# INVESTMENT PERFORMANCE SUMMARY QUARTER ENDING SEPTEMBER 30, 2020

# OFFICE OF THE STATE TREASURER & CASH MANAGEMENT POLICY BOARD



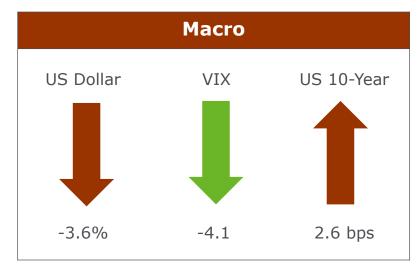
John Krimmel, CPA, CFA, Partner Kevin M. Leonard, Partner Jennifer Appel, CFA, Research Consultant



# **MARKET OVERVIEW**

NEPC, LLC —

#### MARKET OVERVIEW





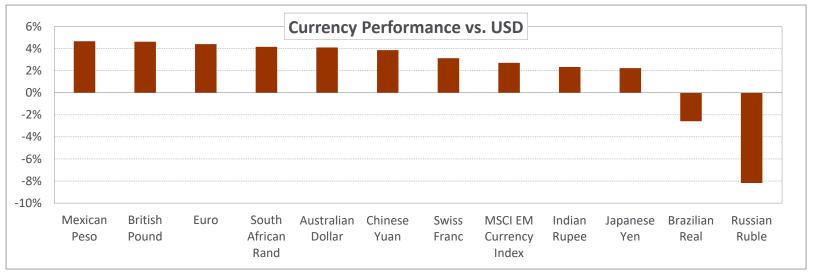




Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM EMBI Global Diversified Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index). Source: FactSet



## **MACRO OVERVIEW**



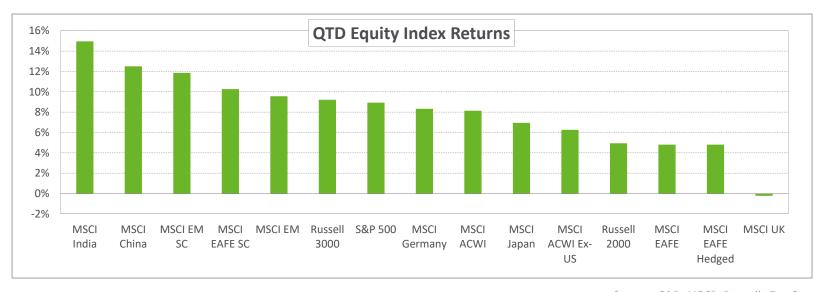
Source: MSCI, FactSet

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	0.00% - 0.25%	1.3%	The Fed announced a new framework that will allow inflation to run above its 2% target and expects to hold interest rates at current levels for the next three years
European Central Bank	0.00%	-0.2%	The ECB held current benchmark rates unchanged and stands ready to increase monetary stimulus to support economic recovery
Bank of Japan	-0.10%	0.1%	The BoJ will continue its ultra-easy QE program with inflation remaining well below target





# **EQUITY OVERVIEW**



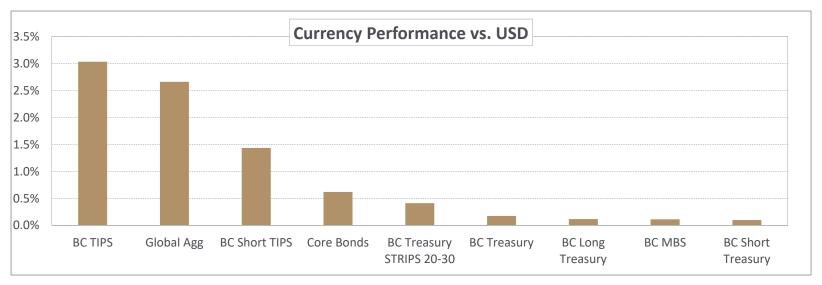
Source: S&P, MSCI, Russell, FactSet

Russell 3000 QTD Sector Returns	QTD	YTD
Technology	12.0%	29.1%
Health Care	6.5%	8.4%
Consumer Discretionary	17.5%	22.2%
Consumer Staples	7.7%	0.0%
Energy	-16.4%	-46.1%
Materials & Processing	11.9%	1.9%
Producer Durables	11.7%	-4.6%
Financial Services	3.3%	-14.4%
Utilities	5.7%	-6.8%





## **RATES OVERVIEW**



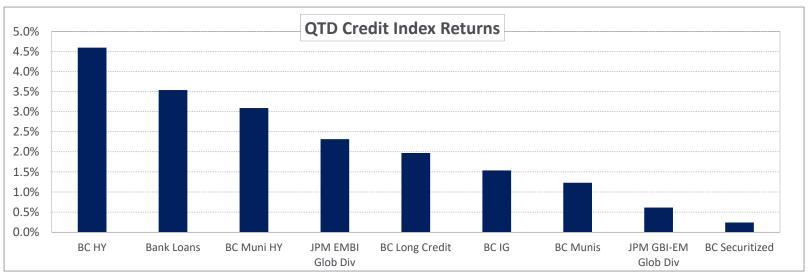
Source: S&P, MSCI, Russell, FactSet

	Previous Quarter Yield	Current Quarter Yield	Δ
US 10-Year	0.65%	0.68%	0.03%
US 30-Year	1.41%	1.45%	0.04%
US Real 10-Year	-0.68%	-0.94%	-0.26%
German 10-Year	-0.48%	-0.53%	-0.05%
Japan 10-Year	0.02%	0.02%	0.00%
China 10-Year	2.90%	3.16%	0.26%
EM Local Debt	4.51%	4.48%	-0.03%



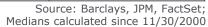


## **CREDIT OVERVIEW**



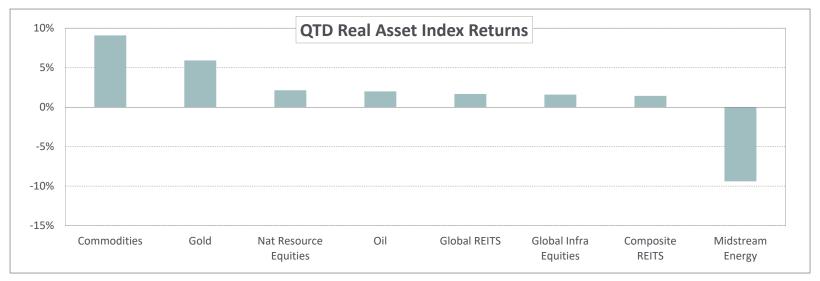
Source: S&P, MSCI, Russell, JPM, FactSet

	Previous Quarter Spread (bps)	Current Quarter Spread (bps)	Δ	Median
BC IG Credit	150	136	-14	137
BC Long Credit	202	188	-14	176
BC Securitized	75	64	-11	49
BC High Yield	626	517	-109	480
Muni HY	489	454	-35	636
JPM EMBI Glob Div	474	432	-42	342
Bank Loans - Libor	582	469	-113	449



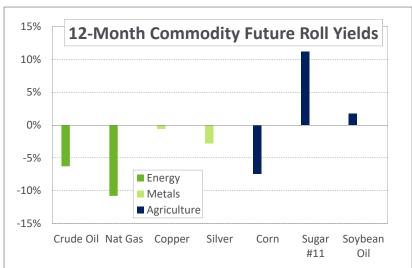


#### **REAL ASSETS OVERVIEW**



Source: S&P, MSCI, Russell, FactSet

Real Asset Yields	Previous Quarter	Current Quarter
Midstream Energy	8.6%	9.9%
Core Real Estate*	4.5%	4.4%
Composite REITs	4.3%	4.1%
Global REITs	5.0%	4.8%
Global Infrastructure Equities	4.2%	4.1%
Natural Resource Equities	4.7%	4.5%
Commodity Index Roll Yield	-6.8%	-6.7%



Sources: Alerian, NAREIT, Barclays, NEPC, FactSet Core Real Estate\* yields are subject to a one quarter lag



