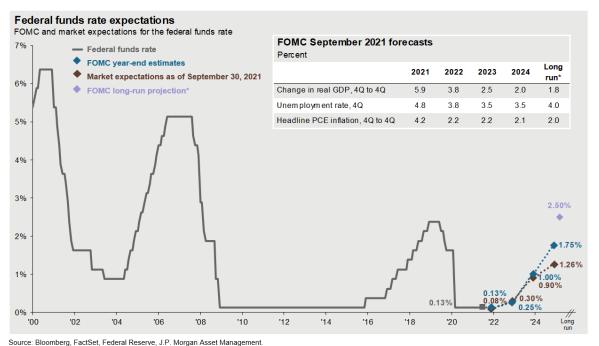


Source: Barclays, Bloomberg, EactSet, J.P. Morgan Credit Research, J.P. Morgan Asset Management, Indices used are Barclays except for emerging market debt and leveraged loans: EMD (\$): J.P. Morgan EMIGLOBAL Diversified Index, EMD (LCL): J.P. Morgan GBI-EM Global Diversified Index, EMD (corp.: J.P. Morgan CEMBI Broad Diversified, Leveraged loans: J.P.M. Leveraged Loan Index. Spread-to-worst indicated is the difference between the yield-to-worst of a bond and yield-to-worst of a U.S. Treasury security with a similar duration. All sectors shown are spread-to-worst except for Treasuries and Municipals, which are based on yield-to-worst, and Leveraged loans, which are based on spread to 3Y takeout. EM (LCL) spread-to-worst is calculated using the index yield less the YTM on the 5-year U.S. Treasury bellwether index. Guide to the Markets – U.S. Data are as of September 30, 2021.



Monetary Policy Expected to Change

- The FOMC and market are expecting the fed funds target rate to increase over the next few years.
- The market is also expecting the Fed to reduce ("taper") it's QE bond buying program which has been running at \$120 billion per month (\$80 billion U.S. Treasures and \$40 billion mortgages). This is expected to be announced at the November 3rd FOMC meeting.

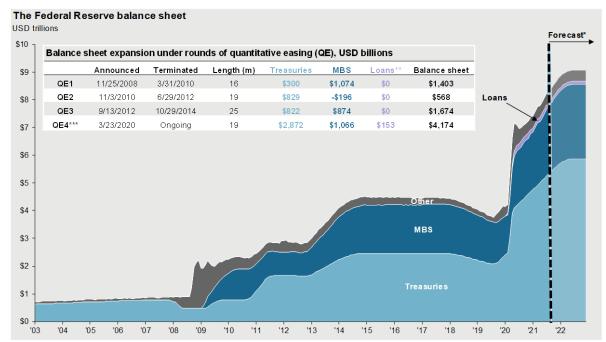


Source: Bioomberg, Factoet, Federal reserve, J.F. Morgan Asset Management.

Market expectations are based off of the USD Overnight Index Forward Swap rates. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.

Guide to the Markets – U.S. Data are as of September 30, 2021.





Source: FactSet, Federal Reserve, J.P. Morgan Investment Bank, J.P. Morgan Asset Management.

Currently, the balance sheet contains \$5 4th in Treasuries and \$2.5 th in IMEs. "The end balance sheet forecast assumes the Federal Reserve maintains its current pace of purchases of Treasuries and MBS through at least November 2021 as suggested in the September 2021 FOMC meeting. "Loans include liquidity and credit extended through corporate credit facilities established in March 2020. Other includes primary, secondary and seasonal loans, repurchase agreements, foreign currency reserves and maiden lane securities. ""CE4 is ongoing and the expansion figures are as of the most recent Wednesday close as reported by the Federal Reserve. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.
Guide to the Markets — U.S. Data are as of September 30, 2021.



