

INVESTMENT PERFORMANCE SUMMARY QUARTER ENDING DECEMBER 31, 2019

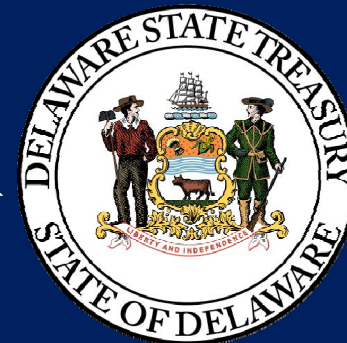
OFFICE OF THE STATE TREASURER & CASH MANAGEMENT POLICY BOARD

December 31, 2019

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BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

MARKET ENVIRONMENT

NEPC, LLC

PERFORMANCE OVERVIEW

Q4 Market Summary

Macro			Equity			Credit			Real Assets		
US Dollar	VIX	US 10-Yr	S&P 500	MSCI EAFE	MSCI EM	US Agg.	High Yield	Dollar EMD	Oil	Gold	REITS
											
-3.0%	-2.5	24 bps	9.1%	8.2%	11.8%	0.2%	2.6%	1.8%	13.0%	3.1%	0.6%

Global risk assets rallied during the quarter as prospects of a trade deal increased and global central banks continued easing monetary policy to offset economic growth concerns

Dollar weakness provided a tailwind for international and emerging market asset returns

Increasing yields caused the spread between the 10-year and 3-month Treasuries to move into positive territory, widening to 37 basis points – marking the largest spread since January 2019

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 PERFORMANCE OVERVIEW

Q4 Macro Market Summary

Global central banks continued easing with the Fed cutting rates and the ECB reigniting monthly bond purchases

Emerging market currencies appreciated relative to the dollar as trade concerns eased

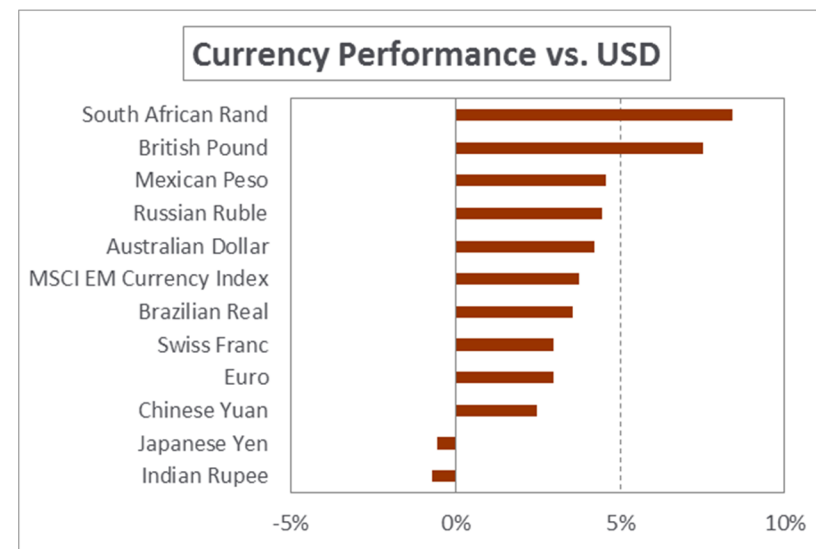
Global government bond yields increased reflecting optimism around trade and expected growth

	Yield 9/30/19	Yield 12/31/19	\Delta
US 10-Year	1.68%	1.92%	+0.24%
US 30-Year	2.12%	2.39%	+0.27%
US Real 10-Year	0.15%	0.15%	-
German 10-Year	-0.58%	-0.19%	+0.40%
Japan 10-Year	-0.23%	-0.02%	+0.21%
China 10-Year	3.17%	3.20%	+0.03%
EM Local Debt	5.21%	5.22%	+0.01%

Source: FactSet

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	1.50% - 1.75%	2.0%	The Fed cut interest rates by 25 basis points in October and signaled a pause from further rate cuts
European Central Bank	0.00%	1.0%	The ECB maintained its current benchmark interest rates and restarted monthly bond purchases of €20 billion in November
Bank of Japan	-0.10%	0.5%	The BoJ will continue its ultra-easy QE program with inflation remaining well below target

Source: FactSet



Source: FactSet



EQUITY PERFORMANCE OVERVIEW

Q4 Equity Market Summary

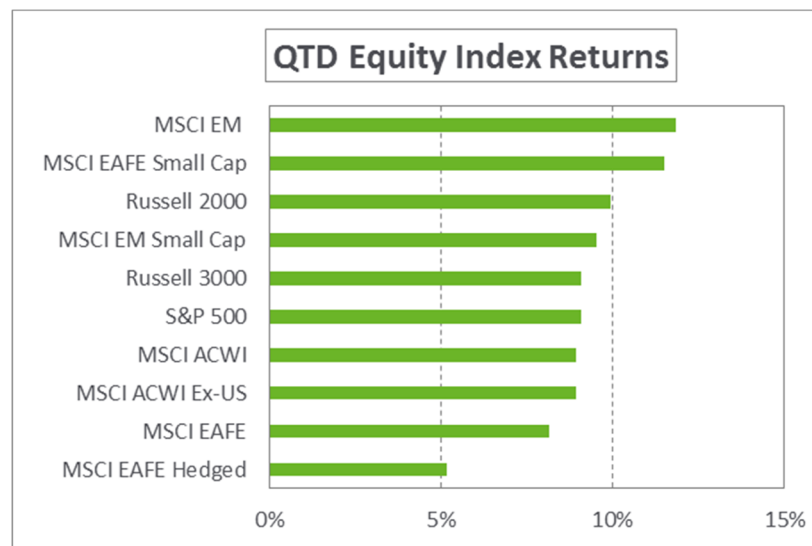
Global equities posted stellar returns in Q4, adding to already sizable year-to-date gains

Dollar weakness provided a boon to international and emerging market returns

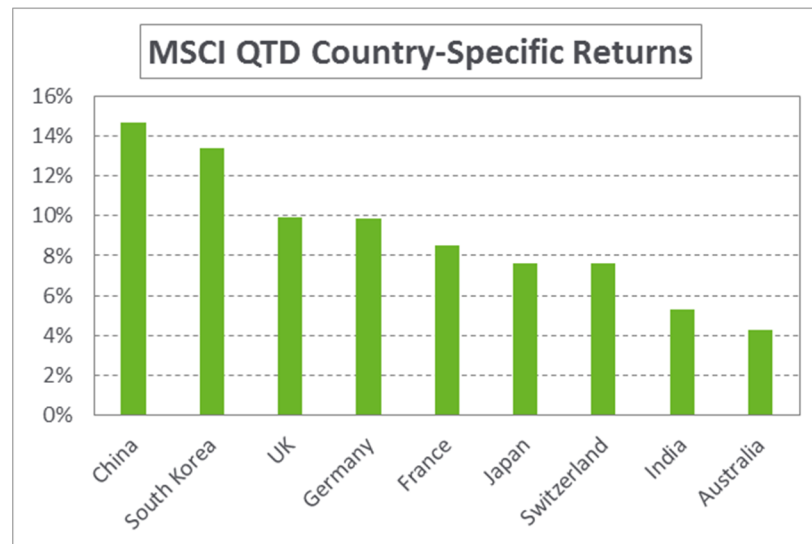
Chinese equities outperformed broad emerging market equities – following news of a potential trade deal between the US and China

Russell 3000 QTD Sector Returns	
Technology	+14.3%
Health Care	+14.9%
Consumer Discretionary	+6.3%
Consumer Staples	+4.7%
Energy	+5.7%
Materials & Processing	+7.0%
Producer Durables	+6.4%
Financial Services	+7.6%
Utilities	+1.5%

Source: FactSet



Source: FactSet



Source: FactSet



CREDIT PERFORMANCE OVERVIEW

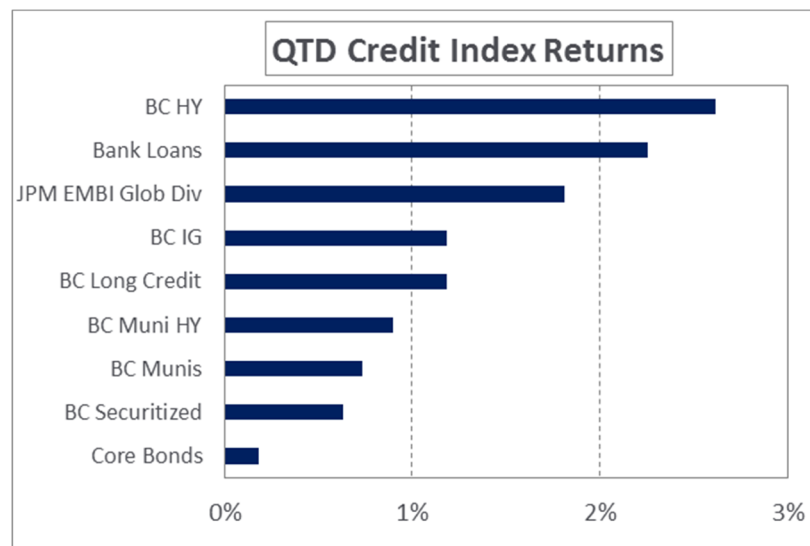
Q4 Credit Market Summary

Return-seeking credit broadly outperformed safe-haven assets with spread tightening reflecting risk on sentiment

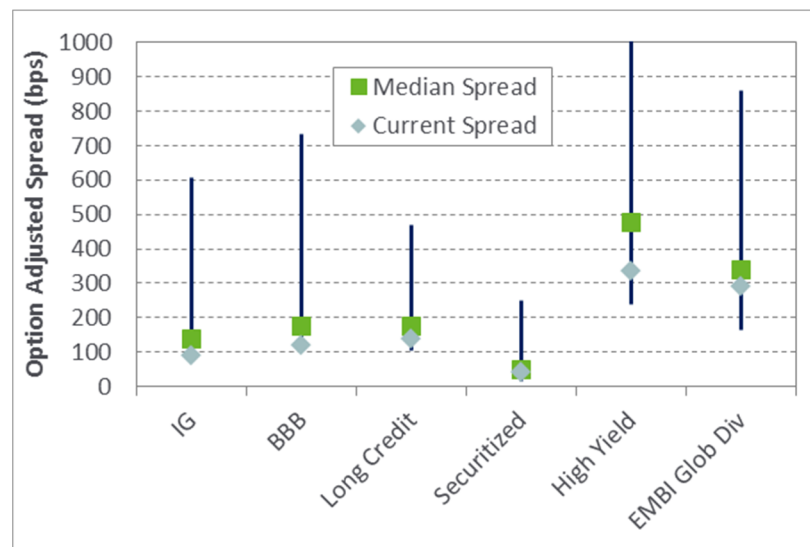
In most areas of credit, spreads moved lower and remain well below long-term median levels

Credit Spread (Basis Points)	9/30/2019	12/31/2019	Δ
BC IG Credit	115	93	-22
BC Long Credit	167	139	-28
BC Securitized	47	42	-5
BC High Yield	373	336	-37
Muni HY	250	226	-24
JPM EMBI	337	291	-46
Bank Loans - Libor	398	372	-25

Source: FactSet



Source: FactSet



Source: FactSet; Ranges calculated since 11/30/2000



REAL ASSETS PERFORMANCE OVERVIEW

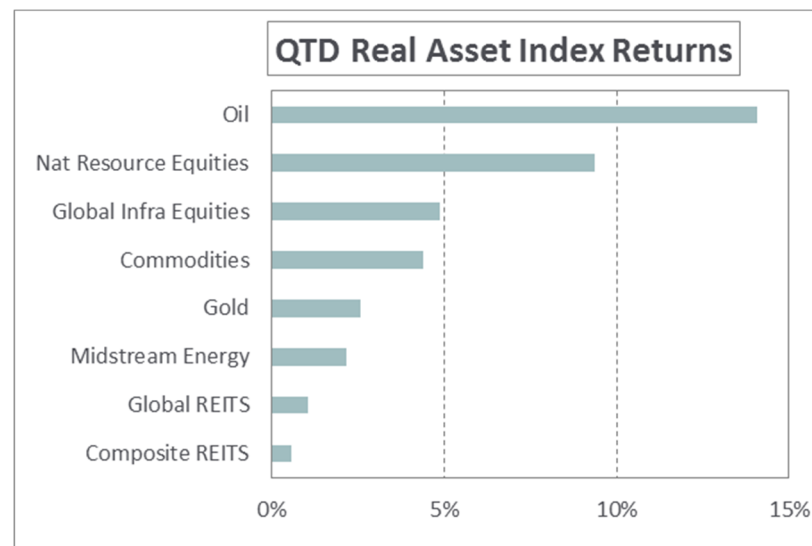
Q4 Real Assets Market Summary

Spot WTI crude oil increased 13.0% as a result of OPEC production cuts and easing US-China trade concerns

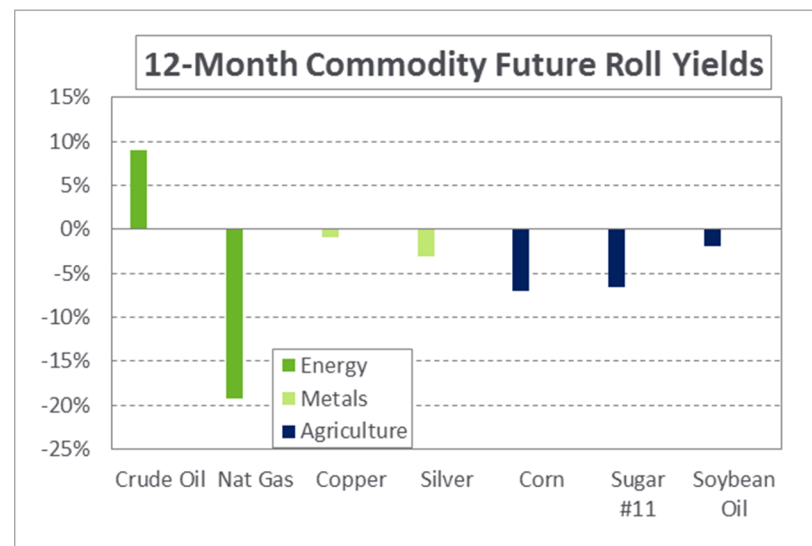
The expectation of modestly higher inflation caused gold and other inflation-sensitive assets to rally

Real Asset Yields	9/30/19	12/31/19
Midstream Energy	6.4%	6.4%
Core Real Estate	4.5%	4.4%
Composite REITs	4.0%	4.1%
Global REITs	4.1%	4.2%
Global Infrastructure Equities	4.2%	4.0%
Natural Resource Equities	4.3%	3.9%
US 10-Year Breakeven Inflation	1.49%	1.77%
Commodity Index Roll Yield	-3.0%	-1.7%
10-Year TIPS Real Yield	0.2%	0.2%

Source: FactSet



Source: FactSet



Source: FactSet



EXECUTIVE SUMMARY

NEPC, LLC

Delaware Office of the State Treasurer

TOTAL FUND PERFORMANCE SUMMARY

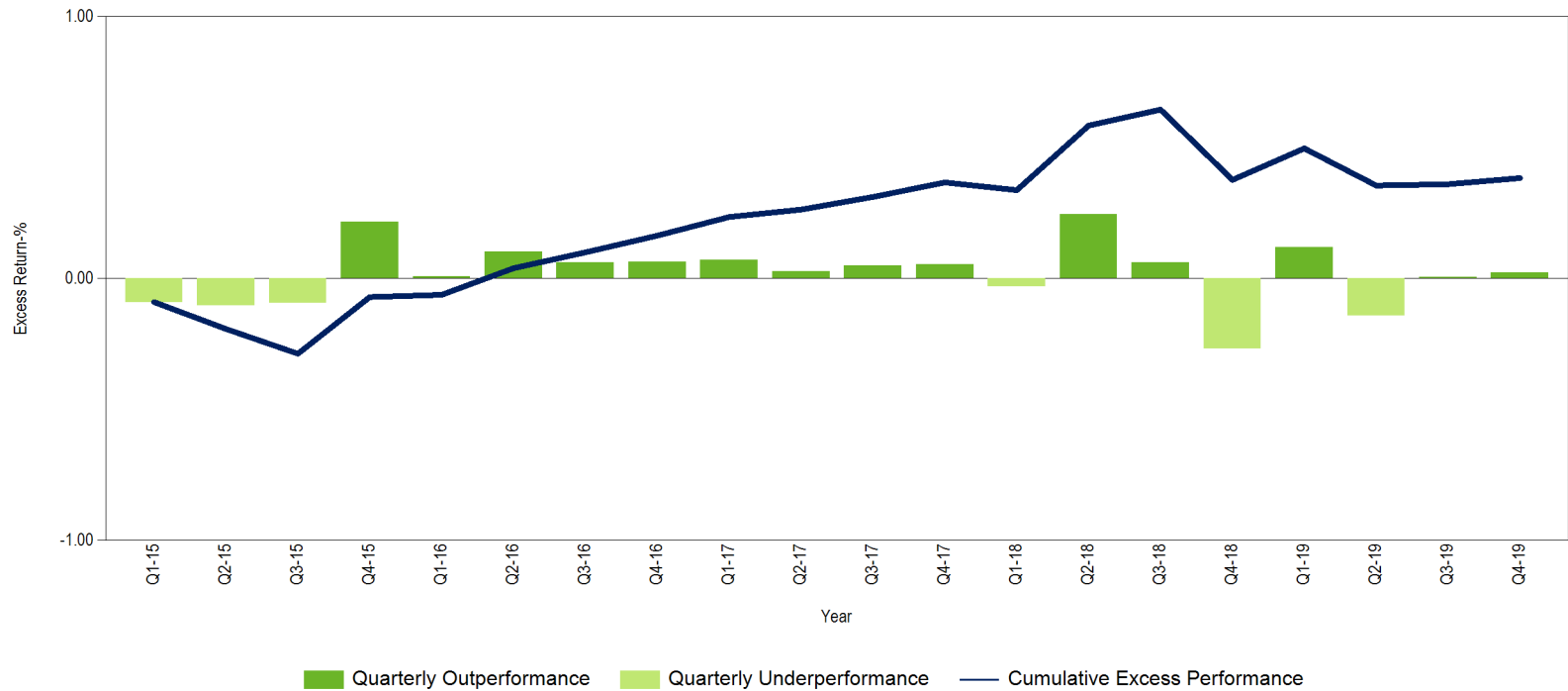
	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	Inception	Inception Date
Delaware Total Consolidation	\$2,662,578,285	0.38%	1.66%	5.62%	2.97%	2.14%	2.15%	Jan-05
Total Liquidity & Reserve	\$2,586,796,149	0.23%	1.54%	5.20%	2.74%	--	2.49%	Nov-16
Total Liquidity	\$613,707,557	0.54%	1.21%	2.92%	2.00%	1.48%	1.83%	Jan-05
<i>eV US Cash Management Net Median</i>		<i>0.48%</i>	<i>1.03%</i>	<i>2.31%</i>	<i>1.79%</i>	<i>1.22%</i>	<i>1.51%</i>	<i>Jan-05</i>
Total Reserve	\$1,973,088,592	0.12%	1.61%	6.63%	3.22%	2.36%	2.49%	Jan-05
<i>Reserve Custom Index</i>		<i>0.10%</i>	<i>1.58%</i>	<i>6.62%</i>	<i>3.14%</i>	<i>2.28%</i>	<i>2.68%</i>	<i>Jan-05</i>
<i>eV US Interm Duration Fixed Inc Net Median</i>		<i>0.37%</i>	<i>1.74%</i>	<i>6.74%</i>	<i>3.19%</i>	<i>2.56%</i>	<i>3.76%</i>	<i>Jan-05</i>
Total Endowment	\$75,782,136	5.88%	5.98%	19.88%	9.18%	--	6.65%	Aug-15
<i>Endowment Custom Index</i>		<i>5.15%</i>	<i>6.48%</i>	<i>20.01%</i>	<i>9.27%</i>	<i>6.63%</i>	<i>6.82%</i>	<i>Aug-15</i>
<i>eV Global Balanced Net Median</i>		<i>6.07%</i>	<i>7.50%</i>	<i>19.32%</i>	<i>9.33%</i>	<i>6.44%</i>	<i>7.14%</i>	<i>Aug-15</i>