Source: FactSet

# **EXECUTIVE SUMMARY**

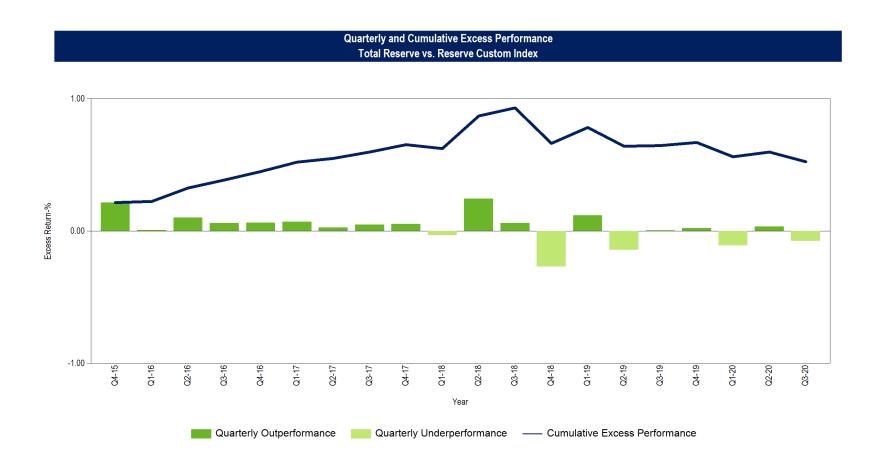
NEPC, LLC -

# **TOTAL FUND PERFORMANCE SUMMARY**

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	Inception	Inception Date
Delaware Total Consolidation	\$3,782,339,581	0.25%	4.70%	5.10%	4.01%	2.93%	2.34%	Jan-05
Delaware Total Consolidation ex. CARES	\$2,996,155,608	0.32%	5.07%	5.47%	4.13%	3.00%	2.37%	Jan-05
Total Liquidity & Reserve	\$2,921,049,458	0.29%	5.29%	5.53%	4.12%		3.54%	Nov-16
Total Liquidity	\$901,774,875	0.11%	1.41%	1.96%	2.14%	1.67%	1.83%	Jan-05
eV US Cash Management Net Median		0.03%	0.64%	1.12%	1.76%	1.35%	1.47%	Jan-05
Total Reserve	\$2,019,274,584	0.37%	6.42%	6.55%	4.92%	3.44%	2.78%	Jan-05
Reserve Custom Index		0.44%	6.57%	6.67%	4.94%	3.32%	2.97%	Jan-05
eV US Interm Duration Fixed Inc Net Median		0.83%	5.76%	6.20%	4.39%	3.40%	3.97%	Jan-05
Total Endowment	\$75,106,150	2.14%	-1.36%	4.44%	4.53%	6.99%	5.38%	Aug-15
Endowment Custom Index		5.04%	4.30%	9.68%	7.12%	8.20%	6.67%	Aug-15
eV Global Balanced Net Median		4.84%	0.19%	5.27%	4.21%	8.11%	6.68%	Aug-15
CARES	\$786,183,973	0.00%					0.03%	Apr-20
FTSE T-Bill 1 Month TR		0.03%	0.43%	0.86%	1.57%	1.09%	0.05%	Apr-20
eV US Cash Management Net Median		0.03%	0.64%	1.12%	1.76%	1.35%	0.26%	Apr-20

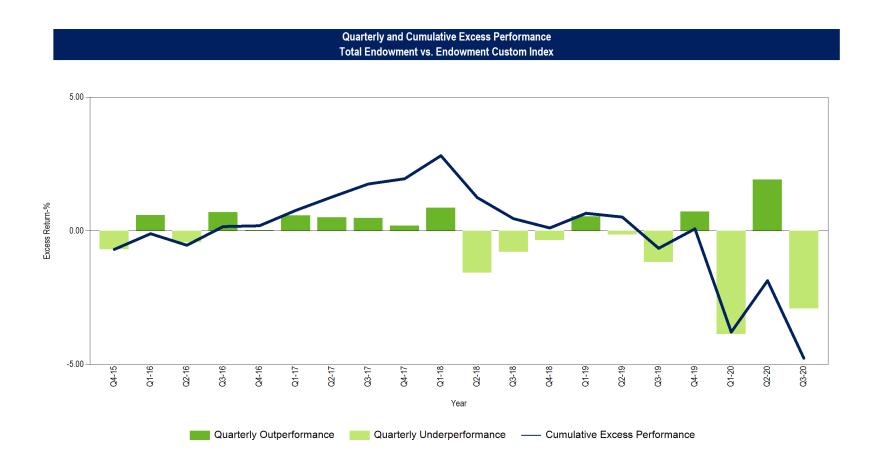


# **TOTAL FUND PERFORMANCE SUMMARY**



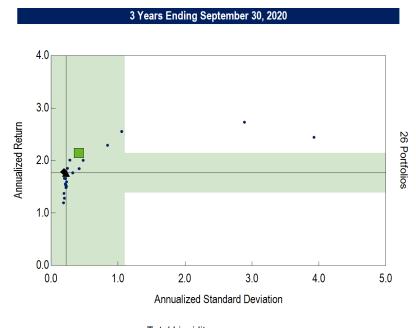


# **TOTAL FUND PERFORMANCE SUMMARY**



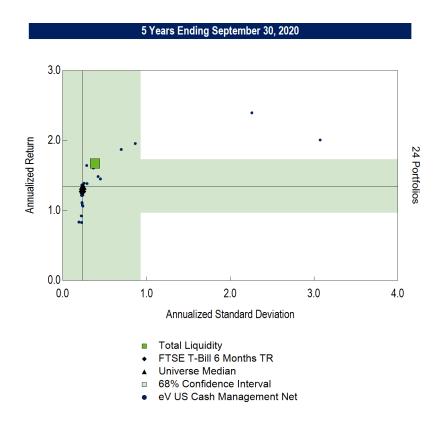


# LIQUIDITY RISK/RETURN - 3 & 5 YEARS



- Total Liquidity
- ◆ FTSE T-Bill 6 Months TR
- Universe Median
- 68% Confidence Interval
- eV US Cash Management Net

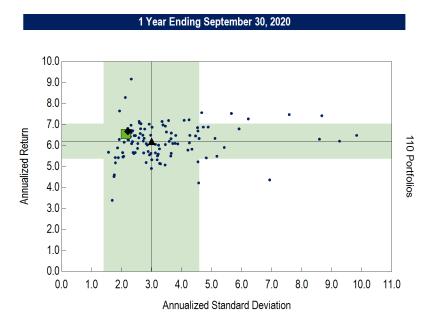
3 Years Ending September 30, 2020					
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio		
Total Liquidity	2.14%	0.41%	1.37		



5 Years Ending September 30, 2020					
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio		
Total Liquidity	1.67%	0.39%	1.39		

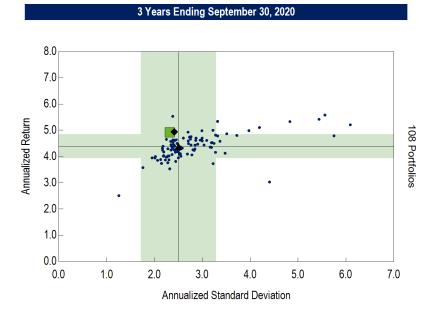


# **RESERVE RISK/RETURN - 1 & 3 YEARS**



- Total Reserve
- Reserve Custom Index
- ▲ Universe Median
- 68% Confidence Interval
- eV US Interm Duration Fixed Inc Net

1 Year Ending September 30, 2020					
Anlzd Ret Anlzd Std Dev Sharpe Ratio					
Total Reserve	6.55%	2.14%	2.66		
Reserve Custom Index	6.67%	2.21%	2.63		

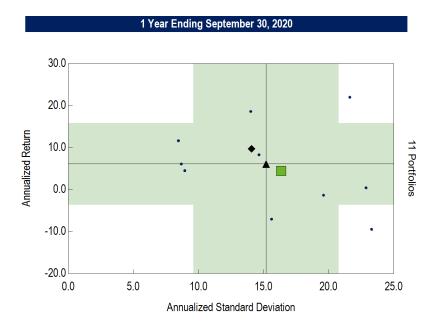


- Total Reserve
- Reserve Custom Index
- ▲ Universe Median
- 68% Confidence Interval
- eV US Interm Duration Fixed Inc Net

3 Years Ending September 30, 2020						
Anlzd Ret Anlzd Std Dev Sharpe Ratio						
4.92%	2.32%	1.44				
4.94%	2.42%	1.40				
	Anlzd Ret 4.92%	Anlzd Ret Anlzd Std Dev 4.92% 2.32%				

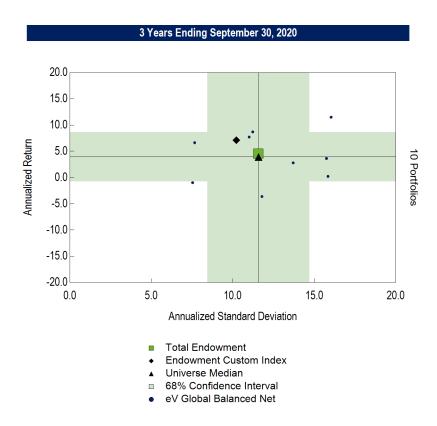


# **ENDOWMENT RISK/RETURN - 1 & 3 YEARS**



- Total Endowment
- Endowment Custom Index
- Universe Median
- 68% Confidence Interval
- eV Global Balanced Net

1 Year Ending September 30, 2020					
Anlzd Ret Anlzd Std Dev Sharpe Ratio					
Total Endowment	4.44%	16.35%	0.22		
Endowment Custom Index	9.68%	14.07%	0.63		



3 Years Ending September 30, 2020					
Anlzd Ret Anlzd Std Dev Sharpe Ratio					
4.53%	11.57%	0.25			
7.12%	10.22%	0.54			
	Anlzd Ret 4.53%	Anlzd Ret Anlzd Std Dev 4.53% 11.57%			