Jobs, GDP, Inflation

- The U.S. economy has shown strong signs of recovery with dramatic improvement in the unemployment rate and GDP since the initial onset of the pandemic.
- Inflation risks are now presenting with year over year inflation increases that have not been seen for many years. There is an active debate over whether these price increases are transitory or here to stay. Inflation pressures are broad, including raw materials, wages, shipping, energy, etc.
- Global economies are still being impacted by the stop and start economic lurch of the pandemic. Many logistical supply chains are still impaired which is also contributing to cost pressures.
- The labor market has recovered but not yet to its pre-COVID condition and recent data suggest the labor market may be shrinking which would be a constraint on future economic growth.

U.S. GDP Annualized Quarterly Change Dec 31, 2019 through June 30, 2021

	2Q	1 Q	4 Q	3Q	2Q	1 Q	4 Q
Annualized Quarterly Change	2021	2021	2020	2020	2020	2020	2019
GDP	6.7%	6.3%	4.5%	33.8%	-31.2%	-5.1%	1.9%

U.S. Unemployment Rate 2000 through September 30, 2021







COMMISSIONER'S REPORT

As of September 30, 2021

Market Value

Plan Name	Cash Equivalents	Domestic Equity	Fixed Income	Int'l Equity	REITs	Market Value
2008 Transportation Project Government Bonds (AY2Q)	\$760,646					\$760,646
2010 Education Tax Exempt Bonds (AY3V)	\$2,642					\$2,642
2013B Tax Exempt Education (AY3Z)	\$191,558					\$191,558
2016A - 2012 Transporation Bond Act (AY3Y)	\$1,409,314					\$1,409,314
2016B - 2012 Transportation Bond Act (AY3Q)	\$78,325,504					\$78,325,504
Alaska Higher Education Investment (AY3L)	\$287,270	\$159,989,027	\$123,533,658	\$99,373,114	\$20,762,863	\$403,945,931
Alaska Mental Health Trust Reserve (AY2L)	\$31,948	\$20,286,789	\$27,041,508	\$13,656,494		\$61,016,738
ASLC Investment Fund (AY3S)	\$56,989,789		\$19,821,493			\$76,811,282
Constitutional Budget Reserve Fund (AY19)	\$1,074,265,102					\$1,074,265,102
Education Endowment Fund (AY3G)	\$5,505	\$233,584	\$180,484	\$145,057	\$30,306	\$594,936
EVOS Habitat Investment (AY2H)	\$21,306	\$26,892,411	\$46,997,409	\$18,752,224		\$92,663,350
EVOS Research Investment (AY02)	\$27,959	\$33,797,242	\$49,813,584	\$23,173,426		\$106,812,211
GeFONSI I (AY01)	\$1,365,669,430		\$249,072,402			\$1,614,741,832
GeFONSI II (AY3F)	\$1,008,480,860	\$59,374,960	\$387,850,321	\$28,101,117		\$1,483,807,257
Illinois Creek Mine Reclamation (AY9J)	\$13,575	\$574,025	\$443,123	\$356,512	\$74,524	\$1,461,759
International Airports 2006 Non-AMT (AY9X)	\$1,710,787					\$1,710,787
International Airports 2009 Variable (AY9Y)	\$111,895					\$111,895
International Airports 2010-B (AY3B)	\$213,600					\$213,600
International Airports Repair & Replacement Fund (AY05)	\$500,133					\$500,133
International Airports Revenue Fund (AY04)	\$136,755,917		\$23,474,842			\$160,230,759
International Airports Series 2002 Reserve Account (AY2E)	\$16,405,113					\$16,405,113
International Airports Series 2003 Reserve (AY2U)	\$10,514,482					\$10,514,482
Investment Loss Trust Fund (AY28)	\$3,431,507					\$3,431,507
PCE Endowment Fund (AY13)	\$10,399,160	\$360,538,681	\$485,929,715	\$218,229,507	\$45,718,236	\$1,120,815,299
Permanent Fund Dividend Holding Account (AY2G)	\$26,623,294					\$26,623,294
Public School Trust Fund (AY08)	\$7,525,935	\$317,851,388	\$245,425,141	\$197,425,262	\$41,249,819	\$809,477,546
RHIF LTC Insurance (AY11)	\$6,864,672	\$250,949,699	\$312,750,473	\$154,677,002	\$30,857,461	\$756,099,307
RHIF Major Medical (AY03)	\$18,636,223					\$18,636,223