Fiscal year ends June 30



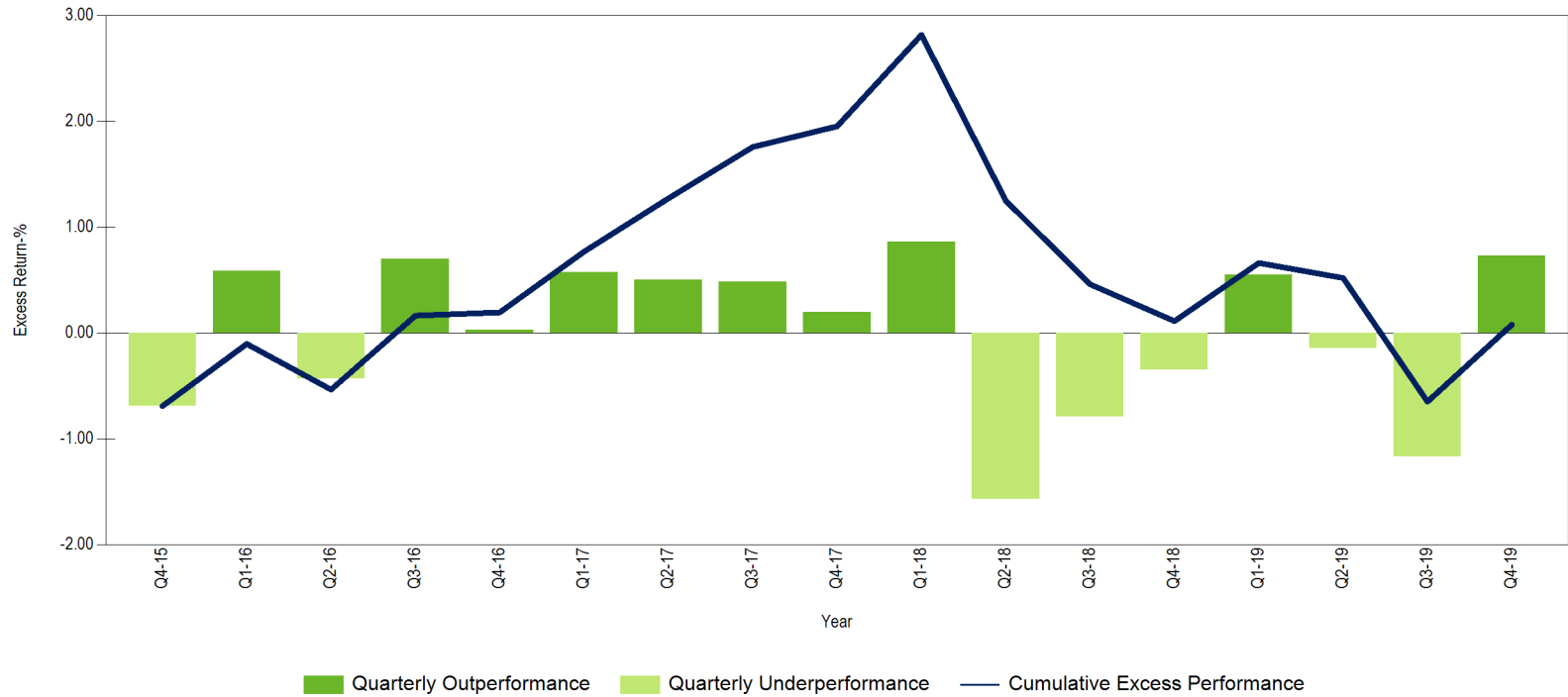
TOTAL FUND PERFORMANCE SUMMARY

Quarterly and Cumulative Excess Performance
Total Reserve vs. Reserve Custom Index



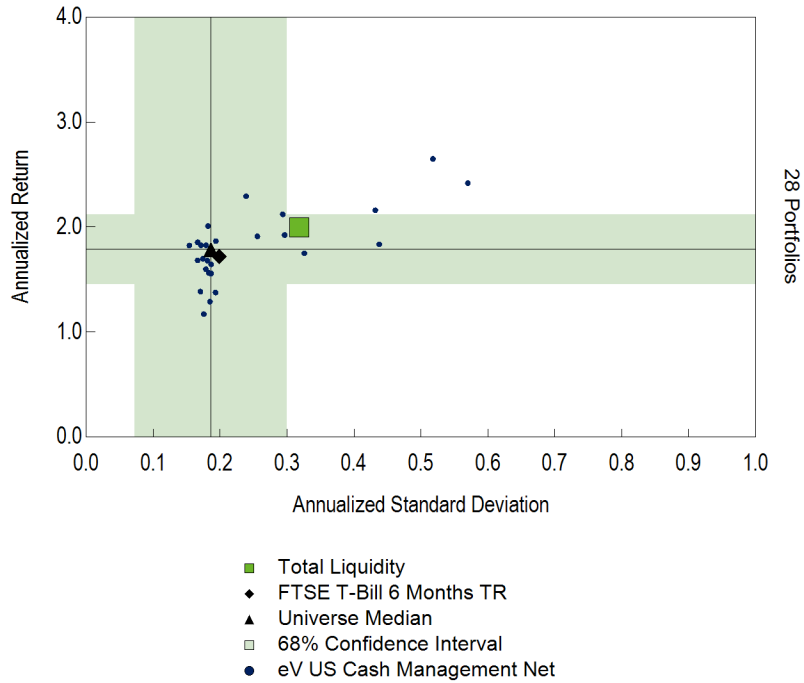
TOTAL FUND PERFORMANCE SUMMARY

Quarterly and Cumulative Excess Performance
Total Endowment vs. Endowment Custom Index

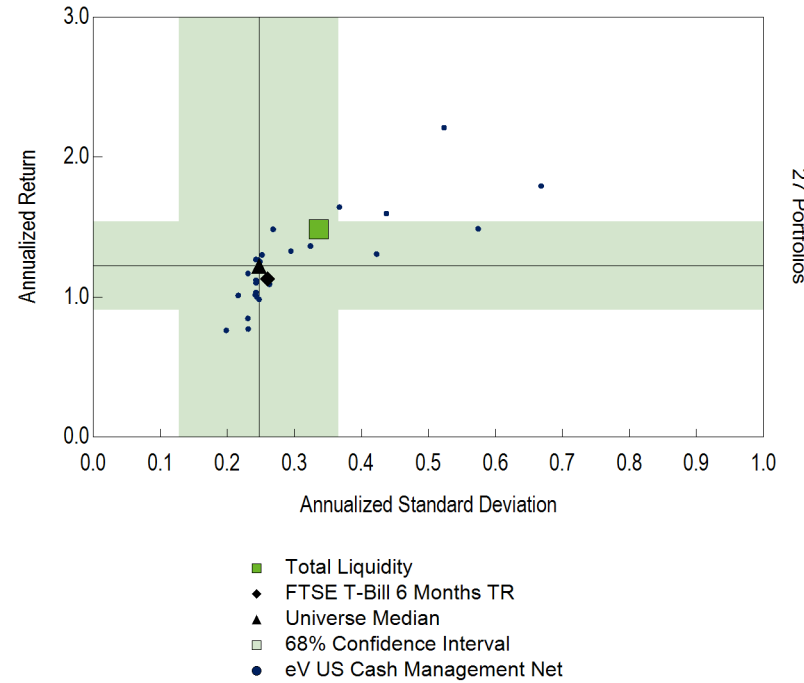


LIQUIDITY RISK/RETURN - 3 & 5 YEARS

3 Years Ending December 31, 2019



5 Years Ending December 31, 2019



3 Years Ending December 31, 2019

	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio
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Total Liquidity	2.00%	0.32%	1.12
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5 Years Ending December 31, 2019

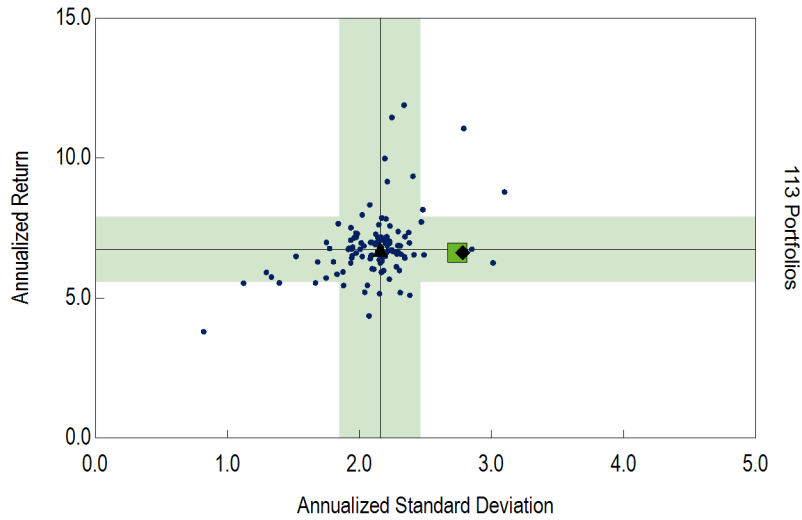
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio
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Total Liquidity	1.48%	0.34%	1.28
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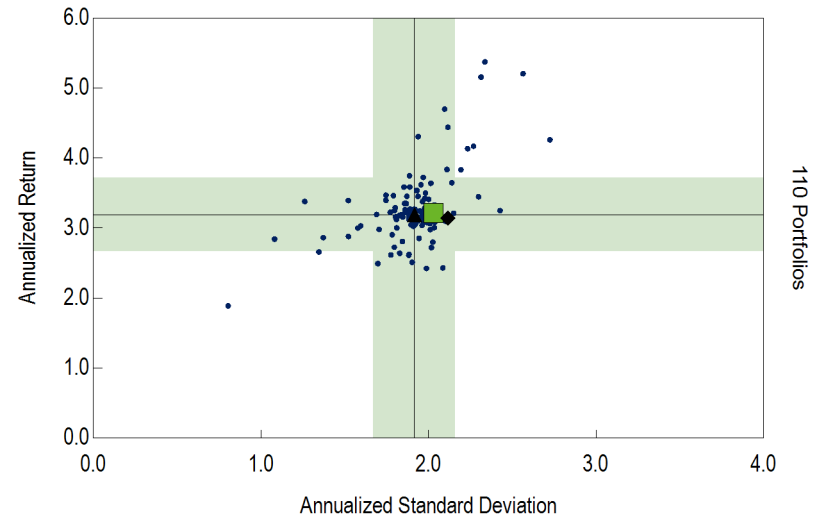
RESERVE RISK/RETURN - 1 & 3 YEARS

1 Year Ending December 31, 2019



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

3 Years Ending December 31, 2019



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

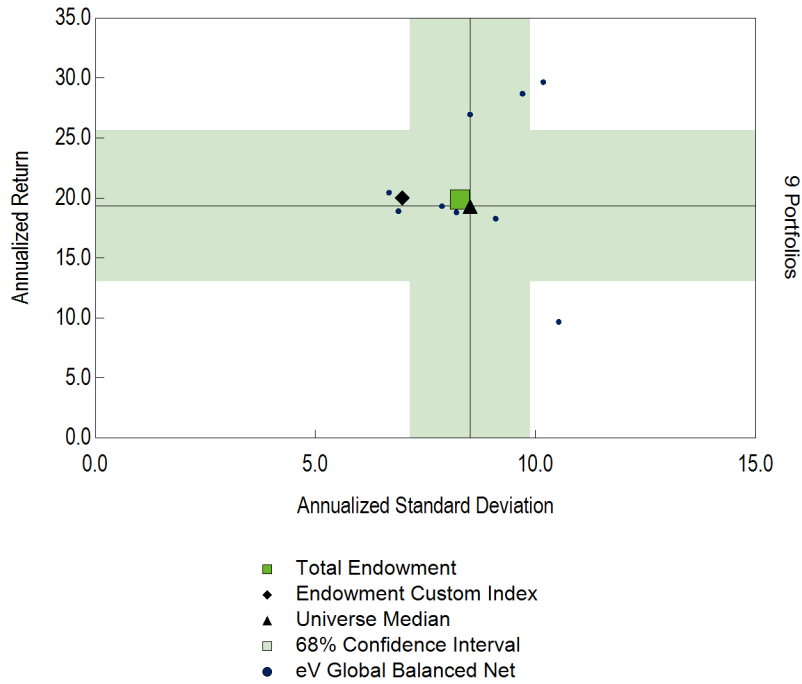
1 Year Ending December 31, 2019			
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio
Total Reserve	6.63%	2.74%	1.62
Reserve Custom Index	6.62%	2.78%	1.59

3 Years Ending December 31, 2019			
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio
Total Reserve	3.22%	2.03%	0.79
Reserve Custom Index	3.14%	2.12%	0.72

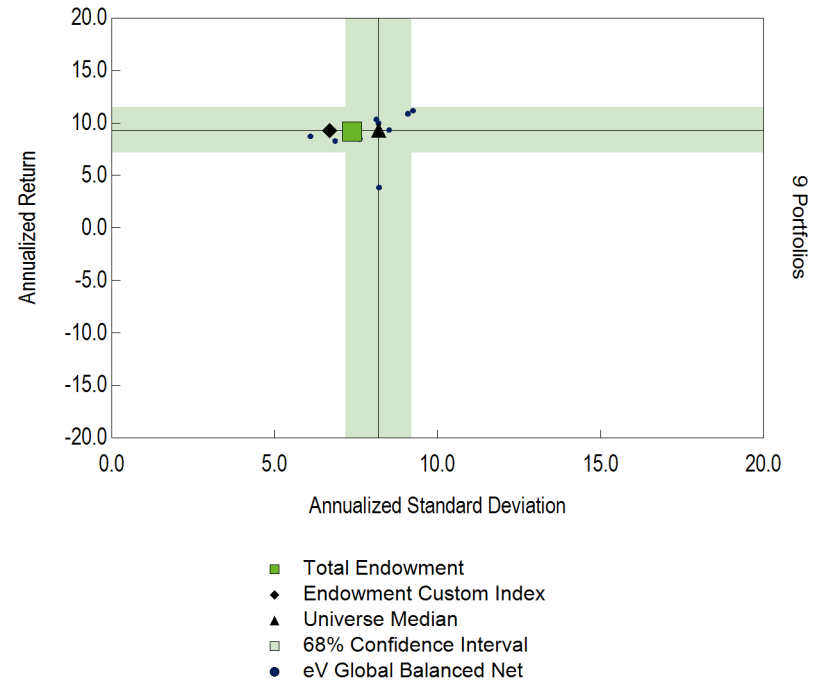


ENDOWMENT RISK/RETURN - 1 & 3 YEARS

1 Year Ending December 31, 2019



3 Years Ending December 31, 2019



1 Year Ending December 31, 2019			
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio
Total Endowment	19.88%	8.29%	2.15
Endowment Custom Index	20.01%	6.97%	2.57

3 Years Ending December 31, 2019			
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio
Total Endowment	9.18%	7.37%	1.02
Endowment Custom Index	9.27%	6.69%	1.14



TOTAL FUND PERFORMANCE DETAIL - NET OF FEES

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Delaware Total Consolidation	2,662,578,285	100.00	0.38	--	1.66	--	5.62	--	2.97	--	2.14	--	2.15	Jan-05
Total Liquidity & Reserve	2,586,796,149	97.15	0.23	--	1.54	--	5.20	--	2.74	--	--	--	2.49	Nov-16
Total Liquidity	613,707,557	23.05	0.54	18	1.21	17	2.92	19	2.00	20	1.48	20	1.83	Jan-05
<i>eV US Cash Management Net Median</i>			0.48		1.03		2.31		1.79		1.22		1.51	Jan-05
PFM Asset Management	308,005,366	11.57	0.55	17	1.21	17	2.88	20	2.00	19	1.53	14	1.29	Jun-13
Wilmington Liquidity	305,702,191	11.48	0.54	19	1.20	17	2.95	19	1.93	23	1.44	21	4.16	Jan-85
Total Reserve	1,973,088,592	74.10	0.12	94	1.61	74	6.63	55	3.22	47	2.36	79	2.49	Jan-05
<i>Reserve Custom Index</i>			0.10	95	1.58	76	6.62	56	3.14	61	2.28	88	2.68	Jan-05
<i>eV US Interm Duration Fixed Inc Net Median</i>			0.37		1.74		6.74		3.19		2.56		3.76	Jan-05
JPM Intermediate	481,816,839	18.10	0.55	43	1.23	70	4.05	67	2.26	61	1.80	58	1.54	Jun-13
<i>J.P. Morgan Custom Index</i>			0.56	42	1.22	72	3.83	76	2.12	76	1.67	72	1.45	Jun-13
Blackrock Financial Mangement	486,482,529	18.27	0.43	82	1.34	46	4.78	28	--	--	--	--	3.82	Mar-18
<i>Blackrock Custom Index</i>			0.44	80	1.27	61	4.62	36	2.43	44	1.85	56	3.71	Mar-18
Chandler Asset Management	505,057,798	18.97	-0.04	80	2.02	88	8.79	66	4.05	--	2.86	--	2.39	Jun-13
Lazard Financial Management	499,731,426	18.77	-0.43	99	1.82	94	8.85	60	--	--	--	--	6.26	Mar-18
<i>Chandler/Lazard Custom Index</i>			-0.30	98	1.90	93	9.04	50	4.00	60	2.79	85	6.33	Mar-18
Total Endowment	75,782,136	2.85	5.88	62	5.98	82	19.88	44	9.18	54	--	--	6.65	Aug-15
<i>Endowment Custom Index</i>			5.15	88	6.48	60	20.01	43	9.27	52	6.63	46	6.82	Aug-15
<i>eV Global Balanced Net Median</i>			6.07		7.50		19.32		9.33		6.44		7.14	Aug-15
SEI Funds	26,275,282	0.99	5.85	63	6.54	60	20.71	37	9.62	45	--	--	7.64	Aug-15
MSIFT Global Strategist	24,350,513	0.91	6.13	41	5.52	93	18.06	88	8.88	60	--	--	5.98	Aug-15
JP Morgan Diversified	25,155,918	0.94	5.68	68	5.84	87	20.83	37	9.50	47	--	--	6.86	Aug-15
Cash Account	423	0.00	0.44	69	0.93	83	2.08	87	1.36	94	--	--	0.99	Aug-15

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 BofA ML 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.