# **TOTAL FUND PERFORMANCE DETAIL - NET OF FEES**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Delaware Total Consolidation	3,782,339,581	100.00	0.25		4.70		5.10		4.01		2.93		2.34	Jan-05
Delaware Total Consolidation ex. CARES	2,996,155,608	79.21	0.32		5.07		5.47		4.13		3.00		2.37	Jan-05
Total Liquidity & Reserve	2,921,049,458	77.23	0.29		5.29		5.53	-	4.12				3.54	Nov-16
Total Liquidity	901,774,875	23.84	0.11	27	1.41	16	1.96	19	2.14	18	1.67	20	1.83	Jan-05
eV US Cash Management Net Median			0.03		0.64		1.12		1.76		1.35		1.47	Jan-05
PFM Asset Management	451,924,580	11.95	0.09	28	1.37	18	1.92	19	2.14	19	1.71	18	1.34	Jun-13
Wilmington Liquidity	449,850,294	11.89	0.13	26	1.45	15	2.00	18	2.13	19	1.61	24	4.12	Jan-85
Total Reserve	2,019,274,584	53.39	0.37	95	6.42	18	6.55	30	4.92	9	3.44	46	2.78	Jan-05
Reserve Custom Index			0.44	91	6.57	14	6.67	27	4.94	8	3.32	61	2.97	Jan-05
eV US Interm Duration Fixed Inc Net Median			0.83		5.76		6.20		4.39		3.40		3.97	Jan-05
JPM Intermediate	478,099,929	12.64	0.18	87	3.39	40	3.96	38	2.95	54	2.25	58	1.85	Jun-13
J.P. Morgan Custom Index			0.17	87	3.10	57	3.68	54	2.77	70	2.04	78	1.73	Jun-13
Blackrock Financial Mangement	487,853,366	12.90	0.30	71	4.41	9	4.86	14					4.43	Mar-18
Blackrock Custom Index			0.24	80	4.27	13	4.73	17	3.46	16	2.45	44	4.30	Mar-18
Chandler Asset Management	530,110,913	14.02	0.62	88	8.96	5	8.92	5	6.54	3	4.41	49	3.34	Jun-13
Lazard Financial Management	523,210,375	13.83	0.35	99	8.72	6	8.26	15					7.84	Mar-18
Chandler/Lazard Custom Index			0.68	85	9.51	2	9.18	4	6.78	2	4.41	49	8.19	Mar-18
Total Endowment	75,106,150	1.99	2.14	89	-1.36	58	4.44	55	4.53	39	6.99	72	5.38	Aug-15
Endowment Custom Index			5.04	34	4.30	26	9.68	24	7.12	26	8.20	49	6.67	Aug-15
eV Global Balanced Net Median			4.84		0.19		5.27		4.21		8.11		6.68	Aug-15
SEI Funds	38,737,859	1.02	5.70	26	4.48	25	10.58	21	6.83	29	8.93	22	7.40	Aug-15
Cash Account	74	0.00	0.00	93	0.34	98	0.79	89	1.36	94	0.95	92	0.92	Aug-15
Vanguard Funds	36,368,217	0.96											-1.82	Sep-20
Endowment Custom Index			5.04		4.30		9.68		7.12		8.20		-2.09	Sep-20
CARES	786,183,973	20.79	0.00	93			-		-				0.03	Apr-20
FTSE T-Bill 1 Month TR			0.03	63	0.43	79	0.86	78	1.57	73	1.09	82	0.05	Apr-20
eV US Cash Management Net Median			0.03		0.64		1.12		1.76		1.35		0.26	Apr-20
PFM CARES	393,091,889	10.39	0.00	93									0.03	Apr-20
Wilmington CARES	393,092,084	10.39	0.00	93									0.03	Apr-20
FTSE T-Bill 1 Month TR			0.03	63	0.43	79	0.86	78	1.57	73	1.09	82	0.05	Apr-20

Notes: Net of Fees. Results for periods longer than one year are annualized.

Performance history through 12/2015 is from BNY Mellon. NEPC Performance start date is January 2016. Fiscal Year end is June 30.

Reserve Custom Index consists of 25% ICE BofAML 1-5 Yrs AAA-A US Corp & Govt TR / 25% ICE BofAML 1-3 Yrs AAA-A US Corp & Govt / 50% ICE BofAML US Gov/Credit 5-10 Yrs A Rated and Above, as of 4/1/2018. Prior to this, the index comprised 75% ICE BofAML 1-5 Yrs AAA-A US Corp & Govt TR / 25% ICE BofAML 6 Months US T-Bills TR.

Endowment Custom Index consists of 60% MSCI World Index/40% BBgBarc US Aggregate.

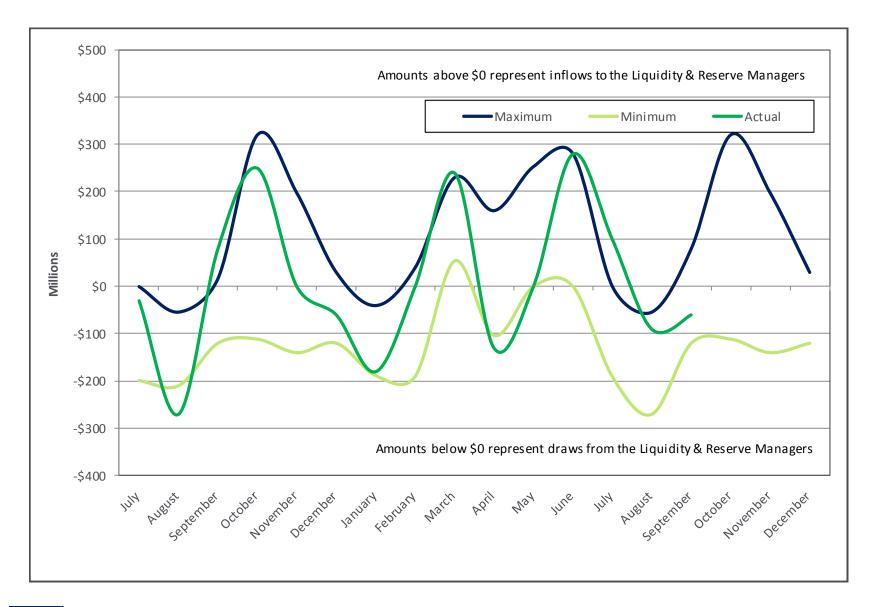
BlackRock Custom Index consists of 100% ICE BofAML 1-5 Yrs AAA-A US Corp & Govt TR.

J.P. Morgan Custom Index consists of 100% ICE BofAML 1-3 Yrs AAA-A US Corp & Govt.

Chandler/Lazard Custom Index consists of ICE BofAML US Gov/Credit 5-10 Yrs A Rated and Above.



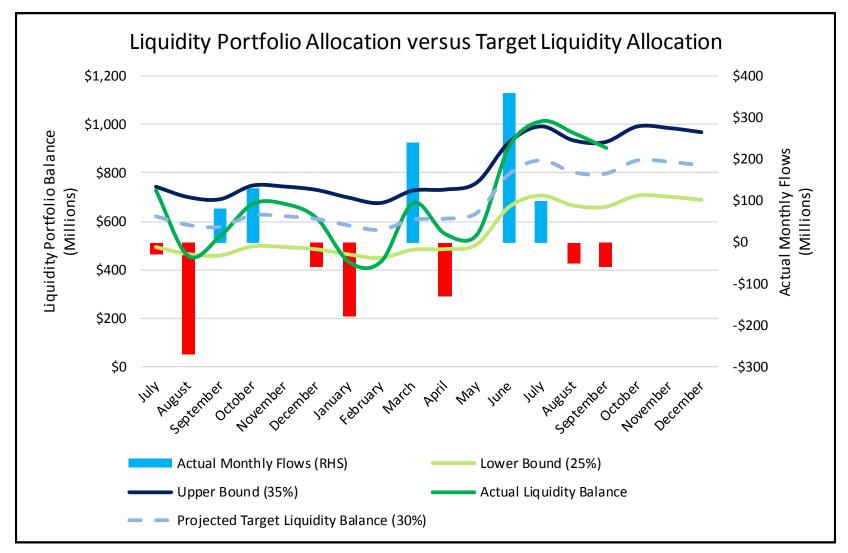
# **LIQUIDITY & RESERVE CASH FLOWS**



16



# LIQUIDITY BALANCE



As of June 1, 2020, the target allocation between Liquidity and Reserve Portfolios was adjusted to 30%/70%. The previous target allocation was 25%/75%.



RHS refers to the use of the Right Hand Scale.