Relative Allocation

Plan Name	Cash Equivalents	Domestic Equity	Fixed Income	Int'l Equity	REITS
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 Transporation Bond Act (AY3Y)	0.00%				
2016B - 2012 Transportation Bond Act (AY3Q)	0.00%				
Alaska Higher Education Investment (AY3L)	-0.93% 😵	0.61%	0.58%	-0.40% 🛕	0.14%
Alaska Mental Health Trust Reserve (AY2L)	0.05%	0.25%	0.32%	-0.62%	
ASLC Investment Fund (AY3S)	0.19%		-0.19%		
Constitutional Budget Reserve Fund (AY19)	0.00%				
Education Endowment Fund (AY3G)	-0.07%	0.26%	0.34%	-0.62%	0.09%
EVOS Habitat Investment (AY2H)	0.02%	0.12%	0.42%	-0.56%	
EVOS Research Investment (AY02)	0.03%	0.24%	0.34%	-0.60%	
GeFONSI I (AY01)	-0.42%		0.42%	·	
GeFONSI II (AY3F)	-0.03%	0.00%	0.14%	-0.11%	
Illinois Creek Mine Reclamation (AY9J)	-0.07%	0.27%	0.31%	-0.61%	0.10%
International Airports 2006 Non-AMT (AY9X)	0.00%				
International Airports 2009 Variable (AY9Y)	0.00%				
International Airports 2010-B (AY3B)	0.00%				
International Airports Repair & Replacement Fund (AY05)	0.00%				
International Airports Revenue Fund (AY04)	0.35%		-0.35% 🛕		
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)	-0.07%	0.17%	0.36%	-0.53%	0.08%
Permanent Fund Dividend Holding Account (AY2G)	0.00%				
Public School Trust Fund (AY08)	-0.07%	0.27% 🛕	0.32%	-0.61%	0.10%
RHIF LTC Insurance (AY11)	-0.09%	0.19%	0.36%	-0.54%	0.08%
RHIF Major Medical (AY03)	0.00%			•	

Actual Allocation

Plan Name	Cash Equivalents	Domestic Equity	Fixed Income	Int'l Equity	REITs
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 Transporation Bond Act (AY3Y)	100.00%				
2016B - 2012 Transportation Bond Act (AY3Q)	100.00%				
Alaska Higher Education Investment (AY3L)	0.07%	39.61%	30.58%	24.60%	5.14%
Alaska Mental Health Trust Reserve (AY2L)	0.05%	33.25%	44.32%	22.38%	
ASLC Investment Fund (AY3S)	74.19%		25.81%		
Constitutional Budget Reserve Fund (AY19)	100.00%				
Education Endowment Fund (AY3G)	0.93%	39.26%	30.34%	24.38%	5.09%
EVOS Habitat Investment (AY2H)	0.02%	29.02%	50.72%	20.24%	
EVOS Research Investment (AY02)	0.03%	31.64%	46.64%	21.70%	
GeFONSI I (AY01)	84.58%		15.42%		
GeFONSI II (AY3F)	67.97%	4.00%	26.14%	1.89%	
Illinois Creek Mine Reclamation (AY9J)	0.93%	39.27%	30.31%	24.39%	5.10%
International Airports 2006 Non-AMT (AY9X)	100.00%				
International Airports 2009 Variable (AY9Y)	100.00%				
International Airports 2010-B (AY3B)	100.00%				
International Airports Repair & Replacement Fund (AY05)	100.00%				
International Airports Revenue Fund (AY04)	85.35%		14.65%		
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)	0.93%	32.17%	43.36%	19.47%	4.08%
Permanent Fund Dividend Holding Account (AY2G)	100.00%				
Public School Trust Fund (AY08)	0.93%	39.27%	30.32%	24.39%	5.10%
RHIF LTC Insurance (AY11)	0.91%	33.19%	41.36%	20.46%	4.08%
RHIF Major Medical (AY03)	100.00%				