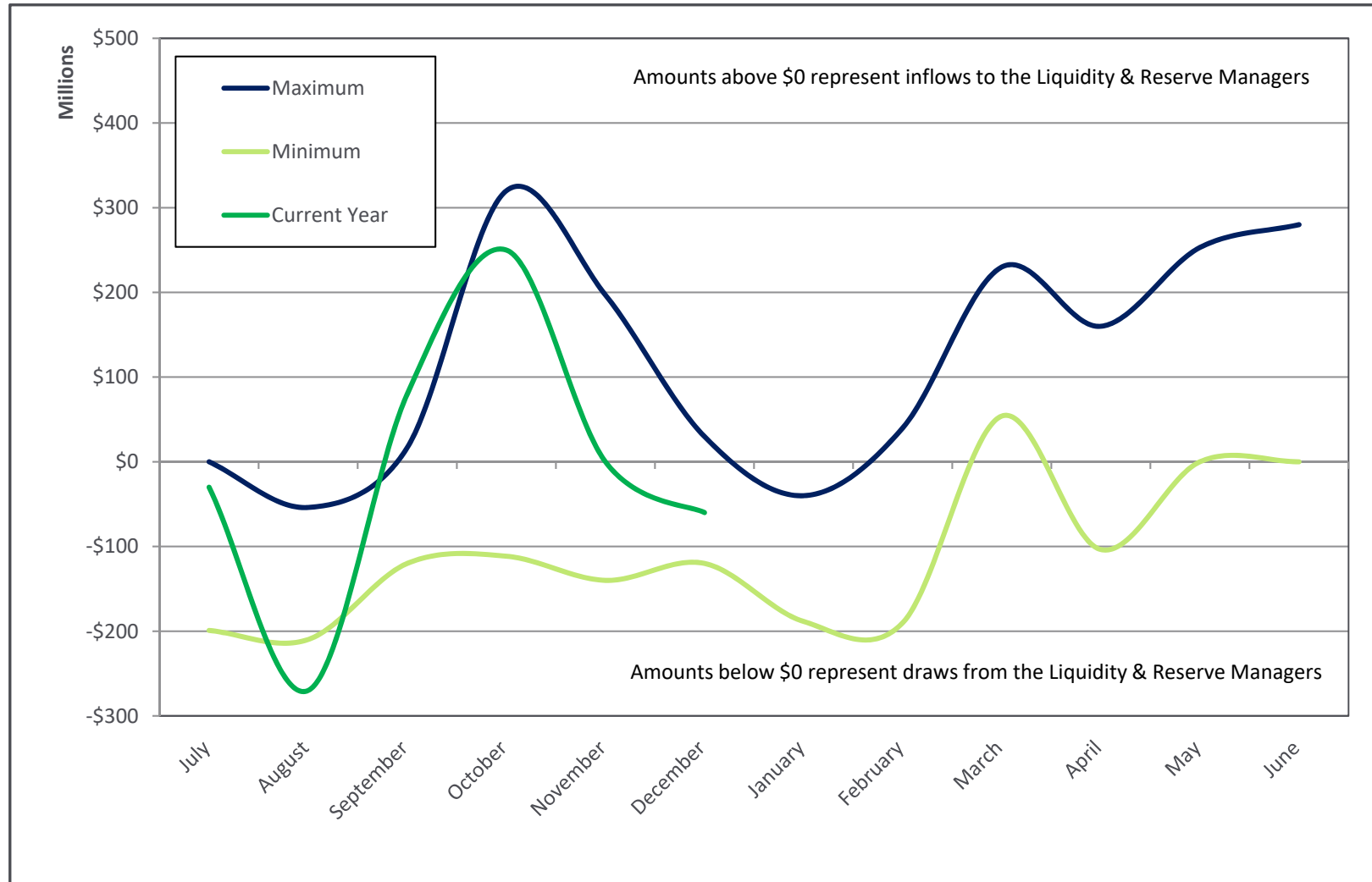
BlackRock Custom Index consists of 100% ICE BofAML 1-5 Yrs AAA-A US Corp & Govt TR.

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.



CASH FLOWS – FISCAL YEAR 2020



MONTH ENDED DECEMBER 31, 2019

Change in Market Value Month Ending December 31, 2019										
	Beginning Market Value	Contributions	Withdrawals	Fees	Income	Unrealized Gain (Loss)	Realized Gain (Loss)	Amortization / Accretion	Ending Market Value	
Liquidity Managers										
PFM Asset Management	\$ 337,504,575	\$ -	\$ (30,000,000)	\$ -	\$ 453,298	\$ (12,122)	\$ 5,228	\$ 54,387	\$ 308,005,366	
Wilmington Liquidity	\$ 335,103,215	\$ -	\$ (30,000,000)	\$ -	\$ 465,067	\$ 22,454	\$ 1,590	\$ 109,865	\$ 305,702,191	
Total Liquidity Managers	\$ 672,607,790	\$ -	\$ (60,000,000)	\$ -	\$ 918,365	\$ 10,332	\$ 6,818	\$ 164,252	\$ 613,707,557	
Reserve Managers										
BlackRock Financial Management	\$ 485,571,884	\$ -	\$ -	\$ -	\$ 881,968	\$ (14,113)	\$ 61,689	\$ (18,899)	\$ 486,482,529	
Chandler Asset Management	\$ 505,788,966	\$ -	\$ -	\$ -	\$ 1,048,593	\$ (2,001,645)	\$ 171,560	\$ 50,323	\$ 505,057,798	
JPM Intermediate	\$ 480,687,453	\$ -	\$ -	\$ -	\$ 837,448	\$ 208,561	\$ 99,683	\$ (16,307)	\$ 481,816,839	
Lazard Asset Management	\$ 501,520,701	\$ -	\$ -	\$ -	\$ 1,023,445	\$ (3,647,743)	\$ 861,889	\$ (26,867)	\$ 499,731,426	
Total Reserve Managers	\$ 1,973,569,004	\$ -	\$ -	\$ -	\$ 3,791,454	\$ (5,454,939)	\$ 1,194,822	\$ (11,750)	\$ 1,973,088,592	
Total Liquidity & Reserve Managers	\$ 2,646,176,794	\$ -	\$ (60,000,000)	\$ -	\$ 4,709,819	\$ (5,444,607)	\$ 1,201,639	\$ 152,502	\$ 2,586,796,149	
Land & Water Endowment										
SEI Funds	\$ 25,682,093	\$ 11,546	\$ -	\$ -	\$ 366,935	\$ (70,913)	\$ 285,622	\$ -	\$ 26,275,282	
MSIFT Global Strategist	\$ 23,661,505	\$ 11,546	\$ -	\$ -	\$ 323,278	\$ 260,684	\$ 93,500	\$ -	\$ 24,350,513	
JP Morgan Diversified	\$ 24,568,504	\$ 11,546	\$ -	\$ -	\$ 214,311	\$ (1,260,206)	\$ 1,621,763	\$ -	\$ 25,155,918	
Cash Account	\$ 421	\$ -	\$ -	\$ -	\$ 2	\$ -	\$ -	\$ -	\$ 423	
Total Land & Water Endowment	\$ 73,912,523	\$ 34,638	\$ -	\$ -	\$ 904,526	\$ (1,070,436)	\$ 2,000,886	\$ -	\$ 75,782,136	
Total	\$ 2,720,089,317	\$ 34,638	\$ (60,000,000)	\$ -	\$ 5,614,345	\$ (6,515,042)	\$ 3,202,525	\$ 152,502	\$ 2,662,578,285	

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.



FISCAL YEAR TO DATE

	Change in Market Value Fiscal Year-to-Date Through December 31, 2019								
	Beginning Market Value	Contributions	Withdrawals	Fees	Income	Unrealized Gain (Loss)	Realized Gain (Loss)	Amortization / Accretion	Ending Market Value
Liquidity Managers									
PFM Asset Management	\$ 379,459,861	\$ 190,000,000	\$ (265,000,000)	\$ (142,080)	\$ 3,300,506	\$ (214,973)	\$ 431,947	\$ 170,104	\$ 308,005,366
Wilmington Liquidity	\$ 377,298,107	\$ 190,000,000	\$ (265,000,000)	\$ (148,175)	\$ 2,893,824	\$ (583,742)	\$ 525,236	\$ 716,941	\$ 305,702,191
Total Liquidity Managers	\$ 756,757,968	\$ 380,000,000	\$ (530,000,000)	\$ (290,255)	\$ 6,194,330	\$ (798,715)	\$ 957,182	\$ 887,045	\$ 613,707,557
Reserve Managers									
BlackRock Financial Management	\$ 450,402,164	\$ 30,000,000	\$ -	\$ (145,981)	\$ 5,268,720	\$ 257,849	\$ 849,104	\$ (149,326)	\$ 486,482,529
Chandler Asset Management	\$ 465,725,064	\$ 30,000,000	\$ -	\$ (144,173)	\$ 6,037,966	\$ 2,817,824	\$ 281,630	\$ 339,487	\$ 505,057,798
JPM Intermediate	\$ 446,232,523	\$ 30,000,000	\$ -	\$ (159,711)	\$ 5,008,496	\$ (846,737)	\$ 1,567,903	\$ 14,364	\$ 481,816,839
Lazard Asset Management	\$ 461,513,160	\$ 30,000,000	\$ -	\$ (236,930)	\$ 5,829,240	\$ (3,036,221)	\$ 5,551,580	\$ 110,599	\$ 499,731,426
Total Reserve Managers	\$ 1,823,872,911	\$ 120,000,000	\$ -	\$ (686,795)	\$ 22,144,422	\$ (807,286)	\$ 8,250,217	\$ 315,123	\$ 1,973,088,592
Total Liquidity & Reserve Managers	\$ 2,580,630,879	\$ 500,000,000	\$ (530,000,000)	\$ (977,050)	\$ 28,338,752	\$ (1,606,001)	\$ 9,207,399	\$ 1,202,168	\$ 2,586,796,149
Land & Water Endowment									
SEI Funds	\$ 24,666,596	\$ 13,444	\$ (16,833)	\$ (42,659)	\$ 568,190	\$ 790,756	\$ 295,788	\$ -	\$ 26,275,282
MSIFT Global Strategist	\$ 23,080,612	\$ 13,444	\$ (16,833)	\$ -	\$ 325,791	\$ 854,168	\$ 93,330	\$ -	\$ 24,350,513
JP Morgan Diversified	\$ 23,772,475	\$ 13,444	\$ (16,833)	\$ -	\$ 320,936	\$ (555,634)	\$ 1,621,529	\$ -	\$ 25,155,918
Cash Account	\$ 413	\$ 5,695	\$ (5,695)	\$ -	\$ 10	\$ -	\$ -	\$ -	\$ 423
Total Land & Water Endowment	\$ 71,520,096	\$ 46,027	\$ (56,194)	\$ (42,659)	\$ 1,214,927	\$ 1,089,290	\$ 2,010,647	\$ -	\$ 75,782,136
Total	\$ 2,652,150,975	\$ 500,046,027	\$ (530,056,194)	\$ (1,019,709)	\$ 29,553,679	\$ (516,711)	\$ 11,218,046	\$ 1,202,168	\$ 2,662,578,285

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.



YIELD AND DURATION POSITIONING

Liquidity Portfolio Yield and Duration Analysis							
Portfolio					Benchmark		
	Portfolio Value	% of Assets	Yield	Duration		Yield	Duration
PFM \$	308,005,366	11.9%	1.86%	0.57	6-Month Treasury Bill	1.56%	0.48
Wilmington Trust \$	305,702,191	11.8%	1.83%	0.73	6-Month Treasury Bill	1.56%	0.48
Total Liquidity \$	613,707,557	23.7%	1.85%	0.65	6-Month Treasury Bill	1.56%	0.48

Reserve Portfolio Yield and Duration Analysis							
Portfolio					Benchmark		
	Portfolio Value	% of Assets	Yield	Duration		Yield	Duration
JP Morgan \$	481,816,839	18.6%	1.73%	1.82	BAML 1-3 Yr Govt/Credit A+	1.67%	1.85
BlackRock \$	486,482,529	18.8%	1.78%	2.52	BAML 1-5 Yr Govt/Credit A+	1.71%	2.58
Chandler \$	505,057,798	19.5%	2.08%	6.02	BAML 5-10 Yr Govt/Credit A+	2.02%	6.38
Lazard \$	499,731,426	19.3%	1.97%	6.35	BAML 5-10 Yr Govt/Credit A+	2.02%	6.38
Total Reserve \$	1,973,088,592	76.3%	1.89%	4.22	Custom Reserve Benchmark	1.86%	4.30

Total Liquidity & Reserve Portfolio Yield and Duration Analysis							
Portfolio					Benchmark		
	Portfolio Value	% of Assets	Yield	Duration		Yield	Duration
Total Liquidity & Reserve \$	2,586,796,149	100.0%	1.88%	3.37	Weighted Average	1.78%	3.34

Source: Bloomberg, Barclays, Alerian, Nareit, MSCI, JP Morgan, Credit Suisse, Thomson One



LIQUIDITY MANAGER REVIEW

NEPC, LLC

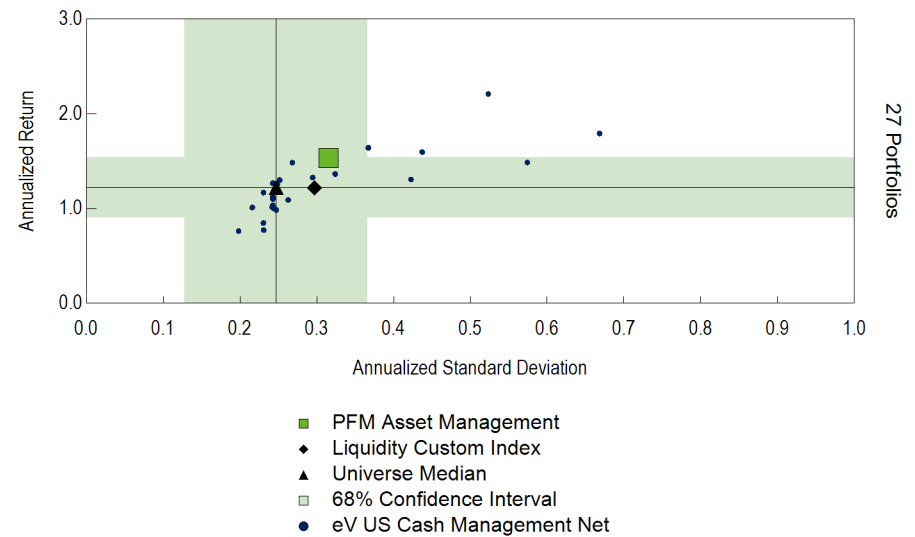
Delaware Office of the State Treasurer

PFM ASSET MANAGEMENT

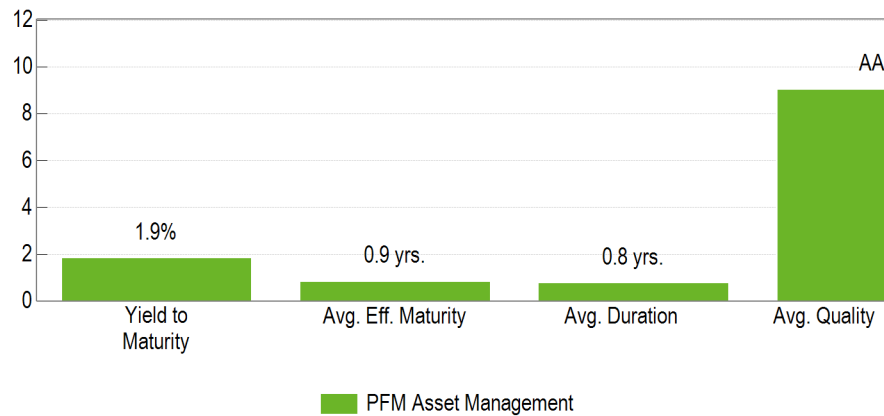
eV US Cash Management Net Return Comparison



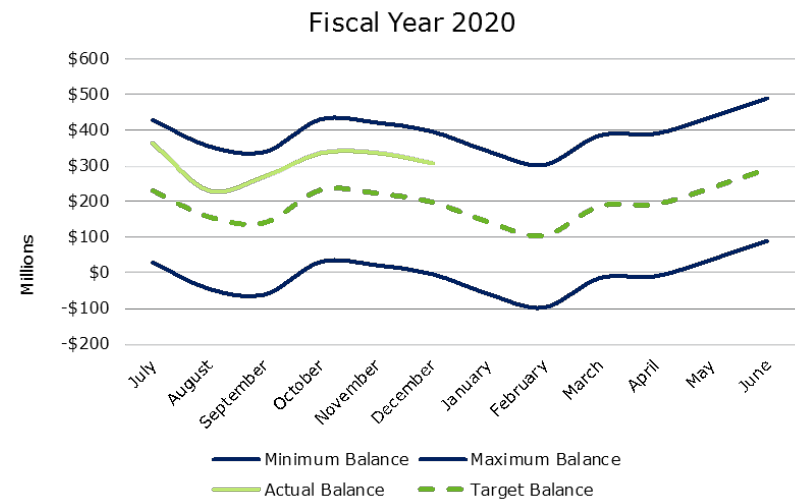
5 Year Risk Return



Characteristics



Manager Balance to Target



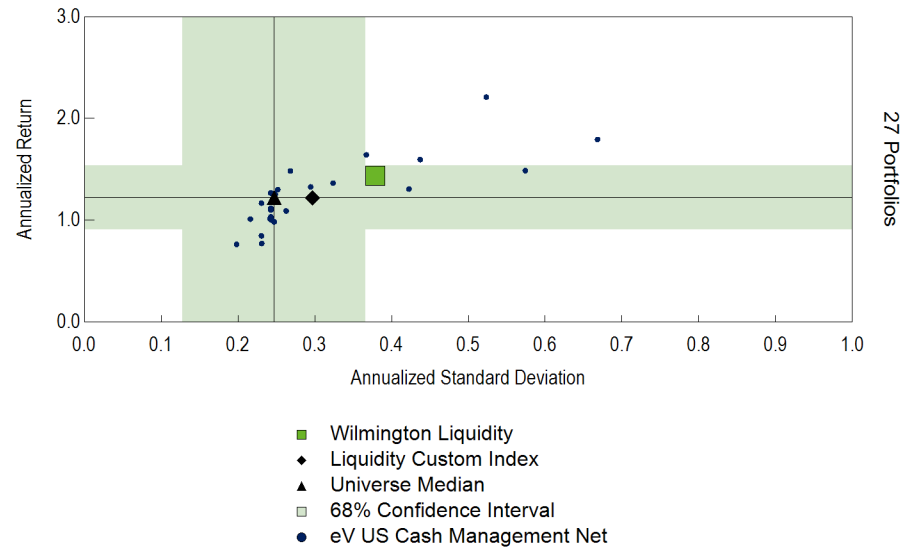
Delaware Office of the State Treasurer

WILMINGTON LIQUIDITY

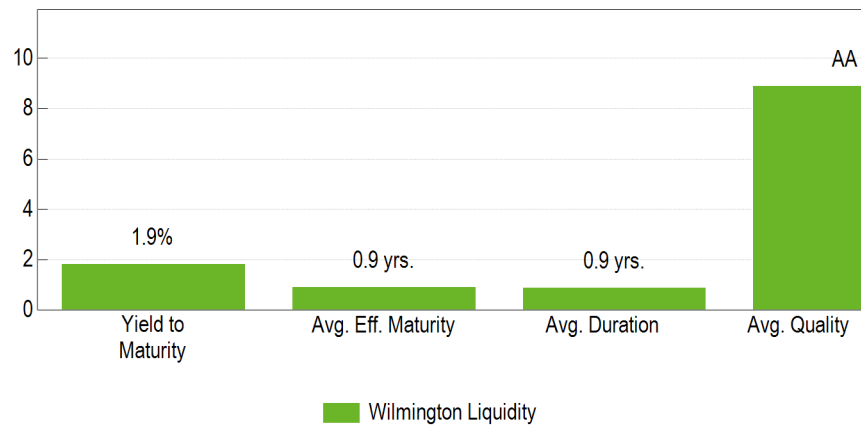
eV US Cash Management Net Return Comparison



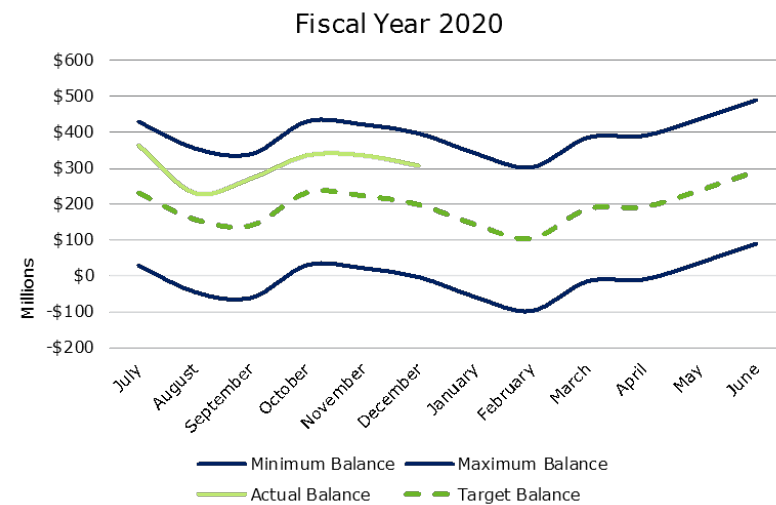
5 Year Risk Return



Characteristics



Manager Balance to Target



RESERVE MANAGER REVIEW

NEPC, LLC

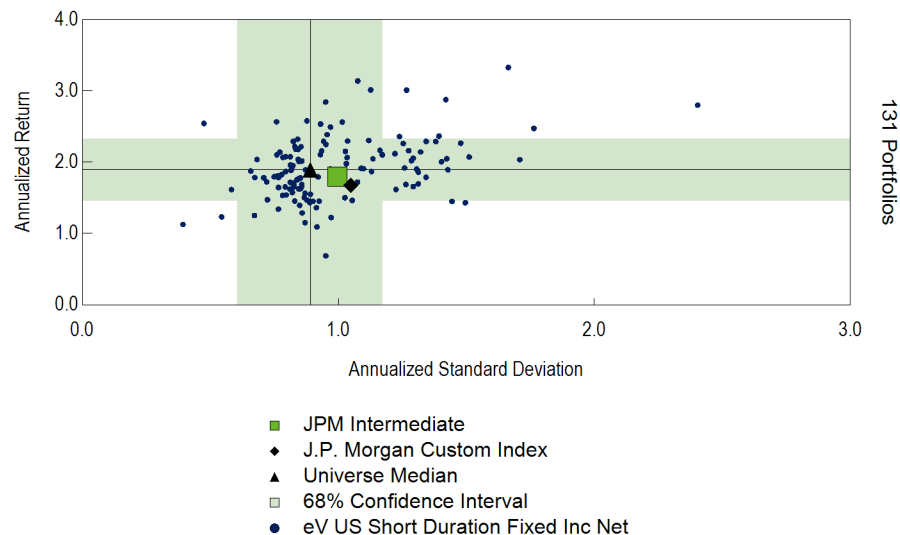
Delaware Office of the State Treasurer

JPM INTERMEDIATE

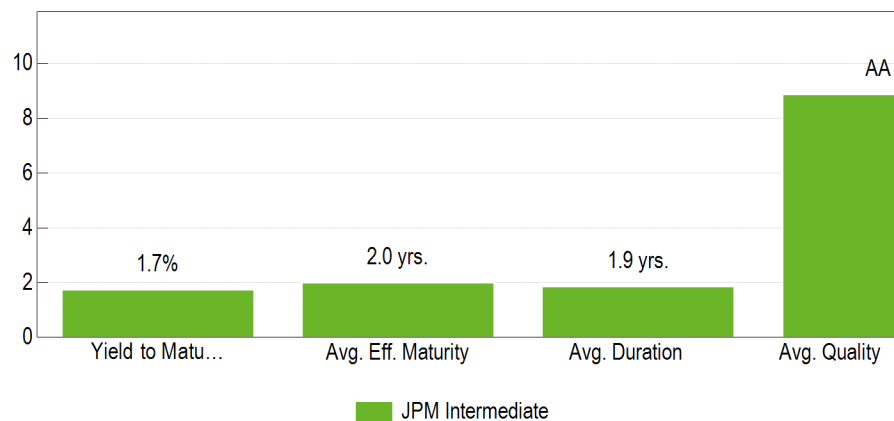
eV US Short Duration Fixed Inc Net Return Comparison



5 Year Risk Return



Characteristics



Qualitative Attribution

Duration and Yield Positioning: During the fourth quarter, JPM thought that a rate decrease was priced in by the market so they elected to keep duration in-line with that of the benchmark.