## **FISCAL YEAR TO DATE**

							_	in Market Value Year-to-Date									
						Through	h Se	eptember 30, 202	20								
		Beginning								U	nrealized Gain	ı	Realized Gain	Α	Amortization /	E	inding Market
		Market Value		Contributions		Withdrawals		Fees	Income		(Loss)		(Loss)		Accretion		Value
Liquidity Managers		456 400 065		F0 000 000	_	(55,000,000)		(52.440) A	4 274 727	_	(505.047)	_	62.226	_	(242.472)	_	454 004 500
PFM Asset Management	\$	456,492,365	\$	50,000,000	\$	(55,000,000)		(62,418) \$	1,371,727		(596,947)	•	62,326		. , ,	\$	451,924,580
Wilmington Liquidity	\$	454,246,650	_	50,000,000	\$	(55,000,000)		(65,233) \$	1,372,126	_	(414,359)	•	157,912		, , ,	\$	449,850,294
Total Liquidity Managers	\$	910,739,015	Ş	100,000,000	\$	(110,000,000)	Ş	(127,651) \$	2,743,853	Ş	(1,011,306)	Ş	220,238	Ş	(789,274)	Ş	901,774,875
Reserve Managers																	
BlackRock Financial Management	Ś	486,370,073	Ś	3,610	\$	_	\$	(85,825) \$	2,105,026	Ś	(2,721,174)	Ś	2,421,321	Ś	(239,665)	\$	487,853,366
Chandler Asset Management	\$	526,857,829	•	-	\$	_	\$	(87,053) \$		\$	(2,304,138)	•	2,647,580		, , ,	\$	530,110,913
JPM Intermediate	Ś	477,223,108		-	\$	-	\$	(97,834) \$	1,989,452		(2,259,921)	•	1,436,771	•	(191,648)	•	478,099,929
Lazard Asset Management	\$	521,377,153		_	Ś	_	\$	(148,280) \$	2,766,067		(9,969,029)		9,832,706		(648,243)		523,210,375
Total Reserve Managers	\$ 2	2,011,828,163	\$	3,610	\$	-	\$	(418,992) \$	9,757,374	\$	(17,254,262)	•	16,338,378		, , ,	_	2,019,274,584
Total Liquidity & Reserve Managers	٠ خ	2 022 567 170	Ś	100.003.610	Ś	(110.000.000)	<u> </u>	(546.643) \$	12.501.226	Ś	(18,265,568)	Ś	16.558.616	Ś	(1.769.063)	٠ ٠	2,921,049,458
Total Equidity & Reserve Managers	<b>،</b> ڊ	2,322,307,170	Ą	100,003,010	Ą	(110,000,000)	Ą	(540,043) \$	12,501,220	Ą	(18,205,508)	Ģ	10,556,010	Ą	(1,768,963)	<b>،</b> ڊ	2,921,049,456
Land & Water Endowment																	
SEI Funds	\$	25,440,594	\$	11,390,752	\$	(24,000)	\$	(21,556) \$	111,545	\$	1,826,761	\$	13,764	\$	-	\$	38,737,859
Vanguard	\$	-	\$	36,788,900	\$	(4,000)	\$	- \$	127,176	\$	(543,848)	\$	(10)	\$	-	\$	36,368,217
Cash Account	\$	46,153,234	\$	2,071,007	\$	(48,225,652)	\$	- \$	1,484	\$	-	\$	-	\$	-	\$	74
Total Land & Water Endowment	\$	71,593,828	\$	50,250,659	\$	(48,253,652)	\$	(21,556) \$	240,205	\$	1,282,913	\$	13,754	\$	-	\$	75,106,150
CARES																	
PFM CARES	\$	427,436,714	Ś		Ś	(34,360,931)	Ś	- \$	16,107	Ś	_	\$	_	\$	-	\$	393,091,889
Wilmington CARES	\$	427,436,909	\$	-	Ś	(34,360,931)		- \$	16,107	\$		\$	-	\$	_	Ś	393,092,084
Total CARES	\$	<b>854,873,623</b>	\$	•	\$	(68,721,862)	_	- \$	32,214	\$		\$	-	\$	-	\$	786,183,973
		,,	•			(11, 11, 11, 11, 11, 11, 11, 11, 11, 11,		•	,							•	,,
Total	\$ 3	3,849,034,629	\$	150,254,269	\$	(226,975,514)	\$	(568,199) \$	12,773,644	\$	(16,982,655)	\$	16,572,369	\$	(1,768,963)	\$ 3	3,782,339,581

#### Footnotes:

Values provided by Northern Trust and are reconciled to the audited custodian reports.

Income is a product of income received during the month plus accrued income.

Numbers may not add due to rounding.

The \$3,610 contribution in August 2020 for BlackRock represents proceeds from a securities litigation settlement.



## YIELD AND DURATION POSITIONING

		Liquidity P	ortfolio Yie	eld and Duration A	Analysis		
	Portfolio				Bend	chmark	
	<u>Portfolio Value</u>	% of Assets	<u>Yield</u>	Duration		<u>Yield</u>	Duration
PFM \$	451,924,580	15.5%	0.36%	0.50	6-Month Treasury Bill	0.11%	0.48
Wilmington Trust \$	449,850,294	15.4%	0.33%	0.82	6-Month Treasury Bill	0.11%	0.48
Total Liquidity \$	901,774,874	30.9%	0.34%	0.66	6-Month Treasury Bill	0.11%	0.48
		Reserve Po	ortfolio Yie	ld and Duration A	Analysis		
	Portfolio				Bend	chmark	
	<u>Portfolio Value</u>	% of Assets	<u>Yield</u>	<u>Duration</u>		<u>Yield</u>	<u>Duration</u>
JP Morgan \$	478,099,929	16.4%	0.27%	1.71	BAML 1-3 Yr Govt/Credit A+	0.22%	1.90
BlackRock \$	487,853,366	16.7%	0.38%	2.46	BAML 1-5 Yr Govt/Credit A+	0.28%	2.67
Chandler \$	530,110,913	18.1%	0.90%	6.21	BAML 5-10 Yr Govt/Credit A+	0.77%	6.63
Lazard \$	523,210,375	17.9%	0.56%	6.22	BAML 5-10 Yr Govt/Credit A+	0.77%	6.63
Total Reserve \$	2,019,274,584	69.1%	0.54%	4.24	Custom Reserve Benchmark	0.51%	4.46
		-					
	7	otal Liquidity & R	eserve Por	tfolio Yield and D	Ouration Analysis		
	Portfolio				Bend	chmark	
	<u>Portfolio Value</u>	% of Assets	<u>Yield</u>	<u>Duration</u>		<u>Yield</u>	<u>Duration</u>
otal Liquidity & Reserve \$	2,921,049,457	100.0%	0.48%	3.13	Weighted Average	0.39%	3.26

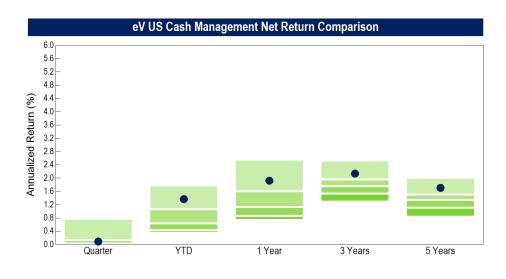
As of June 1, 2020, the target allocation between Liquidity and Reserve Portfolios was adjusted to 30%/70%. The previous target allocation was 25%/75%.



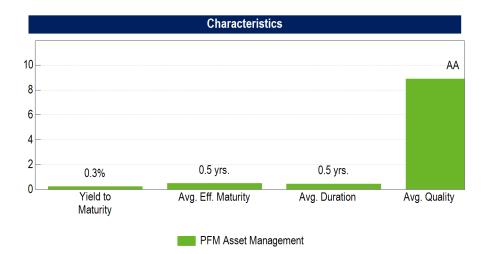
# LIQUIDITY MANAGER REVIEW

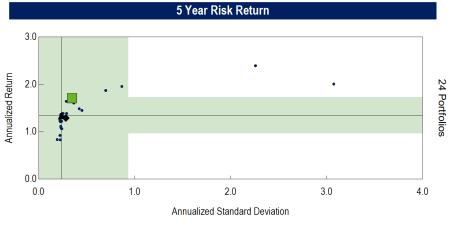
NEPC, LLC -

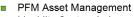
#### **PFM ASSET MANAGEMENT**











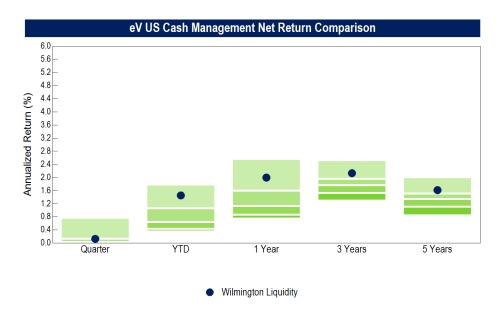
- ◆ Liquidity Custom Index
- Universe Median
- 68% Confidence Interval
- eV US Cash Management Net



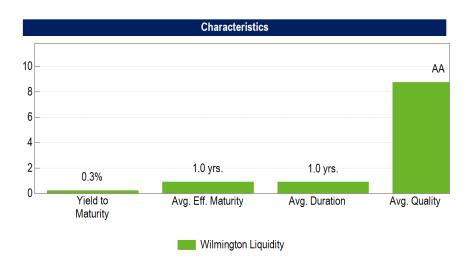


September 30, 2020

# WILMINGTON LIQUIDITY









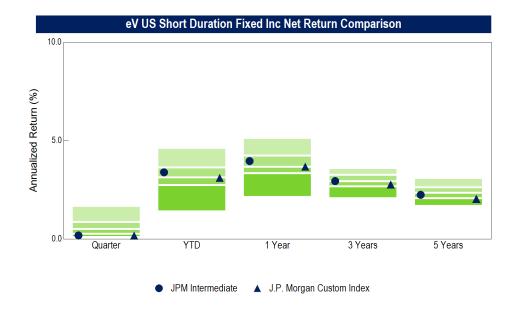


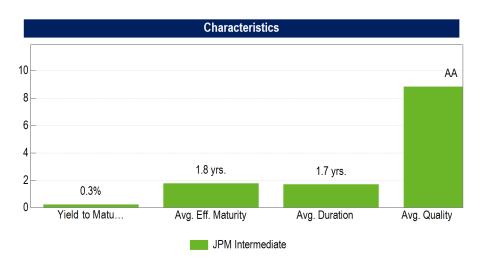
September 30, 2020

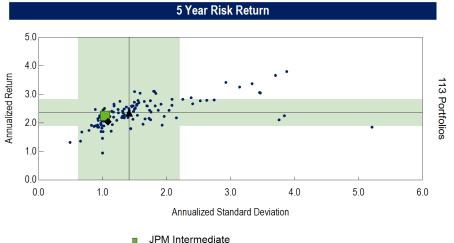
# RESERVE MANAGER REVIEW

NEPC, LLC —

#### JPM INTERMEDIATE







#### **Qualitative Attribution**

eV US Short Duration Fixed Inc Net

J.P. Morgan Custom Index Universe Median

68% Confidence Interval

**Duration and Yield Positioning:** JPM extended the duration of the portfolio during the quarter as the benchmark duration extended with the decline in interest rates.