Target Allocation

Plan Name	Cash Equivalents	Domestic Equity	Fixed Income	Int'l Equity	REITs
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 Transporation Bond Act (AY3Y)	100.00%				
2016B - 2012 Transportation Bond Act (AY3Q)	100.00%				
Alaska Higher Education Investment (AY3L)	1.00%	39.00%	30.00%	25.00%	5.00%
Alaska Mental Health Trust Reserve (AY2L)	0.00%	33.00%	44.00%	23.00%	
ASLC Investment Fund (AY3S)	74.00%		26.00%		
Constitutional Budget Reserve Fund (AY19)	100.00%				
Education Endowment Fund (AY3G)	1.00%	39.00%	30.00%	25.00%	5.00%
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)	85.00%		15.00%		
GeFONSI II (AY3F)	68.00%	4.00%	26.00%	2.00%	
Illinois Creek Mine Reclamation (AY9J)	1.00%	39.00%	30.00%	25.00%	5.00%
International Airports 2006 Non-AMT (AY9X)	100.00%				
International Airports 2009 Variable (AY9Y)	100.00%				
International Airports 2010-B (AY3B)	100.00%				
International Airports Repair & Replacement Fund (AY05)	100.00%				
International Airports Revenue Fund (AY04)	85.00%		15.00%		
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%	32.00%	43.00%	20.00%	4.00%
Permanent Fund Dividend Holding Account (AY2G)	100.00%				
Public School Trust Fund (AY08)	1.00%	39.00%	30.00%	25.00%	5.00%
RHIF LTC Insurance (AY11)	1.00%	33.00%	41.00%	21.00%	4.00%
RHIF Major Medical (AY03)	100.00%				

DOR Commissioner's Report: Net Pool Performance for Month Ending 9/30/2021

Relative Performance (Net of Fee)	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	6 Year	10 Year
Broad Market Fixed Income	0.00%	-0.03% 🛕	-0.03% 🛕	0.06%	0.26%	0.17%	0.20%	0.17%
Domestic Equity*	0.02%	0.02%	0.02%	-0.06%	-0.07%	-0.12%		
Internally Managed REITs	0.03%			•	•	•		
International Equity*	0.00%	-0.02% 🛕	-0.02%	0.14%	0.03%	-0.15% 🔷		
Short-term Fixed Income Pool	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
Pool Performance (Net of Fee)	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	6 Year	10 Year
Broad Market Fixed Income	-0.86%	0.03%	0.03%	-0.84%	5.61%	3.12%	3.52%	3.18%
Domestic Equity*	-4.47%	-0.08%	-0.08%	31.82%	15.93%	16.73%		
Internally Managed REITs	-5.89%							
International Equity*	-3.21%	-3.00%	-3.00%	24.06%	8.06%	8.79%		
Short-term Fixed Income Pool	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.87%
Benchmark Performance	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	6 Year	10 Year
Broad Market Fixed Income	-0.87%	0.05%	0.05%	-0.90%	5.36%	2.94%	3.31%	3.01%
Domestic Equity*	-4.49%	-0.10%	-0.10%	31.88%	16.00%	16.85%		
Internally Managed REITs	-5.92%							
International Equity*	-3.20%	-2.99%	-2.99%	23.92%	8.03%	8.94%		
Short-term Fixed Income Pool	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%