Result: Duration/curve positioning worked against JPM as rates inside one-year fell more than long rates and 3-year Treasuries actually rose (5bps) on the quarter.

Credit Positioning: Going into the quarter JPM was constructive on the economy and credit and chose to maintain an overweight to corporate bonds at the expense of Treasuries, and within the corporate sector JPM thought financial obligations carried the most value.

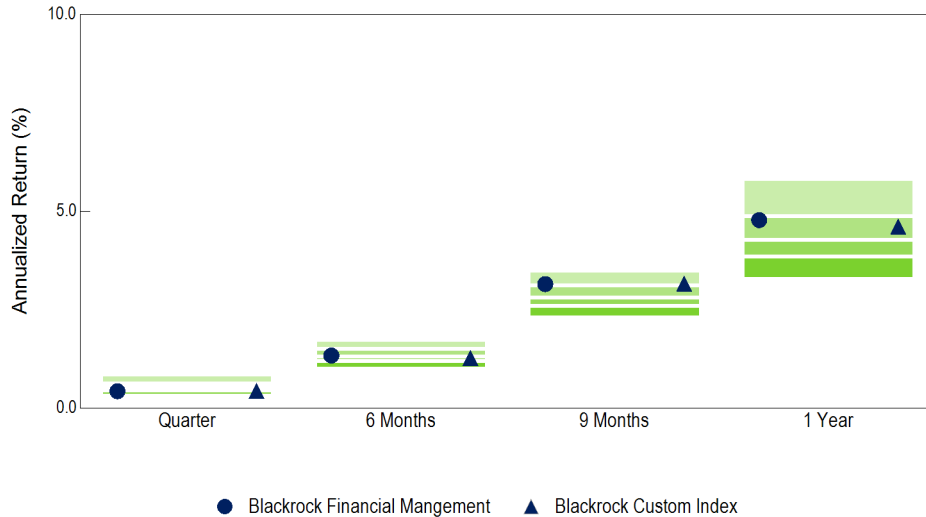
Result: For the full year, JPM's overweight to corporate bonds helped them outperform the benchmark.

Other Positioning: Going forward JPM expects the Fed to stay on hold and will look for opportunities to add risk if credit spreads were to widen. Exposure to structured products are likely to increase as they have underperformed corporates and are starting to look more attractive.

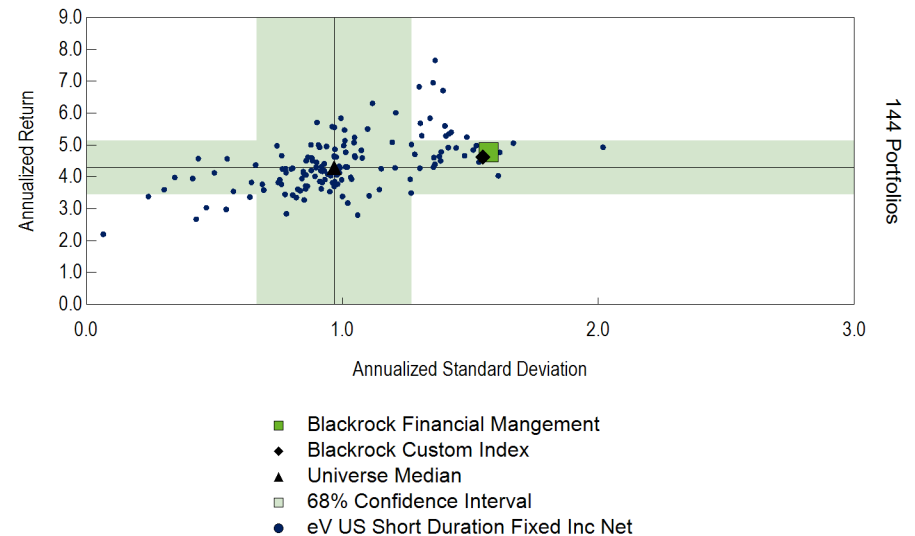


BLACKROCK FINANCIAL MANAGEMENT

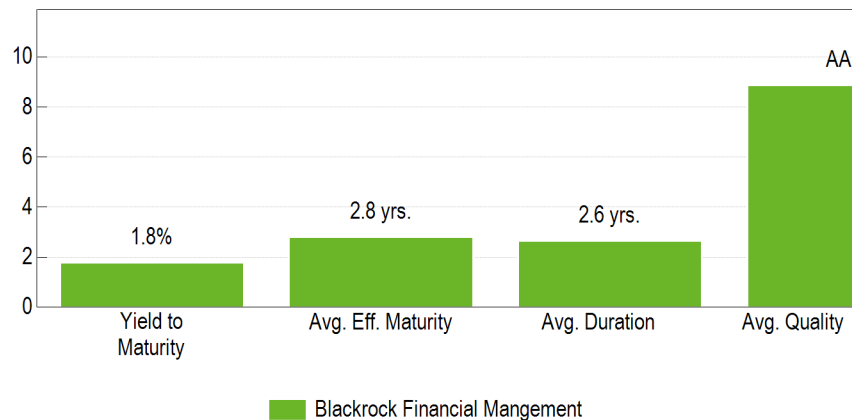
eV US Short Duration Fixed Inc Net Return Comparison



1 Year Risk Return



Characteristics



Qualitative Attribution

Duration and Yield Positioning: The portfolio's duration positioning was neutral to long versus the benchmark.

Result: BlackRock's duration and curve positioning was the largest detractor to performance as rates sold off on improved macro conditions and improved geopolitical landscape in December.

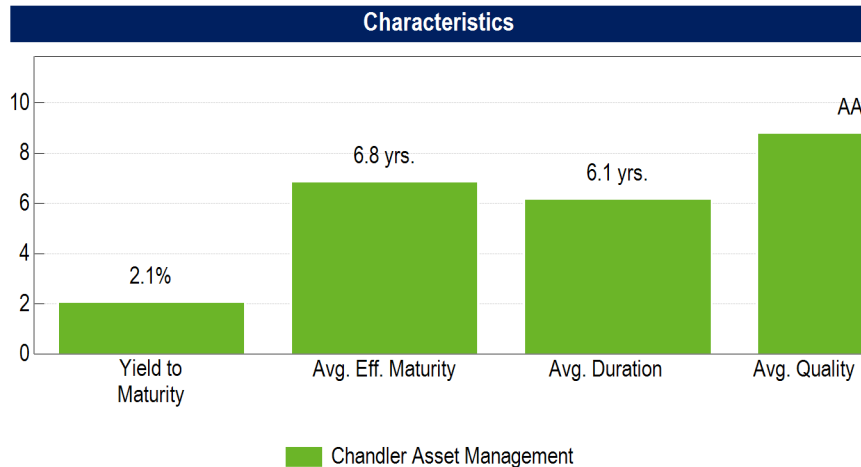
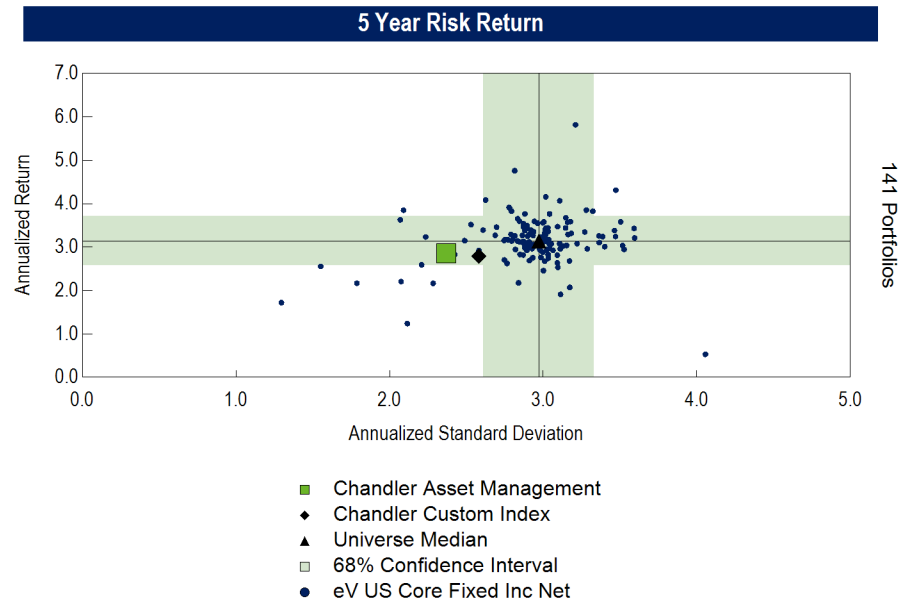
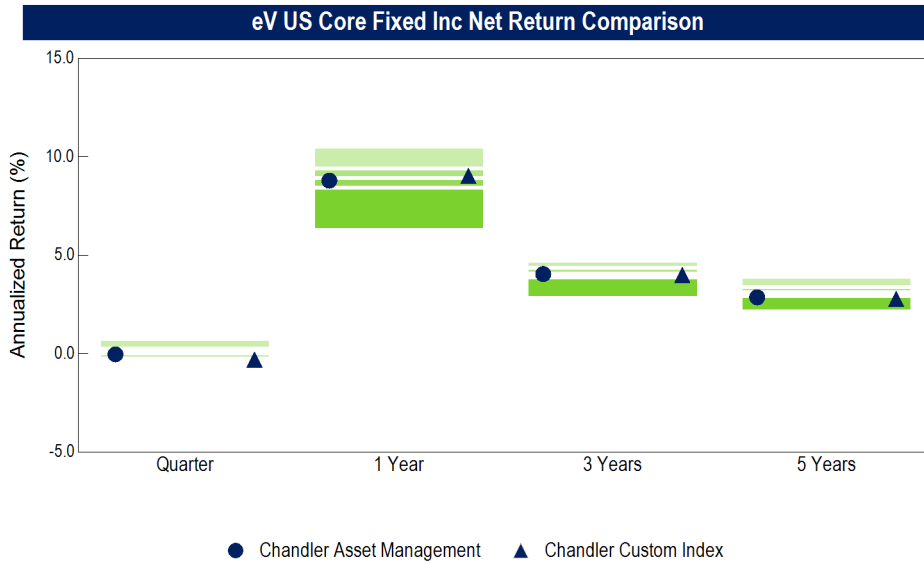
Credit Positioning: Overall, the portfolio had an overweight to securitized assets such as MBS and ABS, and a slight overweight to Investment Grade Corporates. The largest contributors to performance were the allocations to Investment Grade Credit and MBS.

Result: The portfolio's allocations to Investment Grade Credit contributed to performance along with the constructive overweight in Agency MBS as prepayment speeds moderated as the rates sold off.

Other Positioning: The largest contributor to returns was the portfolio's overweight to corporate and securitized credit. The allocations to ABS and mortgages also supported returns. The largest detractor to returns was the portfolio's underweight to sovereign paper and US treasuries.



CHANDLER ASSET MANAGEMENT



Qualitative Attribution

Duration and Yield Positioning: The portfolio continues to be positioned with a duration below the benchmark.
Result: Short duration positioning was a positive contributor to the relative performance in Q4.

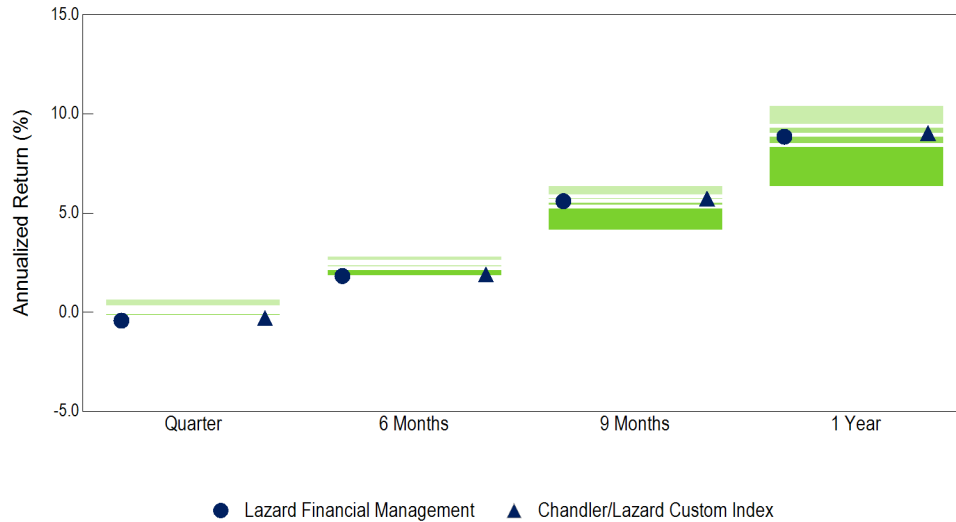
Credit Positioning: The portfolio remained defensively positioned with overweighting Corporates and underweighting sovereign debt.
Result: Value was neutral relative to the benchmark due to the positive overweight to Corporates.

Other Positioning: The portfolio is biased to add to the banking sector allocation beyond eight years but is constrained by the credit quality requirements of the portfolio relative to the securities embedded within the performance benchmark.

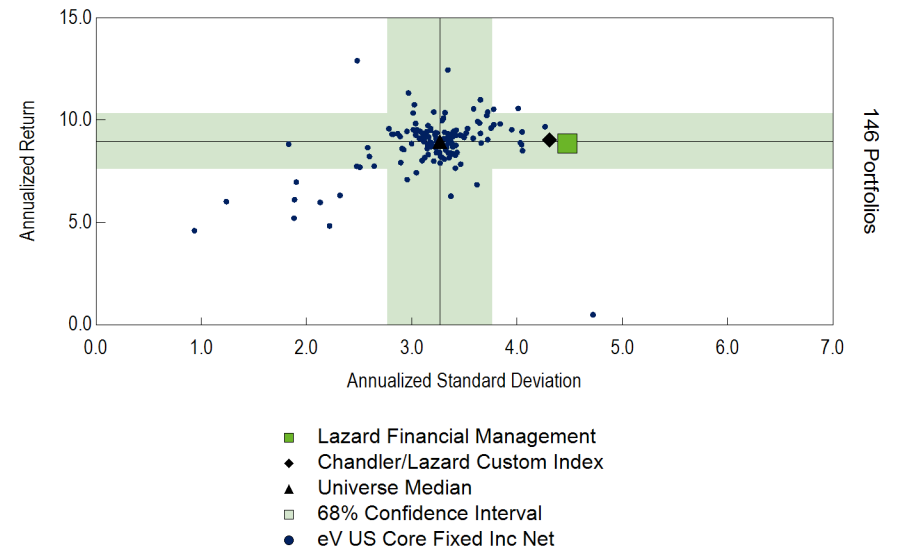


LAZARD FINANCIAL MANAGEMENT

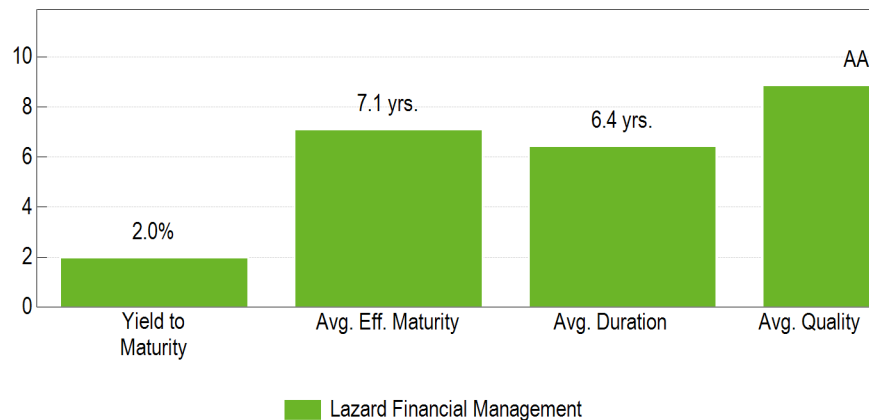
eV US Core Fixed Inc Net Return Comparison



1 Year Risk Return



Characteristics



Qualitative Attribution

Duration and Yield Positioning: The portfolio was moderately positioned for a curve steepening scenario going into the 4th quarter, with neutral duration positioning.

Result: This interest rate position had a modestly positive impact on relative performance, as the applicable portion of the US Treasury curve (5s-10s) steepened.

Credit Positioning: With respect to overall credit exposure, the portfolio was somewhat defensive, carrying an underweight to both Corporate and Non-US Government credit risk.

Result: Non-US/Yankees underperformed US Corporates, making the allocation to US Corporates in lieu of Non-US/Yankees a marginal positive contributor to relative performance in the 4th quarter.

Other Positioning: Lazard continues to search for attractively priced A-rated corporate positions with little success. In the meantime, Lazard will continue to engage Taxable Municipal debt opportunities as that market develops going forward.