**Result:** Duration/curve positioning had a neutral effect for quarter on the portfolio as the portfolio's duration and yield curve positioning moved in concert with the benchmark.

**Credit Positioning:** The portfolio maintained its overweight investment grade credit with a corresponding underweight to Treasuries.

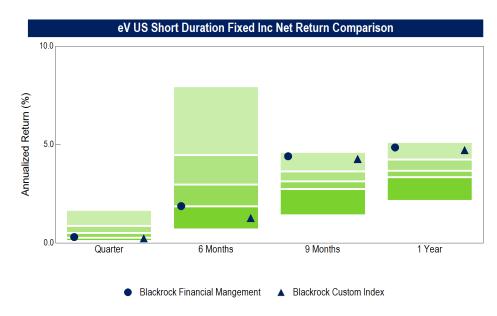
**Result:** The overweight position in investment grade credit was additive to the portfolio's return as credit spreads tightened during the quarter.

**Other Positioning:** Going forward JPM expects Treasury rates to remain at current yield levels given the recent posturing and comments by the Federal Reserve Board. As a result, the firm intends to maintain an overweight position in high quality corporate securities.

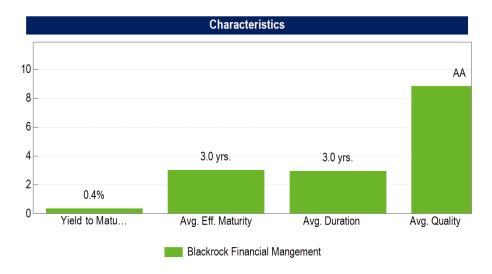


September 30, 2020

#### **BLACKROCK FINANCIAL MANAGEMENT**







#### **Qualitative Attribution**

**Duration and Yield Positioning:** The portfolio's duration was postioned below the benchmark in a belief that positive developments with either a fiscal sitmilus package or COVID-19 vaccine could cause short-term rates to rise.

**Result:** BlackRock's duration and curve positioning was not a meaningful contributor to or detractor from performance during the quarter.

**Credit Positioning:** Overall, the portfolio had an overweight to securitized assets such as MBS and ABS, and a slight overweight to Investment Grade Corporates.

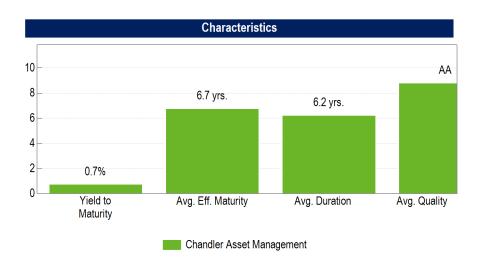
**Result:** Overall, the portfolio's sector positioning had a positive effect on performance as MBS and corporate spreasds tightened during the quarter.

**Other Positioning:** BlackRock continues to remain cautious in the current environment and favors an elevated position in higher quality agency securities relative to a significant overweight to in corporate securities.



#### CHANDLER ASSET MANAGEMENT







#### Qualitative Attribution

**Duration and Yield Positioning:** The portfolio's duration was extended slightly but continues to be positioned with a duration below the benchmark.

**Result:** Interest rates declined during the quarter but did not materially detract from performance during the period.

**Credit Positioning:** The portfolio continues to hold larger allocations to Treasury and high quality names. The overall quality is higher than the benchmark and will remain higher quality for the forseeable future.

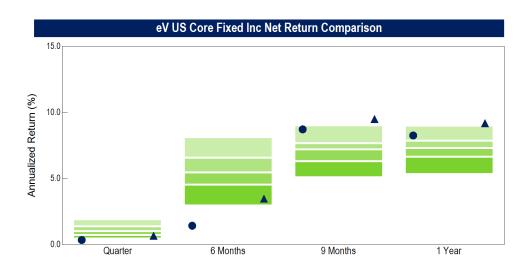
**Result:** The higher quality positioning detracted from returns during the risk on environment of the 3rd quarter.

**Other Positioning:** Overall the portfolio's positioning remained stable during the quarter with some minor adjustments in in the underlying holdings to maintain the structure and duration in line with the Chandler's current market outlook.

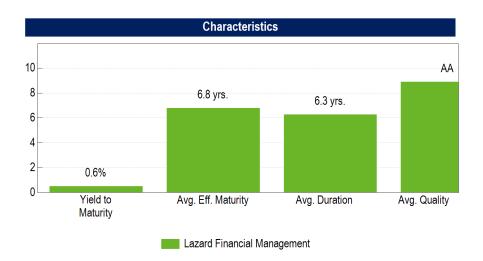


September 30, 2020

#### LAZARD FINANCIAL MANAGEMENT









#### Qualitative Attribution

eV US Core Fixed Inc Net

**Duration and Yield Positioning:** the portfolio duration was shortened at the beginning of the third quarter by selling 10-year Treasuries (near historic low yields) and buying 5-year Treasuries. The duration was reduced was to 0.3 years short of the underlying benchmark as part of the defensive positioning.

**Result:** the portfolio's defensive realignment detracted from value during the quarter.

**Credit Positioning:** The portfolio's overall credit exposure has consistently maintained a defensive posture, carrying an underweight to both Corporate and Non-US Government credit risk.

**Result:** The portfolio's overweight to Treasuries and underweight to investment grade corporate credit detracted from returns during the quarter.

**Other Positioning:** Lazard continues to search for attractively priced A-rated corporate positions. The portfolio continues to be conservatively positioned as the firm believes current yields and credit spreads to not adquately compensate investors.



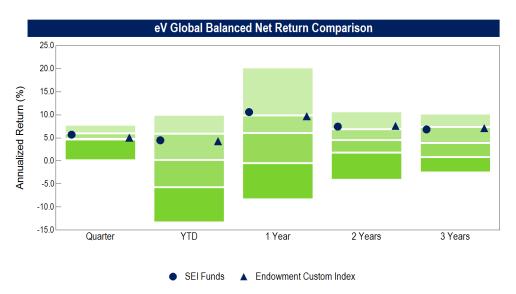
September 30, 2020

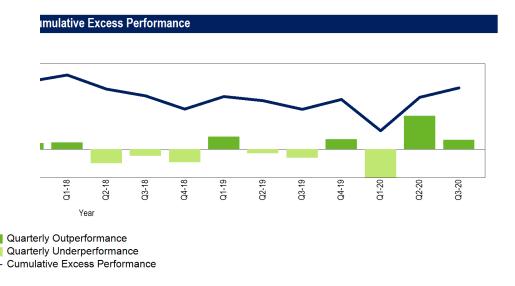
# ENDOWMENT MANAGER REVIEW

NEPC, LLC —

#### **SEI FUNDS**

SEI Funds manages a multi-asset class portfolio subject to a 60% target equity allocation which will be held in a range of 45% to 75%, with international equities not to exceed 35% of the equity allocation. A combination of fixed income, alternative investments, and cash will account for the remaining 40% target allocation. Funds will be managed by the following SEI strategies: SEI US Managed Volatility Strategy, SEI S&P 500 Index Strategy, SEI Extended Markets Index Strategy, SEI Small Cap II Equity Strategy, SEI World Equity ex-US Strategy, SEI Core Fixed Income Strategy, SEI High Yield Strategy, and SEI Emerging Markets Debt Strategy.

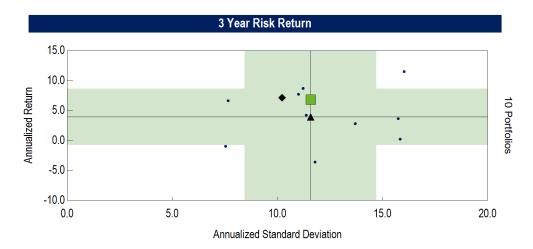




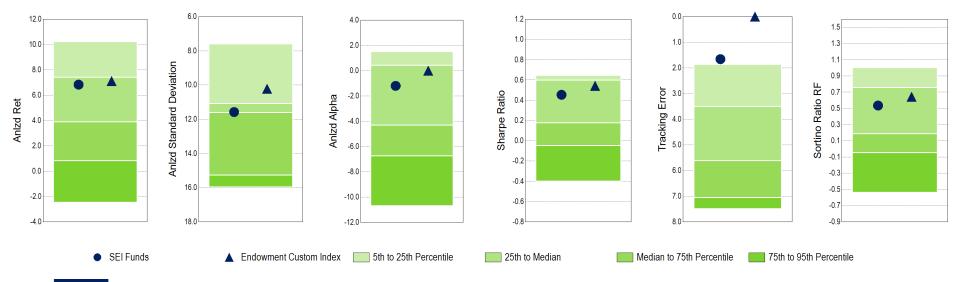


September 30, 2020

## **SEI FUNDS**



- SEI Funds
- Endowment Custom Index
- ▲ Universe Median
- 68% Confidence Interval
- eV Global Balanced Net