DOR Commissioner's Report: Net Plan Performance for Month Ending 9/30/2021

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%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
2010 Education Tax Exempt Bonds (AY3V)	0.00%	0.01%	0.01%	0.08%	0.12%	0.18%	0.22%	0.24%
2013B Tax Exempt Education (AY3Z)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	
2016A - 2012 Transporation Bond Act (AY3Y)	0.00%	0.01%	0.01%	0.07%	0.10%	0.17%	0.21%	
2016B - 2012 Transportation Bond Act (AY3Q)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%		
Alaska Higher Education Investment (AY3L)	-0.01%	-0.05%	-0.05%	-0.13%	-0.05%	-0.01%	0.01%	
Alaska Mental Health Trust Reserve (AY2L)	0.01%	0.00%	0.00%	-0.07%	-0.04%	0.11%	0.09%	0.35%
ASLC Investment Fund (AY3S)	0.00%							
Constitutional Budget Reserve Fund (AY19)	0.00%	0.01%	0.01%	0.07%	0.15%	0.18%	0.21%	0.20%
Education Endowment Fund (AY3G)	0.01%	-0.03%	-0.03%	-0.12%				
EVOS Habitat Investment (AY2H)	0.01%	0.00%	0.00%	-0.23%	-0.05%	-0.05%	0.00%	0.33%
EVOS Research Investment (AY02)	0.01%	0.00%	0.00%	-0.10%	0.00%	-0.04%	-0.02%	0.32%
GeFONSI I (AY01)	0.00%	0.00%	0.00%	0.05%	0.11%	0.15%	0.18%	0.20%
GeFONSI II (AY3F)	0.00%	0.00%	0.00%	-0.04%	0.06%			
Illinois Creek Mine Reclamation (AY9J)	0.01%	-0.03%	-0.03%	-0.12%	-0.09%	-0.04%	-0.02%	0.11%
International Airports 2006 Non-AMT (AY9X)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
International Airports 2009 Variable (AY9Y)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
International Airports 2010-B (AY3B)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
International Airports Repair & Replacement Fund (AY05)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
International Airports Revenue Fund (AY04)	0.00%	0.00%	0.00%	0.07%	0.11%	0.20%	0.24%	0.23%
International Airports Series 2002 Reserve Account (AY2E)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
International Airports Series 2003 Reserve (AY2U)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
Investment Loss Trust Fund (AY28)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%
PCE Endowment Fund (AY13)	0.01%	-0.09%	-0.09%	-0.13%	-0.09%	-0.05%	-0.01%	0.18%
Permanent Fund Dividend Holding Account (AY2G)	0.00%	0.01%	0.01%	0.07%	0.18%	0.32%	0.32%	0.28%
Public School Trust Fund (AY08)	0.01%	-0.03%	-0.03%	-0.12%	-0.05%	-0.02%	0.01%	0.00%
RHIF LTC Insurance (AY11)	0.00%	-0.09%	-0.09%	-0.15%	0.01%	0.05%	0.08%	0.19%
RHIF Major Medical (AY03)	0.00%	0.01%	0.01%	0.07%	0.12%	0.18%	0.22%	0.24%