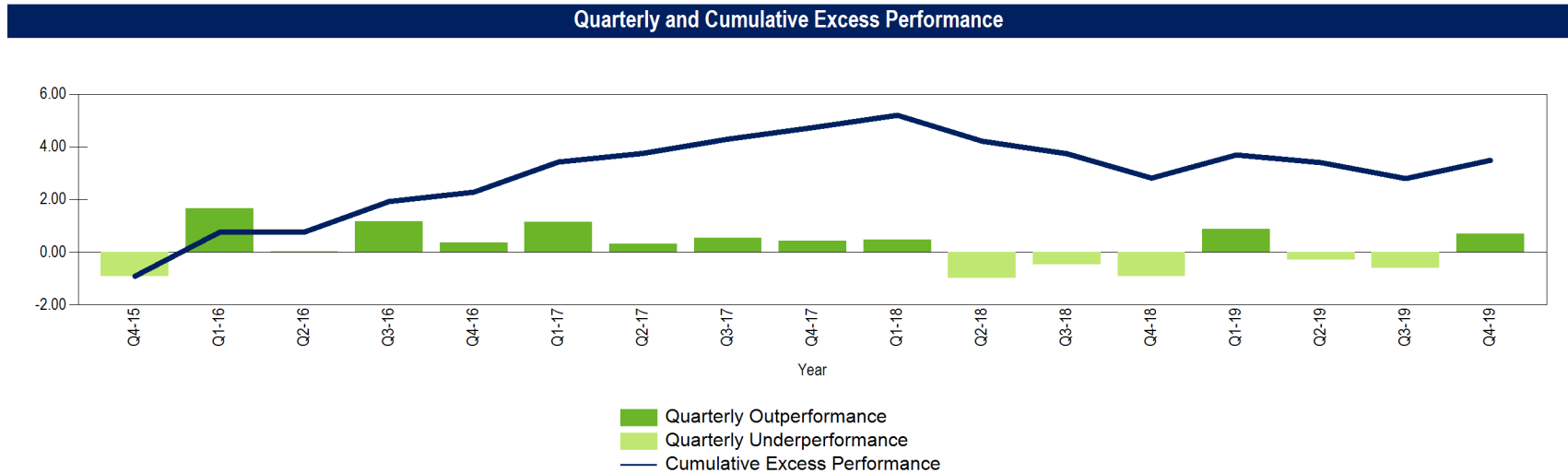
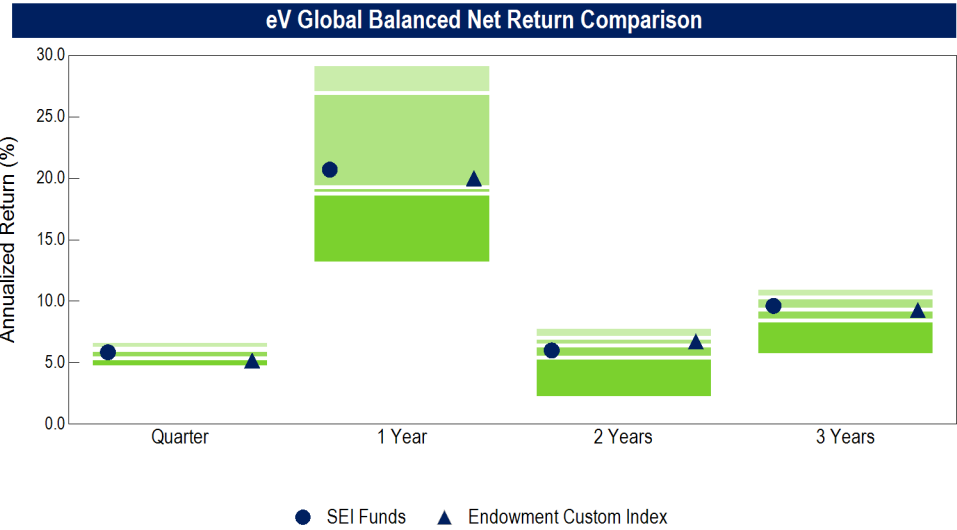


ENDOWMENT MANAGER REVIEW

NEPC, LLC

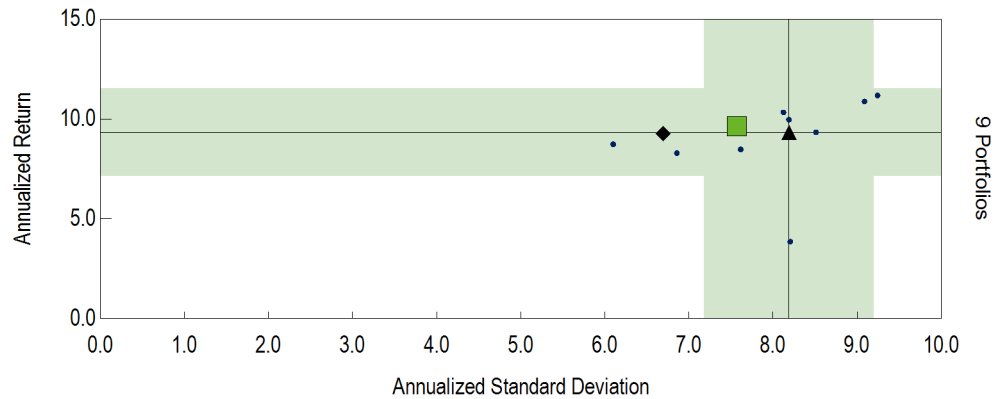
SEI FUNDS

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.

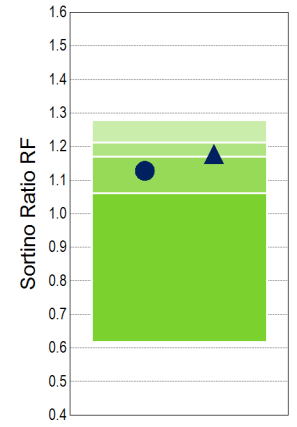
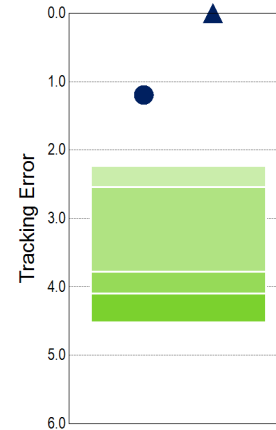
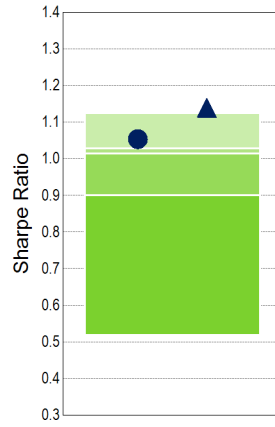
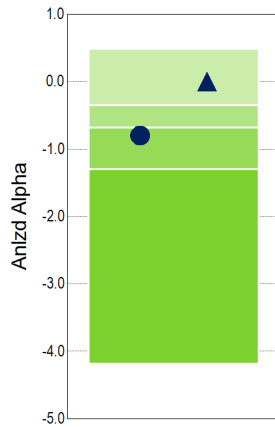
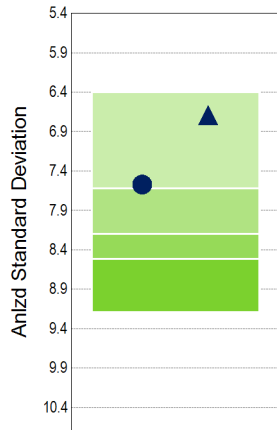
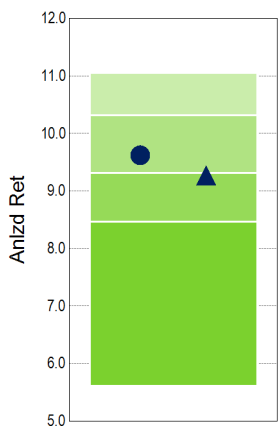


SEI FUNDS

3 Year Risk Return



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

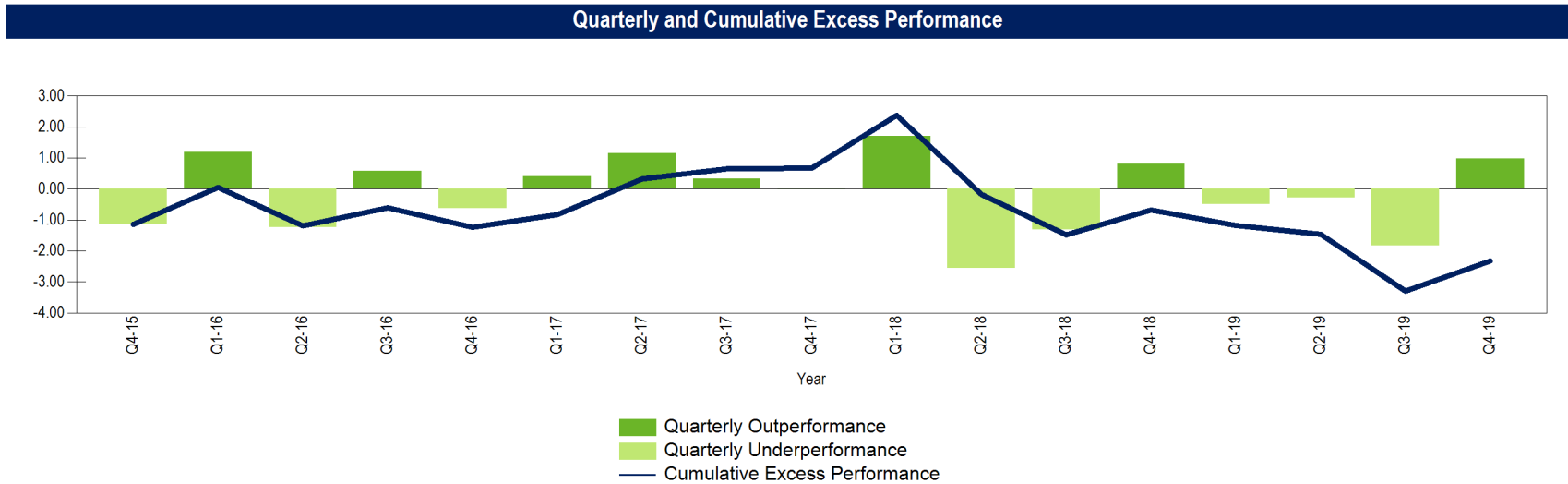
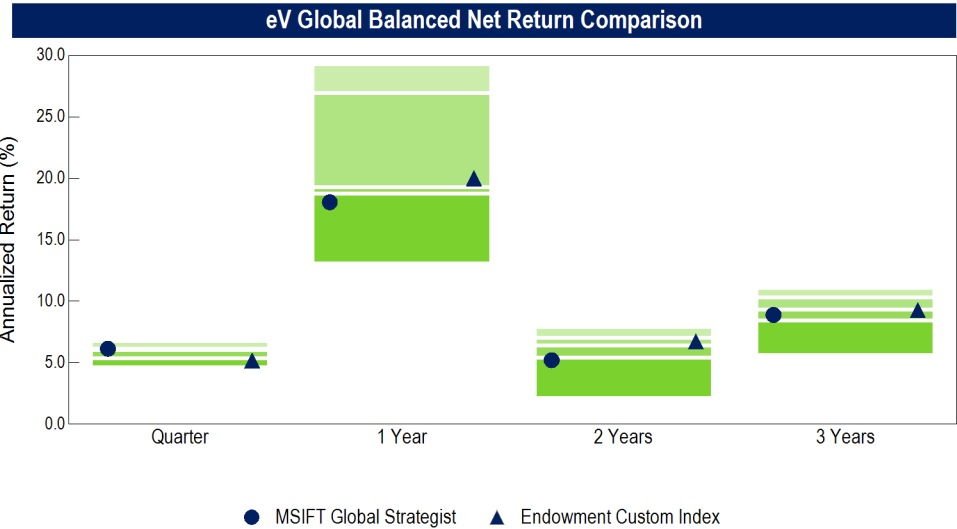


- SEI Funds
- ▲ Endowment Custom Index
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

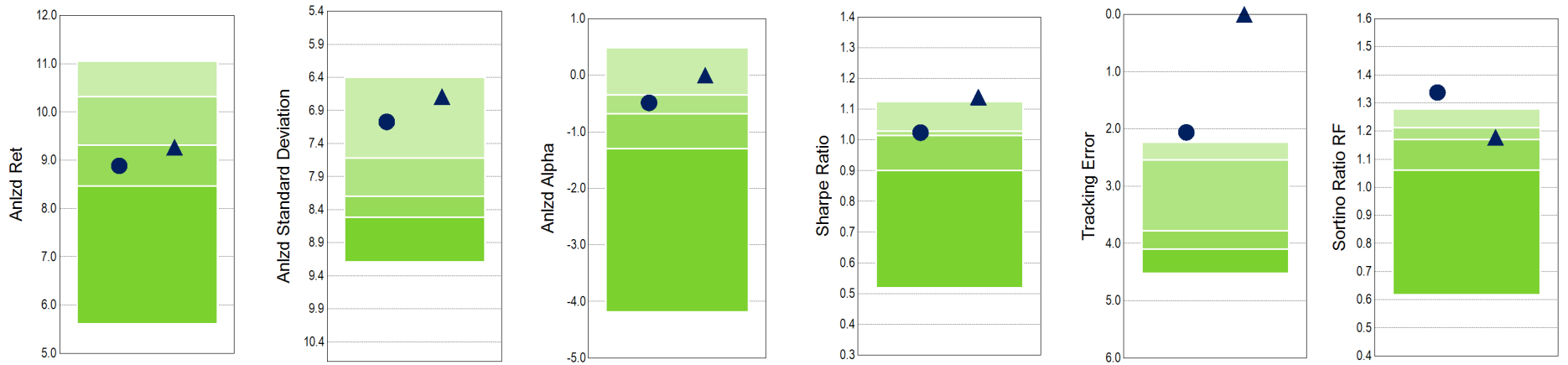
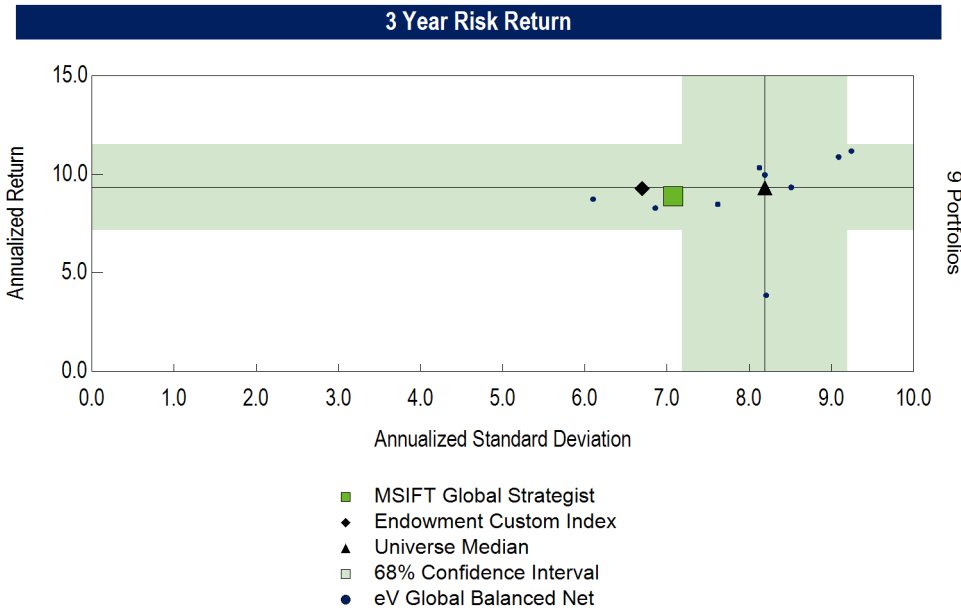


MSIFT GLOBAL STRATEGIST

Morgan Stanley manages a multi-asset class portfolio. The portfolio seeks to achieve its investment objective by investing primarily in a blend of equity and fixed income securities of U.S. and non-U.S. issuers. The equity portfolio will be diversified by types of securities (i.e. common and preferred shares of equity), issuer, industry and sectors. The fixed income portfolio will be diversified by security types (i.e government, agency and corporate bonds), issuer, duration and yield characteristics.

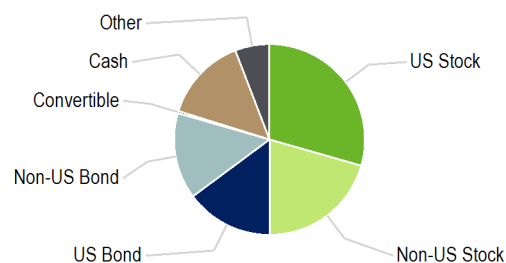


MSIFT GLOBAL STRATEGIST



MSIFT GLOBAL STRATEGIST

Mutual Fund Allocation as of December 31, 2019



Portfolio Fund Information as of December 31, 2019

Ticker	MPBAX
Morningstar Category	World Allocation
Average Market Cap (\$mm)	67,113.11
Net Assets (\$mm)	59.49
% Assets in Top 10 Holdings	36.11
Total Number of Holdings	1,731
Manager Name	Mark A. Bavoso
Manager Tenure	9
Expense Ratio	0.74%
Closed to New Investors	No

Fund Characteristics as of December 31, 2019

Sharpe Ratio (3 Year)	1.02
Average Market Cap (\$mm)	67,113.11
Price/Earnings	16.42
Price/Book	2.32
Price/Sales	1.66
Price/Cash Flow	8.52
Dividend Yield	2.54
Number of Equity Holdings	1,368
R-Squared (3 Year)	0.92
Alpha (3 Year)	-0.04%

Top Holdings as of December 31, 2019

E-MINI S&P 500 FUTURES MAR20	5.45%
MS INST. FUND TRUST GLBL STRATEGIST CAYMAN POR LTD	5.37%
1265771 TRS USD R E II1760260190123 EQUITYTRS	4.92%
1265771 TRS USD P V 03MLIBOR II1758120190123 EQUITYTRS	4.55%
1265804 TRS USD R E II2084320190206 EQUITYTRS	3.57%
1265804 TRS USD P V 03MLIBOR II2081480190206 EQUITYTRS	3.50%
ULTRA 10 YEAR US TREASURY NOTE FUTURE MAR 20	3.19%
MSCI USA INDEX FUTURE MAR 20	2.19%
1266723 TRS USD R E II6332360191206 EQUITYTRS	1.70%
1266753 TRS USD R E II8338940191211 EQUITYTRS	1.66%

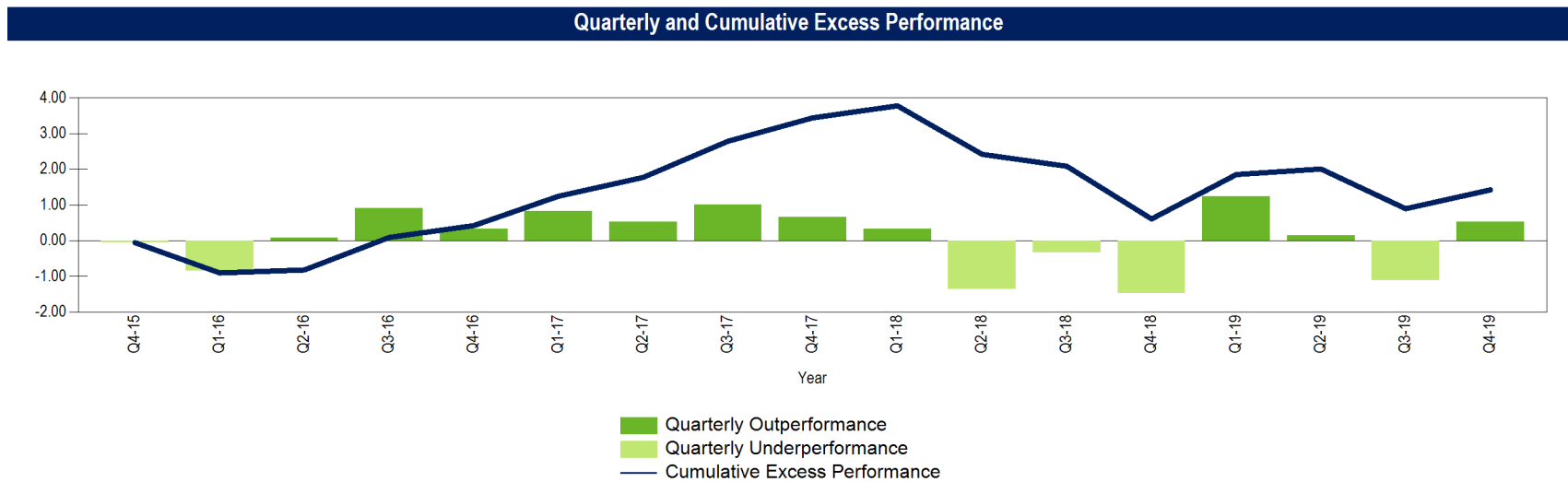
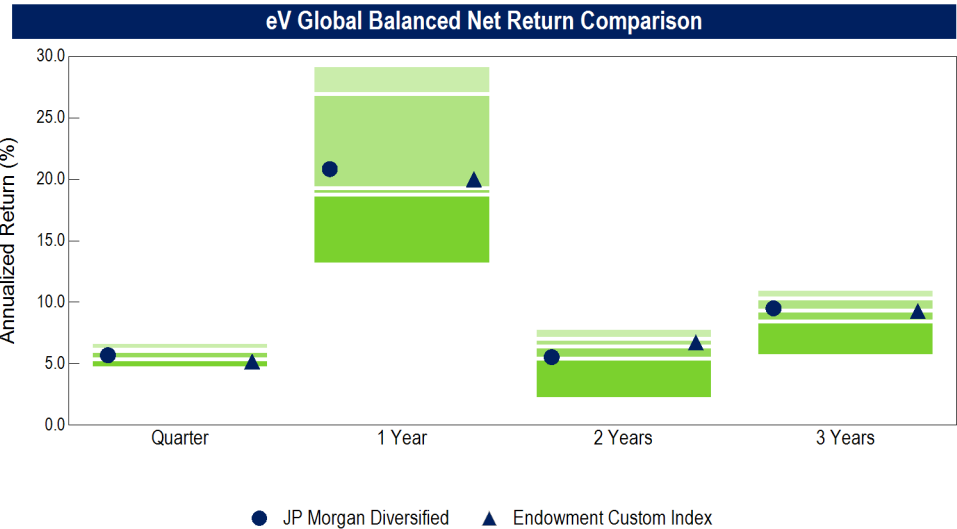
Sector Allocation as of December 31, 2019