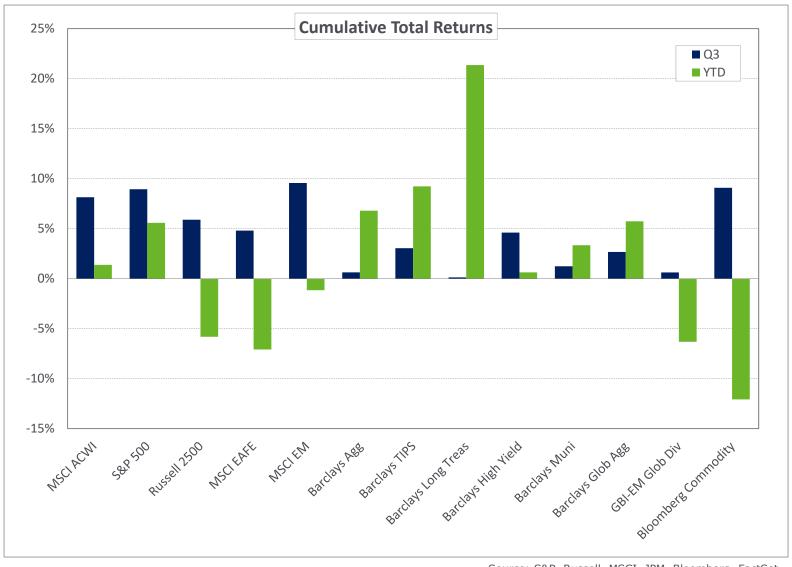


September 30, 2020

# REPORT APPENDIX

NEPC, LLC —

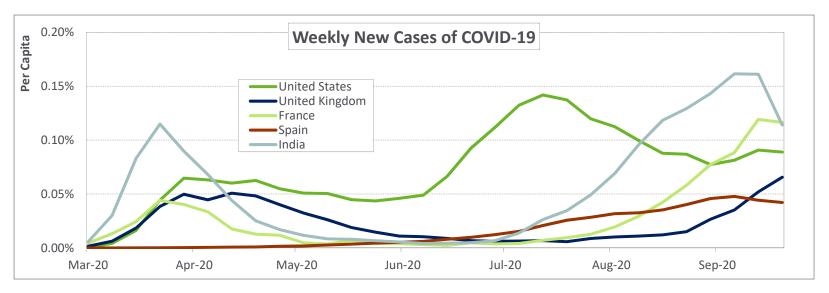
#### **RISK ASSETS RALLIED**

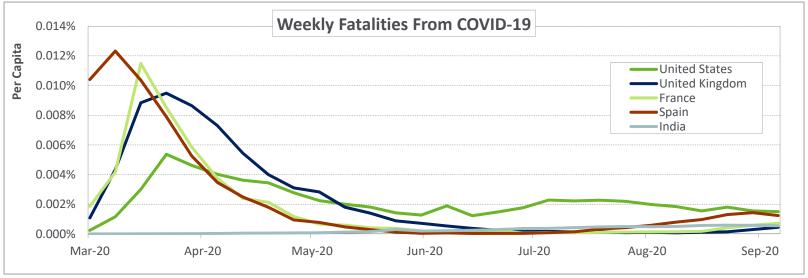






# **COVID CASES ARE RISING IN EUROPE**









#### **ECONOMIC DATA HAS SLOWLY IMPROVED**

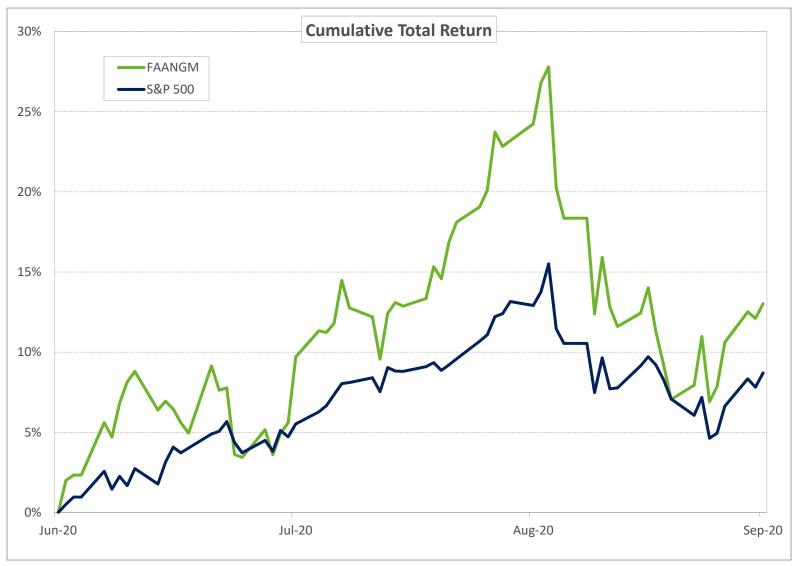
Metric	12/31/19	06/30/20	09/30/20	Trend
S&P 500 NTM Earnings Estimate	\$177.8	\$145.0	\$157.6	
US Real GDP (QoQ%)	2.4%	-31.4%	25.4% <sup>1</sup>	
US 10 Year Breakeven Inflation	1.8%	1.3%	1.6%	~~
US Unemployment Rate	3.5%	11.1%	7.9%	
Continued Claims for Unemployment	1.7M	19.0M	11.8M²	
Federal Reserve Balance Sheet as % of Nominal GDP	19.2%	36.3%	32.9%	



Source: US Bureau of Labor Statistics, Federal Reserve, FactSet, NEPC NTM represents next 12 months ¹The 09/30/20 real GDP figure represents the consensus estimate from FactSet

<sup>2</sup>The 09/30/20 Continued Claims represents data as of 9/18/2020

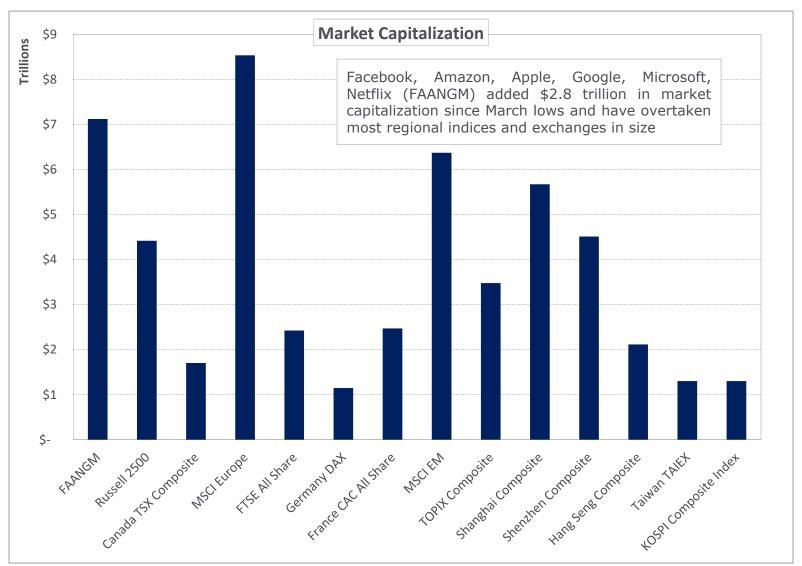
# **FAANGM CONTINUED TO OUTPERFORM**







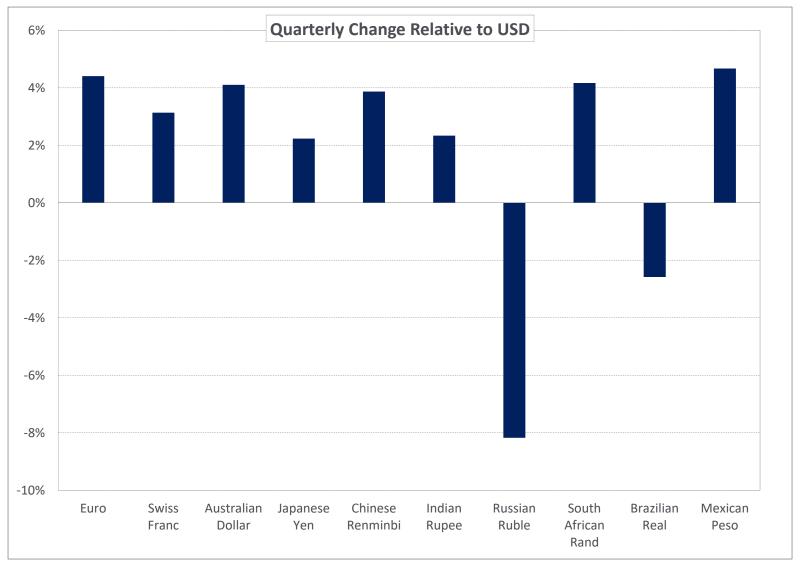
### **FAANGM NOW LARGER THAN MOST INDICES**



Source: MSCI, S&P, Russell, FTSE, DAX, CAC, TOPIX, SSE, SZSE, Hang Seng, TAIEX, KOSPI, FactSet