DOR Commissioner's Re	port: Net Plan Performance	for Month Ending 9/30/2021

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)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.87%
2010 Education Tax Exempt Bonds (AY3V)	0.01%	0.03%	0.03%	0.15%	1.31%	1.34%	1.23%	0.87%
2013B Tax Exempt Education (AY3Z)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	
2016A - 2012 Transporation Bond Act (AY3Y)	0.01%	0.03%	0.03%	0.14%	1.28%	1.32%	1.22%	
2016B - 2012 Transportation Bond Act (AY3Q)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%		
Alaska Higher Education Investment (AY3L)	-3.15%	-0.81%	-0.81%	19.23%	11.23%	10.57%	10.52%	
Alaska Mental Health Trust Reserve (AY2L)	-2.61%	-0.70%	-0.70%	14.88%	9.66%	9.62%	9.53%	9.64%
ASLC Investment Fund (AY3S)	-0.22%							
Constitutional Budget Reserve Fund (AY19)	0.01%	0.03%	0.03%	0.14%	2.31%	2.07%	2.15%	1.68%
Education Endowment Fund (AY3G)	-3.12%	-0.79%	-0.79%	19.25%				
EVOS Habitat Investment (AY2H)	-2.41%	-0.63%	-0.63%	12.69%	9.28%	9.55%	9.73%	10.34%
EVOS Research Investment (AY02)	-2.54%	-0.67%	-0.67%	14.00%	9.70%	9.78%	9.89%	10.44%
GeFONSI I (AY01)	-0.12%	0.02%	0.02%	-0.10%	1.62%	1.36%	1.26%	0.99%
GeFONSI II (AY3F)	-0.47%	-0.04%	-0.04%	1.72%	3.20%			
Illinois Creek Mine Reclamation (AY9J)	-3.12%	-0.79%	-0.79%	19.25%	11.20%	10.54%	10.49%	6.93%
International Airports 2006 Non-AMT (AY9X)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.86%
International Airports 2009 Variable (AY9Y)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.86%
International Airports 2010-B (AY3B)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.87%
International Airports Repair & Replacement Fund (AY05)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.87%
International Airports Revenue Fund (AY04)	-0.13%	0.02%	0.02%	-0.08%	2.35%	2.13%	2.22%	1.59%
International Airports Series 2002 Reserve Account (AY2E)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.87%
International Airports Series 2003 Reserve (AY2U)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.87%
Investment Loss Trust Fund (AY28)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.87%
PCE Endowment Fund (AY13)	-2.71%	-0.68%	-0.68%	9.73%	7.38%	8.23%	8.59%	9.67%
Permanent Fund Dividend Holding Account (AY2G)	0.00%	0.02%	0.02%	0.14%	1.36%	1.48%	1.33%	0.91%
Public School Trust Fund (AY08)	-3.12%	-0.79%	-0.79%	19.24%	11.49%	10.00%	9.90%	8.99%
RHIF LTC Insurance (AY11)	-2.77%	-0.72%	-0.72%	11.49%	9.57%	7.91%	7.96%	7.22%
RHIF Major Medical (AY03)	0.01%	0.03%	0.03%	0.14%	1.30%	1.34%	1.23%	0.87%

DOR Commissioner's Report: Net Plan Performance for Month Ending 9/30/2021

Benchmark Performance	1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	6 Year	10 Year
2008 Transportation Project Government Bonds (AY2Q)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
2010 Education Tax Exempt Bonds (AY3V)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
2013B Tax Exempt Education (AY3Z)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	
2016A - 2012 Transporation Bond Act (AY3Y)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	
2016B - 2012 Transportation Bond Act (AY3Q)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%		
Alaska Higher Education Investment (AY3L)	-3.13%	-0.76%	-0.76%	19.37%	11.29%	10.58%	10.51%	
Alaska Mental Health Trust Reserve (AY2L)	-2.62%	-0.70%	-0.70%	14.94%	9.70%	9.50%	9.44%	9.29%
ASLC Investment Fund (AY3S)	-0.22%							
Constitutional Budget Reserve Fund (AY19)	0.01%	0.01%	0.01%	0.07%	2.16%	1.88%	1.94%	1.48%
Education Endowment Fund (AY3G)	-3.13%	-0.76%	-0.76%	19.37%				
EVOS Habitat Investment (AY2H)	-2.42%	-0.62%	-0.62%	12.92%	9.33%	9.60%	9.73%	10.01%
EVOS Research Investment (AY02)	-2.54%	-0.67%	-0.67%	14.10%	9.69%	9.82%	9.91%	10.11%
GeFONSI I (AY01)	-0.13%	0.02%	0.02%	-0.15%	1.51%	1.21%	1.08%	0.80%
GeFONSI II (AY3F)	-0.47%	-0.04%	-0.04%	1.76%	3.14%			
Illinois Creek Mine Reclamation (AY9J)	-3.13%	-0.76%	-0.76%	19.37%	11.29%	10.58%	10.51%	6.82%
International Airports 2006 Non-AMT (AY9X)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
International Airports 2009 Variable (AY9Y)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
International Airports 2010-B (AY3B)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
International Airports Repair & Replacement Fund (AY05)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
International Airports Revenue Fund (AY04)	-0.13%	0.02%	0.02%	-0.15%	2.24%	1.93%	1.98%	1.35%
International Airports Series 2002 Reserve Account (AY2E)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
International Airports Series 2003 Reserve (AY2U)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
Investment Loss Trust Fund (AY28)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
PCE Endowment Fund (AY13)	-2.71%	-0.60%	-0.60%	9.86%	7.47%	8.29%	8.60%	9.49%
Permanent Fund Dividend Holding Account (AY2G)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%
Public School Trust Fund (AY08)	-3.13%	-0.76%	-0.76%	19.37%	11.54%	10.02%	9.89%	9.00%
RHIF LTC Insurance (AY11)	-2.77%	-0.63%	-0.63%	11.64%	9.55%	7.86%	7.88%	7.03%
RHIF Major Medical (AY03)	0.01%	0.01%	0.01%	0.07%	1.18%	1.16%	1.01%	0.63%