BASIC MATERIALS	3.85%
COMMUNICATION SERVICES	7.88%
CONSUMER CYCLICAL	9.75%
CONSUMER DEFENSIVE	7.73%
ENERGY	4.47%
FINANCIAL SERVICES	18.47%
HEALTHCARE	11.54%
INDUSTRIALS	13.76%
REAL ESTATE	4.98%
TECHNOLOGY	14.44%
UTILITIES	3.13%



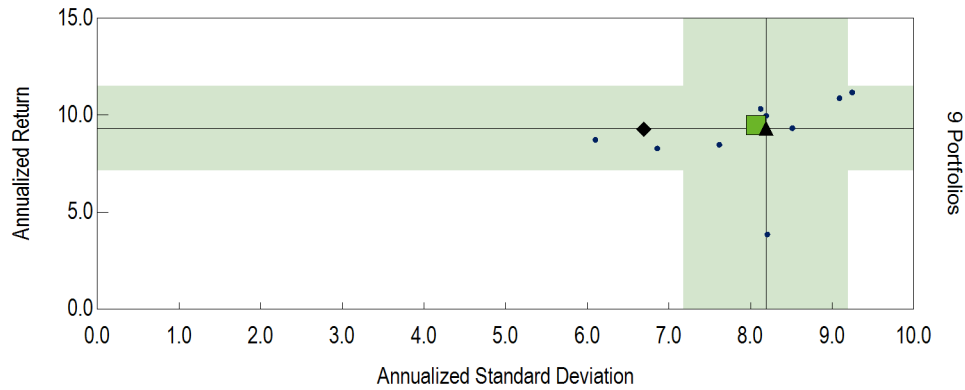
JP MORGAN DIVERSIFIED

J.P Morgan manages a diversified mutli-asset class portfolio. The strategy seeks to provide a high total return from a diversified portfolio of equity and fixed income investments based on a model allocation. JP Morgan may periodically increase or decrease the Fund’s actual asset allocation according to the relative attractiveness of each asset class. Within its equity allocations, the Fund primarily invests in the common stock and convertible securities of U.S. and foreign companies. Within its fixed income allocations, the Fund primarily invests in corporate bonds, mortgage-backed securities, mortgage “dollar rolls” and U.S. government securities.

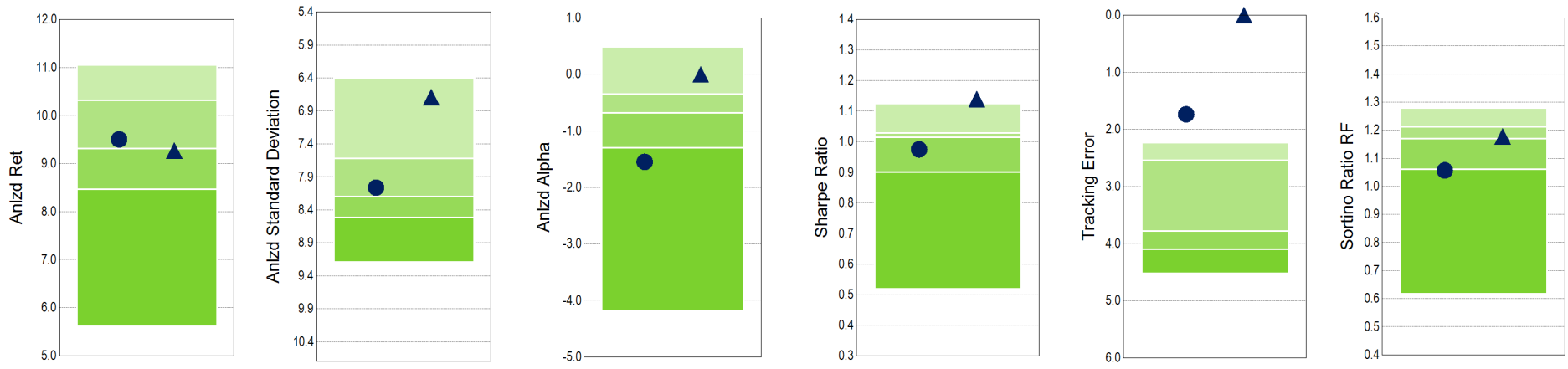


JP MORGAN DIVERSIFIED

3 Year Risk Return



- JP Morgan Diversified
- ◆ Endowment Custom Index
- ▲ Universe Median
- 68% Confidence Interval
- eV Global Balanced Net

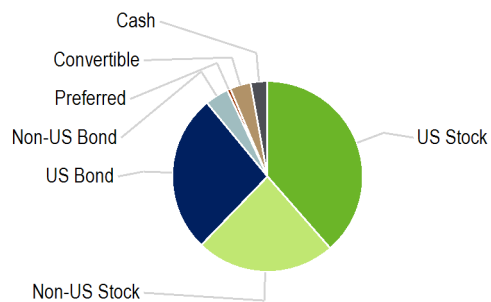


- JP Morgan Diversified
- ▲ Endowment Custom Index
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



JP MORGAN DIVERSIFIED

Mutual Fund Allocation as of December 31, 2019



Portfolio Fund Information as of December 31, 2019

Ticker	JPDVX
Morningstar Category	Allocation--50% to 70% Equity
Average Market Cap (\$mm)	56,633.40
Net Assets (\$mm)	163.90
% Assets in Top 10 Holdings	12.23
Total Number of Holdings	3,304
Manager Name	Jeffrey A. Geller
Manager Tenure	1
Expense Ratio	0.66%
Closed to New Investors	No

Fund Characteristics as of December 31, 2019

Sharpe Ratio (3 Year)	0.97
Average Market Cap (\$mm)	56,633.40
Price/Earnings	17.91
Price/Book	2.62
Price/Sales	2.05
Price/Cash Flow	9.97
Dividend Yield	2.17
Number of Equity Holdings	1,841
R-Squared (3 Year)	0.98
Alpha (3 Year)	-0.12%

Top Holdings as of December 31, 2019

JPMORGAN BETABUILDERS MSCI US REIT ETF	2.56%
JPMORGAN EMERGING MARKETS DEBT R6	1.85%
MICROSOFT CORP	1.62%
JPMORGAN EMERGING MARKETS STRAT DBT R6	1.23%
AMAZON.COM INC	1.07%
APPLE INC	0.99%
ALPHABET INC CLASS C	0.81%
UNITEDHEALTH GROUP INC	0.73%
UNITED STATES TREASURY NOTES 1.62%	0.70%
MASTERCARD INC A	0.67%

Sector Allocation as of December 31, 2019

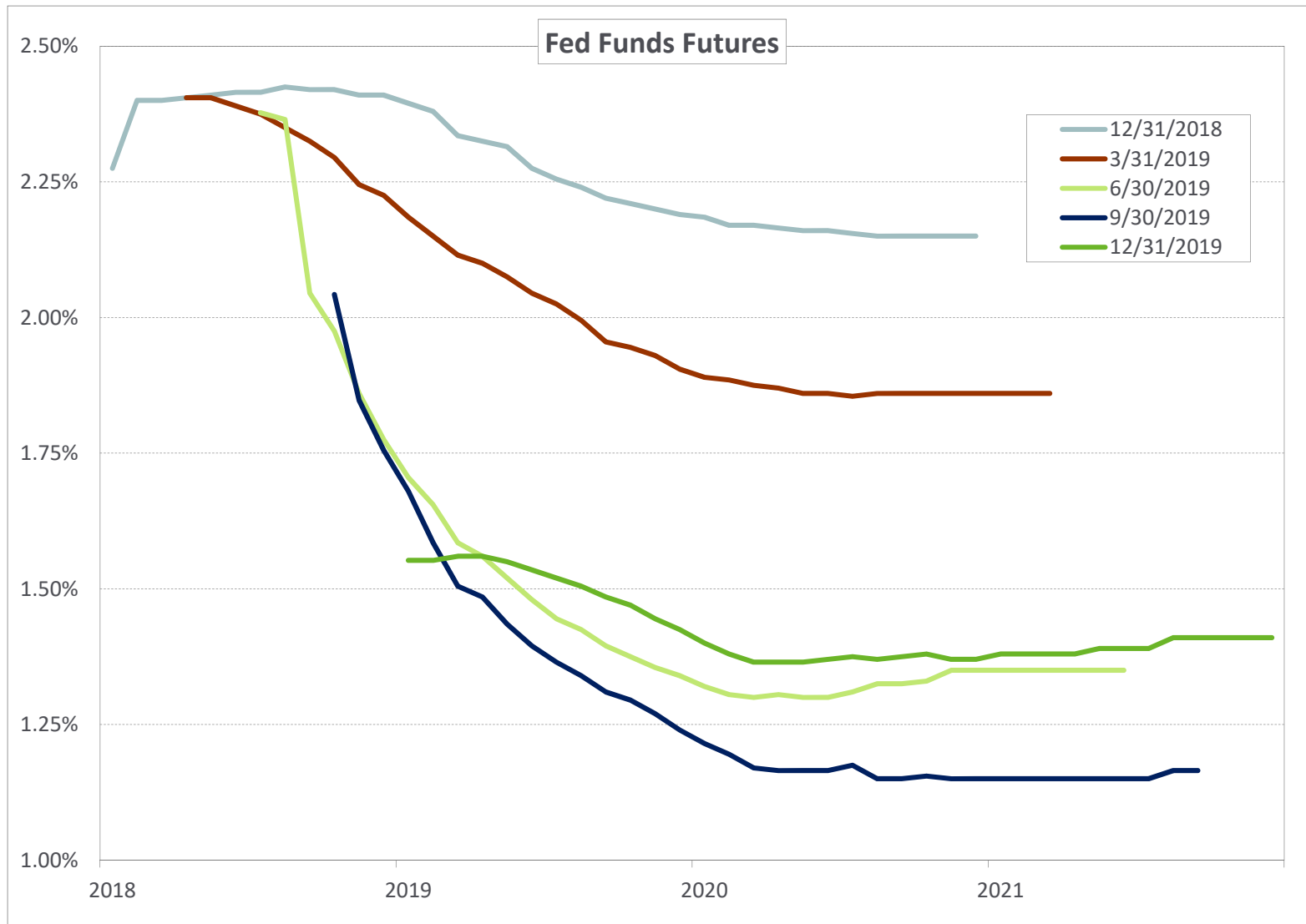
BASIC MATERIALS	2.73%
COMMUNICATION SERVICES	7.34%
CONSUMER CYCLICAL	11.61%
CONSUMER DEFENSIVE	6.13%
ENERGY	4.08%
FINANCIAL SERVICES	20.13%
HEALTHCARE	11.69%
INDUSTRIALS	11.20%
REAL ESTATE	7.02%
TECHNOLOGY	15.37%
UTILITIES	2.69%