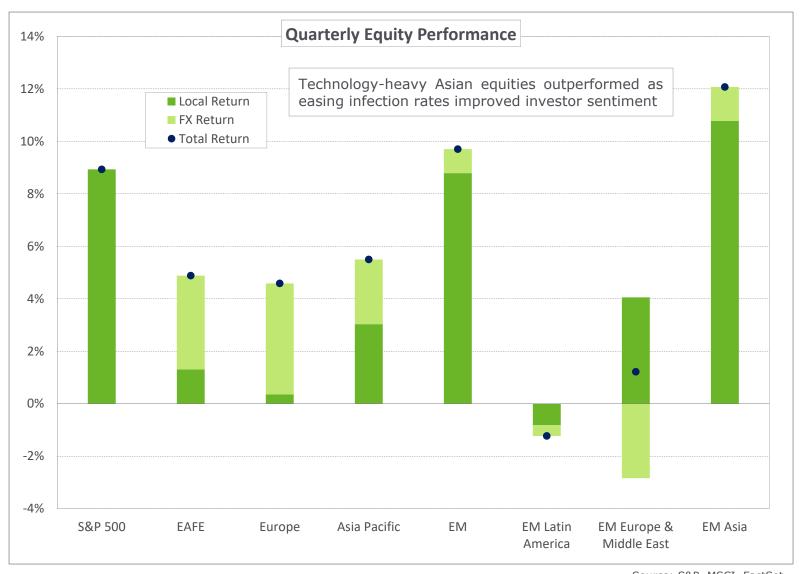
# **DOLLAR WEAKENED AGAINST MOST CURRENCIES**







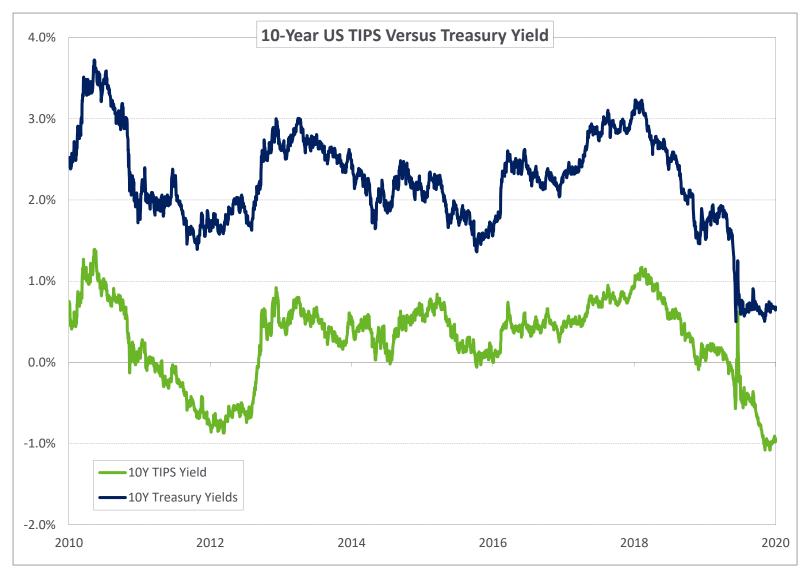
### **DOLLAR WEAKNESS BOLSTERED NON-US ASSETS**





Source: S&P, MSCI, FactSet
Asia Pacific represents (from highest to lowest) Japan, China, Australia, Taiwan, South Korea, and Other
EM Europe & Middle East represents (from highest to lowest) Russia, Saudi Arabia, Qatar, Poland, United Arab Emirates, and Other

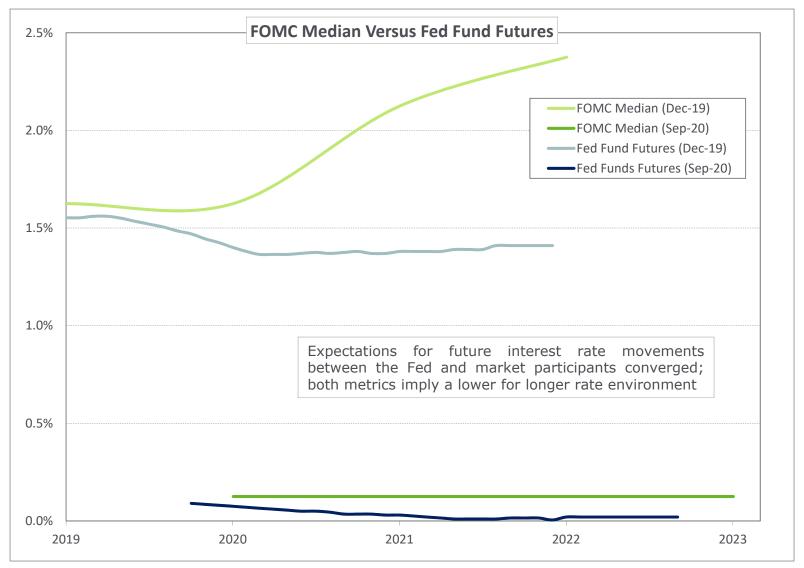
# TREASURY YIELDS FELL TO HISTORICAL LOWS







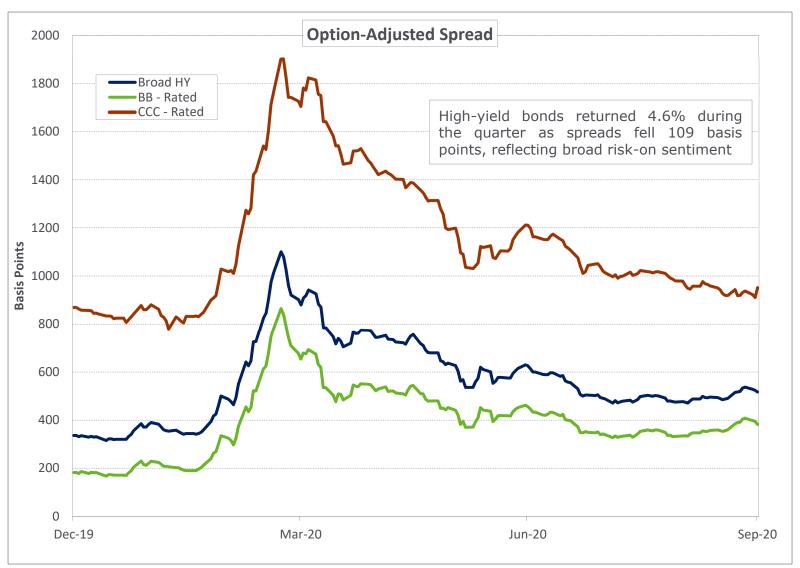
### FED FUNDS RATE EXPECTED TO REMAIN LOW







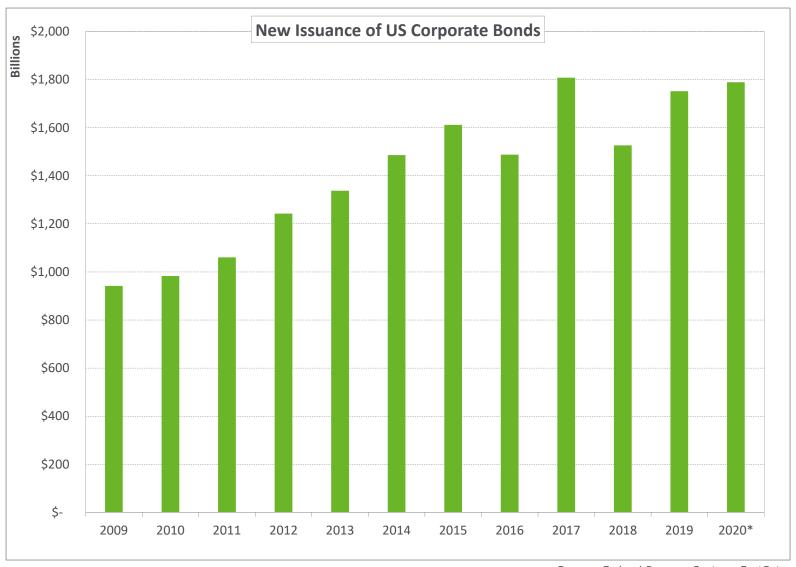
# **US SPREADS CONTINUED TO TIGHTEN**







# **DEBT ISSUANCE LIKELY TO HIT RECORD LEVELS**





Source: Federal Reserve System, FactSet 2020\* represents issuance data for the first eight months

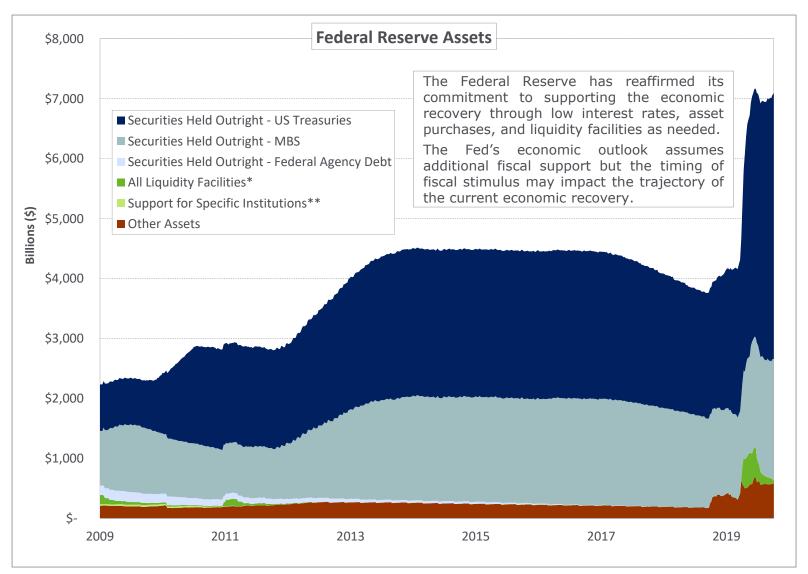
# **ASSESSING THE KEY MARKET THEMES**

# 09/30/20 Assessment

	Virus Trajectory	Permanent Interventions	Globalization Backlash	China Transitions
Dominant	Change in Status: - Virus Trajectory is the	<u>Change in Status:</u> - Globally, significant	Change in Status: - The influence of the	Change in Status: - Tensions between
Emerging	the dominant force driving market and economic outcomes.	monetary and fiscal stimulus has been aimed at lessening the economic impact	theme will likely increase in coming quarters as countries digest lasting	the US and China remain elevated as the US government attempted to ban
Neutral	While the market is optimistic regarding a vaccine, rising case counts in many areas may alter the economic reopening theme.	of COVID-19.  In the US, the prospect of a fiscal stimulus package has supported business and consumer sentiment.	impacts from the pandemic.  The world will likely be faced with an amplified wealth divide given economic and labor	apps, such as TikTok and WeChat, from US platforms given data concerns.  The upcoming US election is a source of uncertainty as the
Fading	A significant amount of uncertainty remains related to the path of the virus and	However, the timing of the stimulus is unclear with the	market disruptions.  In addition, backlash may continue as	outcome may alter relations between the countries.
Dormant	the timing of an economic recovery.	upcoming presidential election.	countries reassess global supply chains.	