DOR Commissioner's Report: External Management Fees as of Month Ending 9/30/2021

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 Transporation Bond Act (AY3Y)	0.0000%
2016B - 2012 Transportation Bond Act (AY3Q)	0.0000%
Alaska Higher Education Investment (AY3L)	0.0068%
Alaska Mental Health Trust Reserve (AY2L)	0.0056%
Constitutional Budget Reserve Fund (AY19)	0.0000%
Education Endowment Fund (AY3G)	0.0069%
EVOS Habitat Investment (AY2H)	0.0049%
EVOS Research Investment (AY02)	0.0053%
GeFONSI I (AY01)	0.0000%
GeFONSI II (AY3F)	0.0007%
Illinois Creek Mine Reclamation (AY9J)	0.0068%
International Airports 2006 Non-AMT (AY9X)	0.0000%
International Airports 2009 Variable (AY9Y)	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)	0.0041%
Permanent Fund Dividend Holding Account (AY2G)	0.0000%
Public School Trust Fund (AY08)	0.0068%
RHIF LTC Insurance (AY11)	0.0047%
RHIF Major Medical (AY03)	0.0000%

Commissioner's Report: Top GeFONSI Accounts for Month Ending: 9/30/2021

Program	Account Name	End Balance
GeFONSI I	General Fund	\$510,180,674.49
	Alaska Clean Water Fund	\$120,798,077.61
	Alaska Drinking Water Fund	\$73,020,017.97
	Oil & Hazardous Substance Release Response Account	\$43,152,491.53
	Fish & Game Fund	\$41,756,716.57
GeFONSI II	Public Education Fund	\$164,213,461.38
	Statutory Budget Reserve Fund	\$157,413,237.15
	Highway Equipment Working Capital Fund For Operating Appropriations	\$96,363,708.64
	School Construction Fund	\$77,189,104.32
	Community Revenue Sharing Fund	\$72,697,331.41
	Sum of 5 Largest GeFONSI I and II Funds	\$1,356,784,821.07

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?

State of Alaska Department of Revenue

2022 State Investment Review Meeting Schedule

February 15, 2022 (Videoconference)

- 1. December 31, 2021 Performance
- 2. FY2022 Capital Market Assumptions
- 3.

May 10, 2022 (Videoconference)

- 1. March 31, 2022 Performance
- 2. FY2023 State Asset Allocation Discussion
- 3.

August 23, 2022 (Videoconference)

- 1. June 30, 2022 Performance
- 2. Asset Allocation Process & 2022 Capital Market Assumptions
- 3.

October 25, 2022 (Videoconference)

- 1. September 30, 2022 Performance
- 2.

Start times for the above meetings are to be determined.

Potential Discussion Topics:

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