YEAR-IN-REVIEW

NEPC, LLC

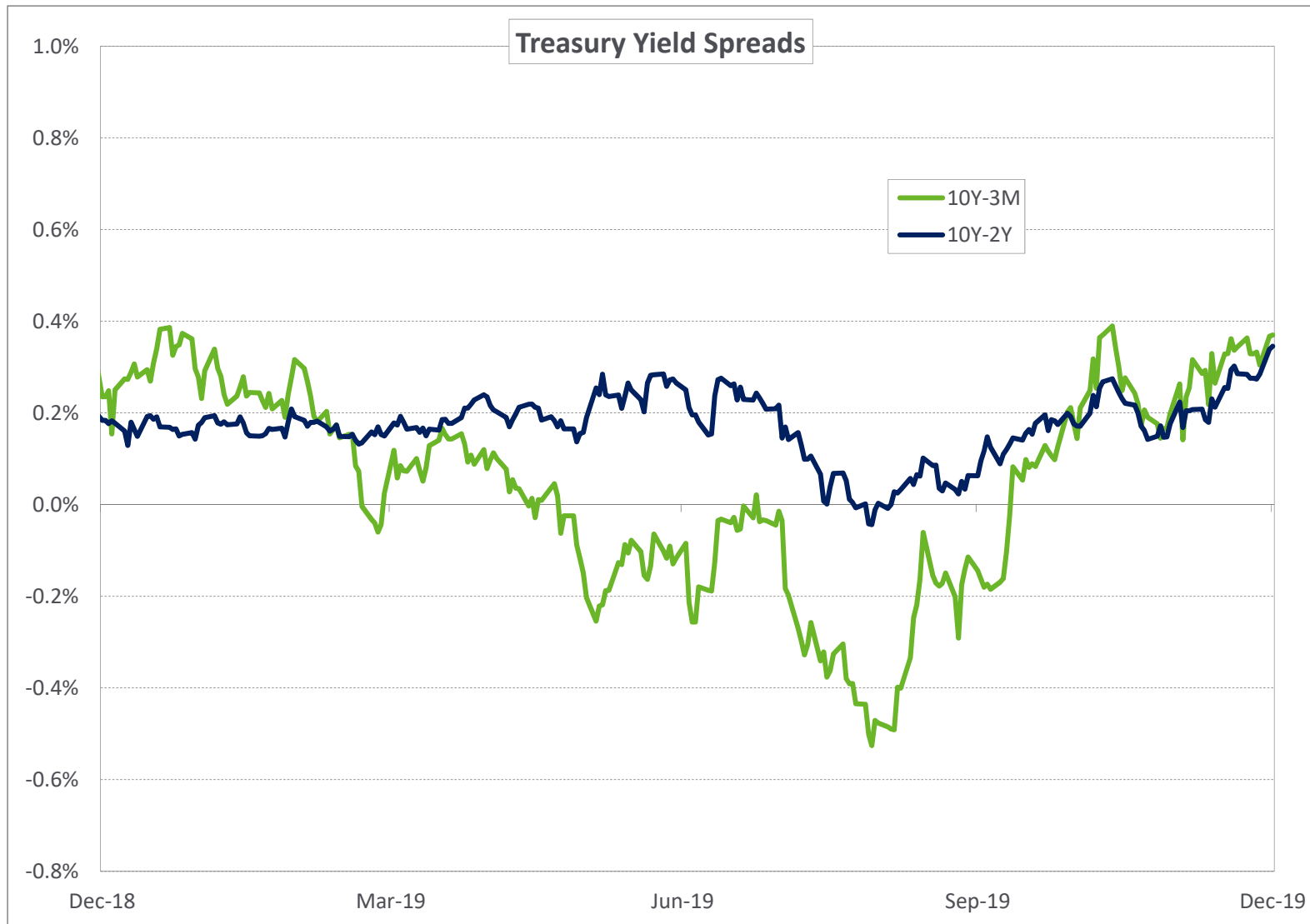
RATE EXPECTATIONS HAVE SHARPLY DECLINED



Source: FactSet



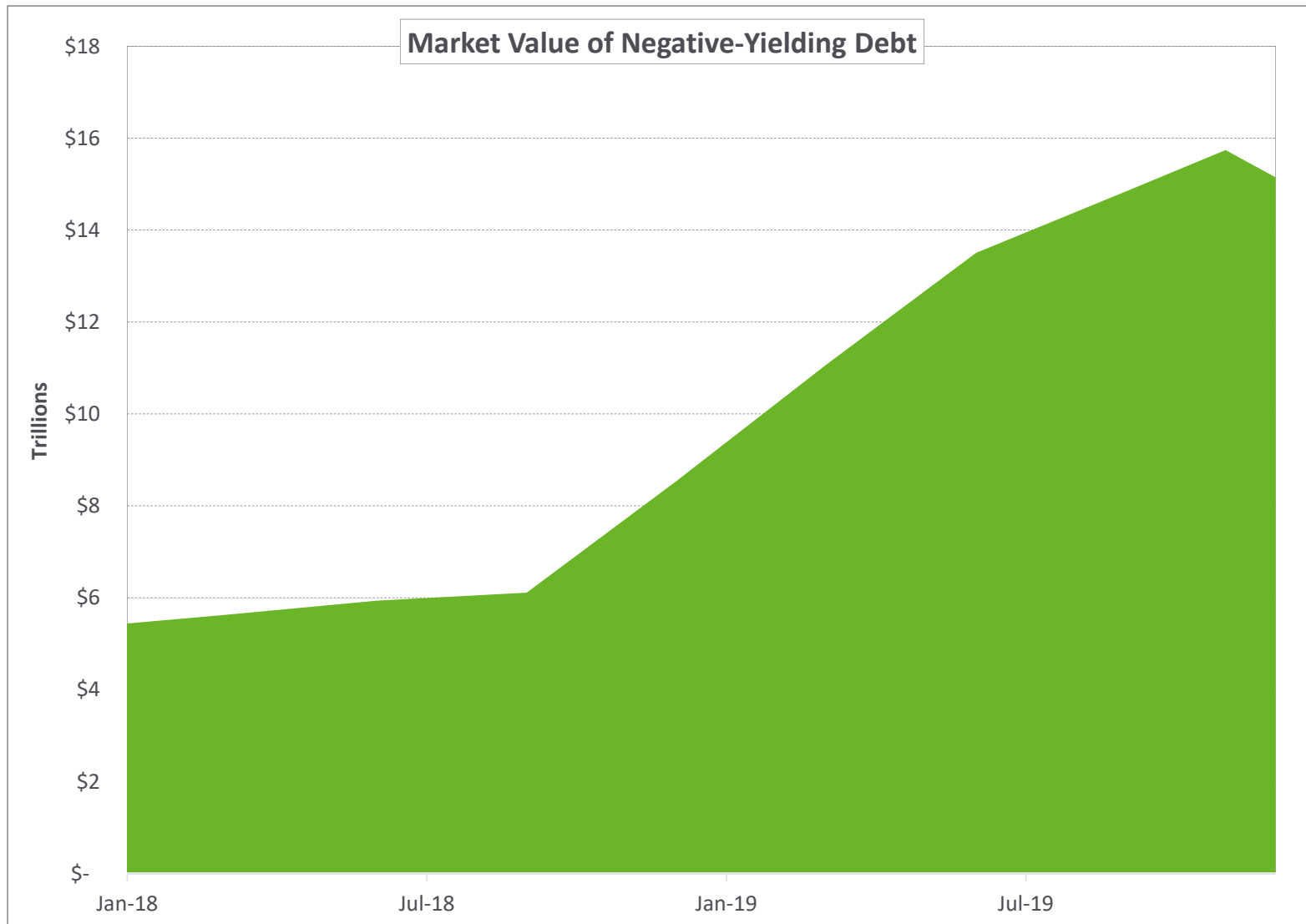
THE YIELD CURVE STEEPENED DURING Q4



Source: FactSet



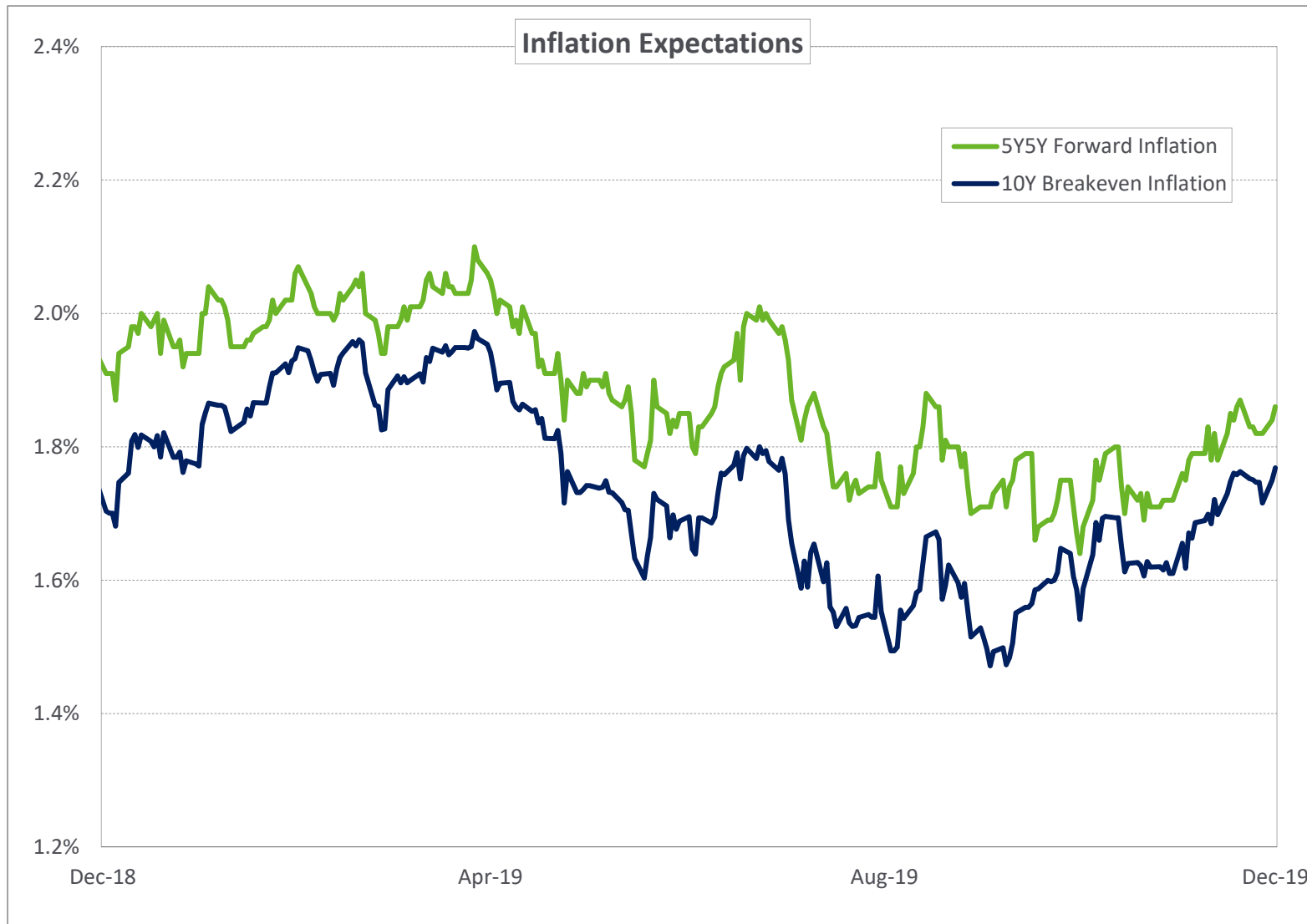
NEGATIVE RATES PERMEATED BOND MARKETS



Source: FactSet



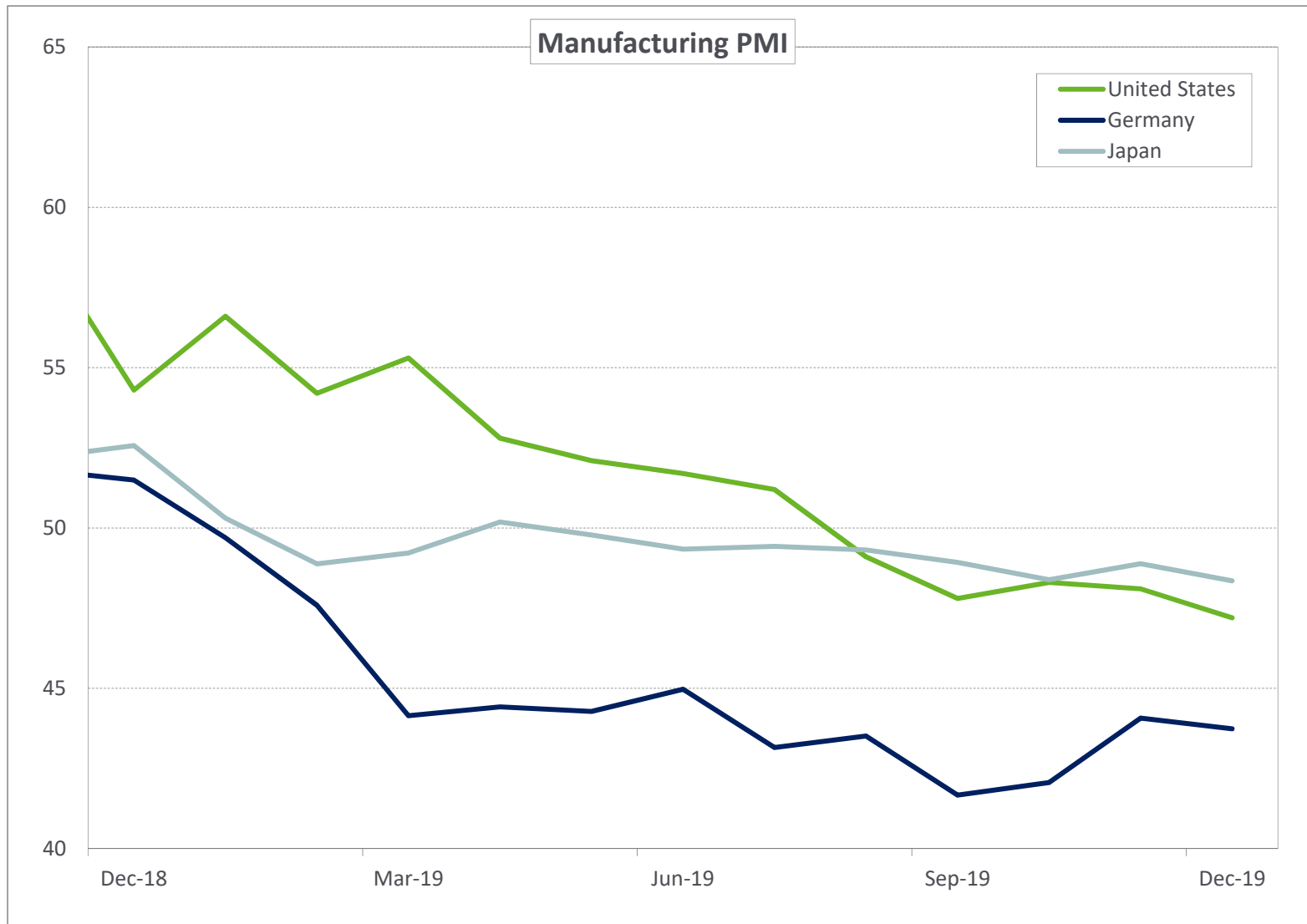
INFLATION EXPECTATIONS REMAIN LOW



Source: FactSet



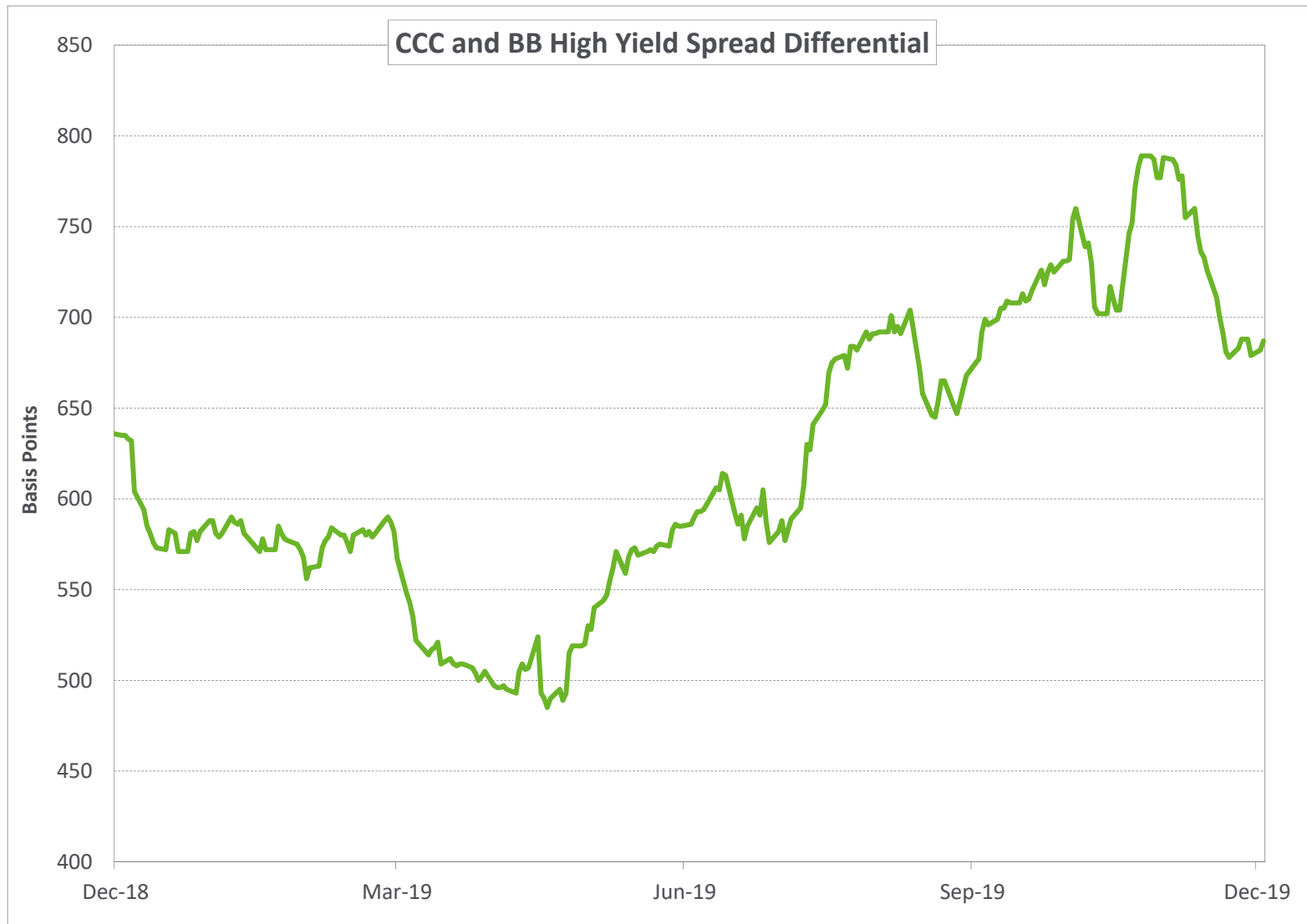
GLOBAL MANUFACTURING ACTIVITY SLOWED



Source: ISM, Markit, FactSet



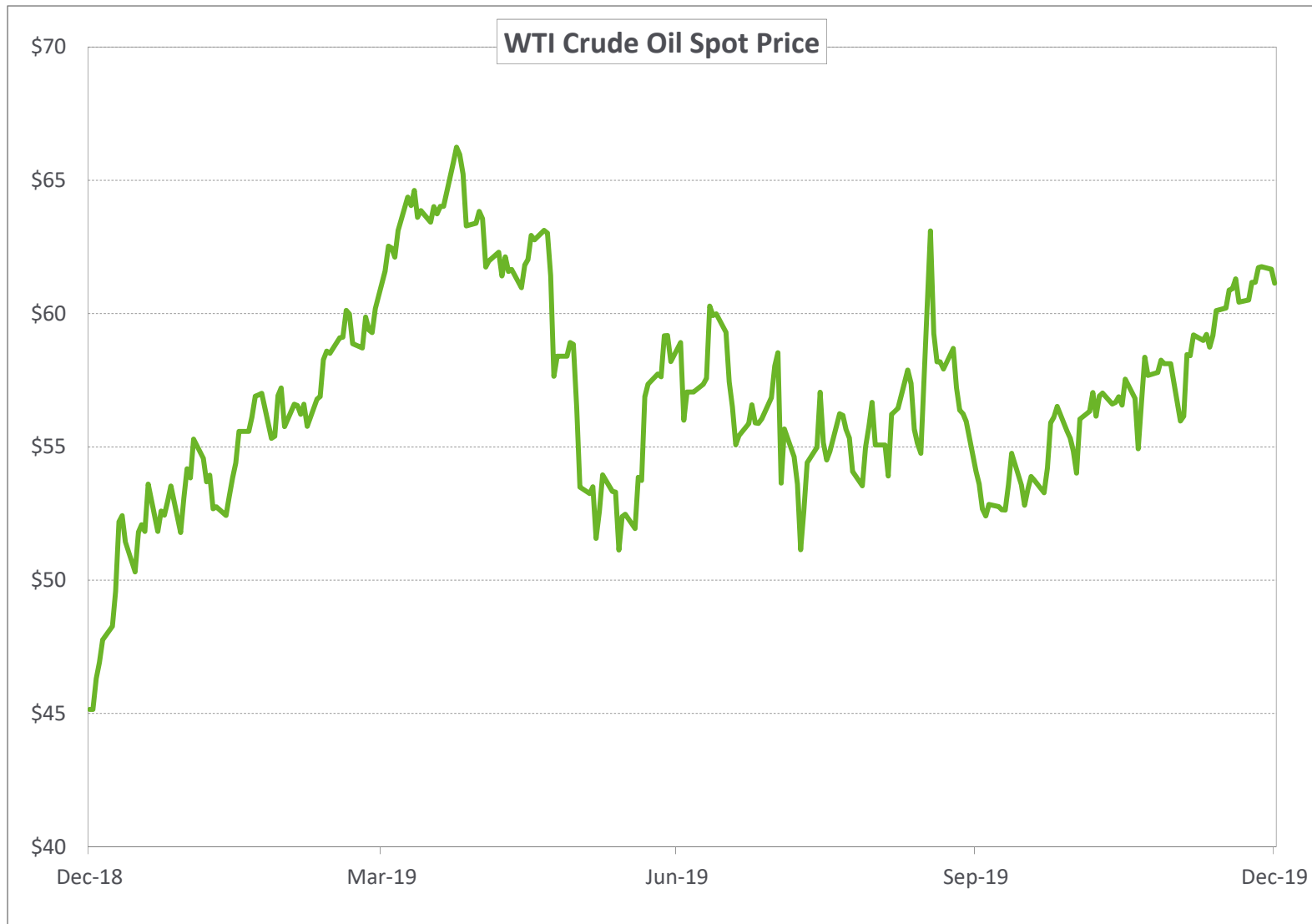
CCC SPREADS WIDENED DURING THE YEAR



Source: Bloomberg, FactSet



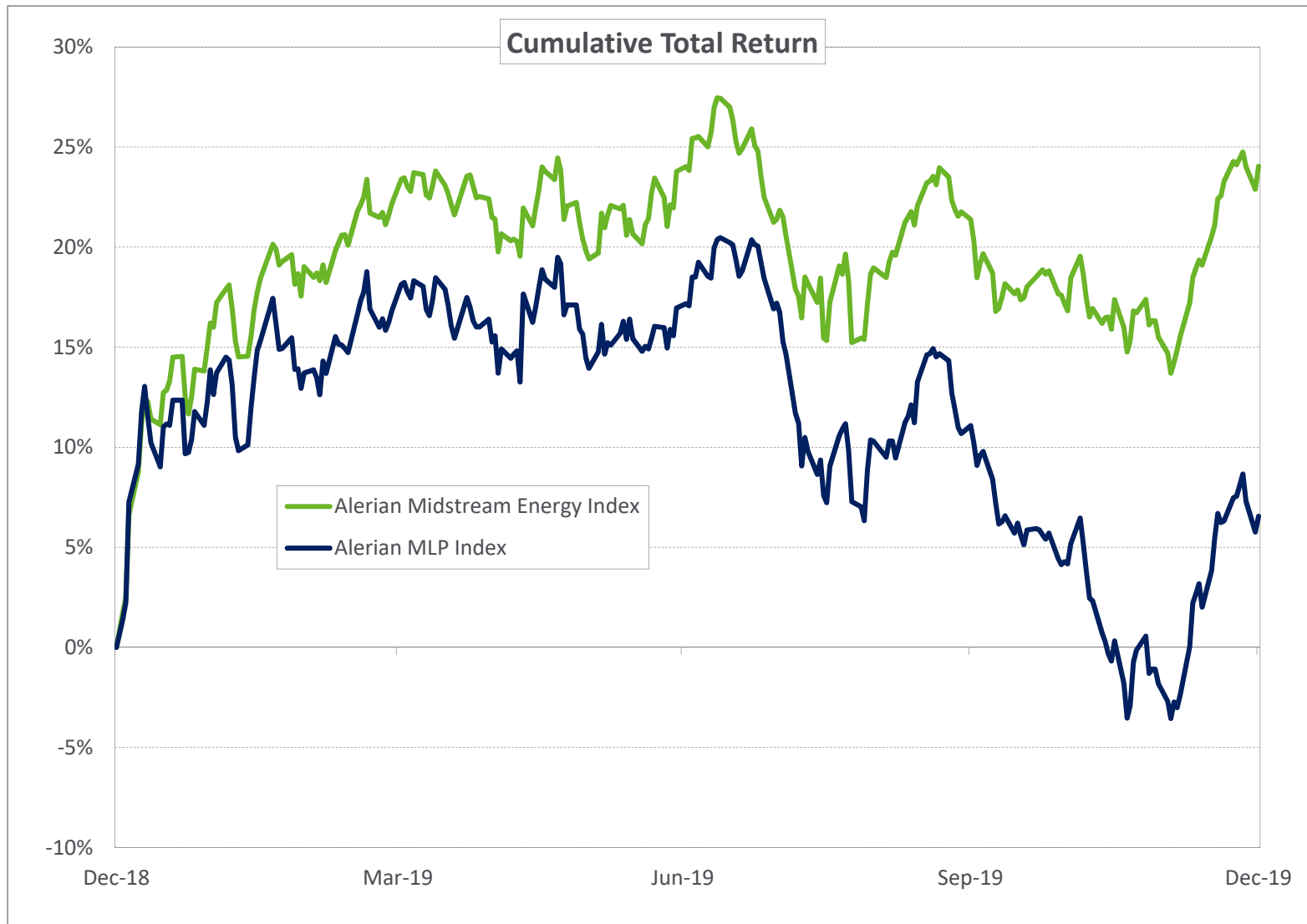
CRUDE OIL EXPERIENCED A VOLATILE YEAR



Source: FactSet



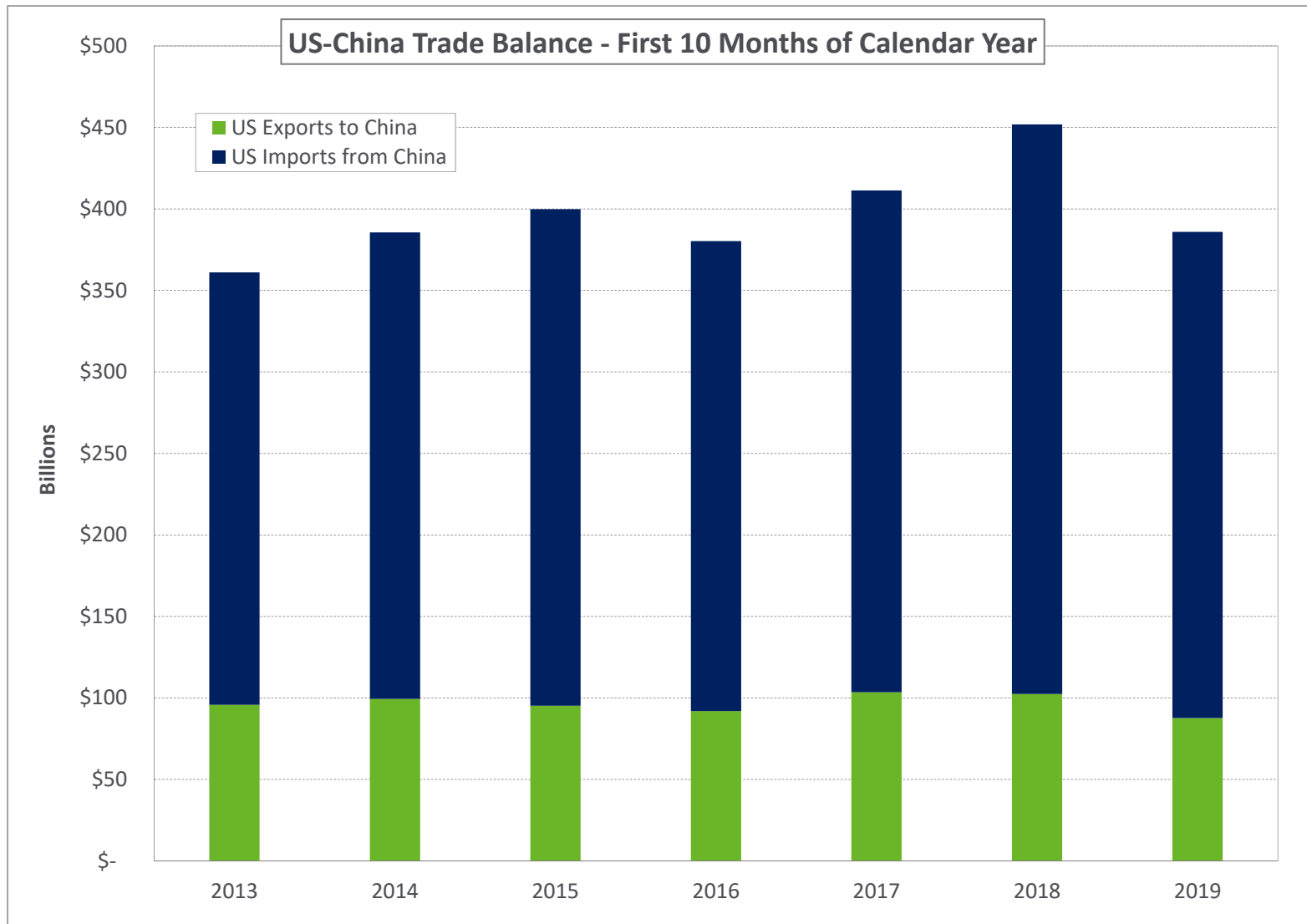
MIDSTREAM ENERGY OUTPERFORMED MLPS



Source: Alerian, FactSet



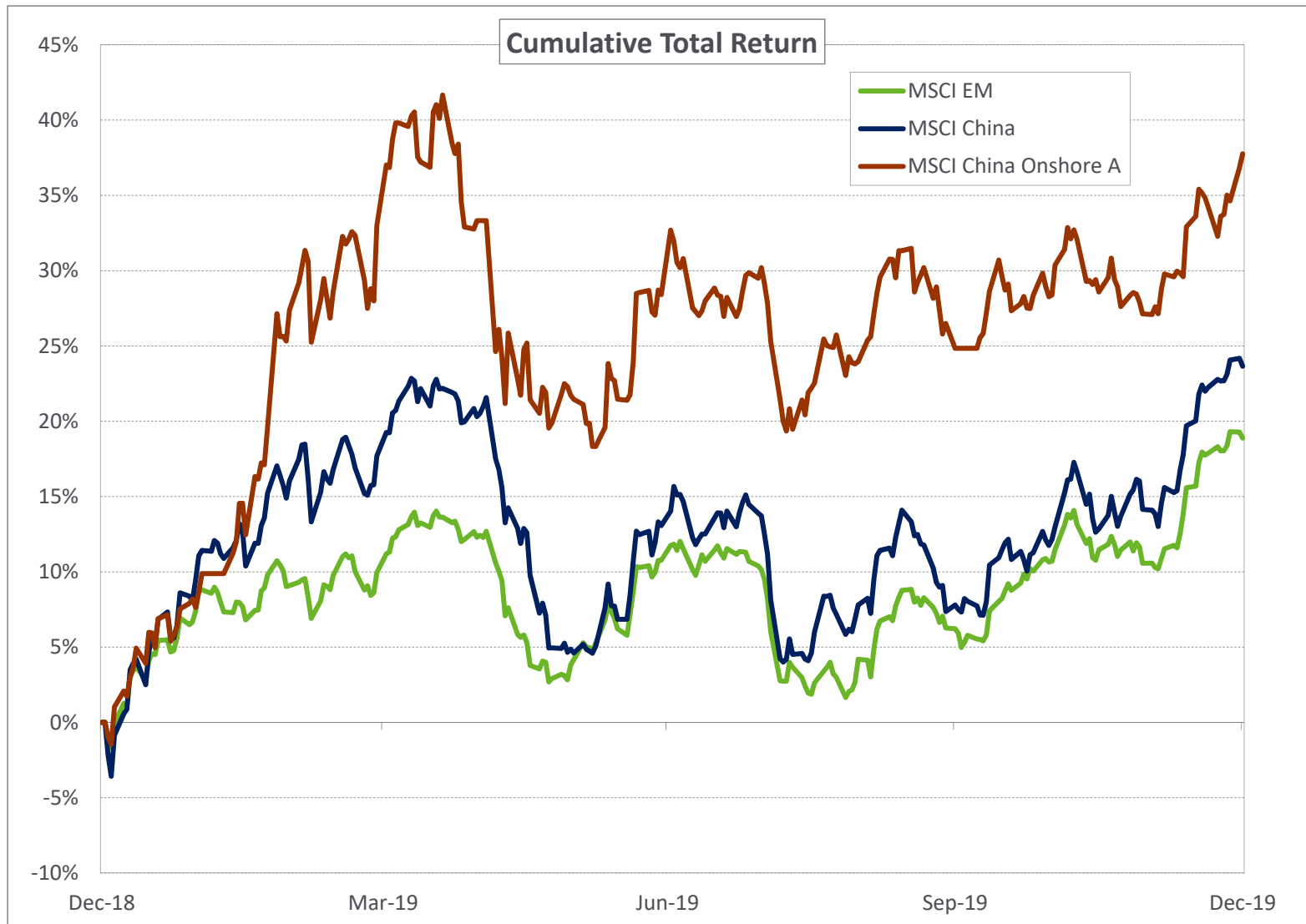
TOTAL TRADE BETWEEN THE US AND CHINA FELL



Source: FactSet



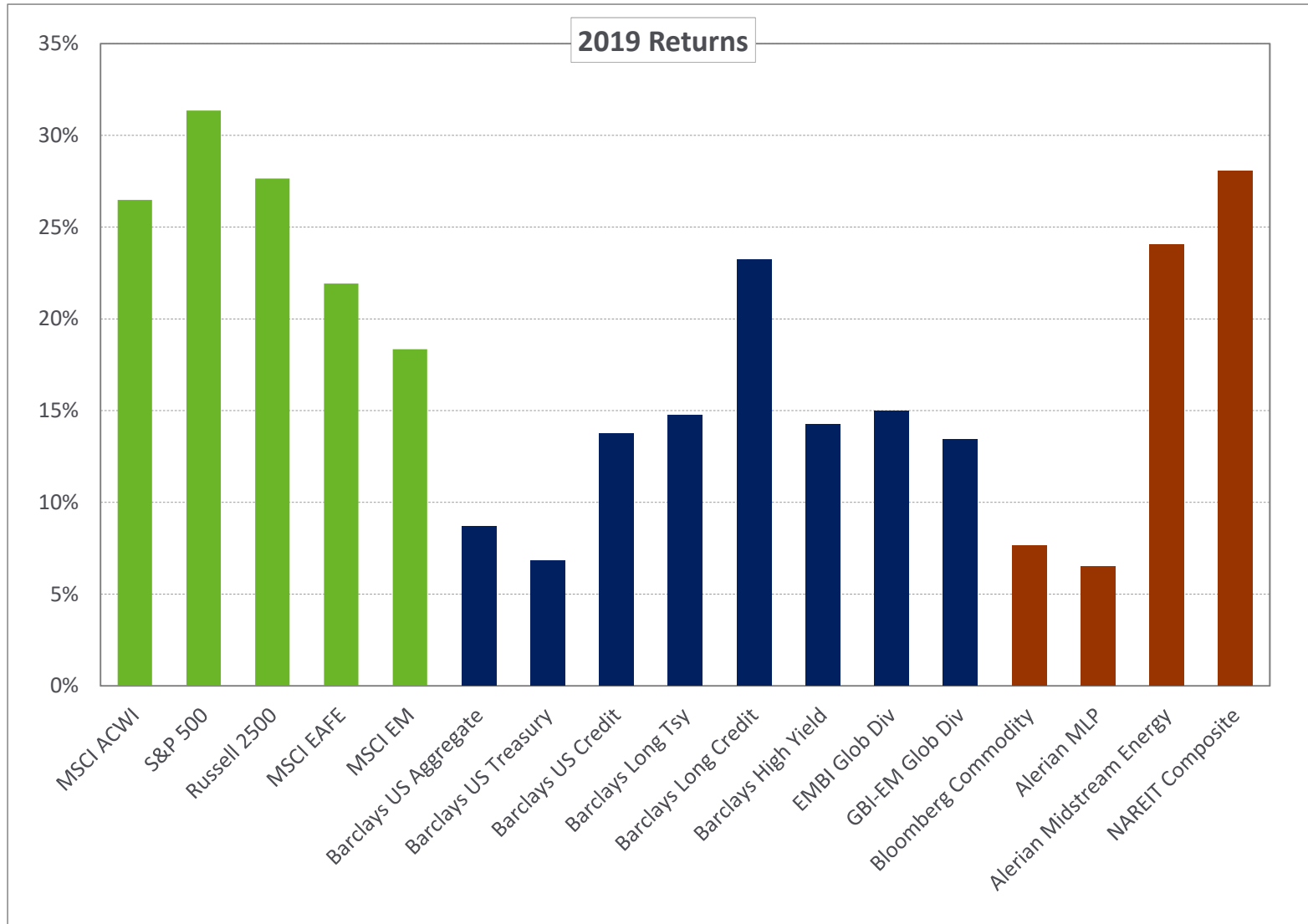
LOCAL CHINA A-SHARES OUTPERFORMED



Source: MSCI, FactSet



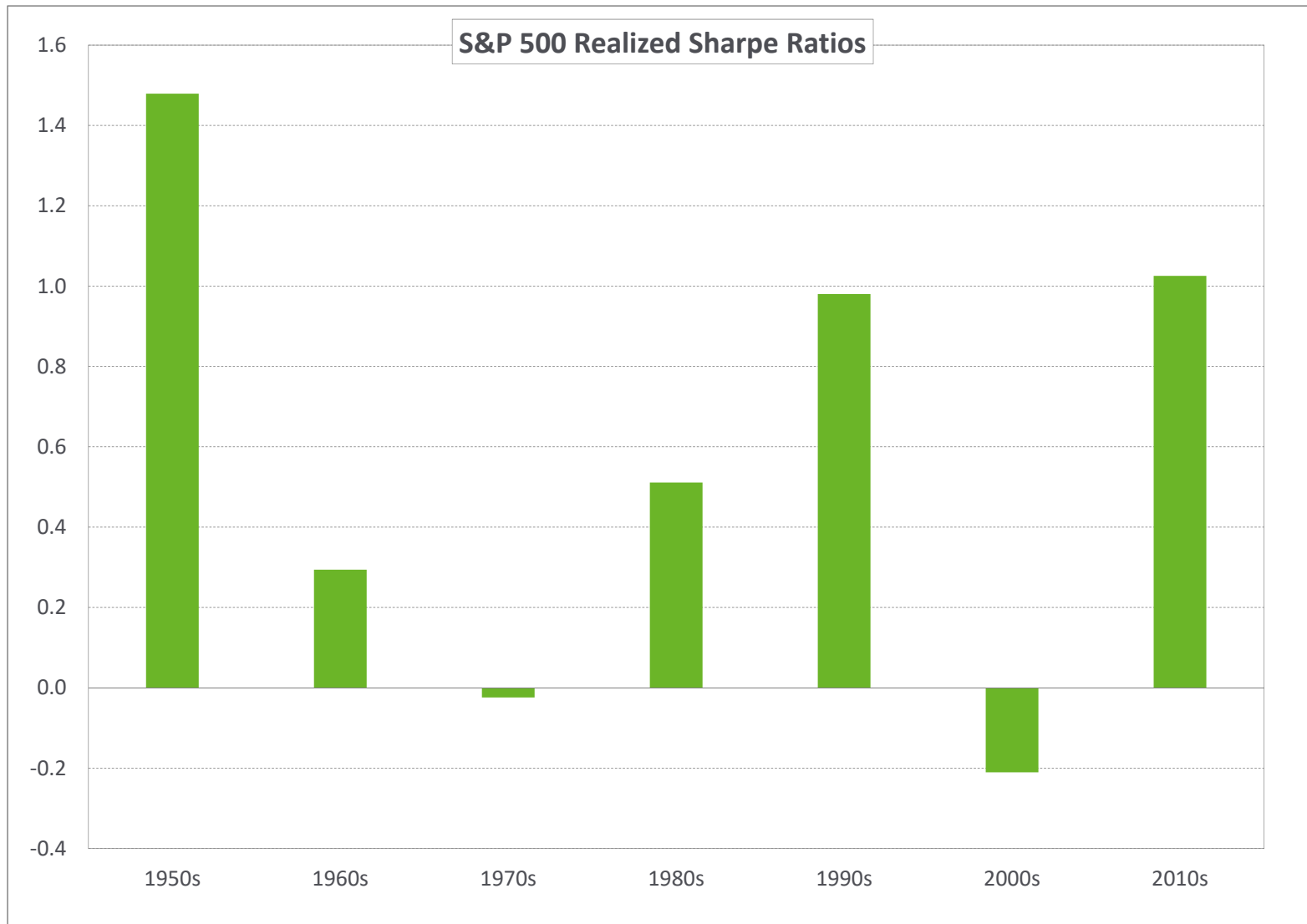
STRONG, POSITIVE RETURNS FOR MOST ASSETS



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



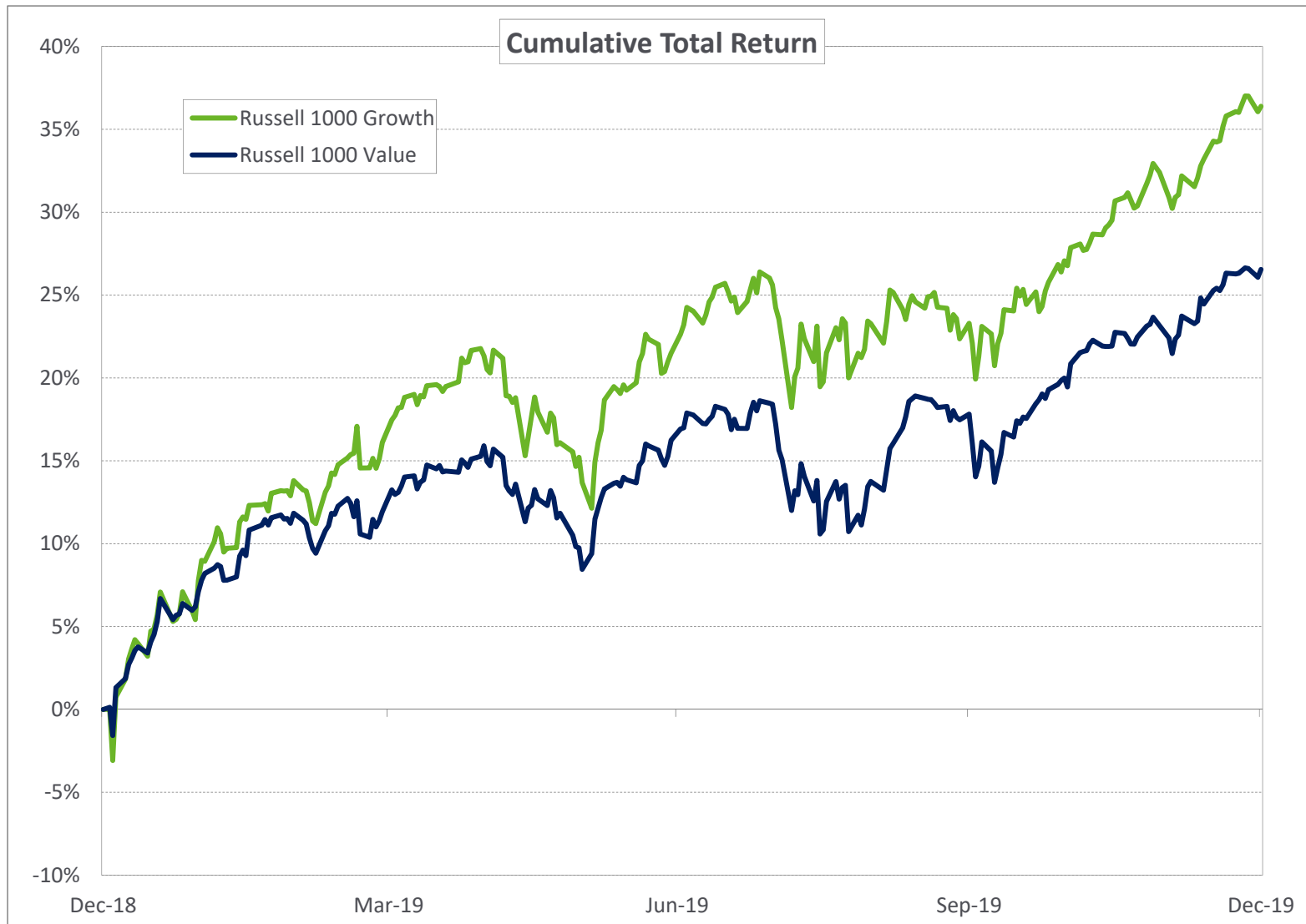
BEST RISK-ADJUSTED DECADE SINCE THE 1950S



Source: S&P, FactSet



GROWTH OUTPERFORMED VALUE



Source: Russell, FactSet



APPENDIX

NEPC, LLC

GLOSSARY OF INVESTMENT TERMINOLOGY

Of Portfolios/Observations¹ - The total number of data points that make up a specified universe

Allocation Index³ - 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 Effect² - 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 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)³ - 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)³ - Bonds which are similar to mortgage-backed securities but are collateralized by assets other than mortgages; commonly backed by credit card receivables, auto loans, or other types of consumer financing.

Attribution³ - 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 Maturity⁴ - 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 Average¹ - 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) Attribution¹ - 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) Attribution¹ - 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)⁴ - 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: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net



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Coupon⁴ – 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 Effect¹ – Is the effect that changes in currency exchange rates over time affect excess performance.

Derivative Instrument² – 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 Deviation¹ – 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.

Duration³ – 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 Ratio¹ – 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 Bond³ – 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 Hurdle⁵ – 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 Mark⁴ – 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 Rate⁴ – 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 Effects² – 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.

Median³ – The value (rate of return, market sensitivity, etc.) that exceeds one-half 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 Duration³ – The percentage change in the price of a fixed income security that results from a change in yield.

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

Municipal Bond (Muni)⁴ – A debt security issued by a state, municipality or county to finance its capital expenditures.

Net Investment Change¹ – Is the change in an investment after accounting for all Net Cash Flows.

Performance Fee⁴ – 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 Index³ - 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)⁴ - 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)³ - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).

Price to Sales (P/S)⁴ - 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)⁴ - 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) Effect² - 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 rate⁵ - is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

Tiered Fee¹ - 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 Effects² - 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 Return¹ - 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 Deviation¹ - 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 (%)³ - The current yield of a security is the current indicated annual dividend rate divided by current price.

Yield to Maturity³ - The discount rate that equates the present value of cash flows, both principal and interest, to market price.

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



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