## **ELEVATED PERMANENT INTERVENTIONS**





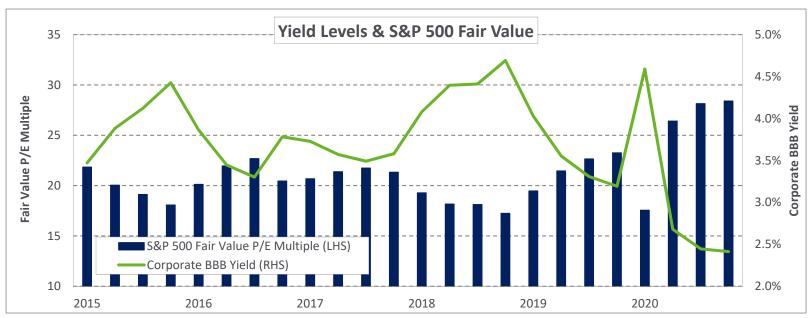
Sources: Federal Reserve, FactSet, NEPC; \*All Liquidity Facilities includes term auction credit, primary credit, secondary credit, seasonal credit, Primary Dealer Credit Facility, Asset-Backed Commercial Paper, Money Market Mutual Fund Liquidity Facility, and central bank liquidity swaps; \*\*Support for Specific Institutions includes credit extended to AIG and Maiden Lane LLCs

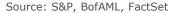
### **ELEVATED PERMANENT INTERVENTIONS**

# A regime shift is underway defined by central bank market interventions and permanent fiscal support

This dynamic drives low interest rates and high P/E multiples, rendering valuations as a less potent market signal

# The COVID-19 pandemic has supercharged this theme with an outsized central bank response and fiscal relief







#### GLOSSARY OF INVESTMENT TERMINOLOGY

# Of Portfolios/Observations<sup>1</sup> - The total number of data points that make up a specified universe

**Allocation Index**<sup>3</sup> - The allocation index measures the value added (or subtracted) to each portfolio by active management. It is calculated monthly: The portfolio asset allocation to each category from the prior month-end is multiplied by a specified market index.

Asset Allocation Effect<sup>2</sup> - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.

Agency Bonds (Agencies)<sup>3</sup> - The full faith and credit of the United States government is normally not pledged to payment of principal and interest on the majority of government agencies issuing these bonds, with maturities of up to ten years. Their yields, therefore, are normally higher than government and their marketability is good, thereby qualifying them as a low risk-high liquidity type of investment. They are eligible as security for advances to the member banks by the Federal Reserve, which attests to their standing.

Asset Backed Securities (ABS)<sup>3</sup> - Bonds which are similar to mortgagebacked securities but are collateralized by assets other than mortgages; commonly backed by credit card receivables, auto loans, or other types of consumer financing.

**Attribution**<sup>3</sup> - Attribution is an analytical technique that allows us to evaluate the performance of the portfolio relative to the benchmark. A proper attribution tells us where value was added or subtracted as a result of the manager's decisions.

**Average Effective Maturity** - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.

For a portfolio of bonds, average effective maturity is the weighted average of the maturities of the underlying bonds. The measure is computed by weighing each bond's maturity by its market value with respect to the portfolio and the likelihood of any of the bonds being called. In a pool of mortgages, this would also account for the likelihood of prepayments on the mortgages.

**Batting Average<sup>1</sup>** - A measurement representing an investment manager's ability to meet or beat an index.

Formula: Divide the number of days (or months, quarters, etc.) in which the manager beats or matches the index by the total number of days (or months, quarters, etc.) in the period of question and multiply that factor by 100.

**Brinson Fachler (BF) Attribution<sup>1</sup>** - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

Brinson Hood Beebower (BHB) Attribution<sup>1</sup> - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

Corporate Bond (Corp) <sup>4</sup> - A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds.

**Correlation¹** - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.

Data Source: 'InvestorForce, 'Interaction Effect Performance Attribution, 'NEPC, LLC, 'Investopedia, 'Hedgeco.net



#### GLOSSARY OF INVESTMENT TERMINOLOGY

Coupon<sup>4</sup> – The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the "coupon rate" or "coupon percent rate."

Currency Effect<sup>1</sup> - Is the effect that changes in currency exchange rates over time affect excess performance.

**Derivative Instrument**<sup>3</sup> - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

**Downside Deviation<sup>1</sup>** - Equals the standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns

#### Formula:

Annualized Standard Deviation (Fund Return - Average Fund Return) where average fund return is greater than individual fund returns, monthly or quarterly.

**Duration**<sup>3</sup> - Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond's duration is inversely related to interest rates and directly related to time to maturity.

Equity/Debt/Cash Ratio<sup>1</sup> – The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. A 7/89/4 ratio represents an investment that is made up of 7% Equity, 89% Debt, and 4% Cash).

**Foreign Bond<sup>3</sup>** - A bond that is issued in a domestic market by a foreign entity, in the domestic market's currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm's debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.

Hard Hurdle<sup>5</sup> – is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

High-Water Mark<sup>4</sup> - The highest peak in value that an investment fund/ account has reached. This term is often used in the context of fund manager compensation, which is performance based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

**Hurdle Rate**<sup>4</sup> - The minimum rate of return on an investment required, in order for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.

Interaction Effects<sup>2</sup> - The interaction effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with the either effect.

Median<sup>3</sup> - The value (rate of return, market sensitivity, etc.) that exceeds onehalf of the values in the population and that is exceeded by one-half of the values. The median has a percentile rank of 50.

Modified Duration<sup>3</sup> - The percentage change in the price of a fixed income security that results from a change in yield.

Mortgage Backed Securities (MBS)<sup>3</sup> - Bonds which are a general obligation of the issuing institution but are also collateralized by a pool of mortgages.

Municipal Bond (Muni) <sup>4</sup> - A debt security issued by a state, municipality or county to finance its capital expenditures.

**Net Investment Change<sup>1</sup>** – Is the change in an investment after accounting for all Net Cash Flows.

**Performance Fee<sup>4</sup>** - A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.

Data Source: 1InvestorForce, 2Interaction Effect Performance Attribution, 3NEPC, LLC, 4Investopedia, 5Hedgeco.net



#### **GLOSSARY OF INVESTMENT TERMINOLOGY**

**Policy Index**<sup>3</sup> - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in this investment policy statement.

**Price to Book** (P/B)<sup>4</sup> - A ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share, also known as the "price-equity ratio".

Price to Earnings (P/E)<sup>3</sup> - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).

Price to Sales (P/S)<sup>4</sup> - A ratio for valuing a stock relative to its own past performance, other companies, or the market itself. Price to sales is calculated by dividing a stock's current price by its revenue per share for the trailing 12 months.

Return on Equity (ROE)<sup>4</sup> - The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Selection (or Manager) Effect<sup>2</sup> - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect—the larger the sector, the larger the effect is, positive or negative.

Soft Hurdle rate<sup>5</sup> – is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

**Tiered Fee<sup>1</sup>** – A fee structure that is paid to fund managers based on the size of the investment (i.e. 1.00% fee on the first \$10M invested, 0.90% on the next \$10M, and 0.80% on the remaining balance).

**Total Effects<sup>2</sup>** - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.

**Total Return<sup>1</sup>** - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

Universe3 - The list of all assets eligible for inclusion in a portfolio.

Upside Deviation - Standard Deviation of Positive Returns

Weighted Avg. Market Cap. 4 - A stock market index weighted by the market capitalization of each stock in the index. In such a weighting scheme, larger companies account for a greater portion of the index. Most indexes are constructed in this manner, with the best example being the S&P 500.

Yield (%)<sup>3</sup> - The current yield of a security is the current indicated annual dividend rate divided by current price.

Yield to Maturity<sup>3</sup> -The discount rate that equates the present value of cash flows, both principal and interest, to market price.

Data Source: InvestorForce, Interaction Effect Performance Attribution, NEPC, LLC, Investopedia, Hedgeco.net



#### **Information Disclaimer**

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank.
   Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

#### **Reporting Methodology**

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.

